FINAL
November 2013 (N=27) GROUNDWATER AND METHANE MONITORING REPORT

FOR

THE LAMONT ROAD LCID (CLOSED) AND C&D LANDFILLS
NCDENR LANDFILL PERMIT #26-08

FORT BRAGG, NORTH CAROLINA

Prepared by:

US Army Corps of Engineers
Savannah District
Hazardous, Toxic & Radioactive Waste Section
CESAS-EN-GH
100 W. Oglethorpe Avenue
Savannah, GA 31401

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Kevin Haborak, P.G.

TABLE OF CONTENTS

SECTION **PAGE**

1.0 INTRODUCTION 1

1.1 Project Background 1

1.2 Project Scope 2

2.0 PROJECT HISTORY 3

2.1 Site Description and History 3

2.2 General Site Geology and Hydrology 3

2.3 Previous Investigation and Results 4

3.0 METHODS 5

3.1 Methane Monitoring 5

3.2 Water-Level Gauging 5

3.3 Groundwater Sampling 5

3.4 Investigation Derived Wastes Handling 6

4.0 ANALYTICAL RESULTS AND STATISTICAL ANALYSIS 8

4.1 Analytical Data Summary 8

4.2 Statistical Analysis Results 8

4.3 Methane Monitoring Results 9

CONCLUSIONS AND RECOMMENATIONS 10

5.0 REFERENCES 11

In Order
Following
Page 11

FIGURES

Figure 1 Site Map – Ft. Bragg, NC

Figure 2 Location Map – Lamont Road Landfill, Ft. Bragg, NC

Figure 3 Methane Monitoring Results

Figure 4 Potentiometric Map

Figure 5 Groundwater Analytical Results

TABLES

Table 1 Methane Monitoring Results

Table 2 Groundwater Elevation Data

Table 3 Field Parameter Measurements

Table 4 Summary of Groundwater Detections

APPENDICES

Appendix A – Groundwater Sampling Logs

Appendix B – Data-Validation Reports – Electronic Only

Appendix C – Chains of Custody and Laboratory Analytical Reports – Electronic Only

Appendix D – Statistical Reports – Electronic Only

LIST OF ACRONYMS

C&D	Construction and Demolition
COCs	Chemicals of Concern
DPW	Directorate of Public Works
IDW	Investigation Derived Waste
LCID	Land Clearing and Inert Debris
µg/L	Micrograms Per Liter
MSWLF	Municipal Solid Waste Landfill Facility
NC2L	North Carolina Administrative Code, Title 15A, Subchapter 2L
NCDENR	North Carolina Department of Environmental and Natural Resources
RCRA	Resource Conservation and Recovery Act
SAP	Sampling and Analysis Plan
SSI	Statistically Significant Increase
USACE	US Army Corps of Engineers
VOCs	Volatile Organic Compounds

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1.0 INTRODUCTION

This is the Report for the November 2013 groundwater and methane monitoring at the Lamont Road Landfills (Figure 1) performed by the United States Army Corps of Engineers (USACE), Savannah District in November 2013. The monitoring is required by the North Carolina Department of Environmental and Natural Resources (NCDENR) Solid Waste Management Division. This was the twenty-seventh (N=27) event performed for the Site. This report summarizes the methods used for the groundwater and methane monitoring and presents the results of the sampling event.

1.1 Project Background

The USACE was contracted by the Directorate of Public Works (DPW), Fort Bragg, North Carolina to perform groundwater sampling and methane monitoring. The original groundwater monitoring well network for the land clearing and inert debris (LCID) and construction and demolition (C&D) landfills consisted of 12 wells. Four of the original eleven monitoring wells have been permanently abandoned and replaced with new wells at different locations. An additional two wells have also been installed. The current Sampling and Analysis Plan (SAP), approved by NCDENR, includes sampling these 13 monitoring wells. The monitoring wells are LMW-3, LMW-3S, LMW-4R, LMW-6, LMW-7, LMW-8, LMW-9, LMW-9S, LMW-9D, LMW-10, LMW-14R, LMW-15R, and LMW-16. Groundwater monitoring locations are shown on Figure 2. All sampling was conducted according to North Carolina Solid Waste Management Guidelines.

1.2 Project Scope

The scope for this project included collecting groundwater samples from 12 monitoring wells at the Lamont Road LCID and C&D Landfill for analyses of Appendix I constituents, sampling for methane at 13 selected methane monitoring wells and at three additional buildings, evaluating the analytical results, and reporting the results of the investigation. The groundwater sampling and data analyses included obtaining field parameter measurements (i.e. pH, temperature, etc.), measuring water levels at the monitoring well locations, determining groundwater flow directions, validating laboratory analytical data, performing statistical analysis for each detected constituent as required by NC regulations, and determining the concentration changes of chemicals of concern (COCs) with time.

2.0 PROJECT HISTORY

2.1 Site Description and History

The Lamont Road LCID and C&D Landfills are on the west side of Cooleyconch Mountain (Figure 2). The site was previously utilized as a maneuver training area (conducted continuously for 50 years), a borrow pit for sands and clays, and a repository for unclassified debris from land clearing and construction demolition. The LCID Landfill started as an uncontrolled dump site which was associated with reclaiming borrow excavation. Its initial operation pre-dated Federal and State regulations governing waste disposal. The LCID Landfill has been operated as a controlled repository for C&D debris as well as for land clearing and inert debris since its permitting under NCDENR Permit No. 26C on August 28, 1987. From February 1993 to date of closure, C&D debris was diverted to the Longstreet Road Sanitary Landfill, and only LCID has been accepted at the LCID Landfill site. It is presumed that asbestos materials are disposed of in this landfill.

Cooleyconch Mountain is the prominent terrain feature west of the main post. The LCID Landfill site is 1.5 miles west of the Longstreet Road municipal solid waste landfill (MSWLF) (closed January 1, 1998) and 200 yards northwest of the Lamont Road C&D Landfill. The area adjacent and east of the LCID Landfill has been excavated to be used as a borrow pit for sandy fill material. To the south of the LCID Landfill, in the C&D Landfill site, petroleum contaminated soils have been spread, dried, and stored for subsequent removal. To the east of the LCID Landfill, petroleum contaminated sludge has been stored in earthen impoundments for subsequent removal. The LCID Landfill drains north to Cypress Creek, which intersects the Little River a mile upstream of the Fort Bragg Water Plant intake.

2.2 General Site Geology and Hydrology

Lithologic descriptions of soil borings and monitoring well borings from previous investigations at Fort Bragg indicate that in general Fort Bragg is underlain by alternating sands, silty sands, clayey sands, sandy clays, and clays, likely belonging to the

Middendorf Formation. The sands and silty sands range in thickness from approximately 2 to 22 ft and are coarse grained. The clay units range in thickness from approximately 2 to 7 ft and are typically plastic.

2.3 Previous Investigation and Results

Several sampling events have been conducted at the landfills. Initially, four monthly sampling events were conducted in July, August, September, and October 1996 by R,S & H Architect, Engineering, & Planning, Inc. Law & Company, Inc. conducted two sampling events in March and September, 1999 in conjunction with the installation of new wells. Then until 2005, sampling events were conducted by BPA Environmental & Engineering, Inc. The USACE has monitored the site since 2005.

The previous sampling event, held in May of 2013 for Lamont Landfill, was conducted by the USACE, Savannah District. Low levels of Appendix I VOCs and metals were detected. All of the detections were below their respective NC2L standards and according to the statistical analysis there was no evidence that showed an increasing contaminant concentration trend.

METHODS

2.4 Methane Monitoring

Methane monitoring was performed at 13 wells and at three additional buildings. The monitoring included measuring levels of methane, carbon dioxide, and oxygen at each location. The results of the monitoring are summarized in Table 1 and are also presented on Figure 3.

2.5 Water-Level Gauging

During this sampling event, USACE personnel measured the water levels in 12 monitoring wells. Observed water levels and calculated groundwater elevations are presented in Table 2. A potentiometric map was developed based on the groundwater elevations; the map is presented as Figure 4. The map shows that the general direction of the groundwater flow at the Lamont Landfill is towards the west-northwest.

2.6 Groundwater Sampling

The groundwater sampling was conducted in accordance with the SAP for the Lamont Road LCID and C&D Landfills (NCDENR Landfill Permits # 26G and #26-08 dated April 2005, which have been updated to reflect the most recent SAP). Groundwater samples were collected from 12 wells. Water quality parameters pH, specific conductivity, temperature, turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were measured during the purge cycle of each well. The measurements are summarized in Table 3.

Groundwater samples were collected using a low-flow purge method with either a bladder pump or a peristaltic pump. Immediately before purging a well, the static water level below the top of the well casing and the total depth of the well were measured to the nearest 0.01 foot and recorded in the field notebook. The volume of water in the well was calculated based on the static water level and the well construction information. Well volume calculations were placed in the field notebook. The inlet of the sampling

pump was placed at the mid-point of the screened interval. This level was adjusted for wells where the static water level is within the well screen. The monitoring wells were purged using a variable-flow bladder pump or peristaltic pump at a rate of 500 ml/min or less.

The wells were purged until the water quality had stabilized or five purge volumes were removed. The wells were considered stable when the following requirements were met for three consecutive readings: turbidity values within 10% or lower than 10 Nephelometric Turbidity Units (NTUs), temperature values within a range of 0.5 degrees Celcius, pH readings within 0.1 Standard Units (SU), ORP values within a range of 10 milivolts (mV), and conductivity values within 3%, and DO values within 10%.

The rate of pumping was determined and noted in the field notebook. The purge rate was adjusted, as necessary, to avoid purging any well to dryness and to equal the recharge of the aquifer. All sampling equipment was protected from contaminated soil surfaces to prevent contamination of the samples (e.g., equipment may be placed on disposable polyethylene plastic sheeting). Groundwater samples were collected after purging was complete. The tubing was disconnected from the flow through cell, and the samples were collected from the pump outlet. The samples were labeled and placed into an ice-filled cooler for preservation.

Groundwater sampling data (including sample number, location, quantity of water purged, field parameters, site conditions, etc.) were documented in the field notebook. Water samples for Resource Conservation and Recovery Act (RCRA) metal analyses were un-filtered. The results of the groundwater sampling are presented in Table 4 and on Figure 5. The groundwater sampling field data logs are presented in Appendix A.

2.7 Investigation Derived Wastes Handling

The investigation derived wastes (IDW), including the waste water from well purging and decontamination water, were containerized in 55-gallon drums. Those drums were appropriately labeled, sealed, and staged within designated areas until

analytical results had been received and reviewed. Based on the analytical results of the groundwater samples, the IDW was classified as non-hazardous. With the concurrence of the Fort Bragg Installation Restoration Program Manager, the IDW was disposed of at an appropriate disposal facility.

3.0 ANALYTICAL RESULTS AND STATISTICAL ANALYSIS

3.1 Analytical Data Summary

Groundwater samples collected in November 2013 were analyzed for Appendix I VOCs and metals. The summary of detections of the COCs is presented in Table 4. Figure 5 shows the distribution of the detections and their concentrations from this sampling event. The reports of chemical data quality assessment prepared by the Project Chemist are included as Appendix B. The laboratory reports of analytical results are included as Appendix C. For comparison, the analytical results of previous investigations are also presented in the Statistical Analyses Summary Report included in Appendix D.

In accordance with North Carolina guidance, analytical results are compared to North Carolina Groundwater 2L Standards (NC2L standards). The analytical data of the first 2013 sampling event indicated that some VOCs and inorganics were detected at low levels, and all detections were below NC2L standards (Table 4).

3.2 Statistical Analysis Results

A statistical test predicts the average behavior (distribution) of a random variable by comparing the means (normal distribution) or medians (lognormal and non-parametric distributions) of the compliance well data to background well data. Different statistical tests were used as appropriate for the different distributional patterns that occur within the data. Prior to testing for statistical significance, the distribution of each parameter was determined to be normal, lognormal, or non-normal.

If the data were non-normally distributed, or the fraction of nondetects exceeded 15% but were less than 90%, then the Kruskal-Wallis Test was applied. If the fraction of non-detects exceeded 90%, then the Non-Parametric Prediction Limit was applied. For these tests to be sufficiently sensitive, the sample size for any group must be at least 4. A Kruskal-Wallis Test can be used in any situation that the parametric analysis of variance can be used. This test computes the H-statistic, adjusts it for ties, and compares it to the

appropriate chi-square critical value. If the H-statistic is less than the critical value, the null-hypothesis is accepted, and it is concluded that there are no differences between median background and compliance well concentrations. If the H-statistic is greater than the critical value, it is concluded that at least one pair of well groups is statistically different. However, the Kruskal-Wallis test is prone to false positives. Therefore, additional statistical analyses were used to determine the validity of the positive results. Intra-well comparisons of data from a single well to previous data from the same well were performed to determine if a trend of increasing concentration is occurring. The Mann-Kendall Trend Analysis and the Shewhart-CUSUM Control Chart statistical tests were selected for these additional analyses.

A detailed discussion of the statistical methods is presented in Appendix D. The results of the statistical analysis indicate that there are no SSIs in the concentrations of the detected constituents.

3.3 Methane Monitoring Results

The methane levels were measured at 16 locations at Lamont Landfill. The results of the monitoring are summarized in Table 1 and are also presented on Figure 3. No methane monitoring wells contained a high level of methane (> 5% Methane by Volume).

4.0 CONCLUSIONS AND RECOMMENATIONS

The annual monitoring program consists of two sampling events conducted six months apart. This was the November 2013 sampling event for groundwater and methane monitoring performed by the USACE, Savannah District. It was the N=27 sampling event for the Lamont Road Landfills. Low levels of Appendix I VOCs and metals were detected, but all of the detections were at estimated levels and/or were below NC2L standards.

According to the Statistical Analysis of groundwater Data (Appendix D), there is no evidence of an upward trend in constituent concentrations. The statistical findings at the Lamont Road Landfill demonstrated that any statistical abnormalities were due to natural variation in the results. Long-term monitoring should continue at the Lamont Road Landfill because it is still an active site and NC Solid Waste Regulations require it.

The methane levels were measured at 16 locations around Lamont landfill. No methane monitoring wells contained a high level of methane (> 5% Methane by Volume).

REFERENCES

North Carolina Administrative Code, Title 15A, Department of Environment, Health, and Natural Resources, Division of Solid Waste, Management, Subchapter 13B, Solid Waste Management, Section .1600 (January 4, 1994).

North Carolina Administrative Code, Title 15A, Department of Environment, Health, and Natural Resources, Division of Solid Waste, Management, SubchapterNC2L, Classifications and Water Quality Standards Applicable to the Ground Waters of North Carolina, Sections .0100, .0200, and .0300 (November 8, 1993): from the Environmental Management Commission, Raleigh, North Carolina.

FIGURES

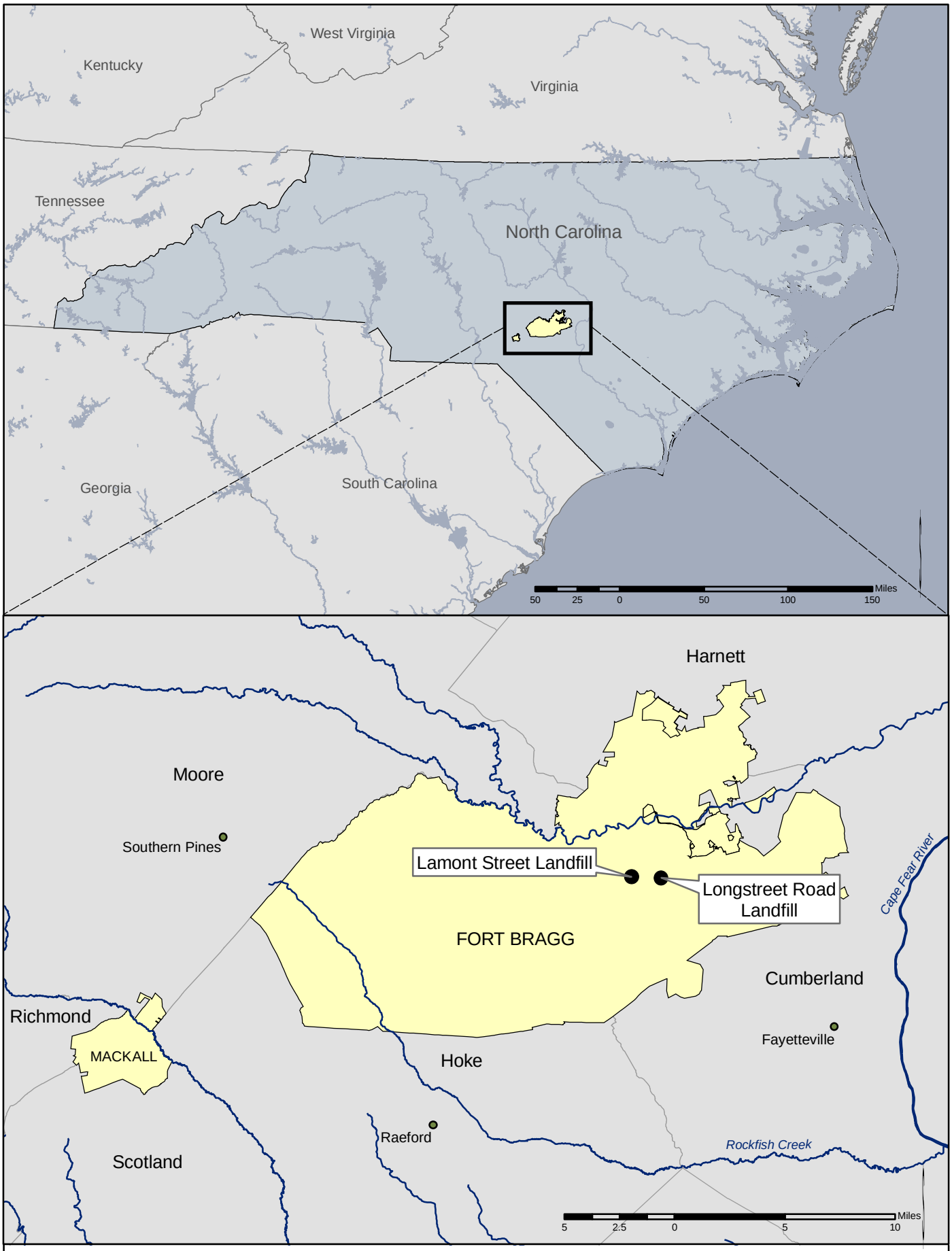

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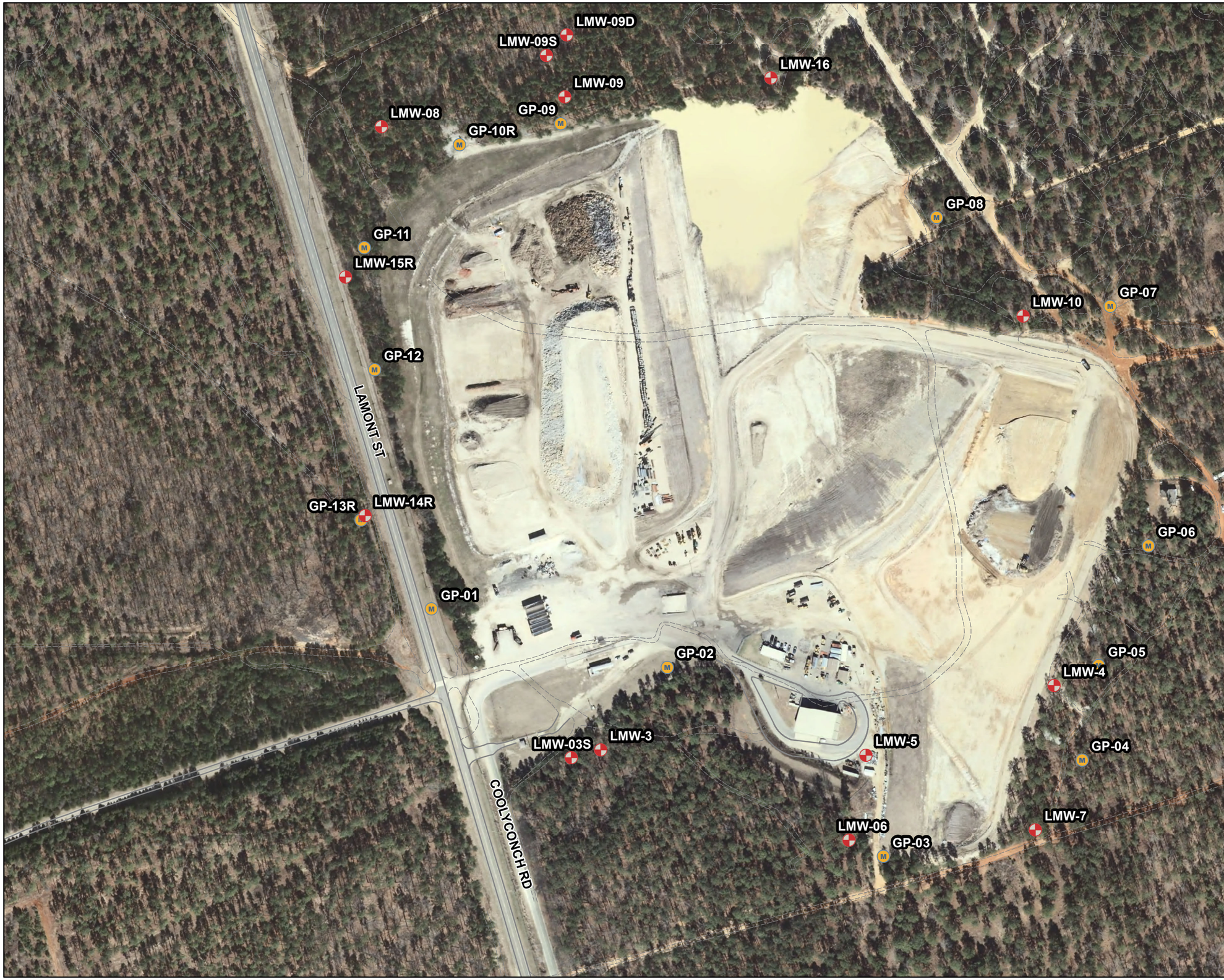
Figure 1

Site Map -- Ft. Bragg, NC



Legend

- Groundwater Monitoring Wells
- Methane Monitoring Wells
- Roads
- Trails

1 inch = 250 feet

0 125 250 500'

N

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LAMONT STREET LANDFILL

LOCATION MAP

FORT BRAGG, NC

DATE: MAR 2014 | FIGURE: 2

Legend

- Methane Monitoring Wells
- Buildings
- Streams
- Roads
- Trails

1 inch = 200 feet

0 100 200 400'

N

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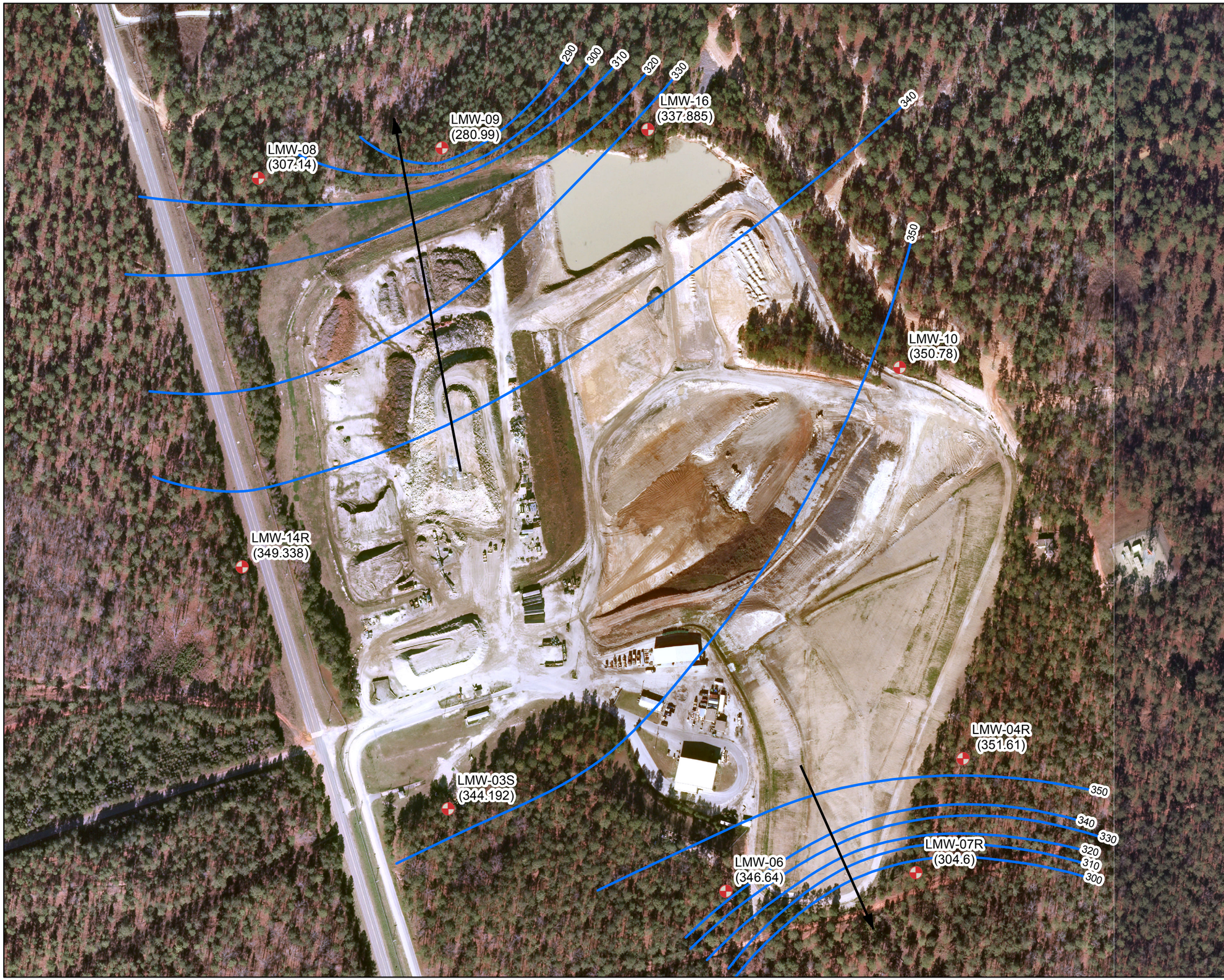
LAMONT STREET LANDFILL

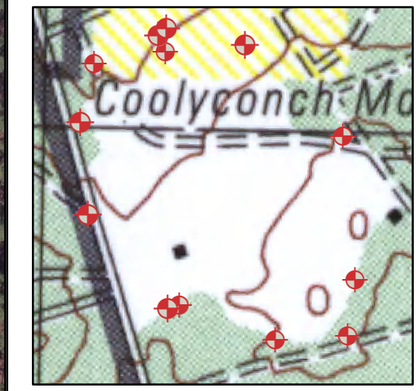
METHANE MONITORING RESULTS
NOVEMBER 2013

FORT BRAGG, NC

DATE: MAR 2014

FIGURE: 3





Legend

Groundwater Monitoring Wells

Groundwater Contour Line

Note: Monitoring wells used for potentiometric surface are displayed with elevations in feet above MSL in parenthesis below the label.

Arrows point in direction of groundwater flow.

1 inch = 250 feet

0 125 250 500'

N

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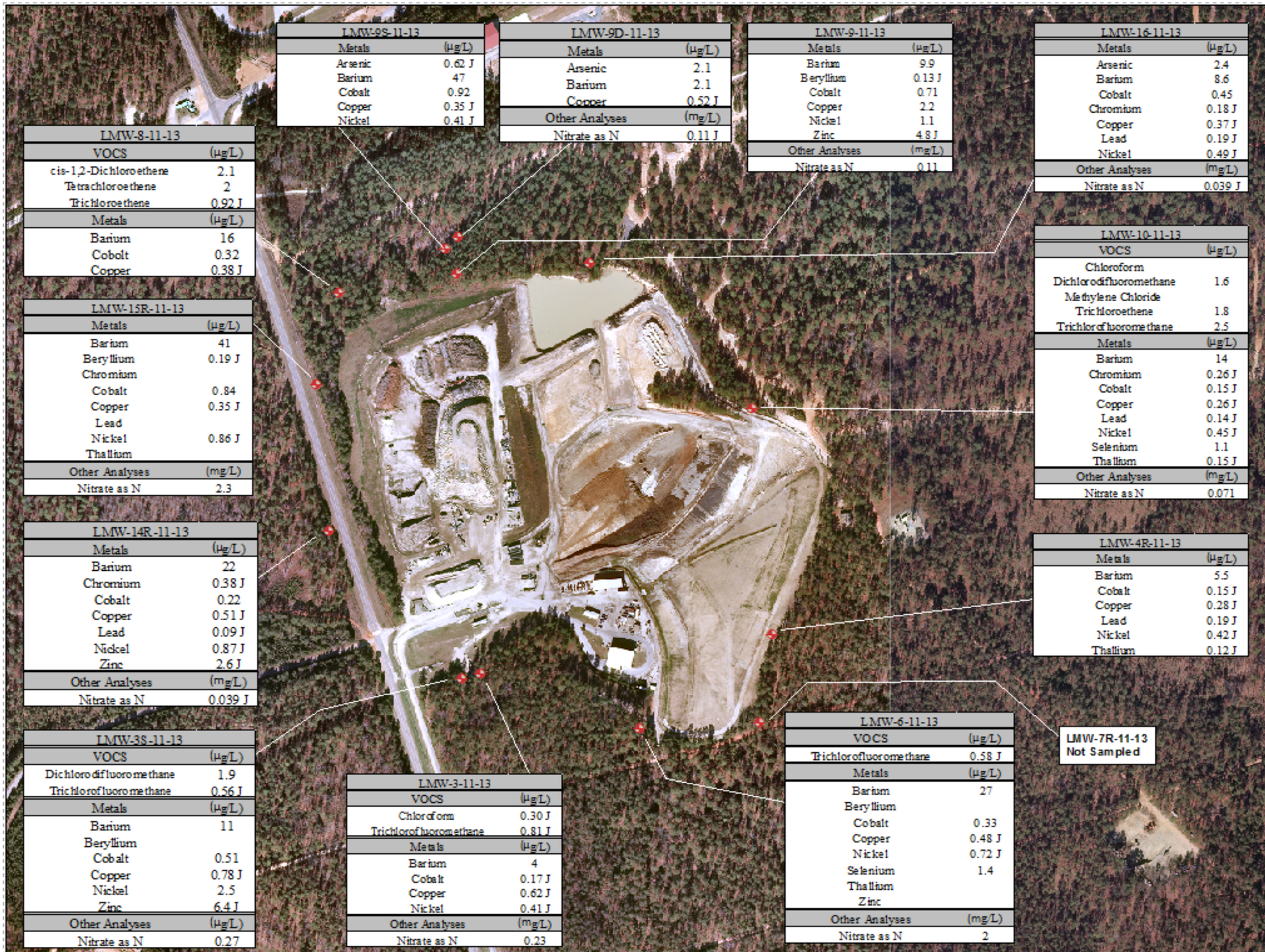
LAMONT STREET LANDFILL

POTENTIOMETRIC SURFACE MAP
NOVEMBER 2013
FORT BRAGG, NC

DATE: MARCH 2014 | FIGURE: 4



LMW-9S-11-13	
Metals	(µg/L)
Arsenic	0.62 J
Barium	47
Cobalt	0.92
Copper	0.35 J
Nickel	0.41 J

LMW-9D-11-13	
Metals	(µg/L)
Arsenic	2.1
Barium	2.1
Copper	0.52 J
Other Analyses	(mg/L)
Nitrate as N	0.11 J

LMW-9-11-13	
Metals	(µg/L)
Barium	9.9
Beryllium	0.13 J
Cobalt	0.71
Copper	2.2
Nickel	1.1
Zinc	4.8 J
Other Analyses	(mg/L)
Nitrate as N	0.11

LMW-16-11-13	
Metals	(µg/L)
Arsenic	2.4
Barium	8.6
Cobalt	0.45
Chromium	0.18 J
Copper	0.37 J
Lead	0.19 J
Nickel	0.49 J
Other Analyses	(mg/L)
Nitrate as N	0.039 J

LMW-8-11-13	
VOCS	(µg/L)
cis-1,2-Dichloroethene	2.1
Tetrachloroethene	2
Trichloroethene	0.92 J
Metals	(µg/L)
Barium	16
Cobalt	0.32
Copper	0.38 J

LMW-10-11-13	
VOCS	(µg/L)
Chloroform	
Dichlorodifluoromethane	1.6
Methylene Chloride	
Trichloroethene	1.8
Trichlorofluoromethane	2.5
Metals	(µg/L)
Barium	14
Chromium	0.26 J
Cobalt	0.15 J
Copper	0.26 J
Lead	0.14 J
Nickel	0.45 J
Selenium	1.1
Thallium	0.15 J
Other Analyses	(mg/L)
Nitrate as N	0.071

LMW-15R-11-13	
Metals	(µg/L)
Barium	41
Beryllium	0.19 J
Chromium	
Cobalt	0.84
Copper	0.35 J
Lead	
Nickel	0.86 J
Thallium	
Other Analyses	(mg/L)
Nitrate as N	2.3

LMW-14R-11-13	
Metals	(µg/L)
Barium	22
Chromium	0.38 J
Cobalt	0.22
Copper	0.51 J
Lead	0.09 J
Nickel	0.87 J
Zinc	2.6 J
Other Analyses	(mg/L)
Nitrate as N	0.039 J

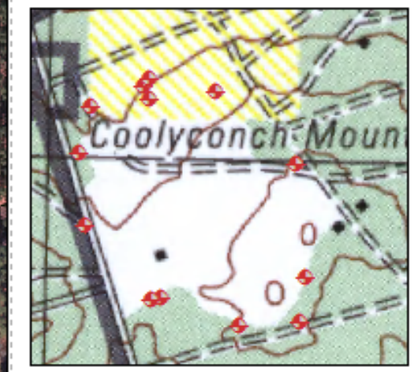
LMW-4R-11-13	
Metals	(µg/L)
Barium	5.5
Cobalt	0.15 J
Copper	0.28 J
Lead	0.19 J
Nickel	0.42 J
Thallium	0.12 J

LMW-3S-11-13	
VOCS	(µg/L)
Dichlorodifluoromethane	1.9
Trichlorofluoromethane	0.56 J
Metals	(µg/L)
Barium	11
Beryllium	
Cobalt	0.51
Copper	0.78 J
Nickel	2.5
Zinc	6.4 J
Other Analyses	(µg/L)
Nitrate as N	0.27

LMW-3-11-13	
VOCS	(µg/L)
Chloroform	0.30 J
Trichlorofluoromethane	0.81 J
Metals	(µg/L)
Barium	4
Cobalt	0.17 J
Copper	0.62 J
Nickel	0.41 J
Other Analyses	(mg/L)
Nitrate as N	0.23

LMW-6-11-13	
VOCS	(µg/L)
Trichlorofluoromethane	0.58 J
Metals	(µg/L)
Barium	27
Beryllium	
Cobalt	0.33
Copper	0.48 J
Nickel	0.72 J
Selenium	1.4
Thallium	
Zinc	
Other Analyses	(mg/L)
Nitrate as N	2

LMW-7R-11-13
Not Sampled



Legend

MONITORING WELL

NOTE: Only detected analytes shown.
NA - Not Available
U - Target analytes were not detected above the reporting limits
J - Analyte was present but concentration is an estimated value.
Bold - Concentrations exceed NC 2L standards.
*IMAC - Interim maximum allowable concentration
**PRG based on carcinogenic factor.

1 inch = 400 feet

0 200 400 800'

N

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LAMONT STREET LANDFILL

GROUNDWATER
ANALYTICAL RESULTS
NOV 2013

FORT BRAGG, NC

DATE: MAR 2013 | FIGURE: 5

TABLES

Table 1. Methane Monitoring Results
Lamont Landfills, Fort Bragg, NC

Well ID	Date Sampled	Time Sampled	%Methane by Volume	%Oxygen	%CO2
Gas-GP-1	9 Nov 2013	1309	0.1	3.3	16.1
Gas- GP -2	9 Nov 2013	1329	0.0	9.1	11.4
Gas- GP -3	9 Nov 2013	1333	0.0	16.7	2.2
Gas- GP -4	9 Nov 2013	1302	0.0	17.7	1.3
Gas- GP -5	9 Nov 2013	1258	0.0	17.2	1.6
Gas- GP -6	9 Nov 2013	1254	0.0	15.4	2.8
Gas- GP -7	9 Nov 2013	1230	0.0	12.4	4.3
Gas- GP -8	9 Nov 2013	1233	0.0	18.3	0.2
Gas- GP -9	9 Nov 2013	1239	0.6	10.6	9.7
Gas- GP -10R	9 Nov 2013	1242	4.0	0.0	23.3
Gas- GP -11	9 Nov 2013	1321	0.0	18.3	0.6
Gas- GP -12	9 Nov 2013	1316	2.5	1.6	14.6
Gas- GP -13R	9 Nov 2013	1354	0.0	10.8	4.3
Office	9 Nov 2013	1336	0.0	18.8	0.0
Scale House	9 Nov 2013	1340	0.0	18.8	0.0
O-3533	9 Nov 2013	1344	0.0	18.8	0.0

Note:
TOC – Top of casing, btoc – Below top of casing, NA – Not Available
bgs – Below ground surface, amsl – Above mean sea level
Δ --- Selected Well for Long Term Monitoring
TOC elevation is based on vertical datum NGVD29 (source: USGS RFI, Aug. 1999)
* Erroneous reading not reported in table.
**No well cover

Table 2
Groundwater Elevation Data
Lamont Street Landfill, Fort Bragg NC

Well ID	TOC Elev. (ft. amsl)	Water Level (ft. BTOC)	Water Level Elev. (ft. amsl)	Water Level (ft. BTOC)	Water Level Elev. (ft. amsl)	Water Level (ft. BTOC)	Water Level Elev. (ft. amsl)	Water Level (ft. BTOC)	Water Level Elev. (ft. amsl)	Water Level (ft. BTOC)	Water Level Elev. (ft. amsl)	Water Level (ft. BTOC)	Water Level Elev. (ft. amsl)	Water Level (ft. BTOC)	Water Level Elev. (ft. amsl)	Water Level (ft. BTOC)	Water Level Elev. (ft. amsl)	Water Level (ft. BTOC)	Water Level Elev. (ft. amsl)	Water Level (ft. BTOC)	Water Level Elev. (ft. amsl)	Water Level (ft. BTOC)
		Nov-08	Nov-08	Jun-09	Jun-09	Nov-09	Nov-09	Jun-10	Jun-10	Nov-10	Nov-10	Jun-11	Jun-11	Nov-11	Nov-11	May-12	May-12	Nov-12	Nov-12	May-13	May-13	Nov-13	Nov-13
LMW-3	408.32	102.18	306.14	103.2	305.12	102.21	306.11	87.27	321.05	102.13	306.19	102.79	305.56	104	304.32	106.22	302.1	105.72	302.6	106.27	199.87	105.6	302.72
LMW-3s	*	59.19	NA	60.4	NA	59.12	NA	59.61	NA	58.91	NA	59.64	NA	61.26	NA	62.8	NA	63.17	NA	63.57	NA	61.7	344.19
LMW-4R **	441.79	75.42	366.37	74.65	367.14	74.74	367.05	75.39	366.4	74.83	366.96	75.33	366.46	75.81	365.98	75.71	366.08	80.34	361.45	79.85	286.52	79.39	351.61
LMW-6	431.45	80.3	351.15	81.65	349.8	80.15	351.3	80.75	350.7	80.04	351.41	80.93	350.52	82.7	348.75	84.38	347.07	84.81	346.64	85.05	266.1	84.81	346.64
LMW-7R***	436.62	125.87	310.75	125.63	310.99	124.78	311.84	128.8	307.82	124.54	312.08	124.78	311.84	125	311.62	125.2	311.42	125.11	311.51	125.41	185.34	130.4	304.6
LMW-8	354.07	48.68	305.39	76.66	277.41	46.85	307.22	304.86	49.21	46.86	307.21	48.95	305.12	51.02	303.05	50.84	303.23	49.97	304.1	NA	NA	46.93	307.17
LMW-9	364.79	82.16	282.63	80	284.79	80.71	284.08	87.27	277.52	80.73	284.06	82.43	282.36	85	279.79	86.64	278.15	87.43	277.36	87.95	194.68	83.8	280.99
LMW-9S	*	52.46	NA	49.01	NA	51.01	NA	53.35	NA	51	NA	52.89	NA	55.05	NA	54.83	NA	53.95	NA	55.43	NA	51.3	NA
LMW-9D	*	76.95	NA	76.66	NA	75.41	NA	77.03	NA	75.48	NA	77.29	NA	79.73	NA	81.11	NA	82.07	NA	82.61	NA	78.4	NA
LMW-10	428.68	76.81	351.87	76.48	352.2	76.38	352.3	72.11	356.57	NA	NA	76.89	NA	78.84	349.84	79.87	348.81	79.87	348.81	80.25	271.62	77.9	350.78
LMW-14R	398.42	50.07	NA	49	NA	48.97	NA	50.06	NA	48.99	NA	50.25	NA	51.53	NA	52.02	NA	51.67	NA	52.28	NA	49.08	349.34
LMW-15R	*	40.89	NA	37	NA	37.55	NA	40.31	NA	38.19	NA	40.28	NA	41.68	NA	40.81	NA	40.35	NA	40.82	NA	36.4	NA
LMW-16	374.69	86.02	NA	36.48	NA	37.5	NA	37.28	NA	36.61	NA	36	NA	36.8	NA	37.36	NA	37.22	NA	36.91	NA	36.8	337.89

Note:
TOC – Top of casing,
bgs – Below ground surface,
Δ --- Selected Well for Long Term Monitoring
TOC elevation is based on vertical datum NGVD29 (source: USGS RFI, Aug. 1999)
btoc – Below top of casing,
amsl – Above mean sea level
*Well & ground-water elevations unavailable at this time.
** Data are for LMW-4 up through May 2013
*** Data are for LMW-7 up through May 2013
NA – Not Available
NS – Not Surveyed

Table 3. Field Parameter Measurements
Lamont Landfills, Fort Bragg, NC

Monitoring Well	Sample Identification	pH	Specific Conductivity (µs/cm)	Temperature (°C)	Turbidity (N.T.U.)	Dissolved Oxygen (mg/L)	ORP
LMW-3	GW-LMW-3-11-13	5.04	0.016	15.82	2.6	6.06	266
LMW-3S	GW-LMW-3S-11-13	4.91	0.024	15.8	10	5.21	258
LMW-4R	GW-LMW-4R-11-13	5.03	0.015	17.65	8.02	7.98	229
LMW-6	GW-LMW-6-11-13	5.18	0.161	15.14	9.4	0.45	256
LMW-7	GW-LMW-7-11-13	5.08	0.031	20.62	9	6.79	233
LMW-8	GW-LMW-8-11-13	5.28	0.095	17.43	9	2.22	181
LMW-9	GW-LMW-9-11-13	4.79	0.062	21.18	16.3	5.85	317
LMW-9S	GW-LMW-9S-11-13	5.64	0.304	19.15	10	0.59	106
LMW-9D	GW-LMW-9D-11-13	6.09	0.033	18.71	40	7.04	180
LMW-10	GW-LMW-10-11-13	5.08	0.031	20.62	9	6.79	233
LMW-14R	GW-LMW-14R-11-13	4.97	0.022	17.49	8.3	4.5	292
LMW-15R	GW-LMW-15R-11-13	4.62	0.043	18.67	2.1	6.53	291

Note:

N.T.U. --- Nephelometric Turbidity Unit
ORP --- Oxidation Reduction Potential
NS – Not Sampled

Table 4. Summary of Groundwater Detections
Lamont Landfills, Fort Bragg, NC

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	Lamont																																	
			LMW-3 04/05	LMW-3 10/05	LMW-3 06/06	LMW-3 11/06	GW-LMW-3 06/07	GW-LMW-3 11/07	GW-LMW-3 05/08	GW-LMW-3 11/08	LMW-3 06/09	LMW-3 11/09	LMW-3 06/10	LMW-3 11/10	LMW-3 6/11	LMW-3 11/11	LMW-3 5/12	LMW-3 11/12	LMW-3 05/13	LMW-3 11/13	LMW-4 04/05	LMW-4 10/05	LMW-4 10/05 Dup	LMW-4 06/06	LMW-4 11/06	GW-LMW-4 06/07	GW-LMW-4 11/07	GW-LMW-4 05/08	GW-LMW-4 11/08	LMW-4 06/09	LMW-4 11/09	LMW-4 06/10	LMW-4 11/10	LMW-4 6/11	LMW-4 11/11	LMW-4 5/12
VOCs (EPA 8260B)																																				
1,1,2,2-tetrachloroethane	0.17	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,1-dichloroethane	700	810*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,3-trichloropropane	0.005	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,4-trichlorobenzene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,4-trimethylbenzene	350	15 *	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.24 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dibromo-3-chloropropane	0.025	0.2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dibromoethane	0.0004	0.05	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dichloroethane	0.38	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dichloropropane	0.56	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,4-dichlorobenzene	75	75	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
2-butanone	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
4-Isopropyltoluene	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.95 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
4-Methyl-2-pentanone (MIBK)	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
acetone	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	5.7 J	6.9 J	BRL
acrolein	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
benzene	1	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
carbon disulfide	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chlorobenzene	50	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloroethane	2800	4.6*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloroform	70	80	BRL	BRL	BRL	BRL	BRL	BRL	0.27 J	0.27 J	0.33 J	0.5 J	0.31 J	0.42 J	0.4 J	0.44 J	0.41 J	0.52 J	0.33 J	0.30 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloromethane (methyl chloride)	2.6	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
cis-1,2-dichloroethene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
dibromochloromethane	0.41	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
dichlorodifluoromethane	1400	390*	BRL	BRL	BRL	BRL	BRL	BRL	0.45 J	0.43 J	BRL	0.41 J	BRL	BRL	BRL	BRL	0.31 J	0.51 J	BRL	BRL	BRL	BRL	BRL	0.57J	0.92J	BRL	BRL	0.71 J	0.95 J	BRL	1.1	BRL	0.81 J	BRL	1	0.66 J
diisopropyl ether	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
isopropylbenzene	70	660*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
m&p xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.44 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.25J	BRL	BRL	0.23J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
methylene chloride (dichloromethane)	4.6	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	3.1 J B	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	3.7 J B	BRL	BRL
MTBE	200	13*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
o-xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
sec-butylbenzene	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
tetrachloroethene	0.7	5	BRL	BRL	BRL	BRL	BRL	.025 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
toluene	1000	1000	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.3 J	BRL	BRL	BRL	BRL	0.38 J	BRL	BRL	BRL	BRL	BRL	0.33 J	BRL	BRL	BRL	0.47J	BRL	BRL	BRL	0.25 J	< 2	BRL	BRL	BRL	1.2	BRL	BRL
trans-1,2-dichloroethene	70	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
trichloroethene	2.8	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
trichlorofluoromethane	2100	1300*	0.25 J	0.34J	0.52J	BRL	BRL	BRL	0.74 J	0.63 J	0.84 J	0.68 J	0.58 J	0.52 J	0.51 J	0.89 J	0.71 J	1.1	0.91 J	0.81 J	2.37	0.68J	0.47J	2.53	2.37	BRL	BRL	3.79	2.66	0.82 J	2.4	2	1.7	0.31 J	1.2	1.3
Total Xylenes	530	0.01	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.32 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.24 J	BRL	BRL
vinyl chloride	0.015	2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Metals (EPA 6010B/6020A)																																				
Arsenic	10	10	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.44 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.13 J	BRL	BRL	BRL	0.51 J	BRL	BRL	BRL	BRL	BRL	BRL
Barium	2000	2000	BRL	7.2J	5.0J	7.4	5.33	BRL	5.47	5.8	BRL	6.4	5	13	3.5	12	4.6	4.5	3.3	4	14.2	12.5	11.8	10	13.6	24.7	1.14J	11.20	14.7	15	13	15	14	14	16	15
Beryllium	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.071 J	NA	NA	BRL	BRL	BRL
Cadmium	5	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Cobalt	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.16 J	0.16 J	0.17 J	0.51	BRL	0.43	0.18 J	0.18 J	0.16 J	0.17 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.24	0.24	0.27	0.29 J	0.27	0.25	0.26
Chromium	50	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.1 B	0.76 J	0.94 J	BRL	BRL	BRL	0.61 J	BRL	BRL	10.8 J	BRL	BRL	BRL	BRL	21.7	BRL	BRL	BRL	0.84 J	1 B	0.72 J	1	1.7	BRL	0.23 J
Copper	1000	1000	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.1	BRL	1.6	1	0.84 J	0.78 J	0.40 J	0.64 J	0.62 J	BRL	BRL	BRL	BRL	BRL	8.06 J	5.45 J	8.80	BRL	BRL	0.78 J	1.3	0.87 J	1.1	0.79 J	0.87 J
Iron	300	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	53	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	130	BRL	BRL	BRL	BRL
Lead	15	15	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.37	0.17 J	0.51	0.12 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.534J	BRL	0.644J	3.52	BRL	0.644J	BRL	0.13 J	0.3 J	0.19 J	0.16 J	0.26 J	0.13 J	0.3
Manganese	50	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.1 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Nickel	100	730*	BRL	BRL	BRL	BRL	BRL	BRL	1.12 J	BRL	BRL	1.1	1.3 J	3	0.85 J	3	0.51 J	1	0.45 J	0.41 J	BRL	BRL	BRL	BRL	1.6J	6.98	3.46	5.38	BRL	< 50	1.2	0.76 J	1.1	1.2	1.1	0.62 J
Selenium	50	50	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.54 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Silver	17.5	180	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Thallium	NA	2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Tin	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Vanadium	NA	260*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.8 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	15.8	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Zinc	2100	5000	BRL	BRL	BRL	6.46J	BRL	BRL	12	BRL	BRL	32 B	8.5 J	11	7.6 J	14	4.0 J	3.0 J	BRL	BRL	BRL	BRL	BRL	BRL	11.1	47.0	BRL	15.30	BRL	6.7 J	16 B	6.9 J	7.3	20	11	6.0 J
Other Analyses																																				
Mercury	1.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA
Nitrate-NO3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	660 J	730 J	640 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL
Nitrate/Nitrite as N (SM 4500)	1,000	1,000	NA	BRL	NA	0.333	209	139	510	5220	N/A	870 J	780 J	190 J	730	200 J	NA	NA	NA	0.23	NA	BRL	BRL	NA	0.050	**643,000**	107	370	44	N/A	40	840 J	BRL	<75	<75	NA

Note: BRL -- Below Reporting Limit; NA -- Not Available; NS -- Not Sampled; U -- Target analytes were not detected above the reporting limits; J -- Analyte concentration is an estimated value;
**Used values for Chlordane; * No MCL, used PRG; Bold--Concentration exceeds NC 2L Std.

Table 4. Summary of Groundwater Detections
Lamont Landfills, Fort Bragg, NC

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	Lamont																																	
			LMW-4 11/12	LMW-4 05/13	LMW-4R 11/13	LMW-6 04/05	LMW-6 10/05	LMW-6 6/06	LMW-6 11/06	LMW-6 Dup 11/06	GW-LMW-6 06/07	GW-LMW-6 Dup 06/07	GW-LMW-6 11/07	GW-LMW-6 05/08	GW-LMW-6 11/08	GW-LMW-6	GW-LMW-6	LMW-6 06/10	LMW-6 11/10	LMW-6 6/11	LMW-6 11/11	LMW-6 5/12	LMW-6 11/12	LMW-6 05/13	LMW-6 11/13	LMW-7 04/05	LMW-7 10/05	LMW-7 6/06	LMW-7 6/06 Dup	LMW-7 11/06	GW-LMW-7 06/07	GW-LMW-7 11/07	GW-LMW-7 05/08	GW-LMW-7 11/08	GW-LMW-7	GW-LMW-7	LMW-7 06/10
VOCs (EPA 8260B)																																				
1,1,2,2-tetrachloroethane	0.17	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
1,1-dichloroethane	700	810*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
1,2,3-trichloropropane	0.005	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
1,2,4-trichlorobenzene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
1,2,4-trimethylbenzene	350	15 *	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.21 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
1,2-dibromo-3-chloropropane	0.025	0.2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
1,2-dibromoethane	0.0004	0.05	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
1,2-dichloroethane	0.38	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
1,2-dichloropropane	0.56	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
1,4-dichlorobenzene	75	75	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
2-butanone	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
4-Isopropyltoluene	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
4-Methyl-2-pentanone (MIBK)	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
acetone	700	NA	BRL	BRL	BRL	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	4.69 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NA	BRL	BRL	BRL	BRL	BRL	BRL	282	4.22 J	BRL	NS	NS
acrolein	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
benzene	1	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
carbon disulfide	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
chlorobenzene	50	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
chloroethane	2800	4.6*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
chloroform	70	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
chloromethane (methyl chloride)	2.6	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.5 J	BRL	NS	NS
cis-1,2-dichloroethene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
dibromochloromethane	0.41	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
dichlorodifluoromethane	1400	390*	0.60 J	0.42 J	BRL	BRL	BRL	0.93J	2.67	2.80	BRL	BRL	BRL	0.83 J	0.82 J	BRL	BRL	BRL	BRL	BRL	BRL	0.69 J	0.47 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.71 J	BRL	BRL	BRL	NS	NS
diisopropyl ether	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
isopropylbenzene	70	660*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
m&p xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.230J	BRL	BRL	BRL	BRL	BRL	NS	NS
methylene chloride (dichloromethane)	4.6	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
MTBE	200	13*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
o-xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
sec-butylbenzene	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
tetrachloroethene	0.7	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.22 J	BRL	BRL	0.16 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
toluene	1000	1000	0.42 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.30 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.07 J	BRL	BRL	BRL	0.850J	BRL	BRL	BRL	BRL	0.5 J	NS	NS
trans-1,2-dichloroethene	70	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
trichloroethene	2.8	5	0.16 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
trichlorofluoromethane	2100	1300*	1	0.66 J	BRL	0.63 J	1.54J	1.13J	BRL	0.860J	BRL	BRL	BRL	1.22 J	0.72 J	0.95 J	1.1	0.72 J	0.48 J	0.70 J	0.35 J	0.67 J	0.41 J	0.64 J	0.58 J	BRL	BRL	BRL	BRL	BRL	2.5	4.79	BRL	BRL	BRL	NS	NS
Total Xylenes	530	0.01	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
vinyl chloride	0.015	2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
Metals (EPA 6010B/6020A)																																				
Arsenic	10	10	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.1 J	BRL	BRL	BRL	BRL	BRL	BRL	0.46 J	0.52 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.05 J	BRL	BRL	**10.8**	BRL	NS	NS
Barium	2000	2000	13	14	5.5	9.5 J	12.3	20	33.9	33.7	52.4	46.4	42	49.2	73.7	92	74	77	79	55	44 J	36	33	30	27	31.7	30	20	10	11.6	27.4	6.28	5.48 J	7	12	NS	NS
Beryllium	NA	4	BRL	0.078 J	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.15 J	0.15 J	0.13 J	0.16 J	0.085 J	BRL	0.075 J	BRL	0.092 J	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.15 J	NS	NS
Cadmium	5	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.701J	0.57J	BRL	BRL	BRL	BRL	BRL	BRL	1.2	NS	NS
Cobalt	NA	NA	0.26	0.5	0.15 J	BRL	BRL	BRL	0.734J	0.733J	BRL	BRL	BRL	0.93 J	BRL	1.4	1.2	1.2	1.1	0.72	0.52	0.46	0.41	0.37	0.33	BRL	BRL	BRL	BRL	1.03	BRL	BRL	BRL	BRL	0.63	NS	NS
Chromium	50	100	0.24 J	0.19 J	BRL	BRL	BRL	BRL	BRL	BRL	4.74 J	3.75 J	BRL	7.82	BRL	BRL	BRL	0.57 J	0.24 J	0.18 J	BRL	BRL	BRL	BRL	BRL	19.0 J	23.2	BRL	BRL	5.28	24.7	BRL	7.18	BRL	5.8	NS	NS
Copper	1000	1000	0.23 J	1.3	0.28 J	BRL	BRL	BRL	BRL	BRL	7.78 J	BRL	BRL	2.70 J	BRL	BRL	1.2	3	2.2	1.1	BRL	0.49 J	0.78 J	0.76 J	0.48 J	10.8 J	11.1	10J	BRL	6.64	6.05 J	7.53 J	BRL	BRL	4	NS	NS
Iron	300	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	52	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
Lead	15	15	BRL	0.13 J	0.19 J	BRL	BRL	BRL	BRL	BRL	0.839 J	0.873 J	BRL	BRL	BRL	0.084 J	BRL	0.14 J	0.17 J	0.099 J	BRL	BRL	0.11 J	BRL	BRL	3.11	3.07	3.37	2.31	1.81	3.51	BRL	BRL	0.533 J	0.88	NS	NS
Manganese	50	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	5.6	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
Nickel	100	730*	1.1	0.77 J	0.42 J	BRL	BRL	BRL	1.13J	1.12J	5.53 J	BRL	BRL	2.06	BRL	2.2	1.8 J	1.9	1.9	1.1	0.99 J	0.64 J	0.85 J	0.60J	0.72 J	18.9 J	BRL	BRL	BRL	4.23	7.73	4.71 J	2.42	3 J	5.5	NS	NS
Selenium	50	50	BRL	BRL	BRL	BRL	1.8J	2.12	2.83	2.91	2.93	2.46	4.3	2.99 J	BRL	3.2	2.6	3.2	6	5.6	3	3.2	3.3	1.8	1.4	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
Silver	17.5	180	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
Thallium	NA	2	BRL	0.15 J	0.12 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.18 J	BRL	BRL	BRL	BRL	0.17 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
Tin	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS
Vanadium	NA	260*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	3.7 J	4.21	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	12.6 J	18.5J	8.0J	BRL	3.56J	14.8	BRL	BRL	BRL	2.9 J	NS	NS
Zinc	2100	5000	11	5.9 J	BRL	BRL	BRL	20J	7.63J	7.85J	17.3 J	15.2 J	27 J	10.1	BRL	BRL	41	11	8.6 J	8.7 J	4.9 J	2.9 J	3.4 J	2.6 J	BRL	27.5 J	31.4J	40J	20J	21.6	51.0	BRL	10.9	BRL	BRL	NS	NS
Other Analyses																																				
Mercury	1.05	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-NO3	NA	NA	BRL	BRL	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5500	5600	5,800	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite as N (SM 4500)	1,000	1,000	NA	NA	0.071	NA	BRL	NA	1.15	1.14	1,220	1,290	950	1410	908	NA	5000	8,800	1,400	1,700	1,200	NA	NA	NA	2	NA	BRL	NA	NA	0	295	528	130	113	NA	NS	NS

Note: BRL -- Below Reporting Limit; NA -- Not Available; NS -- Not Sampled; U -- Target analytes were not detected above the reporting limits; J -- Analyte concentration is an estimated value;
**Used values for Chlordane; * No MCL, used PRG; Bold--Concentration exceeds NC 2L Std.

Table 4. Summary of Groundwater Detections
Lamont Landfills, Fort Bragg, NC

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	Lamont																																
			LMW-7 11/10	LMW-7 6/11	LMW-7 11/11	LMW-7 5/12	LMW-7 11/12	LMW-7 05/13	LMW-7 11/13	LMW-8 04/05	LMW-8 10/05	LMW-8b 6/06	LMW-8 11/06	GW-LMW-8 06/07	GW-LMW-8 11/07	GW-LMW-8 05/08	GW-LMW-8 11/08	GW-LMW-8	GW-LMW-8	LMW-8 06/10	LMW-8 11/10	LMW-8 6/11	LMW-8 11/11	LMW-8 5/12	LMW-8 11/12	LMW-8 05/13	LMW-8 11/13	LMW-9 04/05	MW-DUP2 04/05	LMW-9 10/05	LMW-9 6/06	LMW-9 11/06	GW-LMW-9 06/07	GW-LMW-9 11/07	GW-LMW-9 05/08	GW-LMW-9 11/08
VOCs (EPA 8260B)																																			
1,1,2,2-tetrachloroethane	0.17	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,1-dichloroethane	700	810*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,3-trichloropropane	0.005	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,4-trichlorobenzene	70	70	BRL	BRL	BRL	BRL	0.25 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,4-trimethylbenzene	350	15 *	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.21 J
1,2-dibromo-3-chloropropane	0.025	0.2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dibromoethane	0.0004	0.05	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dichloroethane	0.38	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dichloropropane	0.56	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,4-dichlorobenzene	75	75	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
2-butanone	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
4-Isopropyltoluene	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
4-Methyl-2-pentanone (MIBK)	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
acetone	700	NA	7.5 J	BRL	11 J	BRL	BRL	BRL	BRL	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	5.6 J	BRL	NS	BRL	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL
acrolein	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
benzene	1	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
carbon disulfide	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chlorobenzene	50	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloroethane	2800	4.6*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloroform	70	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloromethane (methyl chloride)	2.6	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
cis-1,2-dichloroethene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.27J	0.43J	0.300J	BRL	0.35 J	0.35 J	BRL	2.4	BRL	1.1	BRL	1.5	1.7	3.2	2.7	NS	2.1	BRL	0.44 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL
dibromochloromethane	0.41	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	v	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
dichlorodifluoromethane	1400	390*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
diisopropyl ether	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
isopropylbenzene	70	660*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
m&p xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.41 J
methylene chloride (dichloromethane)	4.6	5	BRL	3.0 J B	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
MTBE	200	13*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
o-xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.22 J
sec-butylbenzene	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
tetrachloroethene	0.7	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.6J	BRL	0.370J	BRL	0.22 J	0.22 J	0.22 J	0.31 J	0.26 J	0.25 J	0.19 J	BRL	BRL	BRL	BRL	NS	2	BRL	1.87 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL
toluene	1000	1000	BRL	1.3	BRL	BRL	0.94 J	0.39 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.39 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.52 J
trans-1,2-dichloroethene	70	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
trichloroethene	2.8	5	BRL	BRL	BRL	BRL	0.22 J	0.22 J	BRL	BRL	0.24J	0.23J	BRL	BRL	BRL	BRL	BRL	0.41 J	0.19 J	0.29 J	0.14 J	BRL	0.23 J	0.23 J	0.19 J	NS	0.92 J	BRL	0.83 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL
trichlorofluoromethane	2100	1300*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Total Xylenes	530	0.01	BRL	0.22 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
vinyl chloride	0.015	2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL		BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Metals (EPA 6010B/6020A)																																			
Arsenic	10	10	BRL	1.8	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.49 J	0.53 J	0.43 J	0.48 J	0.81 J	1.2	1.3	1.7	NS	BRL	1.04 J	BRL	BRL	1.52J	BRL	1.12 J	BRL	BRL	8.7
Barium	2000	2000	5.2	13	8.5	7.6	6.9	4.3	BRL	48.5	38.1	40	32.0	34.0	41.0	34.9	29	40	40	30	44	32	45	39	38	NS	16	BRL	BRL	BRL	10	3.84	6.29	3 J	2.71	4
Beryllium	NA	4	NA	0.34	BRL	0.094 J	0.092 J	BRL	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	BRL	NS	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	5	0.6	4.9	0.68	0.24 J	0.25 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Cobalt	NA	NA	0.19 J	2.7	0.44	0.29	0.41	0.11 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.83 J	BRL	0.47	0.71	0.78	0.71	1.5	1.4	1.2	0.98	NS	0.32	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Chromium	50	100	0.25 J	12	0.27 J	0.37 J	1.6	0.24 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.28 J	0.69 J	0.35 J	0.16 J	0.18 J	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	10J	BRL	7.14	BRL	BRL	BRL
Copper	1000	1000	3.8	13	3.5	2.1	1.5	1.1	BRL	BRL	BRL	BRL	BRL	BRL	6 J	BRL	BRL	0.75 J	0.65 J	1.3	0.75 J	0.48 J	2.1	0.46 J	BRL	NS	0.38 J	BRL	BRL	BRL	10J	BRL	5.28 J	7 J	BRL	BRL
Iron	300	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**9400**	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Lead	15	15	0.86	2.5	0.36	0.4	0.26 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	0.525 J	BRL	BRL	0.87J	0.989J	1.40	BRL	1.41	BRL
Manganese	50	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**150**	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Nickel	100	730*	1.7	7.5	1.5	4.2	2.1	BRL	BRL	BRL	BRL	BRL	1.72J	BRL	BRL	1.76 J	BRL	0.61	0.64	0.69 J	0.65 J	0.95 J	1.3	0.55 J	0.64 J	NS	BRL	BRL	BRL	BRL	BRL	BRL	3.26 J	BRL	1.49 J	9
Selenium	50	50	BRL	0.30 J	0.86	BRL	BRL	BRL	BRL	3.28	1.67J	1.87J	1.67J	1.04 J	3.73 J	BRL	BRL	0.64	0.59	0.33 J	0.66	BRL	0.22 J	BRL	BRL	NS	0.59	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Silver	17.5	180	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Thallium	NA	2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.11 J	BRL	0.11 J	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Tin	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Vanadium	NA	260*	BRL	7	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	8.4 J	8.4 J	BRL	30	BRL	7.06	BRL	2.78 J	BRL
Zinc	2100	5000	9.5 J	59	15	11	6.4 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	5.20 J	BRL	8.2 J	19	4.5 J	3.2	11J	24	BRL	BRL	NS	BRL	BRL	BRL	BRL	20J	BRL	17.1 J	BRL	7.93 J	BRL
Other Analyses																																			
Mercury	1.05	NA	NA	NA	BRL	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-NO3	NA	NA	NA	NA	NA	360 J	790 J	BRL	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	NS	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite as N (SM 4500)	1,000	1,000	560 J	86 J	120 J	NA	NA	NA	BRL	NA	BRL	NA	0.216	398	527	570	466	NA	740 J	0.45 J	610	260	BRL	NA	NA	NA	0.43	NA	NA	BRL	NA	0.10	**17,200**	222	460	236

Note: BRL -- Below Reporting Limit; NA -- Not Available; NS -- Not Sampled; U -- Target analytes were not detected above the reporting limits; J -- Analyte concentration is an estimated value;
**Used values for Chlordane; * No MCL, used PRG; Bold--Concentration exceeds NC 2L Std.

Table 4. Summary of Groundwater Detections
Lamont Landfills, Fort Bragg, NC

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	Lamont																																	
			LMW-9 06/09	LMW-9 11/09	LMW-9 06/10	LMW -9 11/10	LMW -9 6/11	LMW -9 11/11	LMW -9 5/12	LMW -9 11/12	LMW -9 05/13	LMW -9 11/13	LMW-10 04/05	LMW-10 10/05	LMW-10 6/06	LMW-10 11/06	GW-LMW-10 06/07	GW-BLK 11/06	GW-LMW-10 11/07	GW-LMW-10 05/08	GW-LMW-10 11/08	LMW-10 06/09	LMW-10 11/09	LMW-10 06/10	LMW-10 11/10	LMW-10 6/11	LMW-10 11/11	LMW-10 5/12	LMW-10 11/12	LMW-10 05/13	LMW-10 11/13	LMW-1 11/06	LMW-3S 11/06	GW-LMW-3S 06/07	GW-LMW-3S 11/07	GW-LMW-3S 05/08
VOCs (EPA 8260B)																																				
1,1,2,2-tetrachloroethane	0.17	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,1-dichloroethane	700	810*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.43J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,3-trichloropropane	0.005	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,4-trichlorobenzene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,4-trimethylbenzene	350	15 *	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dibromo-3-chloropropane	0.025	0.2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dibromoethane	0.0004	0.05	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dichloroethane	0.38	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dichloropropane	0.56	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,4-dichlorobenzene	75	75	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
2-butanone	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
4-Isopropyltoluene	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.22 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL
4-Methyl-2-pentanone (MIBK)	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
acetone	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	5.8 J	BRL	BRL	BRL	BRL	1.60J	BRL	BRL	BRL	BRL
acrolein	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
benzene	1	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
carbon disulfide	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chlorobenzene	50	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloroethane	2800	4.6*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloroform	70	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.20 J	0.14 J	0.23 J	BRL	0.25 J	0.15 J	BRL	BRL	BRL	BRL	BRL	BRL
chloromethane (methyl chloride)	2.6	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
cis-1,2-dichloroethene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
dibromochloromethane	0.41	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**2.08**	BRL
dichlorodifluoromethane	1400	390*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	2.02	9.35	2.5	BRL	3.4	4.66	2.42	BRL	4.9	BRL	BRL	BRL	10	6.7	6.2	3.9	1.600	BRL	12.6	BRL	BRL	0.62 J
diisopropyl ether	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
isopropylbenzene	70	660*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
m&p xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
methylene chloride (dichloromethane)	4.6	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.69 J	0.63 J	0.49 J	BRL	BRL	BRL	BRL	2.4 J	2.2 J	1.8 J	1.9 J	1.2 J	BRL	BRL	BRL	BRL	BRL	BRL
MTBE	200	13*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
o-xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
sec-butylbenzene	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
tetrachloroethene	0.7	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	4.94	BRL	0.24 J	BRL	0.27 J	BRL	0.35 J	0.28 J	0.29 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL
toluene	1000	1000	BRL	0.41 J	BRL	BRL	0.39 J	BRL	BRL	BRL	BRL	BRL	0.26 J	BRL	BRL	BRL	BRL	0.57J	BRL	BRL	0.24 J	BRL	BRL	BRL	BRL	0.38 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.4	1.4	BRL
trans-1,2-dichloroethene	70	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
trichloroethene	2.8	5	BRL	BRL	BRL	BRL	0.16 J	0.14 J	BRL	BRL	BRL	BRL	0.39 J	0.56J	0.91J	0.440J	BRL	BRL	0.48 J	BRL	0.58 J	0.88 J	1.7	1.1	0.97 J	1.4	1.9	1.4	1.6	0.63 J	1.800	BRL	BRL	BRL	BRL	BRL
trichlorofluoromethane	2100	1300*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.26J	2.07	7.01	3.3	BRL	7.73	10.6	BRL	6.6	13	5.8	7.3	3.7	14	14	13	7.9	2.500	BRL	0.330J	BRL	1.03 J	0.52 J
Total Xylenes	530	0.01	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
vinyl chloride	0.015	2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Metals (EPA 6010B/6020A)																																				
Arsenic	10	10	1.1 J	BRL	0.58 J	1.6	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.15 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Barium	2000	2000	3.1	2.9	2.8	4	3.3	3.4	13	21	10	9.9	13.5	BRL	20	11.9	21.3	BRL	16.7	12	12.7	13	12	12	14	21	23	23	25	25	14.00	BRL	5.95	18.7	13	8.86
Beryllium	NA	4	0.089 J	NA	NS	0.12 J	BRL	BRL	0.27	0.38	0.2	0.13 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	NA	NA	NA	NA	NA
Cadmium	5	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.94J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Cobalt	NA	NA	0.15 J	0.13 J	0.13 J	0.16 J	0.13 J	0.11 J	1.3	1.8	0.7	0.71	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.13 J	0.15 J	0.2	0.16 J	0.23	0.19 J	0.25	0.23	0.21	0.15 J	BRL	BRL	BRL	BRL	0.53 J
Chromium	50	100	1.2	0.62 J	0.44 J	2.1	0.56 J	BRL	0.32 J	0.44 J	0.20 J	BRL	BRL	BRL	BRL	BRL	2.72 J	BRL	BRL	BRL	BRL	0.36 J	0.26 J	0.36 J	0.30 J	0.61 J	0.33 J	0.44 J	0.55 J	0.44 J	0.26 J	BRL	BRL	11.6	BRL	BRL
Copper	1000	1000	0.88 J	0.59 J	2.4	1.7	0.65 J	0.78 J	4.2	5	2.8	2.2	BRL	BRL	BRL	BRL	BRL	BRL	5.41 J	2.79 J	BRL	0.51 J	BRL	1.9	0.39 J	0.35 J	0.57 J	BRL	BRL	0.24 J	0.26 J	8.51	2.54J	BRL	6	BRL
Iron	300	NA	BRL	BRL	200	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	41 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Lead	15	15	0.17 J	BRL	0.16 J	0.57	BRL	BRL	0.097 J	0.094 J	0.096 J	BRL	BRL	BRL	0.78J	BRL	4.15	BRL	BRL	BRL	0.524 J	BRL	BRL	0.11 J	BRL	BRL	BRL	0.25 J	BRL	BRL	0.14 J	BRL	BRL	3.71	1.47	BRL
Manganese	50	NA	BRL	BRL	1.4 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.1 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Nickel	100	730*	0.33 J	0.46 J	BRL	0.63 J	0.96 J	0.55 J	2.4	3.5	1.5	1.1	BRL	BRL	BRL	BRL	BRL	BRL	3.24 J	1.53 J	BRL	0.38 J	0.5 J	BRL	BRL	0.70 J	0.89 J	BRL	0.71 J	0.42 J	0.45 J	BRL	2.41	4.92 J	5	3.72
Selenium	50	50	0.28 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	2.8	3.1	4.3	5	3.9	1.10	1.15J	BRL	BRL	BRL	BRL
Silver	17.5	180	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Thallium	NA	2	BRL	BRL	BRL	BRL	BRL	BRL	0.13 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.15 J	BRL	BRL	BRL	BRL	BRL
Tin	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.63 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Vanadium	NA	260*	2.6 J	BRL	BRL	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	8.0J	BRL	3.12 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	9.91	BRL	BRL
Zinc	2100	5000	BRL	7 J	4.4 J	4.5 J	3.7 J	6.6 J	BRL	12 J	3.7 J	4.8 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	40.8	BRL	BRL	21	3.6 J	5.3 J	4.2 J	5.5 J	BRL	BRL	BRL	BRL	BRL	10.1	16.6 J	48	15.2
Other Analyses																																				
Mercury	1.05	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	BRL	NA	NA	NA	NA	NA
Nitrate-NO3	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1300	1300	1,100	BRL	NA	NA	NA	NA	NA
Nitrate/Nitrite as N (SM 4500)	1,000	1,000	NA	450 J	450 J	94 J	110 J	98 J	NA	NA	NA	0.11	NA	BRL	NA	0.551	1,020	BRL	964	410	513	NA	2,400	3,700	520	580	510	NA	NA	NA	0.071	BRL	0.321	196	228	550

Note: BRL -- Below Reporting Limit; NA -- Not Available; NS -- Not Sampled; U -- Target analytes were not detected above the reporting limits; J -- Analyte concentration is an estimated value;
**Used values for Chlordane; * No MCL, used PRG; Bold--Concentration exceeds NC 2L Std.

Table 4. Summary of Groundwater Detections
Lamont Landfills, Fort Bragg, NC

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	Lamont																													
			GW-LMW-3S 11/08	LMW-3S 06/09	LMW-3S 11/09	LMW-3S 06/10	LMW-3S 11/10	LMW-3S 6/11	LMW-3S 11/11	LMW-3S 5/12	LMW-3S 11/12	LMW-3S 05/13	LMW-3S 11/13	LMW-9D 11/06	GW-LMW-9D 06/07	GW-LMW-9D 11/07	GW-LMW-9D 05/08	GW-LMW-9D 11/08	LMW-9D 06/09	LMW-9D 11/09	LMW-9D 06/10	LMW-9D 11/10	LMW-9D 6/11	LMW-9D 11/11	LMW-9D 5/12	LMW-9D 11/12	LMW-9D 05/13	LMW-9D 11/13	LMW-9S 11/06	GW-LMW-9S 06/07	GW-LMW-9S 11/07	GW-LMW-9S 05/08	GW-LMW-9S 11/08
VOCs (EPA 8260B)																																
1,1,2,2-tetrachloroethane	0.17	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**0.66 J**	BRL	BRL
1,1-dichloroethane	700	810*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,3-trichloropropane	0.005	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**0.76 J**	BRL	BRL
1,2,4-trichlorobenzene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,4-trimethylbenzene	350	15 *	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dibromo-3-chloropropane	0.025	0.2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**0.82 J**	BRL	BRL
1,2-dibromoethane	0.0004	0.05	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**0.43 J**	BRL	BRL
1,2-dichloroethane	0.38	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**0.24 J**	BRL	BRL
1,2-dichloropropane	0.56	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,4-dichlorobenzene	75	75	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
2-butanone	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
4-Isopropyltoluene	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.44 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
4-Methyl-2-pentanone (MIBK)	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
acetone	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
acrolein	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
benzene	1	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**1.3**	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
carbon disulfide	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chlorobenzene	50	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloroethane	2800	4.6*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloroform	70	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloromethane (methyl chloride)	2.6	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
cis-1,2-dichloroethene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
dibromochloromethane	0.41	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.20 J	BRL	BRL
dichlorodifluoromethane	1400	390*	2.76	BRL	BRL	4	2.3	0.76 J	BRL	2.1	3.2	1.7	1.9	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
diisopropyl ether	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
isopropylbenzene	70	660*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
m&p xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
methylene chloride (dichloromethane)	4.6	5	BRL	BRL	BRL	BRL	BRL	3.2 J B	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	3.4 J B	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
MTBE	200	13*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.33 J	BRL	BRL
o-xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
sec-butylbenzene	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
tetrachloroethene	0.7	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
toluene	1000	1000	0.22 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.30 J	BRL	BRL	BRL	BRL	0.43 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.20 J
trans-1,2-dichloroethene	70	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
trichloroethene	2.8	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.13 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
trichlorofluoromethane	2100	1300*	1.05 J	1.1	0.97 J	1.4	1.1	0.36 J	0.80 J	1.2	1.7	0.97 J	0.56 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Total Xylenes	530	0.01	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
vinyl chloride	0.015	2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Metals (EPA 6010B/6020A)																																
Arsenic	10	10	BRL	BRL	BRL	BRL	1	0.84 J	BRL	BRL	BRL	BRL	BRL	7.67	7.66	BRL	3.84	3.39	2.1	2	1.8	2	3.2	2.5	2.6	5.3	BRL	2.1	BRL	1.68 J	4.54	BRL	BRL
Barium	2000	2000	13.8	12	10	12	16	14	5.4	13	14	12	11	13.9	5.57	120	10.1	3	3.1	2.9	2.1	2.8	3.8	2.8	2.5	1.9	10	2.1	77.3	80.9	2	75.3	61
Beryllium	NA	4	NA	0.076 J	NA	NA	0.12 J	0.10 J	BRL	BRL	BRL	0.073 J	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	BRL	0.2	BRL	NA	NA	NA	NA	NA
Cadmium	5	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Cobalt	NA	NA	BRL	0.42	0.42	0.57	0.53	0.45	0.2	0.52	0.61	0.5	0.51	BRL	BRL	3	BRL	BRL	BRL	BRL	BRL	0.081 J	0.13 J	BRL	BRL	BRL	0.7	BRL	1.27	1.04 J	BRL	1.13	BRL
Chromium	50	100	BRL	1.7 J	0.54 J	0.37 J	4.1	3.3	BRL	BRL	BRL	BRL	BRL	6.51	BRL	BRL	3.32 J	BRL	1	1.1	0.5 J	0.58 J	3.1	BRL	0.35 J	0.98 J	0.20 J	BRL	BRL	5.73	BRL	BRL	BRL
Copper	1000	1000	BRL	BRL	0.82 J	BRL	1.7	1.3	1.1	0.81 J	0.99 J	0.81 J	0.78 J	6.37	BRL	9	2.63 J	BRL	0.69 J	0.75 J	0.9 J	0.53 J	BRL	0.94 J	0.63 J	0.66 J	2.8	0.52 J	BRL	BRL	7	BRL	BRL
Iron	300	NA	BRL	BRL	BRL	41 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	150	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Lead	15	15	BRL	0.58	BRL	0.093 J	1.7	1.7	BRL	BRL	BRL	BRL	BRL	3.60	3.97	0.68	3.94	BRL	0.71	0.31	0.23 J	0.44	0.46	0.12 J	0.49	0.29 J	0.096 J	BRL	BRL	2.16	1.19	BRL	0.761
Manganese	50	NA	BRL	BRL	BRL	23	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.5 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Nickel	100	730*	3.7 J	2.6	2.8	4.1	3.1	3.1	0.95 J	2.8	3	2.7	2.5	2.16	BRL	BRL	1.45 J	BRL	0.55 J	0.69	0.53 J	0.60 J	2.5	0.75 J	BRL	0.73 J	1.5	BRL	1.15J	BRL	BRL	1.51 J	BRL
Selenium	50	50	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	4.95 J	BRL	BRL	BRL	BRL	BRL	BRL	0.49 J	BRL	BRL	BRL	BRL	BRL	4.56	4.53	BRL	BRL	BRL
Silver	17.5	180	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**33**	**BRL**	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Thallium	NA	2	BRL	BRL	BRL	BRL	BRL	BRL	BRL2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.13 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Tin	NA	NA	BRL	BRL	BRL	BRL	0.67 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Vanadium	NA	260*	BRL	2.1 J	BRL	BRL	4.6 J	3.2 J	BRL	BRL	BRL	BRL	BRL	10.0	5.73	BRL	5.5	5	2.5 J	2.3 J	1.8 J	2.3 J	2.6 J	2.0 J	2.4 J	3.9 J	BRL	BRL	BRL	5.99	BRL	BRL	BRL
Zinc	2100	5000	BRL	BRL	13	BRL	11	7.6 J	5.5 J	11	12	8.8 J	6.4 J	7.91	BRL	BRL	18	BRL	3.5 J	25	5.6	5.1 J	13	14	2.7 J	5.3 J	3.7 J	BRL	BRL	BRL	BRL	32.2	BRL
Other Analyses																																
Mercury	1.05	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	0.11	NA	NA	NA	NA	NA
Nitrate-NO3	NA	NA	NA	NA	NA	NA	NA	NA	NA	820 J	770 J	920 J	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	NA	NA
Nitrate/Nitrite as N (SM 4500)	1,000	1,000	343	NA	710 J	BRL	88 J	150 J	240 J	NA	NA	NA	0.27	0.107	461	39	BRL	130	NA	430 J	580 J	97 J	130 J	330	85 J	NA	NA	BRL	0.19	1,000	147	BRL	132

Note: BRL -- Below Reporting Limit; NA -- Not Available; NS -- Not Sampled; U -- Target analytes were not detected above the reporting limits; J -- Analyte concentration is an estimated value;
**Used values for Chlordane; * No MCL, used PRG; Bold--Concentration exceeds NC 2L Std.

Table 4. Summary of Groundwater Detections
Lamont Landfills, Fort Bragg, NC

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	Lamont																													
			LMW-9S 06/09	LMW-9S 11/09	LMW-9S 06/10	LMW-9S 11/10	LMW-9S 6/11	LMW-9S 11/11	LMW-9S 5/12	LMW-9S 11/12	LMW-9S 05/13	LMW-9S 11/13	LMW-15 11/06	LMW-16 11/06	GW-LMW-16 06/07	GW-LMW-16 11/07	GM-LMW-16 05/08	GW-LMW-16 11/08	LMW-16 06/09	LMW-16 11/09	LMW-16 06/10	LMW-16 11/10	LMW-16 6/11	LMW-16 11/11	LMW-16 5/12	LMW-16 11/12	LMW-16 05/13	LMW-16 11/13	GW-LMW-16-DUP 11/07	GW-LMW-16-DUP	GW-LMW-14R 06/07	GW-LMW-14R 11/07	GW-LMW-14R 05/08
VOCs (EPA 8260B)																																
1,1,2,2-tetrachloroethane	0.17	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
1,1-dichloroethane	700	810*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
1,2,3-trichloropropane	0.005	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
1,2,4-trichlorobenzene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
1,2,4-trimethylbenzene	350	15 *	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
1,2-dibromo-3-chloropropane	0.025	0.2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
1,2-dibromoethane	0.0004	0.05	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
1,2-dichloroethane	0.38	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
1,2-dichloropropane	0.56	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
1,4-dichlorobenzene	75	75	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
2-butanone	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
4-Isopropyltoluene	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
4-Methyl-2-pentanone (MIBK)	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
acetone	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
acrolein	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
benzene	1	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
carbon disulfide	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
chlorobenzene	50	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
chloroethane	2800	4.6*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
chloroform	70	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
chloromethane (methyl chloride)	2.6	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
cis-1,2-dichloroethene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
dibromochloromethane	0.41	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
dichlorodifluoromethane	1400	390*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
diisopropyl ether	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
isopropylbenzene	70	660*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
m&p xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
methylene chloride (dichloromethane)	4.6	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
MTBE	200	13*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
o-xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
sec-butylbenzene	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
tetrachloroethene	0.7	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
toluene	1000	1000	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.240J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
trans-1,2-dichloroethene	70	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
trichloroethene	2.8	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
trichlorofluoromethane	2100	1300*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
Total Xylenes	530	0.01	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
vinyl chloride	0.015	2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL
Metals (EPA 6010B/6020A)																																
Arsenic	10	10	2.1	0.47 J	0.57 J	1.2	0.46 J	0.47 J	0.54 J	1.2	1.1	0.62 J	BRL	BRL	2.13	BRL	BRL	9.27	0.56 J	0.59 J	0.5 J	0.54 J	1	0.54 J	1.8	1.1	2.1	2.4	BRL	11	1.11 J	BRL	BRL
Barium	2000	2000	3.1	48	38	53	59	66	39	68	46	47	37.4	23.1	41.3	35	22.9	23	14	13	8.8	10	11	8.8	9.2	9.2	8	8.6	29	4 J	14.6	12	9.72
Beryllium	NA	4	NA	NA	NA	0.071 J	BRL	BRL	BRL	BRL	BRL	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	NA	NA	NA	NA	NA
Cadmium	5	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.002 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Cobalt	NA	NA	BRL	0.25	0.16 J	0.26	0.87	1.1	1	0.89	1	0.92	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.08 J	0.098 J	0.078 J	0.13 J	BRL	0.14 J	0.11 J	0.18 J	0.45	BRL	BRL	BRL	BRL	0.51 J
Chromium	50	100	BRL	0.44 J	0.58 J	4.4	BRL	0.27 J	BRL	BRL	BRL	BRL	BRL	BRL	20.7	BRL	BRL	BRL	0.83 J	0.53 J	0.56 J		0.70 J	BRL	BRL	0.94 J	1.8	0.18 J	BRL	BRL	BRL	BRL	BRL
Copper	1000	1000	0.69 J	1.7	1.7	1.6	0.49 J	0.88 J	0.23 J	BRL	0.25 J	0.35 J	3.66J	BRL	7.37 J	6	BRL	5 J	0.36 J	0.59 J	BRL	0.46 J	0.67 J	0.95 J	0.27 J	0.30 J	0.78 J	0.37 J	6	BRL	BRL	BRL	BRL
Iron	300	NA	BRL	BRL	360	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	150	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Lead	15	15	0.71	0.21 J	0.11 J	0.55	BRL	BRL	BRL	BRL	BRL	BRL	0.559J	0.643J	5.28	2.62	BRL	BRL	BRL	0.099 J	0.26 J	BRL	<0.16 J	BRL	BRL	BRL	BRL	0.19 J	4.21	BRL	4.42	BRL	BRL
Manganese	50	NA	BRL	BRL	13	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.1 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Nickel	100	730*	0.55 J	0.97 J	BRL	0.44 J	0.67 J	0.85 J	BRL	0.71 J	BRL	0.41 J	1.80J	1.03J	BRL	BRL	BRL	BRL	0.72	0.66	0.97 J	BRL	0.65 J	0.90 J	0.55 J	0.95 J	0.70 J	0.49 J	BRL	BRL	BRL	BRL	2.39
Selenium	50	50	BRL	BRL	BRL	0.26 J	0.38 J	0.22 J	BRL	0.25 J	BRL	BRL	BRL	BRL	BRL	2.20 J	BRL	BRL	BRL	BRL	BRL	0.31 J	BRL	0.25 J	BRL	0.21 J	BRL	BRL	2.50 J	BRL	BRL	BRL	BRL
Silver	17.5	180	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Thallium	NA	2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Tin	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Vanadium	NA	260*	2.5 J	BRL	BRL	6.2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	41.9	69	BRL	BRL	BRL	BRL	BRL	BRL	2.7 J	BRL	BRL	1.5 J	BRL	BRL	26	BRL	2.30 J	BRL	BRL
Zinc	2100	5000	3.5 J	15 B	3.5 J	3.6 J	BRL	8.2 J	BRL	BRL	BRL	BRL	14	BRL	16.5 J	BRL	15.8	BRL	BRL	9.3 J	7.9 J	5.4 J	5.1 J	12	3.8 J	BRL	BRL	BRL	BRL	BRL	15.4 J	BRL	18.2
Other Analyses																																
Mercury	1.05	NA	NA	NA	NA	NA	NA	0.42	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	BRL	NA	NA	NA	NA	NA
Nitrate-NO3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	BRL	NA	NA	NA	NA	NA
Nitrate/Nitrite as N (SM 4500)	1,000	1,000	NA	770 J	600 J	210 J	BRL50	BRL50	BRL	NA	NA	BRL	4.78	0	166	1020	380	33 J	NA	BRL	< 40	72	180 J	240 J	NA	NA	NA	0.039 J	1010	< 40	326	143	370

Note: BRL -- Below Reporting Limit; NA -- Not Available; NS -- Not Sampled; U -- Target analytes were not detected above the reporting limits; J -- Analyte concentration is an estimated value;
**Used values for Chlordane; * No MCL, used PRG; Bold--Concentration exceeds NC 2L Std.

Table 4. Summary of Groundwater Detections
Lamont Landfills, Fort Bragg, NC

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	Lamont																									
			GW-LMW-14R 11/08	LMW-14R 06/09	LMW-14R 11/09	LMW-14R 06/10	LMW-14R 11/10	LMW-14R 6/11	LMW-14R-11/11	LMW-14R 5/12	LMW-14R 11/12	LMW-14R 05/13	LMW-14R 11/13	GW-LMW-14R DUP	GW-LMW-15R 06/07	GW-LMW-15R 11/07	GW-LMW-15R 05/08	GW-LMW-15R 11/08	LMW-15R 06/09	LMW-15R 11/09	LMW-15R 06/10	LMW-15R 11/10	LMW-15R 6/11	LMW-15R 11/11	LMW-15R 5/12	LMW-15R 11/12	LMW-15R 05/13	LMW-15R 11/13
VOCs (EPA 8260B)																												
1,1,2,2-tetrachloroethane	0.17	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,1-dichloroethane	700	810*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,3-trichloropropane	0.005	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,4-trichlorobenzene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2,4-trimethylbenzene	350	15 *	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.3 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dibromo-3-chloropropane	0.025	0.2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dibromoethane	0.0004	0.05	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dichloroethane	0.38	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,2-dichloropropane	0.56	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,4-dichlorobenzene	75	75	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
2-butanone	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
4-Isopropyltoluene	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
4-Methyl-2-pentanone (MIBK)	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.0 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
acetone	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	8.8 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
acrolein	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
benzene	1	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
carbon disulfide	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chlorobenzene	50	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloroethane	2800	4.6*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloroform	70	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloromethane (methyl chloride)	2.6	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.8	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
cis-1,2-dichloroethene	70	70	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
dibromochloromethane	0.41	80	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
dichlorodifluoromethane	1400	390*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
diisopropyl ether	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
isopropylbenzene	70	660*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
m&p xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.47 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
methylene chloride (dichloromethane)	4.6	5	BRL	BRL	BRL	BRL	BRL	3.1 J B	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	3.1 J B	BRL	BRL	BRL	BRL	BRL
MTBE	200	13*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
o-xylene	530#	10000#	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.24 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
sec-butylbenzene	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
tetrachloroethene	0.7	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
toluene	1000	1000	BRL	BRL	BRL	BRL	BRL	0.61 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.29 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
trans-1,2-dichloroethene	70	100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
trichloroethene	2.8	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
trichlorofluoromethane	2100	1300*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Total Xylenes	530	0.01	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
vinyl chloride	0.015	2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Metals (EPA 6010B/6020A)																												
Arsenic	10	10	9.08	0.41 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	**12.7**	2.5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Barium	2000	2000	133	13	12	13	12	11	14	13	13	11	22	NS	38.5	27	24.3	37.6	42	14	36	30	25	32	32	30	29	41
Beryllium	NA	4	NA	NA	NA	NA	NA	1.8	BRL	BRL	BRL	BRL	BRL	NA	NA	NA	NA	NA	0.29	NA	0.17 J	0.13 J	0.13 J	BRL	0.15 J	0.15 J	0.15 J	0.19 J
Cadmium	5	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Cobalt	NA	NA	BRL	0.24	0.3	0.17 J	0.21	0.2	0.18 J	0.15 J	0.19 J	0.12 J	0.22	NS	BRL	BRL	0.65 J	BRL	0.83	0.26	0.7	0.58	0.75	0.6	0.58	0.57	0.52 J	0.84
Chromium	50	100	BRL	1.6	0.53 J	0.49 J	0.60 J	1.2	0.18 J	0.35 J	0.37 J	0.50 J	0.38 J	NS	BRL	BRL	BRL	BRL	5.5	0.16 J	0.51 J	0.24 J	0.20 J	BRL	BRL	0.16 J	0.18 J	BRL
Copper	1000	1000	BRL	0.81 J	0.92 J	BRL	0.96 J	2	0.72 J	0.41 J	BRL	0.70 J	0.51 J	NS	5.33 J	5 J	BRL	5.2 J	3.7	0.57 J	BRL	2.3	0.59 J	0.74 J	0.51 J	BRL	0.58 J	0.35 J
Iron	300	NA	BRL	BRL	BRL	43 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	110	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Lead	15	15	BRL	0.22 J	0.14 J	0.10 J	0.11 J	0.3	BRL	0.12 J	BRL	0.12 J	0.090 J	NS	BRL	BRL	BRL	1.08	0.89	BRL	0.08 J	0.16 J	0.48	BRL	0.15 J	BRL	0.087 J	BRL
Manganese	50	NA	BRL	BRL	BRL	1.3J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.6 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Nickel	100	730*	3.2 J	2.2	1.6 J	0.84 J	1.9	1.8	1.6	0.65 J	1.1	0.44 J	0.87 J	NS	BRL	BRL	1.12 J	BRL	3	0.8 J	1	0.98 J	0.93 J	0.90 J	0.60 J	0.78 J	2.2	0.86 J
Selenium	50	50	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	0.24 J	BRL	BRL	BRL	0.32 J	BRL	0.24 J	BRL	BRL	BRL
Silver	17.5	180	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Thallium	NA	2	BRL	BRL	0.17 J	BRL	BRL	BRL	BRL	0.11 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.14 J	BRL
Tin	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Vanadium	NA	260*	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	7.5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Zinc	2100	5000	BRL	6.3 J	26 B	4.9 J	4.5 J	10	10	6.7 J	BRL	BRL	2.6 J	NS	BRL	BRL	39.3	BRL	6.5 J	9.1 J	6.6 J	8.3 J	8.6 J	8.5 J	BRL	BRL	BRL	BRL
Other Analyses																												
Mercury	1.05	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	BRL
Nitrate-NO3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7400	6800	BRL
Nitrate/Nitrite as N (SM 4500)	1,000	1,000	960	NA	BRL	BRL	72	350	120 J	360	NA	NA	0.039 J	2260	1,400	1620	BRL	1460	NA	7,300 H	**21000**	1600	68,000 J	1,800	1,600.0	NA	NA	2.3

Note: BRL -- Below Reporting Limit; NA -- Not Available; NS -- Not Sampled; U -- Target analytes were not detected above the reporting limits; J -- Analyte concentration is an estimated value;
**Used values for Chlordane; * No MCL, used PRG; Bold--Concentration exceeds NC 2L Std.

APPENDIX A
GROUNDWATER SAMPLING LOGS

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/7/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1601**
WEATHER CONDITIONS: Cloudy 63°

Location: Lamont street Landfill	**Sample ID: LMW-14R-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: **3**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	56.9	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	49.08	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				1.28	(gallons)
Flow Rate:	315	(ml/min)	Purge Vol:	3.8	(gallons)
Length of Time Purged:	45	(minutes)	Sample Time:	1601	
Amount Purged:	3.8	(gallons)	Pump Depth:	55	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	1526	1531	1536	1541	1546	1551
pH	4.99	4.98	4.97	4.97	4.97	4.97
Sp. Cond	0.024	0.024	0.022	0.022	0.022	0.022
Temp. °C	17.57	17.51	17.48	17.53	17.53	17.49
Turbidity	15.2	12.8	16.3	12.4	8.8	8.3
DO	4.20	4.28	4.38	4.50	4.50	4.50
ORP	284	285	287	289	290	292
Water Level	49.1	49.1	49.1	49.1	49.1	49.1

5. NOTES:

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/7/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1503**
WEATHER CONDITIONS: Cloudy, 72°

Location: Lamont street Landfill	**Sample ID: LMW-15R-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: **3**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	46.4	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	36.4	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				1.64	(gallons)
Flow Rate:	192	(ml/min)	Purge Vol:	3.0	(gallons)
Length of Time Purged:	59	(minutes)	Sample Time:	1503	
Amount Purged:	3.0	(gallons)	Pump Depth:	44.5	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	1428	1433	1438	1443	1448	1453
pH	4.65	4.65	4.63	4.63	4.62	4.62
Sp. Cond	0.042	0.044	0.044	0.044	0.044	0.043
Temp. °C	18.70	18.73	18.69	18.74	18.74	18.67
Turbidity	8.2	7.3	6.2	4.9	3.0	2.1
DO	7.20	7.05	6.9	6.75	6.61	6.53
ORP	250	260	268	276	282	291
Water Level	46.4	46.4	46.4	46.4	46.4	46.4

5. NOTES:

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/7/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1053**
WEATHER CONDITIONS: Cloudy 68°

Location: Lamont street Landfill	**Sample ID: LMW-9S-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: **3**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	61.3	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	51.3	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				1.64	(gallons)
Flow Rate:	310	(ml/min)	Purge Vol:	5.0	(gallons)
Length of Time Purged:	61	(minutes)	Sample Time:	1053	
Amount Purged:	5.0	(gallons)	Pump Depth:	59	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	1018	1023	1028	1033	1038	1043
pH	5.6	5.62	5.63	5.63	5.63	5.64
Sp. Cond	0.267	0.279	0.286	0.292	0.296	0.304
Temp. °C	18.88	18.96	18.98	18.92	18.92	19.15
Turbidity	25	21	23	19	13	10
DO	1.22	.95	.80	.70	.63	.59
ORP	116	113	110	108	107	106
Water Level	51.3	51.3	51.3	51.3	51.3	51.3

5. NOTES:

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/7/13
SAMPLED BY: R. Hill & C. Poston **TIME : 0940**
WEATHER CONDITIONS: Cloudy 63°

Location: Lamont street Landfill	**Sample ID: LMW-9D-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: 3
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	86.8	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	78.4	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				1.38	(gallons)
Flow Rate:	157	(ml/min)	Purge Vol:	2.5	(gallons)
Length of Time Purged:	60	(minutes)	Sample Time:	940	
Amount Purged:	2.5	(gallons)	Pump Depth:	85.5	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	0905	0910	0915	0920	0925	0930
pH	6.28	6.24	6.19	6.15	6.12	6.09
Sp. Cond	0.039	0.037	0.035	0.035	0.033	0.033
Temp. °C	18.59	18.62	18.65	18.67	18.64	18.71
Turbidity	54	49	46	45	43	40
DO	7.09	7.25	7.19	7.16	6.97	7.04
ORP	162	167	170	174	176	180
Water Level	80.1	80.4	81.0	81.0	81.0	81.0

5.

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/6/12
SAMPLED BY: R. Hill & C. Poston **TIME :** **1428**
WEATHER CONDITIONS: Sunny, 72°

Location: Lamont street Landfill	**Sample ID: LMW-10-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: **3**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	82.9	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	77.9	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				0.82	(gallons)
Flow Rate:	166	(ml/min)	Purge Vol:	2.5	(gallons)
Length of Time Purged:	57	(minutes)	Purge Time:	1331	
Amount Purged:	2.5	(gallons)	Pump Depth:	80.5	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	1353	1358	1403	1408	1413	1418
pH	5.16	5.13	5.11	5.09	5.09	5.08
Sp. Cond	0.031	0.031	0.031	0.031	0.030	0.031
Temp. °C	20.63	20.63	20.53	20.52	20.57	20.62
Turbidity	57.9	45.3	29.1	17.4	14.6	9.0
DO	7.13	7.09	6.91	6.84	6.78	6.79
ORP	201	210	217	224	228	233
Water Level	77.9	77.9	77.9	77.9	77.9	77.90

5. NOTES:

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/6/12
SAMPLED BY: R. Hill & C. Poston **TIME :**
WEATHER CONDITIONS: Sunny 70°

Location: Lamont street Landfill	**Sample ID: LMW-7R-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: 3
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Depth to Water (dw):	130.4	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			0.52	(gallons)
	Flow Rate:		(ml/min)	Purge Vol:	(gallons)
Length of Time Purged:		(minutes)	Sample Time:		
Amount Purged:	0.0	(gallons)	Pump Depth:		

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time						
pH						
Sp. Cond						
Temp. °C						
Turbidity						
DO						
ORP						
Water Level						

5. NOTES: 1302 well purged dry. The well was allowed to recharge no samples collected, insufficient volumn of water.

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/6/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1211**
WEATHER CONDITIONS: Sunny, 63°

Location: Lamont street Landfill	**Sample ID: LMW-4R-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: **3**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	89.7	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	79.39	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				1.69	(gallons)
Flow Rate:	296	(ml/min)	Purge Vol:	4.0	(gallons)
Length of Time Purged:	51	(minutes)	Sample Time:	1211	
Amount Purged:	4.0	(gallons)	Pump Depth:	80	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	1141	1146	1151	1156	1201	
pH	5.02	5.02	5.02	5.02	5.03	
Sp. Cond	0.015	0.015	0.015	0.015	0.015	
Temp. °C	17.36	17.31	17.35	17.35	17.65	
Turbidity	11.1	11.8	12.6	9.21	8.02	
DO	8.30	8.27	8.08	8.03	7.98	
ORP	205	212	219	225	229	
Water Level	79.4	79.4	79.4	79.4	79.4	

5. NOTES:

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/8/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1339**
WEATHER CONDITIONS: Clear 57°

Location: Lamont street Landfill	**Sample ID: LMW-3S-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: **3**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	69.8	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	61.7	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				1.33	(gallons)
Flow Rate:	270	(ml/min)	Purge Vol:	4.5	(gallons)
Length of Time Purged:	63	(minutes)	Sample Time:	1339	
Amount Purged:	4.5	(gallons)	Pump Depth:	68	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	1304	1309	1314	1319	1324	1329
pH	4.86	4.87	4.89	4.89	4.89	4.91
Sp. Cond	0.026	0.025	0.024	0.026	0.026	0.024
Temp. °C	15.44	15.42	15.75	15.73	15.84	15.80
Turbidity	26.2	29.8	13.1	12.8	10.5	10.0
DO	3.35	3.89	4.37	4.64	4.82	5.21
ORP	225	233	239	246	251	258
Water Level	61.9	61.9	61.9	61.9	61.9	61.9

5. NOTES: MS/MSD taken

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/8/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **0940**
WEATHER CONDITIONS: Clear 38°

Location: Lamont street Landfill	**Sample ID: LMW-6-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: **3**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	95.6	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	84.81	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				1.77	(gallons)
Flow Rate:	220	(ml/min)	Purge Vol:	5.0	(gallons)
Length of Time Purged:	86	(minutes)	Sample Time:	940	
Amount Purged:	5.0	(gallons)	Pump Depth:	93	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	0908	0913	0918	0923	0928	0933
pH	5.15	5.16	5.17	5.18	5.18	5.18
Sp. Cond	0.157	0.158	0.158	0.160	0.158	0.161
Temp. °C	13.26	13.86	13.87	14.38	14.55	15.14
Turbidity	41.2	42.3	36.2	23.0	18.1	9.4
DO	0.61	0.54	0.55	0.61	0.61	0.45
ORP	260	259	258	257	256	256
Water Level	82.8	82.8	82.8	82.8	82.8	82.8

5. NOTES: Dup-1-11-13 taken here

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/6/12
SAMPLED BY: R. Hill & C. Poston **TIME :** **1423**
WEATHER CONDITIONS: Cloudy & Windy 58°

Location: Lamont street Landfill	**Sample ID: LMW-16-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: **3**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	43.7	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	36.8	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				4.50	(gallons)
Flow Rate:	415	(ml/min)	Purge Vol:	4.5	(gallons)
Length of Time Purged:	41	(minutes)	Sample Time:	1625	
Amount Purged:	4.5	(gallons)	Pump Depth:	41.5	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	1534	1539	1544	1544	1549	1554
pH	6.43	6.44	6.44	6.44	6.45	6.45
Sp. Cond	0.439	0.437	0.435	0.434	0.433	0.432
Temp. °C	20.08	20.09	20.02	19.97	20.00	19.94
Turbidity	165	79	34	20	20	20
DO	0.52	0.73	0.89	0.95	1.01	1.10
ORP	35	32	31	31	31	31
Water Level						

5. NOTES: Water pumped below top of pump, pump slowed to allow water level to rise.

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/7/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1251**
WEATHER CONDITIONS: Sunny 38°

Location: Lamont street Landfill	**Sample ID: LMW-9-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: **3**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☐ YES ☒ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	135.7	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	83.8	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				8.51	(gallons)
Flow Rate:	315	(ml/min)	Purge Vol:	6.5	(gallons)
Length of Time Purged:	78	(minutes)	Sample Time:	1251	
Amount Purged:	6.50	(gallons)	Pump Depth:	132	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	1216	1221	1226	1231	1236	1241
pH	4.78	4.78	4.79	4.78	4.79	4.79
Sp. Cond	0.066	0.062	0.062	0.063	0.063	0.062
Temp. °C	20.29	19.97	19.85	20.25	21.05	21.18
Turbidity	20.5	16.2	15.2	19.8	14.6	16.3
DO	4.79	5.05	4.79	5.45	4.79	5.85
ORP	308	311	312	313	314	317
Water Level	83.8	83.8	83.8	83.8	8.38	8.38

5. NOTES:

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/8/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1129**
WEATHER CONDITIONS: Clear 46°

Location: Lamont street Landfill	**Sample ID: LMW-8-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: **3**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	62.5	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	46.93	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				2.55	(gallons)
Flow Rate:	411	(ml/min)	Purge Vol:	7.5	(gallons)
Length of Time Purged:	69	(minutes)	Sample Time:	1129	
Amount Purged:	7.5	(gallons)	Pump Depth:	60	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	1054	1059	1104	1109	1114	1119
pH	5.21	5.22	5.24	5.26	5.27	5.28
Sp. Cond	0.076	0.082	0.086	0.090	0.093	0.095
Temp. °C	17.18	17.16	17.30	17.39	17.49	17.43
Turbidity	25.0	20.2	15.6	16.3	12.1	9.0
DO	2.81	2.63	2.49	2.39	2.49	2.22
ORP	210	201	194	189	184	181
Water Level	47.1	47.1	47.1	47.1	47.1	47.1

5. NOTES:

	U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT GEOLOGY and HYDROGEOLOGY	GROUNDWATER FIELD DATA LOG

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/8/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1457**
WEATHER CONDITIONS: Sunny 60°

Location: Lamont street Landfill	**Sample ID: LMW-3-11-13**

PRESERVATIVE: Ice, HNO_3
ANALYSES REQUESTED: EPA 8260B, 300, 6020A
 # OF CONTAINERS: **3**
SAMPLING METHOD: ☐ Peristaltic Pump ☒ Bladder Pump
LOW FLOW: ☒ YES ☐ NO
DUPLICATE SAMPLE: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO

2. WATER LEVEL DATA

MEASURING POINT: ☒ Top of casing ☐ Other:
METHOD OF MEASUREMENT: Water Level Indicator

3. WELL EVACUATION DATA

Well Depth (wd):	123	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	105.6	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				2.85	(gallons)
Flow Rate:	201	(ml/min)	Purge Vol:	2.5	(gallons)
Length of Time Purged:	47	(minutes)	Sample Time:	1457	
Amount Purged:	2.5	(gallons)	Pump Depth:	121	

4. FIELD PARAMETERS

INSTRUMENT	CALIBRATED
pH Meter –YSI 556XL	☒
Conductivity Meter – YSI 556XL	☒
Temperature – YSI 556XL	☒
Turbidity Meter – Hach 2100 Q	☒
DO Meter – YSI 556XL	☒
ORP Meter – YSI 556XL	☒
CO_2– Hach Digital Titrator	☐

Time	1422	1427	1432	1437	1442	1447
pH	4.96	4.97	5.00	5.02	5.03	5.04
Sp. Cond	0.017	0.015	0.016	0.016	0.016	0.016
Temp. °C	15.88	15.65	15.82	15.76	15.82	15.82
Turbidity	8.1	4.3	5.6	2.9	4.3	2.6
DO	6.36	6.11	6.01	6.11	6.06	6.06
ORP	256	255	258	261	263	266
Water Level	106.1	106.1	106.1	106.1	106.1	106.1

5. NOTES: BLK-1-11-13 taken

APPENDIX B
DATA VALIDATION REPORTS

ELECTRONIC ONLY

QA LEVEL II - DATA EVALUATION CHECKLIST

Company Name: USACE
Project Name: Longstreet / Cement
Reviewer: Kevin Dellovade
Laboratory: Test America
Analytical Method (type and no.): 300, 6020A (3)
Matrix: ☐ Air ☐ Soil/Sed. ☑ Water ☐ Waste ☐
Sample Names LMW-4R, LMW-10, LMW-16

Project Manager: Dena Thompson
Project Number:
Validation Date: 4/3/14
SDG #: J95899

NOTE: Please provide calculation in Comment areas or on the back (if on the back please indicate in comment areas).

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	☑	☐	☐	
b) Sampling team indicated?	☑	☐	☐	
c) Sample location noted?	☑	☐	☐	
d) Sample depth indicated (Soils)?	☐	☐	☑	
e) Sample type indicated (grab/composite)?	☑	☐	☐	
f) Field QC noted?	☑	☐	☐	
g) Field parameters collected (note types)?	☑	☐	☐	
h) Field Calibration within control limits?	☑	☐	☐	
i) Notations of unacceptable field conditions/performances from field logs or field notes?	☐	☑	☐	
j) Does the laboratory narrative indicate deficiencies:	☐	☑	☐	

Note Deficiencies:

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
k) Was the COC properly completed?	☑	☐	☐	
l) Was the COC signed by both field and laboratory personnel?	☑	☐	☐	
m) Were samples received in good condition?	☑	☐	☐	

General (Reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	☑	☐	☐	
b) Were hold times met for sample analysis?	☑	☐	☐	
c) Were the correct preservatives used?	☑	☐	☐	
d) Was the correct method used?	☑	☐	☐	
e) Were appropriate reporting limits achieved?	☑	☐	☐	
f) Were any sample dilutions noted?	☐	☑	☐	
g) Were any matrix problems noted?	☐	☑	☐	

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	☐	☑	☐	
b) Were analytes detected in the field blank(s)?	☐	☐	☑	
c) Were analytes detected in the equipment blank(s)?	☐	☐	☑	
d) Were analytes detected in the trip blank(s)?	☐	☐	☑	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	☑	☐	☐	
b) Were the proper compounds included in the LCS?	☑	☐	☐	
c) Was the LCS accuracy criteria met?	☑	☐	☐	

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	☐	☑	☐	
b) Were field dup. precision criteria met (note RPD)?	☐	☐	☑	
c) Were lab duplicates analyzed (note original and duplicate samples)?	☐	☑	☐	
d) Were lab dup. precision criteria met (note RPD)?	☐	☐	☑	

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, compounds included and concentrations)?	☐	☑	☐	
b) Was the %D within control limits?	☐	☐	☑	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?	☑	☐	☐	
b) Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☑	
c) Was MSD accuracy criteria met?	☑	☐	☐	
Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☑	
d) Were MS/MSD precision criteria met?	☑	☐	☐	

Reagent Water Spike and Duplicate (RWS & RWSD)	YES	NO	NA	COMMENTS
a) Was RWS accuracy criteria met?	☐	☐	☑	
b) Was RWSD accuracy criteria met?	☐	☐	☑	
c) Was RWS/RWSD precision criteria met (RPD)?	☐	☐	☑	

Surrogate Spikes	YES	NO	NA	COMMENTS
a) Were surrogate recoveries within control limits?	☐	☐	☑	
b) Were surrogate recoveries not calculated due to dilutions?	☐	☐	☑	

Comments/Notes:

No qualifications necessary

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: [signature] Date: 4/3/14

QA LEVEL II - DATA EVALUATION CHECKLIST

Company Name: USACE
Project Name: Longstreet/Lamont
Reviewer: Kevin Kelsoe
Laboratory: Test America
Analytical Method (type and no.): 300 ; 6020A (5)
Matrix: ☐ Air ☐ Soil/Sed. ☒ Water ☐ Waste ☐
Sample Names LMW-90, -95, -9, -15R, -14R

Project Manager: Dena Thompson
Project Number: —
Validation Date: 4/3/14
SDG #: J95974

NOTE: Please provide calculation in Comment areas or on the back (if on the back please indicate in comment areas).

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	☒	☐	☐	
b) Sampling team indicated?	☒	☐	☐	
c) Sample location noted?	☒	☐	☐	
d) Sample depth indicated (Soils)?	☐	☐	☒	
e) Sample type indicated (grab/composite)?	☒	☐	☐	
f) Field QC noted?	☒	☐	☐	
g) Field parameters collected (note types)?	☒	☐	☐	
h) Field Calibration within control limits?	☒	☐	☐	
i) Notations of unacceptable field conditions/performances from field logs or field notes?	☐	☒	☐	
j) Does the laboratory narrative indicate deficiencies:	☐	☒	☐	

Note Deficiencies:

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
k) Was the COC properly completed?	☒	☐	☐	
l) Was the COC signed by both field and laboratory personnel?	☒	☐	☐	
m) Were samples received in good condition?	☒	☐	☐	

General (Reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	☒	☐	☐	
b) Were hold times met for sample analysis?	☒	☐	☐	
c) Were the correct preservatives used?	☒	☐	☐	
d) Was the correct method used?	☒	☐	☐	
e) Were appropriate reporting limits achieved?	☒	☐	☐	
f) Were any sample dilutions noted?	☐	☒	☐	
g) Were any matrix problems noted?	☐	☒	☐	

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	☐	☑	☐	
b) Were analytes detected in the field blank(s)?	☐	☐	☑	
c) Were analytes detected in the equipment blank(s)?	☐	☐	☑	
d) Were analytes detected in the trip blank(s)?	☐	☐	☑	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	☑	☐	☐	
b) Were the proper compounds included in the LCS?	☑	☐	☐	
c) Was the LCS accuracy criteria met?	☑	☐	☐	

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	☐	☑	☐	
b) Were field dup. precision criteria met (note RPD)?	☐	☐	☑	
c) Were lab duplicates analyzed (note original and duplicate samples)?	☐	☑	☐	
d) Were lab dup. precision criteria met (note RPD)?	☐	☐	☑	

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, compounds included and concentrations)?	☐	☑	☐	
b) Was the %D within control limits?	☐	☐	☑	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?	☑	☐	☐	
b) Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☑	
c) Was MSD accuracy criteria met?	☑	☐	☐	
Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☑	
d) Were MS/MSD precision criteria met?	☑	☐	☐	

Reagent Water Spike and Duplicate (RWS & RWSD)	YES	NO	NA	COMMENTS
a) Was RWS accuracy criteria met?	☐	☐	☑	
b) Was RWSD accuracy criteria met?	☐	☐	☑	
c) Was RWS/RWSD precision criteria met (RPD)?	☐	☐	☑	

Surrogate Spikes	YES	NO	NA	COMMENTS
a) Were surrogate recoveries within control limits?	☐	☐	☑	
b) Were surrogate recoveries not calculated due to dilutions?	☐	☐	☑	

Comments/Notes:

No qualifications necessary

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: [signature] Date: 4/3/19

QA LEVEL II - DATA EVALUATION CHECKLIST

Company Name: USACE
Project Name: Longstreet/Lamont
Reviewer: Devin Hellwood
Laboratory: Test America
Analytical Method (type and no.): 300 r6020 (8) 8260 (11)
Matrix: ☐ Air ☐ Soil/Sed. ☒ Water ☐ Waste ☐
Sample Names Trip Blank, Dup-1, LMW-4R, 10, 6, 8, 3S, 3, 16, 9R, 9S, 9, 15R, 14R, 6, 3LR-1

Project Manager: Dena Thompson
Project Number:
Validation Date: 4/3/14
SDG #: J9604

NOTE: Please provide calculation in Comment areas or on the back (if on the back please indicate in comment areas).

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	☑	☐	☐	
b) Sampling team indicated?	☑	☐	☐	
c) Sample location noted?	☑	☐	☐	
d) Sample depth indicated (Soils)?	☐	☐	☑	
e) Sample type indicated (grab/composite)?	☑	☐	☐	
f) Field QC noted?	☑	☐	☐	
g) Field parameters collected (note types)?	☑	☐	☐	
h) Field Calibration within control limits?	☑	☐	☐	
i) Notations of unacceptable field conditions/performances from field logs or field notes?	☐	☑	☐	
j) Does the laboratory narrative indicate deficiencies:	☑	☒	☐	

Note Deficiencies: matrix interference in MS/MSD for 8260

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
k) Was the COC properly completed?	☑	☐	☐	
l) Was the COC signed by both field and laboratory personnel?	☑	☐	☐	
m) Were samples received in good condition?	☑	☐	☐	

General (Reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	☑	☐	☐	
b) Were hold times met for sample analysis?	☑	☐	☐	
c) Were the correct preservatives used?	☑	☐	☐	
d) Was the correct method used?	☑	☐	☐	
e) Were appropriate reporting limits achieved?	☑	☐	☐	
f) Were any sample dilutions noted?	☒	☑	☐	
g) Were any matrix problems noted?	☐	☑	☐	

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	☐	☑	☐	
b) Were analytes detected in the field blank(s)?	☐	☐	☑	
c) Were analytes detected in the equipment blank(s)?	☑	☐	☐	Barium @ 0.54J
d) Were analytes detected in the trip blank(s)?	☐	☑	☐	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	☑	☐	☐	
b) Were the proper compounds included in the LCS?	☑	☐	☐	
c) Was the LCS accuracy criteria met?	☑	☐	☐	

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	☑	☐	☐	
b) Were field dup. precision criteria met (note RPD)?	☑	☐	☐	
c) Were lab duplicates analyzed (note original and duplicate samples)?	☐	☑	☐	
d) Were lab dup. precision criteria met (note RPD)?	☐	☐	☑	

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, compounds included and concentrations)?	☐	☑	☐	
b) Was the %D within control limits?	☐	☐	☑	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?	☐	☑	☐	several outside control limits
b) Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☑	associated LCS w/in limits
c) Was MSD accuracy criteria met?	☐	☑	☐	
Recovery could not be calculated since sample contained high concentration of analyte?	☐	☐	☑	
d) Were MS/MSD precision criteria met?	☑	☐	☐	

Reagent Water Spike and Duplicate (RWS & RWSD)	YES	NO	NA	COMMENTS
a) Was RWS accuracy criteria met?	☐	☐	☑	
b) Was RWSD accuracy criteria met?	☐	☐	☑	
c) Was RWS/RWSD precision criteria met (RPD)?	☐	☐	☑	

Surrogate Spikes	YES	NO	NA	COMMENTS
a) Were surrogate recoveries within control limits?	☑	☐	☐	
b) Were surrogate recoveries not calculated due to dilutions?	☐	☑	☐	

Comments/Notes:

Barium results below 2.7 flaged QUJ
2.7> - 5.4< flagged J

LMW-3 4.0 J

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
LMW-3	Barium	4.0	J	rinsate blank detection

Signature: [signature] Date: 4/3/18

APPENDIX C

CHAINS OF CUSTODY & LAB ANALYTICAL REPORTS

ELECTRONIC ONLY

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-96024-1
Client Project/Site: Ft.Bragg-Lamont
Revision: 1

For:
U.S. Army Corps of Engineers
100 West Oglethorpe Ave
Savannah, Georgia 31401

Attn: Mr. Kevin Haborak

Authorized for release by:
11/26/2013 3:27:39 PM

Linda Wolfe, Project Manager II
(912)354-7858 e.3005
linda.wolfe@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 5
Method Summary 6
Definitions 7
Detection Summary 8
Client Sample Results 11
Surrogate Summary 37
QC Sample Results 38
QC Association 53
Chronicle 55
Chain of Custody 59
Receipt Checklists 62
Certification Summary 63

Job ID: 680-96024-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: U.S. Army Corps of Engineers

Project: Ft.Bragg-Lamont

Report Number: 680-96024-1 REV 1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Client changed request from reporting of Nitrate as NO3 to Nitrate as N.

RECEIPT
The samples were received on 11/09/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.4º C and 4.2º C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples Trip Blank (680-96024-7), LMW-4R-11-13 (680-96024-8), LMW-10-11-13 (680-96024-9), LMW-16-11-13 (680-96024-10), LMW-9D-11-13 (680-96024-11), LMW-9S-11-13 (680-96024-12), LMW-9-11-13 (680-96024-13), LMW-15R-11-13 (680-96024-14), LMW-14R-11-13 (680-96024-15), LMW-6-11-13 (680-96024-16), Dup-1-11-13 (680-96024-17), LMW-8-11-13 (680-96024-18), LMW-35-11-13 (680-96024-19), LMW-3-11-13 (680-96024-20) and BLK-1-11-13 (680-96024-21) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/12/2013 and 11/13/2013.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with batch 302974 were outside control limits for several compounds: LMW-35-11-13 (680-96024-19). The associated laboratory control sample (LCS) recovery met acceptance criteria.

No difficulties were encountered during the volatiles analysis.

All quality control parameters were within the acceptance limits.

METALS (ICPMS)
Samples LMW-6-11-13 (680-96024-1), DUP-1-11-13 (680-96024-2), LMW-8-11-13 (680-96024-3), LMW-35-11-13 (680-96024-4), LMW-3-11-13 (680-96024-5) and BLK-1-11-13 (680-96024-6) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 11/11/2013 and analyzed on 11/12/2013.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

ANIONS BY ION CHROMATOGRAPHY (Nitrate as N)

Job ID: 680-96024-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

Samples LMW-6-11-13 (680-96024-1), DUP-1-11-13 (680-96024-2), LMW-8-11-13 (680-96024-3), LMW-35-11-13 (680-96024-4), LMW-3-11-13 (680-96024-5) and BLK-1-11-13 (680-96024-6) were analyzed for Anions by Ion Chromatography (Nitrate as N) in accordance with EPA Method 300.0. The samples were analyzed on 11/09/2013.

No difficulties were encountered during the Anions analysis.

All quality control parameters were within the acceptance limits.

Sample Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-96024-1	LMW-6-11-13	Water	11/08/13 09:43	11/09/13 08:50
680-96024-2	DUP-1-11-13	Water	11/08/13 08:00	11/09/13 08:50
680-96024-3	LMW-8-11-13	Water	11/08/13 11:29	11/09/13 08:50
680-96024-4	LMW-35-11-13	Water	11/08/13 13:39	11/09/13 08:50
680-96024-5	LMW-3-11-13	Water	11/08/13 14:57	11/09/13 08:50
680-96024-6	BLK-1-11-13	Water	11/08/13 16:00	11/09/13 08:50
680-96024-7	Trip Blank	Water	11/06/13 10:00	11/09/13 08:50
680-96024-8	LMW-4R-11-13	Water	11/06/13 12:11	11/09/13 08:50
680-96024-9	LMW-10-11-13	Water	11/06/13 14:28	11/09/13 08:50
680-96024-10	LMW-16-11-13	Water	11/06/13 16:04	11/09/13 08:50
680-96024-11	LMW-9D-11-13	Water	11/07/13 09:40	11/09/13 08:50
680-96024-12	LMW-9S-11-13	Water	11/07/13 10:53	11/09/13 08:50
680-96024-13	LMW-9-11-13	Water	11/07/13 12:51	11/09/13 08:50
680-96024-14	LMW-15R-11-13	Water	11/07/13 15:03	11/09/13 08:50
680-96024-15	LMW-14R-11-13	Water	11/07/13 16:01	11/09/13 08:50
680-96024-16	LMW-6-11-13	Water	11/08/13 09:43	11/09/13 08:50
680-96024-17	Dup-1-11-13	Water	11/08/13 08:00	11/09/13 08:50
680-96024-18	LMW-8-11-13	Water	11/08/13 11:29	11/09/13 08:50
680-96024-19	LMW-35-11-13	Water	11/08/13 13:39	11/09/13 08:50
680-96024-20	LMW-3-11-13	Water	11/08/13 14:57	11/09/13 08:50
680-96024-21	BLK-1-11-13	Water	11/08/13 16:00	11/09/13 08:50

Method Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
300.0	Anions, Ion Chromatography	MCAWW	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

HPLC/IC

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: LMW-6-11-13 — Lab Sample ID: 680-96024-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	1.8		0.050	0.025	mg/L	1		300.0	Total/NA
Barium	27		1.0	0.15	ug/L	1		6020A	Total/NA
Cobalt	0.33		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.48	J	1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	0.72	J	1.0	0.40	ug/L	1		6020A	Total/NA
Selenium	1.4		0.50	0.21	ug/L	1		6020A	Total/NA

Client Sample ID: DUP-1-11-13 — Lab Sample ID: 680-96024-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	1.8		0.050	0.025	mg/L	1		300.0	Total/NA
Barium	27		1.0	0.15	ug/L	1		6020A	Total/NA
Cobalt	0.34		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.50	J	1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	0.73	J	1.0	0.40	ug/L	1		6020A	Total/NA
Selenium	1.4		0.50	0.21	ug/L	1		6020A	Total/NA
Zinc	2.7	J	10	2.6	ug/L	1		6020A	Total/NA

Client Sample ID: LMW-8-11-13 — Lab Sample ID: 680-96024-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.43		0.050	0.025	mg/L	1		300.0	Total/NA
Barium	16		1.0	0.15	ug/L	1		6020A	Total/NA
Cobalt	0.32		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.38	J	1.0	0.21	ug/L	1		6020A	Total/NA
Selenium	0.59		0.50	0.21	ug/L	1		6020A	Total/NA

Client Sample ID: LMW-35-11-13 — Lab Sample ID: 680-96024-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.27		0.050	0.025	mg/L	1		300.0	Total/NA
Barium	11		1.0	0.15	ug/L	1		6020A	Total/NA
Cobalt	0.51		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.78	J	1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	2.5		1.0	0.40	ug/L	1		6020A	Total/NA
Zinc	8.4	J	10	2.6	ug/L	1		6020A	Total/NA

Client Sample ID: LMW-3-11-13 — Lab Sample ID: 680-96024-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.23		0.050	0.025	mg/L	1		300.0	Total/NA
Barium	4.0		1.0	0.15	ug/L	1		6020A	Total/NA
Cobalt	0.17	J	0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.62	J	1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	0.41	J	1.0	0.40	ug/L	1		6020A	Total/NA

Client Sample ID: BLK-1-11-13 — Lab Sample ID: 680-96024-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.54	J	1.0	0.15	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: Trip Blank — Lab Sample ID: 680-96024-7

No Detections.

Client Sample ID: LMW-4R-11-13 — Lab Sample ID: 680-96024-8

No Detections.

Client Sample ID: LMW-10-11-13 — Lab Sample ID: 680-96024-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	1.6		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	1.8		1.0	0.13	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	2.5		1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: LMW-16-11-13 — Lab Sample ID: 680-96024-10

No Detections.

Client Sample ID: LMW-9D-11-13 — Lab Sample ID: 680-96024-11

No Detections.

Client Sample ID: LMW-9S-11-13 — Lab Sample ID: 680-96024-12

No Detections.

Client Sample ID: LMW-9-11-13 — Lab Sample ID: 680-96024-13

No Detections.

Client Sample ID: LMW-15R-11-13 — Lab Sample ID: 680-96024-14

No Detections.

Client Sample ID: LMW-14R-11-13 — Lab Sample ID: 680-96024-15

No Detections.

Client Sample ID: LMW-6-11-13 — Lab Sample ID: 680-96024-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichlorofluoromethane	0.58	J	1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: Dup-1-11-13 — Lab Sample ID: 680-96024-17

No Detections.

Client Sample ID: LMW-8-11-13 — Lab Sample ID: 680-96024-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.1		1.0	0.15	ug/L	1		8260B	Total/NA
Tetrachloroethene	2.0		1.0	0.15	ug/L	1		8260B	Total/NA
Trichloroethene	0.92	J	1.0	0.13	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: LMW-35-11-13 — Lab Sample ID: 680-96024-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	1.9		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.56	J	1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: LMW-3-11-13 — Lab Sample ID: 680-96024-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.30	J	1.0	0.14	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.81	J	1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: BLK-1-11-13 — Lab Sample ID: 680-96024-21

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: LMW-6-11-13

Lab Sample ID: 680-96024-1

Date Collected: 11/08/13 09:43
Matrix: Water
Date Received: 11/09/13 08:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	1.8		0.050	0.025	mg/L			11/09/13 17:11	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/11/13 11:06	11/12/13 06:23	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 06:23	1
Barium	27		1.0	0.15	ug/L		11/11/13 11:06	11/12/13 06:23	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/11/13 11:06	11/12/13 06:23	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/11/13 11:06	11/12/13 06:23	1
Chromium	0.16	U	1.0	0.16	ug/L		11/11/13 11:06	11/12/13 06:23	1
Cobalt	0.33		0.20	0.078	ug/L		11/11/13 11:06	11/12/13 06:23	1
Copper	0.48	J	1.0	0.21	ug/L		11/11/13 11:06	11/12/13 06:23	1
Lead	0.080	U	0.30	0.080	ug/L		11/11/13 11:06	11/12/13 06:23	1
Nickel	0.72	J	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 06:23	1
Selenium	1.4		0.50	0.21	ug/L		11/11/13 11:06	11/12/13 06:23	1
Silver	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 06:23	1
Thallium	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 06:23	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/11/13 11:06	11/12/13 06:23	1
Zinc	2.6	U	10	2.6	ug/L		11/11/13 11:06	11/12/13 06:23	1

Client Sample ID: DUP-1-11-13

Lab Sample ID: 680-96024-2

Date Collected: 11/08/13 08:00
Matrix: Water
Date Received: 11/09/13 08:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	1.8		0.050	0.025	mg/L			11/09/13 17:26	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/11/13 11:06	11/12/13 06:30	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 06:30	1
Barium	27		1.0	0.15	ug/L		11/11/13 11:06	11/12/13 06:30	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/11/13 11:06	11/12/13 06:30	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/11/13 11:06	11/12/13 06:30	1
Chromium	0.16	U	1.0	0.16	ug/L		11/11/13 11:06	11/12/13 06:30	1
Cobalt	0.34		0.20	0.078	ug/L		11/11/13 11:06	11/12/13 06:30	1
Copper	0.50	J	1.0	0.21	ug/L		11/11/13 11:06	11/12/13 06:30	1
Lead	0.080	U	0.30	0.080	ug/L		11/11/13 11:06	11/12/13 06:30	1
Nickel	0.73	J	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 06:30	1
Selenium	1.4		0.50	0.21	ug/L		11/11/13 11:06	11/12/13 06:30	1
Silver	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 06:30	1
Thallium	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 06:30	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/11/13 11:06	11/12/13 06:30	1
Zinc	2.7	J	10	2.6	ug/L		11/11/13 11:06	11/12/13 06:30	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: LMW-8-11-13

Lab Sample ID: 680-96024-3

Date Collected: 11/08/13 11:29
Matrix: Water
Date Received: 11/09/13 08:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.43**		0.050	0.025	mg/L			11/09/13 17:41	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/11/13 11:06	11/12/13 06:38	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 06:38	1
Barium	**16**		1.0	0.15	ug/L		11/11/13 11:06	11/12/13 06:38	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/11/13 11:06	11/12/13 06:38	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/11/13 11:06	11/12/13 06:38	1
Chromium	0.16	U	1.0	0.16	ug/L		11/11/13 11:06	11/12/13 06:38	1
Cobalt	**0.32**		0.20	0.078	ug/L		11/11/13 11:06	11/12/13 06:38	1
Copper	**0.38**	**J**	1.0	0.21	ug/L		11/11/13 11:06	11/12/13 06:38	1
Lead	0.080	U	0.30	0.080	ug/L		11/11/13 11:06	11/12/13 06:38	1
Nickel	0.40	U	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 06:38	1
Selenium	**0.59**		0.50	0.21	ug/L		11/11/13 11:06	11/12/13 06:38	1
Silver	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 06:38	1
Thallium	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 06:38	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/11/13 11:06	11/12/13 06:38	1
Zinc	2.6	U	10	2.6	ug/L		11/11/13 11:06	11/12/13 06:38	1

Client Sample ID: LMW-35-11-13

Lab Sample ID: 680-96024-4

Date Collected: 11/08/13 13:39
Matrix: Water
Date Received: 11/09/13 08:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.27**		0.050	0.025	mg/L			11/09/13 17:57	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/11/13 11:06	11/12/13 06:45	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 06:45	1
Barium	**11**		1.0	0.15	ug/L		11/11/13 11:06	11/12/13 06:45	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/11/13 11:06	11/12/13 06:45	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/11/13 11:06	11/12/13 06:45	1
Chromium	0.16	U	1.0	0.16	ug/L		11/11/13 11:06	11/12/13 06:45	1
Cobalt	**0.51**		0.20	0.078	ug/L		11/11/13 11:06	11/12/13 06:45	1
Copper	**0.78**	**J**	1.0	0.21	ug/L		11/11/13 11:06	11/12/13 06:45	1
Lead	0.080	U	0.30	0.080	ug/L		11/11/13 11:06	11/12/13 06:45	1
Nickel	**2.5**		1.0	0.40	ug/L		11/11/13 11:06	11/12/13 06:45	1
Selenium	0.21	U	0.50	0.21	ug/L		11/11/13 11:06	11/12/13 06:45	1
Silver	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 06:45	1
Thallium	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 06:45	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/11/13 11:06	11/12/13 06:45	1
Zinc	**8.4**	**J**	10	2.6	ug/L		11/11/13 11:06	11/12/13 06:45	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: LMW-3-11-13

Lab Sample ID: 680-96024-5

Date Collected: 11/08/13 14:57
Matrix: Water
Date Received: 11/09/13 08:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.23**		0.050	0.025	mg/L			11/09/13 18:43	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/11/13 11:06	11/12/13 07:37	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 07:37	1
Barium	**4.0**		1.0	0.15	ug/L		11/11/13 11:06	11/12/13 07:37	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/11/13 11:06	11/12/13 07:37	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/11/13 11:06	11/12/13 07:37	1
Chromium	0.16	U	1.0	0.16	ug/L		11/11/13 11:06	11/12/13 07:37	1
Cobalt	**0.17**	**J**	0.20	0.078	ug/L		11/11/13 11:06	11/12/13 07:37	1
Copper	**0.62**	**J**	1.0	0.21	ug/L		11/11/13 11:06	11/12/13 07:37	1
Lead	0.080	U	0.30	0.080	ug/L		11/11/13 11:06	11/12/13 07:37	1
Nickel	**0.41**	**J**	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 07:37	1
Selenium	0.21	U	0.50	0.21	ug/L		11/11/13 11:06	11/12/13 07:37	1
Silver	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 07:37	1
Thallium	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 07:37	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/11/13 11:06	11/12/13 07:37	1
Zinc	2.6	U	10	2.6	ug/L		11/11/13 11:06	11/12/13 07:37	1

Client Sample ID: BLK-1-11-13

Lab Sample ID: 680-96024-6

Date Collected: 11/08/13 16:00
Matrix: Water
Date Received: 11/09/13 08:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.025	U	0.050	0.025	mg/L			11/09/13 18:58	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/11/13 11:06	11/12/13 07:44	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 07:44	1
Barium	**0.54**	**J**	1.0	0.15	ug/L		11/11/13 11:06	11/12/13 07:44	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/11/13 11:06	11/12/13 07:44	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/11/13 11:06	11/12/13 07:44	1
Chromium	0.16	U	1.0	0.16	ug/L		11/11/13 11:06	11/12/13 07:44	1
Cobalt	0.078	U	0.20	0.078	ug/L		11/11/13 11:06	11/12/13 07:44	1
Copper	0.21	U	1.0	0.21	ug/L		11/11/13 11:06	11/12/13 07:44	1
Lead	0.080	U	0.30	0.080	ug/L		11/11/13 11:06	11/12/13 07:44	1
Nickel	0.40	U	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 07:44	1
Selenium	0.21	U	0.50	0.21	ug/L		11/11/13 11:06	11/12/13 07:44	1
Silver	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 07:44	1
Thallium	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 07:44	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/11/13 11:06	11/12/13 07:44	1
Zinc	2.6	U	10	2.6	ug/L		11/11/13 11:06	11/12/13 07:44	1

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: Trip Blank

Lab Sample ID: 680-96024-7

Date Collected: 11/06/13 10:00

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/12/13 12:37	1
Benzene	0.25	U	1.0	0.25	ug/L			11/12/13 12:37	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/12/13 12:37	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/12/13 12:37	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/12/13 12:37	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/12/13 12:37	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/12/13 12:37	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/12/13 12:37	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 12:37	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/12/13 12:37	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/12/13 12:37	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/12/13 12:37	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 12:37	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/12/13 12:37	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/12/13 12:37	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/12/13 12:37	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/12/13 12:37	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/12/13 12:37	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/12/13 12:37	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/12/13 12:37	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/12/13 12:37	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/12/13 12:37	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 12:37	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/12/13 12:37	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 12:37	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/12/13 12:37	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/12/13 12:37	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 12:37	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/12/13 12:37	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/12/13 12:37	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 12:37	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 12:37	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/12/13 12:37	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/12/13 12:37	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/12/13 12:37	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/12/13 12:37	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/12/13 12:37	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/12/13 12:37	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 12:37	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/12/13 12:37	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/12/13 12:37	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/12/13 12:37	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/12/13 12:37	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/12/13 12:37	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/12/13 12:37	1
Styrene	0.11	U	1.0	0.11	ug/L			11/12/13 12:37	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/12/13 12:37	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/12/13 12:37	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 12:37	1

Client Sample ID: Trip Blank

Lab Sample ID: 680-96024-7

Date Collected: 11/06/13 10:00

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	0.33	U	1.0	0.33	ug/L			11/12/13 12:37	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/12/13 12:37	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 12:37	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/12/13 12:37	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/12/13 12:37	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/12/13 12:37	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 12:37	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/12/13 12:37	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 12:37	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 12:37	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/12/13 12:37	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/12/13 12:37	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/12/13 12:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*70 - 130*		*11/12/13 12:37*	*1*
Dibromofluoromethane	*114*		*70 - 130*		*11/12/13 12:37*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*11/12/13 12:37*	*1*

Client Sample ID: LMW-4R-11-13

Lab Sample ID: 680-96024-8

Date Collected: 11/06/13 12:11

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/12/13 15:38	1
Benzene	0.25	U	1.0	0.25	ug/L			11/12/13 15:38	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/12/13 15:38	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/12/13 15:38	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/12/13 15:38	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/12/13 15:38	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/12/13 15:38	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/12/13 15:38	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 15:38	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/12/13 15:38	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/12/13 15:38	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/12/13 15:38	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 15:38	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/12/13 15:38	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/12/13 15:38	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/12/13 15:38	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/12/13 15:38	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/12/13 15:38	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/12/13 15:38	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/12/13 15:38	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/12/13 15:38	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/12/13 15:38	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 15:38	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/12/13 15:38	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 15:38	1

Client Sample ID: LMW-4R-11-13

Lab Sample ID: 680-96024-8

Date Collected: 11/06/13 12:11

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/12/13 15:38	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/12/13 15:38	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 15:38	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/12/13 15:38	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/12/13 15:38	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 15:38	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 15:38	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/12/13 15:38	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/12/13 15:38	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/12/13 15:38	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/12/13 15:38	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/12/13 15:38	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/12/13 15:38	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 15:38	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/12/13 15:38	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/12/13 15:38	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/12/13 15:38	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/12/13 15:38	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/12/13 15:38	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/12/13 15:38	1
Styrene	0.11	U	1.0	0.11	ug/L			11/12/13 15:38	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/12/13 15:38	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/12/13 15:38	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 15:38	1
Toluene	0.33	U	1.0	0.33	ug/L			11/12/13 15:38	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/12/13 15:38	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 15:38	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/12/13 15:38	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/12/13 15:38	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/12/13 15:38	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 15:38	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/12/13 15:38	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 15:38	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 15:38	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/12/13 15:38	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/12/13 15:38	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/12/13 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*70 - 130*		*11/12/13 15:38*	*1*
Dibromofluoromethane	*112*		*70 - 130*		*11/12/13 15:38*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*11/12/13 15:38*	*1*

Client Sample ID: LMW-10-11-13

Lab Sample ID: 680-96024-9

Date Collected: 11/06/13 14:28

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/12/13 16:00	1

Client Sample ID: LMW-10-11-13
Date Collected: 11/06/13 14:28
Date Received: 11/09/13 08:50

Lab Sample ID: 680-96024-9
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:00	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/12/13 16:00	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/12/13 16:00	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/12/13 16:00	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/12/13 16:00	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/12/13 16:00	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/12/13 16:00	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 16:00	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/12/13 16:00	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/12/13 16:00	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/12/13 16:00	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:00	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/12/13 16:00	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/12/13 16:00	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/12/13 16:00	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/12/13 16:00	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/12/13 16:00	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/12/13 16:00	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/12/13 16:00	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/12/13 16:00	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/12/13 16:00	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:00	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/12/13 16:00	1
Dichlorodifluoromethane	**1.6**		1.0	0.25	ug/L			11/12/13 16:00	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/12/13 16:00	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/12/13 16:00	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 16:00	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/12/13 16:00	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/12/13 16:00	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 16:00	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 16:00	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/12/13 16:00	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/12/13 16:00	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/12/13 16:00	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/12/13 16:00	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/12/13 16:00	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/12/13 16:00	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 16:00	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/12/13 16:00	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/12/13 16:00	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/12/13 16:00	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/12/13 16:00	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/12/13 16:00	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/12/13 16:00	1
Styrene	0.11	U	1.0	0.11	ug/L			11/12/13 16:00	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/12/13 16:00	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/12/13 16:00	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 16:00	1
Toluene	0.33	U	1.0	0.33	ug/L			11/12/13 16:00	1

Client Sample ID: LMW-10-11-13

Lab Sample ID: 680-96024-9

Date Collected: 11/06/13 14:28

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/12/13 16:00	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:00	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/12/13 16:00	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/12/13 16:00	1
Trichloroethene	**1.8**		1.0	0.13	ug/L			11/12/13 16:00	1
Trichlorofluoromethane	**2.5**		1.0	0.25	ug/L			11/12/13 16:00	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/12/13 16:00	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 16:00	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 16:00	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/12/13 16:00	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/12/13 16:00	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/12/13 16:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*70 - 130*		*11/12/13 16:00*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*11/12/13 16:00*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*11/12/13 16:00*	*1*

Client Sample ID: LMW-16-11-13

Lab Sample ID: 680-96024-10

Date Collected: 11/06/13 16:04

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/12/13 16:23	1
Benzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:23	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/12/13 16:23	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/12/13 16:23	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/12/13 16:23	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/12/13 16:23	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/12/13 16:23	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/12/13 16:23	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 16:23	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/12/13 16:23	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/12/13 16:23	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/12/13 16:23	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:23	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/12/13 16:23	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/12/13 16:23	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/12/13 16:23	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/12/13 16:23	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/12/13 16:23	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/12/13 16:23	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/12/13 16:23	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/12/13 16:23	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/12/13 16:23	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:23	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/12/13 16:23	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 16:23	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/12/13 16:23	1

Client Sample ID: LMW-16-11-13

Lab Sample ID: 680-96024-10

Date Collected: 11/06/13 16:04

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/12/13 16:23	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 16:23	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/12/13 16:23	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/12/13 16:23	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 16:23	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 16:23	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/12/13 16:23	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/12/13 16:23	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/12/13 16:23	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/12/13 16:23	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/12/13 16:23	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/12/13 16:23	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 16:23	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/12/13 16:23	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/12/13 16:23	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/12/13 16:23	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/12/13 16:23	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/12/13 16:23	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/12/13 16:23	1
Styrene	0.11	U	1.0	0.11	ug/L			11/12/13 16:23	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/12/13 16:23	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/12/13 16:23	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 16:23	1
Toluene	0.33	U	1.0	0.33	ug/L			11/12/13 16:23	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/12/13 16:23	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:23	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/12/13 16:23	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/12/13 16:23	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/12/13 16:23	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 16:23	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/12/13 16:23	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 16:23	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 16:23	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/12/13 16:23	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/12/13 16:23	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/12/13 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*11/12/13 16:23*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*11/12/13 16:23*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*11/12/13 16:23*	*1*

Client Sample ID: LMW-9D-11-13

Lab Sample ID: 680-96024-11

Date Collected: 11/07/13 09:40

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/12/13 16:46	1
Benzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:46	1

Client Sample ID: LMW-9D-11-13
Date Collected: 11/07/13 09:40
Date Received: 11/09/13 08:50

Lab Sample ID: 680-96024-11
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/12/13 16:46	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/12/13 16:46	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/12/13 16:46	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/12/13 16:46	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/12/13 16:46	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/12/13 16:46	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 16:46	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/12/13 16:46	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/12/13 16:46	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/12/13 16:46	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:46	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/12/13 16:46	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/12/13 16:46	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/12/13 16:46	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/12/13 16:46	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/12/13 16:46	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/12/13 16:46	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/12/13 16:46	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/12/13 16:46	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/12/13 16:46	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:46	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/12/13 16:46	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 16:46	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/12/13 16:46	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/12/13 16:46	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 16:46	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/12/13 16:46	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/12/13 16:46	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 16:46	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 16:46	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/12/13 16:46	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/12/13 16:46	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/12/13 16:46	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/12/13 16:46	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/12/13 16:46	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/12/13 16:46	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 16:46	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/12/13 16:46	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/12/13 16:46	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/12/13 16:46	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/12/13 16:46	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/12/13 16:46	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/12/13 16:46	1
Styrene	0.11	U	1.0	0.11	ug/L			11/12/13 16:46	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/12/13 16:46	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/12/13 16:46	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 16:46	1
Toluene	0.33	U	1.0	0.33	ug/L			11/12/13 16:46	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/12/13 16:46	1

Client Sample ID: LMW-9D-11-13

Lab Sample ID: 680-96024-11

Date Collected: 11/07/13 09:40

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 16:46	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/12/13 16:46	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/12/13 16:46	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/12/13 16:46	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 16:46	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/12/13 16:46	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 16:46	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 16:46	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/12/13 16:46	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/12/13 16:46	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/12/13 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*11/12/13 16:46*	*1*
Dibromofluoromethane	*110*		*70 - 130*		*11/12/13 16:46*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*11/12/13 16:46*	*1*

Client Sample ID: LMW-9S-11-13

Lab Sample ID: 680-96024-12

Date Collected: 11/07/13 10:53

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/12/13 17:08	1
Benzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:08	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/12/13 17:08	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/12/13 17:08	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:08	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/12/13 17:08	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/12/13 17:08	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/12/13 17:08	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 17:08	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/12/13 17:08	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/12/13 17:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/12/13 17:08	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:08	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/12/13 17:08	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/12/13 17:08	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/12/13 17:08	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/12/13 17:08	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/12/13 17:08	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/12/13 17:08	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/12/13 17:08	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/12/13 17:08	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/12/13 17:08	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:08	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/12/13 17:08	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:08	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:08	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/12/13 17:08	1

Client Sample ID: LMW-9S-11-13

Lab Sample ID: 680-96024-12

Date Collected: 11/07/13 10:53

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 17:08	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/12/13 17:08	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/12/13 17:08	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 17:08	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 17:08	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/12/13 17:08	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/12/13 17:08	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/12/13 17:08	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/12/13 17:08	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/12/13 17:08	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/12/13 17:08	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 17:08	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/12/13 17:08	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/12/13 17:08	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/12/13 17:08	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/12/13 17:08	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/12/13 17:08	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/12/13 17:08	1
Styrene	0.11	U	1.0	0.11	ug/L			11/12/13 17:08	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/12/13 17:08	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/12/13 17:08	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 17:08	1
Toluene	0.33	U	1.0	0.33	ug/L			11/12/13 17:08	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/12/13 17:08	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/12/13 17:08	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/12/13 17:08	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/12/13 17:08	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:08	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/12/13 17:08	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 17:08	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 17:08	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/12/13 17:08	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/12/13 17:08	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/12/13 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*11/12/13 17:08*	*1*
Dibromofluoromethane	*110*		*70 - 130*		*11/12/13 17:08*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*11/12/13 17:08*	*1*

Client Sample ID: LMW-9-11-13

Lab Sample ID: 680-96024-13

Date Collected: 11/07/13 12:51

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/12/13 17:31	1
Benzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:31	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/12/13 17:31	1

Client Sample ID: LMW-9-11-13
Date Collected: 11/07/13 12:51
Date Received: 11/09/13 08:50

Lab Sample ID: 680-96024-13
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/12/13 17:31	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:31	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/12/13 17:31	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/12/13 17:31	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/12/13 17:31	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 17:31	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/12/13 17:31	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/12/13 17:31	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/12/13 17:31	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:31	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/12/13 17:31	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/12/13 17:31	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/12/13 17:31	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/12/13 17:31	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/12/13 17:31	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/12/13 17:31	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/12/13 17:31	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/12/13 17:31	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/12/13 17:31	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:31	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/12/13 17:31	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:31	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:31	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/12/13 17:31	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 17:31	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/12/13 17:31	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/12/13 17:31	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 17:31	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 17:31	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/12/13 17:31	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/12/13 17:31	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/12/13 17:31	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/12/13 17:31	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/12/13 17:31	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/12/13 17:31	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 17:31	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/12/13 17:31	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/12/13 17:31	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/12/13 17:31	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/12/13 17:31	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/12/13 17:31	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/12/13 17:31	1
Styrene	0.11	U	1.0	0.11	ug/L			11/12/13 17:31	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/12/13 17:31	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/12/13 17:31	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 17:31	1
Toluene	0.33	U	1.0	0.33	ug/L			11/12/13 17:31	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/12/13 17:31	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:31	1

Client Sample ID: LMW-9-11-13

Lab Sample ID: 680-96024-13

Date Collected: 11/07/13 12:51

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/12/13 17:31	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/12/13 17:31	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/12/13 17:31	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:31	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/12/13 17:31	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 17:31	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 17:31	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/12/13 17:31	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/12/13 17:31	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/12/13 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*11/12/13 17:31*	*1*
Dibromofluoromethane	*107*		*70 - 130*		*11/12/13 17:31*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/12/13 17:31*	*1*

Client Sample ID: LMW-15R-11-13

Lab Sample ID: 680-96024-14

Date Collected: 11/07/13 15:03

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/12/13 17:54	1
Benzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:54	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/12/13 17:54	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/12/13 17:54	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:54	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/12/13 17:54	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/12/13 17:54	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/12/13 17:54	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 17:54	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/12/13 17:54	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/12/13 17:54	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/12/13 17:54	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:54	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/12/13 17:54	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/12/13 17:54	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/12/13 17:54	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/12/13 17:54	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/12/13 17:54	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/12/13 17:54	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/12/13 17:54	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/12/13 17:54	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/12/13 17:54	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:54	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/12/13 17:54	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:54	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:54	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/12/13 17:54	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 17:54	1

Client Sample ID: LMW-15R-11-13

Lab Sample ID: 680-96024-14

Date Collected: 11/07/13 15:03

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/12/13 17:54	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/12/13 17:54	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 17:54	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 17:54	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/12/13 17:54	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/12/13 17:54	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/12/13 17:54	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/12/13 17:54	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/12/13 17:54	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/12/13 17:54	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 17:54	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/12/13 17:54	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/12/13 17:54	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/12/13 17:54	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/12/13 17:54	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/12/13 17:54	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/12/13 17:54	1
Styrene	0.11	U	1.0	0.11	ug/L			11/12/13 17:54	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/12/13 17:54	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/12/13 17:54	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 17:54	1
Toluene	0.33	U	1.0	0.33	ug/L			11/12/13 17:54	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/12/13 17:54	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 17:54	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/12/13 17:54	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/12/13 17:54	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/12/13 17:54	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 17:54	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/12/13 17:54	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 17:54	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 17:54	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/12/13 17:54	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/12/13 17:54	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/12/13 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*11/12/13 17:54*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*11/12/13 17:54*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*11/12/13 17:54*	*1*

Client Sample ID: LMW-14R-11-13

Lab Sample ID: 680-96024-15

Date Collected: 11/07/13 16:01

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/12/13 18:16	1
Benzene	0.25	U	1.0	0.25	ug/L			11/12/13 18:16	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/12/13 18:16	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/12/13 18:16	1

Client Sample ID: LMW-14R-11-13
Date Collected: 11/07/13 16:01
Date Received: 11/09/13 08:50

Lab Sample ID: 680-96024-15
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/12/13 18:16	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/12/13 18:16	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/12/13 18:16	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/12/13 18:16	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 18:16	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/12/13 18:16	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/12/13 18:16	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/12/13 18:16	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 18:16	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/12/13 18:16	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/12/13 18:16	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/12/13 18:16	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/12/13 18:16	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/12/13 18:16	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/12/13 18:16	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/12/13 18:16	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/12/13 18:16	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/12/13 18:16	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 18:16	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/12/13 18:16	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 18:16	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/12/13 18:16	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/12/13 18:16	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 18:16	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/12/13 18:16	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/12/13 18:16	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 18:16	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 18:16	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/12/13 18:16	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/12/13 18:16	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/12/13 18:16	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/12/13 18:16	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/12/13 18:16	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/12/13 18:16	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 18:16	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/12/13 18:16	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/12/13 18:16	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/12/13 18:16	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/12/13 18:16	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/12/13 18:16	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/12/13 18:16	1
Styrene	0.11	U	1.0	0.11	ug/L			11/12/13 18:16	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/12/13 18:16	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/12/13 18:16	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 18:16	1
Toluene	0.33	U	1.0	0.33	ug/L			11/12/13 18:16	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/12/13 18:16	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 18:16	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/12/13 18:16	1

Client Sample ID: LMW-14R-11-13

Lab Sample ID: 680-96024-15

Date Collected: 11/07/13 16:01

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/12/13 18:16	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/12/13 18:16	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 18:16	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/12/13 18:16	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 18:16	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 18:16	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/12/13 18:16	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/12/13 18:16	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/12/13 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*11/12/13 18:16*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*11/12/13 18:16*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*11/12/13 18:16*	*1*

Client Sample ID: LMW-6-11-13

Lab Sample ID: 680-96024-16

Date Collected: 11/08/13 09:43

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/13/13 18:24	1
Benzene	0.25	U	1.0	0.25	ug/L			11/13/13 18:24	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/13/13 18:24	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/13/13 18:24	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/13/13 18:24	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/13/13 18:24	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/13/13 18:24	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/13/13 18:24	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 18:24	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/13/13 18:24	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/13/13 18:24	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/13/13 18:24	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 18:24	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/13/13 18:24	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/13/13 18:24	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/13/13 18:24	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/13/13 18:24	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/13/13 18:24	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/13/13 18:24	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/13/13 18:24	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/13/13 18:24	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/13/13 18:24	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 18:24	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/13/13 18:24	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/13/13 18:24	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/13/13 18:24	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/13/13 18:24	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 18:24	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/13/13 18:24	1

Client Sample ID: LMW-6-11-13

Lab Sample ID: 680-96024-16

Date Collected: 11/08/13 09:43

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/13/13 18:24	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 18:24	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 18:24	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/13/13 18:24	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/13/13 18:24	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/13/13 18:24	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/13/13 18:24	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/13/13 18:24	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/13/13 18:24	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 18:24	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/13/13 18:24	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/13/13 18:24	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/13/13 18:24	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/13/13 18:24	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/13/13 18:24	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/13/13 18:24	1
Styrene	0.11	U	1.0	0.11	ug/L			11/13/13 18:24	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/13/13 18:24	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/13/13 18:24	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 18:24	1
Toluene	0.33	U	1.0	0.33	ug/L			11/13/13 18:24	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/13/13 18:24	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 18:24	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/13/13 18:24	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/13/13 18:24	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/13/13 18:24	1
Trichlorofluoromethane	**0.58**	**J**	1.0	0.25	ug/L			11/13/13 18:24	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/13/13 18:24	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 18:24	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 18:24	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/13/13 18:24	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/13/13 18:24	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/13/13 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*11/13/13 18:24*	*1*
Dibromofluoromethane	*108*		*70 - 130*		*11/13/13 18:24*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*11/13/13 18:24*	*1*

Client Sample ID: Dup-1-11-13

Lab Sample ID: 680-96024-17

Date Collected: 11/08/13 08:00

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/13/13 18:46	1
Benzene	0.25	U	1.0	0.25	ug/L			11/13/13 18:46	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/13/13 18:46	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/13/13 18:46	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/13/13 18:46	1

Client Sample ID: Dup-1-11-13
Date Collected: 11/08/13 08:00
Date Received: 11/09/13 08:50

Lab Sample ID: 680-96024-17
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	0.50	U	1.0	0.50	ug/L			11/13/13 18:46	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/13/13 18:46	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/13/13 18:46	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 18:46	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/13/13 18:46	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/13/13 18:46	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/13/13 18:46	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 18:46	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/13/13 18:46	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/13/13 18:46	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/13/13 18:46	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/13/13 18:46	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/13/13 18:46	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/13/13 18:46	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/13/13 18:46	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/13/13 18:46	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/13/13 18:46	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 18:46	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/13/13 18:46	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/13/13 18:46	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/13/13 18:46	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/13/13 18:46	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 18:46	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/13/13 18:46	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/13/13 18:46	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 18:46	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 18:46	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/13/13 18:46	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/13/13 18:46	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/13/13 18:46	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/13/13 18:46	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/13/13 18:46	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/13/13 18:46	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 18:46	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/13/13 18:46	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/13/13 18:46	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/13/13 18:46	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/13/13 18:46	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/13/13 18:46	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/13/13 18:46	1
Styrene	0.11	U	1.0	0.11	ug/L			11/13/13 18:46	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/13/13 18:46	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/13/13 18:46	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 18:46	1
Toluene	0.33	U	1.0	0.33	ug/L			11/13/13 18:46	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/13/13 18:46	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 18:46	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/13/13 18:46	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/13/13 18:46	1

Client Sample ID: Dup-1-11-13

Lab Sample ID: 680-96024-17

Date Collected: 11/08/13 08:00

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/13/13 18:46	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/13/13 18:46	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/13/13 18:46	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 18:46	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 18:46	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/13/13 18:46	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/13/13 18:46	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/13/13 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*11/13/13 18:46*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*11/13/13 18:46*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/13/13 18:46*	*1*

Client Sample ID: LMW-8-11-13

Lab Sample ID: 680-96024-18

Date Collected: 11/08/13 11:29

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/13/13 19:09	1
Benzene	0.25	U	1.0	0.25	ug/L			11/13/13 19:09	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/13/13 19:09	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/13/13 19:09	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/13/13 19:09	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/13/13 19:09	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/13/13 19:09	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/13/13 19:09	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 19:09	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/13/13 19:09	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/13/13 19:09	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/13/13 19:09	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 19:09	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/13/13 19:09	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/13/13 19:09	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/13/13 19:09	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/13/13 19:09	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/13/13 19:09	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/13/13 19:09	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/13/13 19:09	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/13/13 19:09	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/13/13 19:09	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 19:09	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/13/13 19:09	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/13/13 19:09	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/13/13 19:09	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/13/13 19:09	1
cis-1,2-Dichloroethene	**2.1**		1.0	0.15	ug/L			11/13/13 19:09	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/13/13 19:09	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/13/13 19:09	1

Client Sample ID: LMW-8-11-13

Lab Sample ID: 680-96024-18

Date Collected: 11/08/13 11:29

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 19:09	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 19:09	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/13/13 19:09	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/13/13 19:09	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/13/13 19:09	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/13/13 19:09	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/13/13 19:09	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/13/13 19:09	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 19:09	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/13/13 19:09	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/13/13 19:09	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/13/13 19:09	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/13/13 19:09	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/13/13 19:09	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/13/13 19:09	1
Styrene	0.11	U	1.0	0.11	ug/L			11/13/13 19:09	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/13/13 19:09	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/13/13 19:09	1
Tetrachloroethene	**2.0**		1.0	0.15	ug/L			11/13/13 19:09	1
Toluene	0.33	U	1.0	0.33	ug/L			11/13/13 19:09	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/13/13 19:09	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 19:09	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/13/13 19:09	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/13/13 19:09	1
Trichloroethene	**0.92**	**J**	1.0	0.13	ug/L			11/13/13 19:09	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/13/13 19:09	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/13/13 19:09	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 19:09	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 19:09	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/13/13 19:09	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/13/13 19:09	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/13/13 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*70 - 130*		*11/13/13 19:09*	*1*
Dibromofluoromethane	*113*		*70 - 130*		*11/13/13 19:09*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*11/13/13 19:09*	*1*

Client Sample ID: LMW-35-11-13

Lab Sample ID: 680-96024-19

Date Collected: 11/08/13 13:39

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/13/13 19:31	1
Benzene	0.25	U	1.0	0.25	ug/L			11/13/13 19:31	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/13/13 19:31	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/13/13 19:31	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/13/13 19:31	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/13/13 19:31	1

Client Sample ID: LMW-35-11-13
Date Collected: 11/08/13 13:39
Date Received: 11/09/13 08:50

Lab Sample ID: 680-96024-19
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	2.0	U	5.0	2.0	ug/L			11/13/13 19:31	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/13/13 19:31	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 19:31	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/13/13 19:31	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/13/13 19:31	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/13/13 19:31	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 19:31	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/13/13 19:31	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/13/13 19:31	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/13/13 19:31	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/13/13 19:31	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/13/13 19:31	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/13/13 19:31	1
1,2-Dibromo-3-Chloropropane	0.44	U J	1.0	0.44	ug/L			11/13/13 19:31	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/13/13 19:31	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/13/13 19:31	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 19:31	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/13/13 19:31	1
Dichlorodifluoromethane	**1.9**		1.0	0.25	ug/L			11/13/13 19:31	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/13/13 19:31	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/13/13 19:31	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 19:31	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/13/13 19:31	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/13/13 19:31	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 19:31	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 19:31	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/13/13 19:31	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/13/13 19:31	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/13/13 19:31	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/13/13 19:31	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/13/13 19:31	1
Hexachlorobutadiene	0.40	U J	1.0	0.40	ug/L			11/13/13 19:31	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 19:31	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/13/13 19:31	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/13/13 19:31	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/13/13 19:31	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/13/13 19:31	1
Naphthalene	1.0	U J	5.0	1.0	ug/L			11/13/13 19:31	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/13/13 19:31	1
Styrene	0.11	U	1.0	0.11	ug/L			11/13/13 19:31	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/13/13 19:31	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/13/13 19:31	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 19:31	1
Toluene	0.33	U	1.0	0.33	ug/L			11/13/13 19:31	1
1,2,3-Trichlorobenzene	0.35	U J	1.0	0.35	ug/L			11/13/13 19:31	1
1,2,4-Trichlorobenzene	0.25	U J	1.0	0.25	ug/L			11/13/13 19:31	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/13/13 19:31	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/13/13 19:31	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/13/13 19:31	1

Client Sample ID: LMW-35-11-13

Lab Sample ID: 680-96024-19

Date Collected: 11/08/13 13:39

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	**0.56**	**J**	1.0	0.25	ug/L			11/13/13 19:31	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/13/13 19:31	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 19:31	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 19:31	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/13/13 19:31	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/13/13 19:31	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/13/13 19:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*11/13/13 19:31*	*1*
Dibromofluoromethane	*111*		*70 - 130*		*11/13/13 19:31*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*11/13/13 19:31*	*1*

Client Sample ID: LMW-3-11-13

Lab Sample ID: 680-96024-20

Date Collected: 11/08/13 14:57

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/13/13 19:53	1
Benzene	0.25	U	1.0	0.25	ug/L			11/13/13 19:53	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/13/13 19:53	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/13/13 19:53	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/13/13 19:53	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/13/13 19:53	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/13/13 19:53	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/13/13 19:53	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 19:53	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/13/13 19:53	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/13/13 19:53	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/13/13 19:53	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 19:53	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/13/13 19:53	1
Chloroform	**0.30**	**J**	1.0	0.14	ug/L			11/13/13 19:53	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/13/13 19:53	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/13/13 19:53	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/13/13 19:53	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/13/13 19:53	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/13/13 19:53	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/13/13 19:53	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/13/13 19:53	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 19:53	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/13/13 19:53	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/13/13 19:53	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/13/13 19:53	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/13/13 19:53	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 19:53	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/13/13 19:53	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/13/13 19:53	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 19:53	1

Client Sample ID: LMW-3-11-13

Lab Sample ID: 680-96024-20

Date Collected: 11/08/13 14:57

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 19:53	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/13/13 19:53	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/13/13 19:53	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/13/13 19:53	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/13/13 19:53	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/13/13 19:53	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/13/13 19:53	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 19:53	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/13/13 19:53	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/13/13 19:53	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/13/13 19:53	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/13/13 19:53	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/13/13 19:53	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/13/13 19:53	1
Styrene	0.11	U	1.0	0.11	ug/L			11/13/13 19:53	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/13/13 19:53	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/13/13 19:53	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 19:53	1
Toluene	0.33	U	1.0	0.33	ug/L			11/13/13 19:53	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/13/13 19:53	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 19:53	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/13/13 19:53	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/13/13 19:53	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/13/13 19:53	1
Trichlorofluoromethane	**0.81**	**J**	1.0	0.25	ug/L			11/13/13 19:53	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/13/13 19:53	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 19:53	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 19:53	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/13/13 19:53	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/13/13 19:53	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/13/13 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*11/13/13 19:53*	*1*
Dibromofluoromethane	*107*		*70 - 130*		*11/13/13 19:53*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*11/13/13 19:53*	*1*

Client Sample ID: BLK-1-11-13

Lab Sample ID: 680-96024-21

Date Collected: 11/08/13 16:00

Matrix: Water

Date Received: 11/09/13 08:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/13/13 20:16	1
Benzene	0.25	U	1.0	0.25	ug/L			11/13/13 20:16	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/13/13 20:16	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/13/13 20:16	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/13/13 20:16	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/13/13 20:16	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/13/13 20:16	1

Client Sample ID: BLK-1-11-13
Date Collected: 11/08/13 16:00
Date Received: 11/09/13 08:50

Lab Sample ID: 680-96024-21
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/13/13 20:16	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 20:16	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/13/13 20:16	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/13/13 20:16	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/13/13 20:16	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 20:16	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/13/13 20:16	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/13/13 20:16	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/13/13 20:16	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/13/13 20:16	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/13/13 20:16	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/13/13 20:16	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/13/13 20:16	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/13/13 20:16	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/13/13 20:16	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 20:16	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/13/13 20:16	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/13/13 20:16	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/13/13 20:16	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/13/13 20:16	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 20:16	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/13/13 20:16	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/13/13 20:16	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 20:16	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 20:16	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/13/13 20:16	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/13/13 20:16	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/13/13 20:16	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/13/13 20:16	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/13/13 20:16	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/13/13 20:16	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 20:16	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/13/13 20:16	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/13/13 20:16	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/13/13 20:16	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/13/13 20:16	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/13/13 20:16	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/13/13 20:16	1
Styrene	0.11	U	1.0	0.11	ug/L			11/13/13 20:16	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/13/13 20:16	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/13/13 20:16	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 20:16	1
Toluene	0.33	U	1.0	0.33	ug/L			11/13/13 20:16	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/13/13 20:16	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 20:16	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/13/13 20:16	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/13/13 20:16	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/13/13 20:16	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/13/13 20:16	1

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: BLK-1-11-13
Date Collected: 11/08/13 16:00
Date Received: 11/09/13 08:50

Lab Sample ID: 680-96024-21
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/13/13 20:16	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 20:16	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 20:16	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/13/13 20:16	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/13/13 20:16	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/13/13 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*11/13/13 20:16*	*1*
Dibromofluoromethane	*104*		*70 - 130*		*11/13/13 20:16*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*11/13/13 20:16*	*1*

Surrogate Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
680-96024-7	Trip Blank	94	114	97
680-96024-8	LMW-4R-11-13	104	112	101
680-96024-9	LMW-10-11-13	99	109	98
680-96024-10	LMW-16-11-13	98	109	98
680-96024-11	LMW-9D-11-13	97	110	98
680-96024-12	LMW-9S-11-13	98	110	98
680-96024-13	LMW-9-11-13	95	107	100
680-96024-14	LMW-15R-11-13	98	109	99
680-96024-15	LMW-14R-11-13	96	109	97
680-96024-16	LMW-6-11-13	96	108	98
680-96024-17	Dup-1-11-13	96	109	100
680-96024-18	LMW-8-11-13	94	113	97
680-96024-19	LMW-35-11-13	96	111	97
680-96024-19 MS	LMW-35-11-13	99	117	107
680-96024-19 MSD	LMW-35-11-13	99	114	107
680-96024-20	LMW-3-11-13	95	107	98
680-96024-21	BLK-1-11-13	97	104	98
LCS 680-302736/4	Lab Control Sample	100	112	105
LCS 680-302974/8	Lab Control Sample	102	102	102
LCSD 680-302736/5	Lab Control Sample Dup	97	109	100
LCSD 680-302974/9	Lab Control Sample Dup	99	110	105
MB 680-302736/8	Method Blank	97	111	98
MB 680-302974/12	Method Blank	97	111	98

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-302736/8
Matrix: Water
Analysis Batch: 302736

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/12/13 11:58	1
Benzene	0.25	U	1.0	0.25	ug/L			11/12/13 11:58	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/12/13 11:58	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/12/13 11:58	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/12/13 11:58	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/12/13 11:58	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/12/13 11:58	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/12/13 11:58	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 11:58	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/12/13 11:58	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/12/13 11:58	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/12/13 11:58	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 11:58	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/12/13 11:58	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/12/13 11:58	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/12/13 11:58	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/12/13 11:58	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/12/13 11:58	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/12/13 11:58	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/12/13 11:58	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/12/13 11:58	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/12/13 11:58	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 11:58	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/12/13 11:58	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 11:58	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/12/13 11:58	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/12/13 11:58	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 11:58	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/12/13 11:58	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/12/13 11:58	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 11:58	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/12/13 11:58	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/12/13 11:58	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/12/13 11:58	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/12/13 11:58	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/12/13 11:58	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/12/13 11:58	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/12/13 11:58	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/12/13 11:58	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/12/13 11:58	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/12/13 11:58	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/12/13 11:58	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/12/13 11:58	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/12/13 11:58	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/12/13 11:58	1
Styrene	0.11	U	1.0	0.11	ug/L			11/12/13 11:58	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/12/13 11:58	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/12/13 11:58	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-302736/8
Matrix: Water
Analysis Batch: 302736

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/12/13 11:58	1
Toluene	0.33	U	1.0	0.33	ug/L			11/12/13 11:58	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/12/13 11:58	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/12/13 11:58	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/12/13 11:58	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/12/13 11:58	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/12/13 11:58	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/12/13 11:58	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/12/13 11:58	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 11:58	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/12/13 11:58	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/12/13 11:58	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/12/13 11:58	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/12/13 11:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*11/12/13 11:58*	*1*
Dibromofluoromethane	*111*		*70 - 130*		*11/12/13 11:58*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*11/12/13 11:58*	*1*

Lab Sample ID: LCS 680-302736/4
Matrix: Water
Analysis Batch: 302736

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	116		ug/L		116	39 - 162
Benzene	50.0	48.9		ug/L		98	74 - 123
Bromobenzene	50.0	51.0		ug/L		102	79 - 125
Chlorobromomethane	50.0	54.9		ug/L		110	60 - 136
Dichlorobromomethane	50.0	47.3		ug/L		95	72 - 129
Bromoform	50.0	45.5		ug/L		91	60 - 134
Bromomethane	50.0	67.2		ug/L		134	10 - 171
2-Butanone (MEK)	100	105		ug/L		105	55 - 142
n-Butylbenzene	50.0	51.4		ug/L		103	72 - 128
sec-Butylbenzene	50.0	50.9		ug/L		102	71 - 130
tert-Butylbenzene	50.0	53.7		ug/L		107	72 - 130
Carbon tetrachloride	50.0	48.5		ug/L		97	70 - 131
Chlorobenzene	50.0	49.9		ug/L		100	79 - 120
Chloroethane	50.0	59.0		ug/L		118	47 - 148
Chloroform	50.0	50.8		ug/L		102	76 - 128
Chloromethane	50.0	57.7		ug/L		115	47 - 151
2-Chlorotoluene	50.0	51.8		ug/L		104	78 - 126
4-Chlorotoluene	50.0	52.9		ug/L		106	79 - 124
Chlorodibromomethane	50.0	48.1		ug/L		96	63 - 134
1,2-Dibromo-3-Chloropropane	50.0	49.4		ug/L		99	57 - 126
Ethylene Dibromide	50.0	46.8		ug/L		94	75 - 127
1,2-Dichlorobenzene	50.0	45.3		ug/L		91	77 - 124
1,3-Dichlorobenzene	50.0	47.9		ug/L		96	79 - 123

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-302736/4
Matrix: Water
Analysis Batch: 302736

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	50.0	46.8		ug/L		94	76 - 124
Dichlorodifluoromethane	50.0	57.9		ug/L		116	41 - 165
1,1-Dichloroethane	50.0	51.3		ug/L		103	69 - 132
1,2-Dichloroethane	50.0	46.7		ug/L		93	75 - 120
cis-1,2-Dichloroethene	50.0	51.0		ug/L		102	78 - 127
trans-1,2-Dichloroethene	50.0	54.3		ug/L		109	78 - 130
1,1-Dichloroethene	50.0	61.3		ug/L		123	73 - 134
1,2-Dichloropropane	50.0	49.0		ug/L		98	71 - 126
1,3-Dichloropropane	50.0	47.8		ug/L		96	73 - 125
2,2-Dichloropropane	50.0	60.4		ug/L		121	72 - 147
1,1-Dichloropropene	50.0	51.5		ug/L		103	74 - 130
cis-1,3-Dichloropropene	50.0	46.9		ug/L		94	73 - 128
trans-1,3-Dichloropropene	50.0	48.2		ug/L		96	72 - 127
Ethylbenzene	50.0	51.1		ug/L		102	78 - 125
Hexachlorobutadiene	50.0	53.0		ug/L		106	62 - 145
Isopropylbenzene	50.0	54.8		ug/L		110	72 - 129
4-Isopropyltoluene	50.0	51.7		ug/L		103	69 - 129
Methylene Chloride	50.0	51.7		ug/L		103	79 - 124
4-Methyl-2-pentanone (MIBK)	100	93.3		ug/L		93	51 - 143
Methyl tert-butyl ether	100	96.1		ug/L		96	76 - 126
Naphthalene	50.0	47.4		ug/L		95	56 - 136
N-Propylbenzene	50.0	50.9		ug/L		102	74 - 130
Styrene	50.0	51.1		ug/L		102	75 - 129
1,1,1,2-Tetrachloroethane	50.0	47.7		ug/L		95	68 - 132
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/L		100	71 - 127
Tetrachloroethene	50.0	53.0		ug/L		106	77 - 128
Toluene	50.0	49.7		ug/L		99	77 - 125
1,2,3-Trichlorobenzene	50.0	54.2		ug/L		108	63 - 136
1,2,4-Trichlorobenzene	50.0	54.5		ug/L		109	67 - 134
1,1,1-Trichloroethane	50.0	50.3		ug/L		101	76 - 126
1,1,2-Trichloroethane	50.0	45.3		ug/L		91	69 - 127
Trichloroethene	50.0	50.6		ug/L		101	80 - 120
Trichlorofluoromethane	50.0	57.3		ug/L		115	66 - 144
1,2,3-Trichloropropane	50.0	50.3		ug/L		101	74 - 126
1,2,4-Trimethylbenzene	50.0	52.1		ug/L		104	72 - 129
1,3,5-Trimethylbenzene	50.0	53.8		ug/L		108	72 - 130
Vinyl chloride	50.0	58.1		ug/L		116	58 - 141
Isopropyl ether	50.0	36.2		ug/L		72	54 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*70 - 130*
Dibromofluoromethane	*112*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-302736/5
Matrix: Water
Analysis Batch: 302736

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	118		ug/L		118	39 - 162	2	50
Benzene	50.0	47.3		ug/L		95	74 - 123	3	30
Bromobenzene	50.0	47.6		ug/L		95	79 - 125	7	30
Chlorobromomethane	50.0	54.8		ug/L		110	60 - 136	0	30
Dichlorobromomethane	50.0	47.0		ug/L		94	72 - 129	1	30
Bromoform	50.0	45.5		ug/L		91	60 - 134	0	30
Bromomethane	50.0	67.0		ug/L		134	10 - 171	0	50
2-Butanone (MEK)	100	105		ug/L		105	55 - 142	0	30
n-Butylbenzene	50.0	49.9		ug/L		100	72 - 128	3	30
sec-Butylbenzene	50.0	49.3		ug/L		99	71 - 130	3	30
tert-Butylbenzene	50.0	52.3		ug/L		105	72 - 130	3	30
Carbon tetrachloride	50.0	46.0		ug/L		92	70 - 131	5	30
Chlorobenzene	50.0	48.8		ug/L		98	79 - 120	2	30
Chloroethane	50.0	58.3		ug/L		117	47 - 148	1	40
Chloroform	50.0	49.7		ug/L		99	76 - 128	2	30
Chloromethane	50.0	57.3		ug/L		115	47 - 151	1	30
2-Chlorotoluene	50.0	51.1		ug/L		102	78 - 126	1	30
4-Chlorotoluene	50.0	51.6		ug/L		103	79 - 124	2	30
Chlorodibromomethane	50.0	46.8		ug/L		94	63 - 134	3	50
1,2-Dibromo-3-Chloropropane	50.0	51.3		ug/L		103	57 - 126	4	50
Ethylene Dibromide	50.0	46.7		ug/L		93	75 - 127	0	30
1,2-Dichlorobenzene	50.0	45.6		ug/L		91	77 - 124	1	30
1,3-Dichlorobenzene	50.0	46.9		ug/L		94	79 - 123	2	30
1,4-Dichlorobenzene	50.0	46.7		ug/L		93	76 - 124	0	30
Dichlorodifluoromethane	50.0	54.6		ug/L		109	41 - 165	6	50
1,1-Dichloroethane	50.0	50.8		ug/L		102	69 - 132	1	30
1,2-Dichloroethane	50.0	45.3		ug/L		91	75 - 120	3	30
cis-1,2-Dichloroethene	50.0	50.4		ug/L		101	78 - 127	1	30
trans-1,2-Dichloroethene	50.0	52.5		ug/L		105	78 - 130	3	30
1,1-Dichloroethene	50.0	57.0		ug/L		114	73 - 134	7	30
1,2-Dichloropropane	50.0	48.2		ug/L		96	71 - 126	2	30
1,3-Dichloropropane	50.0	47.2		ug/L		94	73 - 125	1	30
2,2-Dichloropropane	50.0	57.4		ug/L		115	72 - 147	5	30
1,1-Dichloropropene	50.0	48.9		ug/L		98	74 - 130	5	30
cis-1,3-Dichloropropene	50.0	46.2		ug/L		92	73 - 128	1	30
trans-1,3-Dichloropropene	50.0	47.0		ug/L		94	72 - 127	3	50
Ethylbenzene	50.0	49.4		ug/L		99	78 - 125	4	30
Hexachlorobutadiene	50.0	49.2		ug/L		98	62 - 145	8	30
Isopropylbenzene	50.0	53.4		ug/L		107	72 - 129	3	30
4-Isopropyltoluene	50.0	50.3		ug/L		101	69 - 129	3	50
Methylene Chloride	50.0	50.5		ug/L		101	79 - 124	2	30
4-Methyl-2-pentanone (MIBK)	100	93.8		ug/L		94	51 - 143	1	30
Methyl tert-butyl ether	100	96.8		ug/L		97	76 - 126	1	30
Naphthalene	50.0	51.2		ug/L		102	56 - 136	8	30
N-Propylbenzene	50.0	49.9		ug/L		100	74 - 130	2	30
Styrene	50.0	49.4		ug/L		99	75 - 129	3	30
1,1,1,2-Tetrachloroethane	50.0	46.6		ug/L		93	68 - 132	2	30
1,1,2,2-Tetrachloroethane	50.0	50.8		ug/L		102	71 - 127	2	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-302736/5
Matrix: Water
Analysis Batch: 302736

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	50.0	50.1		ug/L		100	77 - 128	6	30
Toluene	50.0	48.7		ug/L		97	77 - 125	2	30
1,2,3-Trichlorobenzene	50.0	62.6		ug/L		125	63 - 136	14	30
1,2,4-Trichlorobenzene	50.0	54.8		ug/L		110	67 - 134	1	30
1,1,1-Trichloroethane	50.0	47.6		ug/L		95	76 - 126	5	30
1,1,2-Trichloroethane	50.0	45.0		ug/L		90	69 - 127	1	30
Trichloroethene	50.0	47.7		ug/L		95	80 - 120	6	30
Trichlorofluoromethane	50.0	54.2		ug/L		108	66 - 144	6	30
1,2,3-Trichloropropane	50.0	47.1		ug/L		94	74 - 126	6	30
1,2,4-Trimethylbenzene	50.0	51.5		ug/L		103	72 - 129	1	50
1,3,5-Trimethylbenzene	50.0	52.3		ug/L		105	72 - 130	3	50
Vinyl chloride	50.0	54.3		ug/L		109	58 - 141	7	30
Isopropyl ether	50.0	36.5		ug/L		73	54 - 153	1	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*70 - 130*
Dibromofluoromethane	*109*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: MB 680-302974/12
Matrix: Water
Analysis Batch: 302974

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.0	U	25	5.0	ug/L			11/13/13 13:55	1
Benzene	0.25	U	1.0	0.25	ug/L			11/13/13 13:55	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			11/13/13 13:55	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			11/13/13 13:55	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			11/13/13 13:55	1
Bromoform	0.50	U	1.0	0.50	ug/L			11/13/13 13:55	1
Bromomethane	2.0	U	5.0	2.0	ug/L			11/13/13 13:55	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			11/13/13 13:55	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 13:55	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			11/13/13 13:55	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			11/13/13 13:55	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			11/13/13 13:55	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 13:55	1
Chloroethane	2.0	U	5.0	2.0	ug/L			11/13/13 13:55	1
Chloroform	0.14	U	1.0	0.14	ug/L			11/13/13 13:55	1
Chloromethane	0.33	U	1.0	0.33	ug/L			11/13/13 13:55	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			11/13/13 13:55	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/13/13 13:55	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			11/13/13 13:55	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			11/13/13 13:55	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			11/13/13 13:55	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			11/13/13 13:55	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 13:55	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			11/13/13 13:55	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-302974/12
Matrix: Water
Analysis Batch: 302974

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			11/13/13 13:55	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			11/13/13 13:55	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			11/13/13 13:55	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 13:55	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			11/13/13 13:55	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			11/13/13 13:55	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 13:55	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			11/13/13 13:55	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			11/13/13 13:55	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			11/13/13 13:55	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			11/13/13 13:55	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			11/13/13 13:55	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/13/13 13:55	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			11/13/13 13:55	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			11/13/13 13:55	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/13/13 13:55	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			11/13/13 13:55	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			11/13/13 13:55	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			11/13/13 13:55	1
Naphthalene	1.0	U	5.0	1.0	ug/L			11/13/13 13:55	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/13/13 13:55	1
Styrene	0.11	U	1.0	0.11	ug/L			11/13/13 13:55	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			11/13/13 13:55	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			11/13/13 13:55	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/13/13 13:55	1
Toluene	0.33	U	1.0	0.33	ug/L			11/13/13 13:55	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			11/13/13 13:55	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			11/13/13 13:55	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			11/13/13 13:55	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			11/13/13 13:55	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			11/13/13 13:55	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			11/13/13 13:55	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			11/13/13 13:55	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 13:55	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			11/13/13 13:55	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			11/13/13 13:55	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			11/13/13 13:55	1
Isopropyl ether	0.24	U	10	0.24	ug/L			11/13/13 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*11/13/13 13:55*	*1*
Dibromofluoromethane	*111*		*70 - 130*		*11/13/13 13:55*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*11/13/13 13:55*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-302974/8
Matrix: Water
Analysis Batch: 302974

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	108		ug/L		108	39 - 162
Benzene	50.0	48.5		ug/L		97	74 - 123
Bromobenzene	50.0	50.1		ug/L		100	79 - 125
Chlorobromomethane	50.0	51.8		ug/L		104	60 - 136
Dichlorobromomethane	50.0	47.9		ug/L		96	72 - 129
Bromoform	50.0	45.6		ug/L		91	60 - 134
Bromomethane	50.0	48.2		ug/L		96	10 - 171
2-Butanone (MEK)	100	99.6		ug/L		100	55 - 142
n-Butylbenzene	50.0	52.4		ug/L		105	72 - 128
sec-Butylbenzene	50.0	51.1		ug/L		102	71 - 130
tert-Butylbenzene	50.0	54.9		ug/L		110	72 - 130
Carbon tetrachloride	50.0	47.3		ug/L		95	70 - 131
Chlorobenzene	50.0	51.1		ug/L		102	79 - 120
Chloroethane	50.0	55.7		ug/L		111	47 - 148
Chloroform	50.0	47.7		ug/L		95	76 - 128
Chloromethane	50.0	55.8		ug/L		112	47 - 151
2-Chlorotoluene	50.0	53.3		ug/L		107	78 - 126
4-Chlorotoluene	50.0	53.4		ug/L		107	79 - 124
Chlorodibromomethane	50.0	47.0		ug/L		94	63 - 134
1,2-Dibromo-3-Chloropropane	50.0	53.0		ug/L		106	57 - 126
Ethylene Dibromide	50.0	46.6		ug/L		93	75 - 127
1,2-Dichlorobenzene	50.0	47.4		ug/L		95	77 - 124
1,3-Dichlorobenzene	50.0	49.6		ug/L		99	79 - 123
1,4-Dichlorobenzene	50.0	48.7		ug/L		97	76 - 124
Dichlorodifluoromethane	50.0	50.8		ug/L		102	41 - 165
1,1-Dichloroethane	50.0	47.6		ug/L		95	69 - 132
1,2-Dichloroethane	50.0	48.4		ug/L		97	75 - 120
cis-1,2-Dichloroethene	50.0	47.1		ug/L		94	78 - 127
trans-1,2-Dichloroethene	50.0	49.2		ug/L		98	78 - 130
1,1-Dichloroethene	50.0	53.3		ug/L		107	73 - 134
1,2-Dichloropropane	50.0	48.5		ug/L		97	71 - 126
1,3-Dichloropropane	50.0	48.7		ug/L		97	73 - 125
2,2-Dichloropropane	50.0	55.4		ug/L		111	72 - 147
1,1-Dichloropropene	50.0	49.7		ug/L		99	74 - 130
cis-1,3-Dichloropropene	50.0	47.0		ug/L		94	73 - 128
trans-1,3-Dichloropropene	50.0	48.1		ug/L		96	72 - 127
Ethylbenzene	50.0	51.3		ug/L		103	78 - 125
Hexachlorobutadiene	50.0	51.1		ug/L		102	62 - 145
Isopropylbenzene	50.0	55.0		ug/L		110	72 - 129
4-Isopropyltoluene	50.0	52.7		ug/L		105	69 - 129
Methylene Chloride	50.0	47.5		ug/L		95	79 - 124
4-Methyl-2-pentanone (MIBK)	100	97.6		ug/L		98	51 - 143
Methyl tert-butyl ether	100	90.6		ug/L		91	76 - 126
Naphthalene	50.0	47.3		ug/L		95	56 - 136
N-Propylbenzene	50.0	52.5		ug/L		105	74 - 130
Styrene	50.0	51.3		ug/L		103	75 - 129
1,1,1,2-Tetrachloroethane	50.0	48.4		ug/L		97	68 - 132
1,1,2,2-Tetrachloroethane	50.0	52.1		ug/L		104	71 - 127

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-302974/8
Matrix: Water
Analysis Batch: 302974

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	50.0	52.9		ug/L		106	77 - 128
Toluene	50.0	49.6		ug/L		99	77 - 125
1,2,3-Trichlorobenzene	50.0	54.4		ug/L		109	63 - 136
1,2,4-Trichlorobenzene	50.0	58.5		ug/L		117	67 - 134
1,1,1-Trichloroethane	50.0	49.6		ug/L		99	76 - 126
1,1,2-Trichloroethane	50.0	46.2		ug/L		92	69 - 127
Trichloroethene	50.0	49.4		ug/L		99	80 - 120
Trichlorofluoromethane	50.0	51.0		ug/L		102	66 - 144
1,2,3-Trichloropropane	50.0	51.0		ug/L		102	74 - 126
1,2,4-Trimethylbenzene	50.0	54.4		ug/L		109	72 - 129
1,3,5-Trimethylbenzene	50.0	55.4		ug/L		111	72 - 130
Vinyl chloride	50.0	51.7		ug/L		103	58 - 141
Isopropyl ether	50.0	33.1		ug/L		66	54 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*70 - 130*
Dibromofluoromethane	*102*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 680-302974/9
Matrix: Water
Analysis Batch: 302974

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	123		ug/L		123	39 - 162	12	50
Benzene	50.0	50.2		ug/L		100	74 - 123	4	30
Bromobenzene	50.0	49.8		ug/L		100	79 - 125	0	30
Chlorobromomethane	50.0	56.7		ug/L		113	60 - 136	9	30
Dichlorobromomethane	50.0	47.6		ug/L		95	72 - 129	1	30
Bromoform	50.0	44.9		ug/L		90	60 - 134	2	30
Bromomethane	50.0	60.2		ug/L		120	10 - 171	22	50
2-Butanone (MEK)	100	110		ug/L		110	55 - 142	10	30
n-Butylbenzene	50.0	53.2		ug/L		106	72 - 128	2	30
sec-Butylbenzene	50.0	51.9		ug/L		104	71 - 130	2	30
tert-Butylbenzene	50.0	54.8		ug/L		110	72 - 130	0	30
Carbon tetrachloride	50.0	49.3		ug/L		99	70 - 131	4	30
Chlorobenzene	50.0	50.2		ug/L		100	79 - 120	2	30
Chloroethane	50.0	61.7		ug/L		123	47 - 148	10	40
Chloroform	50.0	52.4		ug/L		105	76 - 128	9	30
Chloromethane	50.0	62.5		ug/L		125	47 - 151	11	30
2-Chlorotoluene	50.0	53.1		ug/L		106	78 - 126	0	30
4-Chlorotoluene	50.0	53.9		ug/L		108	79 - 124	1	30
Chlorodibromomethane	50.0	47.7		ug/L		95	63 - 134	2	50
1,2-Dibromo-3-Chloropropane	50.0	54.6		ug/L		109	57 - 126	3	50
Ethylene Dibromide	50.0	47.7		ug/L		95	75 - 127	2	30
1,2-Dichlorobenzene	50.0	47.3		ug/L		95	77 - 124	0	30
1,3-Dichlorobenzene	50.0	48.6		ug/L		97	79 - 123	2	30
1,4-Dichlorobenzene	50.0	48.1		ug/L		96	76 - 124	1	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-302974/9
Matrix: Water
Analysis Batch: 302974

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dichlorodifluoromethane	50.0	57.0		ug/L		114	41 - 165	12	50
1,1-Dichloroethane	50.0	53.5		ug/L		107	69 - 132	12	30
1,2-Dichloroethane	50.0	47.7		ug/L		95	75 - 120	2	30
cis-1,2-Dichloroethene	50.0	52.8		ug/L		106	78 - 127	11	30
trans-1,2-Dichloroethene	50.0	54.4		ug/L		109	78 - 130	10	30
1,1-Dichloroethene	50.0	60.9		ug/L		122	73 - 134	13	30
1,2-Dichloropropane	50.0	50.6		ug/L		101	71 - 126	4	30
1,3-Dichloropropane	50.0	48.6		ug/L		97	73 - 125	0	30
2,2-Dichloropropane	50.0	59.9		ug/L		120	72 - 147	8	30
1,1-Dichloropropene	50.0	51.9		ug/L		104	74 - 130	4	30
cis-1,3-Dichloropropene	50.0	47.8		ug/L		96	73 - 128	2	30
trans-1,3-Dichloropropene	50.0	47.9		ug/L		96	72 - 127	0	50
Ethylbenzene	50.0	51.1		ug/L		102	78 - 125	0	30
Hexachlorobutadiene	50.0	54.8		ug/L		110	62 - 145	7	30
Isopropylbenzene	50.0	55.9		ug/L		112	72 - 129	2	30
4-Isopropyltoluene	50.0	52.8		ug/L		106	69 - 129	0	50
Methylene Chloride	50.0	52.3		ug/L		105	79 - 124	10	30
4-Methyl-2-pentanone (MIBK)	100	98.2		ug/L		98	51 - 143	1	30
Methyl tert-butyl ether	100	96.9		ug/L		97	76 - 126	7	30
Naphthalene	50.0	56.7		ug/L		113	56 - 136	18	30
N-Propylbenzene	50.0	50.6		ug/L		101	74 - 130	4	30
Styrene	50.0	51.4		ug/L		103	75 - 129	0	30
1,1,1,2-Tetrachloroethane	50.0	46.9		ug/L		94	68 - 132	3	30
1,1,2,2-Tetrachloroethane	50.0	52.0		ug/L		104	71 - 127	0	30
Tetrachloroethene	50.0	51.8		ug/L		104	77 - 128	2	30
Toluene	50.0	51.4		ug/L		103	77 - 125	4	30
1,2,3-Trichlorobenzene	50.0	65.7		ug/L		131	63 - 136	19	30
1,2,4-Trichlorobenzene	50.0	62.0		ug/L		124	67 - 134	6	30
1,1,1-Trichloroethane	50.0	50.9		ug/L		102	76 - 126	3	30
1,1,2-Trichloroethane	50.0	47.4		ug/L		95	69 - 127	3	30
Trichloroethene	50.0	49.7		ug/L		99	80 - 120	1	30
Trichlorofluoromethane	50.0	56.9		ug/L		114	66 - 144	11	30
1,2,3-Trichloropropane	50.0	49.9		ug/L		100	74 - 126	2	30
1,2,4-Trimethylbenzene	50.0	53.8		ug/L		108	72 - 129	1	50
1,3,5-Trimethylbenzene	50.0	54.3		ug/L		109	72 - 130	2	50
Vinyl chloride	50.0	58.8		ug/L		118	58 - 141	13	30
Isopropyl ether	50.0	36.1		ug/L		72	54 - 153	9	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*70 - 130*
Dibromofluoromethane	*110*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-96024-19 MS
Matrix: Water
Analysis Batch: 302974

Client Sample ID: LMW-35-11-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	5.0	U	100	91.0		ug/L		91	39 - 162
Benzene	0.25	U	50.0	49.7		ug/L		99	74 - 123
Bromobenzene	0.16	U	50.0	50.2		ug/L		100	79 - 125
Chlorobromomethane	0.14	U	50.0	57.1		ug/L		114	60 - 136
Dichlorobromomethane	0.25	U	50.0	49.4		ug/L		99	72 - 129
Bromoform	0.50	U	50.0	41.5		ug/L		83	60 - 134
Bromomethane	2.0	U	50.0	57.8		ug/L		116	10 - 171
2-Butanone (MEK)	1.0	U	100	87.0		ug/L		87	55 - 142
n-Butylbenzene	0.10	U	50.0	44.3		ug/L		89	72 - 128
sec-Butylbenzene	0.16	U	50.0	50.2		ug/L		100	71 - 130
tert-Butylbenzene	0.12	U	50.0	53.5		ug/L		107	72 - 130
Carbon tetrachloride	0.50	U	50.0	53.3		ug/L		107	70 - 131
Chlorobenzene	0.25	U	50.0	50.4		ug/L		101	79 - 120
Chloroethane	2.0	U	50.0	61.4		ug/L		123	47 - 148
Chloroform	0.14	U	50.0	56.6		ug/L		113	76 - 128
Chloromethane	0.33	U	50.0	65.6		ug/L		131	47 - 151
2-Chlorotoluene	0.17	U	50.0	52.0		ug/L		104	78 - 126
4-Chlorotoluene	0.27	U	50.0	50.3		ug/L		101	79 - 124
Chlorodibromomethane	0.10	U	50.0	47.1		ug/L		94	63 - 134
1,2-Dibromo-3-Chloropropane	0.44	U J	50.0	26.7	J	ug/L		53	57 - 126
Ethylene Dibromide	0.25	U	50.0	45.3		ug/L		91	75 - 127
1,2-Dichlorobenzene	0.21	U	50.0	38.3		ug/L		77	77 - 124
1,3-Dichlorobenzene	0.25	U	50.0	44.1		ug/L		88	79 - 123
1,4-Dichlorobenzene	0.28	U	50.0	41.6		ug/L		83	76 - 124
Dichlorodifluoromethane	1.9		50.0	68.2		ug/L		133	41 - 165
1,1-Dichloroethane	0.25	U	50.0	57.4		ug/L		115	69 - 132
1,2-Dichloroethane	0.10	U	50.0	49.1		ug/L		98	75 - 120
cis-1,2-Dichloroethene	0.15	U	50.0	54.3		ug/L		109	78 - 127
trans-1,2-Dichloroethene	0.20	U	50.0	57.3		ug/L		115	78 - 130
1,1-Dichloroethene	0.11	U	50.0	63.3		ug/L		127	73 - 134
1,2-Dichloropropane	0.13	U	50.0	48.8		ug/L		98	71 - 126
1,3-Dichloropropane	0.13	U	50.0	46.3		ug/L		93	73 - 125
2,2-Dichloropropane	0.12	U	50.0	62.9		ug/L		126	72 - 147
1,1-Dichloropropene	0.25	U	50.0	54.8		ug/L		110	74 - 130
cis-1,3-Dichloropropene	0.11	U	50.0	46.4		ug/L		93	73 - 128
trans-1,3-Dichloropropene	0.21	U	50.0	47.7		ug/L		95	72 - 127
Ethylbenzene	0.11	U	50.0	52.4		ug/L		105	78 - 125
Hexachlorobutadiene	0.40	U J	50.0	25.2	J	ug/L		50	62 - 145
Isopropylbenzene	0.10	U	50.0	56.0		ug/L		112	72 - 129
4-Isopropyltoluene	0.13	U	50.0	48.5		ug/L		97	69 - 129
Methylene Chloride	1.0	U	50.0	52.8		ug/L		106	79 - 124
4-Methyl-2-pentanone (MIBK)	1.0	U	100	83.5		ug/L		83	51 - 143
Methyl tert-butyl ether	0.20	U	100	95.8		ug/L		96	76 - 126
Naphthalene	1.0	U J	50.0	22.3	J	ug/L		45	56 - 136
N-Propylbenzene	0.15	U	50.0	51.4		ug/L		103	74 - 130
Styrene	0.11	U	50.0	50.8		ug/L		102	75 - 129
1,1,1,2-Tetrachloroethane	0.33	U	50.0	49.8		ug/L		100	68 - 132
1,1,2,2-Tetrachloroethane	0.18	U	50.0	43.8		ug/L		88	71 - 127

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-96024-19 MS
Matrix: Water
Analysis Batch: 302974

Client Sample ID: LMW-35-11-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	0.15	U	50.0	54.5		ug/L		109	77 - 128
Toluene	0.33	U	50.0	51.1		ug/L		102	77 - 125
1,2,3-Trichlorobenzene	0.35	U J	50.0	27.0	J	ug/L		54	63 - 136
1,2,4-Trichlorobenzene	0.25	U J	50.0	25.3	J	ug/L		51	67 - 134
1,1,1-Trichloroethane	0.50	U	50.0	54.4		ug/L		109	76 - 126
1,1,2-Trichloroethane	0.13	U	50.0	44.2		ug/L		88	69 - 127
Trichloroethene	0.13	U	50.0	51.0		ug/L		102	80 - 120
Trichlorofluoromethane	0.56	J	50.0	64.4		ug/L		128	66 - 144
1,2,3-Trichloropropane	0.41	U	50.0	43.7		ug/L		87	74 - 126
1,2,4-Trimethylbenzene	0.33	U	50.0	50.3		ug/L		101	72 - 129
1,3,5-Trimethylbenzene	0.33	U	50.0	53.3		ug/L		107	72 - 130
Vinyl chloride	0.18	U	50.0	61.8		ug/L		124	58 - 141
Isopropyl ether	0.24	U	50.0	35.1		ug/L		70	54 - 153

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*70 - 130*
Dibromofluoromethane	*117*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: 680-96024-19 MSD
Matrix: Water
Analysis Batch: 302974

Client Sample ID: LMW-35-11-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	5.0	U	100	91.1		ug/L		91	39 - 162	0	50
Benzene	0.25	U	50.0	50.0		ug/L		100	74 - 123	1	30
Bromobenzene	0.16	U	50.0	49.4		ug/L		99	79 - 125	2	30
Chlorobromomethane	0.14	U	50.0	55.9		ug/L		112	60 - 136	2	30
Dichlorobromomethane	0.25	U	50.0	49.9		ug/L		100	72 - 129	1	30
Bromoform	0.50	U	50.0	41.2		ug/L		82	60 - 134	1	30
Bromomethane	2.0	U	50.0	59.2		ug/L		118	10 - 171	2	50
2-Butanone (MEK)	1.0	U	100	94.8		ug/L		95	55 - 142	9	30
n-Butylbenzene	0.10	U	50.0	46.8		ug/L		94	72 - 128	5	30
sec-Butylbenzene	0.16	U	50.0	51.6		ug/L		103	71 - 130	3	30
tert-Butylbenzene	0.12	U	50.0	54.8		ug/L		110	72 - 130	3	30
Carbon tetrachloride	0.50	U	50.0	52.6		ug/L		105	70 - 131	1	30
Chlorobenzene	0.25	U	50.0	50.6		ug/L		101	79 - 120	0	30
Chloroethane	2.0	U	50.0	64.1		ug/L		128	47 - 148	4	40
Chloroform	0.14	U	50.0	53.8		ug/L		108	76 - 128	5	30
Chloromethane	0.33	U	50.0	63.8		ug/L		128	47 - 151	3	30
2-Chlorotoluene	0.17	U	50.0	53.6		ug/L		107	78 - 126	3	30
4-Chlorotoluene	0.27	U	50.0	52.4		ug/L		105	79 - 124	4	30
Chlorodibromomethane	0.10	U	50.0	47.6		ug/L		95	63 - 134	1	50
1,2-Dibromo-3-Chloropropane	0.44	U J	50.0	27.8	J	ug/L		56	57 - 126	4	50
Ethylene Dibromide	0.25	U	50.0	45.0		ug/L		90	75 - 127	1	30
1,2-Dichlorobenzene	0.21	U	50.0	38.6		ug/L		77	77 - 124	1	30
1,3-Dichlorobenzene	0.25	U	50.0	44.7		ug/L		89	79 - 123	1	30
1,4-Dichlorobenzene	0.28	U	50.0	42.7		ug/L		85	76 - 124	3	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-96024-19 MSD
Matrix: Water
Analysis Batch: 302974

Client Sample ID: LMW-35-11-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dichlorodifluoromethane	1.9		50.0	63.5		ug/L		123	41 - 165	7	50
1,1-Dichloroethane	0.25	U	50.0	53.9		ug/L		108	69 - 132	6	30
1,2-Dichloroethane	0.10	U	50.0	47.9		ug/L		96	75 - 120	2	30
cis-1,2-Dichloroethene	0.15	U	50.0	53.8		ug/L		108	78 - 127	1	30
trans-1,2-Dichloroethene	0.20	U	50.0	56.0		ug/L		112	78 - 130	2	30
1,1-Dichloroethene	0.11	U	50.0	62.3		ug/L		125	73 - 134	1	30
1,2-Dichloropropane	0.13	U	50.0	49.4		ug/L		99	71 - 126	1	30
1,3-Dichloropropane	0.13	U	50.0	46.6		ug/L		93	73 - 125	1	30
2,2-Dichloropropane	0.12	U	50.0	59.6		ug/L		119	72 - 147	5	30
1,1-Dichloropropene	0.25	U	50.0	53.8		ug/L		108	74 - 130	2	30
cis-1,3-Dichloropropene	0.11	U	50.0	47.0		ug/L		94	73 - 128	1	30
trans-1,3-Dichloropropene	0.21	U	50.0	46.4		ug/L		93	72 - 127	3	50
Ethylbenzene	0.11	U	50.0	53.1		ug/L		106	78 - 125	1	30
Hexachlorobutadiene	0.40	U J	50.0	25.5	J	ug/L		51	62 - 145	1	30
Isopropylbenzene	0.10	U	50.0	56.3		ug/L		113	72 - 129	1	30
4-Isopropyltoluene	0.13	U	50.0	49.8		ug/L		100	69 - 129	3	50
Methylene Chloride	1.0	U	50.0	51.6		ug/L		103	79 - 124	2	30
4-Methyl-2-pentanone (MIBK)	1.0	U	100	86.1		ug/L		86	51 - 143	3	30
Methyl tert-butyl ether	0.20	U	100	95.4		ug/L		95	76 - 126	0	30
Naphthalene	1.0	U J	50.0	25.0	J	ug/L		50	56 - 136	11	30
N-Propylbenzene	0.15	U	50.0	52.1		ug/L		104	74 - 130	1	30
Styrene	0.11	U	50.0	50.6		ug/L		101	75 - 129	0	30
1,1,1,2-Tetrachloroethane	0.33	U	50.0	48.8		ug/L		98	68 - 132	2	30
1,1,2,2-Tetrachloroethane	0.18	U	50.0	44.6		ug/L		89	71 - 127	2	30
Tetrachloroethene	0.15	U	50.0	55.3		ug/L		111	77 - 128	1	30
Toluene	0.33	U	50.0	51.0		ug/L		102	77 - 125	0	30
1,2,3-Trichlorobenzene	0.35	U J	50.0	32.8		ug/L		66	63 - 136	20	30
1,2,4-Trichlorobenzene	0.25	U J	50.0	27.4	J	ug/L		55	67 - 134	8	30
1,1,1-Trichloroethane	0.50	U	50.0	54.2		ug/L		108	76 - 126	0	30
1,1,2-Trichloroethane	0.13	U	50.0	45.4		ug/L		91	69 - 127	3	30
Trichloroethene	0.13	U	50.0	50.7		ug/L		101	80 - 120	1	30
Trichlorofluoromethane	0.56	J	50.0	64.2		ug/L		127	66 - 144	0	30
1,2,3-Trichloropropane	0.41	U	50.0	42.5		ug/L		85	74 - 126	3	30
1,2,4-Trimethylbenzene	0.33	U	50.0	51.5		ug/L		103	72 - 129	2	50
1,3,5-Trimethylbenzene	0.33	U	50.0	54.4		ug/L		109	72 - 130	2	50
Vinyl chloride	0.18	U	50.0	61.1		ug/L		122	58 - 141	1	30
Isopropyl ether	0.24	U	50.0	34.2		ug/L		68	54 - 153	3	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*70 - 130*
Dibromofluoromethane	*114*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-302479/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302479

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.025	U	0.050	0.025	mg/L			11/09/13 16:09	1

Lab Sample ID: LCS 680-302479/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302479

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.999	1.02		mg/L		102	90 - 110

Lab Sample ID: LCSD 680-302479/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302479

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.999	1.02		mg/L		102	90 - 110	0	30

Lab Sample ID: 680-96024-4 MS — **Client Sample ID: LMW-35-11-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302479

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.27		0.999	1.30		mg/L		104	80 - 120

Lab Sample ID: 680-96024-4 MSD — **Client Sample ID: LMW-35-11-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302479

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.27		0.999	1.37		mg/L		110	80 - 120	5	30

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-302594/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302847 — **Prep Batch: 302594**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/11/13 11:06	11/12/13 06:08	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 06:08	1
Barium	0.15	U	1.0	0.15	ug/L		11/11/13 11:06	11/12/13 06:08	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/11/13 11:06	11/12/13 06:08	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/11/13 11:06	11/12/13 06:08	1
Chromium	0.16	U	1.0	0.16	ug/L		11/11/13 11:06	11/12/13 06:08	1
Cobalt	0.078	U	0.20	0.078	ug/L		11/11/13 11:06	11/12/13 06:08	1
Copper	0.21	U	1.0	0.21	ug/L		11/11/13 11:06	11/12/13 06:08	1
Lead	0.080	U	0.30	0.080	ug/L		11/11/13 11:06	11/12/13 06:08	1
Nickel	0.40	U	1.0	0.40	ug/L		11/11/13 11:06	11/12/13 06:08	1
Selenium	0.21	U	0.50	0.21	ug/L		11/11/13 11:06	11/12/13 06:08	1
Silver	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 06:08	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 680-302594/1-A
Matrix: Water
Analysis Batch: 302847

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 302594

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.10	U	0.20	0.10	ug/L		11/11/13 11:06	11/12/13 06:08	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/11/13 11:06	11/12/13 06:08	1
Zinc	2.6	U	10	2.6	ug/L		11/11/13 11:06	11/12/13 06:08	1

Lab Sample ID: LCS 680-302594/2-A
Matrix: Water
Analysis Batch: 302847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 302594

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	20.0	21.2		ug/L		106	75 - 125
Arsenic	40.0	43.5		ug/L		109	75 - 125
Barium	40.0	40.1		ug/L		100	75 - 125
Beryllium	20.0	20.5		ug/L		103	75 - 125
Cadmium	20.0	21.4		ug/L		107	75 - 125
Chromium	40.0	41.2		ug/L		103	75 - 125
Cobalt	20.0	19.8		ug/L		99	75 - 125
Copper	40.0	42.8		ug/L		107	75 - 125
Lead	20.0	20.2		ug/L		101	75 - 125
Nickel	40.0	42.0		ug/L		105	75 - 125
Selenium	40.0	48.8		ug/L		122	75 - 125
Silver	20.0	21.6		ug/L		108	75 - 125
Thallium	16.0	15.8		ug/L		99	75 - 125
Vanadium	40.0	40.4		ug/L		101	75 - 125
Zinc	40.0	44.5		ug/L		111	75 - 125

Lab Sample ID: 680-96024-4 MS
Matrix: Water
Analysis Batch: 302847

Client Sample ID: LMW-35-11-13
Prep Type: Total/NA
Prep Batch: 302594

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.99	U	20.0	21.0		ug/L		105	75 - 125
Arsenic	0.40	U	40.0	43.3		ug/L		108	75 - 125
Barium	11		40.0	51.7		ug/L		102	75 - 125
Beryllium	0.070	U	20.0	20.1		ug/L		100	75 - 125
Cadmium	0.20	U	20.0	21.3		ug/L		106	75 - 125
Chromium	0.16	U	40.0	41.0		ug/L		103	75 - 125
Cobalt	0.51		20.0	20.4		ug/L		99	75 - 125
Copper	0.78	J	40.0	43.3		ug/L		106	75 - 125
Lead	0.080	U	20.0	19.9		ug/L		100	75 - 125
Nickel	2.5		40.0	43.9		ug/L		104	75 - 125
Selenium	0.21	U	40.0	46.7		ug/L		117	75 - 125
Silver	0.10	U	20.0	21.0		ug/L		105	75 - 125
Thallium	0.10	U	16.0	15.8		ug/L		99	75 - 125
Vanadium	1.4	U	40.0	40.2		ug/L		100	75 - 125
Zinc	8.4	J	40.0	51.6		ug/L		108	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-96024-4 MSD
Matrix: Water
Analysis Batch: 302847

Client Sample ID: LMW-35-11-13
Prep Type: Total/NA
Prep Batch: 302594

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.99	U	20.0	20.8		ug/L		104	75 - 125	1	20
Arsenic	0.40	U	40.0	41.2		ug/L		103	75 - 125	5	20
Barium	11		40.0	50.1		ug/L		98	75 - 125	3	20
Beryllium	0.070	U	20.0	19.6		ug/L		98	75 - 125	2	20
Cadmium	0.20	U	20.0	20.8		ug/L		104	75 - 125	2	20
Chromium	0.16	U	40.0	38.6		ug/L		97	75 - 125	6	20
Cobalt	0.51		20.0	19.4		ug/L		94	75 - 125	5	20
Copper	0.78	J	40.0	41.1		ug/L		101	75 - 125	5	20
Lead	0.080	U	20.0	19.6		ug/L		98	75 - 125	1	20
Nickel	2.5		40.0	42.0		ug/L		99	75 - 125	5	20
Selenium	0.21	U	40.0	45.9		ug/L		115	75 - 125	2	20
Silver	0.10	U	20.0	21.8		ug/L		109	75 - 125	3	20
Thallium	0.10	U	16.0	15.5		ug/L		97	75 - 125	2	20
Vanadium	1.4	U	40.0	38.2		ug/L		95	75 - 125	5	20
Zinc	8.4	J	40.0	48.7		ug/L		101	75 - 125	6	20

QC Association Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

GC/MS VOA

Analysis Batch: 302736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96024-7	Trip Blank	Total/NA	Water	8260B	
680-96024-8	LMW-4R-11-13	Total/NA	Water	8260B	
680-96024-9	LMW-10-11-13	Total/NA	Water	8260B	
680-96024-10	LMW-16-11-13	Total/NA	Water	8260B	
680-96024-11	LMW-9D-11-13	Total/NA	Water	8260B	
680-96024-12	LMW-9S-11-13	Total/NA	Water	8260B	
680-96024-13	LMW-9-11-13	Total/NA	Water	8260B	
680-96024-14	LMW-15R-11-13	Total/NA	Water	8260B	
680-96024-15	LMW-14R-11-13	Total/NA	Water	8260B	
LCS 680-302736/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-302736/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-302736/8	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 302974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96024-16	LMW-6-11-13	Total/NA	Water	8260B	
680-96024-17	Dup-1-11-13	Total/NA	Water	8260B	
680-96024-18	LMW-8-11-13	Total/NA	Water	8260B	
680-96024-19	LMW-35-11-13	Total/NA	Water	8260B	
680-96024-19 MS	LMW-35-11-13	Total/NA	Water	8260B	
680-96024-19 MSD	LMW-35-11-13	Total/NA	Water	8260B	
680-96024-20	LMW-3-11-13	Total/NA	Water	8260B	
680-96024-21	BLK-1-11-13	Total/NA	Water	8260B	
LCS 680-302974/8	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-302974/9	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-302974/12	Method Blank	Total/NA	Water	8260B	

HPLC/IC

Analysis Batch: 302479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96024-1	LMW-6-11-13	Total/NA	Water	300.0	
680-96024-2	DUP-1-11-13	Total/NA	Water	300.0	
680-96024-3	LMW-8-11-13	Total/NA	Water	300.0	
680-96024-4	LMW-35-11-13	Total/NA	Water	300.0	
680-96024-4 MS	LMW-35-11-13	Total/NA	Water	300.0	
680-96024-4 MSD	LMW-35-11-13	Total/NA	Water	300.0	
680-96024-5	LMW-3-11-13	Total/NA	Water	300.0	
680-96024-6	BLK-1-11-13	Total/NA	Water	300.0	
LCS 680-302479/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-302479/7	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-302479/5	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 302594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96024-1	LMW-6-11-13	Total/NA	Water	3030C	
680-96024-2	DUP-1-11-13	Total/NA	Water	3030C	
680-96024-3	LMW-8-11-13	Total/NA	Water	3030C	

Metals (Continued)

Prep Batch: 302594 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96024-4	LMW-35-11-13	Total/NA	Water	3030C	
680-96024-4 MS	LMW-35-11-13	Total/NA	Water	3030C	
680-96024-4 MSD	LMW-35-11-13	Total/NA	Water	3030C	
680-96024-5	LMW-3-11-13	Total/NA	Water	3030C	
680-96024-6	BLK-1-11-13	Total/NA	Water	3030C	
LCS 680-302594/2-A	Lab Control Sample	Total/NA	Water	3030C	
MB 680-302594/1-A	Method Blank	Total/NA	Water	3030C	

Analysis Batch: 302847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96024-1	LMW-6-11-13	Total/NA	Water	6020A	302594
680-96024-2	DUP-1-11-13	Total/NA	Water	6020A	302594
680-96024-3	LMW-8-11-13	Total/NA	Water	6020A	302594
680-96024-4	LMW-35-11-13	Total/NA	Water	6020A	302594
680-96024-4 MS	LMW-35-11-13	Total/NA	Water	6020A	302594
680-96024-4 MSD	LMW-35-11-13	Total/NA	Water	6020A	302594
680-96024-5	LMW-3-11-13	Total/NA	Water	6020A	302594
680-96024-6	BLK-1-11-13	Total/NA	Water	6020A	302594
LCS 680-302594/2-A	Lab Control Sample	Total/NA	Water	6020A	302594
MB 680-302594/1-A	Method Blank	Total/NA	Water	6020A	302594

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: LMW-6-11-13 — Lab Sample ID: 680-96024-1

Date Collected: 11/08/13 09:43 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302479	11/09/13 17:11	PAT	TAL SAV
Total/NA	Prep	3030C			302594	11/11/13 11:06	BJB	TAL SAV
Total/NA	Analysis	6020A		1	302847	11/12/13 06:23	BWR	TAL SAV

Client Sample ID: DUP-1-11-13 — Lab Sample ID: 680-96024-2

Date Collected: 11/08/13 08:00 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302479	11/09/13 17:26	PAT	TAL SAV
Total/NA	Prep	3030C			302594	11/11/13 11:06	BJB	TAL SAV
Total/NA	Analysis	6020A		1	302847	11/12/13 06:30	BWR	TAL SAV

Client Sample ID: LMW-8-11-13 — Lab Sample ID: 680-96024-3

Date Collected: 11/08/13 11:29 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302479	11/09/13 17:41	PAT	TAL SAV
Total/NA	Prep	3030C			302594	11/11/13 11:06	BJB	TAL SAV
Total/NA	Analysis	6020A		1	302847	11/12/13 06:38	BWR	TAL SAV

Client Sample ID: LMW-35-11-13 — Lab Sample ID: 680-96024-4

Date Collected: 11/08/13 13:39 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302479	11/09/13 17:57	PAT	TAL SAV
Total/NA	Prep	3030C			302594	11/11/13 11:06	BJB	TAL SAV
Total/NA	Analysis	6020A		1	302847	11/12/13 06:45	BWR	TAL SAV

Client Sample ID: LMW-3-11-13 — Lab Sample ID: 680-96024-5

Date Collected: 11/08/13 14:57 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302479	11/09/13 18:43	PAT	TAL SAV
Total/NA	Prep	3030C			302594	11/11/13 11:06	BJB	TAL SAV
Total/NA	Analysis	6020A		1	302847	11/12/13 07:37	BWR	TAL SAV

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: BLK-1-11-13 — Lab Sample ID: 680-96024-6

Date Collected: 11/08/13 16:00 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302479	11/09/13 18:58	PAT	TAL SAV
Total/NA	Prep	3030C			302594	11/11/13 11:06	BJB	TAL SAV
Total/NA	Analysis	6020A		1	302847	11/12/13 07:44	BWR	TAL SAV

Client Sample ID: Trip Blank — Lab Sample ID: 680-96024-7

Date Collected: 11/06/13 10:00 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302736	11/12/13 12:37	JD1	TAL SAV

Client Sample ID: LMW-4R-11-13 — Lab Sample ID: 680-96024-8

Date Collected: 11/06/13 12:11 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302736	11/12/13 15:38	JD1	TAL SAV

Client Sample ID: LMW-10-11-13 — Lab Sample ID: 680-96024-9

Date Collected: 11/06/13 14:28 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302736	11/12/13 16:00	JD1	TAL SAV

Client Sample ID: LMW-16-11-13 — Lab Sample ID: 680-96024-10

Date Collected: 11/06/13 16:04 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302736	11/12/13 16:23	JD1	TAL SAV

Client Sample ID: LMW-9D-11-13 — Lab Sample ID: 680-96024-11

Date Collected: 11/07/13 09:40 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302736	11/12/13 16:46	JD1	TAL SAV

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: LMW-9S-11-13 — Lab Sample ID: 680-96024-12

Date Collected: 11/07/13 10:53 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302736	11/12/13 17:08	JD1	TAL SAV

Client Sample ID: LMW-9-11-13 — Lab Sample ID: 680-96024-13

Date Collected: 11/07/13 12:51 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302736	11/12/13 17:31	JD1	TAL SAV

Client Sample ID: LMW-15R-11-13 — Lab Sample ID: 680-96024-14

Date Collected: 11/07/13 15:03 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302736	11/12/13 17:54	JD1	TAL SAV

Client Sample ID: LMW-14R-11-13 — Lab Sample ID: 680-96024-15

Date Collected: 11/07/13 16:01 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302736	11/12/13 18:16	JD1	TAL SAV

Client Sample ID: LMW-6-11-13 — Lab Sample ID: 680-96024-16

Date Collected: 11/08/13 09:43 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302974	11/13/13 18:24	JD1	TAL SAV

Client Sample ID: Dup-1-11-13 — Lab Sample ID: 680-96024-17

Date Collected: 11/08/13 08:00 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302974	11/13/13 18:46	JD1	TAL SAV

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Client Sample ID: LMW-8-11-13 — Lab Sample ID: 680-96024-18

Date Collected: 11/08/13 11:29 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302974	11/13/13 19:09	JD1	TAL SAV

Client Sample ID: LMW-35-11-13 — Lab Sample ID: 680-96024-19

Date Collected: 11/08/13 13:39 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302974	11/13/13 19:31	JD1	TAL SAV

Client Sample ID: LMW-3-11-13 — Lab Sample ID: 680-96024-20

Date Collected: 11/08/13 14:57 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302974	11/13/13 19:53	JD1	TAL SAV

Client Sample ID: BLK-1-11-13 — Lab Sample ID: 680-96024-21

Date Collected: 11/08/13 16:00 — **Matrix: Water**
Date Received: 11/09/13 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	302974	11/13/13 20:16	JD1	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 80341

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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Savannah, GA 31404

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( ) Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE: Ft Bragg - Lamont	PROJECT NO.	PROJECT LOCATION (STATE): NC	PAGE 1 OF 1
TAL (LAB) PROJECT MANAGER: Linda Wolfe	P.O. NUMBER: DO 0084	CONTRACT NO.	STANDARD REPORT DELIVERY (✓)
CLIENT (SITE) PM: Kevin Huborak	CLIENT PHONE: 912-652-6083	CLIENT FAX	DATE DUE
CLIENT NAME: USACE	CLIENT E-MAIL		EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
CLIENT ADDRESS			DATE DUE
COMPANY CONTRACTING THIS WORK (if applicable)			NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 2

REQUIRED ANALYSIS: 300.0 ORGFMS Nitrate as N; 6020A API

PRESERVATIVE: Ice; HNO3

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	300.0 ORGFMS Nitrate as N	6020A API								REMARKS
11-8-13	0943	LMW-6-11-13	G	X				1	1								
11-8-13	0800	Dup-1-11-13	G	X				1	1								
11-8-13	1129	LMW-8-11-13	G	X				1	1								
11-8-13	1339	LMW-35-11-13	G	X				1	1								
11-8-13	1339	LMW-35-MS-11-13	G	X				1	1								
11-8-13	1339	LMW-35-MSD-11-13	G	X				1	1								
11-8-13	1457	LMW-3-11-13	G	X				1	1								
11-8-13	1600	BLK-1-11-13	G	X				1	1								

680-96024 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	11-8-13	1800						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	11/09/13	0850	YES ( ) NO ( )		680-96024	4.2/2.4 °C

TAL8240-680 (1008)

Serial Number 80337

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

(✓) TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

( ) Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE: Ft Bragg Lamont	PROJECT NO.	PROJECT LOCATION (STATE): NC	PAGE 1 of 2
TAL (LAB) PROJECT MANAGER: Linda Wolfe	~~P.O. NUMBER~~ 0084	CONTRACT NO.	STANDARD REPORT DELIVERY (✓)
CLIENT (SITE) PM: Kevin Haberak	CLIENT PHONE: 912-652-6083	CLIENT FAX	DATE DUE
CLIENT NAME: USACE	CLIENT E-MAIL		EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
CLIENT ADDRESS			DATE DUE
COMPANY CONTRACTING THIS WORK (if applicable)			NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 2

MATRIX TYPE — INDICATE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	8260B									REMARKS
								Ice	PRESERVATIVE								
								NUMBER OF CONTAINERS SUBMITTED									
11-6-13	1000	Trip Blank	G	X				2									
11-6-13	1211	LMW-4R-11-13	G	X				3									
~~11-6-13~~	~~1630~~	~~LMW-7R-11-13~~	~~G~~	~~X~~				~~3~~				RH					
11-6-13	1428	LMW-10-11-13	G	X				3									
11-6-13	1604	LMW-16-11-13	G	X				3									
11-7-13	0940	LMW-9D-11-13	G	X				3									
11-7-13	0053	LMW-9S-11-13	G	X				3									
11-7-13	1251	LMW-9-11-13	G	X				3									
11-7-13	1503	LMW-15R-11-13	G	X				3									
11-7-13	1601	LMW-14R-11-13	G	X				3									
11-8-13	0943	LMW-6-11-13	G	X				3									
11-8-13	0800	Dup-1-11-13	G	X				3									

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	11-8-13	1800						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	11/09/13	0850	YES ( ) NO ( )		680-96024	4.2/24°C

TAL8240-680 (1008)

Serial Number 80339

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

(✓) TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

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Phone: (912) 354-7858
Fax: (912) 352-0165

( ) Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
Ft Bragg Lamont		NC

TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Linda Wolfe	DO 0084	

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Kevin Haborak	912-652-6083	

CLIENT NAME	CLIENT E-MAIL
USACE	

CLIENT ADDRESS

COMPANY CONTRACTING THIS WORK (if applicable)

MATRIX TYPE

REQUIRED ANALYSIS

PAGE 2 OF 2

STANDARD REPORT DELIVERY (✓)

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ( )

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 2

PRESERVATIVE: Tri 8260B

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
11-8-13	1129	LMW-8-11-13	G	X				3	
11-8-13	1339	LMW-35-11-13	G	X				3	
11-8-13	1339	LMW-35-MS-11-13	G	X				3	
11-8-13	1339	LMW-35-MSD-11-13	G	X				3	
11-8-13	1457	LMW-3-11-13	G	X				3	
11-8-13	1600	BLK-1-11-13	G	X				3	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	11-8-13	1800						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	11/09/13	0830	YES ( ) NO ( )		680-96024	

TAL8240-680 (1008)

Login Sample Receipt Checklist

Client: U.S. Army Corps of Engineers

Job Number: 680-96024-1

Login Number: 96024
List Number: 1
Creator: Conner, Keaton

List Source: TestAmerica Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-96024-1

Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		SAVLAB	
A2LA	DoD ELAP		399.01	02-28-15
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-14
Arkansas DEQ	State Program	6	88-0692	02-01-14
California	NELAP	9	3217CA	07-31-14
Colorado	State Program	8	N/A	12-31-13 *
Connecticut	State Program	1	PH-0161	03-31-15
Florida	NELAP	4	E87052	06-30-14
GA Dept. of Agriculture	State Program	4	N/A	12-31-13 *
Georgia	State Program	4	N/A	06-30-14
Georgia	State Program	4	803	06-30-14
Guam	State Program	9	09-005r	06-17-14
Hawaii	State Program	9	N/A	06-30-14
Illinois	NELAP	5	200022	11-30-13 *
Indiana	State Program	5	N/A	06-30-14
Iowa	State Program	7	353	07-01-15
Kentucky	State Program	4	90084	12-31-13 *
Kentucky (UST)	State Program	4	18	06-30-14
Louisiana	NELAP	6	30690	06-30-14
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-13 *
Massachusetts	State Program	1	M-GA006	06-30-14
Michigan	State Program	5	9925	06-30-14
Mississippi	State Program	4	N/A	06-30-14
Montana	State Program	8	CERT0081	01-01-14 *
Nebraska	State Program	7	TestAmerica-Savannah	06-30-14
New Jersey	NELAP	2	GA769	06-30-14
New Mexico	State Program	6	N/A	06-30-14
New York	NELAP	2	10842	04-01-14
North Carolina DENR	State Program	4	269	12-31-13 *
North Carolina DHHS	State Program	4	13701	07-31-14
Oklahoma	State Program	6	9984	08-31-14
Pennsylvania	NELAP	3	68-00474	06-30-14
Puerto Rico	State Program	2	GA00006	01-01-14 *
South Carolina	State Program	4	98001	06-30-14
Tennessee	State Program	4	TN02961	06-30-14
Texas	NELAP	6	T104704185-08-TX	11-30-14
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-14
Washington	State Program	10	C1794	06-10-14
West Virginia	State Program	3	9950C	12-31-13 *
West Virginia DEP	State Program	3	94	06-30-14
Wisconsin	State Program	5	999819810	08-31-14
Wyoming	State Program	8	8TMS-L	06-30-14

* Expired certification is currently pending renewal and is considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-95974-1
Client Project/Site: Ft.Bragg-Lamont

For:
U.S. Army Corps of Engineers
100 West Oglethorpe Ave
Savannah, Georgia 31401

Attn: Mr. Kevin Haborak

Authorized for release by:
11/27/2013 5:46:32 PM
Bernard Kirkland, Manager of Project Management
(912)354-7858 e.3238
bernard.kirkland@testamericainc.com

Designee for

Linda Wolfe, Project Manager II
(912)354-7858 e.3005
linda.wolfe@testamericainc.com

LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 4
Method Summary 5
Definitions 6
Detection Summary 7
Client Sample Results 8
QC Sample Results 11
QC Association 14
Chronicle 15
Chain of Custody 16
Receipt Checklists 17
Certification Summary 18

Job ID: 680-95974-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: U.S. Army Corps of Engineers

Project: Ft.Bragg-Lamont Longstreet UST/Pope AFB/

Report Number: 680-95974-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/08/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.2 C.

METALS (ICPMS)

Samples LMW-9D-11-13 (680-95974-1), LMW-9S-11-13 (680-95974-2), LMW-9-11-13 (680-95974-3), LMW-15R-11-13 (680-95974-4) and LMW-14R-11-13 (680-95974-5) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 11/08/2013 and analyzed on 11/13/2013.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

ANIONS BY ION CHROMATOGRAPHY (14 DAY)

Samples LMW-9D-11-13 (680-95974-1), LMW-9S-11-13 (680-95974-2), LMW-9-11-13 (680-95974-3), LMW-15R-11-13 (680-95974-4) and LMW-14R-11-13 (680-95974-5) were analyzed for Anions by Ion Chromatography (14 day) in accordance with EPA Method 300.0. The samples were analyzed on 11/09/2013.

Sample LMW-15R-11-13 (680-95974-4)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the Anions analysis.

All quality control parameters were within the acceptance limits.

Sample Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-95974-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-95974-1	LMW-9D-11-13	Water	11/07/13 09:40	11/08/13 10:01
680-95974-2	LMW-9S-11-13	Water	11/07/13 10:53	11/08/13 10:01
680-95974-3	LMW-9-11-13	Water	11/07/13 12:51	11/08/13 10:01
680-95974-4	LMW-15R-11-13	Water	11/07/13 15:03	11/08/13 10:01
680-95974-5	LMW-14R-11-13	Water	11/07/13 16:01	11/08/13 10:01

Method Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-95974-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Definitions/Glossary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-95974-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-95974-1

Client Sample ID: LMW-9D-11-13 — Lab Sample ID: 680-95974-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.11		0.050	0.025	mg/L	1		300.0	Total/NA
Arsenic	2.1		1.0	0.40	ug/L	1		6020A	Total/NA
Barium	2.1		1.0	0.15	ug/L	1		6020A	Total/NA
Copper	0.52	J	1.0	0.21	ug/L	1		6020A	Total/NA
Lead	0.18	J	0.30	0.080	ug/L	1		6020A	Total/NA
Nickel	0.52	J	1.0	0.40	ug/L	1		6020A	Total/NA
Vanadium	2.0	J	5.0	1.4	ug/L	1		6020A	Total/NA
Zinc	4.0	J	10	2.6	ug/L	1		6020A	Total/NA

Client Sample ID: LMW-9S-11-13 — Lab Sample ID: 680-95974-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.62	J	1.0	0.40	ug/L	1		6020A	Total/NA
Barium	47		1.0	0.15	ug/L	1		6020A	Total/NA
Cobalt	0.92		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.35	J	1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	0.41	J	1.0	0.40	ug/L	1		6020A	Total/NA

Client Sample ID: LMW-9-11-13 — Lab Sample ID: 680-95974-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.11		0.050	0.025	mg/L	1		300.0	Total/NA
Barium	9.9		1.0	0.15	ug/L	1		6020A	Total/NA
Beryllium	0.13	J	0.20	0.070	ug/L	1		6020A	Total/NA
Cobalt	0.71		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	2.2		1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	1.1		1.0	0.40	ug/L	1		6020A	Total/NA
Zinc	4.8	J	10	2.6	ug/L	1		6020A	Total/NA

Client Sample ID: LMW-15R-11-13 — Lab Sample ID: 680-95974-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	2.3		0.20	0.10	mg/L	4		300.0	Total/NA
Barium	41		1.0	0.15	ug/L	1		6020A	Total/NA
Beryllium	0.19	J	0.20	0.070	ug/L	1		6020A	Total/NA
Cobalt	0.84		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.35	J	1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	0.86	J	1.0	0.40	ug/L	1		6020A	Total/NA

Client Sample ID: LMW-14R-11-13 — Lab Sample ID: 680-95974-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.039	J	0.050	0.025	mg/L	1		300.0	Total/NA
Barium	22		1.0	0.15	ug/L	1		6020A	Total/NA
Chromium	0.38	J	1.0	0.16	ug/L	1		6020A	Total/NA
Cobalt	0.22		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.51	J	1.0	0.21	ug/L	1		6020A	Total/NA
Lead	0.090	J	0.30	0.080	ug/L	1		6020A	Total/NA
Nickel	0.87	J	1.0	0.40	ug/L	1		6020A	Total/NA
Zinc	2.6	J	10	2.6	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-95974-1

Client Sample ID: LMW-9D-11-13

Lab Sample ID: 680-95974-1

Date Collected: 11/07/13 09:40

Matrix: Water

Date Received: 11/08/13 10:01

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.11**		0.050	0.025	mg/L			11/09/13 00:04	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/08/13 15:04	11/13/13 04:57	1
Arsenic	**2.1**		1.0	0.40	ug/L		11/08/13 15:04	11/13/13 04:57	1
Barium	**2.1**		1.0	0.15	ug/L		11/08/13 15:04	11/13/13 04:57	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/08/13 15:04	11/13/13 04:57	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/08/13 15:04	11/13/13 04:57	1
Chromium	0.16	U	1.0	0.16	ug/L		11/08/13 15:04	11/13/13 04:57	1
Cobalt	0.078	U	0.20	0.078	ug/L		11/08/13 15:04	11/13/13 04:57	1
Copper	**0.52**	**J**	1.0	0.21	ug/L		11/08/13 15:04	11/13/13 04:57	1
Lead	**0.18**	**J**	0.30	0.080	ug/L		11/08/13 15:04	11/13/13 04:57	1
Nickel	**0.52**	**J**	1.0	0.40	ug/L		11/08/13 15:04	11/13/13 04:57	1
Selenium	0.21	U	0.50	0.21	ug/L		11/08/13 15:04	11/13/13 04:57	1
Silver	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 04:57	1
Thallium	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 04:57	1
Vanadium	**2.0**	**J**	5.0	1.4	ug/L		11/08/13 15:04	11/13/13 04:57	1
Zinc	**4.0**	**J**	10	2.6	ug/L		11/08/13 15:04	11/13/13 04:57	1

Client Sample ID: LMW-9S-11-13

Lab Sample ID: 680-95974-2

Date Collected: 11/07/13 10:53

Matrix: Water

Date Received: 11/08/13 10:01

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.025	U	0.050	0.025	mg/L			11/09/13 00:50	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/08/13 15:04	11/13/13 05:26	1
Arsenic	**0.62**	**J**	1.0	0.40	ug/L		11/08/13 15:04	11/13/13 05:26	1
Barium	**47**		1.0	0.15	ug/L		11/08/13 15:04	11/13/13 05:26	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/08/13 15:04	11/13/13 05:26	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/08/13 15:04	11/13/13 05:26	1
Chromium	0.16	U	1.0	0.16	ug/L		11/08/13 15:04	11/13/13 05:26	1
Cobalt	**0.92**		0.20	0.078	ug/L		11/08/13 15:04	11/13/13 05:26	1
Copper	**0.35**	**J**	1.0	0.21	ug/L		11/08/13 15:04	11/13/13 05:26	1
Lead	0.080	U	0.30	0.080	ug/L		11/08/13 15:04	11/13/13 05:26	1
Nickel	**0.41**	**J**	1.0	0.40	ug/L		11/08/13 15:04	11/13/13 05:26	1
Selenium	0.21	U	0.50	0.21	ug/L		11/08/13 15:04	11/13/13 05:26	1
Silver	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 05:26	1
Thallium	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 05:26	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/08/13 15:04	11/13/13 05:26	1
Zinc	2.6	U	10	2.6	ug/L		11/08/13 15:04	11/13/13 05:26	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-95974-1

Client Sample ID: LMW-9-11-13

Lab Sample ID: 680-95974-3
Matrix: Water
Date Collected: 11/07/13 12:51
Date Received: 11/08/13 10:01

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.11**		0.050	0.025	mg/L			11/09/13 01:05	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/08/13 15:04	11/13/13 05:32	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/08/13 15:04	11/13/13 05:32	1
Barium	**9.9**		1.0	0.15	ug/L		11/08/13 15:04	11/13/13 05:32	1
Beryllium	**0.13**	**J**	0.20	0.070	ug/L		11/08/13 15:04	11/13/13 05:32	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/08/13 15:04	11/13/13 05:32	1
Chromium	0.16	U	1.0	0.16	ug/L		11/08/13 15:04	11/13/13 05:32	1
Cobalt	**0.71**		0.20	0.078	ug/L		11/08/13 15:04	11/13/13 05:32	1
Copper	**2.2**		1.0	0.21	ug/L		11/08/13 15:04	11/13/13 05:32	1
Lead	0.080	U	0.30	0.080	ug/L		11/08/13 15:04	11/13/13 05:32	1
Nickel	**1.1**		1.0	0.40	ug/L		11/08/13 15:04	11/13/13 05:32	1
Selenium	0.21	U	0.50	0.21	ug/L		11/08/13 15:04	11/13/13 05:32	1
Silver	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 05:32	1
Thallium	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 05:32	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/08/13 15:04	11/13/13 05:32	1
Zinc	**4.8**	**J**	10	2.6	ug/L		11/08/13 15:04	11/13/13 05:32	1

Client Sample ID: LMW-15R-11-13

Lab Sample ID: 680-95974-4
Matrix: Water
Date Collected: 11/07/13 15:03
Date Received: 11/08/13 10:01

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**2.3**		0.20	0.10	mg/L			11/09/13 01:36	4

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/08/13 15:04	11/13/13 05:38	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/08/13 15:04	11/13/13 05:38	1
Barium	**41**		1.0	0.15	ug/L		11/08/13 15:04	11/13/13 05:38	1
Beryllium	**0.19**	**J**	0.20	0.070	ug/L		11/08/13 15:04	11/13/13 05:38	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/08/13 15:04	11/13/13 05:38	1
Chromium	0.16	U	1.0	0.16	ug/L		11/08/13 15:04	11/13/13 05:38	1
Cobalt	**0.84**		0.20	0.078	ug/L		11/08/13 15:04	11/13/13 05:38	1
Copper	**0.35**	**J**	1.0	0.21	ug/L		11/08/13 15:04	11/13/13 05:38	1
Lead	0.080	U	0.30	0.080	ug/L		11/08/13 15:04	11/13/13 05:38	1
Nickel	**0.86**	**J**	1.0	0.40	ug/L		11/08/13 15:04	11/13/13 05:38	1
Selenium	0.21	U	0.50	0.21	ug/L		11/08/13 15:04	11/13/13 05:38	1
Silver	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 05:38	1
Thallium	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 05:38	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/08/13 15:04	11/13/13 05:38	1
Zinc	2.6	U	10	2.6	ug/L		11/08/13 15:04	11/13/13 05:38	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-95974-1

Client Sample ID: LMW-14R-11-13

Lab Sample ID: 680-95974-5

Date Collected: 11/07/13 16:01

Matrix: Water

Date Received: 11/08/13 10:01

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.039**	**J**	0.050	0.025	mg/L			11/09/13 01:51	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/08/13 15:04	11/13/13 05:55	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/08/13 15:04	11/13/13 05:55	1
Barium	**22**		1.0	0.15	ug/L		11/08/13 15:04	11/13/13 05:55	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/08/13 15:04	11/13/13 05:55	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/08/13 15:04	11/13/13 05:55	1
Chromium	**0.38**	**J**	1.0	0.16	ug/L		11/08/13 15:04	11/13/13 05:55	1
Cobalt	**0.22**		0.20	0.078	ug/L		11/08/13 15:04	11/13/13 05:55	1
Copper	**0.51**	**J**	1.0	0.21	ug/L		11/08/13 15:04	11/13/13 05:55	1
Lead	**0.090**	**J**	0.30	0.080	ug/L		11/08/13 15:04	11/13/13 05:55	1
Nickel	**0.87**	**J**	1.0	0.40	ug/L		11/08/13 15:04	11/13/13 05:55	1
Selenium	0.21	U	0.50	0.21	ug/L		11/08/13 15:04	11/13/13 05:55	1
Silver	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 05:55	1
Thallium	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 05:55	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/08/13 15:04	11/13/13 05:55	1
Zinc	**2.6**	**J**	10	2.6	ug/L		11/08/13 15:04	11/13/13 05:55	1

QC Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-95974-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-302422/53 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302422

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.025	U	0.050	0.025	mg/L			11/08/13 23:02	1

Lab Sample ID: LCS 680-302422/54 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302422

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.999	1.01		mg/L		101	90 - 110

Lab Sample ID: LCSD 680-302422/55 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302422

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.999	1.01		mg/L		101	90 - 110	0	30

Lab Sample ID: 680-95974-1 MS — **Client Sample ID: LMW-9D-11-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302422

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.11		0.999	1.14		mg/L		103	80 - 120

Lab Sample ID: 680-95974-1 MSD — **Client Sample ID: LMW-9D-11-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302422

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.11		0.999	1.13		mg/L		102	80 - 120	1	30

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-302408/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302993 — **Prep Batch: 302408**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/08/13 15:04	11/13/13 04:46	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/08/13 15:04	11/13/13 04:46	1
Barium	0.15	U	1.0	0.15	ug/L		11/08/13 15:04	11/13/13 04:46	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/08/13 15:04	11/13/13 04:46	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/08/13 15:04	11/13/13 04:46	1
Chromium	0.16	U	1.0	0.16	ug/L		11/08/13 15:04	11/13/13 04:46	1
Cobalt	0.078	U	0.20	0.078	ug/L		11/08/13 15:04	11/13/13 04:46	1
Copper	0.21	U	1.0	0.21	ug/L		11/08/13 15:04	11/13/13 04:46	1
Lead	0.080	U	0.30	0.080	ug/L		11/08/13 15:04	11/13/13 04:46	1
Nickel	0.40	U	1.0	0.40	ug/L		11/08/13 15:04	11/13/13 04:46	1
Selenium	0.21	U	0.50	0.21	ug/L		11/08/13 15:04	11/13/13 04:46	1
Silver	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 04:46	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 680-302408/1-A
Matrix: Water
Analysis Batch: 302993

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 302408

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.10	U	0.20	0.10	ug/L		11/08/13 15:04	11/13/13 04:46	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/08/13 15:04	11/13/13 04:46	1
Zinc	2.6	U	10	2.6	ug/L		11/08/13 15:04	11/13/13 04:46	1

Lab Sample ID: LCS 680-302408/2-A
Matrix: Water
Analysis Batch: 302993

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 302408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	20.0	24.9		ug/L		125	75 - 125
Arsenic	40.0	43.9		ug/L		110	75 - 125
Barium	40.0	41.7		ug/L		104	75 - 125
Beryllium	20.0	20.3		ug/L		102	75 - 125
Cadmium	20.0	22.4		ug/L		112	75 - 125
Chromium	40.0	40.8		ug/L		102	75 - 125
Cobalt	20.0	20.4		ug/L		102	75 - 125
Copper	40.0	41.4		ug/L		103	75 - 125
Lead	20.0	21.6		ug/L		108	75 - 125
Nickel	40.0	40.0		ug/L		100	75 - 125
Selenium	40.0	43.0		ug/L		108	75 - 125
Silver	20.0	22.5		ug/L		113	75 - 125
Thallium	16.0	16.9		ug/L		106	75 - 125
Vanadium	40.0	39.5		ug/L		99	75 - 125
Zinc	40.0	45.5		ug/L		114	75 - 125

Lab Sample ID: 680-95974-1 MS
Matrix: Water
Analysis Batch: 302993

Client Sample ID: LMW-9D-11-13
Prep Type: Total/NA
Prep Batch: 302408

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.99	U	20.0	24.5		ug/L		123	75 - 125
Arsenic	2.1		40.0	43.1		ug/L		102	75 - 125
Barium	2.1		40.0	46.0		ug/L		110	75 - 125
Beryllium	0.070	U	20.0	19.9		ug/L		99	75 - 125
Cadmium	0.20	U	20.0	21.7		ug/L		108	75 - 125
Chromium	0.16	U	40.0	39.0		ug/L		97	75 - 125
Cobalt	0.078	U	20.0	19.3		ug/L		96	75 - 125
Copper	0.52	J	40.0	39.6		ug/L		98	75 - 125
Lead	0.18	J	20.0	21.5		ug/L		106	75 - 125
Nickel	0.52	J	40.0	38.8		ug/L		96	75 - 125
Selenium	0.21	U	40.0	40.4		ug/L		101	75 - 125
Silver	0.10	U	20.0	23.6		ug/L		118	75 - 125
Thallium	0.10	U	16.0	16.7		ug/L		105	75 - 125
Vanadium	2.0	J	40.0	40.1		ug/L		95	75 - 125
Zinc	4.0	J	40.0	44.8		ug/L		102	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-95974-1 MSD
Matrix: Water
Analysis Batch: 302993

Client Sample ID: LMW-9D-11-13
Prep Type: Total/NA
Prep Batch: 302408

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.99	U	20.0	24.9		ug/L		125	75 - 125	2	20
Arsenic	2.1		40.0	43.4		ug/L		103	75 - 125	1	20
Barium	2.1		40.0	45.6		ug/L		109	75 - 125	1	20
Beryllium	0.070	U	20.0	19.9		ug/L		99	75 - 125	0	20
Cadmium	0.20	U	20.0	21.8		ug/L		109	75 - 125	1	20
Chromium	0.16	U	40.0	39.2		ug/L		98	75 - 125	1	20
Cobalt	0.078	U	20.0	19.4		ug/L		97	75 - 125	1	20
Copper	0.52	J	40.0	40.4		ug/L		100	75 - 125	2	20
Lead	0.18	J	20.0	21.5		ug/L		106	75 - 125	0	20
Nickel	0.52	J	40.0	39.2		ug/L		97	75 - 125	1	20
Selenium	0.21	U	40.0	41.7		ug/L		104	75 - 125	3	20
Silver	0.10	U	20.0	23.0		ug/L		115	75 - 125	2	20
Thallium	0.10	U	16.0	16.6		ug/L		104	75 - 125	1	20
Vanadium	2.0	J	40.0	40.4		ug/L		96	75 - 125	1	20
Zinc	4.0	J	40.0	46.4		ug/L		106	75 - 125	4	20

QC Association Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-95974-1

HPLC/IC

Analysis Batch: 302422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-95974-1	LMW-9D-11-13	Total/NA	Water	300.0	
680-95974-1 MS	LMW-9D-11-13	Total/NA	Water	300.0	
680-95974-1 MSD	LMW-9D-11-13	Total/NA	Water	300.0	
680-95974-2	LMW-9S-11-13	Total/NA	Water	300.0	
680-95974-3	LMW-9-11-13	Total/NA	Water	300.0	
680-95974-4	LMW-15R-11-13	Total/NA	Water	300.0	
680-95974-5	LMW-14R-11-13	Total/NA	Water	300.0	
LCS 680-302422/54	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-302422/55	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-302422/53	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 302408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-95974-1	LMW-9D-11-13	Total/NA	Water	3030C	
680-95974-1 MS	LMW-9D-11-13	Total/NA	Water	3030C	
680-95974-1 MSD	LMW-9D-11-13	Total/NA	Water	3030C	
680-95974-2	LMW-9S-11-13	Total/NA	Water	3030C	
680-95974-3	LMW-9-11-13	Total/NA	Water	3030C	
680-95974-4	LMW-15R-11-13	Total/NA	Water	3030C	
680-95974-5	LMW-14R-11-13	Total/NA	Water	3030C	
LCS 680-302408/2-A	Lab Control Sample	Total/NA	Water	3030C	
MB 680-302408/1-A	Method Blank	Total/NA	Water	3030C	

Analysis Batch: 302993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-95974-1	LMW-9D-11-13	Total/NA	Water	6020A	302408
680-95974-1 MS	LMW-9D-11-13	Total/NA	Water	6020A	302408
680-95974-1 MSD	LMW-9D-11-13	Total/NA	Water	6020A	302408
680-95974-2	LMW-9S-11-13	Total/NA	Water	6020A	302408
680-95974-3	LMW-9-11-13	Total/NA	Water	6020A	302408
680-95974-4	LMW-15R-11-13	Total/NA	Water	6020A	302408
680-95974-5	LMW-14R-11-13	Total/NA	Water	6020A	302408
LCS 680-302408/2-A	Lab Control Sample	Total/NA	Water	6020A	302408
MB 680-302408/1-A	Method Blank	Total/NA	Water	6020A	302408

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-95974-1

Client Sample ID: LMW-9D-11-13 — Lab Sample ID: 680-95974-1

Date Collected: 11/07/13 09:40 — **Matrix: Water**
Date Received: 11/08/13 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302422	11/09/13 00:04	PAT	TAL SAV
Total/NA	Prep	3030C			302408	11/08/13 15:04	DAS	TAL SAV
Total/NA	Analysis	6020A		1	302993	11/13/13 04:57	BWR	TAL SAV

Client Sample ID: LMW-9S-11-13 — Lab Sample ID: 680-95974-2

Date Collected: 11/07/13 10:53 — **Matrix: Water**
Date Received: 11/08/13 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302422	11/09/13 00:50	PAT	TAL SAV
Total/NA	Prep	3030C			302408	11/08/13 15:04	DAS	TAL SAV
Total/NA	Analysis	6020A		1	302993	11/13/13 05:26	BWR	TAL SAV

Client Sample ID: LMW-9-11-13 — Lab Sample ID: 680-95974-3

Date Collected: 11/07/13 12:51 — **Matrix: Water**
Date Received: 11/08/13 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302422	11/09/13 01:05	PAT	TAL SAV
Total/NA	Prep	3030C			302408	11/08/13 15:04	DAS	TAL SAV
Total/NA	Analysis	6020A		1	302993	11/13/13 05:32	BWR	TAL SAV

Client Sample ID: LMW-15R-11-13 — Lab Sample ID: 680-95974-4

Date Collected: 11/07/13 15:03 — **Matrix: Water**
Date Received: 11/08/13 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		4	302422	11/09/13 01:36	PAT	TAL SAV
Total/NA	Prep	3030C			302408	11/08/13 15:04	DAS	TAL SAV
Total/NA	Analysis	6020A		1	302993	11/13/13 05:38	BWR	TAL SAV

Client Sample ID: LMW-14R-11-13 — Lab Sample ID: 680-95974-5

Date Collected: 11/07/13 16:01 — **Matrix: Water**
Date Received: 11/08/13 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302422	11/09/13 01:51	PAT	TAL SAV
Total/NA	Prep	3030C			302408	11/08/13 15:04	DAS	TAL SAV
Total/NA	Analysis	6020A		1	302993	11/13/13 05:55	BWR	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 80342

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

(✓) TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

( ) Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE: Ft Bragg Lemont	PROJECT NO.	PROJECT LOCATION (STATE): NC	PAGE 1 OF
TAL (LAB) PROJECT MANAGER: Linda Wolfe	~~P.O.~~ NUMBER: PO 0084	CONTRACT NO.	STANDARD REPORT DELIVERY (✓)
CLIENT (SITE) PM: Kevin Haborak	CLIENT PHONE: 912-652-6083	CLIENT FAX	DATE DUE
CLIENT NAME: USACE	CLIENT E-MAIL		EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
CLIENT ADDRESS			DATE DUE
COMPANY CONTRACTING THIS WORK (if applicable)			NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

REQUIRED ANALYSIS: 300.0 RGFXS Nitrate as N; 6020A - APP; Ice; HNO3; PRESERVATIVE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	300.0 RGFXS	Nitrate as N	6020A - APP							REMARKS
11-7-13	0940	LMW-9D-11-13	G	X				1	1								
11-7-13	1053	LMW-9S-11-13	G	X				1	1								
11-7-13	1251	LMW-9-11-13	G	X				1	1								
11-7-13	1503	LMW-15R-11-13	G	X				1	1								
11-7-13	1601	LMW-14R-11-13	G	X				1	1								

680-95974 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	11-7-13	1800						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	11/08/13	1001	YES ( ) NO ( )		680-95974	0.2°C

TAL8240-680 (1008)

Login Sample Receipt Checklist

Client: U.S. Army Corps of Engineers

Job Number: 680-95974-1

Login Number: 95974

List Source: TestAmerica Savannah

List Number: 1

Creator: Conner, Keaton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg-Lamont

TestAmerica Job ID: 680-95974-1

Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		SAVLAB	
A2LA	DoD ELAP		399.01	02-28-15
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-14
Arkansas DEQ	State Program	6	88-0692	02-01-14
California	NELAP	9	3217CA	07-31-14
Colorado	State Program	8	N/A	12-31-13 *
Connecticut	State Program	1	PH-0161	03-31-15
Florida	NELAP	4	E87052	06-30-14
GA Dept. of Agriculture	State Program	4	N/A	12-31-13 *
Georgia	State Program	4	N/A	06-30-14
Georgia	State Program	4	803	06-30-14
Guam	State Program	9	09-005r	06-17-14
Hawaii	State Program	9	N/A	06-30-14
Illinois	NELAP	5	200022	11-30-13 *
Indiana	State Program	5	N/A	06-30-14
Iowa	State Program	7	353	07-01-15
Kentucky	State Program	4	90084	12-31-13 *
Kentucky (UST)	State Program	4	18	06-30-14
Louisiana	NELAP	6	30690	06-30-14
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-13 *
Massachusetts	State Program	1	M-GA006	06-30-14
Michigan	State Program	5	9925	06-30-14
Mississippi	State Program	4	N/A	06-30-14
Montana	State Program	8	CERT0081	01-01-14 *
Nebraska	State Program	7	TestAmerica-Savannah	06-30-14
New Jersey	NELAP	2	GA769	06-30-14
New Mexico	State Program	6	N/A	06-30-14
New York	NELAP	2	10842	04-01-14
North Carolina DENR	State Program	4	269	12-31-13 *
North Carolina DHHS	State Program	4	13701	07-31-14
Oklahoma	State Program	6	9984	08-31-14
Pennsylvania	NELAP	3	68-00474	06-30-14
Puerto Rico	State Program	2	GA00006	01-01-14 *
South Carolina	State Program	4	98001	06-30-14
Tennessee	State Program	4	TN02961	06-30-14
Texas	NELAP	6	T104704185-08-TX	11-30-14
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-14
Washington	State Program	10	C1794	06-10-14
West Virginia	State Program	3	9950C	12-31-13 *
West Virginia DEP	State Program	3	94	06-30-14
Wisconsin	State Program	5	999819810	08-31-14
Wyoming	State Program	8	8TMS-L	06-30-14

* Expired certification is currently pending renewal and is considered valid.

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-95899-1
Client Project/Site: Ft.Bragg - Lamont Landfill
Revision: 1

For:
U.S. Army Corps of Engineers
100 West Oglethorpe Ave
Savannah, Georgia 31401

Attn: Mr. Kevin Haborak

Authorized for release by:
11/26/2013 3:03:04 PM

Linda Wolfe, Project Manager II
(912)354-7858 e.3005
linda.wolfe@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 4
Method Summary 5
Definitions 6
Detection Summary 7
Client Sample Results 8
QC Sample Results 10
QC Association 13
Chronicle 14
Chain of Custody 15
Receipt Checklists 16
Certification Summary 17

Job ID: 680-95899-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: U.S. Army Corps of Engineers

Project: Ft.Bragg - Lamont Landfill

Report Number: 680-95899-1 REV 1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Client changed request from reporting of Nitrate as NO3 to Nitrate as N.

RECEIPT
The samples were received on 11/07/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.6 C.

METALS (ICPMS)
Samples LMW-4R-11-13 (680-95899-1), LMW-10-11-13 (680-95899-2) and LMW-16-11-13 (680-95899-3) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 11/07/2013 and analyzed on 11/08/2013.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

ANIONS BY ION CHROMATOGRAPHY (Nitrate)
Samples LMW-4R-11-13 (680-95899-1), LMW-10-11-13 (680-95899-2) and LMW-16-11-13 (680-95899-3) were analyzed for Anions by Ion Chromatography (Nitrate) in accordance with EPA Method 300.0. The samples were analyzed on 11/07/2013.

No difficulties were encountered during the Anions analysis.

All quality control parameters were within the acceptance limits.

Sample Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg - Lamont Landfill

TestAmerica Job ID: 680-95899-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-95899-1	LMW-4R-11-13	Water	11/06/13 12:11	11/07/13 10:01
680-95899-2	LMW-10-11-13	Water	11/06/13 14:28	11/07/13 10:01
680-95899-3	LMW-16-11-13	Water	11/06/13 16:04	11/07/13 10:01

Method Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg - Lamont Landfill

TestAmerica Job ID: 680-95899-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Definitions/Glossary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg - Lamont Landfill

TestAmerica Job ID: 680-95899-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg - Lamont Landfill

TestAmerica Job ID: 680-95899-1

Client Sample ID: LMW-4R-11-13 — Lab Sample ID: 680-95899-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.071		0.050	0.025	mg/L	1		300.0	Total/NA
Barium	5.5		1.0	0.15	ug/L	1		6020A	Total/NA
Cobalt	0.15	J	0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.28	J	1.0	0.21	ug/L	1		6020A	Total/NA
Lead	0.19	J	0.30	0.080	ug/L	1		6020A	Total/NA
Nickel	0.42	J	1.0	0.40	ug/L	1		6020A	Total/NA
Thallium	0.12	J	0.20	0.10	ug/L	1		6020A	Total/NA

Client Sample ID: LMW-10-11-13 — Lab Sample ID: 680-95899-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.67		0.050	0.025	mg/L	1		300.0	Total/NA
Barium	14		1.0	0.15	ug/L	1		6020A	Total/NA
Chromium	0.26	J	1.0	0.16	ug/L	1		6020A	Total/NA
Cobalt	0.15	J	0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.26	J	1.0	0.21	ug/L	1		6020A	Total/NA
Lead	0.14	J	0.30	0.080	ug/L	1		6020A	Total/NA
Nickel	0.45	J	1.0	0.40	ug/L	1		6020A	Total/NA
Selenium	1.1		0.50	0.21	ug/L	1		6020A	Total/NA
Thallium	0.15	J	0.20	0.10	ug/L	1		6020A	Total/NA

Client Sample ID: LMW-16-11-13 — Lab Sample ID: 680-95899-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.039	J	0.050	0.025	mg/L	1		300.0	Total/NA
Arsenic	2.4		1.0	0.40	ug/L	1		6020A	Total/NA
Barium	8.6		1.0	0.15	ug/L	1		6020A	Total/NA
Chromium	0.18	J	1.0	0.16	ug/L	1		6020A	Total/NA
Cobalt	0.45		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.37	J	1.0	0.21	ug/L	1		6020A	Total/NA
Lead	0.19	J	0.30	0.080	ug/L	1		6020A	Total/NA
Nickel	0.49	J	1.0	0.40	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg - Lamont Landfill

TestAmerica Job ID: 680-95899-1

Client Sample ID: LMW-4R-11-13

Lab Sample ID: 680-95899-1

Date Collected: 11/06/13 12:11

Matrix: Water

Date Received: 11/07/13 10:01

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.071**		0.050	0.025	mg/L			11/07/13 17:04	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/07/13 11:26	11/08/13 01:37	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/07/13 11:26	11/08/13 01:37	1
Barium	**5.5**		1.0	0.15	ug/L		11/07/13 11:26	11/08/13 01:37	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/07/13 11:26	11/08/13 01:37	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/07/13 11:26	11/08/13 01:37	1
Chromium	0.16	U	1.0	0.16	ug/L		11/07/13 11:26	11/08/13 01:37	1
Cobalt	**0.15**	**J**	0.20	0.078	ug/L		11/07/13 11:26	11/08/13 01:37	1
Copper	**0.28**	**J**	1.0	0.21	ug/L		11/07/13 11:26	11/08/13 01:37	1
Lead	**0.19**	**J**	0.30	0.080	ug/L		11/07/13 11:26	11/08/13 01:37	1
Nickel	**0.42**	**J**	1.0	0.40	ug/L		11/07/13 11:26	11/08/13 01:37	1
Selenium	0.21	U	0.50	0.21	ug/L		11/07/13 11:26	11/08/13 01:37	1
Silver	0.10	U	0.20	0.10	ug/L		11/07/13 11:26	11/08/13 01:37	1
Thallium	**0.12**	**J**	0.20	0.10	ug/L		11/07/13 11:26	11/08/13 01:37	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/07/13 11:26	11/08/13 01:37	1
Zinc	2.6	U	10	2.6	ug/L		11/07/13 11:26	11/08/13 01:37	1

Client Sample ID: LMW-10-11-13

Lab Sample ID: 680-95899-2

Date Collected: 11/06/13 14:28

Matrix: Water

Date Received: 11/07/13 10:01

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.67**		0.050	0.025	mg/L			11/07/13 17:19	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/07/13 11:26	11/08/13 02:14	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/07/13 11:26	11/08/13 02:14	1
Barium	**14**		1.0	0.15	ug/L		11/07/13 11:26	11/08/13 02:14	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/07/13 11:26	11/08/13 02:14	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/07/13 11:26	11/08/13 02:14	1
Chromium	**0.26**	**J**	1.0	0.16	ug/L		11/07/13 11:26	11/08/13 02:14	1
Cobalt	**0.15**	**J**	0.20	0.078	ug/L		11/07/13 11:26	11/08/13 02:14	1
Copper	**0.26**	**J**	1.0	0.21	ug/L		11/07/13 11:26	11/08/13 02:14	1
Lead	**0.14**	**J**	0.30	0.080	ug/L		11/07/13 11:26	11/08/13 02:14	1
Nickel	**0.45**	**J**	1.0	0.40	ug/L		11/07/13 11:26	11/08/13 02:14	1
Selenium	**1.1**		0.50	0.21	ug/L		11/07/13 11:26	11/08/13 02:14	1
Silver	0.10	U	0.20	0.10	ug/L		11/07/13 11:26	11/08/13 02:14	1
Thallium	**0.15**	**J**	0.20	0.10	ug/L		11/07/13 11:26	11/08/13 02:14	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/07/13 11:26	11/08/13 02:14	1
Zinc	2.6	U	10	2.6	ug/L		11/07/13 11:26	11/08/13 02:14	1

Client Sample Results

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg - Lamont Landfill

TestAmerica Job ID: 680-95899-1

Client Sample ID: LMW-16-11-13

Lab Sample ID: 680-95899-3

Date Collected: 11/06/13 16:04

Matrix: Water

Date Received: 11/07/13 10:01

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.039**	**J**	0.050	0.025	mg/L			11/07/13 17:35	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/07/13 11:26	11/08/13 02:22	1
Arsenic	**2.4**		1.0	0.40	ug/L		11/07/13 11:26	11/08/13 02:22	1
Barium	**8.6**		1.0	0.15	ug/L		11/07/13 11:26	11/08/13 02:22	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/07/13 11:26	11/08/13 02:22	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/07/13 11:26	11/08/13 02:22	1
Chromium	**0.18**	**J**	1.0	0.16	ug/L		11/07/13 11:26	11/08/13 02:22	1
Cobalt	**0.45**		0.20	0.078	ug/L		11/07/13 11:26	11/08/13 02:22	1
Copper	**0.37**	**J**	1.0	0.21	ug/L		11/07/13 11:26	11/08/13 02:22	1
Lead	**0.19**	**J**	0.30	0.080	ug/L		11/07/13 11:26	11/08/13 02:22	1
Nickel	**0.49**	**J**	1.0	0.40	ug/L		11/07/13 11:26	11/08/13 02:22	1
Selenium	0.21	U	0.50	0.21	ug/L		11/07/13 11:26	11/08/13 02:22	1
Silver	0.10	U	0.20	0.10	ug/L		11/07/13 11:26	11/08/13 02:22	1
Thallium	0.10	U	0.20	0.10	ug/L		11/07/13 11:26	11/08/13 02:22	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/07/13 11:26	11/08/13 02:22	1
Zinc	2.6	U	10	2.6	ug/L		11/07/13 11:26	11/08/13 02:22	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-302114/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302114

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.025	U	0.050	0.025	mg/L			11/07/13 10:16	1

Lab Sample ID: LCS 680-302114/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302114

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.999	1.02		mg/L		102	90 - 110

Lab Sample ID: LCSD 680-302114/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302114

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.999	1.02		mg/L		102	90 - 110	0	30

Lab Sample ID: 680-95912-F-2 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302114

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.025	U	0.999	0.999		mg/L		100	80 - 120

Lab Sample ID: 680-95912-F-2 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302114

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.025	U	0.999	0.994		mg/L		99	80 - 120	0	30

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-302131/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302369 — **Prep Batch: 302131**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		11/07/13 11:26	11/08/13 01:23	1
Arsenic	0.40	U	1.0	0.40	ug/L		11/07/13 11:26	11/08/13 01:23	1
Barium	0.15	U	1.0	0.15	ug/L		11/07/13 11:26	11/08/13 01:23	1
Beryllium	0.070	U	0.20	0.070	ug/L		11/07/13 11:26	11/08/13 01:23	1
Cadmium	0.20	U	0.50	0.20	ug/L		11/07/13 11:26	11/08/13 01:23	1
Chromium	0.16	U	1.0	0.16	ug/L		11/07/13 11:26	11/08/13 01:23	1
Cobalt	0.078	U	0.20	0.078	ug/L		11/07/13 11:26	11/08/13 01:23	1
Copper	0.21	U	1.0	0.21	ug/L		11/07/13 11:26	11/08/13 01:23	1
Lead	0.080	U	0.30	0.080	ug/L		11/07/13 11:26	11/08/13 01:23	1
Nickel	0.40	U	1.0	0.40	ug/L		11/07/13 11:26	11/08/13 01:23	1
Selenium	0.21	U	0.50	0.21	ug/L		11/07/13 11:26	11/08/13 01:23	1
Silver	0.10	U	0.20	0.10	ug/L		11/07/13 11:26	11/08/13 01:23	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 680-302131/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302369 — **Prep Batch: 302131**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.10	U	0.20	0.10	ug/L		11/07/13 11:26	11/08/13 01:23	1
Vanadium	1.4	U	5.0	1.4	ug/L		11/07/13 11:26	11/08/13 01:23	1
Zinc	2.6	U	10	2.6	ug/L		11/07/13 11:26	11/08/13 01:23	1

Lab Sample ID: LCS 680-302131/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302369 — **Prep Batch: 302131**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	49.4		ug/L		99	75 - 125
Arsenic	100	98.1		ug/L		98	75 - 125
Barium	100	94.6		ug/L		95	75 - 125
Beryllium	50.0	50.8		ug/L		102	75 - 125
Cadmium	50.0	47.3		ug/L		95	75 - 125
Chromium	100	95.4		ug/L		95	75 - 125
Cobalt	50.0	46.8		ug/L		94	75 - 125
Copper	100	97.4		ug/L		97	75 - 125
Lead	50.0	46.1		ug/L		92	75 - 125
Nickel	100	96.4		ug/L		96	75 - 125
Selenium	100	97.5		ug/L		98	75 - 125
Silver	50.0	48.9		ug/L		98	75 - 125
Thallium	40.0	36.0		ug/L		90	75 - 125
Vanadium	100	93.8		ug/L		94	75 - 125
Zinc	100	99.1		ug/L		99	75 - 125

Lab Sample ID: 680-95899-1 MS — **Client Sample ID: LMW-4R-11-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 302369 — **Prep Batch: 302131**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.99	U	50.0	49.3		ug/L		99	75 - 125
Arsenic	0.40	U	100	96.3		ug/L		96	75 - 125
Barium	5.5		100	97.9		ug/L		92	75 - 125
Beryllium	0.070	U	50.0	50.7		ug/L		101	75 - 125
Cadmium	0.20	U	50.0	46.5		ug/L		93	75 - 125
Chromium	0.16	U	100	94.0		ug/L		94	75 - 125
Cobalt	0.15	J	50.0	45.2		ug/L		90	75 - 125
Copper	0.28	J	100	97.0		ug/L		97	75 - 125
Lead	0.19	J	50.0	46.3		ug/L		92	75 - 125
Nickel	0.42	J	100	97.1		ug/L		97	75 - 125
Selenium	0.21	U	100	95.9		ug/L		96	75 - 125
Silver	0.10	U	50.0	48.6		ug/L		97	75 - 125
Thallium	0.12	J	40.0	36.1		ug/L		90	75 - 125
Vanadium	1.4	U	100	92.8		ug/L		93	75 - 125
Zinc	2.6	U	100	97.6		ug/L		98	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-95899-1 MSD
Matrix: Water
Analysis Batch: 302369

Client Sample ID: LMW-4R-11-13
Prep Type: Total/NA
Prep Batch: 302131

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.99	U	50.0	49.2		ug/L		98	75 - 125	0	20
Arsenic	0.40	U	100	97.4		ug/L		97	75 - 125	1	20
Barium	5.5		100	99.8		ug/L		94	75 - 125	2	20
Beryllium	0.070	U	50.0	51.2		ug/L		102	75 - 125	1	20
Cadmium	0.20	U	50.0	47.4		ug/L		95	75 - 125	2	20
Chromium	0.16	U	100	95.0		ug/L		95	75 - 125	1	20
Cobalt	0.15	J	50.0	46.4		ug/L		93	75 - 125	3	20
Copper	0.28	J	100	98.1		ug/L		98	75 - 125	1	20
Lead	0.19	J	50.0	46.6		ug/L		93	75 - 125	1	20
Nickel	0.42	J	100	97.3		ug/L		97	75 - 125	0	20
Selenium	0.21	U	100	95.8		ug/L		96	75 - 125	0	20
Silver	0.10	U	50.0	49.0		ug/L		98	75 - 125	1	20
Thallium	0.12	J	40.0	37.1		ug/L		92	75 - 125	3	20
Vanadium	1.4	U	100	93.7		ug/L		94	75 - 125	1	20
Zinc	2.6	U	100	98.5		ug/L		99	75 - 125	1	20

QC Association Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg - Lamont Landfill

TestAmerica Job ID: 680-95899-1

HPLC/IC

Analysis Batch: 302114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-95899-1	LMW-4R-11-13	Total/NA	Water	300.0	
680-95899-2	LMW-10-11-13	Total/NA	Water	300.0	
680-95899-3	LMW-16-11-13	Total/NA	Water	300.0	
680-95912-F-2 MS	Matrix Spike	Total/NA	Water	300.0	
680-95912-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 680-302114/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-302114/7	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-302114/5	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 302131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-95899-1	LMW-4R-11-13	Total/NA	Water	3030C	
680-95899-1 MS	LMW-4R-11-13	Total/NA	Water	3030C	
680-95899-1 MSD	LMW-4R-11-13	Total/NA	Water	3030C	
680-95899-2	LMW-10-11-13	Total/NA	Water	3030C	
680-95899-3	LMW-16-11-13	Total/NA	Water	3030C	
LCS 680-302131/2-A	Lab Control Sample	Total/NA	Water	3030C	
MB 680-302131/1-A	Method Blank	Total/NA	Water	3030C	

Analysis Batch: 302369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-95899-1	LMW-4R-11-13	Total/NA	Water	6020A	302131
680-95899-1 MS	LMW-4R-11-13	Total/NA	Water	6020A	302131
680-95899-1 MSD	LMW-4R-11-13	Total/NA	Water	6020A	302131
680-95899-2	LMW-10-11-13	Total/NA	Water	6020A	302131
680-95899-3	LMW-16-11-13	Total/NA	Water	6020A	302131
LCS 680-302131/2-A	Lab Control Sample	Total/NA	Water	6020A	302131
MB 680-302131/1-A	Method Blank	Total/NA	Water	6020A	302131

Lab Chronicle

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg - Lamont Landfill

TestAmerica Job ID: 680-95899-1

Client Sample ID: LMW-4R-11-13

Lab Sample ID: 680-95899-1

Date Collected: 11/06/13 12:11

Matrix: Water

Date Received: 11/07/13 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302114	11/07/13 17:04	PAT	TAL SAV
Total/NA	Prep	3030C			302131	11/07/13 11:26	BJB	TAL SAV
Total/NA	Analysis	6020A		1	302369	11/08/13 01:37	BWR	TAL SAV

Client Sample ID: LMW-10-11-13

Lab Sample ID: 680-95899-2

Date Collected: 11/06/13 14:28

Matrix: Water

Date Received: 11/07/13 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302114	11/07/13 17:19	PAT	TAL SAV
Total/NA	Prep	3030C			302131	11/07/13 11:26	BJB	TAL SAV
Total/NA	Analysis	6020A		1	302369	11/08/13 02:14	BWR	TAL SAV

Client Sample ID: LMW-16-11-13

Lab Sample ID: 680-95899-3

Date Collected: 11/06/13 16:04

Matrix: Water

Date Received: 11/07/13 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	302114	11/07/13 17:35	PAT	TAL SAV
Total/NA	Prep	3030C			302131	11/07/13 11:26	BJB	TAL SAV
Total/NA	Analysis	6020A		1	302369	11/08/13 02:22	BWR	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 80344

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

(✓) TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

( ) Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE: Ft Bragg Lamont	PROJECT NO.	PROJECT LOCATION (STATE): NC	PAGE 1 OF 1
TAL (LAB) PROJECT MANAGER: Linda Wolfe	~~P.O.~~ NUMBER: DO 8084	CONTRACT NO.	STANDARD REPORT DELIVERY (✓)
CLIENT (SITE) PM: Kevin Haborak	CLIENT PHONE: 912-652-6083	CLIENT FAX	DATE DUE
CLIENT NAME: USACE	CLIENT E-MAIL		EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
CLIENT ADDRESS			DATE DUE
COMPANY CONTRACTING THIS WORK (if applicable)			NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSIS: 300.0 RGFMS; 6020A-AP1

PRESERVATIVE: Ice; HNO3

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED		REMARKS
11-6-13	1211	LMW-4R-11-13	G	X				1	1	
~~11-6-13~~	~~1630~~	~~LMW-1R-11-13~~	G	X				1	1	
11-6-13	1428	LMW-10-11-13	G	X				1	1	
11-6-13	1604	LMW-16-11-13	G	X				1	1	

RA

680-95899 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	11-6-13	1730						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY 680006463

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	11/07/13	1001	YES ( ) NO ( )		680-95899	0.6°C FBP

TAL8240-680 (1008)

Page 13 of 17

11/20/2013

Login Sample Receipt Checklist

Client: U.S. Army Corps of Engineers

Job Number: 680-95899-1

Login Number: 95899

List Source: TestAmerica Savannah

List Number: 1

Creator: Conner, Keaton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: U.S. Army Corps of Engineers
Project/Site: Ft.Bragg - Lamont Landfill

TestAmerica Job ID: 680-95899-1

Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		SAVLAB	
A2LA	DoD ELAP		399.01	02-28-15
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-14
Arkansas DEQ	State Program	6	88-0692	02-01-14
California	NELAP	9	3217CA	07-31-14
Colorado	State Program	8	N/A	12-31-13 *
Connecticut	State Program	1	PH-0161	03-31-15
Florida	NELAP	4	E87052	06-30-14
GA Dept. of Agriculture	State Program	4	N/A	12-31-13 *
Georgia	State Program	4	N/A	06-30-14
Georgia	State Program	4	803	06-30-14
Guam	State Program	9	09-005r	06-17-14
Hawaii	State Program	9	N/A	06-30-14
Illinois	NELAP	5	200022	11-30-13 *
Indiana	State Program	5	N/A	06-30-14
Iowa	State Program	7	353	07-01-15
Kentucky	State Program	4	90084	12-31-13 *
Kentucky (UST)	State Program	4	18	06-30-14
Louisiana	NELAP	6	30690	06-30-14
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-13 *
Massachusetts	State Program	1	M-GA006	06-30-14
Michigan	State Program	5	9925	06-30-14
Mississippi	State Program	4	N/A	06-30-14
Montana	State Program	8	CERT0081	01-01-14 *
Nebraska	State Program	7	TestAmerica-Savannah	06-30-14
New Jersey	NELAP	2	GA769	06-30-14
New Mexico	State Program	6	N/A	06-30-14
New York	NELAP	2	10842	04-01-14
North Carolina DENR	State Program	4	269	12-31-13 *
North Carolina DHHS	State Program	4	13701	07-31-14
Oklahoma	State Program	6	9984	08-31-14
Pennsylvania	NELAP	3	68-00474	06-30-14
Puerto Rico	State Program	2	GA00006	01-01-14 *
South Carolina	State Program	4	98001	06-30-14
Tennessee	State Program	4	TN02961	06-30-14
Texas	NELAP	6	T104704185-08-TX	11-30-14
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-14
Washington	State Program	10	C1794	06-10-14
West Virginia	State Program	3	9950C	12-31-13 *
West Virginia DEP	State Program	3	94	06-30-14
Wisconsin	State Program	5	999819810	08-31-14
Wyoming	State Program	8	8TMS-L	06-30-14

* Expired certification is currently pending renewal and is considered valid.

APPENDIX D
STATISTICAL REPORTS

ELECTRONIC ONLY

US Army Corps
of Engineers
Savannah District

DIRECTORATE OF PUBLIC
WORKS and ENVIRONMENT
Fort Bragg, North Carolina

Statistical Analysis of Ground-Water Data
Lamont Road Land Clearing and Inert Debris Landfill
Fort Bragg, North Carolina
Rounds N1 through N27

Permit No. 26G and 26-08

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EXECUTIVE SUMMARY

Fort Bragg authorized the U.S. Army Corps of Engineers, Savannah District to perform the required sampling of the Lamont Land Clearing and Inert Debris Landfill. The evaluation of ground-water data was in accordance with 15A NC3AC 13B.1634 for detection monitoring systems.

Sampling activities occurred in November 2013. The background and compliance wells sampled are listed on Table 1. The monitoring well network was originally comprised of 11 wells, 4 of the original wells have been abandoned and 6 additional wells have been installed. Therefore, the current monitoring well network consists of 13 wells. Ground-water data were statistically analyzed to determine if the mean concentration for each analyte deviated significantly from the mean concentration from the background well data. All ground-water samples were analyzed for Appendix I Organics by EPA method 8260B and Appendix I Inorganics by EPA methods 6010B and 6020A. Any analyte with a detection during this event was tested to determine if the detection was a statistically significant increase over background levels.

Analysis of the 1,2-cis-dichloroethene data using the Non-Parametric Prediction Limit test indicated a possible SSI in monitoring well LMW-8. The SSI was not confirmed by the Mann-Kendall Trend Analysis but was confirmed by the Shewhart-CUSUM Control Chart. Since the statistical tests are inconclusive, further data is needed to confirm the SSI.

Analysis of the arsenic data using the Kruskal-Wallis test indicated a possible SSI in monitoring well LMW-9D, LMW-9S and LMW-16. The SSIs were not confirmed by the Mann-Kendall Trend Analysis (for any well) or the Shewhart-CUSUM Control Chart (for LMW-9S and LMW-16). The SSI for LMW-9D was confirmed by the Shewhart-CUSUM Control Chart. The fluctuations in the LMW-9S and LMW-16 data are not SSIs. Since the statistical tests are inconclusive for LMW-9D, further data is needed to confirm the SSI.

Analysis of the barium data using the Kruskal-Wallis test indicated a possible SSI in monitoring well LMW-9S. The possible SSI was not confirmed by the Mann-Kendall Trend Analysis but was confirmed by the Shewhart-CUSUM Control Chart. Since the statistical tests are inconclusive, further data is needed to confirm the SSI.

Analysis of the beryllium data using the Kruskal-Wallis test indicated a possible SSI at the group level, no single well was indicated to have an SSI. Therefore, the Non-Parametric Prediction Limit was used to test if the data contained SSIs. The Non-Parametric Prediction Limit did not indicate that the data contained SSIs for any of the wells.

Analysis of the chromium data using the Kruskal-Wallis test indicated a possible SSI at the group level, no single well was indicated to have an SSI. Therefore, the Non-Parametric Prediction Limit was used to test if the data contained SSIs. The Non-Parametric Prediction Limit did not indicate that the data contained SSIs for any of the wells.

Analysis of the cobalt data using the Kruskal-Wallis test indicated a possible SSI for LMW-9S. The SSI was not confirmed by the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the LMW-9S data are not SSIs.

Analysis of the copper data using the Kruskal-Wallis test indicated a possible SSI at the group level, no single well was indicated to have an SSI. Therefore, the Non-Parametric Prediction Limit was used to test if the data contained SSIs. The Non-Parametric Prediction Limit did not indicate that the data contained SSIs for any of the wells.

Analysis of the dichlorodifluoromethane data using the Kruskal-Wallis test indicated a possible SSI in monitoring well LMW-3S. The possible SSI was not confirmed by the Mann-Kendall Trend Analysis but was confirmed by the Shewhart-CUSUM Control Chart. Since the statistical tests are inconclusive, further data is needed to confirm the SSI.

Analysis of the lead data using the Kruskal-Wallis test indicated a possible SSI at the group level, no single well was indicated to have an SSI. Therefore, the Non-Parametric Prediction Limit was used to test if the data contained SSIs. The Non-Parametric Prediction Limit did not indicate that the data contained SSIs for any of the wells.

Analysis of the nickel data using the Kruskal-Wallis test indicated a possible SSI in monitoring well LMW-3S. The SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the nickel data in monitoring well LMW-3S are not SSIs.

Analysis of the nitrate data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells LMW-6 and LMW-10. The SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the nitrate data in monitoring wells LMW-6 and LMW-10 are not SSIs.

Analysis of the selenium data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells LMW-6 and LMW-8. The SSIs were not confirmed by the Mann-Kendall Trend Analysis (for either well) or the Shewhart-CUSUM Control Chart (for LMW-8). The SSI for LMW-6 was confirmed by the Shewhart-CUSUM Control Chart. The fluctuations in the LMW-8 data are not SSIs. Since the statistical tests are inconclusive for LMW-6, further data is needed to confirm the SSI.

Analysis of the tetrachloroethene data using the Non-Parametric Prediction Limit test indicated a possible SSI in monitoring well LMW-8. The SSI was not confirmed by the Mann-Kendall Trend Analysis but was confirmed by the Shewhart-CUSUM Control Chart. Since the statistical tests are inconclusive, further data is needed to confirm the SSI.

Analysis of the trichloroethene data using the Non-Parametric Prediction Limit test indicated a possible SSI in monitoring well LMW-10. The SSI was not confirmed by the Mann-Kendall Trend Analysis but was confirmed by the Shewhart-CUSUM Control Chart. Since the statistical tests are inconclusive, further data is needed to confirm the SSI.

Analysis of the trichlorofluoromethane data using the Kruskal-Wallis test indicated a possible SSI at the group level, no single well was indicated to have an SSI. Therefore, the Non-Parametric Prediction Limit was used to test if the data contained SSIs. The Non-Parametric Prediction Limit did not indicate that the data contained SSIs for any of the wells.

Analysis of the vanadium data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells LMW-7 and LMW-9D. The SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the vanadium data in monitoring wells LMW-7 and LMW-9D are not SSIs.

Analysis of the zinc data using the Kruskal-Wallis test indicated a possible SSI in monitoring well LMW-3S. The SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the zinc data in monitoring wells LMW-7 and LMW-9D are not SSIs.

The results of the statistical analysis indicate that the compliance well concentrations do not vary significantly from background concentrations for any of the other parameters analyzed. Future analytical results will be evaluated using the same procedures.

REGISTERED PROFESSIONAL GEOLOGIST CERTIFICATION

I certify that I am a qualified ground-water scientist who has received a baccalaureate or post graduate degree in the natural sciences or engineering and have sufficient training and experience in ground-water hydrology and related fields as demonstrated by state registration and completion of accredited university courses that enable me to make sound professional judgments regarding ground-water monitoring and contaminant fate and transport. I further certify that this report was prepared by me or by a subordinate working under my direction.

.Kevin G. Haborak, P.G.

DATE: April 2014

TABLE OF CONTENTS

SECTION Page

EXECUTIVE SUMMARY i

1.0 BACKGROUND 1

2.0 DETERMINATION OF APPROPRIATE DISTRIBUTIONAL MODEL 1

3.0 SELECTION OF STATISTICAL METHOD 2

4.0 FIELD ACTIVITIES 4

5.0 RESULTS 5

6.0 CONCLUSIONS 7

7.0 REFERENCES 8

LIST OF TABLES

Table 1 Ground-Water Monitoring Network 2

FIGURES

Figure 1: Flowchart of the Statistical Tests Performed for Each Analyte Detected in Compliance Wells

LIST OF SUPPLEMENTAL MATERIAL

Lamont Road Land Clearing and Inert Debris Landfill N=18 Statistical Data on CD Format

1.0 BACKGROUND

Fort Bragg authorized the U.S. Army Corps of Engineers, Savannah District to perform the required sampling of the Lamont LCID Landfill. Sampling activities for the twenty-second round of sampling (N=27) were conducted during November 2013. This facility is a Land Clearing and Inert Debris Landfill (LCID) located east of Lamont Road at Fort Bragg in Cumberland County, North Carolina.

A comparison of statistical procedures was performed using this data to determine an adequate statistical analysis for future monitoring at the facility. Guidance for determining proper statistical methods was obtained from the EPA guidance document titled: Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities - Interim Final Guidance, April 1989 (herein referenced as the Guidance) and it's addendum Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities - Addendum to Interim Final Guidance, July 1992 (herein referenced as the Addendum). The statistical computer software ChemStat (version 5.0) used for this analysis is based on the guidance documents referenced above.

Factors that were considered in selecting a statistical method include departures from normality, unequal variances, temporal and spatial variability, and the percentage of non-detects. Tests for normality that were considered include: Probability Plots, Chi-Squared, Shapiro-Wilk Test, and Shapiro-Francia Test. Statistical analysis procedures considered were: parametric Two Sample t-Test, non-parametric Wilcoxin Rank-Sum Test; parametric ANOVA Tests, non-parametric Kruskal-Wallis Test, Tolerance and Prediction Intervals, and Control Charts.

2.0 DETERMINATION OF APPROPRIATE DISTRIBUTIONAL MODEL

A statistical test predicts the average behavior (distribution) of a random variable by comparing the means (normal distribution) or medians (lognormal and non-parametric distributions) of the compliance well data to background well data. Before conducting a statistical analysis, a distributional assumption must be tested to determine whether the data conform to the assumed distribution.

Prior to testing for significance, the distribution of each parameter is determined to be normal, lognormal, or neither. First, the dataset is used to test the assumption that the distribution is normal. If this assumption is rejected, the same data are log transformed and the hypothesis that the distribution is lognormal is tested. If these assumptions are rejected, it is concluded that the data are neither normally nor lognormally distributed. The data is determined to be non-normal if the distribution of each parameter is determined to be neither normal nor lognormal.

The Shapiro-Francia Test was selected as the main test to determine whether the data conform to the assumed distribution. This test has a good likelihood of distinguishing between the target distribution (normal) and other common distributions (for example, uniform or skewed), and is recommended for data sets with 50 or more samples.

3.0 SELECTION OF STATISTICAL METHOD

The ground-water samples were analyzed for Appendix I organics and inorganics. Monitoring well MW-4R serves as the background well. The compliance monitoring well results were compared to the background results by means of an applicable statistical procedure. These monitoring wells are listed on Table 1.

Table 1 Ground-Water Monitoring Network

WELL NAME	STATUS
MW-4R	**Active - Compliance Monitoring Well (Background)**
MW-1	**Active - Compliance Monitoring Well**
MW-3	**Active - Compliance Monitoring Well**
MW-3S	**Active - Compliance Monitoring Well**
MW-6	**Active - Compliance Monitoring Well**
MW-7	**Active - Compliance Monitoring Well**
MW-8	**Active - Compliance Monitoring Well**
MW-9	**Active - Compliance Monitoring Well**
MW-9D	**Active - Compliance Monitoring Well**
MW-9S	**Active - Compliance Monitoring Well**
MW-10	**Active - Compliance Monitoring Well**
MW-14R	**Active - Compliance Monitoring Well**
MW-15R	**Active - Compliance Monitoring Well**
MW-16	**Active - Compliance Monitoring Well**
MW-5	**Abandoned - Compliance Monitoring Well**
MW-11	**Abandoned - Compliance Monitoring Well**
MW-12	**Abandoned - Compliance Monitoring Well**
MW-13	**Abandoned - Compliance Monitoring Well**

For this report, contamination is described as the difference in average concentrations between the background and compliance sample data. Random variation of the sample results occurred, but this variation does not necessarily represent contamination. The statistical test used for this report predicted the average behavior (distribution) of a random variable by comparing the means (normal) or medians (lognormal and non-parametric) of compliance well data to background data. It tested the hypothesis that all background and compliance wells have the same median concentration of a constituent. If the hypothesis of equal medians was rejected, then additional calculations were required to determine which compliance wells showed evidence of contamination.

Different statistical tests were used as appropriate for the different distributional patterns that occur within the data. Prior to testing for statistical significance, the distribution of each parameter was determined to be normal, lognormal, or non-normal if the amount of non-detects was less than 15%. The Shapiro-Francia Test was selected as the primary test to

determine whether the data conform to the assumed distribution. This test has a good likelihood of distinguishing between the target distribution (normal) and other common distributions (for example, uniform or skewed) and is valid for samples with 50 or more observations. The process of choosing the appropriate statistical analyses is illustrated on Figure 1.

If the data were either normally or lognormally distributed the ANOVA Test was applied. The ANOVA Test assumed that there were at least three groups of data (including background), with a minimum of four samples per group. It also assumed that the results were normally or lognormally distributed. This test calculated the F-statistic and its corresponding significance probability. If the computed F-statistic was not significant (less than the tabulated F-statistic), it was concluded that there was no significant difference between the average background concentration and the average concentrations of compliance wells. If the F-statistic was significant, it was concluded that at least one pair of well groups is probably different. In this case, ANOVA proceeded to make individual comparisons between background and compliance well data to isolate which well(s) showed evidence of contamination.

If the data were non-normally distributed, or the fraction of nondetects exceeded 15% but were less than 90%, then the Kruskal-Wallis Test was applied. If the fraction of non-detects exceeded 90%, then the Non-Parametric Prediction Limit was applied. For these tests to be sufficiently sensitive, the sample size for any group must be at least 4. A Kruskal-Wallis Test can be used in any situation that the parametric analysis of variance can be used. This test computes the H-statistic, adjusts it for ties, and compares it to the appropriate chi-square critical value. If the H-statistic is less than the critical value, the null-hypothesis is accepted, and it is concluded that there are no differences between median background and compliance well concentrations. If the H-statistic is greater than the critical value, it is concluded that at least one pair of well groups is statistically different.

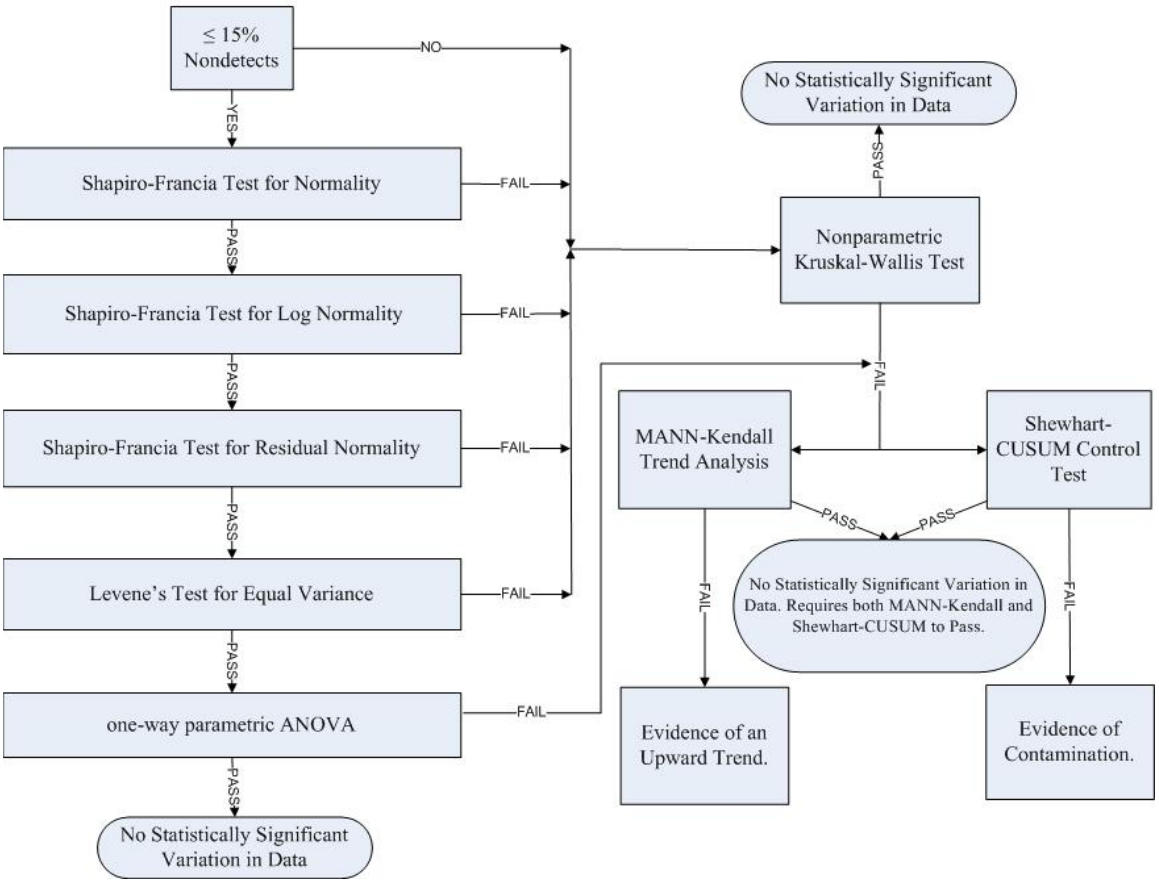
In this case, the Kruskal-Wallis Test performs post-hoc comparisons between background and compliance well data to determine which wells, if any, show evidence of contamination. If the difference between the average ranks and the mean background rank of any individual well exceeds the critical difference calculated for that well, then evidence of contamination exists. A drawback to the Kruskal-Wallis Test is the dependence on background samples. Fewer background samples will result in an increase of incidence of false positives. An additional drawback to the Kruskal-Wallis Test is that past detections can be the cause for the determination of a statistically significant increase since the test does not discriminate between present and past values.

Additional statistical analyses can help to determine the validity of the positive results. Intra-well comparisons of data from a single well to previous data from the same well are performed to determine if a trend of increasing concentration is occurring. The Mann-Kendall Trend Analysis and the Shewhart-CUSUM Control Chart statistical tests were selected for these additional analyses.

The purpose for the Mann-Kendall Trend Analysis is to determine trends in sets of data. The assumption of the Mann-Kendall Trend Analysis procedure is the idea that, if an increasing trend really exists, the sample taken first from any randomly selected pair of measurements should, on average, have a lower concentration than the measurement collected at a later point. The result for a data set being examined by the Mann-Kendall Trend Analysis is either a downward trend, an upward trend, or no trend.

The Shewhart-CUSUM Control Chart is a graphical method to assess contamination levels for individual wells. This analysis visually tracks concentrations at a given well over time to determine whether they exceed critical thresholds, thus implying a significant increase over the baseline value. Shewhart-CUSUM Control Charts are very susceptible to false positives. However, the graph is useful in providing a visual indication of changing trends in parameter concentrations.

Figure 1: Flowchart of the Statistical Tests Performed for Each Analyte Detected in Compliance Wells



4.0 FIELD ACTIVITIES

This section describes the procedures that were followed for equipment decontamination, ground-water sampling, quality assurance sampling, preservation, handling, and shipment of samples. Ground-water samples were collected using a low-flow purge

method with a bladder pump. Immediately before purging a well, the static water level below the top of the well casing and the total depth of the well were measured to the nearest 0.01 foot and recorded in the field notebook.

The volume of water in the well, including the saturated pore volume (assumed to be 30%) of the sand-packed annulus, was calculated based on the static water level and the well construction information. Well volume calculations were placed in the field notebook. The inlet of the sampling pump was placed at the mid-point of the screened interval. This level was adjusted for wells where the static water level is within the well screen. The monitoring wells were purged using a variable-flow bladder pump at a rate of 500 ml/min or less.

Temperature and specific conductance were monitored to ensure the water quality had stabilized to within 10% of the previous reading. Turbidity readings should either stabilize at or be lower than 10 Nephelometric Turbidity Units (NTUs). Stabilization occurs with pH measurements when readings remain constant within 0.1 Standard Units (SU). The rate of pumping was determined and noted in the field notebook. The purge rate was adjusted, as necessary, to avoid purging any well to dryness and to equal the recharge of the aquifer.

All sampling equipment was protected from contaminated soil surfaces to prevent contamination of the samples (e.g., equipment may be placed on disposable polyethylene plastic sheeting). Ground-water sampling data (including sample number, location, quantity of water purged, field parameters, site conditions, etc.) were documented in the field notebook.

5.0 RESULTS

The U.S. Army Corps of Engineers, Savannah District performed the required sampling of the Lamont Road LCID Landfill in accordance with the Fort Bragg request. The evaluation of ground-water data is according to 15A NC3AC 13B.1634 for detection monitoring systems.

Sampling activities were completed during May 2013. The background and compliance wells sampled are listed on Table 1. Ground-water data were statistically analyzed to determine if the mean concentration for each sample analyte deviates significantly from the mean concentration from the background well. All ground-water samples were analyzed for Appendix I Organics by EPA method 8260B and Appendix I Inorganics by EPA methods 6010B and 6020A.

Analysis of the 1,2-cis-dichloroethene data using the Non-Parametric Prediction Limit test indicated a possible SSI in monitoring well LMW-8. The SSI was not confirmed by the Mann-Kendall Trend Analysis but was confirmed by the Shewhart-CUSUM Control Chart. Since the statistical tests are inconclusive, further data is needed to confirm the SSI.

Analysis of the arsenic data using the Kruskal-Wallis test indicated a possible SSI in monitoring well LMW-9D, LMW-9S and LMW-16. The SSIs were not confirmed by the Mann-Kendall Trend Analysis (for any well) or the Shewhart-CUSUM Control Chart (for LMW-9S and LMW-16). The SSI for LMW-9D was confirmed by the Shewhart-CUSUM

Control Chart. The fluctuations in the LMW-9S and LMW-16 data are not SSIs. Since the statistical tests are inconclusive for LMW-9D, further data is needed to confirm the SSI.

Analysis of the barium data using the Kruskal-Wallis test indicated a possible SSI in monitoring well LMW-9S. The possible SSI was not confirmed by the Mann-Kendall Trend Analysis but was confirmed by the Shewhart-CUSUM Control Chart. Since the statistical tests are inconclusive, further data is needed to confirm the SSI.

Analysis of the beryllium data using the Kruskal-Wallis test indicated a possible SSI at the group level, no single well was indicated to have an SSI. Therefore, the Non-Parametric Prediction Limit was used to test if the data contained SSIs. The Non-Parametric Prediction Limit did not indicate that the data contained SSIs for any of the wells.

Analysis of the chromium data using the Kruskal-Wallis test indicated a possible SSI at the group level, no single well was indicated to have an SSI. Therefore, the Non-Parametric Prediction Limit was used to test if the data contained SSIs. The Non-Parametric Prediction Limit did not indicate that the data contained SSIs for any of the wells.

Analysis of the cobalt data using the Kruskal-Wallis test indicated a possible SSI for LMW-9S. The SSI was not confirmed by the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the LMW-9S data are not SSIs.

Analysis of the copper data using the Kruskal-Wallis test indicated a possible SSI at the group level, no single well was indicated to have an SSI. Therefore, the Non-Parametric Prediction Limit was used to test if the data contained SSIs. The Non-Parametric Prediction Limit did not indicate that the data contained SSIs for any of the wells.

Analysis of the dichlorodifluoromethane data using the Kruskal-Wallis test indicated a possible SSI in monitoring well LMW-3S. The possible SSI was not confirmed by the Mann-Kendall Trend Analysis but was confirmed by the Shewhart-CUSUM Control Chart. Since the statistical tests are inconclusive, further data is needed to confirm the SSI.

Analysis of the lead data using the Kruskal-Wallis test indicated a possible SSI at the group level, no single well was indicated to have an SSI. Therefore, the Non-Parametric Prediction Limit was used to test if the data contained SSIs. The Non-Parametric Prediction Limit did not indicate that the data contained SSIs for any of the wells.

Analysis of the nickel data using the Kruskal-Wallis test indicated a possible SSI in monitoring well LMW-3S. The SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the nickel data in monitoring well LMW-3S are not SSIs.

Analysis of the nitrate data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells LMW-6 and LMW-10. The SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the nitrate data in monitoring wells LMW-6 and LMW-10 are not SSIs.

Analysis of the selenium data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells LMW-6 and LMW-8. The SSIs were not confirmed by the Mann-Kendall Trend Analysis (for either well) or the Shewhart-CUSUM Control Chart (for LMW-8). The SSI for LMW-6 was confirmed by the Shewhart-CUSUM Control Chart. The fluctuations in the LMW-8 data are not SSIs. Since the statistical tests are inconclusive for LMW-6, further data is needed to confirm the SSI.

Analysis of the tetrachloroethene data using the Non-Parametric Prediction Limit test indicated a possible SSI in monitoring well LMW-8. The SSI was not confirmed by the Mann-Kendall Trend Analysis but was confirmed by the Shewhart-CUSUM Control Chart. Since the statistical tests are inconclusive, further data is needed to confirm the SSI.

Analysis of the trichloroethene data using the Non-Parametric Prediction Limit test indicated a possible SSI in monitoring well LMW-10. The SSI was not confirmed by the Mann-Kendall Trend Analysis but was confirmed by the Shewhart-CUSUM Control Chart. Since the statistical tests are inconclusive, further data is needed to confirm the SSI.

Analysis of the trichlorofluoromethane data using the Kruskal-Wallis test indicated a possible SSI at the group level, no single well was indicated to have an SSI. Therefore, the Non-Parametric Prediction Limit was used to test if the data contained SSIs. The Non-Parametric Prediction Limit did not indicate that the data contained SSIs for any of the wells.

Analysis of the vanadium data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells LMW-7 and LMW-9D. The SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the vanadium data in monitoring wells LMW-7 and LMW-9D are not SSIs.

Analysis of the zinc data using the Kruskal-Wallis test indicated a possible SSI in monitoring well LMW-3S. The SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the zinc data in monitoring wells LMW-7 and LMW-9D are not SSIs.

The results of the statistical analysis indicate that the compliance well concentrations do not vary significantly from background concentrations for any of the other parameters analyzed. Future analytical results will be evaluated using the same procedures.

6.0 CONCLUSIONS

The arsenic, barium, dichlorodifluoromethane, selenium, and trichloroethene results from Lamont Road Land Clearing and Inert Debris Landfill require additional sampling events to determine if evidence of a SSI or an upward trend exists. Compliance well concentrations do not vary significantly from background concentrations for any of the other parameters analyzed. Future analytical results will be evaluated using the same statistical procedures.

7.0 REFERENCES

EPA, Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities - Interim Final Guidance, April 1989

EPA, Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities - Addendum to Interim Final Guidance, July 1992

EPA, Region IV, Standard Operating Procedures and Quality Assurance Manual, Revision 1, November, 2001.

Concentrations (ppb)

Parameter: 1,2,3-Trichlorobenzene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements: 138
Total Non-Detect: 137
Percent Non-Detects: 99.2754%
Total Background Measurements: 8
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	8	8 (100%)	10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			11/16/2013	ND<0.35 U	ND<0.35 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-9D	8	8 (100%)	10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			11/16/2013	ND<0.35 U	ND<0.35 U
LMW-9	8	8 (100%)	10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			11/16/2013	ND<0.35 U	ND<0.35 U
LMW-3S	8	7 (87.5%)	10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			11/16/2013	0.35 U J	0.35 U J
LMW-9S	8	8 (100%)	10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<0 J	ND<0 J
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2

			11/16/2013	ND<0.35 U	ND<0.35 U	
LMW-16	8	8 (100%)	10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			11/16/2013	ND<0.35 U	ND<0.35 U	
LMW-10	8	8 (100%)	10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			11/16/2013	ND<0.35 U	ND<0.35 U	
LMW-3	8	8 (100%)	10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			11/16/2013	ND<0.35 U	ND<0.35 U	
LMW-8	8	8 (100%)	10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			11/16/2013	ND<0.35 U	ND<0.35 U	
LMW-15R	15	15 (100%)	10/26/2005	ND<2	ND<2	
			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			11/16/2013	ND<0.35 U	ND<0.35 U	
LMW-14R	8	8 (100%)	10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	

			11/16/2013	ND<0.35 U		ND<0.35 U
LMW-6	8	8 (100%)	10/26/2005	ND<2		ND<2
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			11/16/2013	ND<0.35 U		ND<0.35 U
LMW-7	7	7 (100%)	10/26/2005	ND<2		ND<2
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
LMW-12	7	7 (100%)	10/26/2005	ND<2		ND<2
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
LMW-11	7	7 (100%)	10/26/2005	ND<2		ND<2
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
MW-5	7	7 (100%)	10/26/2005	ND<2		ND<2
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
LMW-13	7	7 (100%)	10/26/2005	ND<2		ND<2
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: 1,2,3-Trichlorobenzene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 138

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.457276.03819	0	
2	0.175	-2.1972810.8662	-0.384525	
3	0.175	-2.0335215.0015	-0.740391	
4	0.175	-1.9110318.6535	-1.07482	
5	0.175	-1.8119121.9365	-1.39191	
6	0.175	-1.7168824.8842	-1.69236	
7	0.175	-1.6448527.5898	-1.98021	
8	0.175	-1.5804730.0876	-2.25679	
9	0.175	-1.5220332.4042	-2.52315	
10	0.175	-1.4683834.5604	-2.78011	
11	0.175	-1.4118336.5536	-3.02719	
12	0.175	-1.3658138.4191	-3.2662	
13	0.35	-1.3225140.1681	-3.72908	
14	1	-1.2815541.8105	-5.01063	
15	1	-1.2426443.3546	-6.25327	
16	1	-1.2003644.7955	-7.45363	
17	1	-1.1650546.1528	-8.61868	
18	1	-1.1311347.4323	-9.74981	
19	1	-1.0984748.6389	-10.8483	
20	1	-1.0669449.7773	-11.9152	
21	1	-1.0321550.8426	-12.9474	
22	1	-1.0027151.848	-13.9501	
23	1	-0.974114	52.7969	-14.9242
24	1	-0.946291	53.6924	-15.8705
25	1	-0.919183	54.5373	-16.7897
26	1	-0.889006	55.3276	-17.6787
27	1	-0.863249	56.0728	-18.5419
28	1	-0.838054	56.7752	-19.38
29	1	-0.813379	57.4368	-20.1934
30	1	-0.789191	58.0596	-20.9825
31	1	-0.7621 58.6404	-21.7446	
32	1	-0.738846	59.1863	-22.4835
33	1	-0.715986	59.6989	-23.1995
34	1	-0.693493	60.1798	-23.893
35	1	-0.671346	60.6305	-24.5643
36	1	-0.649522	61.0524	-25.2138
37	1	-0.624956	61.443	-25.8388
38	1	-0.603765	61.8075	-26.4426
39	1	-0.582841	62.1472	-27.0254
40	1	-0.5621762.4633	-27.5876	
41	1	-0.541736	62.7567	-28.1293
42	1	-0.518658	63.0257	-28.648
43	1	-0.498687	63.2744	-29.1467
44	1	-0.478914	63.5038	-29.6256
45	1	-0.459327	63.7148	-30.0849
46	1	-0.439913	63.9083	-30.5248
47	1	-0.417928	64.083	-30.9427
48	1	-0.398855	64.242	-31.3416
49	1	-0.379927	64.3864	-31.7215
50	1	-0.361133	64.5168	-32.0827
51	1	-0.342466	64.6341	-32.4251

52	1	-0.321278	64.7373	-32.7464
53	1	-0.302855	64.829	-33.0493
54	1	-0.284535	64.91	-33.3338
55	1	-0.266311	64.9809	-33.6001
56	1	-0.248174	65.0425	-33.8483
57	1	-0.227545	65.0943	-34.0758
58	1	-0.209575	65.1382	-34.2854
59	1	-0.191671	65.1749	-34.4771
60	1	-0.173829	65.2052	-34.6509
61	1	-0.156042	65.2295	-34.8069
62	1	-0.135774	65.2479	-34.9427
63	1	-0.118085	65.2619	-35.0608
64	1	-0.100433	65.272	-35.1612
65	1	-0.0828129	65.2788	-35.244
66	1	-0.0652187	65.2831	-35.3093
67	1	-0.0451348	65.2851	-35.3544
68	1	-0.0275759	65.2859	-35.382
69	1	-0.0100272	65.286	-35.392
70	1	0.0100272	65.2861	-35.382
71	1	0.0275759	65.2868	-35.3544
72	1	0.0451348	65.2889	-35.3093
73	1	0.0652187	65.2931	-35.244
74	1	0.0828129	65.3	-35.1612
75	1	0.100433	65.3101	-35.0608
76	1	0.118085	65.324	-34.9427
77	1	0.135774	65.3425	-34.8069
78	1	0.156042	65.3668	-34.6509
79	1	0.173829	65.397	-34.4771
80	1	0.191671	65.4338	-34.2854
81	1	0.209575	65.4777	-34.0758
82	1	0.227545	65.5295	-33.8483
83	1	0.248174	65.591	-33.6001
84	1	0.266311	65.662	-33.3338
85	1	0.284535	65.7429	-33.0493
86	1	0.302855	65.8346	-32.7464
87	1	0.321278	65.9379	-32.4251
88	1	0.342466	66.0552	-32.0827
89	1	0.361133	66.1856	-31.7215
90	1	0.379927	66.3299	-31.3416
91	1	0.398855	66.489	-30.9427
92	1	0.417928	66.6637	-30.5248
93	1	0.439913	66.8572	-30.0849
94	1	0.459327	67.0682	-29.6256
95	1	0.478914	67.2975	-29.1467
96	1	0.498687	67.5462	-28.648
97	1	0.518658	67.8152	-28.1293
98	1	0.541736	68.1087	-27.5876
99	1	0.56217	68.4247	-27.0254
100	1	0.582841	68.7644	-26.4426
101	1	0.603765	69.129	-25.8388
102	1	0.624956	69.5195	-25.2138
103	1	0.649522	69.9414	-24.5643
104	1	0.671346	70.3921	-23.893
105	1	0.693493	70.8731	-23.1995
106	1	0.715986	71.3857	-22.4835
107	1	0.738846	71.9316	-21.7446
108	1	0.7621	72.5124	-20.9825
109	1	0.789191	73.1352	-20.1934
110	1	0.813379	73.7968	-19.38
111	1	0.838054	74.4991	-18.5419
112	1	0.863249	75.2443	-17.6787
113	1	0.889006	76.0347	-16.7897

114	1	0.919183	76.8796	-15.8705
115	1	0.946291	77.775	-14.9242
116	1	0.974114	78.7239	-13.9501
117	1	1.00271	79.7293	-12.9474
118	1	1.03215	80.7947	-11.9152
119	1	1.06694	81.933	-10.8483
120	1	1.09847	83.1397	-9.74981
121	1	1.13113	84.4191	-8.61868
122	1	1.16505	85.7765	-7.45363
123	1	1.20036	87.2173	-6.25327
124	1	1.24264	88.7615	-5.01063
125	1	1.28155	90.4039	-3.72908
126	1	1.32251	92.1529	-2.40657
127	1	1.36581	94.0183	-1.04077
128	1	1.41183	96.0116	0.371065
129	1	1.46838	98.1677	1.83945
130	1	1.52203	100.484	3.36148
131	1	1.58047	102.982	4.94195
132	1	1.64485	105.688	6.5868
133	1	1.71688	108.635	8.30369
134	1	1.81191	111.918	10.1156
135	1	1.91103	115.57	12.0266
136	1	2.03352	119.706	14.0602
137	1	2.19728	124.534	16.2574
138	1	2.45727	130.572	18.7147

Data Set Standard Deviation = 0.242792
Numerator = 350.24
Denominator = 1054.48
W Statistic = 0.332145 = 350.24 / 1054.48

5% Critical value of 0.976 exceeds 0.332145
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.332145
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: 1,2,3-Trichlorobenzene

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.57859
0.57859 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.00719424		-2.4572739	334.497	
2	0.175	0.0143885		-2.19728	132.625	321.801
3	0.175	0.0215827		-2.03352	132.625	313.804
4	0.175	0.028777		-1.91103	132.625	307.822
5	0.175	0.0359712		-1.81191	132.625	302.982
6	0.175	0.0431655		-1.71688	132.625	298.341
7	0.175	0.0503597		-1.64485	132.625	294.824
8	0.175	0.057554		-1.58047	132.625	291.679
9	0.175	0.0647482		-1.52203	132.625	288.826
10	0.175	0.0719424		-1.46838	132.625	286.206
11	0.175	0.0791367		-1.41183	132.625	283.444
12	0.175	0.0863309		-1.36581	132.625	281.197
13	0.35	0.0935252		-1.32251	226.25	279.082
14	1	0.100719		-1.28155	574	277.082
15	1	0.107914		-1.24264	574	275.182
16	1	0.115108		-1.20036	574	273.118
17	1	0.122302		-1.16505	574	271.393
18	1	0.129496		-1.13113	574	269.737
19	1	0.136691		-1.09847	574	268.142
20	1	0.143885		-1.06694	574	266.602
21	1	0.151079		-1.03215	574	264.904
22	1	0.158273		-1.00271	574	263.466
23	1	0.165468		-0.974114	574	262.069
24	1	0.172662		-0.946291	574	260.711
25	1	0.179856		-0.919183	574	259.387
26	1	0.18705		-0.889006	574	257.913
27	1	0.194245		-0.863249	574	256.655
28	1	0.201439		-0.838054	574	255.425
29	1	0.208633		-0.813379	574	254.22
30	1	0.215827		-0.789191	574	253.039
31	1	0.223022		-0.7621	574	251.716
32	1	0.230216		-0.738846	574	250.58
33	1	0.23741		-0.715986	574	249.464
34	1	0.244604		-0.693493	574	248.366
35	1	0.251799		-0.671346	574	247.284
36	1	0.258993		-0.649522	574	246.218
37	1	0.266187		-0.624956	574	245.019
38	1	0.273381		-0.603765	574	243.984
39	1	0.280576		-0.582841	574	242.962
40	1	0.28777		-0.56217	574	241.953
41	1	0.294964		-0.541736	574	240.955
42	1	0.302158		-0.518658	574	239.828
43	1	0.309353		-0.498687	574	238.853
44	1	0.316547		-0.478914	574	237.887
45	1	0.323741		-0.459327	574	236.93
46	1	0.330935		-0.439913	574	235.982
47	1	0.338129		-0.417928	574	234.909
48	1	0.345324		-0.398855	574	233.977

49	1	0.352518	-0.379927	574	233.053
50	1	0.359712	-0.361133	574	232.135
51	1	0.366906	-0.342466	574	231.224
52	1	0.374101	-0.321278	574	230.189
53	1	0.381295	-0.302855	574	229.289
54	1	0.388489	-0.284535	574	228.395
55	1	0.395683	-0.266311	574	227.505
56	1	0.402878	-0.248174	574	226.619
57	1	0.410072	-0.227545	574	225.612
58	1	0.417266	-0.209575	574	224.734
59	1	0.42446	-0.191671	574	223.86
60	1	0.431655	-0.173829	574	222.989
61	1	0.438849	-0.156042	574	222.12
62	1	0.446043	-0.135774	574	221.13
63	1	0.453237	-0.118085	574	220.267
64	1	0.460432	-0.100433	574	219.404
65	1	0.467626	-0.0828129	574	218.544
66	1	0.47482	-0.0652187	574	217.685
67	1	0.482014	-0.0451348	574	216.704
68	1	0.489209	-0.0275759	574	215.847
69	1	0.496403	-0.0100272	574	214.99
70	1	0.503597	0.0100272	574	214.01
71	1	0.510791	0.0275759	574	213.153
72	1	0.517986	0.0451348	574	212.296
73	1	0.52518	0.0652187	574	211.315
74	1	0.532374	0.0828129	574	210.456
75	1	0.539568	0.100433	574	209.596
76	1	0.546763	0.118085	574	208.733
77	1	0.553957	0.135774	574	207.87
78	1	0.561151	0.156042	574	206.88
79	1	0.568345	0.173829	574	206.011
80	1	0.57554	0.191671	574	205.14
81	1	0.582734	0.209575	574	204.266
82	1	0.589928	0.227545	574	203.388
83	1	0.597122	0.248174	574	202.381
84	1	0.604317	0.266311	574	201.495
85	1	0.611511	0.284535	574	200.605
86	1	0.618705	0.302855	574	199.711
87	1	0.625899	0.321278	574	198.811
88	1	0.633094	0.342466	574	197.776
89	1	0.640288	0.361133	574	196.865
90	1	0.647482	0.379927	574	195.947
91	1	0.654676	0.398855	574	195.023
92	1	0.661871	0.417928	574	194.091
93	1	0.669065	0.439913	574	193.018
94	1	0.676259	0.459327	574	192.07
95	1	0.683453	0.478914	574	191.113
96	1	0.690647	0.498687	574	190.147
97	1	0.697842	0.518658	574	189.172
98	1	0.705036	0.541736	574	188.045
99	1	0.71223	0.56217	574	187.047
100	1	0.719424	0.582841	574	186.038
101	1	0.726619	0.603765	574	185.016
102	1	0.733813	0.624956	574	183.981
103	1	0.741007	0.649522	574	182.782
104	1	0.748201	0.671346	574	181.716
105	1	0.755396	0.693493	574	180.634
106	1	0.76259	0.715986	574	179.536
107	1	0.769784	0.738846	574	178.42
108	1	0.776978	0.7621	574	177.284
109	1	0.784173	0.789191	574	175.961
110	1	0.791367	0.813379	574	174.78

111	1	0.798561	0.838054	574	173.575
112	1	0.805755	0.863249	574	172.345
113	1	0.81295	0.889006	574	171.087
114	1	0.820144	0.919183	574	169.613
115	1	0.827338	0.946291	574	168.289
116	1	0.834532	0.974114	574	166.931
117	1	0.841727	1.00271	574	165.534
118	1	0.848921	1.03215	574	164.096
119	1	0.856115	1.06694	574	162.398
120	1	0.863309	1.09847	574	160.858
121	1	0.870504	1.13113	574	159.263
122	1	0.877698	1.16505	574	157.607
123	1	0.884892	1.20036	574	155.882
124	1	0.892086	1.24264	574	153.818
125	1	0.899281	1.28155	574	151.918
126	1	0.906475	1.32251	574	149.918
127	1	0.913669	1.36581	574	147.803
128	1	0.920863	1.41183	574	145.556
129	1	0.928058	1.46838	574	142.794
130	1	0.935252	1.52203	574	140.174
131	1	0.942446	1.58047	574	137.321
132	1	0.94964	1.64485	574	134.176
133	1	0.956835	1.71688	574	130.659
134	1	0.964029	1.81191	574	126.018
135	1	0.971223	1.91103	574	121.178
136	1	0.978417	2.03352	574	115.196
137	1	0.985612	2.19728	574	107.199
138	1	0.992806	2.45727	574	94.5032

Shapiro-Francia Test of Normality

Parameter: 1,2,3-Trichlorobenzene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 138

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.74297	-2.45727	6.03819	4.28295
2	-1.74297	-2.19728	10.8662	8.11275
3	-1.74297	-2.03352	15.0015	11.6571
4	-1.74297	-1.91103	18.6535	14.988
5	-1.74297	-1.81191	21.9365	18.1461
6	-1.74297	-1.71688	24.8842	21.1386
7	-1.74297	-1.64485	27.5898	24.0055
8	-1.74297	-1.58047	30.0876	26.7602
9	-1.74297	-1.52203	32.4042	29.4131
10	-1.74297	-1.46838	34.5604	31.9724
11	-1.74297	-1.41183	36.5536	34.4332
12	-1.04982	-1.36581	38.4191	35.867
13	0	-1.32251	40.1681	35.867
14	0	-1.28155	41.8105	35.867
15	0	-1.24264	43.3546	35.867
16	0	-1.20036	44.7955	35.867
17	0	-1.16505	46.1528	35.867
18	0	-1.13113	47.4323	35.867
19	0	-1.09847	48.6389	35.867
20	0	-1.06694	49.7773	35.867
21	0	-1.03215	50.8426	35.867
22	0	-1.00271	51.848	35.867
23	0	-0.974114	52.7969	35.867
24	0	-0.946291	53.6924	35.867
25	0	-0.919183	54.5373	35.867
26	0	-0.889006	55.3276	35.867
27	0	-0.863249	56.0728	35.867
28	0	-0.838054	56.7752	35.867
29	0	-0.813379	57.4368	35.867
30	0	-0.789191	58.0596	35.867
31	0	-0.7621	58.6404	35.867
32	0	-0.738846	59.1863	35.867
33	0	-0.715986	59.6989	35.867
34	0	-0.693493	60.1798	35.867
35	0	-0.671346	60.6305	35.867
36	0	-0.649522	61.0524	35.867
37	0	-0.624956	61.443	35.867
38	0	-0.603765	61.8075	35.867
39	0	-0.582841	62.1472	35.867
40	0	-0.562176	62.4633	35.867
41	0	-0.541736	62.7567	35.867
42	0	-0.518658	63.0257	35.867
43	0	-0.498687	63.2744	35.867
44	0	-0.478914	63.5038	35.867
45	0	-0.459327	63.7148	35.867
46	0	-0.439913	63.9083	35.867
47	0	-0.417928	64.083	35.867
48	0	-0.398855	64.242	35.867
49	0	-0.379927	64.3864	35.867
50	0	-0.361133	64.5168	35.867
51	0	-0.342466	64.6341	35.867

52	0	-0.321278	64.7373	35.867
53	0	-0.302855	64.829	35.867
54	0	-0.284535	64.91	35.867
55	0	-0.266311	64.9809	35.867
56	0	-0.248174	65.0425	35.867
57	0	-0.227545	65.0943	35.867
58	0	-0.209575	65.1382	35.867
59	0	-0.191671	65.1749	35.867
60	0	-0.173829	65.2052	35.867
61	0	-0.156042	65.2295	35.867
62	0	-0.135774	65.2479	35.867
63	0	-0.118085	65.2619	35.867
64	0	-0.100433	65.272	35.867
65	0	-0.0828129	65.2788	35.867
66	0	-0.0652187	65.2831	35.867
67	0	-0.0451348	65.2851	35.867
68	0	-0.0275759	65.2859	35.867
69	0	-0.0100272	65.286	35.867
70	0	0.0100272	65.2861	35.867
71	0	0.0275759	65.2868	35.867
72	0	0.0451348	65.2889	35.867
73	0	0.0652187	65.2931	35.867
74	0	0.0828129	65.3	35.867
75	0	0.100433	65.3101	35.867
76	0	0.118085	65.324	35.867
77	0	0.135774	65.3425	35.867
78	0	0.156042	65.3668	35.867
79	0	0.173829	65.397	35.867
80	0	0.191671	65.4338	35.867
81	0	0.209575	65.4777	35.867
82	0	0.227545	65.5295	35.867
83	0	0.248174	65.591	35.867
84	0	0.266311	65.662	35.867
85	0	0.284535	65.7429	35.867
86	0	0.302855	65.8346	35.867
87	0	0.321278	65.9379	35.867
88	0	0.342466	66.0552	35.867
89	0	0.361133	66.1856	35.867
90	0	0.379927	66.3299	35.867
91	0	0.398855	66.489	35.867
92	0	0.417928	66.6637	35.867
93	0	0.439913	66.8572	35.867
94	0	0.459327	67.0682	35.867
95	0	0.478914	67.2975	35.867
96	0	0.498687	67.5462	35.867
97	0	0.518658	67.8152	35.867
98	0	0.541736	68.1087	35.867
99	0	0.56217	68.4247	35.867
100	0	0.582841	68.7644	35.867
101	0	0.603765	69.129	35.867
102	0	0.624956	69.5195	35.867
103	0	0.649522	69.9414	35.867
104	0	0.671346	70.3921	35.867
105	0	0.693493	70.8731	35.867
106	0	0.715986	71.3857	35.867
107	0	0.738846	71.9316	35.867
108	0	0.7621	72.5124	35.867
109	0	0.789191	73.1352	35.867
110	0	0.813379	73.7968	35.867
111	0	0.838054	74.4991	35.867
112	0	0.863249	75.2443	35.867
113	0	0.889006	76.0347	35.867

114	0	0.919183	76.8796	35.867
115	0	0.946291	77.775	35.867
116	0	0.974114	78.7239	35.867
117	0	1.00271	79.7293	35.867
118	0	1.03215	80.7947	35.867
119	0	1.06694	81.933	35.867
120	0	1.09847	83.1397	35.867
121	0	1.13113	84.4191	35.867
122	0	1.16505	85.7765	35.867
123	0	1.20036	87.2173	35.867
124	0	1.24264	88.7615	35.867
125	0	1.28155	90.4039	35.867
126	0	1.32251	92.1529	35.867
127	0	1.36581	94.0183	35.867
128	0	1.41183	96.0116	35.867
129	0	1.46838	98.1677	35.867
130	0	1.52203	100.484	35.867
131	0	1.58047	102.982	35.867
132	0	1.64485	105.688	35.867
133	0	1.71688	108.635	35.867
134	0	1.81191	111.918	35.867
135	0	1.91103	115.57	35.867
136	0	2.03352	119.706	35.867
137	0	2.19728	124.534	35.867
138	0	2.45727	130.572	35.867

Data Set Standard Deviation = 0.479934
Numerator = 1286.44
Denominator = 4120.34
W Statistic = 0.312218 = 1286.44 / 4120.34

5% Critical value of 0.976 exceeds 0.312218
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.312218
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: 1,2,3-Trichlorobenzene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.56097
0.56097 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-1.74297	0.00719424	-2.45727	107.756	334.497
2	-1.74297	0.0143885	-2.19728	107.756	321.801
3	-1.74297	0.0215827	-2.03352	107.756	313.804
4	-1.74297	0.028777	-1.91103	107.756	307.822
5	-1.74297	0.0359712	-1.81191	107.756	302.982
6	-1.74297	0.0431655	-1.71688	107.756	298.341
7	-1.74297	0.0503597	-1.64485	107.756	294.824
8	-1.74297	0.057554	-1.58047	107.756	291.679
9	-1.74297	0.0647482	-1.52203	107.756	288.826
10	-1.74297	0.0719424	-1.46838	107.756	286.206
11	-1.74297	0.0791367	-1.41183	107.756	283.444
12	-1.04982	0.0863309	-1.36581	293.173	281.197
13	0	0.0935252	-1.32251	574	279.082
14	0	0.100719	-1.28155	574	277.082
15	0	0.107914	-1.24264	574	275.182
16	0	0.115108	-1.20036	574	273.118
17	0	0.122302	-1.16505	574	271.393
18	0	0.129496	-1.13113	574	269.737
19	0	0.136691	-1.09847	574	268.142
20	0	0.143885	-1.06694	574	266.602
21	0	0.151079	-1.03215	574	264.904
22	0	0.158273	-1.00271	574	263.466
23	0	0.165468	-0.974114	574	262.069
24	0	0.172662	-0.946291	574	260.711
25	0	0.179856	-0.919183	574	259.387
26	0	0.18705	-0.889006	574	257.913
27	0	0.194245	-0.863249	574	256.655
28	0	0.201439	-0.838054	574	255.425
29	0	0.208633	-0.813379	574	254.22
30	0	0.215827	-0.789191	574	253.039
31	0	0.223022	-0.7621	574	251.716
32	0	0.230216	-0.738846	574	250.58
33	0	0.23741	-0.715986	574	249.464
34	0	0.244604	-0.693493	574	248.366
35	0	0.251799	-0.671346	574	247.284
36	0	0.258993	-0.649522	574	246.218
37	0	0.266187	-0.624956	574	245.019
38	0	0.273381	-0.603765	574	243.984
39	0	0.280576	-0.582841	574	242.962
40	0	0.28777	-0.56217	574	241.953
41	0	0.294964	-0.541736	574	240.955
42	0	0.302158	-0.518658	574	239.828
43	0	0.309353	-0.498687	574	238.853
44	0	0.316547	-0.478914	574	237.887
45	0	0.323741	-0.459327	574	236.93
46	0	0.330935	-0.439913	574	235.982
47	0	0.338129	-0.417928	574	234.909
48	0	0.345324	-0.398855	574	233.977

49	0	0.352518	-0.379927	574	233.053
50	0	0.359712	-0.361133	574	232.135
51	0	0.366906	-0.342466	574	231.224
52	0	0.374101	-0.321278	574	230.189
53	0	0.381295	-0.302855	574	229.289
54	0	0.388489	-0.284535	574	228.395
55	0	0.395683	-0.266311	574	227.505
56	0	0.402878	-0.248174	574	226.619
57	0	0.410072	-0.227545	574	225.612
58	0	0.417266	-0.209575	574	224.734
59	0	0.42446	-0.191671	574	223.86
60	0	0.431655	-0.173829	574	222.989
61	0	0.438849	-0.156042	574	222.12
62	0	0.446043	-0.135774	574	221.13
63	0	0.453237	-0.118085	574	220.267
64	0	0.460432	-0.100433	574	219.404
65	0	0.467626	-0.0828129	574	218.544
66	0	0.47482	-0.0652187	574	217.685
67	0	0.482014	-0.0451348	574	216.704
68	0	0.489209	-0.0275759	574	215.847
69	0	0.496403	-0.0100272	574	214.99
70	0	0.503597	0.0100272	574	214.01
71	0	0.510791	0.0275759	574	213.153
72	0	0.517986	0.0451348	574	212.296
73	0	0.52518	0.0652187	574	211.315
74	0	0.532374	0.0828129	574	210.456
75	0	0.539568	0.100433	574	209.596
76	0	0.546763	0.118085	574	208.733
77	0	0.553957	0.135774	574	207.87
78	0	0.561151	0.156042	574	206.88
79	0	0.568345	0.173829	574	206.011
80	0	0.57554	0.191671	574	205.14
81	0	0.582734	0.209575	574	204.266
82	0	0.589928	0.227545	574	203.388
83	0	0.597122	0.248174	574	202.381
84	0	0.604317	0.266311	574	201.495
85	0	0.611511	0.284535	574	200.605
86	0	0.618705	0.302855	574	199.711
87	0	0.625899	0.321278	574	198.811
88	0	0.633094	0.342466	574	197.776
89	0	0.640288	0.361133	574	196.865
90	0	0.647482	0.379927	574	195.947
91	0	0.654676	0.398855	574	195.023
92	0	0.661871	0.417928	574	194.091
93	0	0.669065	0.439913	574	193.018
94	0	0.676259	0.459327	574	192.07
95	0	0.683453	0.478914	574	191.113
96	0	0.690647	0.498687	574	190.147
97	0	0.697842	0.518658	574	189.172
98	0	0.705036	0.541736	574	188.045
99	0	0.71223	0.56217	574	187.047
100	0	0.719424	0.582841	574	186.038
101	0	0.726619	0.603765	574	185.016
102	0	0.733813	0.624956	574	183.981
103	0	0.741007	0.649522	574	182.782
104	0	0.748201	0.671346	574	181.716
105	0	0.755396	0.693493	574	180.634
106	0	0.76259	0.715986	574	179.536
107	0	0.769784	0.738846	574	178.42
108	0	0.776978	0.7621	574	177.284
109	0	0.784173	0.789191	574	175.961
110	0	0.791367	0.813379	574	174.78

111	0	0.798561	0.838054	574	173.575
112	0	0.805755	0.863249	574	172.345
113	0	0.81295	0.889006	574	171.087
114	0	0.820144	0.919183	574	169.613
115	0	0.827338	0.946291	574	168.289
116	0	0.834532	0.974114	574	166.931
117	0	0.841727	1.00271	574	165.534
118	0	0.848921	1.03215	574	164.096
119	0	0.856115	1.06694	574	162.398
120	0	0.863309	1.09847	574	160.858
121	0	0.870504	1.13113	574	159.263
122	0	0.877698	1.16505	574	157.607
123	0	0.884892	1.20036	574	155.882
124	0	0.892086	1.24264	574	153.818
125	0	0.899281	1.28155	574	151.918
126	0	0.906475	1.32251	574	149.918
127	0	0.913669	1.36581	574	147.803
128	0	0.920863	1.41183	574	145.556
129	0	0.928058	1.46838	574	142.794
130	0	0.935252	1.52203	574	140.174
131	0	0.942446	1.58047	574	137.321
132	0	0.94964	1.64485	574	134.176
133	0	0.956835	1.71688	574	130.659
134	0	0.964029	1.81191	574	126.018
135	0	0.971223	1.91103	574	121.178
136	0	0.978417	2.03352	574	115.196
137	0	0.985612	2.19728	574	107.199
138	0	0.992806	2.45727	574	94.5032

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: 1,2,3-Trichlorobenzene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 99.2754%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 8
Maximum Background Value = 0
Confidence Level = 50%
False Positive Rate = 50%

Location	Date	Count	Mean	Significant
LMW-9D	11/16/2013	1	-1.74297	FALSE
LMW-9	11/16/2013	1	-1.74297	FALSE
LMW-3S	11/16/2013	1	-1.04982	FALSE
LMW-9S	11/16/2013	1	-1.74297	FALSE
LMW-16	11/16/2013	1	-1.74297	FALSE
LMW-10	11/16/2013	1	-1.74297	FALSE
LMW-3	11/16/2013	1	-1.74297	FALSE
LMW-8	11/16/2013	1	-1.74297	FALSE
LMW-15R	11/16/2013	1	-1.74297	FALSE
LMW-14R	11/16/2013	1	-1.74297	FALSE
LMW-6	11/16/2013	1	-1.74297	FALSE
LMW-7	11/20/2008	1	0	FALSE
LMW-12	11/20/2008	1	0	FALSE
LMW-11	11/20/2008	1	0	FALSE
MW-5	11/20/2008	1	0	FALSE
LMW-13	11/20/2008	1	0	FALSE

Concentrations (ppb)

Parameter: 1,2,4-Trichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 89
Total Non-Detect: 87
Percent Non-Detects: 97.7528%
Total Background Measurements: 7
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	7	7 (100%)	6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U

There are 12 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-9S	7	7 (100%)	6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-10	7	7 (100%)	6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-6	7	7 (100%)	6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-8	7	7 (100%)	6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-9	7	7 (100%)	6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U

		5/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2013	ND<0.25 U	ND<0.25 U	
LMW-9D	7	7 (100%)	6/30/2010	ND<0.25 U	ND<0.25 U
		11/17/2010	ND<0.25 U	ND<0.25 U	
		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U	ND<0.25 U	
		5/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2013	ND<0.25 U	ND<0.25 U	
LMW-15R	7	7 (100%)	6/30/2010	ND<0.25 U	ND<0.25 U
		11/17/2010	ND<0.25 U	ND<0.25 U	
		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U	ND<0.25 U	
		5/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2013	ND<0.25 U	ND<0.25 U	
LMW-16	7	7 (100%)	6/30/2010	ND<0.25 U	ND<0.25 U
		11/17/2010	ND<0.25 U	ND<0.25 U	
		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U	ND<0.25 U	
		5/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2013	ND<0.25 U	ND<0.25 U	
LMW-14R	7	7 (100%)	6/30/2010	ND<0.25 U	ND<0.25 U
		11/17/2010	ND<0.25 U	ND<0.25 U	
		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U	ND<0.25 U	
		5/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2013	ND<0.25 U	ND<0.25 U	
LMW-3S	7	6 (85.7143%)	6/30/2010	ND<0.25 U	ND<0.25 U
		11/17/2010	ND<0.25 U	ND<0.25 U	
		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U	ND<0.25 U	
		5/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2013	0.25 U J	0.25 U J	
LMW-3	7	7 (100%)	6/30/2010	ND<0.25 U	ND<0.25 U
		11/17/2010	ND<0.25 U	ND<0.25 U	
		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U	ND<0.25 U	
		5/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2013	ND<0.25 U	ND<0.25 U	
LMW-7	5	4 (80%)	11/17/2010	ND<0.25 U	ND<0.25 U
		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U	ND<0.25 U	
		5/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2012	0.25 J	0.25 J	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: 1,2,4-Trichlorobenzene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 89

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.125	-2.29036	5.24576	-0.286295
2	0.125	-2.01409	9.30234	-0.538057
3	0.125	-1.83843	12.6821	-0.76786
4	0.125	-1.70604	15.5927	-0.981116
5	0.125	-1.59819	18.1469	-1.18089
6	0.125	-1.50626	20.4158	-1.36917
7	0.125	-1.42554	22.4479	-1.54737
8	0.125	-1.35317	24.279	-1.71651
9	0.125	-1.28155	25.9214	-1.87671
10	0.125	-1.22123	27.4128	-2.02936
11	0.125	-1.16505	28.7701	-2.17499
12	0.125	-1.11232	30.0074	-2.31403
13	0.125	-1.06252	31.1363	-2.44685
14	0.125	-1.01522	32.167	-2.57375
15	0.125	-0.970094	33.1081	-2.69501
16	0.125	-0.926859	33.9672	-2.81087
17	0.125	-0.885291	34.7509	-2.92153
18	0.125	-0.841621	35.4592	-3.02673
19	0.125	-0.802956	36.104	-3.1271
20	0.125	-0.765456	36.6899	-3.22278
21	0.125	-0.729003	37.2213	-3.31391
22	0.125	-0.693493	37.7023	-3.40059
23	0.125	-0.658838	38.1363	-3.48295
24	0.125	-0.624956	38.5269	-3.56107
25	0.125	-0.591776	38.8771	-3.63504
26	0.125	-0.559237	39.1898	-3.70495
27	0.125	-0.524401	39.4648	-3.7705
28	0.125	-0.493018	39.7079	-3.83212
29	0.125	-0.462114	39.9215	-3.88989
30	0.125	-0.431644	40.1078	-3.94384
31	0.125	-0.401571	40.269	-3.99404
32	0.125	-0.371856	40.4073	-4.04052
33	0.125	-0.342466	40.5246	-4.08333
34	0.125	-0.31337	40.6228	-4.1225
35	0.125	-0.284535	40.7038	-4.15807
36	0.125	-0.253347	40.7679	-4.18974
37	0.125	-0.224974	40.8185	-4.21786
38	0.125	-0.196779	40.8573	-4.24245
39	0.125	-0.168741	40.8857	-4.26355
40	0.125	-0.140835	40.9056	-4.28115
41	0.125	-0.113039	40.9184	-4.29528
42	0.125	-0.0853288	40.9256	-4.30595
43	0.125	-0.0576847	40.929	-4.31316
44	0.125	-0.0300838	40.9299	-4.31692
45	0.125	0	40.9299	-4.31692
46	0.125	0.0300838	40.9308	-4.31316
47	0.125	0.0576847	40.9341	-4.30595
48	0.125	0.0853288	40.9414	-4.29528
49	0.125	0.113039	40.9542	-4.28115
50	0.125	0.140835	40.974	-4.26355
51	0.125	0.168741	41.0025	-4.24245

52	0.125	0.196779	41.0412	-4.21786
53	0.125	0.224974	41.0918	-4.18974
54	0.125	0.253347	41.156	-4.15807
55	0.125	0.284535	41.237	-4.1225
56	0.125	0.31337	41.3352	-4.08333
57	0.125	0.342466	41.4524	-4.04052
58	0.125	0.371856	41.5907	-3.99404
59	0.125	0.401571	41.752	-3.94384
60	0.125	0.431644	41.9383	-3.88989
61	0.125	0.462114	42.1518	-3.83212
62	0.125	0.493018	42.3949	-3.7705
63	0.125	0.524401	42.6699	-3.70495
64	0.125	0.559237	42.9826	-3.63504
65	0.125	0.591776	43.3328	-3.56107
66	0.125	0.624956	43.7234	-3.48295
67	0.125	0.658838	44.1575	-3.40059
68	0.125	0.693493	44.6384	-3.31391
69	0.125	0.729003	45.1699	-3.22278
70	0.125	0.765456	45.7558	-3.1271
71	0.125	0.802956	46.4005	-3.02673
72	0.125	0.841621	47.1088	-2.92153
73	0.125	0.885291	47.8926	-2.81087
74	0.125	0.926859	48.7517	-2.69501
75	0.125	0.970094	49.6927	-2.57375
76	0.125	1.01522	50.7234	-2.44685
77	0.125	1.06252	51.8524	-2.31403
78	0.125	1.11232	53.0896	-2.17499
79	0.125	1.16505	54.447	-2.02936
80	0.125	1.22123	55.9384	-1.87671
81	0.125	1.28155	57.5807	-1.71651
82	0.125	1.35317	59.4118	-1.54737
83	0.125	1.42554	61.444	-1.36917
84	0.125	1.50626	63.7128	-1.18089
85	0.125	1.59819	66.267	-0.981116
86	0.125	1.70604	69.1776	-0.76786
87	0.125	1.83843	72.5574	-0.538057
88	0.25	2.01409	76.614	-0.0345335
89	0.25	2.29036	81.8597	0.538057

Data Set Standard Deviation = 0.0186315
Numerator = 0.289505
Denominator = 2.50063
W Statistic = 0.115773 = 0.289505 / 2.50063

5% Critical value of 0.972 exceeds 0.115773
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.115773
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: 1,2,4-Trichlorobenzene

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.351402
0.351402 < 0.985 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.125	0.0111111	-2.29036	261.917	326.346	
2	0.125	0.0222222	-2.01409	261.917	312.855	
3	0.125	0.0333333	-1.83843	261.917	304.276	
4	0.125	0.0444444	-1.70604	261.917	297.812	
5	0.125	0.0555556	-1.59819	261.917	292.545	
6	0.125	0.0666667	-1.50626	261.917	288.056	
7	0.125	0.0777778	-1.42554	261.917	284.114	
8	0.125	0.0888889	-1.35317	261.917	280.58	
9	0.125	0.1	-1.28155	261.917	277.082	
10	0.125	0.111111	-1.22123	261.917	274.137	
11	0.125	0.122222	-1.16505	261.917	271.393	
12	0.125	0.133333	-1.11232	261.917	268.818	
13	0.125	0.144444	-1.06252	261.917	266.386	
14	0.125	0.155556	-1.01522	261.917	264.077	
15	0.125	0.166667	-0.970094	261.917	261.873	
16	0.125	0.177778	-0.926859	261.917	259.762	
17	0.125	0.188889	-0.885291	261.917	257.732	
18	0.125	0.2	-0.841621	261.917	255.599	
19	0.125	0.211111	-0.802956	261.917	253.711	
20	0.125	0.222222	-0.765456	261.917	251.88	
21	0.125	0.233333	-0.729003	261.917	250.1	
22	0.125	0.244444	-0.693493	261.917	248.366	
23	0.125	0.255556	-0.658838	261.917	246.673	
24	0.125	0.266667	-0.624956	261.917	245.019	
25	0.125	0.277778	-0.591776	261.917	243.398	
26	0.125	0.288889	-0.559237	261.917	241.809	
27	0.125	0.3	-0.524401	261.917	240.108	
28	0.125	0.311111	-0.493018	261.917	238.576	
29	0.125	0.322222	-0.462114	261.917	237.067	
30	0.125	0.333333	-0.431644	261.917	235.579	
31	0.125	0.344444	-0.401571	261.917	234.11	
32	0.125	0.355556	-0.371856	261.917	232.659	
33	0.125	0.366667	-0.342466	261.917	231.224	
34	0.125	0.377778	-0.31337	261.917	229.803	
35	0.125	0.388889	-0.284535	261.917	228.395	
36	0.125	0.4	-0.253347	261.917	226.872	
37	0.125	0.411111	-0.224974	261.917	225.486	
38	0.125	0.422222	-0.196779	261.917	224.109	
39	0.125	0.433333	-0.168741	261.917	222.74	
40	0.125	0.444444	-0.140835	261.917	221.377	
41	0.125	0.455556	-0.113039	261.917	220.02	
42	0.125	0.466667	-0.0853288	261.917	218.667	
43	0.125	0.477778	-0.0576847	261.917	217.317	
44	0.125	0.488889	-0.0300838	261.917	215.969	
45	0.125	0.5	0	261.917	214.5	
46	0.125	0.511111	0.0300838	261.917	213.031	
47	0.125	0.522222	0.0576847	261.917	211.683	
48	0.125	0.533333	0.0853288	261.917	210.333	

49	0.125	0.544444	0.113039	261.917	208.98
50	0.125	0.555556	0.140835	261.917	207.623
51	0.125	0.566667	0.168741	261.917	206.26
52	0.125	0.577778	0.196779	261.917	204.891
53	0.125	0.588889	0.224974	261.917	203.514
54	0.125	0.6	0.253347	261.917	202.128
55	0.125	0.611111	0.284535	261.917	200.605
56	0.125	0.622222	0.31337	261.917	199.197
57	0.125	0.633333	0.342466	261.917	197.776
58	0.125	0.644444	0.371856	261.917	196.341
59	0.125	0.655556	0.401571	261.917	194.89
60	0.125	0.666667	0.431644	261.917	193.421
61	0.125	0.677778	0.462114	261.917	191.933
62	0.125	0.688889	0.493018	261.917	190.424
63	0.125	0.7	0.524401	261.917	188.892
64	0.125	0.711111	0.559237	261.917	187.191
65	0.125	0.722222	0.591776	261.917	185.602
66	0.125	0.733333	0.624956	261.917	183.981
67	0.125	0.744444	0.658838	261.917	182.327
68	0.125	0.755556	0.693493	261.917	180.634
69	0.125	0.766667	0.729003	261.917	178.9
70	0.125	0.777778	0.765456	261.917	177.12
71	0.125	0.788889	0.802956	261.917	175.289
72	0.125	0.8	0.841621	261.917	173.401
73	0.125	0.811111	0.885291	261.917	171.268
74	0.125	0.822222	0.926859	261.917	169.238
75	0.125	0.833333	0.970094	261.917	167.127
76	0.125	0.844444	1.01522	261.917	164.923
77	0.125	0.855556	1.06252	261.917	162.614
78	0.125	0.866667	1.11232	261.917	160.182
79	0.125	0.877778	1.16505	261.917	157.607
80	0.125	0.888889	1.22123	261.917	154.863
81	0.125	0.9	1.28155	261.917	151.918
82	0.125	0.911111	1.35317	261.917	148.42
83	0.125	0.922222	1.42554	261.917	144.886
84	0.125	0.933333	1.50626	261.917	140.944
85	0.125	0.944444	1.59819	261.917	136.455
86	0.125	0.955556	1.70604	261.917	131.188
87	0.125	0.966667	1.83843	261.917	124.724
88	0.25	0.977778	2.01409	484.833	116.145
89	0.25	0.988889	2.29036	484.833	102.654

Shapiro-Francia Test of Normality

Parameter: 1,2,4-Trichlorobenzene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 89

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.07944	-2.29036	5.24576	4.76267
2	-2.07944	-2.01409	9.30234	8.95087
3	-2.07944	-1.83843	12.6821	12.7738
4	-2.07944	-1.70604	15.5927	16.3214
5	-2.07944	-1.59819	18.1469	19.6447
6	-2.07944	-1.50626	20.4158	22.7769
7	-2.07944	-1.42554	22.4479	25.7412
8	-2.07944	-1.35317	24.279	28.5551
9	-2.07944	-1.28155	25.9214	31.22
10	-2.07944	-1.22123	27.4128	33.7595
11	-2.07944	-1.16505	28.7701	36.1821
12	-2.07944	-1.11232	30.0074	38.4951
13	-2.07944	-1.06252	31.1363	40.7046
14	-2.07944	-1.01522	32.167	42.8157
15	-2.07944	-0.970094	33.1081	44.8329
16	-2.07944	-0.926859	33.9672	46.7603
17	-2.07944	-0.885291	34.7509	48.6012
18	-2.07944	-0.841621	35.4592	50.3513
19	-2.07944	-0.802956	36.104	52.021
20	-2.07944	-0.765456	36.6899	53.6127
21	-2.07944	-0.729003	37.2213	55.1286
22	-2.07944	-0.693493	37.7023	56.5707
23	-2.07944	-0.658838	38.1363	57.9407
24	-2.07944	-0.624956	38.5269	59.2403
25	-2.07944	-0.591776	38.8771	60.4708
26	-2.07944	-0.559237	39.1898	61.6337
27	-2.07944	-0.524401	39.4648	62.7242
28	-2.07944	-0.493018	39.7079	63.7494
29	-2.07944	-0.462114	39.9215	64.7103
30	-2.07944	-0.431644	40.1078	65.6079
31	-2.07944	-0.401571	40.269	66.443
32	-2.07944	-0.371856	40.4073	67.2162
33	-2.07944	-0.342466	40.5246	67.9284
34	-2.07944	-0.313374	0.6228	68.58
35	-2.07944	-0.284535	40.7038	69.1717
36	-2.07944	-0.253347	40.7679	69.6985
37	-2.07944	-0.224974	40.8185	70.1663
38	-2.07944	-0.196779	40.8573	70.5755
39	-2.07944	-0.168741	40.8857	70.9264
40	-2.07944	-0.140835	40.9056	71.2192
41	-2.07944	-0.113039	40.9184	71.4543
42	-2.07944	-0.0853288	40.9256	71.6317
43	-2.07944	-0.0576847	40.929	71.7517
44	-2.07944	-0.0300838	40.9299	71.8142
45	-2.07944	0	40.9299	71.8142
46	-2.07944	0.0300838	40.9308	71.7517
47	-2.07944	0.0576847	40.9341	71.6317
48	-2.07944	0.0853288	40.9414	71.4543
49	-2.07944	0.113039	40.9542	71.2192
50	-2.07944	0.140835	40.974	70.9264
51	-2.07944	0.168741	41.0025	70.5755

52	-2.079440.196779		41.0412	70.1663
53	-2.079440.224974		41.0918	69.6985
54	-2.079440.253347		41.156	69.1717
55	-2.079440.284535		41.237	68.58
56	-2.079440.31337	41.3352	67.9284	
57	-2.079440.342466		41.4524	67.2162
58	-2.079440.371856		41.5907	66.443
59	-2.079440.401571		41.752	65.6079
60	-2.079440.431644		41.9383	64.7103
61	-2.079440.462114		42.1518	63.7494
62	-2.079440.493018		42.3949	62.7242
63	-2.079440.524401		42.6699	61.6337
64	-2.079440.559237		42.9826	60.4708
65	-2.079440.591776		43.3328	59.2403
66	-2.079440.624956		43.7234	57.9407
67	-2.079440.658838		44.1575	56.5707
68	-2.079440.693493		44.6384	55.1286
69	-2.079440.729003		45.1699	53.6127
70	-2.079440.765456		45.7558	52.021
71	-2.079440.802956		46.4005	50.3513
72	-2.079440.841621		47.1088	48.6012
73	-2.079440.885291		47.8926	46.7603
74	-2.079440.926859		48.7517	44.8329
75	-2.079440.970094		49.6927	42.8157
76	-2.079441.01522	50.7234	40.7046	
77	-2.079441.06252	51.8524	38.4951	
78	-2.079441.11232	53.0896	36.1821	
79	-2.079441.16505	54.447	33.7595	
80	-2.079441.22123	55.9384	31.22	
81	-2.079441.28155	57.5807	28.5551	
82	-2.079441.35317	59.4118	25.7412	
83	-2.079441.42554	61.444	22.7769	
84	-2.079441.50626	63.7128	19.6447	
85	-2.079441.59819	66.267	16.3214	
86	-2.079441.70604	69.1776	12.7738	
87	-2.079441.83843	72.5574	8.95087	
88	-1.386292.01409	76.614	6.15874	
89	-1.386292.29036	81.8597	2.98362	

Data Set Standard Deviation = 0.103315
Numerator = 8.902
Denominator = 76.8919
W Statistic = 0.115773 = 8.902 / 76.8919

5% Critical value of 0.972 exceeds 0.115773
Evidence of non-normality at 95% level of significance

1% Critical value of 0.961 exceeds 0.115773
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: 1,2,4-Trichlorobenzene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.351402
0.351402 < 0.985 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.079440	0.011111	-2.29036	203.166	326.346
2	-2.079440	0.022222	-2.01409	203.166	312.855
3	-2.079440	0.033333	-1.83843	203.166	304.276
4	-2.079440	0.044444	-1.70604	203.166	297.812
5	-2.079440	0.055556	-1.59819	203.166	292.545
6	-2.079440	0.066667	-1.50626	203.166	288.056
7	-2.079440	0.077778	-1.42554	203.166	284.114
8	-2.079440	0.088889	-1.35317	203.166	280.58
9	-2.079440	0.1	-1.28155	203.166	277.082
10	-2.079440	0.111111	-1.22123	203.166	274.137
11	-2.079440	0.122222	-1.16505	203.166	271.393
12	-2.079440	0.133333	-1.11232	203.166	268.818
13	-2.079440	0.144444	-1.06252	203.166	266.386
14	-2.079440	0.155556	-1.01522	203.166	264.077
15	-2.079440	0.166667	-0.970094	203.166	261.873
16	-2.079440	0.177778	-0.926859	203.166	259.762
17	-2.079440	0.188889	-0.885291	203.166	257.732
18	-2.079440	0.2	-0.841621	203.166	255.599
19	-2.079440	0.211111	-0.802956	203.166	253.711
20	-2.079440	0.222222	-0.765456	203.166	251.88
21	-2.079440	0.233333	-0.729003	203.166	250.1
22	-2.079440	0.244444	-0.693493	203.166	248.366
23	-2.079440	0.255556	-0.658838	203.166	246.673
24	-2.079440	0.266667	-0.624956	203.166	245.019
25	-2.079440	0.277778	-0.591776	203.166	243.398
26	-2.079440	0.288889	-0.559237	203.166	241.809
27	-2.079440	0.3	-0.524401	203.166	240.108
28	-2.079440	0.311111	-0.493018	203.166	238.576
29	-2.079440	0.322222	-0.462114	203.166	237.067
30	-2.079440	0.333333	-0.431644	203.166	235.579
31	-2.079440	0.344444	-0.401571	203.166	234.11
32	-2.079440	0.355556	-0.371856	203.166	232.659
33	-2.079440	0.366667	-0.342466	203.166	231.224
34	-2.079440	0.377778	-0.31337	203.166	229.803
35	-2.079440	0.388889	-0.284535	203.166	228.395
36	-2.079440	0.4	-0.253347	203.166	226.872
37	-2.079440	0.411111	-0.224974	203.166	225.486
38	-2.079440	0.422222	-0.196779	203.166	224.109
39	-2.079440	0.433333	-0.168741	203.166	222.74
40	-2.079440	0.444444	-0.140835	203.166	221.377
41	-2.079440	0.455556	-0.113039	203.166	220.02
42	-2.079440	0.466667	-0.0853288	203.166	218.667
43	-2.079440	0.477778	-0.0576847	203.166	217.317
44	-2.079440	0.488889	-0.0300838	203.166	215.969
45	-2.079440	0.5	0	203.166	214.5
46	-2.079440	0.511111	0.0300838	203.166	213.031
47	-2.079440	0.522222	0.0576847	203.166	211.683
48	-2.079440	0.533333	0.0853288	203.166	210.333

49	-2.079440.544444	0.113039	203.166	208.98
50	-2.079440.555556	0.140835	203.166	207.623
51	-2.079440.566667	0.168741	203.166	206.26
52	-2.079440.577778	0.196779	203.166	204.891
53	-2.079440.588889	0.224974	203.166	203.514
54	-2.079440.6	0.253347	203.166	202.128
55	-2.079440.611111	0.284535	203.166	200.605
56	-2.079440.622222	0.31337	203.166	199.197
57	-2.079440.633333	0.342466	203.166	197.776
58	-2.079440.644444	0.371856	203.166	196.341
59	-2.079440.655556	0.401571	203.166	194.89
60	-2.079440.666667	0.431644	203.166	193.421
61	-2.079440.677778	0.462114	203.166	191.933
62	-2.079440.688889	0.493018	203.166	190.424
63	-2.079440.7	0.524401	203.166	188.892
64	-2.079440.711111	0.559237	203.166	187.191
65	-2.079440.722222	0.591776	203.166	185.602
66	-2.079440.733333	0.624956	203.166	183.981
67	-2.079440.744444	0.658838	203.166	182.327
68	-2.079440.755556	0.693493	203.166	180.634
69	-2.079440.766667	0.729003	203.166	178.9
70	-2.079440.777778	0.765456	203.166	177.12
71	-2.079440.788889	0.802956	203.166	175.289
72	-2.079440.8	0.841621	203.166	173.401
73	-2.079440.811111	0.885291	203.166	171.268
74	-2.079440.822222	0.926859	203.166	169.238
75	-2.079440.833333	0.970094	203.166	167.127
76	-2.079440.844444	1.01522	203.166	164.923
77	-2.079440.855556	1.06252	203.166	162.614
78	-2.079440.866667	1.11232	203.166	160.182
79	-2.079440.877778	1.16505	203.166	157.607
80	-2.079440.888889	1.22123	203.166	154.863
81	-2.079440.9	1.28155	203.166	151.918
82	-2.079440.911111	1.35317	203.166	148.42
83	-2.079440.922222	1.42554	203.166	144.886
84	-2.079440.933333	1.50626	203.166	140.944
85	-2.079440.944444	1.59819	203.166	136.455
86	-2.079440.955556	1.70604	203.166	131.188
87	-2.079440.966667	1.83843	203.166	124.724
88	-1.386290.977778	2.01409	326.778	116.145
89	-1.386290.988889	2.29036	326.778	102.654

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: 1,2,4-Trichlorobenzene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 97.7528%
Number of comparisons = 12
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 7
Maximum Background Value = 0
Confidence Level = 46.7%
False Positive Rate = 53.3%

Location	Date	Count	Mean	Significant
LMW-9S	11/16/2013	1	-2.07944	FALSE
LMW-10	11/16/2013	1	-2.07944	FALSE
LMW-6	11/16/2013	1	-2.07944	FALSE
LMW-8	11/16/2013	1	-2.07944	FALSE
LMW-9	11/16/2013	1	-2.07944	FALSE
LMW-9D	11/16/2013	1	-2.07944	FALSE
LMW-15R	11/16/2013	1	-2.07944	FALSE
LMW-16	11/16/2013	1	-2.07944	FALSE
LMW-14R	11/16/2013	1	-2.07944	FALSE
LMW-3S	11/16/2013	1	-1.38629	FALSE
LMW-3	11/16/2013	1	-2.07944	FALSE
LMW-7	11/16/2012	1	-1.38629	FALSE

Concentrations (ppb)

Parameter: 1,2-cis-Dichloroethylene

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 276
Percent Non-Detects: 97.1831%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	23	(100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.15 U	ND<0.15 U
			6/30/2010	ND<0.15 U	ND<0.15 U
			11/17/2010	ND<0.15 U	ND<0.15 U
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	ND<0.15 U	ND<0.15 U
			5/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2013	ND<0.15 U	ND<0.15 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-9S	13	(100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.15 U	ND<0.15 U
			6/30/2010	ND<0.15 U	ND<0.15 U
			11/17/2010	ND<0.15 U	ND<0.15 U
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	ND<0.15 U	ND<0.15 U
			5/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2013	ND<0.15 U	ND<0.15 U
LMW-3	25	25 (100%)	11/19/1996	ND<1	ND<1
			3/24/1997	ND<1	ND<1
			1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1

			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.15 U	ND<0.15 U	
			6/30/2010	ND<0.15 U	ND<0.15 U	
			11/17/2010	ND<0.15 U	ND<0.15 U	
			7/6/2011	ND<0.15 U	ND<0.15 U	
			11/22/2011	ND<0.15 U	ND<0.15 U	
			5/16/2012	ND<0.15 U	ND<0.15 U	
			11/16/2012	ND<0.15 U	ND<0.15 U	
			11/16/2013	ND<0.15 U	ND<0.15 U	
LMW-16	13	13 (100%)	11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.15 U	ND<0.15 U	
			6/30/2010	ND<0.15 U	ND<0.15 U	
			11/17/2010	ND<0.15 U	ND<0.15 U	
			7/6/2011	ND<0.15 U	ND<0.15 U	
			11/22/2011	ND<0.15 U	ND<0.15 U	
			5/16/2012	ND<0.15 U	ND<0.15 U	
			11/16/2012	ND<0.15 U	ND<0.15 U	
			11/16/2013	ND<0.15 U	ND<0.15 U	
LMW-6	23	23 (100%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.15 U	ND<0.15 U	
			6/30/2010	ND<0.15 U	ND<0.15 U	
			11/17/2010	ND<0.15 U	ND<0.15 U	
			7/6/2011	ND<0.15 U	ND<0.15 U	
			11/22/2011	ND<0.15 U	ND<0.15 U	
			5/16/2012	ND<0.15 U	ND<0.15 U	
			11/16/2012	ND<0.15 U	ND<0.15 U	
			11/16/2013	ND<0.15 U	ND<0.15 U	
LMW-8	23	15 (65.2174%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	

			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<0 J	ND<0 J	
			6/19/2006	ND<0 J	ND<0 J	
			11/18/2006	ND<0 J	ND<0 J	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<0 J	ND<0 J	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	2.4	2.4	
			6/30/2010	1.1	1.1	
			11/17/2010	0.67 J	0.67 J	
			7/6/2011	1.5	1.5	
			11/22/2011	1.7	1.7	
			5/16/2012	3.2	3.2	
			11/16/2012	2.7	2.7	
			11/16/2013	2.1	2.1	
LMW-9	23	23 (100%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.15 U	ND<0.15 U	
			6/30/2010	ND<0.15 U	ND<0.15 U	
			11/17/2010	ND<0.15 U	ND<0.15 U	
			7/6/2011	ND<0.15 U	ND<0.15 U	
			11/22/2011	ND<0.15 U	ND<0.15 U	
			5/16/2012	ND<0.15 U	ND<0.15 U	
			11/16/2012	ND<0.15 U	ND<0.15 U	
			11/16/2013	ND<0.15 U	ND<0.15 U	
LMW-15R	16	16 (100%)	11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.15 U	ND<0.15 U	
			6/30/2010	ND<0.15 U	ND<0.15 U	
			11/17/2010	ND<0.15 U	ND<0.15 U	
			7/6/2011	ND<0.15 U	ND<0.15 U	
			11/22/2011	ND<0.15 U	ND<0.15 U	
			5/16/2012	ND<0.15 U	ND<0.15 U	
			11/16/2012	ND<0.15 U	ND<0.15 U	
			11/16/2013	ND<0.15 U	ND<0.15 U	
LMW-14R	12	12 (100%)	6/2/2007	ND<1	ND<1	

			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.15 U	ND<0.15 U
			6/30/2010	ND<0.15 U	ND<0.15 U
			11/17/2010	ND<0.15 U	ND<0.15 U
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	ND<0.15 U	ND<0.15 U
			5/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2013	ND<0.15 U	ND<0.15 U
LMW-10	20	20 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.15 U	ND<0.15 U
			6/30/2010	ND<0.15 U	ND<0.15 U
			11/17/2010	ND<0.15 U	ND<0.15 U
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	ND<0.15 U	ND<0.15 U
			5/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2013	ND<0.15 U	ND<0.15 U
LMW-9D	13	13 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.15 U	ND<0.15 U
			6/30/2010	ND<0.15 U	ND<0.15 U
			11/17/2010	ND<0.15 U	ND<0.15 U
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	ND<0.15 U	ND<0.15 U
			5/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2013	ND<0.15 U	ND<0.15 U
LMW-3S	13	13 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.15 U	ND<0.15 U
			6/30/2010	ND<0.15 U	ND<0.15 U
			11/17/2010	ND<0.15 U	ND<0.15 U
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	ND<0.15 U	ND<0.15 U
			5/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2013	ND<0.15 U	ND<0.15 U
LMW-7	21	21 (100%)	1/16/1998	ND<1	ND<1

			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.15 U	ND<0.15 U	
			11/17/2010	ND<0.15 U	ND<0.15 U	
			7/6/2011	ND<0.15 U	ND<0.15 U	
			11/22/2011	ND<0.15 U	ND<0.15 U	
			5/16/2012	ND<0.15 U	ND<0.15 U	
			11/16/2012	ND<0.15 U	ND<0.15 U	
LMW-11	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
LMW-12	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
LMW-13	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
MW-5	13	13 (100%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	

3/10/2004	ND<1	ND<1
10/12/2004	ND<1	ND<1
4/1/2005 ND<1	ND<1	
10/26/2005	ND<1	ND<1
6/19/2006	ND<1	ND<1
11/15/2007	ND<1	ND<1
5/20/2008	ND<1	ND<1
11/20/2008	ND<1	ND<1

There are 0 unused locations

Loc.	Meas. ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: 1,2-cis-Dichloroethylene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.747777	.55021	0
2	0	-2.457271	3.5884	0
3	0	-2.326341	9.0003	0
4	0	-2.197282	3.8283	0
5	0.075	-2.120072	8.323	-0.159005
6	0.075	-2.033523	2.4582	-0.311519
7	0.075	-1.977373	6.3682	-0.459822
8	0.075	-1.911034	0.0203	-0.603149
9	0.075	-1.866294	3.5033	-0.743121
10	0.075	-1.811914	6.7863	-0.879015
11	0.075	-1.774384	9.9348	-1.01209
12	0.075	-1.727935	2.9205	-1.14169
13	0.075	-1.6954	55.7949	-1.26884
14	0.075	-1.654635	8.5327	-1.39294
15	0.075	-1.625766	1.1758	-1.51487
16	0.075	-1.589276	3.7015	-1.63407
17	0.075	-1.563226	6.1452	-1.75131
18	0.075	-1.530076	8.4863	-1.86606
19	0.075	-1.506267	0.7551	-1.97903
20	0.075	-1.475797	2.9331	-2.08972
21	0.075	-1.4538	75.0466	-2.19875
22	0.075	-1.425547	7.0788	-2.30567
23	0.075	-1.405077	9.053	-2.41105
24	0.075	-1.378668	0.9537	-2.51445
25	0.075	-1.359468	2.8019	-2.61641
26	0.075	-1.334628	4.5831	-2.7165
27	0.075	-1.316528	6.3163	-2.81524
28	0.075	-1.293038	7.9883	-2.91222
29	0.075	-1.275888	9.6161	-3.00791
30	0.075	-1.253579	1.1875	-3.10193
31	0.075	-1.237249	2.7183	-3.19472
32	0.075	-1.215969	4.1969	-3.28592
33	0.075	-1.200369	5.6377	-3.37595
34	0.075	-1.18	97.0301	-3.46445
35	0.075	-1.165059	8.3875	-3.55182
36	0.075	-1.1455	99.6996	-3.63774
37	0.075	-1.131131	00.979	-3.72257
38	0.075	-1.112321	02.216	-3.806
39	0.075	-1.098471	03.423	-3.88838
40	0.075	-1.080321	04.59	-3.96941
41	0.075	-1.066941	05.728	-4.04943
42	0.075	-1.049391	06.83	-4.12813
43	0.075	-1.036431	07.904	-4.20586
44	0.075	-1.019431	08.943	-4.28232
45	0.075	-1.006871	09.957	-4.35783
46	0.075	-0.990356	110.938	-4.43211
47	0.075	-0.978151	11.894	-4.50547
48	0.075	-0.9621	112.82	-4.57763
49	0.075	-0.950222	113.723	-4.6489
50	0.075	-0.934591	14.596	-4.71899
51	0.075	-0.923014	115.448	-4.78822

52	0.075	-0.907769	116.272	-4.8563
53	0.075	-0.896473	117.076	-4.92354
54	0.075	-0.881587	117.853	-4.98965
55	0.075	-0.87055	118.611	-5.05495
56	0.075	-0.855996	119.344	-5.11915
57	0.075	-0.841621	120.052	-5.18227
58	0.075	-0.830953	120.743	-5.24459
59	0.075	-0.816874	121.41	-5.30585
60	0.075	-0.806422	122.06	-5.36634
61	0.075	-0.792618	122.689	-5.42578
62	0.075	-0.782366	123.301	-5.48446
63	0.075	-0.768821	123.892	-5.54212
64	0.075	-0.758753	124.467	-5.59903
65	0.075	-0.745449	125.023	-5.65494
66	0.075	-0.735557	125.564	-5.7101
67	0.075	-0.722479	126.086	-5.76429
68	0.075	-0.712751	126.594	-5.81774
69	0.075	-0.699883	127.084	-5.87024
70	0.075	-0.690309	127.561	-5.92201
71	0.075	-0.677639	128.02	-5.97283
72	0.075	-0.668209	128.466	-6.02295
73	0.075	-0.655726	128.896	-6.07213
74	0.075	-0.646431	129.314	-6.12061
75	0.075	-0.634124	129.716	-6.16817
76	0.075	-0.624956	130.107	-6.21504
77	0.075	-0.612813	130.482	-6.261
78	0.075	-0.603765	130.847	-6.30628
79	0.075	-0.591776	131.197	-6.35067
80	0.075	-0.582841	131.537	-6.39438
81	0.075	-0.570999	131.863	-6.43721
82	0.075	-0.56217	132.179	-6.47937
83	0.075	-0.550465	132.482	-6.52065
84	0.075	-0.541736	132.775	-6.56128
85	0.075	-0.530162	133.056	-6.60105
86	0.075	-0.521527	133.328	-6.64016
87	0.075	-0.510074	133.589	-6.67842
88	0.075	-0.501527	133.84	-6.71603
89	0.075	-0.490189	134.08	-6.75279
90	0.075	-0.481728	134.312	-6.78892
91	0.075	-0.470498	134.534	-6.82421
92	0.075	-0.462114	134.747	-6.85887
93	0.075	-0.450985	134.951	-6.89269
94	0.075	-0.442676	135.147	-6.92589
95	0.075	-0.431644	135.333	-6.95827
96	0.075	-0.423405	135.512	-6.99002
97	0.075	-0.412463	135.682	-7.02096
98	0.075	-0.40429	135.846	-7.05128
99	0.5	-0.393433	136.001	-7.248
100	0.5	-0.385321	136.149	-7.44066
101	0.5	-0.374544	136.289	-7.62793
102	0.5	-0.36649	136.424	-7.81117
103	0.5	-0.355788	136.55	-7.98907
104	0.5	-0.347787	136.671	-8.16296
105	0.5	-0.337155	136.785	-8.33154
106	0.5	-0.329206	136.893	-8.49614
107	0.5	-0.318639	136.995	-8.65546
108	0.5	-0.310738	137.091	-8.81083
109	0.5	-0.300232	137.182	-8.96095
110	0.5	-0.292375	137.267	-9.10713
111	0.5	-0.281926	137.346	-9.2481
112	0.5	-0.27411	137.422	-9.38515
113	0.5	-0.263715	137.491	-9.51701

114	0.5	-0.253347	137.555	-9.64368
115	0.5	-0.24559	137.616	-9.76648
116	0.5	-0.235269	137.671	-9.88411
117	0.5	-0.227545	137.723	-9.99788
118	0.5	-0.217267	137.77	-10.1065
119	0.5	-0.209575	137.814	-10.2113
120	0.5	-0.199336	137.854	-10.311
121	0.5	-0.191671	137.89	-10.4068
122	0.5	-0.181468	137.923	-10.4975
123	0.5	-0.173829	137.954	-10.5845
124	0.5	-0.163659	137.98	-10.6663
125	0.5	-0.156042	138.005	-10.7443
126	0.5	-0.1459	138.026	-10.8173
127	0.5	-0.138305	138.045	-10.8864
128	0.5	-0.128189	138.062	-10.9505
129	0.5	-0.12061	138.076	-11.0108
130	0.5	-0.110516	138.088	-11.0661
131	0.5	-0.102953	138.099	-11.1175
132	0.5	-0.0928787	138.108	-11.164
133	0.5	-0.0853288	138.115	-11.2066
134	0.5	-0.0752698	138.12	-11.2443
135	0.5	-0.0677301	138.125	-11.2781
136	0.5	-0.0576847	138.128	-11.307
137	0.5	-0.0501541	138.131	-11.3321
138	0.5	-0.0401167	138.132	-11.3521
139	0.5	-0.0325917	138.134	-11.3684
140	0.5	-0.0225612	138.134	-11.3797
141	0.5	-0.0150408	138.134	-11.3872
142	0.5	-0.00501359	138.134	-11.3897
143	0.5	0.00501359	138.134	-11.3872
144	0.5	0.0150408	138.135	-11.3797
145	0.5	0.0225612	138.135	-11.3684
146	0.5	0.0325917	138.136	-11.3521
147	0.5	0.0401167	138.138	-11.3321
148	0.5	0.0501541	138.14	-11.307
149	0.5	0.0576847	138.144	-11.2781
150	0.5	0.0677301	138.148	-11.2443
151	0.5	0.0752698	138.154	-11.2066
152	0.5	0.0853288	138.161	-11.164
153	0.5	0.0928787	138.17	-11.1175
154	0.5	0.102953	138.18	-11.0661
155	0.5	0.110516	138.193	-11.0108
156	0.5	0.12061	138.207	-10.9505
157	0.5	0.128189	138.224	-10.8864
158	0.5	0.138305	138.243	-10.8173
159	0.5	0.1459	138.264	-10.7443
160	0.5	0.156042	138.288	-10.6663
161	0.5	0.163659	138.315	-10.5845
162	0.5	0.173829	138.345	-10.4975
163	0.5	0.181468	138.378	-10.4068
164	0.5	0.191671	138.415	-10.311
165	0.5	0.199336	138.455	-10.2113
166	0.5	0.209575	138.499	-10.1065
167	0.5	0.217267	138.546	-9.99788
168	0.5	0.227545	138.598	-9.88411
169	0.5	0.235269	138.653	-9.76648
170	0.5	0.24559	138.713	-9.64368
171	0.5	0.253347	138.777	-9.51701
172	0.5	0.263715	138.847	-9.38515
173	0.5	0.27411	138.922	-9.2481
174	0.5	0.281926	139.002	-9.10713
175	0.5	0.292375	139.087	-8.96095

176	0.5	0.300232	139.177	-8.81083
177	0.5	0.310738	139.274	-8.65546
178	0.5	0.318639	139.375	-8.49614
179	0.5	0.329206	139.484	-8.33154
180	0.5	0.337155	139.597	-8.16296
181	0.5	0.347787	139.718	-7.98907
182	0.5	0.355788	139.845	-7.81117
183	0.5	0.36649	139.979	-7.62793
184	0.5	0.374544	140.12	-7.44066
185	0.5	0.385321	140.268	-7.248
186	0.5	0.393433	140.423	-7.05128
187	0.5	0.40429	140.586	-6.84913
188	0.5	0.412463	140.756	-6.6429
189	0.5	0.423405	140.936	-6.4312
190	0.5	0.431644	141.122	-6.21538
191	0.5	0.442676	141.318	-5.99404
192	0.5	0.450985	141.521	-5.76855
193	0.5	0.462114	141.735	-5.53749
194	0.5	0.470498	141.956	-5.30224
195	0.5	0.481728	142.188	-5.06138
196	0.5	0.490189	142.429	-4.81628
197	0.5	0.501527	142.68	-4.56552
198	0.5	0.510074	142.94	-4.31048
199	0.5	0.521527	143.212	-4.04972
200	0.5	0.530162	143.493	-3.78464
201	0.5	0.541736	143.787	-3.51377
202	0.5	0.550465	144.09	-3.23854
203	0.5	0.56217	144.406	-2.95745
204	0.5	0.570999	144.732	-2.67195
205	0.5	0.582841	145.072	-2.38053
206	0.5	0.591776	145.422	-2.08464
207	0.5	0.603765	145.786	-1.78276
208	0.5	0.612813	146.162	-1.47636
209	0.5	0.624956	146.552	-1.16388
210	0.5	0.634124	146.955	-0.846816
211	0.5	0.646431	147.372	-0.523601
212	0.5	0.655726	147.802	-0.195738
213	0.5	0.668209	148.249	0.138367
214	0.5	0.677639	148.708	0.477187
215	0.5	0.690309	149.185	0.822341
216	0.5	0.699883	149.674	1.17228
217	0.5	0.712751	150.182	1.52866
218	0.5	0.722479	150.704	1.8899
219	0.5	0.735557	151.245	2.25768
220	0.5	0.745449	151.801	2.6304
221	0.5	0.758753	152.377	3.00978
222	0.5	0.768821	152.968	3.39419
223	0.5	0.782366	153.58	3.78537
224	0.5	0.792618	154.208	4.18168
225	0.5	0.806422	154.859	4.58489
226	0.5	0.816874	155.526	4.99333
227	0.5	0.830953	156.216	5.4088
228	0.5	0.841621	156.925	5.82961
229	0.5	0.855996	157.657	6.25761
230	0.5	0.87055	158.415	6.69289
231	0.5	0.881587	159.193	7.13368
232	0.5	0.896473	159.996	7.58192
233	0.5	0.907769	160.82	8.0358
234	0.5	0.923014	161.672	8.49731
235	0.5	0.93459	162.546	8.9646
236	0.5	0.950222	163.449	9.43971
237	0.5	0.9621	164.374	9.92076

238	0.5	0.97815	165.331	10.4098	
239	0.5	0.990356		166.312	10.905
240	0.5	1.00687	167.326	11.4085	
241	0.5	1.01943	168.365	11.9182	
242	0.5	1.03643	169.439	12.4364	
243	0.5	1.04939	170.54	12.9611	
244	0.5	1.06694	171.679	13.4945	
245	0.5	1.08032	172.846	14.0347	
246	0.5	1.09847	174.052	14.5839	
247	0.5	1.11232	175.29	15.1401	
248	0.5	1.13113	176.569	15.7057	
249	0.5	1.1455	177.881	16.2784	
250	0.5	1.16505	179.239	16.8609	
251	0.5	1.18	180.631	17.4509	
252	0.5	1.20036	182.072	18.0511	
253	0.5	1.21596	183.55	18.6591	
254	0.5	1.23724	185.081	19.2777	
255	0.5	1.25357	186.653	19.9045	
256	0.5	1.27588	188.28	20.5424	
257	0.5	1.29303	189.952	21.189	
258	0.5	1.31652	191.686	21.8472	
259	0.5	1.33462	193.467	22.5145	
260	0.5	1.35946	195.315	23.1943	
261	0.5	1.37866	197.216	23.8836	
262	0.5	1.40507	199.19	24.5861	
263	0.5	1.42554	201.222	25.2989	
264	0.5	1.4538	203.336	26.0258	
265	0.5	1.47579	205.514	26.7637	
266	0.5	1.50626	207.782	27.5168	
267	0.5	1.53007	210.123	28.2819	
268	0.5	1.56322	212.567	29.0635	
269	0.5	1.58927	215.093	29.8581	
270	0.5	1.62576	217.736	30.671	
271	0.5	1.65463	220.474	31.4983	
272	0.5	1.6954	223.348	32.346	
273	0.5	1.72793	226.334	33.21	
274	0.5	1.77438	229.482	34.0972	
275	0.5	1.81191	232.765	35.0031	
276	0.5	1.86629	236.248	35.9363	
277	0.67	1.91103	239.9	37.2166	
278	1.1	1.97737	243.81	39.3917	
279	1.5	2.03352	247.946	42.442	
280	1.7	2.12007	252.44	46.0461	
281	2.1	2.19728	257.268	50.6604	
282	2.4	2.32634	262.68	56.2437	
283	2.7	2.45727	268.718	62.8783	
284	3.2	2.74777	276.269	71.6712	

Data Set Standard Deviation = 0.355745
Numerator = 5136.75
Denominator = 9894.54
W Statistic = 0.51915 = 5136.75 / 9894.54

5% Critical value of 0.976 exceeds 0.51915
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.51915
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: 1,2-cis-Dichloroethylene

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.724923
0.724923 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.00350877		-2.747773	9	348.683
2	0	0.00701754		-2.457273	9	334.497
3	0	0.0105263		-2.326343	9	328.103
4	0	0.0140351		-2.197283	9	321.801
5	0.075	0.0175439		-2.120074	9.0313	318.03
6	0.075	0.0210526		-2.033524	9.0313	313.804
7	0.075	0.0245614		-1.977374	9.0313	311.062
8	0.075	0.0280702		-1.911034	9.0313	307.822
9	0.075	0.0315789		-1.866294	9.0313	305.637
10	0.075	0.0350877		-1.811914	9.0313	302.982
11	0.075	0.0385965		-1.774384	9.0313	301.149
12	0.075	0.0421053		-1.727934	9.0313	298.881
13	0.075	0.045614		-1.6954	49.0313	297.292
14	0.075	0.0491228		-1.654634	9.0313	295.301
15	0.075	0.0526316		-1.625764	9.0313	293.891
16	0.075	0.0561404		-1.589274	9.0313	292.109
17	0.075	0.0596491		-1.563224	9.0313	290.837
18	0.075	0.0631579		-1.530074	9.0313	289.218
19	0.075	0.0666667		-1.506264	9.0313	288.056
20	0.075	0.0701754		-1.475794	9.0313	286.568
21	0.075	0.0736842		-1.4538	49.0313	285.494
22	0.075	0.077193		-1.425544	9.0313	284.114
23	0.075	0.0807018		-1.405074	9.0313	283.114
24	0.075	0.0842105		-1.378664	9.0313	281.824
25	0.075	0.0877193		-1.359464	9.0313	280.887
26	0.075	0.0912281		-1.334624	9.0313	279.674
27	0.075	0.0947368		-1.316524	9.0313	278.79
28	0.075	0.0982456		-1.293034	9.0313	277.643
29	0.075	0.101754		-1.275884	9.0313	276.805
30	0.075	0.105263		-1.253574	9.0313	275.716
31	0.075	0.108772		-1.237244	9.0313	274.918
32	0.075	0.112281		-1.215964	9.0313	273.879
33	0.075	0.115789		-1.200364	9.0313	273.118
34	0.075	0.119298		-1.18	49.0313	272.123
35	0.075	0.122807		-1.165054	9.0313	271.393
36	0.075	0.126316		-1.1455	49.0313	270.439
37	0.075	0.129825		-1.131134	9.0313	269.737
38	0.075	0.133333		-1.112324	9.0313	268.818
39	0.075	0.136842		-1.098474	9.0313	268.142
40	0.075	0.140351		-1.080324	9.0313	267.256
41	0.075	0.14386	-1.066944	9.0313	266.602	
42	0.075	0.147368		-1.049394	9.0313	265.745
43	0.075	0.150877		-1.036434	9.0313	265.112
44	0.075	0.154386		-1.019434	9.0313	264.282
45	0.075	0.157895		-1.006874	9.0313	263.669
46	0.075	0.161404		-0.990356	49.0313	262.862
47	0.075	0.164912		-0.978154	9.0313	262.266
48	0.075	0.168421		-0.9621	49.0313	261.483

49	0.075	0.17193	-0.950222	49.0313	260.903
50	0.075	0.175439	-0.934594	9.0313	260.139
51	0.075	0.178947	-0.923014	49.0313	259.574
52	0.075	0.182456	-0.907769	49.0313	258.829
53	0.075	0.185965	-0.896473	49.0313	258.278
54	0.075	0.189474	-0.881587	49.0313	257.551
55	0.075	0.192982	-0.870554	9.0313	257.012
56	0.075	0.196491	-0.855996	49.0313	256.301
57	0.075	0.2	-0.841621	49.0313	255.599
58	0.075	0.203509	-0.830953	49.0313	255.078
59	0.075	0.207018	-0.816874	49.0313	254.391
60	0.075	0.210526	-0.806422	49.0313	253.88
61	0.075	0.214035	-0.792618	49.0313	253.206
62	0.075	0.217544	-0.782366	49.0313	252.706
63	0.075	0.221053	-0.768821	49.0313	252.044
64	0.075	0.224561	-0.758753	49.0313	251.552
65	0.075	0.22807	-0.745449	49.0313	250.903
66	0.075	0.231579	-0.735557	49.0313	250.42
67	0.075	0.235088	-0.722479	49.0313	249.781
68	0.075	0.238596	-0.712751	49.0313	249.306
69	0.075	0.242105	-0.699883	49.0313	248.678
70	0.075	0.245614	-0.690309	49.0313	248.21
71	0.075	0.249123	-0.677639	49.0313	247.591
72	0.075	0.252632	-0.668209	49.0313	247.131
73	0.075	0.25614	-0.655726	49.0313	246.521
74	0.075	0.259649	-0.646431	49.0313	246.067
75	0.075	0.263158	-0.634124	49.0313	245.466
76	0.075	0.266667	-0.624956	49.0313	245.019
77	0.075	0.270175	-0.612813	49.0313	244.426
78	0.075	0.273684	-0.603765	49.0313	243.984
79	0.075	0.277193	-0.591776	49.0313	243.398
80	0.075	0.280702	-0.582841	49.0313	242.962
81	0.075	0.284211	-0.570999	49.0313	242.384
82	0.075	0.287719	-0.562174	9.0313	241.953
83	0.075	0.291228	-0.550465	49.0313	241.381
84	0.075	0.294737	-0.541736	49.0313	240.955
85	0.075	0.298246	-0.530162	49.0313	240.39
86	0.075	0.301754	-0.521527	49.0313	239.968
87	0.075	0.305263	-0.510074	49.0313	239.409
88	0.075	0.308772	-0.501527	49.0313	238.991
89	0.075	0.312281	-0.490189	49.0313	238.438
90	0.075	0.315789	-0.481728	49.0313	238.024
91	0.075	0.319298	-0.470498	49.0313	237.476
92	0.075	0.322807	-0.462114	49.0313	237.067
93	0.075	0.326316	-0.450985	49.0313	236.523
94	0.075	0.329825	-0.442676	49.0313	236.117
95	0.075	0.333333	-0.431644	49.0313	235.579
96	0.075	0.336842	-0.423405	49.0313	235.176
97	0.075	0.340351	-0.412463	49.0313	234.642
98	0.075	0.34386	-0.404294	9.0313	234.243
99	0.5	0.347368	-0.393433	105.875	233.713
100	0.5	0.350877	-0.385321	105.875	233.317
101	0.5	0.354386	-0.374544	105.875	232.79
102	0.5	0.357895	-0.36649	105.875	232.397
103	0.5	0.361404	-0.355788	105.875	231.874
104	0.5	0.364912	-0.347787	105.875	231.484
105	0.5	0.368421	-0.337155	105.875	230.964
106	0.5	0.37193	-0.329206	105.875	230.576
107	0.5	0.375439	-0.318639	105.875	230.06
108	0.5	0.378947	-0.310738	105.875	229.674
109	0.5	0.382456	-0.300232	105.875	229.161
110	0.5	0.385965	-0.292375	105.875	228.778

111	0.5	0.389474	-0.281926	105.875	228.267
112	0.5	0.392982	-0.27411	105.875	227.886
113	0.5	0.396491	-0.263715	105.875	227.378
114	0.5	0.4	-0.253347	105.875	226.872
115	0.5	0.403509	-0.24559	105.875	226.493
116	0.5	0.407018	-0.235269	105.875	225.989
117	0.5	0.410526	-0.227545	105.875	225.612
118	0.5	0.414035	-0.217267	105.875	225.11
119	0.5	0.417544	-0.209575	105.875	224.734
120	0.5	0.421053	-0.199336	105.875	224.234
121	0.5	0.424561	-0.191671	105.875	223.86
122	0.5	0.42807	-0.181468	105.875	223.362
123	0.5	0.431579	-0.173829	105.875	222.989
124	0.5	0.435088	-0.163659	105.875	222.492
125	0.5	0.438596	-0.156042	105.875	222.12
126	0.5	0.442105	-0.1459	105.875	221.625
127	0.5	0.445614	-0.138305	105.875	221.254
128	0.5	0.449123	-0.128189	105.875	220.76
129	0.5	0.452632	-0.12061	105.875	220.39
130	0.5	0.45614	-0.110516	105.875	219.897
131	0.5	0.459649	-0.102953	105.875	219.528
132	0.5	0.463158	-0.0928787	105.875	219.036
133	0.5	0.466667	-0.0853288	105.875	218.667
134	0.5	0.470175	-0.0752698	105.875	218.176
135	0.5	0.473684	-0.0677301	105.875	217.807
136	0.5	0.477193	-0.0576847	105.875	217.317
137	0.5	0.480702	-0.0501541	105.875	216.949
138	0.5	0.484211	-0.0401167	105.875	216.459
139	0.5	0.487719	-0.0325917	105.875	216.092
140	0.5	0.491228	-0.0225612	105.875	215.602
141	0.5	0.494737	-0.0150408	105.875	215.234
142	0.5	0.498246	-0.00501359	105.875	214.745
143	0.5	0.501754	0.00501359	105.875	214.255
144	0.5	0.505263	0.0150408	105.875	213.766
145	0.5	0.508772	0.0225612	105.875	213.398
146	0.5	0.512281	0.0325917	105.875	212.908
147	0.5	0.515789	0.0401167	105.875	212.541
148	0.5	0.519298	0.0501541	105.875	212.051
149	0.5	0.522807	0.0576847	105.875	211.683
150	0.5	0.526316	0.0677301	105.875	211.193
151	0.5	0.529825	0.0752698	105.875	210.824
152	0.5	0.533333	0.0853288	105.875	210.333
153	0.5	0.536842	0.0928787	105.875	209.964
154	0.5	0.540351	0.102953	105.875	209.472
155	0.5	0.54386	0.110516	105.875	209.103
156	0.5	0.547368	0.12061	105.875	208.61
157	0.5	0.550877	0.128189	105.875	208.24
158	0.5	0.554386	0.138305	105.875	207.746
159	0.5	0.557895	0.1459	105.875	207.375
160	0.5	0.561404	0.156042	105.875	206.88
161	0.5	0.564912	0.163659	105.875	206.508
162	0.5	0.568421	0.173829	105.875	206.011
163	0.5	0.57193	0.181468	105.875	205.638
164	0.5	0.575439	0.191671	105.875	205.14
165	0.5	0.578947	0.199336	105.875	204.766
166	0.5	0.582456	0.209575	105.875	204.266
167	0.5	0.585965	0.217267	105.875	203.89
168	0.5	0.589474	0.227545	105.875	203.388
169	0.5	0.592982	0.235269	105.875	203.011
170	0.5	0.596491	0.24559	105.875	202.507
171	0.5	0.6	0.253347	105.875	202.128
172	0.5	0.603509	0.263715	105.875	201.622

173	0.5	0.607018	0.27411	105.875	201.114
174	0.5	0.610526	0.281926	105.875	200.733
175	0.5	0.614035	0.292375	105.875	200.222
176	0.5	0.617544	0.300232	105.875	199.839
177	0.5	0.621053	0.310738	105.875	199.326
178	0.5	0.624561	0.318639	105.875	198.94
179	0.5	0.62807	0.329206	105.875	198.424
180	0.5	0.631579	0.337155	105.875	198.036
181	0.5	0.635088	0.347787	105.875	197.516
182	0.5	0.638596	0.355788	105.875	197.126
183	0.5	0.642105	0.36649	105.875	196.603
184	0.5	0.645614	0.374544	105.875	196.21
185	0.5	0.649123	0.385321	105.875	195.683
186	0.5	0.652632	0.393433	105.875	195.287
187	0.5	0.65614	0.40429	105.875	194.757
188	0.5	0.659649	0.412463	105.875	194.358
189	0.5	0.663158	0.423405	105.875	193.824
190	0.5	0.666667	0.431644	105.875	193.421
191	0.5	0.670175	0.442676	105.875	192.883
192	0.5	0.673684	0.450985	105.875	192.477
193	0.5	0.677193	0.462114	105.875	191.933
194	0.5	0.680702	0.470498	105.875	191.524
195	0.5	0.684211	0.481728	105.875	190.976
196	0.5	0.687719	0.490189	105.875	190.562
197	0.5	0.691228	0.501527	105.875	190.009
198	0.5	0.694737	0.510074	105.875	189.591
199	0.5	0.698246	0.521527	105.875	189.032
200	0.5	0.701754	0.530162	105.875	188.61
201	0.5	0.705263	0.541736	105.875	188.045
202	0.5	0.708772	0.550465	105.875	187.619
203	0.5	0.712281	0.56217	105.875	187.047
204	0.5	0.715789	0.570999	105.875	186.616
205	0.5	0.719298	0.582841	105.875	186.038
206	0.5	0.722807	0.591776	105.875	185.602
207	0.5	0.726316	0.603765	105.875	185.016
208	0.5	0.729825	0.612813	105.875	184.574
209	0.5	0.733333	0.624956	105.875	183.981
210	0.5	0.736842	0.634124	105.875	183.534
211	0.5	0.740351	0.646431	105.875	182.933
212	0.5	0.74386	0.655726	105.875	182.479
213	0.5	0.747368	0.668209	105.875	181.869
214	0.5	0.750877	0.677639	105.875	181.409
215	0.5	0.754386	0.690309	105.875	180.79
216	0.5	0.757895	0.699883	105.875	180.322
217	0.5	0.761404	0.712751	105.875	179.694
218	0.5	0.764912	0.722479	105.875	179.219
219	0.5	0.768421	0.735557	105.875	178.58
220	0.5	0.77193	0.745449	105.875	178.097
221	0.5	0.775439	0.758753	105.875	177.448
222	0.5	0.778947	0.768821	105.875	176.956
223	0.5	0.782456	0.782366	105.875	176.294
224	0.5	0.785965	0.792618	105.875	175.794
225	0.5	0.789474	0.806422	105.875	175.12
226	0.5	0.792982	0.816874	105.875	174.609
227	0.5	0.796491	0.830953	105.875	173.922
228	0.5	0.8	0.841621	105.875	173.401
229	0.5	0.803509	0.855996	105.875	172.699
230	0.5	0.807018	0.87055	105.875	171.988
231	0.5	0.810526	0.881587	105.875	171.449
232	0.5	0.814035	0.896473	105.875	170.722
233	0.5	0.817544	0.907769	105.875	170.171
234	0.5	0.821053	0.923014	105.875	169.426

235	0.5	0.824561	0.93459	105.875	168.861	
236	0.5	0.82807	0.950222	105.875	168.097	
237	0.5	0.831579	0.9621	105.875	167.517	
238	0.5	0.835088	0.97815	105.875	166.734	
239	0.5	0.838596	0.990356	105.875	166.138	
240	0.5	0.842105	1.00687	105.875	165.331	
241	0.5	0.845614	1.01943	105.875	164.718	
242	0.5	0.849123	1.03643	105.875	163.888	
243	0.5	0.852632	1.04939	105.875	163.255	
244	0.5	0.85614	1.06694	105.875	162.398	
245	0.5	0.859649	1.08032	105.875	161.744	
246	0.5	0.863158	1.09847	105.875	160.858	
247	0.5	0.866667	1.11232	105.875	160.182	
248	0.5	0.870175	1.13113	105.875	159.263	
249	0.5	0.873684	1.1455	105.875	158.561	
250	0.5	0.877193	1.16505	105.875	157.607	
251	0.5	0.880702	1.18	105.875	156.877	
252	0.5	0.884211	1.20036	105.875	155.882	
253	0.5	0.887719	1.21596	105.875	155.121	
254	0.5	0.891228	1.23724	105.875	154.082	
255	0.5	0.894737	1.25357	105.875	153.284	
256	0.5	0.898246	1.27588	105.875	152.195	
257	0.5	0.901754	1.29303	105.875	151.357	
258	0.5	0.905263	1.31652	105.875	150.21	
259	0.5	0.908772	1.33462	105.875	149.326	
260	0.5	0.912281	1.35946	105.875	148.113	
261	0.5	0.915789	1.37866	105.875	147.176	
262	0.5	0.919298	1.40507	105.875	145.886	
263	0.5	0.922807	1.42554	105.875	144.886	
264	0.5	0.926316	1.4538	105.875	143.506	
265	0.5	0.929825	1.47579	105.875	142.432	
266	0.5	0.933333	1.50626	105.875	140.944	
267	0.5	0.936842	1.53007	105.875	139.782	
268	0.5	0.940351	1.56322	105.875	138.163	
269	0.5	0.94386	1.58927	105.875	136.891	
270	0.5	0.947368	1.62576	105.875	135.109	
271	0.5	0.950877	1.65463	105.875	133.699	
272	0.5	0.954386	1.6954	105.875	131.708	
273	0.5	0.957895	1.72793	105.875	130.119	
274	0.5	0.961404	1.77438	105.875	127.851	
275	0.5	0.964912	1.81191	105.875	126.018	
276	0.5	0.968421	1.86629	105.875	123.363	
277	0.67	0.97193	1.91103	128.613	121.178	
278	1.1	0.975439	1.97737	186.125	117.938	
279	1.5	0.978947	2.03352	239.625	115.196	
280	1.7	0.982456	2.12007	266.375	110.97	
281	2.1	0.985965	2.19728	319.875	107.199	
282	2.4	0.989474	2.32634	360	100.897	
283	2.7	0.992982	2.45727	400.125	94.5032	
284	3.2	0.996491	2.74777	467	80.3175	

Shapiro-Francia Test of Normality

Parameter: 1,2-cis-Dichloroethylene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.59027	-2.74777	7.55021	7.11745
2	-2.59027	-2.45727	13.5884	13.4824
3	-2.59027	-2.32634	19.0003	19.5083
4	-2.59027	-2.19728	23.8283	25.1998
5	-2.59027	-2.12007	28.323	30.6914
6	-2.59027	-2.03352	32.4582	35.9587
7	-2.59027	-1.97737	36.3682	41.0807
8	-2.59027	-1.91103	40.0203	46.0307
9	-2.59027	-1.86629	43.5033	50.8649
10	-2.59027	-1.81191	46.7863	55.5583
11	-2.59027	-1.77438	49.9348	60.1544
12	-2.59027	-1.72793	52.9205	64.6302
13	-2.59027	-1.6954	55.7949	69.0217
14	-2.59027	-1.65463	58.5327	73.3076
15	-2.59027	-1.62576	61.1758	77.5188
16	-2.59027	-1.58927	63.7015	81.6354
17	-2.59027	-1.56322	66.1452	85.6846
18	-2.59027	-1.53007	68.4863	89.6479
19	-2.59027	-1.50626	70.7551	93.5495
20	-2.59027	-1.47579	72.9331	97.3722
21	-2.59027	-1.4538	75.0466	101.138
22	-2.59027	-1.42554	77.0788	104.83
23	-2.59027	-1.40507	79.053	108.47
24	-2.59027	-1.37866	80.9537	112.041
25	-2.59027	-1.35946	82.8019	115.562
26	-2.59027	-1.33462	84.5831	119.019
27	-2.59027	-1.31652	86.3163	122.43
28	-2.59027	-1.29303	87.9883	125.779
29	-2.59027	-1.27588	89.6161	129.084
30	-2.59027	-1.25357	91.1875	132.331
31	-2.59027	-1.23724	92.7183	135.536
32	-2.59027	-1.21596	94.1969	138.685
33	-2.59027	-1.20036	95.6377	141.795
34	-2.59027	-1.18	97.0301	144.851
35	-2.59027	-1.16505	98.3875	147.869
36	-2.59027	-1.1455	99.6996	150.836
37	-2.59027	-1.13113	100.979	153.766
38	-2.59027	-1.11232	102.216	156.647
39	-2.59027	-1.09847	103.423	159.492
40	-2.59027	-1.08032	104.59	162.291
41	-2.59027	-1.06694	105.728	165.054
42	-2.59027	-1.04939	106.83	167.773
43	-2.59027	-1.03643	107.904	170.457
44	-2.59027	-1.01943	108.943	173.098
45	-2.59027	-1.00687	109.957	175.706
46	-2.59027	-0.990356	110.938	178.271
47	-2.59027	-0.97815	111.894	180.805
48	-2.59027	-0.9621	112.82	183.297
49	-2.59027	-0.950222	113.723	185.758
50	-2.59027	-0.93459	114.596	188.179
51	-2.59027	-0.923014	115.448	190.57

52	-2.59027	-0.907769	116.272	192.921
53	-2.59027	-0.896473	117.076	195.243
54	-2.59027	-0.881587	117.853	197.527
55	-2.59027	-0.87055	118.611	199.782
56	-2.59027	-0.855996	119.344	201.999
57	-2.59027	-0.841621	120.052	204.179
58	-2.59027	-0.830953	120.743	206.332
59	-2.59027	-0.816874	121.41	208.448
60	-2.59027	-0.806422	122.06	210.536
61	-2.59027	-0.792618	122.689	212.589
62	-2.59027	-0.782366	123.301	214.616
63	-2.59027	-0.768821	123.892	216.607
64	-2.59027	-0.758753	124.467	218.573
65	-2.59027	-0.745449	125.023	220.504
66	-2.59027	-0.735557	125.564	222.409
67	-2.59027	-0.722479	126.086	224.28
68	-2.59027	-0.712751	126.594	226.127
69	-2.59027	-0.699883	127.084	227.94
70	-2.59027	-0.690309	127.561	229.728
71	-2.59027	-0.677639	128.02	231.483
72	-2.59027	-0.668209	128.466	233.214
73	-2.59027	-0.655726	128.896	234.912
74	-2.59027	-0.646431	129.314	236.587
75	-2.59027	-0.634124	129.716	238.229
76	-2.59027	-0.624956	130.107	239.848
77	-2.59027	-0.612813	130.482	241.435
78	-2.59027	-0.603765	130.847	242.999
79	-2.59027	-0.591776	131.197	244.532
80	-2.59027	-0.582841	131.537	246.042
81	-2.59027	-0.570999	131.863	247.521
82	-2.59027	-0.56217	132.179	248.977
83	-2.59027	-0.550465	132.482	250.403
84	-2.59027	-0.541736	132.775	251.806
85	-2.59027	-0.530162	133.056	253.179
86	-2.59027	-0.521527	133.328	254.53
87	-2.59027	-0.510074	133.589	255.852
88	-2.59027	-0.501527	133.84	257.151
89	-2.59027	-0.490189	134.08	258.42
90	-2.59027	-0.481728	134.312	259.668
91	-2.59027	-0.470498	134.534	260.887
92	-2.59027	-0.462114	134.747	262.084
93	-2.59027	-0.450985	134.951	263.252
94	-2.59027	-0.442676	135.147	264.399
95	-0.693147	-0.431644	135.333	264.698
96	-0.693147	-0.423405	135.512	264.991
97	-0.693147	-0.412463	135.682	265.277
98	-0.693147	-0.40429	135.846	265.558
99	-0.693147	-0.393433	136.001	265.83
100	-0.693147	-0.385321	136.149	266.097
101	-0.693147	-0.374544	136.289	266.357
102	-0.693147	-0.36649	136.424	266.611
103	-0.693147	-0.355788	136.55	266.858
104	-0.693147	-0.347787	136.671	267.099
105	-0.693147	-0.337155	136.785	267.332
106	-0.693147	-0.329206	136.893	267.561
107	-0.693147	-0.318639	136.995	267.781
108	-0.693147	-0.310738	137.091	267.997
109	-0.693147	-0.300232	137.182	268.205
110	-0.693147	-0.292375	137.267	268.408
111	-0.693147	-0.281926	137.346	268.603
112	-0.693147	-0.27411	137.422	268.793
113	-0.693147	-0.263715	137.491	268.976

114	-0.693147	-0.253347	137.555	269.151
115	-0.693147	-0.24559	137.616	269.322
116	-0.693147	-0.235269	137.671	269.485
117	-0.693147	-0.227545	137.723	269.642
118	-0.693147	-0.217267	137.77	269.793
119	-0.693147	-0.209575	137.814	269.938
120	-0.693147	-0.199336	137.854	270.076
121	-0.693147	-0.191671	137.89	270.209
122	-0.693147	-0.181468	137.923	270.335
123	-0.693147	-0.173829	137.954	270.456
124	-0.693147	-0.163659	137.98	270.569
125	-0.693147	-0.156042	138.005	270.677
126	-0.693147	-0.1459	138.026	270.778
127	-0.693147	-0.138305	138.045	270.874
128	-0.693147	-0.128189	138.062	270.963
129	-0.693147	-0.12061	138.076	271.047
130	-0.693147	-0.110516	138.088	271.123
131	-0.693147	-0.102953	138.099	271.195
132	-0.693147	-0.0928787	138.108	271.259
133	-0.693147	-0.0853288	138.115	271.318
134	-0.693147	-0.0752698	138.12	271.37
135	-0.693147	-0.0677301	138.125	271.417
136	-0.693147	-0.0576847	138.128	271.457
137	-0.693147	-0.0501541	138.131	271.492
138	-0.693147	-0.0401167	138.132	271.52
139	-0.693147	-0.0325917	138.134	271.542
140	-0.693147	-0.0225612	138.134	271.558
141	-0.693147	-0.0150408	138.134	271.568
142	-0.693147	-0.00501359	138.134	271.572
143	-0.693147	0.00501359	138.134	271.568
144	-0.693147	0.0150408	138.135	271.558
145	-0.693147	0.0225612	138.135	271.542
146	-0.693147	0.0325917	138.136	271.52
147	-0.693147	0.0401167	138.138	271.492
148	-0.693147	0.0501541	138.14	271.457
149	-0.693147	0.0576847	138.144	271.417
150	-0.693147	0.0677301	138.148	271.37
151	-0.693147	0.0752698	138.154	271.318
152	-0.693147	0.0853288	138.161	271.259
153	-0.693147	0.0928787	138.17	271.195
154	-0.693147	0.102953	138.18	271.123
155	-0.693147	0.110516	138.193	271.047
156	-0.693147	0.12061	138.207	270.963
157	-0.693147	0.128189	138.224	270.874
158	-0.693147	0.138305	138.243	270.778
159	-0.693147	0.1459	138.264	270.677
160	-0.693147	0.156042	138.288	270.569
161	-0.693147	0.163659	138.315	270.456
162	-0.693147	0.173829	138.345	270.335
163	-0.693147	0.181468	138.378	270.209
164	-0.693147	0.191671	138.415	270.076
165	-0.693147	0.199336	138.455	269.938
166	-0.693147	0.209575	138.499	269.793
167	-0.693147	0.217267	138.546	269.642
168	-0.693147	0.227545	138.598	269.485
169	-0.693147	0.235269	138.653	269.322
170	-0.693147	0.24559	138.713	269.151
171	-0.693147	0.253347	138.777	268.976
172	-0.693147	0.263715	138.847	268.793
173	-0.693147	0.27411	138.922	268.603
174	-0.693147	0.281926	139.002	268.408
175	-0.693147	0.292375	139.087	268.205

176	-0.693147	0.300232	139.177	267.997
177	-0.693147	0.310738	139.274	267.781
178	-0.693147	0.318639	139.375	267.561
179	-0.693147	0.329206	139.484	267.332
180	-0.693147	0.337155	139.597	267.099
181	-0.693147	0.347787	139.718	266.858
182	-0.693147	0.355788	139.845	266.611
183	-0.693147	0.36649	139.979	266.357
184	-0.693147	0.374544	140.12	266.097
185	-0.693147	0.385321	140.268	265.83
186	-0.693147	0.393433	140.423	265.558
187	-0.693147	0.40429	140.586	265.277
188	-0.693147	0.412463	140.756	264.991
189	-0.693147	0.423405	140.936	264.698
190	-0.693147	0.431644	141.122	264.399
191	-0.693147	0.442676	141.318	264.092
192	-0.693147	0.450985	141.521	263.779
193	-0.693147	0.462114	141.735	263.459
194	-0.693147	0.470498	141.956	263.133
195	-0.693147	0.481728	142.188	262.799
196	-0.693147	0.490189	142.429	262.459
197	-0.693147	0.501527	142.68	262.112
198	-0.693147	0.510074	142.94	261.758
199	-0.693147	0.521527	143.212	261.396
200	-0.693147	0.530162	143.493	261.029
201	-0.693147	0.541736	143.787	260.653
202	-0.693147	0.550465	144.09	260.272
203	-0.693147	0.56217	144.406	259.882
204	-0.693147	0.570999	144.732	259.486
205	-0.693147	0.582841	145.072	259.082
206	-0.693147	0.591776	145.422	258.672
207	-0.693147	0.603765	145.786	258.254
208	-0.693147	0.612813	146.162	257.829
209	-0.693147	0.624956	146.552	257.396
210	-0.693147	0.634124	146.955	256.956
211	-0.693147	0.646431	147.372	256.508
212	-0.693147	0.655726	147.802	256.054
213	-0.693147	0.668209	148.249	255.591
214	-0.693147	0.677639	148.708	255.121
215	-0.693147	0.690309	149.185	254.642
216	-0.693147	0.699883	149.674	254.157
217	-0.693147	0.712751	150.182	253.663
218	-0.693147	0.722479	150.704	253.162
219	-0.693147	0.735557	151.245	252.653
220	-0.693147	0.745449	151.801	252.136
221	-0.693147	0.758753	152.377	251.61
222	-0.693147	0.768821	152.968	251.077
223	-0.693147	0.782366	153.58	250.535
224	-0.693147	0.792618	154.208	249.985
225	-0.693147	0.806422	154.859	249.426
226	-0.693147	0.816874	155.526	248.86
227	-0.693147	0.830953	156.216	248.284
228	-0.693147	0.841621	156.925	247.701
229	-0.693147	0.855996	157.657	247.107
230	-0.693147	0.87055	158.415	246.504
231	-0.693147	0.881587	159.193	245.893
232	-0.693147	0.896473	159.996	245.272
233	-0.693147	0.907769	160.82	244.642
234	-0.693147	0.923014	161.672	244.003
235	-0.693147	0.93459	162.546	243.355
236	-0.693147	0.950222	163.449	242.696
237	-0.693147	0.9621	164.374	242.029

238	-0.693147		0.97815	165.331	241.351
239	-0.693147		0.990356		166.312 240.665
240	-0.693147		1.00687	167.326	239.967
241	-0.693147		1.01943	168.365	239.26
242	-0.693147		1.03643	169.439	238.542
243	-0.693147		1.04939	170.54	237.815
244	-0.693147		1.06694	171.679	237.075
245	-0.693147		1.08032	172.846	236.326
246	-0.693147		1.09847	174.052	235.565
247	-0.693147		1.11232	175.29	234.794
248	-0.693147		1.13113	176.569	234.01
249	-0.693147		1.1455	177.881	233.216
250	-0.693147		1.16505	179.239	232.408
251	-0.693147		1.18	180.631	231.59
252	-0.693147		1.20036	182.072	230.758
253	-0.693147		1.21596	183.55	229.915
254	-0.693147		1.23724	185.081	229.058
255	-0.693147		1.25357	186.653	228.189
256	-0.693147		1.27588	188.28	227.305
257	-0.693147		1.29303	189.952	226.408
258	-0.693147		1.31652	191.686	225.496
259	-0.693147		1.33462	193.467	224.571
260	-0.693147		1.35946	195.315	223.628
261	-0.693147		1.37866	197.216	222.673
262	-0.693147		1.40507	199.19	221.699
263	-0.693147		1.42554	201.222	220.711
264	-0.693147		1.4538	203.336	219.703
265	-0.693147		1.47579	205.514	218.68
266	-0.693147		1.50626	207.782	217.636
267	-0.693147		1.53007	210.123	216.575
268	-0.693147		1.56322	212.567	215.492
269	-0.693147		1.58927	215.093	214.39
270	-0.693147		1.62576	217.736	213.263
271	-0.693147		1.65463	220.474	212.116
272	-0.693147		1.6954	223.348	210.941
273	-0.400478		1.72793	226.334	210.249
274	0	1.77438	229.482	210.249	
275	0	1.81191	232.765	210.249	
276	0	1.86629	236.248	210.249	
277	0	1.91103	239.9	210.249	
278	0.0953102		1.97737	243.81	210.438
279	0.405465		2.03352	247.946	211.262
280	0.530628		2.12007	252.44	212.387
281	0.741937		2.19728	257.268	214.018
282	0.875469		2.32634	262.68	216.054
283	0.993252		2.45727	268.718	218.495
284	1.16315	2.74777	276.269	221.691	

Data Set Standard Deviation = 0.954599
Numerator = 49146.9
Denominator = 71246
W Statistic = 0.68982 = 49146.9 / 71246

5% Critical value of 0.976 exceeds 0.68982
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.68982
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: 1,2-cis-Dichloroethylene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.829727
0.829727 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.590270	0.00350877	-2.747778	2.8414	348.683
2	-2.590270	0.00701754	-2.457278	2.8414	334.497
3	-2.590270	0.0105263	-2.326348	2.8414	328.103
4	-2.590270	0.0140351	-2.197288	2.8414	321.801
5	-2.590270	0.0175439	-2.120078	2.8414	318.03
6	-2.590270	0.0210526	-2.033528	2.8414	313.804
7	-2.590270	0.0245614	-1.977378	2.8414	311.062
8	-2.590270	0.0280702	-1.911038	2.8414	307.822
9	-2.590270	0.0315789	-1.866298	2.8414	305.637
10	-2.590270	0.0350877	-1.811918	2.8414	302.982
11	-2.590270	0.0385965	-1.774388	2.8414	301.149
12	-2.590270	0.0421053	-1.727938	2.8414	298.881
13	-2.590270	0.045614	-1.6954	2.8414	297.292
14	-2.590270	0.0491228	-1.654638	2.8414	295.301
15	-2.590270	0.0526316	-1.625768	2.8414	293.891
16	-2.590270	0.0561404	-1.589278	2.8414	292.109
17	-2.590270	0.0596491	-1.563228	2.8414	290.837
18	-2.590270	0.0631579	-1.530078	2.8414	289.218
19	-2.590270	0.0666667	-1.506268	2.8414	288.056
20	-2.590270	0.0701754	-1.475798	2.8414	286.568
21	-2.590270	0.0736842	-1.4538	2.8414	285.494
22	-2.590270	0.077193	-1.425548	2.8414	284.114
23	-2.590270	0.0807018	-1.405078	2.8414	283.114
24	-2.590270	0.0842105	-1.378668	2.8414	281.824
25	-2.590270	0.0877193	-1.359468	2.8414	280.887
26	-2.590270	0.0912281	-1.334628	2.8414	279.674
27	-2.590270	0.0947368	-1.316528	2.8414	278.79
28	-2.590270	0.0982456	-1.293038	2.8414	277.643
29	-2.590270	0.101754	-1.275888	2.8414	276.805
30	-2.590270	0.105263	-1.253578	2.8414	275.716
31	-2.590270	0.108772	-1.237248	2.8414	274.918
32	-2.590270	0.112281	-1.215968	2.8414	273.879
33	-2.590270	0.115789	-1.200368	2.8414	273.118
34	-2.590270	0.119298	-1.18	2.8414	272.123
35	-2.590270	0.122807	-1.165058	2.8414	271.393
36	-2.590270	0.126316	-1.1455	2.8414	270.439
37	-2.590270	0.129825	-1.131138	2.8414	269.737
38	-2.590270	0.133333	-1.112328	2.8414	268.818
39	-2.590270	0.136842	-1.098478	2.8414	268.142
40	-2.590270	0.140351	-1.080328	2.8414	267.256
41	-2.590270	0.14386	-1.066948	2.8414	266.602
42	-2.590270	0.147368	-1.049398	2.8414	265.745
43	-2.590270	0.150877	-1.036438	2.8414	265.112
44	-2.590270	0.154386	-1.019438	2.8414	264.282
45	-2.590270	0.157895	-1.006878	2.8414	263.669
46	-2.590270	0.161404	-0.990356	2.8414	262.862
47	-2.590270	0.164912	-0.978158	2.8414	262.266
48	-2.590270	0.168421	-0.9621	2.8414	261.483

49	-2.590270.17193	-0.950222	82.8414	260.903	
50	-2.590270.175439	-0.9345982.8414	260.139		
51	-2.590270.178947	-0.923014	82.8414	259.574	
52	-2.590270.182456	-0.907769	82.8414	258.829	
53	-2.590270.185965	-0.896473	82.8414	258.278	
54	-2.590270.189474	-0.881587	82.8414	257.551	
55	-2.590270.192982	-0.8705582.8414	257.012		
56	-2.590270.196491	-0.855996	82.8414	256.301	
57	-2.590270.2	-0.841621	82.8414	255.599	
58	-2.590270.203509	-0.830953	82.8414	255.078	
59	-2.590270.207018	-0.816874	82.8414	254.391	
60	-2.590270.210526	-0.806422	82.8414	253.88	
61	-2.590270.214035	-0.792618	82.8414	253.206	
62	-2.590270.217544	-0.782366	82.8414	252.706	
63	-2.590270.221053	-0.768821	82.8414	252.044	
64	-2.590270.224561	-0.758753	82.8414	251.552	
65	-2.590270.22807	-0.745449	82.8414	250.903	
66	-2.590270.231579	-0.735557	82.8414	250.42	
67	-2.590270.235088	-0.722479	82.8414	249.781	
68	-2.590270.238596	-0.712751	82.8414	249.306	
69	-2.590270.242105	-0.699883	82.8414	248.678	
70	-2.590270.245614	-0.690309	82.8414	248.21	
71	-2.590270.249123	-0.677639	82.8414	247.591	
72	-2.590270.252632	-0.668209	82.8414	247.131	
73	-2.590270.25614	-0.655726	82.8414	246.521	
74	-2.590270.259649	-0.646431	82.8414	246.067	
75	-2.590270.263158	-0.634124	82.8414	245.466	
76	-2.590270.266667	-0.624956	82.8414	245.019	
77	-2.590270.270175	-0.612813	82.8414	244.426	
78	-2.590270.273684	-0.603765	82.8414	243.984	
79	-2.590270.277193	-0.591776	82.8414	243.398	
80	-2.590270.280702	-0.582841	82.8414	242.962	
81	-2.590270.284211	-0.570999	82.8414	242.384	
82	-2.590270.287719	-0.5621782.8414	241.953		
83	-2.590270.291228	-0.550465	82.8414	241.381	
84	-2.590270.294737	-0.541736	82.8414	240.955	
85	-2.590270.298246	-0.530162	82.8414	240.39	
86	-2.590270.301754	-0.521527	82.8414	239.968	
87	-2.590270.305263	-0.510074	82.8414	239.409	
88	-2.590270.308772	-0.501527	82.8414	238.991	
89	-2.590270.312281	-0.490189	82.8414	238.438	
90	-2.590270.315789	-0.481728	82.8414	238.024	
91	-2.590270.319298	-0.470498	82.8414	237.476	
92	-2.590270.322807	-0.462114	82.8414	237.067	
93	-2.590270.326316	-0.450985	82.8414	236.523	
94	-2.590270.329825	-0.442676	82.8414	236.117	
95	-0.693147	0.333333	-0.431644	285.833	235.579
96	-0.693147	0.336842	-0.423405	285.833	235.176
97	-0.693147	0.340351	-0.412463	285.833	234.642
98	-0.693147	0.34386	-0.40429285.833	234.243	
99	-0.693147	0.347368	-0.393433	285.833	233.713
100	-0.693147	0.350877	-0.385321	285.833	233.317
101	-0.693147	0.354386	-0.374544	285.833	232.79
102	-0.693147	0.357895	-0.36649285.833	232.397	
103	-0.693147	0.361404	-0.355788	285.833	231.874
104	-0.693147	0.364912	-0.347787	285.833	231.484
105	-0.693147	0.368421	-0.337155	285.833	230.964
106	-0.693147	0.37193	-0.329206	285.833	230.576
107	-0.693147	0.375439	-0.318639	285.833	230.06
108	-0.693147	0.378947	-0.310738	285.833	229.674
109	-0.693147	0.382456	-0.300232	285.833	229.161
110	-0.693147	0.385965	-0.292375	285.833	228.778

111	-0.693147	0.389474	-0.281926	285.833	228.267
112	-0.693147	0.392982	-0.27411	285.833	227.886
113	-0.693147	0.396491	-0.263715	285.833	227.378
114	-0.693147	0.4	-0.253347	285.833	226.872
115	-0.693147	0.403509	-0.24559	285.833	226.493
116	-0.693147	0.407018	-0.235269	285.833	225.989
117	-0.693147	0.410526	-0.227545	285.833	225.612
118	-0.693147	0.414035	-0.217267	285.833	225.11
119	-0.693147	0.417544	-0.209575	285.833	224.734
120	-0.693147	0.421053	-0.199336	285.833	224.234
121	-0.693147	0.424561	-0.191671	285.833	223.86
122	-0.693147	0.42807	-0.181468	285.833	223.362
123	-0.693147	0.431579	-0.173829	285.833	222.989
124	-0.693147	0.435088	-0.163659	285.833	222.492
125	-0.693147	0.438596	-0.156042	285.833	222.12
126	-0.693147	0.442105	-0.1459	285.833	221.625
127	-0.693147	0.445614	-0.138305	285.833	221.254
128	-0.693147	0.449123	-0.128189	285.833	220.76
129	-0.693147	0.452632	-0.12061	285.833	220.39
130	-0.693147	0.45614	-0.110516	285.833	219.897
131	-0.693147	0.459649	-0.102953	285.833	219.528
132	-0.693147	0.463158	-0.0928787	285.833	219.036
133	-0.693147	0.466667	-0.0853288	285.833	218.667
134	-0.693147	0.470175	-0.0752698	285.833	218.176
135	-0.693147	0.473684	-0.0677301	285.833	217.807
136	-0.693147	0.477193	-0.0576847	285.833	217.317
137	-0.693147	0.480702	-0.0501541	285.833	216.949
138	-0.693147	0.484211	-0.0401167	285.833	216.459
139	-0.693147	0.487719	-0.0325917	285.833	216.092
140	-0.693147	0.491228	-0.0225612	285.833	215.602
141	-0.693147	0.494737	-0.0150408	285.833	215.234
142	-0.693147	0.498246	-0.00501359	285.833	214.745
143	-0.693147	0.501754	0.00501359	285.833	214.255
144	-0.693147	0.505263	0.0150408	285.833	213.766
145	-0.693147	0.508772	0.0225612	285.833	213.398
146	-0.693147	0.512281	0.0325917	285.833	212.908
147	-0.693147	0.515789	0.0401167	285.833	212.541
148	-0.693147	0.519298	0.0501541	285.833	212.051
149	-0.693147	0.522807	0.0576847	285.833	211.683
150	-0.693147	0.526316	0.0677301	285.833	211.193
151	-0.693147	0.529825	0.0752698	285.833	210.824
152	-0.693147	0.533333	0.0853288	285.833	210.333
153	-0.693147	0.536842	0.0928787	285.833	209.964
154	-0.693147	0.540351	0.102953	285.833	209.472
155	-0.693147	0.54386	0.110516	285.833	209.103
156	-0.693147	0.547368	0.12061	285.833	208.61
157	-0.693147	0.550877	0.128189	285.833	208.24
158	-0.693147	0.554386	0.138305	285.833	207.746
159	-0.693147	0.557895	0.1459	285.833	207.375
160	-0.693147	0.561404	0.156042	285.833	206.88
161	-0.693147	0.564912	0.163659	285.833	206.508
162	-0.693147	0.568421	0.173829	285.833	206.011
163	-0.693147	0.57193	0.181468	285.833	205.638
164	-0.693147	0.575439	0.191671	285.833	205.14
165	-0.693147	0.578947	0.199336	285.833	204.766
166	-0.693147	0.582456	0.209575	285.833	204.266
167	-0.693147	0.585965	0.217267	285.833	203.89
168	-0.693147	0.589474	0.227545	285.833	203.388
169	-0.693147	0.592982	0.235269	285.833	203.011
170	-0.693147	0.596491	0.24559	285.833	202.507
171	-0.693147	0.6	0.253347	285.833	202.128
172	-0.693147	0.603509	0.263715	285.833	201.622

173	-0.693147	0.607018	0.27411	285.833	201.114
174	-0.693147	0.610526	0.281926	285.833	200.733
175	-0.693147	0.614035	0.292375	285.833	200.222
176	-0.693147	0.617544	0.300232	285.833	199.839
177	-0.693147	0.621053	0.310738	285.833	199.326
178	-0.693147	0.624561	0.318639	285.833	198.94
179	-0.693147	0.62807	0.329206	285.833	198.424
180	-0.693147	0.631579	0.337155	285.833	198.036
181	-0.693147	0.635088	0.347787	285.833	197.516
182	-0.693147	0.638596	0.355788	285.833	197.126
183	-0.693147	0.642105	0.36649	285.833	196.603
184	-0.693147	0.645614	0.374544	285.833	196.21
185	-0.693147	0.649123	0.385321	285.833	195.683
186	-0.693147	0.652632	0.393433	285.833	195.287
187	-0.693147	0.65614	0.40429	285.833	194.757
188	-0.693147	0.659649	0.412463	285.833	194.358
189	-0.693147	0.663158	0.423405	285.833	193.824
190	-0.693147	0.666667	0.431644	285.833	193.421
191	-0.693147	0.670175	0.442676	285.833	192.883
192	-0.693147	0.673684	0.450985	285.833	192.477
193	-0.693147	0.677193	0.462114	285.833	191.933
194	-0.693147	0.680702	0.470498	285.833	191.524
195	-0.693147	0.684211	0.481728	285.833	190.976
196	-0.693147	0.687719	0.490189	285.833	190.562
197	-0.693147	0.691228	0.501527	285.833	190.009
198	-0.693147	0.694737	0.510074	285.833	189.591
199	-0.693147	0.698246	0.521527	285.833	189.032
200	-0.693147	0.701754	0.530162	285.833	188.61
201	-0.693147	0.705263	0.541736	285.833	188.045
202	-0.693147	0.708772	0.550465	285.833	187.619
203	-0.693147	0.712281	0.56217	285.833	187.047
204	-0.693147	0.715789	0.570999	285.833	186.616
205	-0.693147	0.719298	0.582841	285.833	186.038
206	-0.693147	0.722807	0.591776	285.833	185.602
207	-0.693147	0.726316	0.603765	285.833	185.016
208	-0.693147	0.729825	0.612813	285.833	184.574
209	-0.693147	0.733333	0.624956	285.833	183.981
210	-0.693147	0.736842	0.634124	285.833	183.534
211	-0.693147	0.740351	0.646431	285.833	182.933
212	-0.693147	0.74386	0.655726	285.833	182.479
213	-0.693147	0.747368	0.668209	285.833	181.869
214	-0.693147	0.750877	0.677639	285.833	181.409
215	-0.693147	0.754386	0.690309	285.833	180.79
216	-0.693147	0.757895	0.699883	285.833	180.322
217	-0.693147	0.761404	0.712751	285.833	179.694
218	-0.693147	0.764912	0.722479	285.833	179.219
219	-0.693147	0.768421	0.735557	285.833	178.58
220	-0.693147	0.77193	0.745449	285.833	178.097
221	-0.693147	0.775439	0.758753	285.833	177.448
222	-0.693147	0.778947	0.768821	285.833	176.956
223	-0.693147	0.782456	0.782366	285.833	176.294
224	-0.693147	0.785965	0.792618	285.833	175.794
225	-0.693147	0.789474	0.806422	285.833	175.12
226	-0.693147	0.792982	0.816874	285.833	174.609
227	-0.693147	0.796491	0.830953	285.833	173.922
228	-0.693147	0.8	0.841621	285.833	173.401
229	-0.693147	0.803509	0.855996	285.833	172.699
230	-0.693147	0.807018	0.87055	285.833	171.988
231	-0.693147	0.810526	0.881587	285.833	171.449
232	-0.693147	0.814035	0.896473	285.833	170.722
233	-0.693147	0.817544	0.907769	285.833	170.171
234	-0.693147	0.821053	0.923014	285.833	169.426

235	-0.693147	0.824561	0.93459	285.833	168.861	
236	-0.693147	0.82807	0.950222	285.833	168.097	
237	-0.693147	0.831579	0.9621	285.833	167.517	
238	-0.693147	0.835088	0.97815	285.833	166.734	
239	-0.693147	0.838596	0.990356	285.833	166.138	
240	-0.693147	0.842105	1.00687	285.833	165.331	
241	-0.693147	0.845614	1.01943	285.833	164.718	
242	-0.693147	0.849123	1.03643	285.833	163.888	
243	-0.693147	0.852632	1.04939	285.833	163.255	
244	-0.693147	0.85614	1.06694	285.833	162.398	
245	-0.693147	0.859649	1.08032	285.833	161.744	
246	-0.693147	0.863158	1.09847	285.833	160.858	
247	-0.693147	0.866667	1.11232	285.833	160.182	
248	-0.693147	0.870175	1.13113	285.833	159.263	
249	-0.693147	0.873684	1.1455	285.833	158.561	
250	-0.693147	0.877193	1.16505	285.833	157.607	
251	-0.693147	0.880702	1.18	285.833	156.877	
252	-0.693147	0.884211	1.20036	285.833	155.882	
253	-0.693147	0.887719	1.21596	285.833	155.121	
254	-0.693147	0.891228	1.23724	285.833	154.082	
255	-0.693147	0.894737	1.25357	285.833	153.284	
256	-0.693147	0.898246	1.27588	285.833	152.195	
257	-0.693147	0.901754	1.29303	285.833	151.357	
258	-0.693147	0.905263	1.31652	285.833	150.21	
259	-0.693147	0.908772	1.33462	285.833	149.326	
260	-0.693147	0.912281	1.35946	285.833	148.113	
261	-0.693147	0.915789	1.37866	285.833	147.176	
262	-0.693147	0.919298	1.40507	285.833	145.886	
263	-0.693147	0.922807	1.42554	285.833	144.886	
264	-0.693147	0.926316	1.4538	285.833	143.506	
265	-0.693147	0.929825	1.47579	285.833	142.432	
266	-0.693147	0.933333	1.50626	285.833	140.944	
267	-0.693147	0.936842	1.53007	285.833	139.782	
268	-0.693147	0.940351	1.56322	285.833	138.163	
269	-0.693147	0.94386	1.58927	285.833	136.891	
270	-0.693147	0.947368	1.62576	285.833	135.109	
271	-0.693147	0.950877	1.65463	285.833	133.699	
272	-0.693147	0.954386	1.6954	285.833	131.708	
273	-0.400478	0.957895	1.72793	317.149	130.119	
274	0	0.961404	1.77438	360	127.851	
275	0	0.964912	1.81191	360	126.018	
276	0	0.968421	1.86629	360	123.363	
277	0	0.97193	1.91103	360	121.178	
278	0.0953102	0.975439	1.97737	370.198	117.938	
279	0.405465	0.978947	2.03352	403.385	115.196	
280	0.530628	0.982456	2.12007	416.777	110.97	
281	0.741937	0.985965	2.19728	439.387	107.199	
282	0.875469	0.989474	2.32634	453.675	100.897	
283	0.993252	0.992982	2.45727	466.278	94.5032	
284	1.16315	0.996491	2.74777	484.457	80.3175	

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: 1,2-cis-Dichloroethylene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 97.1831%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 23
Maximum Background Value = 0
Confidence Level = 74.2%
False Positive Rate = 25.8%

Location	Date	Count	Mean	Significant
LMW-9S	11/16/2013	1	-2.59027	FALSE
LMW-3	11/16/2013	1	-2.59027	FALSE
LMW-16	11/16/2013	1	-2.59027	FALSE
LMW-6	11/16/2013	1	-2.59027	FALSE
LMW-8	11/16/2013	1	0.741937	TRUE
LMW-9	11/16/2013	1	-2.59027	FALSE
LMW-15R	11/16/2013	1	-2.59027	FALSE
LMW-14R	11/16/2013	1	-2.59027	FALSE
LMW-10	11/16/2013	1	-2.59027	FALSE
LMW-9D	11/16/2013	1	-2.59027	FALSE
LMW-3S	11/16/2013	1	-2.59027	FALSE
LMW-7	11/16/2012	1	-2.59027	FALSE
LMW-11	11/20/2008	1	-0.693147	FALSE
LMW-12	11/20/2008	1	-0.693147	FALSE
LMW-13	11/20/2008	1	-0.693147	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE

Mann-Kendall Trend Analysis

Parameter: 1,2-cis-Dichloroethylene

Location: LMW-8

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
ND<-0.693147	ND<-0.693147	0	0	0
ND<-0.693147	ND<-0.693147	0	0	0
ND<-0.693147	ND<-0.693147	0	0	0
ND<-0.693147	ND<-0.693147	0	0	0
ND<-0.693147	ND<-0.693147	0	0	0
ND<-0.693147	ND<-0.693147	0	0	0
ND<-0.693147	ND<-0.693147	0	0	0
ND<0 J	ND<-0.693147	0.693147	1	0
ND<0 J	ND<-0.693147	0.693147	2	0
ND<0 J	ND<-0.693147	0.693147	3	0
ND<-0.693147	ND<-0.693147	0	3	0
ND<0 J	ND<-0.693147	0.693147	4	0
ND<-0.693147	ND<-0.693147	0	4	0
ND<-0.693147	ND<-0.693147	0	4	0
0.875469	ND<-0.693147	1.56862	5	0
0.0953102	ND<-0.693147	0.788457	6	0
-0.400478 J	ND<-0.693147	0.29267	7	0
0.405465	ND<-0.693147	1.09861	8	0
0.530628	ND<-0.693147	1.22378	9	0
1.16315	ND<-0.693147	1.8563	10	0
0.993252	ND<-0.693147	1.6864	11	0
0.741937	ND<-0.693147	1.43508	12	0
ND<-0.693147	ND<-0.693147	0	12	0
ND<-0.693147	ND<-0.693147	0	12	0
ND<-0.693147	ND<-0.693147	0	12	0
ND<-0.693147	ND<-0.693147	0	12	0
ND<-0.693147	ND<-0.693147	0	12	0
ND<-0.693147	ND<-0.693147	0	12	0
ND<0 J	ND<-0.693147	0.693147	13	0
ND<0 J	ND<-0.693147	0.693147	14	0
ND<0 J	ND<-0.693147	0.693147	15	0
ND<-0.693147	ND<-0.693147	0	15	0
ND<0 J	ND<-0.693147	0.693147	16	0
ND<-0.693147	ND<-0.693147	0	16	0
ND<-0.693147	ND<-0.693147	0	16	0
0.875469	ND<-0.693147	1.56862	17	0
0.0953102	ND<-0.693147	0.788457	18	0
-0.400478 J	ND<-0.693147	0.29267	19	0
0.405465	ND<-0.693147	1.09861	20	0
0.530628	ND<-0.693147	1.22378	21	0
1.16315	ND<-0.693147	1.8563	22	0
0.993252	ND<-0.693147	1.6864	23	0
0.741937	ND<-0.693147	1.43508	24	0
ND<-0.693147	ND<-0.693147	0	24	0
ND<-0.693147	ND<-0.693147	0	24	0
ND<-0.693147	ND<-0.693147	0	24	0
ND<-0.693147	ND<-0.693147	0	24	0
ND<-0.693147	ND<-0.693147	0	24	0

ND<0 J	ND<-0.693147	0.693147	25	0	
ND<0 J	ND<-0.693147	0.693147	26	0	
ND<0 J	ND<-0.693147	0.693147	27	0	
ND<-0.693147	ND<-0.693147	0	27	0	
ND<0 J	ND<-0.693147	0.693147	28	0	
ND<-0.693147	ND<-0.693147	0	28	0	
ND<-0.693147	ND<-0.693147	0	28	0	
0.875469	ND<-0.693147	1.56862	29	0	
0.0953102	ND<-0.693147	0.788457	30	0	
-0.400478 J	ND<-0.693147	0.29267	31	0	
0.405465	ND<-0.693147	1.09861	32	0	
0.530628	ND<-0.693147	1.22378	33	0	
1.16315	ND<-0.693147	1.8563	34	0	
0.993252	ND<-0.693147	1.6864	35	0	
0.741937	ND<-0.693147	1.43508	36	0	
ND<-0.693147	ND<-0.693147	0	36	0	
ND<-0.693147	ND<-0.693147	0	36	0	
ND<-0.693147	ND<-0.693147	0	36	0	
ND<-0.693147	ND<-0.693147	0	36	0	
ND<0 J	ND<-0.693147	0.693147	37	0	
ND<0 J	ND<-0.693147	0.693147	38	0	
ND<0 J	ND<-0.693147	0.693147	39	0	
ND<-0.693147	ND<-0.693147	0	39	0	
ND<0 J	ND<-0.693147	0.693147	40	0	
ND<-0.693147	ND<-0.693147	0	40	0	
ND<-0.693147	ND<-0.693147	0	40	0	
0.875469	ND<-0.693147	1.56862	41	0	
0.0953102	ND<-0.693147	0.788457	42	0	
-0.400478 J	ND<-0.693147	0.29267	43	0	
0.405465	ND<-0.693147	1.09861	44	0	
0.530628	ND<-0.693147	1.22378	45	0	
1.16315	ND<-0.693147	1.8563	46	0	
0.993252	ND<-0.693147	1.6864	47	0	
0.741937	ND<-0.693147	1.43508	48	0	
ND<-0.693147	ND<-0.693147	0	48	0	
ND<-0.693147	ND<-0.693147	0	48	0	
ND<-0.693147	ND<-0.693147	0	48	0	
ND<0 J	ND<-0.693147	0.693147	49	0	
ND<0 J	ND<-0.693147	0.693147	50	0	
ND<0 J	ND<-0.693147	0.693147	51	0	
ND<-0.693147	ND<-0.693147	0	51	0	
ND<0 J	ND<-0.693147	0.693147	52	0	
ND<-0.693147	ND<-0.693147	0	52	0	
ND<-0.693147	ND<-0.693147	0	52	0	
0.875469	ND<-0.693147	1.56862	53	0	
0.0953102	ND<-0.693147	0.788457	54	0	
-0.400478 J	ND<-0.693147	0.29267	55	0	
0.405465	ND<-0.693147	1.09861	56	0	
0.530628	ND<-0.693147	1.22378	57	0	
1.16315	ND<-0.693147	1.8563	58	0	
0.993252	ND<-0.693147	1.6864	59	0	
0.741937	ND<-0.693147	1.43508	60	0	
ND<-0.693147	ND<-0.693147	0	60	0	
ND<-0.693147	ND<-0.693147	0	60	0	
ND<0 J	ND<-0.693147	0.693147	61	0	
ND<0 J	ND<-0.693147	0.693147	62	0	
ND<0 J	ND<-0.693147	0.693147	63	0	
ND<-0.693147	ND<-0.693147	0	63	0	
ND<0 J	ND<-0.693147	0.693147	64	0	

ND<-0.693147	ND<-0.693147	0	64	0	
ND<-0.693147	ND<-0.693147	0	64	0	
0.875469	ND<-0.693147	1.56862	65	0	
0.0953102	ND<-0.693147	0.788457	66	0	
-0.400478 J	ND<-0.693147	0.29267	67	0	
0.405465	ND<-0.693147	1.09861	68	0	
0.530628	ND<-0.693147	1.22378	69	0	
1.16315	ND<-0.693147	1.8563	70	0	
0.993252	ND<-0.693147	1.6864	71	0	
0.741937	ND<-0.693147	1.43508	72	0	
ND<-0.693147	ND<-0.693147	0	72	0	
ND<0 J	ND<-0.693147	0.693147	73	0	
ND<0 J	ND<-0.693147	0.693147	74	0	
ND<0 J	ND<-0.693147	0.693147	75	0	
ND<-0.693147	ND<-0.693147	0	75	0	
ND<0 J	ND<-0.693147	0.693147	76	0	
ND<-0.693147	ND<-0.693147	0	76	0	
ND<-0.693147	ND<-0.693147	0	76	0	
0.875469	ND<-0.693147	1.56862	77	0	
0.0953102	ND<-0.693147	0.788457	78	0	
-0.400478 J	ND<-0.693147	0.29267	79	0	
0.405465	ND<-0.693147	1.09861	80	0	
0.530628	ND<-0.693147	1.22378	81	0	
1.16315	ND<-0.693147	1.8563	82	0	
0.993252	ND<-0.693147	1.6864	83	0	
0.741937	ND<-0.693147	1.43508	84	0	
ND<0 J	ND<-0.693147	0.693147	85	0	
ND<0 J	ND<-0.693147	0.693147	86	0	
ND<0 J	ND<-0.693147	0.693147	87	0	
ND<-0.693147	ND<-0.693147	0	87	0	
ND<0 J	ND<-0.693147	0.693147	88	0	
ND<-0.693147	ND<-0.693147	0	88	0	
ND<-0.693147	ND<-0.693147	0	88	0	
0.875469	ND<-0.693147	1.56862	89	0	
0.0953102	ND<-0.693147	0.788457	90	0	
-0.400478 J	ND<-0.693147	0.29267	91	0	
0.405465	ND<-0.693147	1.09861	92	0	
0.530628	ND<-0.693147	1.22378	93	0	
1.16315	ND<-0.693147	1.8563	94	0	
0.993252	ND<-0.693147	1.6864	95	0	
0.741937	ND<-0.693147	1.43508	96	0	
ND<0 J	ND<0 J	0	96	0	
ND<0 J	ND<0 J	0	96	0	
ND<-0.693147	ND<0 J	-0.693147	96	1	
ND<0 J	ND<0 J	0	96	1	
ND<-0.693147	ND<0 J	-0.693147	96	2	
ND<-0.693147	ND<0 J	-0.693147	96	3	
0.875469	ND<0 J	0.875469	97	3	
0.0953102	ND<0 J	0.0953102	98	3	
-0.400478 J	ND<0 J	-0.400478	98	4	
0.405465	ND<0 J	0.405465	99	4	
0.530628	ND<0 J	0.530628	100	4	
1.16315	ND<0 J	1.16315	101	4	
0.993252	ND<0 J	0.993252	102	4	
0.741937	ND<0 J	0.741937	103	4	
ND<0 J	ND<0 J	0	103	4	
ND<-0.693147	ND<0 J	-0.693147	103	5	
ND<0 J	ND<0 J	0	103	5	

ND<-0.693147	ND<0 J	-0.693147		103	6
ND<-0.693147	ND<0 J	-0.693147		103	7
0.875469	ND<0 J	0.875469		104	7
0.0953102	ND<0 J	0.0953102		105	7
-0.400478 J	ND<0 J	-0.400478		105	8
0.405465	ND<0 J	0.405465		106	8
0.530628	ND<0 J	0.530628		107	8
1.16315	ND<0 J	1.16315	108	8	
0.993252	ND<0 J	0.993252		109	8
0.741937	ND<0 J	0.741937		110	8
ND<-0.693147	ND<0 J	-0.693147		110	9
ND<0 J	ND<0 J	0	110	9	
ND<-0.693147	ND<0 J	-0.693147		110	10
ND<-0.693147	ND<0 J	-0.693147		110	11
0.875469	ND<0 J	0.875469		111	11
0.0953102	ND<0 J	0.0953102		112	11
-0.400478 J	ND<0 J	-0.400478		112	12
0.405465	ND<0 J	0.405465		113	12
0.530628	ND<0 J	0.530628		114	12
1.16315	ND<0 J	1.16315	115	12	
0.993252	ND<0 J	0.993252		116	12
0.741937	ND<0 J	0.741937		117	12
ND<0 J	ND<-0.693147	0.693147		118	12
ND<-0.693147	ND<-0.693147	0		118	12
ND<-0.693147	ND<-0.693147	0		118	12
0.875469	ND<-0.693147	1.56862	119	12	
0.0953102	ND<-0.693147	0.788457		120	12
-0.400478 J	ND<-0.693147	0.29267	121	12	
0.405465	ND<-0.693147	1.09861	122	12	
0.530628	ND<-0.693147	1.22378	123	12	
1.16315	ND<-0.693147	1.8563	124	12	
0.993252	ND<-0.693147	1.6864	125	12	
0.741937	ND<-0.693147	1.43508	126	12	
ND<-0.693147	ND<0 J	-0.693147		126	13
ND<-0.693147	ND<0 J	-0.693147		126	14
0.875469	ND<0 J	0.875469		127	14
0.0953102	ND<0 J	0.0953102		128	14
-0.400478 J	ND<0 J	-0.400478		128	15
0.405465	ND<0 J	0.405465		129	15
0.530628	ND<0 J	0.530628		130	15
1.16315	ND<0 J	1.16315	131	15	
0.993252	ND<0 J	0.993252		132	15
0.741937	ND<0 J	0.741937		133	15
ND<-0.693147	ND<-0.693147	0		133	15
0.875469	ND<-0.693147	1.56862	134	15	
0.0953102	ND<-0.693147	0.788457		135	15
-0.400478 J	ND<-0.693147	0.29267	136	15	
0.405465	ND<-0.693147	1.09861	137	15	
0.530628	ND<-0.693147	1.22378	138	15	
1.16315	ND<-0.693147	1.8563	139	15	
0.993252	ND<-0.693147	1.6864	140	15	
0.741937	ND<-0.693147	1.43508	141	15	
0.875469	ND<-0.693147	1.56862	142	15	
0.0953102	ND<-0.693147	0.788457		143	15
-0.400478 J	ND<-0.693147	0.29267	144	15	
0.405465	ND<-0.693147	1.09861	145	15	
0.530628	ND<-0.693147	1.22378	146	15	

1.16315	ND<-0.693147	1.8563	147	15
0.993252	ND<-0.693147	1.6864	148	15
0.741937	ND<-0.693147	1.43508	149	15
0.0953102	0.875469	-0.780159	149	16
-0.400478 J	0.875469	-1.27595	149	17
0.405465	0.875469	-0.470004	149	18
0.530628	0.875469	-0.34484	149	19
1.16315	0.875469	0.287682	150	19
0.993252	0.875469	0.117783	151	19
0.741937	0.875469	-0.133531	151	20
-0.400478 J	0.0953102	-0.495788	151	21
0.405465	0.0953102	0.310155	152	21
0.530628	0.0953102	0.435318	153	21
1.16315	0.0953102	1.06784	154	21
0.993252	0.0953102	0.897942	155	21
0.741937	0.0953102	0.646627	156	21
0.405465	-0.400478 J	0.805943	157	21
0.530628	-0.400478 J	0.931106	158	21
1.16315	-0.400478 J	1.56363	159	21
0.993252	-0.400478 J	1.39373	160	21
0.741937	-0.400478 J	1.14241	161	21
0.530628	0.405465	0.125163	162	21
1.16315	0.405465	0.757686	163	21
0.993252	0.405465	0.587787	164	21
0.741937	0.405465	0.336472	165	21
1.16315	0.530628	0.632523	166	21
0.993252	0.530628	0.462624	167	21
0.741937	0.530628	0.211309	168	21
0.993252	1.16315	-0.169899	168	22
0.741937	1.16315	-0.421213	168	23
0.741937	0.993252	-0.251314	168	24

S Statistic = 168 - 24 = 144

Tied Group	Value	Members
1	-0.693147	11
2	0	4

Time Period	Observations
1/16/1998	1
3/16/1999	1
9/23/1999	1
3/14/2000	1
9/23/2003	1
3/10/2004	1
10/12/2004	1
4/1/2005	1
10/26/2005	1
6/19/2006	1
11/18/2006	1
6/2/2007	1
11/15/2007	1

5/20/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1
11/17/2010	1
7/6/2011	1
11/22/2011	1
5/16/2012	1
11/16/2012	1
11/16/2013	1

There are 0 time periods with multiple data

A = 3126
B = 0
C = 1014
D = 0
E = 122
F = 0
a = 25806
b = 95634
c = 1012
Group Variance = 1260
Z-Score = 4.02857
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|4.02857| > 1.97737 indicating a trend

Shewhart-CUSUM Control Chart

Parameter: 1,2-cis-Dichloroethylene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -1.35302
Baseline Std Dev = 0.923869
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std	Mean
1/16/1998	-0.693147	0	0.714244	
1/16/1998	-0.693147	0	0.714244	
3/16/1999	-0.693147	0	0.714244	
3/16/1999	-0.693147	0	0.714244	
9/23/1999	-0.693147	0	0.714244	
9/23/1999	-0.693147	0	0.714244	
3/14/2000	-0.693147	0	0.714244	
3/14/2000	-0.693147	0	0.714244	
9/23/2003	-0.693147	0	0.714244	
9/23/2003	-0.693147	0	0.714244	
3/10/2004	-0.693147	0	0.714244	
3/10/2004	-0.693147	0	0.714244	
10/12/2004	-0.693147	0	0.714244	
10/12/2004	-0.693147	0	0.714244	
4/1/2005	-0.693147	0	0.714244	
4/1/2005	-0.693147	0	0.714244	
10/26/2005	0	0.46451	1.46451	
10/26/2005	0	0.46451	1.46451	
6/19/2006	0	0.929021		1.46451
6/19/2006	0	0.929021		1.46451
11/18/2006	0	1.39353	1.46451	
11/18/2006	0	1.39353	1.46451	
6/2/2007	-0.693147	1.10778	0.714244	
6/2/2007	-0.693147	1.10778	0.714244	
11/15/2007	0	1.57229	1.46451	
11/15/2007	0	1.57229	1.46451	
5/20/2008	-0.693147	1.28653	0.714244	
5/20/2008	-0.693147	1.28653	0.714244	
11/20/2008	-0.693147	1.00077	0.714244	
11/20/2008	-0.693147	1.00077	0.714244	
6/11/2009	0.875469	2.4129	2.41212	
6/11/2009	0.875469	2.4129	2.41212	
6/30/2010	0.0953102	2.98057	1.56767	
6/30/2010	0.0953102	2.98057	1.56767	
11/17/2010	-0.400478	3.0116	1.03103	
11/17/2010	-0.400478	3.0116	1.03103	
7/6/2011	0.405465	3.91499	1.90339	
7/6/2011	0.405465	3.91499	1.90339	
11/22/2011	0.530628	4.95386	2.03887	
11/22/2011	0.530628	4.95386	2.03887	
5/16/2012	1.16315	6.67737	2.72351	
5/16/2012	1.16315	6.67737	2.72351	
11/16/2012	0.993252	8.21698	2.53961	
11/16/2012	0.993252	8.21698	2.53961	
11/16/2013	0.741937	9.48456	2.26759	
11/16/2013	0.741937	9.48456	2.26759	

Concentrations (ppb)

Parameter: 1,2-Dibromo-3-chloropropane

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 295
Percent Non-Detects: 99.6622%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	24 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.44 U	ND<0.44 U
			11/16/2009	ND<0.44 U	ND<0.44 U
			6/30/2010	ND<0.44 U	ND<0.44 U
			11/17/2010	ND<0.44 U	ND<0.44 U
			7/6/2011	ND<0.44 U	ND<0.44 U
			11/22/2011	ND<0.44 U	ND<0.44 U
			5/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2013	ND<0.44 U	ND<0.44 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-6	24	24 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.44 U	ND<0.44 U
			11/16/2009	ND<0.44 U	ND<0.44 U
			6/30/2010	ND<0.44 U	ND<0.44 U
			11/17/2010	ND<0.44 U	ND<0.44 U

			7/6/2011	ND<0.44 U	ND<0.44 U
			11/22/2011	ND<0.44 U	ND<0.44 U
			5/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2013	ND<0.44 U	ND<0.44 U
LMW-9S	13	13 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<0 J	ND<0 J
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.44 U	ND<0.44 U
			6/30/2010	ND<0.44 U	ND<0.44 U
			11/17/2010	ND<0.44 U	ND<0.44 U
			7/6/2011	ND<0.44 U	ND<0.44 U
			11/22/2011	ND<0.44 U	ND<0.44 U
			5/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2013	ND<0.44 U	ND<0.44 U
LMW-8	24	24 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.44 U	ND<0.44 U
			11/16/2009	ND<0.44 U	ND<0.44 U
			6/30/2010	ND<0.44 U	ND<0.44 U
			11/17/2010	ND<0.44 U	ND<0.44 U
			7/6/2011	ND<0.44 U	ND<0.44 U
			11/22/2011	ND<0.44 U	ND<0.44 U
			5/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2013	ND<0.44 U	ND<0.44 U
LMW-9D	14	14 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.44 U	ND<0.44 U
			11/16/2009	ND<0.44 U	ND<0.44 U
			6/30/2010	ND<0.44 U	ND<0.44 U
			11/17/2010	ND<0.44 U	ND<0.44 U
			7/6/2011	ND<0.44 U	ND<0.44 U
			11/22/2011	ND<0.44 U	ND<0.44 U
			5/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2013	ND<0.44 U	ND<0.44 U
LMW-10	21	21 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1

			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.44 U	ND<0.44 U	
			11/16/2009	ND<0.44 U	ND<0.44 U	
			6/30/2010	ND<0.44 U	ND<0.44 U	
			11/17/2010	ND<0.44 U	ND<0.44 U	
			7/6/2011	ND<0.44 U	ND<0.44 U	
			11/22/2011	ND<0.44 U	ND<0.44 U	
			5/16/2012	ND<0.44 U	ND<0.44 U	
			11/16/2012	ND<0.44 U	ND<0.44 U	
			11/16/2013	ND<0.44 U	ND<0.44 U	
LMW-3S	14	13 (92.8571%)	11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.44 U	ND<0.44 U	
			11/16/2009	ND<0.44 U	ND<0.44 U	
			6/30/2010	ND<0.44 U	ND<0.44 U	
			11/17/2010	ND<0.44 U	ND<0.44 U	
			7/6/2011	ND<0.44 U	ND<0.44 U	
			11/22/2011	ND<0.44 U	ND<0.44 U	
			5/16/2012	ND<0.44 U	ND<0.44 U	
			11/16/2012	ND<0.44 U	ND<0.44 U	
			11/16/2013	0.44 U J	0.44 U J	
LMW-3	26	26 (100%)	11/19/1996	ND<1	ND<1	
			3/24/1997	ND<1	ND<1	
			1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.44 U	ND<0.44 U	
			11/16/2009	ND<0.44 U	ND<0.44 U	
			6/30/2010	ND<0.44 U	ND<0.44 U	
			11/17/2010	ND<0.44 U	ND<0.44 U	
			7/6/2011	ND<0.44 U	ND<0.44 U	
			11/22/2011	ND<0.44 U	ND<0.44 U	
			5/16/2012	ND<0.44 U	ND<0.44 U	
			11/16/2012	ND<0.44 U	ND<0.44 U	
			11/16/2013	ND<0.44 U	ND<0.44 U	

LMW-16	14	14 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.44 U	ND<0.44 U
			11/16/2009	ND<0.44 U	ND<0.44 U
			6/30/2010	ND<0.44 U	ND<0.44 U
			11/17/2010	ND<0.44 U	ND<0.44 U
			7/6/2011	ND<0.44 U	ND<0.44 U
			11/22/2011	ND<0.44 U	ND<0.44 U
			5/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2013	ND<0.44 U	ND<0.44 U
LMW-15R	16	16 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.44 U	ND<0.44 U
			6/30/2010	ND<0.44 U	ND<0.44 U
			11/17/2010	ND<0.44 U	ND<0.44 U
			7/6/2011	ND<0.44 U	ND<0.44 U
			11/22/2011	ND<0.44 U	ND<0.44 U
			5/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2013	ND<0.44 U	ND<0.44 U
LMW-14R	15	15 (100%)	6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.44 U	ND<0.44 U
			11/16/2009	ND<0.44 U	ND<0.44 U
			11/16/2009	ND<0.44 U	ND<0.44 U
			11/16/2009	ND<0.44 U	ND<0.44 U
			6/30/2010	ND<0.44 U	ND<0.44 U
			11/17/2010	ND<0.44 U	ND<0.44 U
			7/6/2011	ND<0.44 U	ND<0.44 U
			11/22/2011	ND<0.44 U	ND<0.44 U
			5/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2013	ND<0.44 U	ND<0.44 U
LMW-9	24	24 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1

			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.44 U	ND<0.44 U
			11/16/2009	ND<0.44 U	ND<0.44 U
			6/30/2010	ND<0.44 U	ND<0.44 U
			11/17/2010	ND<0.44 U	ND<0.44 U
			7/6/2011	ND<0.44 U	ND<0.44 U
			11/22/2011	ND<0.44 U	ND<0.44 U
			5/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2013	ND<0.44 U	ND<0.44 U
LMW-7	21	21 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.44 U	ND<0.44 U
			11/17/2010	ND<0.44 U	ND<0.44 U
			7/6/2011	ND<0.44 U	ND<0.44 U
			11/22/2011	ND<0.44 U	ND<0.44 U
			5/16/2012	ND<0.44 U	ND<0.44 U
			11/16/2012	ND<0.44 U	ND<0.44 U
LMW-11	11	11 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
LMW-12	11	11 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
LMW-13	11	11 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1

			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
MW-5	13	13 (100%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: 1,2-Dibromo-3-chloropropane

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.747777.55021	0	
2	0.22	-2.5121313.861	-0.552669	
3	0.22	-2.3263419.2729	-1.06446	
4	0.22	-2.2262124.2289	-1.55423	
5	0.22	-2.1444128.8274	-2.026	
6	0.22	-2.0537533.0453	-2.47782	
7	0.22	-1.9953937.0269	-2.91681	
8	0.22	-1.9431440.8026	-3.3443	
9	0.22	-1.8807944.34	-3.75807	
10	0.22	-1.8384347.7198	-4.16253	
11	0.22	-1.7866150.9118	-4.55558	
12	0.22	-1.7506953.9767	-4.94073	
13	0.22	-1.7168856.9244	-5.31845	
14	0.22	-1.6746659.7289	-5.68687	
15	0.22	-1.6448562.4344	-6.04874	
16	0.22	-1.6164465.0473	-6.40436	
17	0.22	-1.5804767.5452	-6.75206	
18	0.22	-1.5547769.9625	-7.09411	
19	0.22	-1.5300772.3036	-7.43072	
20	0.22	-1.4985274.5491	-7.7604	
21	0.22	-1.4757976.7271	-8.08507	
22	0.22	-1.4466378.8198	-8.40333	
23	0.22	-1.4255480.852	-8.71695	
24	0.22	-1.4050782.8262	-9.02607	
25	0.22	-1.3786684.7269	-9.32937	
26	0.22	-1.3594686.5751	-9.62845	
27	0.22	-1.3407588.3727	-9.92342	
28	0.22	-1.3165290.1059	-10.2131	
29	0.22	-1.2988491.7929	-10.4988	
30	0.22	-1.2758893.4208	-10.7795	
31	0.22	-1.2590895.006	-11.0565	
32	0.22	-1.2426496.5502	-11.3299	
33	0.22	-1.2212398.0416	-11.5985	
34	0.22	-1.2055399.4949	-11.8638	
35	0.22	-1.19012100.911	-12.1256	
36	0.22	-1.17 102.28	-12.383	
37	0.22	-1.15522103.615	-12.6371	
38	0.22	-1.14069104.916	-12.8881	
39	0.22	-1.12168106.174	-13.1349	
40	0.22	-1.10768107.401	-13.3785	
41	0.22	-1.08935108.588	-13.6182	
42	0.22	-1.07584109.745	-13.8549	
43	0.22	-1.06252110.874	-14.0886	
44	0.22	-1.04505111.966	-14.3185	
45	0.22	-1.03215113.032	-14.5456	
46	0.22	-1.01943114.071	-14.7699	
47	0.22	-1.00271115.076	-14.9905	
48	0.22	-0.990356	116.057	-15.2084
49	0.22	-0.97815117.014	-15.4236	
50	0.22	-0.9621 117.939	-15.6352	
51	0.22	-0.950222	118.842	-15.8443

52	0.22	-0.93459	119.716	-16.0499
53	0.22	-0.923014	120.568	-16.2529
54	0.22	-0.911562	121.399	-16.4535
55	0.22	-0.896473	122.202	-16.6507
56	0.22	-0.885291	122.986	-16.8455
57	0.22	-0.874218	123.75	-17.0378
58	0.22	-0.859618	124.489	-17.2269
59	0.22	-0.848786	125.21	-17.4137
60	0.22	-0.834498	125.906	-17.5972
61	0.22	-0.823893	126.585	-17.7785
62	0.22	-0.813379	127.247	-17.9574
63	0.22	-0.7995	127.886	-18.1333
64	0.22	-0.789191	128.509	-18.307
65	0.22	-0.778966	129.115	-18.4783
66	0.22	-0.765456	129.701	-18.6467
67	0.22	-0.755415	130.272	-18.8129
68	0.22	-0.745449	130.828	-18.9769
69	0.22	-0.732275	131.364	-19.138
70	0.22	-0.722479	131.886	-19.297
71	0.22	-0.709522	132.389	-19.4531
72	0.22	-0.699883	132.879	-19.607
73	0.22	-0.690309	133.356	-19.7589
74	0.22	-0.677639	133.815	-19.908
75	0.22	-0.668209	134.261	-20.055
76	0.22	-0.658838	134.695	-20.1999
77	0.22	-0.646431	135.113	-20.3421
78	0.22	-0.637192	135.519	-20.4823
79	0.22	-0.628006	135.914	-20.6205
80	0.22	-0.615839	136.293	-20.756
81	0.22	-0.606775	136.661	-20.8895
82	0.22	-0.594766	137.015	-21.0203
83	0.22	-0.585815	137.358	-21.1492
84	0.22	-0.576911	137.691	-21.2761
85	0.22	-0.565108	138.01	-21.4004
86	0.22	-0.556308	138.32	-21.5228
87	0.22	-0.547551	138.619	-21.6433
88	0.22	-0.53594	138.907	-21.7612
89	0.22	-0.52728	139.185	-21.8772
90	0.22	-0.515791	139.451	-21.9907
91	0.22	-0.507221	139.708	-22.1023
92	0.22	-0.498687	139.957	-22.212
93	0.22	-0.487364	140.194	-22.3192
94	0.22	-0.478914	140.424	-22.4246
95	0.22	-0.470498	140.645	-22.5281
96	0.22	-0.459327	140.856	-22.6291
97	0.22	-0.450985	141.059	-22.7283
98	0.22	-0.442676	141.255	-22.8257
99	0.22	-0.431644	141.442	-22.9207
100	0.22	-0.423405	141.621	-23.0138
101	0.22	-0.412463	141.791	-23.1046
102	0.22	-0.40429	141.954	-23.1935
103	0.22	-0.396142	142.111	-23.2807
104	0.22	-0.385321	142.26	-23.3654
105	0.22	-0.377233	142.402	-23.4484
106	0.22	-0.369171	142.538	-23.5296
107	0.22	-0.358459	142.667	-23.6085
108	0.22	-0.350451	142.79	-23.6856
109	0.22	-0.33981	142.905	-23.7604
110	0.22	-0.331854	143.015	-23.8334
111	0.22	-0.323919	143.12	-23.9046
112	0.22	-0.31337	143.218	-23.9736
113	0.22	-0.305481	143.312	-24.0408

114	0.22	-0.297612	143.4	-24.1063
115	0.44	-0.287147	143.483	-24.2326
116	0.5	-0.279319	143.561	-24.3723
117	0.5	-0.271509	143.635	-24.508
118	0.5	-0.26112143.703	-24.6386	
119	0.5	-0.253347	143.767	-24.7652
120	0.5	-0.243007	143.826	-24.8868
121	0.5	-0.235269	143.881	-25.0044
122	0.5	-0.227545	143.933	-25.1182
123	0.5	-0.217267	143.98	-25.2268
124	0.5	-0.209575	144.024	-25.3316
125	0.5	-0.201894	144.065	-25.4325
126	0.5	-0.191671	144.102	-25.5284
127	0.5	-0.184017	144.136	-25.6204
128	0.5	-0.176374	144.167	-25.7086
129	0.5	-0.166199	144.194	-25.7917
130	0.5	-0.158579	144.219	-25.8709
131	0.5	-0.148434	144.241	-25.9452
132	0.5	-0.140835	144.261	-26.0156
133	0.5	-0.133244	144.279	-26.0822
134	0.5	-0.123135	144.294	-26.1438
135	0.5	-0.115562	144.308	-26.2016
136	0.5	-0.107995	144.319	-26.2556
137	0.5	-0.0979139	144.329	-26.3045
138	0.5	-0.0903606	144.337	-26.3497
139	0.5	-0.0802981	144.343	-26.3898
140	0.5	-0.0727562	144.349	-26.4262
141	0.5	-0.0652187	144.353	-26.4588
142	0.5	-0.0551734	144.356	-26.4864
143	0.5	-0.0476439	144.358	-26.5102
144	0.5	-0.0401167	144.36	-26.5303
145	0.5	-0.0300838	144.361	-26.5453
146	0.5	-0.0225612	144.361	-26.5566
147	0.5	-0.0150408	144.362	-26.5641
148	0.5	-0.00501359	144.362	-26.5666
149	0.5	0.00501359	144.362	-26.5641
150	0.5	0.0150408	144.362	-26.5566
151	0.5	0.0225612	144.362	-26.5453
152	0.5	0.0300838	144.363	-26.5303
153	0.5	0.0401167	144.365	-26.5102
154	0.5	0.0476439	144.367	-26.4864
155	0.5	0.0551734	144.37	-26.4588
156	0.5	0.0652187	144.374	-26.4262
157	0.5	0.0727562	144.38	-26.3898
158	0.5	0.0802981	144.386	-26.3497
159	0.5	0.0903606	144.394	-26.3045
160	0.5	0.0979139	144.404	-26.2556
161	0.5	0.107995	144.416	-26.2016
162	0.5	0.115562	144.429	-26.1438
163	0.5	0.123135	144.444	-26.0822
164	0.5	0.133244	144.462	-26.0156
165	0.5	0.140835	144.482	-25.9452
166	0.5	0.148434	144.504	-25.8709
167	0.5	0.158579	144.529	-25.7917
168	0.5	0.166199	144.557	-25.7086
169	0.5	0.176374	144.588	-25.6204
170	0.5	0.184017	144.621	-25.5284
171	0.5	0.191671	144.658	-25.4325
172	0.5	0.201894	144.699	-25.3316
173	0.5	0.209575	144.743	-25.2268
174	0.5	0.217267	144.79	-25.1182
175	0.5	0.227545	144.842	-25.0044

176	0.5	0.235269	144.897	-24.8868
177	0.5	0.243007	144.956	-24.7652
178	0.5	0.253347	145.02	-24.6386
179	0.5	0.26112	145.089	-24.508
180	0.5	0.271509	145.162	-24.3723
181	0.5	0.279319	145.24	-24.2326
182	0.5	0.287147	145.323	-24.089
183	0.5	0.297612	145.411	-23.9402
184	0.5	0.305481	145.505	-23.7875
185	0.5	0.31337	145.603	-23.6308
186	0.5	0.323919	145.708	-23.4688
187	0.5	0.331854	145.818	-23.3029
188	0.5	0.33981	145.933	-23.133
189	0.5	0.350451	146.056	-22.9578
190	0.5	0.358459	146.185	-22.7785
191	0.5	0.369171	146.321	-22.594
192	0.5	0.377233	146.463	-22.4053
193	0.5	0.385321	146.612	-22.2127
194	0.5	0.396142	146.769	-22.0146
195	0.5	0.40429	146.932	-21.8125
196	0.5	0.412463	147.102	-21.6062
197	0.5	0.423405	147.282	-21.3945
198	0.5	0.431644	147.468	-21.1787
199	0.5	0.442676	147.664	-20.9574
200	0.5	0.450985	147.867	-20.7319
201	0.5	0.459327	148.078	-20.5022
202	0.5	0.470498	148.3	-20.267
203	0.5	0.478914	148.529	-20.0275
204	0.5	0.487364	148.767	-19.7838
205	0.5	0.498687	149.015	-19.5345
206	0.5	0.507221	149.272	-19.2809
207	0.5	0.515791	149.539	-19.023
208	0.5	0.52728	149.817	-18.7593
209	0.5	0.53594	150.104	-18.4914
210	0.5	0.547551	150.404	-18.2176
211	0.5	0.556308	150.713	-17.9394
212	0.5	0.565108	151.032	-17.6569
213	0.5	0.576911	151.365	-17.3684
214	0.5	0.585815	151.708	-17.0755
215	0.5	0.594766	152.062	-16.7781
216	0.5	0.606775	152.43	-16.4748
217	0.5	0.615839	152.81	-16.1668
218	0.5	0.628006	153.204	-15.8528
219	0.5	0.637192	153.61	-15.5342
220	0.5	0.646431	154.028	-15.211
221	0.5	0.658838	154.462	-14.8816
222	0.5	0.668209	154.908	-14.5475
223	0.5	0.677639	155.368	-14.2087
224	0.5	0.690309	155.844	-13.8635
225	0.5	0.699883	156.334	-13.5136
226	0.5	0.709522	156.837	-13.1588
227	0.5	0.722479	157.359	-12.7976
228	0.5	0.732275	157.896	-12.4314
229	0.5	0.745449	158.451	-12.0587
230	0.5	0.755415	159.022	-11.681
231	0.5	0.765456	159.608	-11.2983
232	0.5	0.778966	160.215	-10.9088
233	0.5	0.789191	160.837	-10.5142
234	0.5	0.7995	161.477	-10.1145
235	0.5	0.813379	162.138	-9.70777
236	0.5	0.823893	162.817	-9.29582
237	0.5	0.834498	163.513	-8.87857

238	0.5	0.848786	164.234	-8.45418
239	0.5	0.859618	164.973	-8.02437
240	0.5	0.874218	165.737	-7.58726
241	0.5	0.885291	166.521	-7.14462
242	0.5	0.896473	167.325	-6.69638
243	0.5	0.911562	168.155	-6.2406
244	0.5	0.923014	169.007	-5.77909
245	0.5	0.93459	169.881	-5.3118
246	0.5	0.950222	170.784	-4.83669
247	0.5	0.9621	171.709	-4.35564
248	0.5	0.97815	172.666	-3.86656
249	0.5	0.990356	173.647	-3.37138
250	0.5	1.00271	174.652	-2.87003
251	0.5	1.01943	175.692	-2.36031
252	0.5	1.03215	176.757	-1.84424
253	0.5	1.04505	177.849	-1.32171
254	0.5	1.06252	178.978	-0.790451
255	0.5	1.07584	180.136	-0.252533
256	0.5	1.08935	181.322	0.292142
257	0.5	1.10768	182.549	0.845982
258	0.5	1.12168	183.807	1.40682
259	0.5	1.14069	185.108	1.97717
260	0.5	1.15522	186.443	2.55478
261	0.5	1.17	187.812	3.13978
262	0.5	1.19012	189.228	3.73484
263	0.5	1.20553	190.682	4.3376
264	0.5	1.22123	192.173	4.94821
265	0.5	1.24264	193.717	5.56954
266	0.5	1.25908	195.302	6.19908
267	0.5	1.27588	196.93	6.83701
268	0.5	1.29884	198.617	7.48643
269	0.5	1.31652	200.351	8.14469
270	0.5	1.34075	202.148	8.81507
271	0.5	1.35946	203.996	9.4948
272	0.5	1.37866	205.897	10.1841
273	0.5	1.40507	207.871	10.8867
274	0.5	1.42554	209.903	11.5994
275	0.5	1.44663	211.996	12.3228
276	0.5	1.47579	214.174	13.0607
277	0.5	1.49852	216.42	13.8099
278	0.5	1.53007	218.761	14.5749
279	0.5	1.55477	221.178	15.3523
280	0.5	1.58047	223.676	16.1426
281	0.5	1.61644	226.289	16.9508
282	0.5	1.64485	228.994	17.7732
283	0.5	1.67466	231.799	18.6105
284	0.5	1.71688	234.747	19.469
285	0.5	1.75069	237.811	20.3443
286	0.5	1.78661	241.003	21.2376
287	0.5	1.83843	244.383	22.1568
288	0.5	1.88079	247.921	23.0972
289	0.5	1.94314	251.696	24.0688
290	0.5	1.99539	255.678	25.0665
291	0.5	2.05375	259.896	26.0934
292	0.5	2.14441	264.494	27.1656
293	0.5	2.22621	269.45	28.2787
294	0.5	2.32634	274.862	29.4419
295	0.5	2.51213	281.173	30.6979
296	0.5	2.74777	288.723	32.0718

Data Set Standard Deviation = 0.137901

Numerator = 1028.6
Denominator = 1619.73
W Statistic = 0.635046 = 1028.6 / 1619.73

5% Critical value of 0.976 exceeds 0.635046
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.635046
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: 1,2-Dibromo-3-chloropropane

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.795352
0.795352 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.003367		-2.7477739	348.683	
2	0.22	0.00673401		-2.51213	274.4	337.176
3	0.22	0.010101		-2.32634	274.4	328.103
4	0.22	0.013468		-2.22621	274.4	323.213
5	0.22	0.016835		-2.14441	274.4	319.219
6	0.22	0.020202		-2.05375	274.4	314.791
7	0.22	0.023569		-1.99539	274.4	311.942
8	0.22	0.026936		-1.94314	274.4	309.39
9	0.22	0.030303		-1.88079	274.4	306.345
10	0.22	0.03367		-1.83843	274.4	304.276
11	0.22	0.037037		-1.78661	274.4	301.746
12	0.22	0.040404		-1.75069	274.4	299.992
13	0.22	0.043771		-1.71688	274.4	298.341
14	0.22	0.047138		-1.67466	274.4	296.279
15	0.22	0.0505051		-1.64485	274.4	294.824
16	0.22	0.0538721		-1.61644	274.4	293.436
17	0.22	0.0572391		-1.58047	274.4	291.679
18	0.22	0.0606061		-1.55477	274.4	290.425
19	0.22	0.0639731		-1.53007	274.4	289.218
20	0.22	0.0673401		-1.49852	274.4	287.677
21	0.22	0.0707071		-1.47579	274.4	286.568
22	0.22	0.0740741		-1.44663	274.4	285.144
23	0.22	0.0774411		-1.42554	274.4	284.114
24	0.22	0.0808081		-1.40507	274.4	283.114
25	0.22	0.0841751		-1.37866	274.4	281.824
26	0.22	0.0875421		-1.35946	274.4	280.887
27	0.22	0.0909091		-1.34075	274.4	279.974
28	0.22	0.0942761		-1.31652	274.4	278.79
29	0.22	0.0976431		-1.29884	274.4	277.926
30	0.22	0.10101		-1.27588	274.4	276.805
31	0.22	0.104377		-1.25908	274.4	275.985
32	0.22	0.107744		-1.24264	274.4	275.182
33	0.22	0.111111		-1.22123	274.4	274.137
34	0.22	0.114478		-1.20553	274.4	273.37
35	0.22	0.117845		-1.19012	274.4	272.617
36	0.22	0.121212		-1.17	274.4	271.635
37	0.22	0.124579		-1.15522	274.4	270.913
38	0.22	0.127946		-1.14069	274.4	270.204
39	0.22	0.131313		-1.12168	274.4	269.275
40	0.22	0.13468		-1.10768	274.4	268.592
41	0.22	0.138047		-1.08935	274.4	267.697
42	0.22	0.141414		-1.07584	274.4	267.037
43	0.22	0.144781		-1.06252	274.4	266.386
44	0.22	0.148148		-1.04505	274.4	265.533
45	0.22	0.151515		-1.03215	274.4	264.904
46	0.22	0.154882		-1.01943	274.4	264.282
47	0.22	0.158249		-1.00271	274.4	263.466
48	0.22	0.161616		-0.990356	274.4	262.862

49	0.22	0.164983	-0.97815	274.4	262.266
50	0.22	0.16835	-0.9621	274.4	261.483
51	0.22	0.171717	-0.950222	274.4	260.903
52	0.22	0.175084	-0.93459	274.4	260.139
53	0.22	0.178451	-0.923014	274.4	259.574
54	0.22	0.181818	-0.911562	274.4	259.015
55	0.22	0.185185	-0.896473	274.4	258.278
56	0.22	0.188552	-0.885291	274.4	257.732
57	0.22	0.191919	-0.874218	274.4	257.191
58	0.22	0.195286	-0.859618	274.4	256.478
59	0.22	0.198653	-0.848786	274.4	255.949
60	0.22	0.20202	-0.834498	274.4	255.251
61	0.22	0.205387	-0.823893	274.4	254.733
62	0.22	0.208754	-0.813379	274.4	254.22
63	0.22	0.212121	-0.7995	274.4	253.542
64	0.22	0.215488	-0.789191	274.4	253.039
65	0.22	0.218855	-0.778966	274.4	252.54
66	0.22	0.222222	-0.765456	274.4	251.88
67	0.22	0.225589	-0.755415	274.4	251.389
68	0.22	0.228956	-0.745449	274.4	250.903
69	0.22	0.232323	-0.732275	274.4	250.259
70	0.22	0.23569	-0.722479	274.4	249.781
71	0.22	0.239057	-0.709522	274.4	249.148
72	0.22	0.242424	-0.699883	274.4	248.678
73	0.22	0.245791	-0.690309	274.4	248.21
74	0.22	0.249158	-0.677639	274.4	247.591
75	0.22	0.252525	-0.668209	274.4	247.131
76	0.22	0.255892	-0.658838	274.4	246.673
77	0.22	0.259259	-0.646431	274.4	246.067
78	0.22	0.262626	-0.637192	274.4	245.616
79	0.22	0.265993	-0.628006	274.4	245.168
80	0.22	0.26936	-0.615839	274.4	244.573
81	0.22	0.272727	-0.606775	274.4	244.131
82	0.22	0.276094	-0.594766	274.4	243.544
83	0.22	0.279461	-0.585815	274.4	243.107
84	0.22	0.282828	-0.576911	274.4	242.672
85	0.22	0.286195	-0.565108	274.4	242.096
86	0.22	0.289562	-0.556308	274.4	241.666
87	0.22	0.292929	-0.547551	274.4	241.239
88	0.22	0.296296	-0.53594	274.4	240.672
89	0.22	0.299663	-0.52728	274.4	240.249
90	0.22	0.30303	-0.515791	274.4	239.688
91	0.22	0.306397	-0.507221	274.4	239.269
92	0.22	0.309764	-0.498687	274.4	238.853
93	0.22	0.313131	-0.487364	274.4	238.3
94	0.22	0.316498	-0.478914	274.4	237.887
95	0.22	0.319865	-0.470498	274.4	237.476
96	0.22	0.323232	-0.459327	274.4	236.93
97	0.22	0.326599	-0.450985	274.4	236.523
98	0.22	0.329966	-0.442676	274.4	236.117
99	0.22	0.333333	-0.431644	274.4	235.579
100	0.22	0.3367	-0.423405	274.4	235.176
101	0.22	0.340067	-0.412463	274.4	234.642
102	0.22	0.343434	-0.40429	274.4	234.243
103	0.22	0.346801	-0.396142	274.4	233.845
104	0.22	0.350168	-0.385321	274.4	233.317
105	0.22	0.353535	-0.377233	274.4	232.922
106	0.22	0.356902	-0.369171	274.4	232.528
107	0.22	0.360269	-0.358459	274.4	232.005
108	0.22	0.363636	-0.350451	274.4	231.614
109	0.22	0.367003	-0.33981	274.4	231.094
110	0.22	0.37037	-0.331854	274.4	230.706

111	0.22	0.373737	-0.323919	274.4	230.318
112	0.22	0.377104	-0.31337	274.4	229.803
113	0.22	0.380471	-0.305481	274.4	229.418
114	0.22	0.383838	-0.297612	274.4	229.033
115	0.44	0.387205	-0.287147	509.8	228.522
116	0.5	0.390572	-0.279319	574	228.14
117	0.5	0.393939	-0.271509	574	227.759
118	0.5	0.397306	-0.26112	574	227.251
119	0.5	0.400673	-0.253347	574	226.872
120	0.5	0.40404	-0.243007	574	226.367
121	0.5	0.407407	-0.235269	574	225.989
122	0.5	0.410774	-0.227545	574	225.612
123	0.5	0.414141	-0.217267	574	225.11
124	0.5	0.417508	-0.209575	574	224.734
125	0.5	0.420875	-0.201894	574	224.359
126	0.5	0.424242	-0.191671	574	223.86
127	0.5	0.427609	-0.184017	574	223.486
128	0.5	0.430976	-0.176374	574	223.113
129	0.5	0.434343	-0.166199	574	222.616
130	0.5	0.43771	-0.158579	574	222.244
131	0.5	0.441077	-0.148434	574	221.749
132	0.5	0.444444	-0.140835	574	221.377
133	0.5	0.447811	-0.133244	574	221.007
134	0.5	0.451178	-0.123135	574	220.513
135	0.5	0.454545	-0.115562	574	220.143
136	0.5	0.457912	-0.107995	574	219.774
137	0.5	0.461279	-0.0979139	574	219.281
138	0.5	0.464646	-0.0903606	574	218.913
139	0.5	0.468013	-0.0802981	574	218.421
140	0.5	0.47138	-0.0727562	574	218.053
141	0.5	0.474747	-0.0652187	574	217.685
142	0.5	0.478114	-0.0551734	574	217.194
143	0.5	0.481481	-0.0476439	574	216.827
144	0.5	0.484848	-0.0401167	574	216.459
145	0.5	0.488215	-0.0300838	574	215.969
146	0.5	0.491582	-0.0225612	574	215.602
147	0.5	0.494949	-0.0150408	574	215.234
148	0.5	0.498316	-0.00501359	574	214.745
149	0.5	0.501684	0.00501359	574	214.255
150	0.5	0.505051	0.0150408	574	213.766
151	0.5	0.508418	0.0225612	574	213.398
152	0.5	0.511785	0.0300838	574	213.031
153	0.5	0.515152	0.0401167	574	212.541
154	0.5	0.518519	0.0476439	574	212.173
155	0.5	0.521886	0.0551734	574	211.806
156	0.5	0.525253	0.0652187	574	211.315
157	0.5	0.52862	0.0727562	574	210.947
158	0.5	0.531987	0.0802981	574	210.579
159	0.5	0.535354	0.0903606	574	210.087
160	0.5	0.538721	0.0979139	574	209.719
161	0.5	0.542088	0.107995	574	209.226
162	0.5	0.545455	0.115562	574	208.857
163	0.5	0.548822	0.123135	574	208.487
164	0.5	0.552189	0.133244	574	207.993
165	0.5	0.555556	0.140835	574	207.623
166	0.5	0.558923	0.148434	574	207.251
167	0.5	0.56229	0.158579	574	206.756
168	0.5	0.565657	0.166199	574	206.384
169	0.5	0.569024	0.176374	574	205.887
170	0.5	0.572391	0.184017	574	205.514
171	0.5	0.575758	0.191671	574	205.14
172	0.5	0.579125	0.201894	574	204.641

173	0.5	0.582492	0.209575	574	204.266
174	0.5	0.585859	0.217267	574	203.89
175	0.5	0.589226	0.227545	574	203.388
176	0.5	0.592593	0.235269	574	203.011
177	0.5	0.59596	0.243007	574	202.633
178	0.5	0.599327	0.253347	574	202.128
179	0.5	0.602694	0.26112	574	201.749
180	0.5	0.606061	0.271509	574	201.241
181	0.5	0.609428	0.279319	574	200.86
182	0.5	0.612795	0.287147	574	200.478
183	0.5	0.616162	0.297612	574	199.967
184	0.5	0.619529	0.305481	574	199.582
185	0.5	0.622896	0.31337	574	199.197
186	0.5	0.626263	0.323919	574	198.682
187	0.5	0.62963	0.331854	574	198.294
188	0.5	0.632997	0.33981	574	197.906
189	0.5	0.636364	0.350451	574	197.386
190	0.5	0.639731	0.358459	574	196.995
191	0.5	0.643098	0.369171	574	196.472
192	0.5	0.646465	0.377233	574	196.078
193	0.5	0.649832	0.385321	574	195.683
194	0.5	0.653199	0.396142	574	195.155
195	0.5	0.656566	0.40429	574	194.757
196	0.5	0.659933	0.412463	574	194.358
197	0.5	0.6633	0.423405	574	193.824
198	0.5	0.666667	0.431644	574	193.421
199	0.5	0.670034	0.442676	574	192.883
200	0.5	0.673401	0.450985	574	192.477
201	0.5	0.676768	0.459327	574	192.07
202	0.5	0.680135	0.470498	574	191.524
203	0.5	0.683502	0.478914	574	191.113
204	0.5	0.686869	0.487364	574	190.7
205	0.5	0.690236	0.498687	574	190.147
206	0.5	0.693603	0.507221	574	189.731
207	0.5	0.69697	0.515791	574	189.312
208	0.5	0.700337	0.52728	574	188.751
209	0.5	0.703704	0.53594	574	188.328
210	0.5	0.707071	0.547551	574	187.761
211	0.5	0.710438	0.556308	574	187.334
212	0.5	0.713805	0.565108	574	186.904
213	0.5	0.717172	0.576911	574	186.328
214	0.5	0.720539	0.585815	574	185.893
215	0.5	0.723906	0.594766	574	185.456
216	0.5	0.727273	0.606775	574	184.869
217	0.5	0.73064	0.615839	574	184.427
218	0.5	0.734007	0.628006	574	183.832
219	0.5	0.737374	0.637192	574	183.384
220	0.5	0.740741	0.646431	574	182.933
221	0.5	0.744108	0.658838	574	182.327
222	0.5	0.747475	0.668209	574	181.869
223	0.5	0.750842	0.677639	574	181.409
224	0.5	0.754209	0.690309	574	180.79
225	0.5	0.757576	0.699883	574	180.322
226	0.5	0.760943	0.709522	574	179.852
227	0.5	0.76431	0.722479	574	179.219
228	0.5	0.767677	0.732275	574	178.741
229	0.5	0.771044	0.745449	574	178.097
230	0.5	0.774411	0.755415	574	177.611
231	0.5	0.777778	0.765456	574	177.12
232	0.5	0.781145	0.778966	574	176.46
233	0.5	0.784512	0.789191	574	175.961
234	0.5	0.787879	0.7995	574	175.458

235	0.5	0.791246	0.813379	574	174.78
236	0.5	0.794613	0.823893	574	174.267
237	0.5	0.79798	0.834498	574	173.749
238	0.5	0.801347	0.848786	574	173.051
239	0.5	0.804714	0.859618	574	172.522
240	0.5	0.808081	0.874218	574	171.809
241	0.5	0.811448	0.885291	574	171.268
242	0.5	0.814815	0.896473	574	170.722
243	0.5	0.818182	0.911562	574	169.985
244	0.5	0.821549	0.923014	574	169.426
245	0.5	0.824916	0.93459	574	168.861
246	0.5	0.828283	0.950222	574	168.097
247	0.5	0.83165	0.9621	574	167.517
248	0.5	0.835017	0.97815	574	166.734
249	0.5	0.838384	0.990356	574	166.138
250	0.5	0.841751	1.00271	574	165.534
251	0.5	0.845118	1.01943	574	164.718
252	0.5	0.848485	1.03215	574	164.096
253	0.5	0.851852	1.04505	574	163.467
254	0.5	0.855219	1.06252	574	162.614
255	0.5	0.858586	1.07584	574	161.963
256	0.5	0.861953	1.08935	574	161.303
257	0.5	0.86532	1.10768	574	160.408
258	0.5	0.868687	1.12168	574	159.725
259	0.5	0.872054	1.14069	574	158.796
260	0.5	0.875421	1.15522	574	158.087
261	0.5	0.878788	1.17	574	157.365
262	0.5	0.882155	1.19012	574	156.383
263	0.5	0.885522	1.20553	574	155.63
264	0.5	0.888889	1.22123	574	154.863
265	0.5	0.892256	1.24264	574	153.818
266	0.5	0.895623	1.25908	574	153.015
267	0.5	0.89899	1.27588	574	152.195
268	0.5	0.902357	1.29884	574	151.074
269	0.5	0.905724	1.31652	574	150.21
270	0.5	0.909091	1.34075	574	149.026
271	0.5	0.912458	1.35946	574	148.113
272	0.5	0.915825	1.37866	574	147.176
273	0.5	0.919192	1.40507	574	145.886
274	0.5	0.922559	1.42554	574	144.886
275	0.5	0.925926	1.44663	574	143.856
276	0.5	0.929293	1.47579	574	142.432
277	0.5	0.93266	1.49852	574	141.323
278	0.5	0.936027	1.53007	574	139.782
279	0.5	0.939394	1.55477	574	138.575
280	0.5	0.942761	1.58047	574	137.321
281	0.5	0.946128	1.61644	574	135.564
282	0.5	0.949495	1.64485	574	134.176
283	0.5	0.952862	1.67466	574	132.721
284	0.5	0.956229	1.71688	574	130.659
285	0.5	0.959596	1.75069	574	129.008
286	0.5	0.962963	1.78661	574	127.254
287	0.5	0.96633	1.83843	574	124.724
288	0.5	0.969697	1.88079	574	122.655
289	0.5	0.973064	1.94314	574	119.61
290	0.5	0.976431	1.99539	574	117.058
291	0.5	0.979798	2.05375	574	114.209
292	0.5	0.983165	2.14441	574	109.781
293	0.5	0.986532	2.22621	574	105.787
294	0.5	0.989899	2.32634	574	100.897
295	0.5	0.993266	2.51213	574	91.8241
296	0.5	0.996633	2.74777	574	80.3175

Shapiro-Francia Test of Normality

Parameter: 1,2-Dibromo-3-chloropropane

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.51413	-2.74777	7.55021	4.16047
2	-1.51413	-2.51213	13.861	7.96416
3	-1.51413	-2.32634	19.2729	11.4865
4	-1.51413	-2.22621	24.2289	14.8573
5	-1.51413	-2.14441	28.8274	18.1042
6	-1.51413	-2.05375	33.0453	21.2138
7	-1.51413	-1.99539	37.0269	24.2351
8	-1.51413	-1.94314	40.8026	27.1773
9	-1.51413	-1.88079	44.34	30.025
10	-1.51413	-1.83843	47.7198	32.8086
11	-1.51413	-1.78661	50.9118	35.5138
12	-1.51413	-1.75069	53.9767	38.1646
13	-1.51413	-1.71688	56.9244	40.7641
14	-1.51413	-1.67466	59.7289	43.2998
15	-1.51413	-1.64485	62.4344	45.7903
16	-1.51413	-1.61644	65.0473	48.2378
17	-1.51413	-1.58047	67.5452	50.6308
18	-1.51413	-1.55477	69.9625	52.985
19	-1.51413	-1.53007	72.3036	55.3017
20	-1.51413	-1.49852	74.5491	57.5706
21	-1.51413	-1.47579	76.7271	59.8052
22	-1.51413	-1.44663	78.8198	61.9955
23	-1.51413	-1.42554	80.852	64.154
24	-1.51413	-1.40507	82.8262	66.2815
25	-1.51413	-1.37866	84.7269	68.3689
26	-1.51413	-1.35946	86.5751	70.4273
27	-1.51413	-1.34075	88.3727	72.4574
28	-1.51413	-1.31652	90.1059	74.4508
29	-1.51413	-1.29884	91.7929	76.4174
30	-1.51413	-1.27588	93.4208	78.3492
31	-1.51413	-1.25908	95.006	80.2556
32	-1.51413	-1.24264	96.5502	82.1372
33	-1.51413	-1.22123	98.0416	83.9862
34	-1.51413	-1.20553	99.4949	85.8116
35	-1.51413	-1.19012	100.911	87.6136
36	-1.51413	-1.17	102.28	89.3851
37	-1.51413	-1.15522	103.615	91.1342
38	-1.51413	-1.14069	104.916	92.8614
39	-1.51413	-1.12168	106.174	94.5598
40	-1.51413	-1.10768	107.401	96.2369
41	-1.51413	-1.08935	108.588	97.8863
42	-1.51413	-1.07584	109.745	99.5153
43	-1.51413	-1.06252	110.874	101.124
44	-1.51413	-1.04505	111.966	102.706
45	-1.51413	-1.03215	113.032	104.269
46	-1.51413	-1.01943	114.071	105.813
47	-1.51413	-1.00271	115.076	107.331
48	-1.51413	-0.990356	116.057	108.831
49	-1.51413	-0.97815	117.014	110.312
50	-1.51413	-0.9621	117.939	111.768
51	-1.51413	-0.950222	118.842	113.207

52	-1.51413	-0.93459	119.716	114.622
53	-1.51413	-0.923014	120.568	116.02
54	-1.51413	-0.911562	121.399	117.4
55	-1.51413	-0.896473	122.202	118.757
56	-1.51413	-0.885291	122.986	120.098
57	-1.51413	-0.874218	123.75	121.421
58	-1.51413	-0.859618	124.489	122.723
59	-1.51413	-0.848786	125.21	124.008
60	-1.51413	-0.834498	125.906	125.272
61	-1.51413	-0.823893	126.585	126.519
62	-1.51413	-0.813379	127.247	127.751
63	-1.51413	-0.7995	127.886	128.961
64	-1.51413	-0.789191	128.509	130.156
65	-1.51413	-0.778966	129.115	131.336
66	-1.51413	-0.765456	129.701	132.495
67	-1.51413	-0.755415	130.272	133.638
68	-1.51413	-0.745449	130.828	134.767
69	-1.51413	-0.732275	131.364	135.876
70	-1.51413	-0.722479	131.886	136.97
71	-1.51413	-0.709522	132.389	138.044
72	-1.51413	-0.699883	132.879	139.104
73	-1.51413	-0.690309	133.356	140.149
74	-1.51413	-0.677639	133.815	141.175
75	-1.51413	-0.668209	134.261	142.187
76	-1.51413	-0.658838	134.695	143.184
77	-1.51413	-0.646431	135.113	144.163
78	-1.51413	-0.637192	135.519	145.128
79	-1.51413	-0.628006	135.914	146.079
80	-1.51413	-0.615839	136.293	147.011
81	-1.51413	-0.606775	136.661	147.93
82	-1.51413	-0.594766	137.015	148.831
83	-1.51413	-0.585815	137.358	149.718
84	-1.51413	-0.576911	137.691	150.591
85	-1.51413	-0.565108	138.01	151.447
86	-1.51413	-0.556308	138.32	152.289
87	-1.51413	-0.547551	138.619	153.118
88	-1.51413	-0.53594	138.907	153.93
89	-1.51413	-0.52728	139.185	154.728
90	-1.51413	-0.515791	139.451	155.509
91	-1.51413	-0.507221	139.708	156.277
92	-1.51413	-0.498687	139.957	157.032
93	-1.51413	-0.487364	140.194	157.77
94	-1.51413	-0.478914	140.424	158.495
95	-1.51413	-0.470498	140.645	159.208
96	-1.51413	-0.459327	140.856	159.903
97	-1.51413	-0.450985	141.059	160.586
98	-1.51413	-0.442676	141.255	161.256
99	-1.51413	-0.431644	141.442	161.91
100	-1.51413	-0.423405	141.621	162.551
101	-1.51413	-0.412463	141.791	163.175
102	-1.51413	-0.40429	141.954	163.787
103	-1.51413	-0.396142	142.111	164.387
104	-1.51413	-0.385321	142.26	164.971
105	-1.51413	-0.377233	142.402	165.542
106	-1.51413	-0.369171	142.538	166.101
107	-1.51413	-0.358459	142.667	166.644
108	-1.51413	-0.350451	142.79	167.174
109	-1.51413	-0.33981	142.905	167.689
110	-1.51413	-0.331854	143.015	168.191
111	-1.51413	-0.323919	143.12	168.682
112	-1.51413	-0.31337	143.218	169.156
113	-1.51413	-0.305481	143.312	169.619

114	-0.820981	-0.297612	143.4	169.863
115	-0.693147	-0.287147	143.483	170.062
116	-0.693147	-0.279319	143.561	170.256
117	-0.693147	-0.271509	143.635	170.444
118	-0.693147	-0.26112143.703	170.625	
119	-0.693147	-0.253347	143.767	170.8
120	-0.693147	-0.243007	143.826	170.969
121	-0.693147	-0.235269	143.881	171.132
122	-0.693147	-0.227545	143.933	171.29
123	-0.693147	-0.217267	143.98	171.44
124	-0.693147	-0.209575	144.024	171.586
125	-0.693147	-0.201894	144.065	171.726
126	-0.693147	-0.191671	144.102	171.858
127	-0.693147	-0.184017	144.136	171.986
128	-0.693147	-0.176374	144.167	172.108
129	-0.693147	-0.166199	144.194	172.223
130	-0.693147	-0.158579	144.219	172.333
131	-0.693147	-0.148434	144.241	172.436
132	-0.693147	-0.140835	144.261	172.534
133	-0.693147	-0.133244	144.279	172.626
134	-0.693147	-0.123135	144.294	172.712
135	-0.693147	-0.115562	144.308	172.792
136	-0.693147	-0.107995	144.319	172.866
137	-0.693147	-0.0979139	144.329	172.934
138	-0.693147	-0.0903606	144.337	172.997
139	-0.693147	-0.0802981	144.343	173.053
140	-0.693147	-0.0727562	144.349	173.103
141	-0.693147	-0.0652187	144.353	173.148
142	-0.693147	-0.0551734	144.356	173.187
143	-0.693147	-0.0476439	144.358	173.22
144	-0.693147	-0.0401167	144.36	173.247
145	-0.693147	-0.0300838	144.361	173.268
146	-0.693147	-0.0225612	144.361	173.284
147	-0.693147	-0.0150408	144.362	173.294
148	-0.693147	-0.00501359	144.362	173.298
149	-0.693147	0.00501359	144.362	173.294
150	-0.693147	0.0150408	144.362	173.284
151	-0.693147	0.0225612	144.362	173.268
152	-0.693147	0.0300838	144.363	173.247
153	-0.693147	0.0401167	144.365	173.22
154	-0.693147	0.0476439	144.367	173.187
155	-0.693147	0.0551734	144.37	173.148
156	-0.693147	0.0652187	144.374	173.103
157	-0.693147	0.0727562	144.38	173.053
158	-0.693147	0.0802981	144.386	172.997
159	-0.693147	0.0903606	144.394	172.934
160	-0.693147	0.0979139	144.404	172.866
161	-0.693147	0.107995	144.416	172.792
162	-0.693147	0.115562	144.429	172.712
163	-0.693147	0.123135	144.444	172.626
164	-0.693147	0.133244	144.462	172.534
165	-0.693147	0.140835	144.482	172.436
166	-0.693147	0.148434	144.504	172.333
167	-0.693147	0.158579	144.529	172.223
168	-0.693147	0.166199	144.557	172.108
169	-0.693147	0.176374	144.588	171.986
170	-0.693147	0.184017	144.621	171.858
171	-0.693147	0.191671	144.658	171.726
172	-0.693147	0.201894	144.699	171.586
173	-0.693147	0.209575	144.743	171.44
174	-0.693147	0.217267	144.79	171.29
175	-0.693147	0.227545	144.842	171.132

176	-0.693147	0.235269	144.897	170.969
177	-0.693147	0.243007	144.956	170.8
178	-0.693147	0.253347	145.02	170.625
179	-0.693147	0.26112	145.089	170.444
180	-0.693147	0.271509	145.162	170.256
181	-0.693147	0.279319	145.24	170.062
182	-0.693147	0.287147	145.323	169.863
183	-0.693147	0.297612	145.411	169.657
184	-0.693147	0.305481	145.505	169.445
185	-0.693147	0.31337	145.603	169.228
186	-0.693147	0.323919	145.708	169.003
187	-0.693147	0.331854	145.818	168.773
188	-0.693147	0.33981	145.933	168.538
189	-0.693147	0.350451	146.056	168.295
190	-0.693147	0.358459	146.185	168.046
191	-0.693147	0.369171	146.321	167.79
192	-0.693147	0.377233	146.463	167.529
193	-0.693147	0.385321	146.612	167.262
194	-0.693147	0.396142	146.769	166.987
195	-0.693147	0.40429	146.932	166.707
196	-0.693147	0.412463	147.102	166.421
197	-0.693147	0.423405	147.282	166.128
198	-0.693147	0.431644	147.468	165.828
199	-0.693147	0.442676	147.664	165.522
200	-0.693147	0.450985	147.867	165.209
201	-0.693147	0.459327	148.078	164.891
202	-0.693147	0.470498	148.3	164.565
203	-0.693147	0.478914	148.529	164.233
204	-0.693147	0.487364	148.767	163.895
205	-0.693147	0.498687	149.015	163.549
206	-0.693147	0.507221	149.272	163.198
207	-0.693147	0.515791	149.539	162.84
208	-0.693147	0.52728	149.817	162.475
209	-0.693147	0.53594	150.104	162.103
210	-0.693147	0.547551	150.404	161.724
211	-0.693147	0.556308	150.713	161.338
212	-0.693147	0.565108	151.032	160.946
213	-0.693147	0.576911	151.365	160.546
214	-0.693147	0.585815	151.708	160.14
215	-0.693147	0.594766	152.062	159.728
216	-0.693147	0.606775	152.43	159.307
217	-0.693147	0.615839	152.81	158.881
218	-0.693147	0.628006	153.204	158.445
219	-0.693147	0.637192	153.61	158.004
220	-0.693147	0.646431	154.028	157.556
221	-0.693147	0.658838	154.462	157.099
222	-0.693147	0.668209	154.908	156.636
223	-0.693147	0.677639	155.368	156.166
224	-0.693147	0.690309	155.844	155.687
225	-0.693147	0.699883	156.334	155.202
226	-0.693147	0.709522	156.837	154.711
227	-0.693147	0.722479	157.359	154.21
228	-0.693147	0.732275	157.896	153.702
229	-0.693147	0.745449	158.451	153.186
230	-0.693147	0.755415	159.022	152.662
231	-0.693147	0.765456	159.608	152.131
232	-0.693147	0.778966	160.215	151.591
233	-0.693147	0.789191	160.837	151.044
234	-0.693147	0.7995	161.477	150.49
235	-0.693147	0.813379	162.138	149.926
236	-0.693147	0.823893	162.817	149.355
237	-0.693147	0.834498	163.513	148.777

238	-0.693147		0.848786	164.234	148.189
239	-0.693147		0.859618	164.973	147.593
240	-0.693147		0.874218	165.737	146.987
241	-0.693147		0.885291	166.521	146.373
242	-0.693147		0.896473	167.325	145.752
243	-0.693147		0.911562	168.155	145.12
244	-0.693147		0.923014	169.007	144.48
245	-0.693147		0.93459	169.881	143.832
246	-0.693147		0.950222	170.784	143.174
247	-0.693147		0.9621	171.709	142.507
248	-0.693147		0.97815	172.666	141.829
249	-0.693147		0.990356	173.647	141.142
250	-0.693147		1.00271	174.652	140.447
251	-0.693147		1.01943	175.692	139.741
252	-0.693147		1.03215	176.757	139.025
253	-0.693147		1.04505	177.849	138.301
254	-0.693147		1.06252	178.978	137.564
255	-0.693147		1.07584	180.136	136.819
256	-0.693147		1.08935	181.322	136.064
257	-0.693147		1.10768	182.549	135.296
258	-0.693147		1.12168	183.807	134.518
259	-0.693147		1.14069	185.108	133.728
260	-0.693147		1.15522	186.443	132.927
261	-0.693147		1.17	187.812	132.116
262	-0.693147		1.19012	189.228	131.291
263	-0.693147		1.20553	190.682	130.455
264	-0.693147		1.22123	192.173	129.609
265	-0.693147		1.24264	193.717	128.748
266	-0.693147		1.25908	195.302	127.875
267	-0.693147		1.27588	196.93	126.99
268	-0.693147		1.29884	198.617	126.09
269	-0.693147		1.31652	200.351	125.178
270	-0.693147		1.34075	202.148	124.248
271	-0.693147		1.35946	203.996	123.306
272	-0.693147		1.37866	205.897	122.35
273	-0.693147		1.40507	207.871	121.376
274	-0.693147		1.42554	209.903	120.388
275	-0.693147		1.44663	211.996	119.386
276	-0.693147		1.47579	214.174	118.363
277	-0.693147		1.49852	216.42	117.324
278	-0.693147		1.53007	218.761	116.263
279	-0.693147		1.55477	221.178	115.186
280	-0.693147		1.58047	223.676	114.09
281	-0.693147		1.61644	226.289	112.97
282	-0.693147		1.64485	228.994	111.83
283	-0.693147		1.67466	231.799	110.669
284	-0.693147		1.71688	234.747	109.479
285	-0.693147		1.75069	237.811	108.265
286	-0.693147		1.78661	241.003	107.027
287	-0.693147		1.83843	244.383	105.753
288	-0.693147		1.88079	247.921	104.449
289	-0.693147		1.94314	251.696	103.102
290	-0.693147		1.99539	255.678	101.719
291	-0.693147		2.05375	259.896	100.295
292	-0.693147		2.14441	264.494	98.8091
293	-0.693147		2.22621	269.45	97.266
294	-0.693147		2.32634	274.862	95.6535
295	-0.693147		2.51213	281.173	93.9122
296	0	2.74777	288.723	93.9122	

Data Set Standard Deviation = 0.403112

Numerator = 8819.5
Denominator = 13840.6
W Statistic = 0.637219 = 8819.5 / 13840.6

5% Critical value of 0.976 exceeds 0.637219
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.637219
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: 1,2-Dibromo-3-chloropropane

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.796767
0.796767 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-1.514130	0.003367	-2.74777	168.971	348.683
2	-1.514130	0.00673401	-2.51213	168.971	337.176
3	-1.514130	0.010101	-2.32634	168.971	328.103
4	-1.514130	0.013468	-2.22621	168.971	323.213
5	-1.514130	0.016835	-2.14441	168.971	319.219
6	-1.514130	0.020202	-2.05375	168.971	314.791
7	-1.514130	0.023569	-1.99539	168.971	311.942
8	-1.514130	0.026936	-1.94314	168.971	309.39
9	-1.514130	0.030303	-1.88079	168.971	306.345
10	-1.514130	0.03367	-1.83843	168.971	304.276
11	-1.514130	0.037037	-1.78661	168.971	301.746
12	-1.514130	0.040404	-1.75069	168.971	299.992
13	-1.514130	0.043771	-1.71688	168.971	298.341
14	-1.514130	0.047138	-1.67466	168.971	296.279
15	-1.514130	0.0505051	-1.64485	168.971	294.824
16	-1.514130	0.0538721	-1.61644	168.971	293.436
17	-1.514130	0.0572391	-1.58047	168.971	291.679
18	-1.514130	0.0606061	-1.55477	168.971	290.425
19	-1.514130	0.0639731	-1.53007	168.971	289.218
20	-1.514130	0.0673401	-1.49852	168.971	287.677
21	-1.514130	0.0707071	-1.47579	168.971	286.568
22	-1.514130	0.0740741	-1.44663	168.971	285.144
23	-1.514130	0.0774411	-1.42554	168.971	284.114
24	-1.514130	0.0808081	-1.40507	168.971	283.114
25	-1.514130	0.0841751	-1.37866	168.971	281.824
26	-1.514130	0.0875421	-1.35946	168.971	280.887
27	-1.514130	0.0909091	-1.34075	168.971	279.974
28	-1.514130	0.0942761	-1.31652	168.971	278.79
29	-1.514130	0.0976431	-1.29884	168.971	277.926
30	-1.514130	0.10101	-1.27588	168.971	276.805
31	-1.514130	0.104377	-1.25908	168.971	275.985
32	-1.514130	0.107744	-1.24264	168.971	275.182
33	-1.514130	0.111111	-1.22123	168.971	274.137
34	-1.514130	0.114478	-1.20553	168.971	273.37
35	-1.514130	0.117845	-1.19012	168.971	272.617
36	-1.514130	0.121212	-1.17	168.971	271.635
37	-1.514130	0.124579	-1.15522	168.971	270.913
38	-1.514130	0.127946	-1.14069	168.971	270.204
39	-1.514130	0.131313	-1.12168	168.971	269.275
40	-1.514130	0.13468	-1.10768	168.971	268.592
41	-1.514130	0.138047	-1.08935	168.971	267.697
42	-1.514130	0.141414	-1.07584	168.971	267.037
43	-1.514130	0.144781	-1.06252	168.971	266.386
44	-1.514130	0.148148	-1.04505	168.971	265.533
45	-1.514130	0.151515	-1.03215	168.971	264.904
46	-1.514130	0.154882	-1.01943	168.971	264.282
47	-1.514130	0.158249	-1.00271	168.971	263.466
48	-1.514130	0.161616	-0.990356	168.971	262.862

49	-1.514130.164983	-0.97815	168.971	262.266
50	-1.514130.16835	-0.9621	168.971	261.483
51	-1.514130.171717	-0.950222	168.971	260.903
52	-1.514130.175084	-0.93459	168.971	260.139
53	-1.514130.178451	-0.923014	168.971	259.574
54	-1.514130.181818	-0.911562	168.971	259.015
55	-1.514130.185185	-0.896473	168.971	258.278
56	-1.514130.188552	-0.885291	168.971	257.732
57	-1.514130.191919	-0.874218	168.971	257.191
58	-1.514130.195286	-0.859618	168.971	256.478
59	-1.514130.198653	-0.848786	168.971	255.949
60	-1.514130.20202	-0.834498	168.971	255.251
61	-1.514130.205387	-0.823893	168.971	254.733
62	-1.514130.208754	-0.813379	168.971	254.22
63	-1.514130.212121	-0.7995	168.971	253.542
64	-1.514130.215488	-0.789191	168.971	253.039
65	-1.514130.218855	-0.778966	168.971	252.54
66	-1.514130.222222	-0.765456	168.971	251.88
67	-1.514130.225589	-0.755415	168.971	251.389
68	-1.514130.228956	-0.745449	168.971	250.903
69	-1.514130.232323	-0.732275	168.971	250.259
70	-1.514130.23569	-0.722479	168.971	249.781
71	-1.514130.239057	-0.709522	168.971	249.148
72	-1.514130.242424	-0.699883	168.971	248.678
73	-1.514130.245791	-0.690309	168.971	248.21
74	-1.514130.249158	-0.677639	168.971	247.591
75	-1.514130.252525	-0.668209	168.971	247.131
76	-1.514130.255892	-0.658838	168.971	246.673
77	-1.514130.259259	-0.646431	168.971	246.067
78	-1.514130.262626	-0.637192	168.971	245.616
79	-1.514130.265993	-0.628006	168.971	245.168
80	-1.514130.26936	-0.615839	168.971	244.573
81	-1.514130.272727	-0.606775	168.971	244.131
82	-1.514130.276094	-0.594766	168.971	243.544
83	-1.514130.279461	-0.585815	168.971	243.107
84	-1.514130.282828	-0.576911	168.971	242.672
85	-1.514130.286195	-0.565108	168.971	242.096
86	-1.514130.289562	-0.556308	168.971	241.666
87	-1.514130.292929	-0.547551	168.971	241.239
88	-1.514130.296296	-0.53594	168.971	240.672
89	-1.514130.299663	-0.52728	168.971	240.249
90	-1.514130.30303	-0.515791	168.971	239.688
91	-1.514130.306397	-0.507221	168.971	239.269
92	-1.514130.309764	-0.498687	168.971	238.853
93	-1.514130.313131	-0.487364	168.971	238.3
94	-1.514130.316498	-0.478914	168.971	237.887
95	-1.514130.319865	-0.470498	168.971	237.476
96	-1.514130.323232	-0.459327	168.971	236.93
97	-1.514130.326599	-0.450985	168.971	236.523
98	-1.514130.329966	-0.442676	168.971	236.117
99	-1.514130.333333	-0.431644	168.971	235.579
100	-1.514130.3367	-0.423405	168.971	235.176
101	-1.514130.340067	-0.412463	168.971	234.642
102	-1.514130.343434	-0.40429	168.971	234.243
103	-1.514130.346801	-0.396142	168.971	233.845
104	-1.514130.350168	-0.385321	168.971	233.317
105	-1.514130.353535	-0.377233	168.971	232.922
106	-1.514130.356902	-0.369171	168.971	232.528
107	-1.514130.360269	-0.358459	168.971	232.005
108	-1.514130.363636	-0.350451	168.971	231.614
109	-1.514130.367003	-0.33981	168.971	231.094
110	-1.514130.37037	-0.331854	168.971	230.706

111	-1.514130.373737	-0.323919	168.971	230.318	
112	-1.514130.377104	-0.31337168.971	229.803		
113	-1.514130.380471	-0.305481	168.971	229.418	
114	-0.820981	0.383838	-0.297612	354.388	229.033
115	-0.693147	0.387205	-0.287147	388.583	228.522
116	-0.693147	0.390572	-0.279319	388.583	228.14
117	-0.693147	0.393939	-0.271509	388.583	227.759
118	-0.693147	0.397306	-0.26112388.583	227.251	
119	-0.693147	0.400673	-0.253347	388.583	226.872
120	-0.693147	0.40404 -0.243007	388.583	226.367	
121	-0.693147	0.407407	-0.235269	388.583	225.989
122	-0.693147	0.410774	-0.227545	388.583	225.612
123	-0.693147	0.414141	-0.217267	388.583	225.11
124	-0.693147	0.417508	-0.209575	388.583	224.734
125	-0.693147	0.420875	-0.201894	388.583	224.359
126	-0.693147	0.424242	-0.191671	388.583	223.86
127	-0.693147	0.427609	-0.184017	388.583	223.486
128	-0.693147	0.430976	-0.176374	388.583	223.113
129	-0.693147	0.434343	-0.166199	388.583	222.616
130	-0.693147	0.43771 -0.158579	388.583	222.244	
131	-0.693147	0.441077	-0.148434	388.583	221.749
132	-0.693147	0.444444	-0.140835	388.583	221.377
133	-0.693147	0.447811	-0.133244	388.583	221.007
134	-0.693147	0.451178	-0.123135	388.583	220.513
135	-0.693147	0.454545	-0.115562	388.583	220.143
136	-0.693147	0.457912	-0.107995	388.583	219.774
137	-0.693147	0.461279	-0.0979139	388.583	219.281
138	-0.693147	0.464646	-0.0903606	388.583	218.913
139	-0.693147	0.468013	-0.0802981	388.583	218.421
140	-0.693147	0.47138 -0.0727562	388.583	218.053	
141	-0.693147	0.474747	-0.0652187	388.583	217.685
142	-0.693147	0.478114	-0.0551734	388.583	217.194
143	-0.693147	0.481481	-0.0476439	388.583	216.827
144	-0.693147	0.484848	-0.0401167	388.583	216.459
145	-0.693147	0.488215	-0.0300838	388.583	215.969
146	-0.693147	0.491582	-0.0225612	388.583	215.602
147	-0.693147	0.494949	-0.0150408	388.583	215.234
148	-0.693147	0.498316	-0.00501359	388.583	214.745
149	-0.693147	0.501684	0.00501359	388.583	214.255
150	-0.693147	0.505051	0.0150408	388.583	213.766
151	-0.693147	0.508418	0.0225612	388.583	213.398
152	-0.693147	0.511785	0.0300838	388.583	213.031
153	-0.693147	0.515152	0.0401167	388.583	212.541
154	-0.693147	0.518519	0.0476439	388.583	212.173
155	-0.693147	0.521886	0.0551734	388.583	211.806
156	-0.693147	0.525253	0.0652187	388.583	211.315
157	-0.693147	0.52862 0.0727562	388.583	210.947	
158	-0.693147	0.531987	0.0802981	388.583	210.579
159	-0.693147	0.535354	0.0903606	388.583	210.087
160	-0.693147	0.538721	0.0979139	388.583	209.719
161	-0.693147	0.542088	0.107995	388.583	209.226
162	-0.693147	0.545455	0.115562	388.583	208.857
163	-0.693147	0.548822	0.123135	388.583	208.487
164	-0.693147	0.552189	0.133244	388.583	207.993
165	-0.693147	0.555556	0.140835	388.583	207.623
166	-0.693147	0.558923	0.148434	388.583	207.251
167	-0.693147	0.56229 0.158579	388.583	206.756	
168	-0.693147	0.565657	0.166199	388.583	206.384
169	-0.693147	0.569024	0.176374	388.583	205.887
170	-0.693147	0.572391	0.184017	388.583	205.514
171	-0.693147	0.575758	0.191671	388.583	205.14
172	-0.693147	0.579125	0.201894	388.583	204.641

173	-0.693147	0.582492	0.209575	388.583	204.266
174	-0.693147	0.585859	0.217267	388.583	203.89
175	-0.693147	0.589226	0.227545	388.583	203.388
176	-0.693147	0.592593	0.235269	388.583	203.011
177	-0.693147	0.59596	0.243007	388.583	202.633
178	-0.693147	0.599327	0.253347	388.583	202.128
179	-0.693147	0.602694	0.26112	388.583	201.749
180	-0.693147	0.606061	0.271509	388.583	201.241
181	-0.693147	0.609428	0.279319	388.583	200.86
182	-0.693147	0.612795	0.287147	388.583	200.478
183	-0.693147	0.616162	0.297612	388.583	199.967
184	-0.693147	0.619529	0.305481	388.583	199.582
185	-0.693147	0.622896	0.31337	388.583	199.197
186	-0.693147	0.626263	0.323919	388.583	198.682
187	-0.693147	0.62963	0.331854	388.583	198.294
188	-0.693147	0.632997	0.33981	388.583	197.906
189	-0.693147	0.636364	0.350451	388.583	197.386
190	-0.693147	0.639731	0.358459	388.583	196.995
191	-0.693147	0.643098	0.369171	388.583	196.472
192	-0.693147	0.646465	0.377233	388.583	196.078
193	-0.693147	0.649832	0.385321	388.583	195.683
194	-0.693147	0.653199	0.396142	388.583	195.155
195	-0.693147	0.656566	0.40429	388.583	194.757
196	-0.693147	0.659933	0.412463	388.583	194.358
197	-0.693147	0.6633	0.423405	388.583	193.824
198	-0.693147	0.666667	0.431644	388.583	193.421
199	-0.693147	0.670034	0.442676	388.583	192.883
200	-0.693147	0.673401	0.450985	388.583	192.477
201	-0.693147	0.676768	0.459327	388.583	192.07
202	-0.693147	0.680135	0.470498	388.583	191.524
203	-0.693147	0.683502	0.478914	388.583	191.113
204	-0.693147	0.686869	0.487364	388.583	190.7
205	-0.693147	0.690236	0.498687	388.583	190.147
206	-0.693147	0.693603	0.507221	388.583	189.731
207	-0.693147	0.69697	0.515791	388.583	189.312
208	-0.693147	0.700337	0.52728	388.583	188.751
209	-0.693147	0.703704	0.53594	388.583	188.328
210	-0.693147	0.707071	0.547551	388.583	187.761
211	-0.693147	0.710438	0.556308	388.583	187.334
212	-0.693147	0.713805	0.565108	388.583	186.904
213	-0.693147	0.717172	0.576911	388.583	186.328
214	-0.693147	0.720539	0.585815	388.583	185.893
215	-0.693147	0.723906	0.594766	388.583	185.456
216	-0.693147	0.727273	0.606775	388.583	184.869
217	-0.693147	0.73064	0.615839	388.583	184.427
218	-0.693147	0.734007	0.628006	388.583	183.832
219	-0.693147	0.737374	0.637192	388.583	183.384
220	-0.693147	0.740741	0.646431	388.583	182.933
221	-0.693147	0.744108	0.658838	388.583	182.327
222	-0.693147	0.747475	0.668209	388.583	181.869
223	-0.693147	0.750842	0.677639	388.583	181.409
224	-0.693147	0.754209	0.690309	388.583	180.79
225	-0.693147	0.757576	0.699883	388.583	180.322
226	-0.693147	0.760943	0.709522	388.583	179.852
227	-0.693147	0.76431	0.722479	388.583	179.219
228	-0.693147	0.767677	0.732275	388.583	178.741
229	-0.693147	0.771044	0.745449	388.583	178.097
230	-0.693147	0.774411	0.755415	388.583	177.611
231	-0.693147	0.777778	0.765456	388.583	177.12
232	-0.693147	0.781145	0.778966	388.583	176.46
233	-0.693147	0.784512	0.789191	388.583	175.961
234	-0.693147	0.787879	0.7995	388.583	175.458

235	-0.693147	0.791246	0.813379	388.583	174.78
236	-0.693147	0.794613	0.823893	388.583	174.267
237	-0.693147	0.79798	0.834498	388.583	173.749
238	-0.693147	0.801347	0.848786	388.583	173.051
239	-0.693147	0.804714	0.859618	388.583	172.522
240	-0.693147	0.808081	0.874218	388.583	171.809
241	-0.693147	0.811448	0.885291	388.583	171.268
242	-0.693147	0.814815	0.896473	388.583	170.722
243	-0.693147	0.818182	0.911562	388.583	169.985
244	-0.693147	0.821549	0.923014	388.583	169.426
245	-0.693147	0.824916	0.93459	388.583	168.861
246	-0.693147	0.828283	0.950222	388.583	168.097
247	-0.693147	0.83165	0.9621	388.583	167.517
248	-0.693147	0.835017	0.97815	388.583	166.734
249	-0.693147	0.838384	0.990356	388.583	166.138
250	-0.693147	0.841751	1.00271	388.583	165.534
251	-0.693147	0.845118	1.01943	388.583	164.718
252	-0.693147	0.848485	1.03215	388.583	164.096
253	-0.693147	0.851852	1.04505	388.583	163.467
254	-0.693147	0.855219	1.06252	388.583	162.614
255	-0.693147	0.858586	1.07584	388.583	161.963
256	-0.693147	0.861953	1.08935	388.583	161.303
257	-0.693147	0.86532	1.10768	388.583	160.408
258	-0.693147	0.868687	1.12168	388.583	159.725
259	-0.693147	0.872054	1.14069	388.583	158.796
260	-0.693147	0.875421	1.15522	388.583	158.087
261	-0.693147	0.878788	1.17	388.583	157.365
262	-0.693147	0.882155	1.19012	388.583	156.383
263	-0.693147	0.885522	1.20553	388.583	155.63
264	-0.693147	0.888889	1.22123	388.583	154.863
265	-0.693147	0.892256	1.24264	388.583	153.818
266	-0.693147	0.895623	1.25908	388.583	153.015
267	-0.693147	0.89899	1.27588	388.583	152.195
268	-0.693147	0.902357	1.29884	388.583	151.074
269	-0.693147	0.905724	1.31652	388.583	150.21
270	-0.693147	0.909091	1.34075	388.583	149.026
271	-0.693147	0.912458	1.35946	388.583	148.113
272	-0.693147	0.915825	1.37866	388.583	147.176
273	-0.693147	0.919192	1.40507	388.583	145.886
274	-0.693147	0.922559	1.42554	388.583	144.886
275	-0.693147	0.925926	1.44663	388.583	143.856
276	-0.693147	0.929293	1.47579	388.583	142.432
277	-0.693147	0.93266	1.49852	388.583	141.323
278	-0.693147	0.936027	1.53007	388.583	139.782
279	-0.693147	0.939394	1.55477	388.583	138.575
280	-0.693147	0.942761	1.58047	388.583	137.321
281	-0.693147	0.946128	1.61644	388.583	135.564
282	-0.693147	0.949495	1.64485	388.583	134.176
283	-0.693147	0.952862	1.67466	388.583	132.721
284	-0.693147	0.956229	1.71688	388.583	130.659
285	-0.693147	0.959596	1.75069	388.583	129.008
286	-0.693147	0.962963	1.78661	388.583	127.254
287	-0.693147	0.96633	1.83843	388.583	124.724
288	-0.693147	0.969697	1.88079	388.583	122.655
289	-0.693147	0.973064	1.94314	388.583	119.61
290	-0.693147	0.976431	1.99539	388.583	117.058
291	-0.693147	0.979798	2.05375	388.583	114.209
292	-0.693147	0.983165	2.14441	388.583	109.781
293	-0.693147	0.986532	2.22621	388.583	105.787
294	-0.693147	0.989899	2.32634	388.583	100.897
295	-0.693147	0.993266	2.51213	388.583	91.8241
296	0	0.996633	2.74777	574	80.3175

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: 1,2-Dibromo-3-chloropropane

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 99.6622%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 24
Maximum Background Value = 0
Confidence Level = 75%
False Positive Rate = 25%

Location	Date	Count	Mean	Significant
LMW-6	11/16/2013	1	-1.51413	FALSE
LMW-9S	11/16/2013	1	-1.51413	FALSE
LMW-8	11/16/2013	1	-1.51413	FALSE
LMW-9D	11/16/2013	1	-1.51413	FALSE
LMW-10	11/16/2013	1	-1.51413	FALSE
LMW-3S	11/16/2013	1	-0.820981	FALSE
LMW-3	11/16/2013	1	-1.51413	FALSE
LMW-16	11/16/2013	1	-1.51413	FALSE
LMW-15R	11/16/2013	1	-1.51413	FALSE
LMW-14R	11/16/2013	1	-1.51413	FALSE
LMW-9	11/16/2013	1	-1.51413	FALSE
LMW-7	11/16/2012	1	-1.51413	FALSE
LMW-11	11/20/2008	1	-0.693147	FALSE
LMW-12	11/20/2008	1	-0.693147	FALSE
LMW-13	11/20/2008	1	-0.693147	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE

Concentrations (ppb)

Parameter: Arsenic

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 216
Percent Non-Detects: 72.973%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	22 (91.6667%)	1/16/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/14/2000	ND<2	ND<2
			9/23/2003	ND<2	ND<2
			3/10/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			6/2/2007	1 J	1 J
			11/15/2007	1 J	1 J
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.4 U	ND<0.4 U
			11/16/2009	ND<0.4 U	ND<0.4 U
			6/30/2010	ND<0.4 U	ND<0.4 U
			11/17/2010	ND<0.4 U	ND<0.4 U
			7/6/2011	ND<0.4 U	ND<0.4 U
			11/22/2011	ND<0.4 U	ND<0.4 U
			5/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2013	ND<0.4 U	ND<0.4 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	21	18 (85.7143%)	3/14/2000	23	23
			9/23/2003	ND<2	ND<2
			3/10/2004	25	25
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			6/2/2007	1 J	1 J
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.4 U	ND<0.4 U
			11/16/2009	ND<0.4 U	ND<0.4 U
			6/30/2010	ND<0.4 U	ND<0.4 U
			11/17/2010	ND<0.4 U	ND<0.4 U
			7/6/2011	ND<0.4 U	ND<0.4 U
			11/22/2011	ND<0.4 U	ND<0.4 U
			5/16/2012	ND<0.4 U	ND<0.4 U

			11/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2013	ND<0.4 U	ND<0.4 U
LMW-3S	14	11 (78.5714%)	11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	0.73 J B	0.73 J B
			11/16/2009	ND<0.4 U	ND<0.4 U
			6/30/2010	ND<0.4 U	ND<0.4 U
			11/17/2010	1	1
			7/6/2011	0.84 J	0.84 J
			11/22/2011	ND<0.4 U	ND<0.4 U
			5/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2013	ND<0.4 U	ND<0.4 U
LMW-6	24	20 (83.3333%)	1/16/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/14/2000	ND<2	ND<2
			9/23/2003	ND<2	ND<2
			3/10/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			6/2/2007	1 J	1 J
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	0.65 J B	0.65 J B
			11/16/2009	ND<0.4 U	ND<0.4 U
			6/30/2010	0.46 J	0.46 J
			11/17/2010	0.52 J	0.52 J
			7/6/2011	ND<0.4 U	ND<0.4 U
			11/22/2011	ND<0.4 U	ND<0.4 U
			5/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2013	ND<0.4 U	ND<0.4 U
LMW-3	26	24 (92.3077%)	11/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			1/16/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/14/2000	ND<2	ND<2
			9/23/2003	ND<2	ND<2
			3/10/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	0.42 J B	0.42 J B
			11/16/2009	ND<0.4 U	ND<0.4 U

			6/30/2010	ND<0.4 U	ND<0.4 U
			11/17/2010	0.44 J	0.44 J
			7/6/2011	ND<0.4 U	ND<0.4 U
			11/22/2011	ND<0.4 U	ND<0.4 U
			5/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2013	ND<0.4 U	ND<0.4 U
LMW-16	14	3 (21.4286%)	11/18/2006	ND<2	ND<2
			6/2/2007	2	2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	9	9
			6/11/2009	0.56 J	0.56 J
			11/16/2009	0.59 J	0.59 J
			6/30/2010	0.5 J	0.5 J
			11/17/2010	0.54 J	0.54 J
			7/6/2011	1	1
			11/22/2011	0.54 J	0.54 J
			5/16/2012	1.8	1.8
			11/16/2012	1.1	1.1
			11/16/2013	2.4	2.4
LMW-14R	15	11 (73.3333%)	6/2/2007	1 J	1 J
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	9	9
			6/11/2009	0.41 J	0.41 J
			11/16/2009	ND<0.4 U	ND<0.4 U
			11/16/2009	ND<0.4 U	ND<0.4 U
			11/16/2009	0.47 J	0.47 J
			6/30/2010	ND<0.4 U	ND<0.4 U
			11/17/2010	ND<0.4 U	ND<0.4 U
			7/6/2011	ND<0.4 U	ND<0.4 U
			11/22/2011	ND<0.4 U	ND<0.4 U
			5/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2013	ND<0.4 U	ND<0.4 U
LMW-8	24	16 (66.6667%)	1/16/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/14/2000	ND<2	ND<2
			9/23/2003	ND<2	ND<2
			3/10/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	0.49 J	0.49 J
			11/16/2009	0.53 J	0.53 J
			6/30/2010	0.43 J	0.43 J
			11/17/2010	0.48 J	0.48 J
			7/6/2011	0.81 J	0.81 J
			11/22/2011	1.2	1.2
			5/16/2012	1.3	1.3
			11/16/2012	1.7	1.7

			11/16/2013	ND<0.4 U	ND<0.4 U	
LMW-9	24	16 (66.6667%)	1/16/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	3	3	
			3/14/2000	ND<2	ND<2	
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	1 J	1 J	
			10/26/2005	ND<2	ND<2	
			6/19/2006	1 J	1 J	
			11/18/2006	ND<2	ND<2	
			6/2/2007	1 J	1 J	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	8	8	
			6/11/2009	1.1 J	1.1 J	
			11/16/2009	ND<0.4 U	ND<0.4 U	
			6/30/2010	0.58 J	0.58 J	
			11/17/2010	1.6	1.6	
			7/6/2011	ND<0.4 U	ND<0.4 U	
			11/22/2011	ND<0.4 U	ND<0.4 U	
			5/16/2012	ND<0.4 U	ND<0.4 U	
			11/16/2012	ND<0.4 U	ND<0.4 U	
			11/16/2013	ND<0.4 U	ND<0.4 U	
LMW-9D	14	1 (7.14286%)	11/18/2006	7	7	
			6/2/2007	7	7	
			11/15/2007	ND<2	ND<2	
			5/20/2008	3	3	
			11/20/2008	3	3	
			6/11/2009	2.1	2.1	
			11/16/2009	2	2	
			6/30/2010	1.8	1.8	
			11/17/2010	2	2	
			7/6/2011	3.2	3.2	
			11/22/2011	2.5	2.5	
			5/16/2012	2.6	2.6	
			11/16/2012	5.3	5.3	
			11/16/2013	2.1	2.1	
LMW-9S	13	3 (23.0769%)	11/18/2006	ND<2	ND<2	
			6/2/2007	1 J	1 J	
			11/15/2007	4	4	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	0.46 J	0.46 J	
			6/30/2010	0.57 J	0.57 J	
			11/17/2010	1.2	1.2	
			7/6/2011	0.46 J	0.46 J	
			11/22/2011	0.47 J	0.47 J	
			5/16/2012	0.54 J	0.54 J	
			11/16/2012	1.2	1.2	
			11/16/2013	0.62 J	0.62 J	
LMW-15R		16	15 (93.75%)	11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	

			11/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	2.5	2.5	
			6/30/2010	ND<0.4 U		ND<0.4 U
			11/17/2010	ND<0.4 U		ND<0.4 U
			7/6/2011	ND<0.4 U	ND<0.4 U	
			11/22/2011	ND<0.4 U		ND<0.4 U
			5/16/2012	ND<0.4 U		ND<0.4 U
			11/16/2012	ND<0.4 U		ND<0.4 U
			11/16/2013	ND<0.4 U		ND<0.4 U
LMW-7	21	16 (76.1905%)	1/16/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/14/2000	10	10	
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	1 J	1 J	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	10	10	
			6/11/2009	1.1 J B	1.1 J B	
			11/17/2010	ND<0.4 U		ND<0.4 U
			7/6/2011	1.8	1.8	
			11/22/2011	ND<0.4 U		ND<0.4 U
			5/16/2012	ND<0.4 U		ND<0.4 U
			11/16/2012	ND<0.4 U		ND<0.4 U
MW-5	13	11 (84.6154%)	1/16/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/14/2000	34	34	
			9/23/2003	ND<2	ND<2	
			3/10/2004	60	60	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
LMW-13	11	10 (90.9091%)	3/14/2000	16	16	
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
LMW-12	11	10 (90.9091%)	3/14/2000	57	57	
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	

			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
LMW-11	11	9 (81.8182%)	3/14/2000	12	12
			9/23/2003	ND<2	ND<2
			3/10/2004	18	18
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Arsenic

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.2	-2.747777	55021	-0.549553
2	0.2	-2.512131	3.861	-1.05198
3	0.2	-2.326341	9.2729	-1.51725
4	0.2	-2.226212	4.2289	-1.96249
5	0.2	-2.144412	8.8274	-2.39137
6	0.2	-2.053753	3.0453	-2.80212
7	0.2	-1.995393	7.0269	-3.2012
8	0.2	-1.943144	0.8026	-3.58983
9	0.2	-1.880794	4.34	-3.96598
10	0.2	-1.838434	7.7198	-4.33367
11	0.2	-1.786615	0.9118	-4.69099
12	0.2	-1.750695	3.9767	-5.04113
13	0.2	-1.716885	6.9244	-5.38451
14	0.2	-1.674665	9.7289	-5.71944
15	0.2	-1.644856	2.4344	-6.04841
16	0.2	-1.616446	5.0473	-6.3717
17	0.2	-1.580476	7.5452	-6.68779
18	0.2	-1.554776	9.9625	-6.99874
19	0.2	-1.530077	2.3036	-7.30476
20	0.2	-1.498527	4.5491	-7.60446
21	0.2	-1.475797	6.7271	-7.89962
22	0.2	-1.446637	8.8198	-8.18894
23	0.2	-1.425548	0.852	-8.47405
24	0.2	-1.405078	2.8262	-8.75507
25	0.2	-1.378668	4.7269	-9.0308
26	0.2	-1.359468	6.5751	-9.30269
27	0.2	-1.340758	8.3727	-9.57084
28	0.2	-1.316529	0.1059	-9.83415
29	0.2	-1.298849	1.7929	-10.0939
30	0.2	-1.275889	3.4208	-10.3491
31	0.2	-1.259089	5.006	-10.6009
32	0.2	-1.242649	6.5502	-10.8494
33	0.2	-1.221239	8.0416	-11.0937
34	0.2	-1.205539	9.4949	-11.3348
35	0.2	-1.190121	00.911	-11.5728
36	0.2	-1.17	102.28	-11.8068
37	0.2	-1.155221	03.615	-12.0379
38	0.2	-1.140691	04.916	-12.266
39	0.2	-1.121681	06.174	-12.4903
40	0.2	-1.107681	07.401	-12.7119
41	0.2	-1.089351	08.588	-12.9297
42	0.2	-1.075841	09.745	-13.1449
43	0.2	-1.062521	10.874	-13.3574
44	0.2	-1.045051	11.966	-13.5664
45	0.2	-1.032151	13.032	-13.7728
46	0.2	-1.019431	14.071	-13.9767
47	0.2	-1.002711	15.076	-14.1773
48	0.2	-0.990356	116.057	-14.3753
49	0.2	-0.978151	17.014	-14.571
50	0.2	-0.9621	117.939	-14.7634
51	0.2	-0.950222	118.842	-14.9534

52	0.2	-0.93459	119.716	-15.1404
53	0.2	-0.923014	120.568	-15.325
54	0.2	-0.911562	121.399	-15.5073
55	0.2	-0.896473	122.202	-15.6866
56	0.2	-0.885291	122.986	-15.8636
57	0.2	-0.874218	123.75	-16.0385
58	0.2	-0.859618	124.489	-16.2104
59	0.2	-0.848786	125.21	-16.3801
60	0.2	-0.834498	125.906	-16.547
61	0.2	-0.823893	126.585	-16.7118
62	0.2	-0.813379	127.247	-16.8745
63	0.2	-0.7995	127.886	-17.0344
64	0.2	-0.789191	128.509	-17.1922
65	0.41	-0.778966	129.115	-17.5116
66	0.42	-0.765456	129.701	-17.8331
67	0.43	-0.755415	130.272	-18.1579
68	0.44	-0.745449	130.828	-18.4859
69	0.46	-0.732275	131.364	-18.8228
70	0.46	-0.722479	131.886	-19.1551
71	0.46	-0.709522	132.389	-19.4815
72	0.47	-0.699883	132.879	-19.8104
73	0.47	-0.690309	133.356	-20.1349
74	0.48	-0.677639	133.815	-20.4602
75	0.49	-0.668209	134.261	-20.7876
76	0.5	-0.658838	134.695	-21.117
77	0.52	-0.646431	135.113	-21.4531
78	0.53	-0.637192	135.519	-21.7909
79	0.54	-0.628006	135.914	-22.13
80	0.54	-0.615839	136.293	-22.4625
81	0.54	-0.606775	136.661	-22.7902
82	0.56	-0.594766	137.015	-23.1233
83	0.57	-0.585815	137.358	-23.4572
84	0.58	-0.576911	137.691	-23.7918
85	0.59	-0.565108	138.01	-24.1252
86	0.62	-0.556308	138.32	-24.4701
87	0.65	-0.547551	138.619	-24.826
88	0.73	-0.53594	138.907	-25.2173
89	0.81	-0.52728	139.185	-25.6443
90	0.84	-0.515791	139.451	-26.0776
91	1	-0.507221	139.708	-26.5848
92	1	-0.498687	139.957	-27.0835
93	1	-0.487364	140.194	-27.5709
94	1	-0.478914	140.424	-28.0498
95	1	-0.470498	140.645	-28.5203
96	1	-0.459327	140.856	-28.9796
97	1	-0.450985	141.059	-29.4306
98	1	-0.442676	141.255	-29.8733
99	1	-0.431644	141.442	-30.3049
100	1	-0.423405	141.621	-30.7283
101	1	-0.412463	141.791	-31.1408
102	1	-0.40429	141.954	-31.5451
103	1	-0.396142	142.111	-31.9412
104	1	-0.385321	142.26	-32.3265
105	1	-0.377233	142.402	-32.7038
106	1	-0.369171	142.538	-33.073
107	1	-0.358459	142.667	-33.4314
108	1	-0.350451	142.79	-33.7819
109	1	-0.33981	142.905	-34.1217
110	1	-0.331854	143.015	-34.4535
111	1	-0.323919	143.12	-34.7774
112	1	-0.31337	143.218	-35.0908
113	1	-0.305481	143.312	-35.3963

114	1	-0.297612	143.4	-35.6939
115	1	-0.287147	143.483	-35.9811
116	1	-0.279319	143.561	-36.2604
117	1	-0.271509	143.635	-36.5319
118	1	-0.26112143.703	-36.793	
119	1	-0.253347	143.767	-37.0464
120	1	-0.243007	143.826	-37.2894
121	1	-0.235269	143.881	-37.5246
122	1	-0.227545	143.933	-37.7522
123	1	-0.217267	143.98	-37.9694
124	1	-0.209575	144.024	-38.179
125	1	-0.201894	144.065	-38.3809
126	1	-0.191671	144.102	-38.5726
127	1	-0.184017	144.136	-38.7566
128	1	-0.176374	144.167	-38.933
129	1	-0.166199	144.194	-39.0992
130	1	-0.158579	144.219	-39.2577
131	1	-0.148434	144.241	-39.4062
132	1	-0.140835	144.261	-39.547
133	1	-0.133244	144.279	-39.6803
134	1	-0.123135	144.294	-39.8034
135	1	-0.115562	144.308	-39.919
136	1	-0.107995	144.319	-40.027
137	1	-0.0979139	144.329	-40.1249
138	1	-0.0903606	144.337	-40.2152
139	1	-0.0802981	144.343	-40.2955
140	1	-0.0727562	144.349	-40.3683
141	1	-0.0652187	144.353	-40.4335
142	1	-0.0551734	144.356	-40.4887
143	1	-0.0476439	144.358	-40.5363
144	1	-0.0401167	144.36	-40.5764
145	1	-0.0300838	144.361	-40.6065
146	1	-0.0225612	144.361	-40.6291
147	1	-0.0150408	144.362	-40.6441
148	1	-0.00501359	144.362	-40.6491
149	1	0.00501359	144.362	-40.6441
150	1	0.0150408	144.362	-40.6291
151	1	0.0225612	144.362	-40.6065
152	1	0.0300838	144.363	-40.5764
153	1	0.0401167	144.365	-40.5363
154	1	0.0476439	144.367	-40.4887
155	1	0.0551734	144.37	-40.4335
156	1	0.0652187	144.374	-40.3683
157	1	0.0727562	144.38	-40.2955
158	1	0.0802981	144.386	-40.2152
159	1	0.0903606	144.394	-40.1249
160	1	0.0979139	144.404	-40.027
161	1	0.107995	144.416	-39.919
162	1	0.115562	144.429	-39.8034
163	1	0.123135	144.444	-39.6803
164	1	0.133244	144.462	-39.547
165	1	0.140835	144.482	-39.4062
166	1	0.148434	144.504	-39.2577
167	1	0.158579	144.529	-39.0992
168	1	0.166199	144.557	-38.933
169	1	0.176374	144.588	-38.7566
170	1	0.184017	144.621	-38.5726
171	1	0.191671	144.658	-38.3809
172	1	0.201894	144.699	-38.179
173	1	0.209575	144.743	-37.9694
174	1	0.217267	144.79	-37.7522
175	1	0.227545	144.842	-37.5246

176	1	0.235269	144.897	-37.2894
177	1	0.243007	144.956	-37.0464
178	1	0.253347	145.02	-36.793
179	1	0.26112	145.089	-36.5319
180	1	0.271509	145.162	-36.2604
181	1	0.279319	145.24	-35.9811
182	1	0.287147	145.323	-35.6939
183	1	0.297612	145.411	-35.3963
184	1	0.305481	145.505	-35.0908
185	1	0.31337	145.603	-34.7774
186	1	0.323919	145.708	-34.4535
187	1	0.331854	145.818	-34.1217
188	1	0.33981	145.933	-33.7819
189	1	0.350451	146.056	-33.4314
190	1	0.358459	146.185	-33.073
191	1	0.369171	146.321	-32.7038
192	1	0.377233	146.463	-32.3265
193	1	0.385321	146.612	-31.9412
194	1	0.396142	146.769	-31.5451
195	1	0.40429	146.932	-31.1408
196	1	0.412463	147.102	-30.7283
197	1	0.423405	147.282	-30.3049
198	1	0.431644	147.468	-29.8733
199	1	0.442676	147.664	-29.4306
200	1	0.450985	147.867	-28.9796
201	1	0.459327	148.078	-28.5203
202	1	0.470498	148.3	-28.0498
203	1	0.478914	148.529	-27.5709
204	1	0.487364	148.767	-27.0835
205	1	0.498687	149.015	-26.5848
206	1	0.507221	149.272	-26.0776
207	1	0.515791	149.539	-25.5618
208	1	0.52728	149.817	-25.0345
209	1	0.53594	150.104	-24.4986
210	1	0.547551	150.404	-23.9511
211	1	0.556308	150.713	-23.3947
212	1	0.565108	151.032	-22.8296
213	1	0.576911	151.365	-22.2527
214	1	0.585815	151.708	-21.6669
215	1	0.594766	152.062	-21.0721
216	1	0.606775	152.43	-20.4654
217	1	0.615839	152.81	-19.8495
218	1	0.628006	153.204	-19.2215
219	1	0.637192	153.61	-18.5843
220	1	0.646431	154.028	-17.9379
221	1	0.658838	154.462	-17.2791
222	1	0.668209	154.908	-16.6109
223	1	0.677639	155.368	-15.9332
224	1	0.690309	155.844	-15.2429
225	1	0.699883	156.334	-14.543
226	1	0.709522	156.837	-13.8335
227	1	0.722479	157.359	-13.111
228	1	0.732275	157.896	-12.3787
229	1	0.745449	158.451	-11.6333
230	1	0.755415	159.022	-10.8779
231	1	0.765456	159.608	-10.1124
232	1	0.778966	160.215	-9.33346
233	1	0.789191	160.837	-8.54427
234	1	0.7995	161.477	-7.74477
235	1	0.813379	162.138	-6.93139
236	1	0.823893	162.817	-6.1075
237	1	0.834498	163.513	-5.273

238	1	0.848786		164.234	-4.42421
239	1	0.859618		164.973	-3.56459
240	1	0.874218		165.737	-2.69038
241	1	0.885291		166.521	-1.80509
242	1	0.896473		167.325	-0.908612
243	1	0.911562		168.155	0.00294908
244	1	0.923014		169.007	0.925963
245	1	0.93459	169.881	1.86055	
246	1	0.950222		170.784	2.81078
247	1	0.9621	171.709	3.77288	
248	1	0.97815	172.666	4.75103	
249	1	0.990356		173.647	5.74138
250	1	1.00271	174.652	6.74409	
251	1	1.01943	175.692	7.76352	
252	1	1.03215	176.757	8.79567	
253	1	1.04505	177.849	9.84072	
254	1	1.06252	178.978	10.9032	
255	1.1	1.07584	180.136	12.0867	
256	1.1	1.08935	181.322	13.2849	
257	1.1	1.10768	182.549	14.5034	
258	1.2	1.12168	183.807	15.8494	
259	1.2	1.14069	185.108	17.2182	
260	1.2	1.15522	186.443	18.6045	
261	1.3	1.17	187.812	20.1255	
262	1.6	1.19012	189.228	22.0297	
263	1.7	1.20553	190.682	24.0791	
264	1.8	1.22123	192.173	26.2773	
265	1.8	1.24264	193.717	28.5141	
266	1.8	1.25908	195.302	30.7804	
267	2	1.27588	196.93	33.3322	
268	2	1.29884	198.617	35.9298	
269	2	1.31652	200.351	38.5629	
270	2.1	1.34075	202.148	41.3785	
271	2.1	1.35946	203.996	44.2333	
272	2.4	1.37866	205.897	47.5421	
273	2.5	1.40507	207.871	51.0548	
274	2.5	1.42554	209.903	54.6187	
275	2.6	1.44663	211.996	58.3799	
276	3	1.47579	214.174	62.8073	
277	3	1.49852	216.42	67.3028	
278	3	1.53007	218.761	71.893	
279	3.2	1.55477	221.178	76.8683	
280	4	1.58047	223.676	83.1901	
281	5.3	1.61644	226.289	91.7573	
282	7	1.64485	228.994	103.271	
283	7	1.67466	231.799	114.994	
284	8	1.71688	234.747	128.729	
285	9	1.75069	237.811	144.485	
286	9	1.78661	241.003	160.565	
287	10	1.83843	244.383	178.949	
288	10	1.88079	247.921	197.757	
289	12	1.94314	251.696	221.074	
290	16	1.99539	255.678	253.001	
291	18	2.05375	259.896	289.968	
292	23	2.14441	264.494	339.29	
293	25	2.22621	269.45	394.945	
294	34	2.32634	274.862	474.04	
295	57	2.51213	281.173	617.232	
296	60	2.74777	288.723	782.098	

Data Set Standard Deviation = 5.73267

Numerator = 611677
Denominator = 2.79909e+006
W Statistic = 0.218527 = 611677 / 2.79909e+006

5% Critical value of 0.976 exceeds 0.218527
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.218527
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Arsenic

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.472861
0.472861 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.2	0.003367	-2.74777	40.7833	348.683	
2	0.2	0.00673401	-2.51213	40.7833	337.176	
3	0.2	0.010101	-2.32634	40.7833	328.103	
4	0.2	0.013468	-2.22621	40.7833	323.213	
5	0.2	0.016835	-2.14441	40.7833	319.219	
6	0.2	0.020202	-2.05375	40.7833	314.791	
7	0.2	0.023569	-1.99539	40.7833	311.942	
8	0.2	0.026936	-1.94314	40.7833	309.39	
9	0.2	0.030303	-1.88079	40.7833	306.345	
10	0.2	0.03367	-1.83843	40.7833	304.276	
11	0.2	0.037037	-1.78661	40.7833	301.746	
12	0.2	0.040404	-1.75069	40.7833	299.992	
13	0.2	0.043771	-1.71688	40.7833	298.341	
14	0.2	0.047138	-1.67466	40.7833	296.279	
15	0.2	0.0505051	-1.64485	40.7833	294.824	
16	0.2	0.0538721	-1.61644	40.7833	293.436	
17	0.2	0.0572391	-1.58047	40.7833	291.679	
18	0.2	0.0606061	-1.55477	40.7833	290.425	
19	0.2	0.0639731	-1.53007	40.7833	289.218	
20	0.2	0.0673401	-1.49852	40.7833	287.677	
21	0.2	0.0707071	-1.47579	40.7833	286.568	
22	0.2	0.0740741	-1.44663	40.7833	285.144	
23	0.2	0.0774411	-1.42554	40.7833	284.114	
24	0.2	0.0808081	-1.40507	40.7833	283.114	
25	0.2	0.0841751	-1.37866	40.7833	281.824	
26	0.2	0.0875421	-1.35946	40.7833	280.887	
27	0.2	0.0909091	-1.34075	40.7833	279.974	
28	0.2	0.0942761	-1.31652	40.7833	278.79	
29	0.2	0.0976431	-1.29884	40.7833	277.926	
30	0.2	0.10101	-1.27588	40.7833	276.805	
31	0.2	0.104377	-1.25908	40.7833	275.985	
32	0.2	0.107744	-1.24264	40.7833	275.182	
33	0.2	0.111111	-1.22123	40.7833	274.137	
34	0.2	0.114478	-1.20553	40.7833	273.37	
35	0.2	0.117845	-1.19012	40.7833	272.617	
36	0.2	0.121212	-1.17	40.7833	271.635	
37	0.2	0.124579	-1.15522	40.7833	270.913	
38	0.2	0.127946	-1.14069	40.7833	270.204	
39	0.2	0.131313	-1.12168	40.7833	269.275	
40	0.2	0.13468	-1.10768	40.7833	268.592	
41	0.2	0.138047	-1.08935	40.7833	267.697	
42	0.2	0.141414	-1.07584	40.7833	267.037	
43	0.2	0.144781	-1.06252	40.7833	266.386	
44	0.2	0.148148	-1.04505	40.7833	265.533	
45	0.2	0.151515	-1.03215	40.7833	264.904	
46	0.2	0.154882	-1.01943	40.7833	264.282	
47	0.2	0.158249	-1.00271	40.7833	263.466	
48	0.2	0.161616	-0.990356	40.7833	262.862	

49	0.2	0.164983	-0.978154	0.7833	262.266
50	0.2	0.16835	-0.9621	40.7833	261.483
51	0.2	0.171717	-0.950222	40.7833	260.903
52	0.2	0.175084	-0.934594	0.7833	260.139
53	0.2	0.178451	-0.923014	40.7833	259.574
54	0.2	0.181818	-0.911562	40.7833	259.015
55	0.2	0.185185	-0.896473	40.7833	258.278
56	0.2	0.188552	-0.885291	40.7833	257.732
57	0.2	0.191919	-0.874218	40.7833	257.191
58	0.2	0.195286	-0.859618	40.7833	256.478
59	0.2	0.198653	-0.848786	40.7833	255.949
60	0.2	0.20202	-0.834498	40.7833	255.251
61	0.2	0.205387	-0.823893	40.7833	254.733
62	0.2	0.208754	-0.813379	40.7833	254.22
63	0.2	0.212121	-0.7995	40.7833	253.542
64	0.2	0.215488	-0.789191	40.7833	253.039
65	0.41	0.218855	-0.778966	42.6558	252.54
66	0.42	0.222222	-0.765456	42.745	251.88
67	0.43	0.225589	-0.755415	42.8342	251.389
68	0.44	0.228956	-0.745449	42.9233	250.903
69	0.46	0.232323	-0.732275	43.1017	250.259
70	0.46	0.23569	-0.722479	43.1017	249.781
71	0.46	0.239057	-0.709522	43.1017	249.148
72	0.47	0.242424	-0.699883	43.1908	248.678
73	0.47	0.245791	-0.690309	43.1908	248.21
74	0.48	0.249158	-0.677639	43.28	247.591
75	0.49	0.252525	-0.668209	43.3692	247.131
76	0.5	0.255892	-0.658838	43.4583	246.673
77	0.52	0.259259	-0.646431	43.6367	246.067
78	0.53	0.262626	-0.637192	43.7258	245.616
79	0.54	0.265993	-0.628006	43.815	245.168
80	0.54	0.26936	-0.615839	43.815	244.573
81	0.54	0.272727	-0.606775	43.815	244.131
82	0.56	0.276094	-0.594766	43.9933	243.544
83	0.57	0.279461	-0.585815	44.0825	243.107
84	0.58	0.282828	-0.576911	44.1717	242.672
85	0.59	0.286195	-0.565108	44.2608	242.096
86	0.62	0.289562	-0.556308	44.5283	241.666
87	0.65	0.292929	-0.547551	44.7958	241.239
88	0.73	0.296296	-0.535944	5.5092	240.672
89	0.81	0.299663	-0.527284	6.2225	240.249
90	0.84	0.30303	-0.515791	46.49	239.688
91	1	0.306397	-0.507221	47.9167	239.269
92	1	0.309764	-0.498687	47.9167	238.853
93	1	0.313131	-0.487364	47.9167	238.3
94	1	0.316498	-0.478914	47.9167	237.887
95	1	0.319865	-0.470498	47.9167	237.476
96	1	0.323232	-0.459327	47.9167	236.93
97	1	0.326599	-0.450985	47.9167	236.523
98	1	0.329966	-0.442676	47.9167	236.117
99	1	0.333333	-0.431644	47.9167	235.579
100	1	0.3367	-0.423405	47.9167	235.176
101	1	0.340067	-0.412463	47.9167	234.642
102	1	0.343434	-0.404294	7.9167	234.243
103	1	0.346801	-0.396142	47.9167	233.845
104	1	0.350168	-0.385321	47.9167	233.317
105	1	0.353535	-0.377233	47.9167	232.922
106	1	0.356902	-0.369171	47.9167	232.528
107	1	0.360269	-0.358459	47.9167	232.005
108	1	0.363636	-0.350451	47.9167	231.614
109	1	0.367003	-0.339814	7.9167	231.094
110	1	0.37037	-0.331854	47.9167	230.706

111	1	0.373737	-0.323919	47.9167	230.318
112	1	0.377104	-0.3133747.9167	229.803	
113	1	0.380471	-0.305481	47.9167	229.418
114	1	0.383838	-0.297612	47.9167	229.033
115	1	0.387205	-0.287147	47.9167	228.522
116	1	0.390572	-0.279319	47.9167	228.14
117	1	0.393939	-0.271509	47.9167	227.759
118	1	0.397306	-0.2611247.9167	227.251	
119	1	0.400673	-0.253347	47.9167	226.872
120	1	0.40404 -0.243007	47.9167	226.367	
121	1	0.407407	-0.235269	47.9167	225.989
122	1	0.410774	-0.227545	47.9167	225.612
123	1	0.414141	-0.217267	47.9167	225.11
124	1	0.417508	-0.209575	47.9167	224.734
125	1	0.420875	-0.201894	47.9167	224.359
126	1	0.424242	-0.191671	47.9167	223.86
127	1	0.427609	-0.184017	47.9167	223.486
128	1	0.430976	-0.176374	47.9167	223.113
129	1	0.434343	-0.166199	47.9167	222.616
130	1	0.43771 -0.158579	47.9167	222.244	
131	1	0.441077	-0.148434	47.9167	221.749
132	1	0.444444	-0.140835	47.9167	221.377
133	1	0.447811	-0.133244	47.9167	221.007
134	1	0.451178	-0.123135	47.9167	220.513
135	1	0.454545	-0.115562	47.9167	220.143
136	1	0.457912	-0.107995	47.9167	219.774
137	1	0.461279	-0.0979139	47.9167	219.281
138	1	0.464646	-0.0903606	47.9167	218.913
139	1	0.468013	-0.0802981	47.9167	218.421
140	1	0.47138 -0.0727562	47.9167	218.053	
141	1	0.474747	-0.0652187	47.9167	217.685
142	1	0.478114	-0.0551734	47.9167	217.194
143	1	0.481481	-0.0476439	47.9167	216.827
144	1	0.484848	-0.0401167	47.9167	216.459
145	1	0.488215	-0.0300838	47.9167	215.969
146	1	0.491582	-0.0225612	47.9167	215.602
147	1	0.494949	-0.0150408	47.9167	215.234
148	1	0.498316	-0.00501359	47.9167	214.745
149	1	0.501684	0.00501359	47.9167	214.255
150	1	0.505051	0.0150408	47.9167	213.766
151	1	0.508418	0.0225612	47.9167	213.398
152	1	0.511785	0.0300838	47.9167	213.031
153	1	0.515152	0.0401167	47.9167	212.541
154	1	0.518519	0.0476439	47.9167	212.173
155	1	0.521886	0.0551734	47.9167	211.806
156	1	0.525253	0.0652187	47.9167	211.315
157	1	0.52862 0.0727562	47.9167	210.947	
158	1	0.531987	0.0802981	47.9167	210.579
159	1	0.535354	0.0903606	47.9167	210.087
160	1	0.538721	0.0979139	47.9167	209.719
161	1	0.542088	0.107995	47.9167	209.226
162	1	0.545455	0.115562	47.9167	208.857
163	1	0.548822	0.123135	47.9167	208.487
164	1	0.552189	0.133244	47.9167	207.993
165	1	0.555556	0.140835	47.9167	207.623
166	1	0.558923	0.148434	47.9167	207.251
167	1	0.56229 0.158579	47.9167	206.756	
168	1	0.565657	0.166199	47.9167	206.384
169	1	0.569024	0.176374	47.9167	205.887
170	1	0.572391	0.184017	47.9167	205.514
171	1	0.575758	0.191671	47.9167	205.14
172	1	0.579125	0.201894	47.9167	204.641

173	1	0.582492	0.209575	47.9167	204.266
174	1	0.585859	0.217267	47.9167	203.89
175	1	0.589226	0.227545	47.9167	203.388
176	1	0.592593	0.235269	47.9167	203.011
177	1	0.59596	0.243007	47.9167	202.633
178	1	0.599327	0.253347	47.9167	202.128
179	1	0.602694	0.26112	47.9167	201.749
180	1	0.606061	0.271509	47.9167	201.241
181	1	0.609428	0.279319	47.9167	200.86
182	1	0.612795	0.287147	47.9167	200.478
183	1	0.616162	0.297612	47.9167	199.967
184	1	0.619529	0.305481	47.9167	199.582
185	1	0.622896	0.31337	47.9167	199.197
186	1	0.626263	0.323919	47.9167	198.682
187	1	0.62963	0.331854	47.9167	198.294
188	1	0.632997	0.33981	47.9167	197.906
189	1	0.636364	0.350451	47.9167	197.386
190	1	0.639731	0.358459	47.9167	196.995
191	1	0.643098	0.369171	47.9167	196.472
192	1	0.646465	0.377233	47.9167	196.078
193	1	0.649832	0.385321	47.9167	195.683
194	1	0.653199	0.396142	47.9167	195.155
195	1	0.656566	0.40429	47.9167	194.757
196	1	0.659933	0.412463	47.9167	194.358
197	1	0.6633	0.423405	47.9167	193.824
198	1	0.666667	0.431644	47.9167	193.421
199	1	0.670034	0.442676	47.9167	192.883
200	1	0.673401	0.450985	47.9167	192.477
201	1	0.676768	0.459327	47.9167	192.07
202	1	0.680135	0.470498	47.9167	191.524
203	1	0.683502	0.478914	47.9167	191.113
204	1	0.686869	0.487364	47.9167	190.7
205	1	0.690236	0.498687	47.9167	190.147
206	1	0.693603	0.507221	47.9167	189.731
207	1	0.69697	0.515791	47.9167	189.312
208	1	0.700337	0.52728	47.9167	188.751
209	1	0.703704	0.53594	47.9167	188.328
210	1	0.707071	0.547551	47.9167	187.761
211	1	0.710438	0.556308	47.9167	187.334
212	1	0.713805	0.565108	47.9167	186.904
213	1	0.717172	0.576911	47.9167	186.328
214	1	0.720539	0.585815	47.9167	185.893
215	1	0.723906	0.594766	47.9167	185.456
216	1	0.727273	0.606775	47.9167	184.869
217	1	0.73064	0.615839	47.9167	184.427
218	1	0.734007	0.628006	47.9167	183.832
219	1	0.737374	0.637192	47.9167	183.384
220	1	0.740741	0.646431	47.9167	182.933
221	1	0.744108	0.658838	47.9167	182.327
222	1	0.747475	0.668209	47.9167	181.869
223	1	0.750842	0.677639	47.9167	181.409
224	1	0.754209	0.690309	47.9167	180.79
225	1	0.757576	0.699883	47.9167	180.322
226	1	0.760943	0.709522	47.9167	179.852
227	1	0.76431	0.722479	47.9167	179.219
228	1	0.767677	0.732275	47.9167	178.741
229	1	0.771044	0.745449	47.9167	178.097
230	1	0.774411	0.755415	47.9167	177.611
231	1	0.777778	0.765456	47.9167	177.12
232	1	0.781145	0.778966	47.9167	176.46
233	1	0.784512	0.789191	47.9167	175.961
234	1	0.787879	0.7995	47.9167	175.458

235	1	0.791246	0.813379	47.9167	174.78
236	1	0.794613	0.823893	47.9167	174.267
237	1	0.79798	0.834498	47.9167	173.749
238	1	0.801347	0.848786	47.9167	173.051
239	1	0.804714	0.859618	47.9167	172.522
240	1	0.808081	0.874218	47.9167	171.809
241	1	0.811448	0.885291	47.9167	171.268
242	1	0.814815	0.896473	47.9167	170.722
243	1	0.818182	0.911562	47.9167	169.985
244	1	0.821549	0.923014	47.9167	169.426
245	1	0.824916	0.93459	47.9167	168.861
246	1	0.828283	0.950222	47.9167	168.097
247	1	0.83165	0.9621	47.9167	167.517
248	1	0.835017	0.97815	47.9167	166.734
249	1	0.838384	0.990356	47.9167	166.138
250	1	0.841751	1.00271	47.9167	165.534
251	1	0.845118	1.01943	47.9167	164.718
252	1	0.848485	1.03215	47.9167	164.096
253	1	0.851852	1.04505	47.9167	163.467
254	1	0.855219	1.06252	47.9167	162.614
255	1.1	0.858586	1.07584	48.8083	161.963
256	1.1	0.861953	1.08935	48.8083	161.303
257	1.1	0.86532	1.10768	48.8083	160.408
258	1.2	0.868687	1.12168	49.7	159.725
259	1.2	0.872054	1.14069	49.7	158.796
260	1.2	0.875421	1.15522	49.7	158.087
261	1.3	0.878788	1.17	50.5917	157.365
262	1.6	0.882155	1.19012	53.2667	156.383
263	1.7	0.885522	1.20553	54.1583	155.63
264	1.8	0.888889	1.22123	55.05	154.863
265	1.8	0.892256	1.24264	55.05	153.818
266	1.8	0.895623	1.25908	55.05	153.015
267	2	0.89899	1.27588	56.8333	152.195
268	2	0.902357	1.29884	56.8333	151.074
269	2	0.905724	1.31652	56.8333	150.21
270	2.1	0.909091	1.34075	57.725	149.026
271	2.1	0.912458	1.35946	57.725	148.113
272	2.4	0.915825	1.37866	60.4	147.176
273	2.5	0.919192	1.40507	61.2917	145.886
274	2.5	0.922559	1.42554	61.2917	144.886
275	2.6	0.925926	1.44663	62.1833	143.856
276	3	0.929293	1.47579	65.75	142.432
277	3	0.93266	1.49852	65.75	141.323
278	3	0.936027	1.53007	65.75	139.782
279	3.2	0.939394	1.55477	67.5333	138.575
280	4	0.942761	1.58047	74.6667	137.321
281	5.3	0.946128	1.61644	86.2583	135.564
282	7	0.949495	1.64485	101.417	134.176
283	7	0.952862	1.67466	101.417	132.721
284	8	0.956229	1.71688	110.333	130.659
285	9	0.959596	1.75069	119.25	129.008
286	9	0.962963	1.78661	119.25	127.254
287	10	0.96633	1.83843	128.167	124.724
288	10	0.969697	1.88079	128.167	122.655
289	12	0.973064	1.94314	146	119.61
290	16	0.976431	1.99539	181.667	117.058
291	18	0.979798	2.05375	199.5	114.209
292	23	0.983165	2.14441	244.083	109.781
293	25	0.986532	2.22621	261.917	105.787
294	34	0.989899	2.32634	342.167	100.897
295	57	0.993266	2.51213	547.25	91.8241
296	60	0.996633	2.74777	574	80.3175

Shapiro-Francia Test of Normality

Parameter: Arsenic

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.60944	-2.74777	7.55021	4.42236
2	-1.60944	-2.51213	13.861	8.46548
3	-1.60944	-2.32634	19.2729	12.2096
4	-1.60944	-2.22621	24.2289	15.7925
5	-1.60944	-2.14441	28.8274	19.2438
6	-1.60944	-2.05375	33.0453	22.5492
7	-1.60944	-1.99539	37.0269	25.7607
8	-1.60944	-1.94314	40.8026	28.888
9	-1.60944	-1.88079	44.34	31.915
10	-1.60944	-1.83843	47.7198	34.8739
11	-1.60944	-1.78661	50.9118	37.7493
12	-1.60944	-1.75069	53.9767	40.5669
13	-1.60944	-1.71688	56.9244	43.3301
14	-1.60944	-1.67466	59.7289	46.0254
15	-1.60944	-1.64485	62.4344	48.6727
16	-1.60944	-1.61644	65.0473	51.2742
17	-1.60944	-1.58047	67.5452	53.8179
18	-1.60944	-1.55477	69.9625	56.3202
19	-1.60944	-1.53007	72.3036	58.7828
20	-1.60944	-1.49852	74.5491	61.1945
21	-1.60944	-1.47579	76.7271	63.5697
22	-1.60944	-1.44663	78.8198	65.898
23	-1.60944	-1.42554	80.852	68.1923
24	-1.60944	-1.40507	82.8262	70.4537
25	-1.60944	-1.37866	84.7269	72.6726
26	-1.60944	-1.35946	86.5751	74.8605
27	-1.60944	-1.34075	88.3727	77.0184
28	-1.60944	-1.31652	90.1059	79.1372
29	-1.60944	-1.29884	91.7929	81.2276
30	-1.60944	-1.27588	93.4208	83.2811
31	-1.60944	-1.25908	95.006	85.3075
32	-1.60944	-1.24264	96.5502	87.3075
33	-1.60944	-1.22123	98.0416	89.273
34	-1.60944	-1.20553	99.4949	91.2132
35	-1.60944	-1.19012	100.911	93.1286
36	-1.60944	-1.17	102.28	95.0116
37	-1.60944	-1.15522	103.615	96.8709
38	-1.60944	-1.14069	104.916	98.7068
39	-1.60944	-1.12168	106.174	100.512
40	-1.60944	-1.10768	107.401	102.295
41	-1.60944	-1.08935	108.588	104.048
42	-1.60944	-1.07584	109.745	105.78
43	-1.60944	-1.06252	110.874	107.49
44	-1.60944	-1.04505	111.966	109.172
45	-1.60944	-1.03215	113.032	110.833
46	-1.60944	-1.01943	114.071	112.473
47	-1.60944	-1.00271	115.076	114.087
48	-1.60944	-0.990356		116.057	115.681
49	-1.60944	-0.97815	117.014	117.255
50	-1.60944	-0.9621	117.939	118.804
51	-1.60944	-0.950222		118.842	120.333

52	-1.60944	-0.93459	119.716	121.837
53	-1.60944	-0.923014	120.568	123.323
54	-1.60944	-0.911562	121.399	124.79
55	-1.60944	-0.896473	122.202	126.233
56	-1.60944	-0.885291	122.986	127.658
57	-1.60944	-0.874218	123.75	129.065
58	-1.60944	-0.859618	124.489	130.448
59	-1.60944	-0.848786	125.21	131.814
60	-1.60944	-0.834498	125.906	133.157
61	-1.60944	-0.823893	126.585	134.483
62	-1.60944	-0.813379	127.247	135.792
63	-1.60944	-0.7995	127.886	137.079
64	-1.60944	-0.789191	128.509	138.349
65	-0.891598	-0.778966	129.115	139.044
66	-0.867501	-0.765456	129.701	139.708
67	-0.84397	-0.755415	130.272	140.345
68	-0.820981	-0.745449	130.828	140.957
69	-0.776529	-0.732275	131.364	141.526
70	-0.776529	-0.722479	131.886	142.087
71	-0.776529	-0.709522	132.389	142.638
72	-0.755023	-0.699883	132.879	143.166
73	-0.755023	-0.690309	133.356	143.688
74	-0.733969	-0.677639	133.815	144.185
75	-0.71335	-0.668209	134.261	144.662
76	-0.693147	-0.658838	134.695	145.118
77	-0.653926	-0.646431	135.113	145.541
78	-0.634878	-0.637192	135.519	145.946
79	-0.616186	-0.628006	135.914	146.333
80	-0.616186	-0.615839	136.293	146.712
81	-0.616186	-0.606775	136.661	147.086
82	-0.579818	-0.594766	137.015	147.431
83	-0.562119	-0.585815	137.358	147.76
84	-0.544727	-0.576911	137.691	148.074
85	-0.527633	-0.565108	138.01	148.372
86	-0.478036	-0.556308	138.32	148.638
87	-0.430783	-0.547551	138.619	148.874
88	-0.314711	-0.53594	138.907	149.043
89	-0.210721	-0.52728	139.185	149.154
90	-0.174353	-0.515791	139.451	149.244
91	0	-0.507221	139.708	149.244
92	0	-0.498687	139.957	149.244
93	0	-0.487364	140.194	149.244
94	0	-0.478914	140.424	149.244
95	0	-0.470498	140.645	149.244
96	0	-0.459327	140.856	149.244
97	0	-0.450985	141.059	149.244
98	0	-0.442676	141.255	149.244
99	0	-0.431644	141.442	149.244
100	0	-0.423405	141.621	149.244
101	0	-0.412463	141.791	149.244
102	0	-0.40429	141.954	149.244
103	0	-0.396142	142.111	149.244
104	0	-0.385321	142.26	149.244
105	0	-0.377233	142.402	149.244
106	0	-0.369171	142.538	149.244
107	0	-0.358459	142.667	149.244
108	0	-0.350451	142.79	149.244
109	0	-0.33981	142.905	149.244
110	0	-0.331854	143.015	149.244
111	0	-0.323919	143.12	149.244
112	0	-0.31337	143.218	149.244
113	0	-0.305481	143.312	149.244

114	0	-0.297612	143.4	149.244
115	0	-0.287147	143.483	149.244
116	0	-0.279319	143.561	149.244
117	0	-0.271509	143.635	149.244
118	0	-0.26112143.703	149.244	
119	0	-0.253347	143.767	149.244
120	0	-0.243007	143.826	149.244
121	0	-0.235269	143.881	149.244
122	0	-0.227545	143.933	149.244
123	0	-0.217267	143.98	149.244
124	0	-0.209575	144.024	149.244
125	0	-0.201894	144.065	149.244
126	0	-0.191671	144.102	149.244
127	0	-0.184017	144.136	149.244
128	0	-0.176374	144.167	149.244
129	0	-0.166199	144.194	149.244
130	0	-0.158579	144.219	149.244
131	0	-0.148434	144.241	149.244
132	0	-0.140835	144.261	149.244
133	0	-0.133244	144.279	149.244
134	0	-0.123135	144.294	149.244
135	0	-0.115562	144.308	149.244
136	0	-0.107995	144.319	149.244
137	0	-0.0979139	144.329	149.244
138	0	-0.0903606	144.337	149.244
139	0	-0.0802981	144.343	149.244
140	0	-0.0727562	144.349	149.244
141	0	-0.0652187	144.353	149.244
142	0	-0.0551734	144.356	149.244
143	0	-0.0476439	144.358	149.244
144	0	-0.0401167	144.36	149.244
145	0	-0.0300838	144.361	149.244
146	0	-0.0225612	144.361	149.244
147	0	-0.0150408	144.362	149.244
148	0	-0.00501359	144.362	149.244
149	0	0.00501359	144.362	149.244
150	0	0.0150408	144.362	149.244
151	0	0.0225612	144.362	149.244
152	0	0.0300838	144.363	149.244
153	0	0.0401167	144.365	149.244
154	0	0.0476439	144.367	149.244
155	0	0.0551734	144.37	149.244
156	0	0.0652187	144.374	149.244
157	0	0.0727562	144.38	149.244
158	0	0.0802981	144.386	149.244
159	0	0.0903606	144.394	149.244
160	0	0.0979139	144.404	149.244
161	0	0.107995	144.416	149.244
162	0	0.115562	144.429	149.244
163	0	0.123135	144.444	149.244
164	0	0.133244	144.462	149.244
165	0	0.140835	144.482	149.244
166	0	0.148434	144.504	149.244
167	0	0.158579	144.529	149.244
168	0	0.166199	144.557	149.244
169	0	0.176374	144.588	149.244
170	0	0.184017	144.621	149.244
171	0	0.191671	144.658	149.244
172	0	0.201894	144.699	149.244
173	0	0.209575	144.743	149.244
174	0	0.217267	144.79	149.244
175	0	0.227545	144.842	149.244

176	0	0.235269	144.897	149.244
177	0	0.243007	144.956	149.244
178	0	0.253347	145.02	149.244
179	0	0.26112	145.089	149.244
180	0	0.271509	145.162	149.244
181	0	0.279319	145.24	149.244
182	0	0.287147	145.323	149.244
183	0	0.297612	145.411	149.244
184	0	0.305481	145.505	149.244
185	0	0.31337	145.603	149.244
186	0	0.323919	145.708	149.244
187	0	0.331854	145.818	149.244
188	0	0.33981	145.933	149.244
189	0	0.350451	146.056	149.244
190	0	0.358459	146.185	149.244
191	0	0.369171	146.321	149.244
192	0	0.377233	146.463	149.244
193	0	0.385321	146.612	149.244
194	0	0.396142	146.769	149.244
195	0	0.40429	146.932	149.244
196	0	0.412463	147.102	149.244
197	0	0.423405	147.282	149.244
198	0	0.431644	147.468	149.244
199	0	0.442676	147.664	149.244
200	0	0.450985	147.867	149.244
201	0	0.459327	148.078	149.244
202	0	0.470498	148.3	149.244
203	0	0.478914	148.529	149.244
204	0	0.487364	148.767	149.244
205	0	0.498687	149.015	149.244
206	0	0.507221	149.272	149.244
207	0	0.515791	149.539	149.244
208	0	0.52728	149.817	149.244
209	0	0.53594	150.104	149.244
210	0	0.547551	150.404	149.244
211	0	0.556308	150.713	149.244
212	0	0.565108	151.032	149.244
213	0	0.576911	151.365	149.244
214	0	0.585815	151.708	149.244
215	0	0.594766	152.062	149.244
216	0	0.606775	152.43	149.244
217	0	0.615839	152.81	149.244
218	0	0.628006	153.204	149.244
219	0	0.637192	153.61	149.244
220	0	0.646431	154.028	149.244
221	0	0.658838	154.462	149.244
222	0	0.668209	154.908	149.244
223	0	0.677639	155.368	149.244
224	0	0.690309	155.844	149.244
225	0	0.699883	156.334	149.244
226	0	0.709522	156.837	149.244
227	0	0.722479	157.359	149.244
228	0	0.732275	157.896	149.244
229	0	0.745449	158.451	149.244
230	0	0.755415	159.022	149.244
231	0	0.765456	159.608	149.244
232	0	0.778966	160.215	149.244
233	0	0.789191	160.837	149.244
234	0	0.7995	161.477	149.244
235	0	0.813379	162.138	149.244
236	0	0.823893	162.817	149.244
237	0	0.834498	163.513	149.244

238	0	0.848786		164.234	149.244
239	0	0.859618		164.973	149.244
240	0	0.874218		165.737	149.244
241	0	0.885291		166.521	149.244
242	0	0.896473		167.325	149.244
243	0	0.911562		168.155	149.244
244	0	0.923014		169.007	149.244
245	0	0.93459	169.881	149.244	
246	0	0.950222		170.784	149.244
247	0	0.9621	171.709	149.244	
248	0	0.97815	172.666	149.244	
249	0	0.990356		173.647	149.244
250	0	1.00271	174.652	149.244	
251	0	1.01943	175.692	149.244	
252	0	1.03215	176.757	149.244	
253	0	1.04505	177.849	149.244	
254	0	1.06252	178.978	149.244	
255	0.0953102		1.07584	180.136	149.347
256	0.0953102		1.08935	181.322	149.45
257	0.0953102		1.10768	182.549	149.556
258	0.182322		1.12168	183.807	149.76
259	0.182322		1.14069	185.108	149.968
260	0.182322		1.15522	186.443	150.179
261	0.262364		1.17	187.812	150.486
262	0.470004		1.19012	189.228	151.045
263	0.530628		1.20553	190.682	151.685
264	0.587787		1.22123	192.173	152.403
265	0.587787		1.24264	193.717	153.133
266	0.587787		1.25908	195.302	153.873
267	0.693147		1.27588	196.93	154.758
268	0.693147		1.29884	198.617	155.658
269	0.693147		1.31652	200.351	156.571
270	0.741937		1.34075	202.148	157.565
271	0.741937		1.35946	203.996	158.574
272	0.875469		1.37866	205.897	159.781
273	0.916291		1.40507	207.871	161.068
274	0.916291		1.42554	209.903	162.375
275	0.955511		1.44663	211.996	163.757
276	1.09861	1.47579	214.174	165.378	
277	1.09861	1.49852	216.42	167.024	
278	1.09861	1.53007	218.761	168.705	
279	1.16315	1.55477	221.178	170.514	
280	1.38629	1.58047	223.676	172.705	
281	1.66771	1.61644	226.289	175.401	
282	1.94591	1.64485	228.994	178.601	
283	1.94591	1.67466	231.799	181.86	
284	2.07944	1.71688	234.747	185.43	
285	2.19722	1.75069	237.811	189.277	
286	2.19722	1.78661	241.003	193.202	
287	2.30259	1.83843	244.383	197.436	
288	2.30259	1.88079	247.921	201.766	
289	2.48491	1.94314	251.696	206.595	
290	2.77259	1.99539	255.678	212.127	
291	2.89037	2.05375	259.896	218.063	
292	3.13549	2.14441	264.494	224.787	
293	3.21888	2.22621	269.45	231.953	
294	3.52636	2.32634	274.862	240.156	
295	4.04305	2.51213	281.173	250.313	
296	4.09434	2.74777	288.723	261.563	

Data Set Standard Deviation = 1.01244

Numerator = 68415.4
Denominator = 87305.2
W Statistic = 0.783635 = 68415.4 / 87305.2

5% Critical value of 0.976 exceeds 0.783635
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.783635
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Arsenic

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.886124
0.886124 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-1.609440	0.003367	-2.747776	8.8501	348.683
2	-1.609440	0.00673401	-2.512136	8.8501	337.176
3	-1.609440	0.010101	-2.326346	8.8501	328.103
4	-1.609440	0.013468	-2.226216	8.8501	323.213
5	-1.609440	0.016835	-2.144416	8.8501	319.219
6	-1.609440	0.020202	-2.053756	8.8501	314.791
7	-1.609440	0.023569	-1.995396	8.8501	311.942
8	-1.609440	0.026936	-1.943146	8.8501	309.39
9	-1.609440	0.030303	-1.880796	8.8501	306.345
10	-1.609440	0.03367	-1.838436	8.8501	304.276
11	-1.609440	0.037037	-1.786616	8.8501	301.746
12	-1.609440	0.040404	-1.750696	8.8501	299.992
13	-1.609440	0.043771	-1.716886	8.8501	298.341
14	-1.609440	0.047138	-1.674666	8.8501	296.279
15	-1.609440	0.0505051	-1.644856	8.8501	294.824
16	-1.609440	0.0538721	-1.616446	8.8501	293.436
17	-1.609440	0.0572391	-1.580476	8.8501	291.679
18	-1.609440	0.0606061	-1.554776	8.8501	290.425
19	-1.609440	0.0639731	-1.530076	8.8501	289.218
20	-1.609440	0.0673401	-1.498526	8.8501	287.677
21	-1.609440	0.0707071	-1.475796	8.8501	286.568
22	-1.609440	0.0740741	-1.446636	8.8501	285.144
23	-1.609440	0.0774411	-1.425546	8.8501	284.114
24	-1.609440	0.0808081	-1.405076	8.8501	283.114
25	-1.609440	0.0841751	-1.378666	8.8501	281.824
26	-1.609440	0.0875421	-1.359466	8.8501	280.887
27	-1.609440	0.0909091	-1.340756	8.8501	279.974
28	-1.609440	0.0942761	-1.316526	8.8501	278.79
29	-1.609440	0.0976431	-1.298846	8.8501	277.926
30	-1.609440	0.10101	-1.275886	8.8501	276.805
31	-1.609440	0.104377	-1.259086	8.8501	275.985
32	-1.609440	0.107744	-1.242646	8.8501	275.182
33	-1.609440	0.111111	-1.221236	8.8501	274.137
34	-1.609440	0.114478	-1.205536	8.8501	273.37
35	-1.609440	0.117845	-1.190126	8.8501	272.617
36	-1.609440	0.121212	-1.17	68.8501	271.635
37	-1.609440	0.124579	-1.155226	8.8501	270.913
38	-1.609440	0.127946	-1.140696	8.8501	270.204
39	-1.609440	0.131313	-1.121686	8.8501	269.275
40	-1.609440	0.13468	-1.107686	8.8501	268.592
41	-1.609440	0.138047	-1.089356	8.8501	267.697
42	-1.609440	0.141414	-1.075846	8.8501	267.037
43	-1.609440	0.144781	-1.062526	8.8501	266.386
44	-1.609440	0.148148	-1.045056	8.8501	265.533
45	-1.609440	0.151515	-1.032156	8.8501	264.904
46	-1.609440	0.154882	-1.019436	8.8501	264.282
47	-1.609440	0.158249	-1.002716	8.8501	263.466
48	-1.609440	0.161616	-0.990356	68.8501	262.862

49	-1.60944	0.164983	-0.97815	68.8501	262.266
50	-1.60944	0.16835	-0.9621	68.8501	261.483
51	-1.60944	0.171717	-0.950222	68.8501	260.903
52	-1.60944	0.175084	-0.93459	68.8501	260.139
53	-1.60944	0.178451	-0.923014	68.8501	259.574
54	-1.60944	0.181818	-0.911562	68.8501	259.015
55	-1.60944	0.185185	-0.896473	68.8501	258.278
56	-1.60944	0.188552	-0.885291	68.8501	257.732
57	-1.60944	0.191919	-0.874218	68.8501	257.191
58	-1.60944	0.195286	-0.859618	68.8501	256.478
59	-1.60944	0.198653	-0.848786	68.8501	255.949
60	-1.60944	0.20202	-0.834498	68.8501	255.251
61	-1.60944	0.205387	-0.823893	68.8501	254.733
62	-1.60944	0.208754	-0.813379	68.8501	254.22
63	-1.60944	0.212121	-0.7995	68.8501	253.542
64	-1.60944	0.215488	-0.789191	68.8501	253.039
65	-0.891598	0.218855	-0.778966	123.714	252.54
66	-0.867501	0.222222	-0.765456	125.555	251.88
67	-0.84397	0.225589	-0.755415	127.354	251.389
68	-0.820981	0.228956	-0.745449	129.111	250.903
69	-0.776529	0.232323	-0.732275	132.508	250.259
70	-0.776529	0.23569	-0.722479	132.508	249.781
71	-0.776529	0.239057	-0.709522	132.508	249.148
72	-0.755023	0.242424	-0.699883	134.152	248.678
73	-0.755023	0.245791	-0.690309	134.152	248.21
74	-0.733969	0.249158	-0.677639	135.761	247.591
75	-0.71335	0.252525	-0.668209	137.337	247.131
76	-0.693147	0.255892	-0.658838	138.881	246.673
77	-0.653926	0.259259	-0.646431	141.878	246.067
78	-0.634878	0.262626	-0.637192	143.334	245.616
79	-0.616186	0.265993	-0.628006	144.763	245.168
80	-0.616186	0.26936	-0.615839	144.763	244.573
81	-0.616186	0.272727	-0.606775	144.763	244.131
82	-0.579818	0.276094	-0.594766	147.542	243.544
83	-0.562119	0.279461	-0.585815	148.895	243.107
84	-0.544727	0.282828	-0.576911	150.224	242.672
85	-0.527633	0.286195	-0.565108	151.531	242.096
86	-0.478036	0.289562	-0.556308	155.322	241.666
87	-0.430783	0.292929	-0.547551	158.933	241.239
88	-0.314711	0.296296	-0.53594	167.804	240.672
89	-0.210721	0.299663	-0.52728	175.752	240.249
90	-0.174353	0.30303	-0.515791	178.532	239.688
91	0	0.306397	-0.507221	191.857	239.269
92	0	0.309764	-0.498687	191.857	238.853
93	0	0.313131	-0.487364	191.857	238.3
94	0	0.316498	-0.478914	191.857	237.887
95	0	0.319865	-0.470498	191.857	237.476
96	0	0.323232	-0.459327	191.857	236.93
97	0	0.326599	-0.450985	191.857	236.523
98	0	0.329966	-0.442676	191.857	236.117
99	0	0.333333	-0.431644	191.857	235.579
100	0	0.3367	-0.423405	191.857	235.176
101	0	0.340067	-0.412463	191.857	234.642
102	0	0.343434	-0.40429	191.857	234.243
103	0	0.346801	-0.396142	191.857	233.845
104	0	0.350168	-0.385321	191.857	233.317
105	0	0.353535	-0.377233	191.857	232.922
106	0	0.356902	-0.369171	191.857	232.528
107	0	0.360269	-0.358459	191.857	232.005
108	0	0.363636	-0.350451	191.857	231.614
109	0	0.367003	-0.33981	191.857	231.094
110	0	0.37037	-0.331854	191.857	230.706

111	0	0.373737	-0.323919	191.857	230.318
112	0	0.377104	-0.31337	191.857	229.803
113	0	0.380471	-0.305481	191.857	229.418
114	0	0.383838	-0.297612	191.857	229.033
115	0	0.387205	-0.287147	191.857	228.522
116	0	0.390572	-0.279319	191.857	228.14
117	0	0.393939	-0.271509	191.857	227.759
118	0	0.397306	-0.26112	191.857	227.251
119	0	0.400673	-0.253347	191.857	226.872
120	0	0.40404	-0.243007	191.857	226.367
121	0	0.407407	-0.235269	191.857	225.989
122	0	0.410774	-0.227545	191.857	225.612
123	0	0.414141	-0.217267	191.857	225.11
124	0	0.417508	-0.209575	191.857	224.734
125	0	0.420875	-0.201894	191.857	224.359
126	0	0.424242	-0.191671	191.857	223.86
127	0	0.427609	-0.184017	191.857	223.486
128	0	0.430976	-0.176374	191.857	223.113
129	0	0.434343	-0.166199	191.857	222.616
130	0	0.43771	-0.158579	191.857	222.244
131	0	0.441077	-0.148434	191.857	221.749
132	0	0.444444	-0.140835	191.857	221.377
133	0	0.447811	-0.133244	191.857	221.007
134	0	0.451178	-0.123135	191.857	220.513
135	0	0.454545	-0.115562	191.857	220.143
136	0	0.457912	-0.107995	191.857	219.774
137	0	0.461279	-0.0979139	191.857	219.281
138	0	0.464646	-0.0903606	191.857	218.913
139	0	0.468013	-0.0802981	191.857	218.421
140	0	0.47138	-0.0727562	191.857	218.053
141	0	0.474747	-0.0652187	191.857	217.685
142	0	0.478114	-0.0551734	191.857	217.194
143	0	0.481481	-0.0476439	191.857	216.827
144	0	0.484848	-0.0401167	191.857	216.459
145	0	0.488215	-0.0300838	191.857	215.969
146	0	0.491582	-0.0225612	191.857	215.602
147	0	0.494949	-0.0150408	191.857	215.234
148	0	0.498316	-0.00501359	191.857	214.745
149	0	0.501684	0.00501359	191.857	214.255
150	0	0.505051	0.0150408	191.857	213.766
151	0	0.508418	0.0225612	191.857	213.398
152	0	0.511785	0.0300838	191.857	213.031
153	0	0.515152	0.0401167	191.857	212.541
154	0	0.518519	0.0476439	191.857	212.173
155	0	0.521886	0.0551734	191.857	211.806
156	0	0.525253	0.0652187	191.857	211.315
157	0	0.52862	0.0727562	191.857	210.947
158	0	0.531987	0.0802981	191.857	210.579
159	0	0.535354	0.0903606	191.857	210.087
160	0	0.538721	0.0979139	191.857	209.719
161	0	0.542088	0.107995	191.857	209.226
162	0	0.545455	0.115562	191.857	208.857
163	0	0.548822	0.123135	191.857	208.487
164	0	0.552189	0.133244	191.857	207.993
165	0	0.555556	0.140835	191.857	207.623
166	0	0.558923	0.148434	191.857	207.251
167	0	0.56229	0.158579	191.857	206.756
168	0	0.565657	0.166199	191.857	206.384
169	0	0.569024	0.176374	191.857	205.887
170	0	0.572391	0.184017	191.857	205.514
171	0	0.575758	0.191671	191.857	205.14
172	0	0.579125	0.201894	191.857	204.641

173	0	0.582492	0.209575	191.857	204.266
174	0	0.585859	0.217267	191.857	203.89
175	0	0.589226	0.227545	191.857	203.388
176	0	0.592593	0.235269	191.857	203.011
177	0	0.59596	0.243007	191.857	202.633
178	0	0.599327	0.253347	191.857	202.128
179	0	0.602694	0.26112	191.857	201.749
180	0	0.606061	0.271509	191.857	201.241
181	0	0.609428	0.279319	191.857	200.86
182	0	0.612795	0.287147	191.857	200.478
183	0	0.616162	0.297612	191.857	199.967
184	0	0.619529	0.305481	191.857	199.582
185	0	0.622896	0.31337	191.857	199.197
186	0	0.626263	0.323919	191.857	198.682
187	0	0.62963	0.331854	191.857	198.294
188	0	0.632997	0.33981	191.857	197.906
189	0	0.636364	0.350451	191.857	197.386
190	0	0.639731	0.358459	191.857	196.995
191	0	0.643098	0.369171	191.857	196.472
192	0	0.646465	0.377233	191.857	196.078
193	0	0.649832	0.385321	191.857	195.683
194	0	0.653199	0.396142	191.857	195.155
195	0	0.656566	0.40429	191.857	194.757
196	0	0.659933	0.412463	191.857	194.358
197	0	0.6633	0.423405	191.857	193.824
198	0	0.666667	0.431644	191.857	193.421
199	0	0.670034	0.442676	191.857	192.883
200	0	0.673401	0.450985	191.857	192.477
201	0	0.676768	0.459327	191.857	192.07
202	0	0.680135	0.470498	191.857	191.524
203	0	0.683502	0.478914	191.857	191.113
204	0	0.686869	0.487364	191.857	190.7
205	0	0.690236	0.498687	191.857	190.147
206	0	0.693603	0.507221	191.857	189.731
207	0	0.69697	0.515791	191.857	189.312
208	0	0.700337	0.52728	191.857	188.751
209	0	0.703704	0.53594	191.857	188.328
210	0	0.707071	0.547551	191.857	187.761
211	0	0.710438	0.556308	191.857	187.334
212	0	0.713805	0.565108	191.857	186.904
213	0	0.717172	0.576911	191.857	186.328
214	0	0.720539	0.585815	191.857	185.893
215	0	0.723906	0.594766	191.857	185.456
216	0	0.727273	0.606775	191.857	184.869
217	0	0.73064	0.615839	191.857	184.427
218	0	0.734007	0.628006	191.857	183.832
219	0	0.737374	0.637192	191.857	183.384
220	0	0.740741	0.646431	191.857	182.933
221	0	0.744108	0.658838	191.857	182.327
222	0	0.747475	0.668209	191.857	181.869
223	0	0.750842	0.677639	191.857	181.409
224	0	0.754209	0.690309	191.857	180.79
225	0	0.757576	0.699883	191.857	180.322
226	0	0.760943	0.709522	191.857	179.852
227	0	0.76431	0.722479	191.857	179.219
228	0	0.767677	0.732275	191.857	178.741
229	0	0.771044	0.745449	191.857	178.097
230	0	0.774411	0.755415	191.857	177.611
231	0	0.777778	0.765456	191.857	177.12
232	0	0.781145	0.778966	191.857	176.46
233	0	0.784512	0.789191	191.857	175.961
234	0	0.787879	0.7995	191.857	175.458

235	0	0.791246	0.813379	191.857	174.78
236	0	0.794613	0.823893	191.857	174.267
237	0	0.79798	0.834498	191.857	173.749
238	0	0.801347	0.848786	191.857	173.051
239	0	0.804714	0.859618	191.857	172.522
240	0	0.808081	0.874218	191.857	171.809
241	0	0.811448	0.885291	191.857	171.268
242	0	0.814815	0.896473	191.857	170.722
243	0	0.818182	0.911562	191.857	169.985
244	0	0.821549	0.923014	191.857	169.426
245	0	0.824916	0.93459	191.857	168.861
246	0	0.828283	0.950222	191.857	168.097
247	0	0.83165	0.9621	191.857	167.517
248	0	0.835017	0.97815	191.857	166.734
249	0	0.838384	0.990356	191.857	166.138
250	0	0.841751	1.00271	191.857	165.534
251	0	0.845118	1.01943	191.857	164.718
252	0	0.848485	1.03215	191.857	164.096
253	0	0.851852	1.04505	191.857	163.467
254	0	0.855219	1.06252	191.857	162.614
255	0.0953102	0.858586	1.07584	199.142	161.963
256	0.0953102	0.861953	1.08935	199.142	161.303
257	0.0953102	0.86532	1.10768	199.142	160.408
258	0.182322	0.868687	1.12168	205.792	159.725
259	0.182322	0.872054	1.14069	205.792	158.796
260	0.182322	0.875421	1.15522	205.792	158.087
261	0.262364	0.878788	1.17	211.909	157.365
262	0.470004	0.882155	1.19012	227.779	156.383
263	0.530628	0.885522	1.20553	232.412	155.63
264	0.587787	0.888889	1.22123	236.781	154.863
265	0.587787	0.892256	1.24264	236.781	153.818
266	0.587787	0.895623	1.25908	236.781	153.015
267	0.693147	0.89899	1.27588	244.833	152.195
268	0.693147	0.902357	1.29884	244.833	151.074
269	0.693147	0.905724	1.31652	244.833	150.21
270	0.741937	0.909091	1.34075	248.562	149.026
271	0.741937	0.912458	1.35946	248.562	148.113
272	0.875469	0.915825	1.37866	258.768	147.176
273	0.916291	0.919192	1.40507	261.888	145.886
274	0.916291	0.922559	1.42554	261.888	144.886
275	0.955511	0.925926	1.44663	264.886	143.856
276	1.09861	0.929293	1.47579	275.823	142.432
277	1.09861	0.93266	1.49852	275.823	141.323
278	1.09861	0.936027	1.53007	275.823	139.782
279	1.16315	0.939394	1.55477	280.755	138.575
280	1.38629	0.942761	1.58047	297.81	137.321
281	1.66771	0.946128	1.61644	319.318	135.564
282	1.94591	0.949495	1.64485	340.58	134.176
283	1.94591	0.952862	1.67466	340.58	132.721
284	2.07944	0.956229	1.71688	350.786	130.659
285	2.19722	0.959596	1.75069	359.788	129.008
286	2.19722	0.962963	1.78661	359.788	127.254
287	2.30259	0.96633	1.83843	367.84	124.724
288	2.30259	0.969697	1.88079	367.84	122.655
289	2.48491	0.973064	1.94314	381.775	119.61
290	2.77259	0.976431	1.99539	403.762	117.058
291	2.89037	0.979798	2.05375	412.764	114.209
292	3.13549	0.983165	2.14441	431.498	109.781
293	3.21888	0.986532	2.22621	437.871	105.787
294	3.52636	0.989899	2.32634	461.372	100.897
295	4.04305	0.993266	2.51213	500.862	91.8241
296	4.09434	0.996633	2.74777	504.782	80.3175

Kruskal-Wallis Non-Parametric Test

Parameter: Arsenic

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	ND<0	108.5
	3/16/1999	ND<0	108.5
	9/23/1999	ND<0	108.5
	3/14/2000	ND<0	108.5
	9/23/2003	ND<0	108.5
	3/10/2004	ND<0	108.5
	10/12/2004	ND<0	108.5
	4/1/2005	ND<0	108.5
	10/26/2005	ND<0	108.5
	6/19/2006	ND<0	108.5
	11/18/2006	ND<0	108.5
	6/2/2007	0 J	243
	11/15/2007	0 J	244
	5/20/2008	ND<0	108.5
	11/20/2008	ND<0	108.5
	6/11/2009	ND<-1.60944 U	108.5
	11/16/2009	ND<-1.60944 U	108.5
	6/30/2010	ND<-1.60944 U	108.5
	11/17/2010	ND<-1.60944 U	108.5
	7/6/2011	ND<-1.60944 U	108.5
	11/22/2011	ND<-1.60944 U	108.5
	5/16/2012	ND<-1.60944 U	108.5
	11/16/2012	ND<-1.60944 U	108.5
	11/16/2013	ND<-1.60944 U	108.5

Rank Sum = 2874
Rank Mean = 119.75

Background Rank Sum = 2874
Background Rank Mean = 119.75

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	3/14/2000	3.13549	292
	9/23/2003	ND<0	108.5
	3/10/2004	3.21888	293
	10/12/2004	ND<0	108.5
	4/1/2005	ND<0	108.5
	10/26/2005	ND<0	108.5
	6/19/2006	ND<0	108.5
	11/18/2006	ND<0	108.5
	6/2/2007	0 J	245
	11/15/2007	ND<0	108.5
	5/20/2008	ND<0	108.5
	11/20/2008	ND<0	108.5
	6/11/2009	ND<-1.60944 U	108.5
	11/16/2009	ND<-1.60944 U	108.5
	6/30/2010	ND<-1.60944 U	108.5
	11/17/2010	ND<-1.60944 U	108.5

	7/6/2011	ND<-1.60944 U	108.5	
	11/22/2011	ND<-1.60944 U	108.5	
	5/16/2012	ND<-1.60944 U	108.5	
	11/16/2012	ND<-1.60944 U	108.5	
	11/16/2013	ND<-1.60944 U	108.5	

Rank Sum = 2783
Rank Mean = 132.524

LMW-3S	11/18/2006	ND<0	108.5	
	6/2/2007	ND<0	108.5	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	ND<0	108.5	
	6/11/2009	-0.314711 J B		240
	11/16/2009	ND<-1.60944 U	108.5	
	6/30/2010	ND<-1.60944 U	108.5	
	11/17/2010	0	246	
	7/6/2011	-0.174353 J	242	
	11/22/2011	ND<-1.60944 U	108.5	
	5/16/2012	ND<-1.60944 U	108.5	
	11/16/2012	ND<-1.60944 U	108.5	
	11/16/2013	ND<-1.60944 U	108.5	

Rank Sum = 1921.5
Rank Mean = 137.25

LMW-6	1/16/1998	ND<0	108.5	
	3/16/1999	ND<0	108.5	
	9/23/1999	ND<0	108.5	
	3/14/2000	ND<0	108.5	
	9/23/2003	ND<0	108.5	
	3/10/2004	ND<0	108.5	
	10/12/2004	ND<0	108.5	
	4/1/2005	ND<0	108.5	
	10/26/2005	ND<0	108.5	
	6/19/2006	ND<0	108.5	
	11/18/2006	ND<0	108.5	
	6/2/2007	0 J	247	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	ND<0	108.5	
	6/11/2009	-0.430783 J B		239
	11/16/2009	ND<-1.60944 U	108.5	
	6/30/2010	-0.776529 J		221
	11/17/2010	-0.653926 J		229
	7/6/2011	ND<-1.60944 U	108.5	
	11/22/2011	ND<-1.60944 U	108.5	
	5/16/2012	ND<-1.60944 U	108.5	
	11/16/2012	ND<-1.60944 U	108.5	
	11/16/2013	ND<-1.60944 U	108.5	

Rank Sum = 3106
Rank Mean = 129.417

LMW-3	11/19/1996	ND<0	108.5	
	3/24/1997	ND<0	108.5	
	1/16/1998	ND<0	108.5	
	3/16/1999	ND<0	108.5	
	9/23/1999	ND<0	108.5	
	3/14/2000	ND<0	108.5	
	9/23/2003	ND<0	108.5	
	3/10/2004	ND<0	108.5	
	10/12/2004	ND<0	108.5	
	4/1/2005	ND<0	108.5	

	10/26/2005	ND<0	108.5	
	6/19/2006	ND<0	108.5	
	11/18/2006	ND<0	108.5	
	6/2/2007	ND<0	108.5	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	ND<0	108.5	
	6/11/2009	-0.867501 J B		218
	11/16/2009	ND<-1.60944 U		108.5
	6/30/2010	ND<-1.60944 U		108.5
	11/17/2010	-0.820981 J		220
	7/6/2011	ND<-1.60944 U	108.5	
	11/22/2011	ND<-1.60944 U		108.5
	5/16/2012	ND<-1.60944 U		108.5
	11/16/2012	ND<-1.60944 U		108.5
	11/16/2013	ND<-1.60944 U		108.5

Rank Sum = 3042
Rank Mean = 117

LMW-16	11/18/2006	ND<0	108.5	
	6/2/2007	0.693147	267	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	2.19722		285
	6/11/2009	-0.579818 J		234
	11/16/2009	-0.527633 J		237
	6/30/2010	-0.693147 J		228
	11/17/2010	-0.616186 J		231
	7/6/2011	0	248	
	11/22/2011	-0.616186 J		232
	5/16/2012	0.587787		264
	11/16/2012	0.0953102		255
	11/16/2013	0.875469		272

Rank Sum = 3078.5
Rank Mean = 219.893

LMW-14R	6/2/2007	0 J	249	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	2.19722		286
	6/11/2009	-0.891598 J		217
	11/16/2009	ND<-1.60944 U		108.5
	11/16/2009	ND<-1.60944 U		108.5
	11/16/2009	-0.755023 J		224
	6/30/2010	ND<-1.60944 U		108.5
	11/17/2010	ND<-1.60944 U		108.5
	7/6/2011	ND<-1.60944 U	108.5	
	11/22/2011	ND<-1.60944 U		108.5
	5/16/2012	ND<-1.60944 U		108.5
	11/16/2012	ND<-1.60944 U		108.5
	11/16/2013	ND<-1.60944 U		108.5

Rank Sum = 2169.5
Rank Mean = 144.633

LMW-8	1/16/1998	ND<0	108.5	
	3/16/1999	ND<0	108.5	
	9/23/1999	ND<0	108.5	
	3/14/2000	ND<0	108.5	
	9/23/2003	ND<0	108.5	
	3/10/2004	ND<0	108.5	
	10/12/2004	ND<0	108.5	
	4/1/2005	ND<0	108.5	

	10/26/2005	ND<0	108.5	
	6/19/2006	ND<0	108.5	
	11/18/2006	ND<0	108.5	
	6/2/2007	ND<0	108.5	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	ND<0	108.5	
	6/11/2009	-0.71335 J		227
	11/16/2009	-0.634878 J		230
	6/30/2010	-0.84397 J		219
	11/17/2010	-0.733969 J		226
	7/6/2011	-0.210721 J	241	
	11/22/2011	0.182322		258
	5/16/2012	0.262364		261
	11/16/2012	0.530628		263
	11/16/2013	ND<-1.60944 U		108.5

Rank Sum = 3661
Rank Mean = 152.542

LMW-9	1/16/1998	ND<0	108.5	
	3/16/1999	ND<0	108.5	
	9/23/1999	1.09861		276
	3/14/2000	ND<0	108.5	
	9/23/2003	ND<0	108.5	
	3/10/2004	ND<0	108.5	
	10/12/2004	ND<0	108.5	
	4/1/2005	0 J	250	
	10/26/2005	ND<0	108.5	
	6/19/2006	0 J	251	
	11/18/2006	ND<0	108.5	
	6/2/2007	0 J	252	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	2.07944		284
	6/11/2009	0.0953102 J		256
	11/16/2009	ND<-1.60944 U		108.5
	6/30/2010	-0.544727 J		236
	11/17/2010	0.470004		262
	7/6/2011	ND<-1.60944 U	108.5	
	11/22/2011	ND<-1.60944 U		108.5
	5/16/2012	ND<-1.60944 U		108.5
	11/16/2012	ND<-1.60944 U		108.5
	11/16/2013	ND<-1.60944 U		108.5

Rank Sum = 3803
Rank Mean = 158.458

LMW-9D	11/18/2006	1.94591		282
	6/2/2007	1.94591	283	
	11/15/2007	ND<0	108.5	
	5/20/2008	1.09861		277
	11/20/2008	1.09861		278
	6/11/2009	0.741937		270
	11/16/2009	0.693147		268
	6/30/2010	0.587787		265
	11/17/2010	0.693147		269
	7/6/2011	1.16315	279	
	11/22/2011	0.916291		273
	5/16/2012	0.955511		275
	11/16/2012	1.66771		281
	11/16/2013	0.741937		271

Rank Sum = 3679.5
Rank Mean = 262.821

LMW-9S	11/18/2006	ND<0	108.5	
	6/2/2007	0 J	253	
	11/15/2007	1.38629		280
	5/20/2008	ND<0	108.5	
	11/20/2008	ND<0	108.5	
	6/11/2009	-0.776529 J		222
	6/30/2010	-0.562119 J		235
	11/17/2010	0.182322		259
	7/6/2011	-0.776529 J	223	
	11/22/2011	-0.755023 J		225
	5/16/2012	-0.616186 J		233
	11/16/2012	0.182322		260
	11/16/2013	-0.478036 J		238

Rank Sum = 2753.5
Rank Mean = 211.808

LMW-15R	11/18/2006	ND<0	108.5	
	6/2/2007	ND<0	108.5	
	11/15/2007	ND<0	108.5	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	ND<0	108.5	
	11/20/2008	ND<0	108.5	
	6/11/2009	0.916291		274
	6/30/2010	ND<-1.60944 U		108.5
	11/17/2010	ND<-1.60944 U		108.5
	7/6/2011	ND<-1.60944 U	108.5	
	11/22/2011	ND<-1.60944 U		108.5
	5/16/2012	ND<-1.60944 U		108.5
	11/16/2012	ND<-1.60944 U		108.5
	11/16/2013	ND<-1.60944 U		108.5

Rank Sum = 1901.5
Rank Mean = 118.844

LMW-7	1/16/1998	ND<0	108.5	
	3/16/1999	ND<0	108.5	
	9/23/1999	ND<0	108.5	
	3/14/2000	2.30259		287
	9/23/2003	ND<0	108.5	
	3/10/2004	ND<0	108.5	
	10/12/2004	ND<0	108.5	
	4/1/2005	ND<0	108.5	
	10/26/2005	ND<0	108.5	
	6/19/2006	ND<0	108.5	
	11/18/2006	ND<0	108.5	
	6/2/2007	0 J	254	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	2.30259		288
	6/11/2009	0.0953102 J B		257
	11/17/2010	ND<-1.60944 U		108.5
	7/6/2011	0.587787	266	
	11/22/2011	ND<-1.60944 U		108.5
	5/16/2012	ND<-1.60944 U		108.5
	11/16/2012	ND<-1.60944 U		108.5

Rank Sum = 3088
Rank Mean = 147.048

MW-5	1/16/1998	ND<0	108.5	
	3/16/1999	ND<0	108.5	

	9/23/1999	ND<0	108.5	
	3/14/2000	3.52636		294
	9/23/2003	ND<0	108.5	
	3/10/2004	4.09434		296
	10/12/2004	ND<0	108.5	
	4/1/2005	ND<0	108.5	
	10/26/2005	ND<0	108.5	
	6/19/2006	ND<0	108.5	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	ND<0	108.5	

Rank Sum = 1783.5
Rank Mean = 137.192

LMW-13	3/14/2000	2.77259		290
	9/23/2003	ND<0	108.5	
	3/10/2004	ND<0	108.5	
	10/12/2004	ND<0	108.5	
	4/1/2005	ND<0	108.5	
	10/26/2005	ND<0	108.5	
	6/19/2006	ND<0	108.5	
	6/2/2007	ND<0	108.5	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	ND<0	108.5	

Rank Sum = 1375
Rank Mean = 125

LMW-12	3/14/2000	4.04305		295
	9/23/2003	ND<0	108.5	
	3/10/2004	ND<0	108.5	
	10/12/2004	ND<0	108.5	
	4/1/2005	ND<0	108.5	
	10/26/2005	ND<0	108.5	
	6/19/2006	ND<0	108.5	
	6/2/2007	ND<0	108.5	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	ND<0	108.5	

Rank Sum = 1380
Rank Mean = 125.455

LMW-11	3/14/2000	2.48491		289
	9/23/2003	ND<0	108.5	
	3/10/2004	2.89037		291
	10/12/2004	ND<0	108.5	
	4/1/2005	ND<0	108.5	
	10/26/2005	ND<0	108.5	
	6/19/2006	ND<0	108.5	
	6/2/2007	ND<0	108.5	
	11/15/2007	ND<0	108.5	
	5/20/2008	ND<0	108.5	
	11/20/2008	ND<0	108.5	

Rank Sum = 1556.5
Rank Mean = 141.5

Calculation Results:

Kruskal-Wallis H Statistic = 54.4867
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 89.1152
95% Confidence comparison value is 26.2962 at 16 degrees of freedom

54.4867 > 26.2962 indicating a significant group difference at 5% significance level
89.1152 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 119.75

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	132.524	12.7738	59.4974
LMW-3S	137.25	17.5	66.9621
LMW-6	129.417	9.66667	57.48
LMW-3	117	-2.75	56.3637
LMW-16	219.893	100.143	66.9621
LMW-14R		144.633	24.8833	65.5372
LMW-8	152.542	32.7917	57.48
LMW-9	158.458	38.7083	57.48
LMW-9D	262.821	143.071	66.9621
LMW-9S	211.808	92.0577	68.5694
LMW-15R		118.844	-0.9062	64.2645
LMW-7	147.048	27.2976	59.4974
MW-5	137.192	17.4423	68.5694
LMW-13	125	5.25	72.5002
LMW-12	125.455	5.70455	72.5002
LMW-11	141.5	21.75	72.5002

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 119.75

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	132.524	12.7738	70.2755
LMW-3S	137.25	17.5	79.0925
LMW-6	129.417	9.66667	67.8926
LMW-3	117	-2.75	66.5742
LMW-16	219.893	100.143	79.0925
LMW-14R		144.633	24.8833	77.4095
LMW-8	152.542	32.7917	67.8926
LMW-9	158.458	38.7083	67.8926
LMW-9D	262.821	143.071	79.0925
LMW-9S	211.808	92.0577	80.991
LMW-15R		118.844	-0.9062	75.9062
LMW-7	147.048	27.2976	70.2755
MW-5	137.192	17.4423	80.991
LMW-13	125	5.25	85.6338
LMW-12	125.455	5.70455	85.6338
LMW-11	141.5	21.75	85.6338

Mann-Kendall Trend Analysis
Parameter: Arsenic
Location: LMW-9D
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives	
1.94591	1.94591	0	0	0	
ND<0	1.94591	-1.94591	0	1	
1.09861	1.94591	-0.847298	0	2	
1.09861	1.94591	-0.847298	0	3	
0.741937	1.94591	-1.203970	4		
0.693147	1.94591	-1.252760	5		
0.587787	1.94591	-1.358120	6		
0.693147	1.94591	-1.252760	7		
1.16315	1.94591	-0.782759	0	8	
0.916291	1.94591	-1.029620	9		
0.955511	1.94591	-0.990399	0	10	
1.66771	1.94591	-0.278203	0	11	
0.741937	1.94591	-1.203970	12		
ND<0	1.94591	-1.94591	0	13	
1.09861	1.94591	-0.847298	0	14	
1.09861	1.94591	-0.847298	0	15	
0.741937	1.94591	-1.203970	16		
0.693147	1.94591	-1.252760	17		
0.587787	1.94591	-1.358120	18		
0.693147	1.94591	-1.252760	19		
1.16315	1.94591	-0.782759	0	20	
0.916291	1.94591	-1.029620	21		
0.955511	1.94591	-0.990399	0	22	
1.66771	1.94591	-0.278203	0	23	
0.741937	1.94591	-1.203970	24		
1.09861	ND<0	1.09861	1	24	
1.09861	ND<0	1.09861	2	24	
0.741937	ND<0	0.741937	3	24	
0.693147	ND<0	0.693147	4	24	
0.587787	ND<0	0.587787	5	24	
0.693147	ND<0	0.693147	6	24	
1.16315	ND<0	1.16315	7	24	
0.916291	ND<0	0.916291	8	24	
0.955511	ND<0	0.955511	9	24	
1.66771	ND<0	1.66771	10	24	
0.741937	ND<0	0.741937	11	24	
1.09861	1.09861	0	11	24	
0.741937	1.09861	-0.356675	11	25	
0.693147	1.09861	-0.405465	11	26	
0.587787	1.09861	-0.510826	11	27	
0.693147	1.09861	-0.405465	11	28	
1.16315	1.09861	0.0645385	12	28	
0.916291	1.09861	-0.182322	12	29	
0.955511	1.09861	-0.143101	12	30	
1.66771	1.09861	0.569095	13	30	
0.741937	1.09861	-0.356675	13	31	

0.741937	1.09861	-0.356675	13	32
0.693147	1.09861	-0.405465	13	33
0.587787	1.09861	-0.510826	13	34
0.693147	1.09861	-0.405465	13	35
1.16315	1.09861	0.0645385	14	35
0.916291	1.09861	-0.182322	14	36
0.955511	1.09861	-0.143101	14	37
1.66771	1.09861	0.569095	15	37
0.741937	1.09861	-0.356675	15	38
0.693147	0.741937	-0.0487902	15	39
0.587787	0.741937	-0.154151	15	40
0.693147	0.741937	-0.0487902	15	41
1.16315	0.741937	0.421213	16	41
0.916291	0.741937	0.174353	17	41
0.955511	0.741937	0.213574	18	41
1.66771	0.741937	0.925769	19	41
0.741937	0.741937	0 19	41	
0.587787	0.693147	-0.105361	19	42
0.693147	0.693147	0 19	42	
1.16315	0.693147	0.470004	20	42
0.916291	0.693147	0.223144	21	42
0.955511	0.693147	0.262364	22	42
1.66771	0.693147	0.97456 23	42	
0.741937	0.693147	0.0487902	24	42
0.693147	0.587787	0.105361	25	42
1.16315	0.587787	0.575364	26	42
0.916291	0.587787	0.328504	27	42
0.955511	0.587787	0.367725	28	42
1.66771	0.587787	1.07992 29	42	
0.741937	0.587787	0.154151	30	42
1.16315	0.693147	0.470004	31	42
0.916291	0.693147	0.223144	32	42
0.955511	0.693147	0.262364	33	42
1.66771	0.693147	0.97456 34	42	
0.741937	0.693147	0.0487902	35	42
0.916291	1.16315	-0.2468635	43	
0.955511	1.16315	-0.207639	35	44
1.66771	1.16315	0.504556	36	44
0.741937	1.16315	-0.421213	36	45
0.955511	0.916291	0.0392207	37	45
1.66771	0.916291	0.751416	38	45
0.741937	0.916291	-0.174353	38	46
1.66771	0.955511	0.712195	39	46
0.741937	0.955511	-0.213574	39	47
0.741937	1.66771	-0.925769	39	48

S Statistic = 39 - 48 = -9

Tied Group Value Members

1	1.94591	2
2	1.09861	2
3	0.741937	2

4	0.693147	2

Time Period	Observations
11/18/2006	1
6/2/2007	1
11/15/2007	1
5/20/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1
11/17/2010	1
7/6/2011	1
11/22/2011	1
5/16/2012	1
11/16/2012	1
11/16/2013	1

There are 0 time periods with multiple data

A = 72
B = 0
C = 0
D = 0
E = 8
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 329.667
Z-Score = -0.440608
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.440608| <= 1.97737 indicating no evidence of a trend

Mann-Kendall Trend Analysis
Parameter: Arsenic
Location: LMW-9S
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
0 J	ND<0	0	0	0
1.38629	ND<0	1.38629	1	0
ND<0	ND<0	0	1	0
ND<0	ND<0	0	1	0
-0.776529 J	ND<0	-0.776529	1	1
-0.562119 J	ND<0	-0.562119	1	2
0.182322	ND<0	0.182322	2	2
-0.776529 J	ND<0	-0.776529	2	3
-0.755023 J	ND<0	-0.755023	2	4
-0.616186 J	ND<0	-0.616186	2	5
0.182322	ND<0	0.182322	3	5
-0.478036 J	ND<0	-0.478036	3	6
1.38629	0 J	1.38629	4	6
ND<0	0 J	0	4	6
ND<0	0 J	0	4	6
-0.776529 J	0 J	-0.776529	4	7
-0.562119 J	0 J	-0.562119	4	8
0.182322	0 J	0.182322	5	8
-0.776529 J	0 J	-0.776529	5	9
-0.755023 J	0 J	-0.755023	5	10
-0.616186 J	0 J	-0.616186	5	11
0.182322	0 J	0.182322	6	11
-0.478036 J	0 J	-0.478036	6	12
ND<0	1.38629	-1.386296	13	
ND<0	1.38629	-1.386296	14	
-0.776529 J	1.38629	-2.162826		15
-0.562119 J	1.38629	-1.948416		16
0.182322	1.38629	-1.203976		17
-0.776529 J	1.38629	-2.162826		18
-0.755023 J	1.38629	-2.141326		19
-0.616186 J	1.38629	-2.002486		20
0.182322	1.38629	-1.203976		21
-0.478036 J	1.38629	-1.864336		22
ND<0	ND<0	0	6	22
-0.776529 J	ND<0	-0.776529	6	23
-0.562119 J	ND<0	-0.562119	6	24
0.182322	ND<0	0.182322	7	24
-0.776529 J	ND<0	-0.776529	7	25
-0.755023 J	ND<0	-0.755023	7	26
-0.616186 J	ND<0	-0.616186	7	27
0.182322	ND<0	0.182322	8	27
-0.478036 J	ND<0	-0.478036	8	28
-0.776529 J	ND<0	-0.776529	8	29
-0.562119 J	ND<0	-0.562119	8	30
0.182322	ND<0	0.182322	9	30
-0.776529 J	ND<0	-0.776529	9	31

-0.755023 J	ND<0	-0.755023	9	32	
-0.616186 J	ND<0	-0.616186	9	33	
0.182322	ND<0	0.182322	10	33	
-0.478036 J	ND<0	-0.478036	10	34	
-0.562119 J	-0.776529 J	0.21441	11	34	
0.182322	-0.776529 J	0.95885	12	34	
-0.776529 J	-0.776529 J	0	12	34	
-0.755023 J	-0.776529 J	0.0215062	13	34	
-0.616186 J	-0.776529 J	0.160343	14	34	
0.182322	-0.776529 J	0.95885	15	34	
-0.478036 J	-0.776529 J	0.298493	16	34	
0.182322	-0.562119 J	0.74444	17	34	
-0.776529 J	-0.562119 J	-0.2144	117	35	
-0.755023 J	-0.562119 J	-0.192904	17	36	
-0.616186 J	-0.562119 J	-0.0540672	17	37	
0.182322	-0.562119 J	0.74444	18	37	
-0.478036 J	-0.562119 J	0.0840831	19	37	
-0.776529 J	0.182322	-0.958	519	38	
-0.755023 J	0.182322	-0.937344	19	39	
-0.616186 J	0.182322	-0.798508	19	40	
0.182322	0.182322	0	19	40	
-0.478036 J	0.182322	-0.660357	19	41	
-0.755023 J	-0.776529 J	0.0215062	20	41	
-0.616186 J	-0.776529 J	0.160343	21	41	
0.182322	-0.776529 J	0.95885	22	41	
-0.478036 J	-0.776529 J	0.298493	23	41	
-0.616186 J	-0.755023 J	0.138836	24	41	
0.182322	-0.755023 J	0.937344	25	41	
-0.478036 J	-0.755023 J	0.276987	26	41	
0.182322	-0.616186 J	0.798508	27	41	
-0.478036 J	-0.616186 J	0.13815	28	41	
-0.478036 J	0.182322	-0.660357	28	42	

S Statistic = 28 - 42 = -14

Tied Group	Value	Members
1	0	4
2	-0.776529	2
3	0.182322	2

Time Period		Observations
11/18/2006		1
6/2/2007	1	
11/15/2007		1
5/20/2008		1
11/20/2008		1
6/11/2009		1
6/30/2010		1
11/17/2010		1
7/6/2011	1	
11/22/2011		1
5/16/2012		1

11/16/2012	1
11/16/2013	1

There are 0 time periods with multiple data

A = 192
B = 0
C = 24
D = 0
E = 16
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 258
Z-Score = -0.809345
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.809345| <= 1.97737 indicating no evidence of a trend

Shewhart-CUSUM Control Chart

Parameter: Arsenic

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -0.603539
Baseline Std Dev = 0.795924
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	0	0	0.758288
11/18/2006	0	0	0.758288
6/2/2007	0.693147	0.629159	1.62916
6/2/2007	0.693147	0.629159	1.62916
11/15/2007	0	0.387446	0.758288
11/15/2007	0	0.387446	0.758288
5/20/2008	0	0.145734	0.758288
5/20/2008	0	0.145734	0.758288
11/20/2008	2.19722	2.66462	3.51888
11/20/2008	2.19722	2.66462	3.51888
6/11/2009	-0.579818	1.69442	0.0298027
6/11/2009	-0.579818	1.69442	0.0298027
11/16/2009	-0.527633	0.789789	0.095369
11/16/2009	-0.527633	0.789789	0.095369
6/30/2010	-0.693147	0	-0.112584
6/30/2010	-0.693147	0	-0.112584
11/17/2010	-0.616186	0	-0.0158896
11/17/2010	-0.616186	0	-0.0158896
7/6/2011	0	0	0.758288
7/6/2011	0	0	0.758288
11/22/2011	-0.616186	0	-0.0158896
11/22/2011	-0.616186	0	-0.0158896
5/16/2012	0.587787	0.496784	1.49678
5/16/2012	0.587787	0.496784	1.49678
11/16/2012	0.0953102	0.374819	0.878035
11/16/2012	0.0953102	0.374819	0.878035
11/16/2013	0.875469	1.23305	1.85823
11/16/2013	0.875469	1.23305	1.85823

Shewhart-CUSUM Control Chart

Parameter: Arsenic

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -0.603539
Baseline Std Dev = 0.795924
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean	
11/18/2006	1.94591	2.20313	3.20313	
11/18/2006	1.94591	2.20313	3.20313	
6/2/2007	1.94591	4.40626	3.20313	
6/2/2007	1.94591	4.40626	3.20313	
11/15/2007	0	4.16455	0.758288	
11/15/2007	0	4.16455	0.758288	
5/20/2008	1.09861	5.30314	2.13859	
5/20/2008	1.09861	5.30314	2.13859	
11/20/2008	1.09861	6.44172	2.13859	
11/20/2008	1.09861	6.44172	2.13859	
6/11/2009	0.741937	7.13218	1.69046	
6/11/2009	0.741937	7.13218	1.69046	
11/16/2009	0.693147	7.76134	1.62916	
11/16/2009	0.693147	7.76134	1.62916	
6/30/2010	0.587787	8.25812	1.49678	
6/30/2010	0.587787	8.25812	1.49678	
11/17/2010	0.693147	8.88728	1.62916	
11/17/2010	0.693147	8.88728	1.62916	
7/6/2011	1.16315	10.107	2.21967	
7/6/2011	1.16315	10.107	2.21967	
11/22/2011	0.916291	11.0165	1.90952	
11/22/2011	0.916291	11.0165	1.90952	
5/16/2012	0.955511	11.9753	1.95879	
5/16/2012	0.955511	11.9753	1.95879	
11/16/2012	1.66771	13.8289	2.8536	
11/16/2012	1.66771	13.8289	2.8536	
11/16/2013	0.741937	14.5193	1.69046	
11/16/2013	0.741937	14.5193	1.69046	

Shewhart-CUSUM Control Chart

Parameter: Arsenic

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -0.603539
Baseline Std Dev = 0.795924
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	0	0	0.758288
11/18/2006	0	0	0.758288
6/2/2007	0	0	0.758288
6/2/2007	0	0	0.758288
11/15/2007	1.38629	1.50003	2.50003
11/15/2007	1.38629	1.50003	2.50003
5/20/2008	0	1.25832	0.758288
5/20/2008	0	1.25832	0.758288
11/20/2008	0	1.0166	0.758288
11/20/2008	0	1.0166	0.758288
6/11/2009	-0.776529	0	-0.217344
6/11/2009	-0.776529	0	-0.217344
6/30/2010	-0.562119	0	0.0520405
6/30/2010	-0.562119	0	0.0520405
11/17/2010	0.182322	0	0.987357
11/17/2010	0.182322	0	0.987357
7/6/2011	-0.776529	0	-0.217344
7/6/2011	-0.776529	0	-0.217344
11/22/2011	-0.755023	0	-0.190324
11/22/2011	-0.755023	0	-0.190324
5/16/2012	-0.616186	0	-0.0158896
5/16/2012	-0.616186	0	-0.0158896
11/16/2012	0.182322	0	0.987357
11/16/2012	0.182322	0	0.987357
11/16/2013	-0.478036	0	0.157683
11/16/2013	-0.478036	0	0.157683

Concentrations (ppb)

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 88
Percent Non-Detects: 29.7297%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	5 (20.8333%)	1/16/1998	ND<10	ND<10
			3/16/1999	20	20
			9/23/1999	8 J	8 J
			3/14/2000	ND<10	ND<10
			9/23/2003	ND<10	ND<10
			3/10/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	14	14
			10/26/2005	12	12
			6/19/2006	10	10
			11/18/2006	13	13
			6/2/2007	24	24
			11/15/2007	13	13
			5/20/2008	11	11
			11/20/2008	14	14
			6/11/2009	13	13
			11/16/2009	13	13
			6/30/2010	15	15
			11/17/2010	14	14
			7/6/2011	14	14
			11/22/2011	16	16
			5/16/2012	15	15
			11/16/2012	13	13
			11/16/2013	5.5	5.5

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-16	14	0 (0%)	11/18/2006	23	23
			6/2/2007	41	41
			11/15/2007	35	35
			5/20/2008	22	22
			11/20/2008	23	23
			6/11/2009	14	14
			11/16/2009	13	13
			6/30/2010	8.8	8.8
			11/17/2010	10	10
			7/6/2011	11	11
			11/22/2011	8.8	8.8
			5/16/2012	9.2	9.2
			11/16/2012	9.2	9.2
			11/16/2013	8.6	8.6
LMW-10	21	6 (28.5714%)	3/14/2000	ND<10	ND<10
			9/23/2003	ND<10	ND<10
			3/10/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10

			4/1/2005	13	13	
			10/26/2005	ND<10	ND<10	
			6/19/2006	20	20	
			11/18/2006	11	11	
			6/2/2007	21	21	
			11/15/2007	ND<10	ND<10	
			5/20/2008	12	12	
			11/20/2008	12	12	
			6/11/2009	13	13	
			11/16/2009	12	12	
			6/30/2010	12	12	
			11/17/2010	14	14	
			7/6/2011	21	21	
			11/22/2011	23	23	
			5/16/2012	23	23	
			11/16/2012	25	25	
			11/16/2013	14	14	
LMW-14R	15	0 (0%)	6/2/2007	14	14	
			11/15/2007	12	12	
			5/20/2008	9 J	9 J	
			11/20/2008	13	13	
			6/11/2009	13	13	
			11/16/2009	12	12	
			11/16/2009	48	48	
			11/16/2009	14	14	
			6/30/2010	13	13	
			11/17/2010	12	12	
			7/6/2011	11	11	
			11/22/2011	14	14	
			5/16/2012	13	13	
			11/16/2012	13	13	
			11/16/2013	22	22	
LMW-15R	16	3 (18.75%)	11/18/2006	37	37	
			6/2/2007	38	38	
			11/15/2007	ND<10	ND<10	
			11/15/2007	27	27	
			5/20/2008	ND<10	ND<10	
			5/20/2008	24	24	
			11/20/2008	38	38	
			11/20/2008	ND<10	ND<10	
			6/11/2009	42	42	
			6/30/2010	36	36	
			11/17/2010	30	30	
			7/6/2011	25	25	
			11/22/2011	32	32	
			5/16/2012	32	32	
			11/16/2012	30	30	
			11/16/2013	41	41	
LMW-3	26	9 (34.6154%)	11/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			1/16/1998	ND<10	ND<10	
			3/16/1999	8 J	8 J	
			9/23/1999	7 J	7 J	
			3/14/2000	ND<10	ND<10	
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/26/2005	7 J	7 J	

			6/19/2006	5 J	5 J	
			11/18/2006	7 J	7 J	
			6/2/2007	5	5	
			11/15/2007	ND<10	ND<10	
			5/20/2008	5 J	5 J	
			11/20/2008	5 J	5 J	
			6/11/2009	7.2	7.2	
			11/16/2009	6.4	6.4	
			6/30/2010	5	5	
			11/17/2010	13	13	
			7/6/2011	3.5	3.5	
			11/22/2011	12	12	
			5/16/2012	4.6	4.6	
			11/16/2012	4.5	4.5	
			11/16/2013	4	4	
LMW-6	24	5 (20.8333%)	1/16/1998	ND<10	ND<10	
			3/16/1999	8 J	8 J	
			9/23/1999	18	18	
			3/14/2000	ND<10	ND<10	
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	9 J	9 J	
			10/26/2005	12	12	
			6/19/2006	20	20	
			11/18/2006	33	33	
			6/2/2007	52	52	
			11/15/2007	42	42	
			5/20/2008	49	49	
			11/20/2008	73	73	
			6/11/2009	92	92	
			11/16/2009	74	74	
			6/30/2010	77	77	
			11/17/2010	79	79	
			7/6/2011	55	55	
			11/22/2011	44 J	44 J	
			5/16/2012	36	36	
			11/16/2012	33	33	
			11/16/2013	27	27	
LMW-8	24	5 (20.8333%)	1/16/1998	ND<10	ND<10	
			3/16/1999	10	10	
			9/23/1999	109	109	
			3/14/2000	ND<10	ND<10	
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	48	48	
			10/26/2005	38	38	
			6/19/2006	40	40	
			11/18/2006	32	32	
			6/2/2007	34	34	
			11/15/2007	41	41	
			5/20/2008	34	34	
			11/20/2008	29	29	
			6/11/2009	40	40	
			11/16/2009	40	40	
			6/30/2010	30	30	
			11/17/2010	44	44	
			7/6/2011	32	32	
			11/22/2011	45	45	

			5/16/2012	39	39	
			11/16/2012	38	38	
			11/16/2013	16	16	
LMW-9	24	7 (29.1667%)	1/16/1998	ND<10	ND<10	
			3/16/1999	10	10	
			9/23/1999	22	22	
			3/14/2000	ND<10	ND<10	
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			6/19/2006	10	10	
			11/18/2006	3 J	3 J	
			6/2/2007	6	6	
			11/15/2007	3 J	3 J	
			5/20/2008	2 J	2 J	
			11/20/2008	4 J	4 J	
			6/11/2009	3.1	3.1	
			11/16/2009	2.9	2.9	
			6/30/2010	2.8	2.8	
			11/17/2010	4	4	
			7/6/2011	3.3	3.3	
			11/22/2011	3.4	3.4	
			5/16/2012	13	13	
			11/16/2012	21	21	
			11/16/2013	9.9	9.9	
LMW-9S	13	0 (0%)	11/18/2006	77	77	
			6/2/2007	80	80	
			11/15/2007	2 J	2 J	
			5/20/2008	75	75	
			11/20/2008	61	61	
			6/11/2009	28	28	
			6/30/2010	38	38	
			11/17/2010	53	53	
			7/6/2011	59	59	
			11/22/2011	66	66	
			5/16/2012	39	39	
			11/16/2012	68	68	
			11/16/2013	47	47	
LMW-3S	14	0 (0%)	11/18/2006	5 J	5 J	
			6/2/2007	18	18	
			11/15/2007	13	13	
			5/20/2008	8 J	8 J	
			11/20/2008	13	13	
			6/11/2009	12	12	
			11/16/2009	10	10	
			6/30/2010	12	12	
			11/17/2010	16	16	
			7/6/2011	14	14	
			11/22/2011	5.4	5.4	
			5/16/2012	13	13	
			11/16/2012	14	14	
			11/16/2013	11	11	
LMW-9D	14	0 (0%)	11/18/2006	13	13	
			6/2/2007	5	5	
			11/15/2007	120	120	
			5/20/2008	10	10	

			11/20/2008	3 J	3 J	
			6/11/2009	3.1	3.1	
			11/16/2009	2.9	2.9	
			6/30/2010	2.1	2.1	
			11/17/2010	2.8	2.8	
			7/6/2011	3.8	3.8	
			11/22/2011	2.8	2.8	
			5/16/2012	2.5	2.5	
			11/16/2012	1.9	1.9	
			11/16/2013	2.1	2.1	
LMW-7	21	5 (23.8095%)	1/16/1998		ND<10	ND<10
			3/16/1999	20	20	
			9/23/1999	22	22	
			3/14/2000	ND<10	ND<10	
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	31	31	
			10/26/2005	30	30	
			6/19/2006	20	20	
			11/18/2006	11	11	
			6/2/2007	27	27	
			11/15/2007	6 J	6 J	
			5/20/2008	5 J	5 J	
			11/20/2008	7 J	7 J	
			6/11/2009	12	12	
			11/17/2010	5.2	5.2	
			7/6/2011	13	13	
			11/22/2011	8.5	8.5	
			5/16/2012	7.6	7.6	
			11/16/2012	6.9	6.9	
LMW-13	11	11 (100%)	3/14/2000		ND<10	ND<10
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			6/19/2006	ND<10	ND<10	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
MW-5	13	10 (76.9231%)	1/16/1998		ND<10	ND<10
			3/16/1999	20	20	
			9/23/1999	9 J	9 J	
			3/14/2000	ND<10	ND<10	
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			6/19/2006	ND<10	ND<10	
			11/15/2007	17	17	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
LMW-12	11	11 (100%)	3/14/2000		ND<10	ND<10
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	

			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10
			6/19/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
LMW-11	11	11 (100%)	3/14/2000	ND<10	ND<10
			9/23/2003	ND<10	ND<10
			3/10/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10
			6/19/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Barium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1.9	-2.74777	7.55021	-5.22075
2	2	-2.51213	13.861	-10.245
3	2	-2.32634	19.2729	-14.8977
4	2.1	-2.22621	24.2289	-19.5727
5	2.1	-2.14441	28.8274	-24.076
6	2.5	-2.05375	33.0453	-29.2104
7	2.8	-1.99539	37.0269	-34.7975
8	2.8	-1.94314	40.8026	-40.2382
9	2.8	-1.88079	44.34	-45.5045
10	2.9	-1.83843	47.7198	-50.8359
11	2.9	-1.78661	50.9118	-56.0171
12	3	-1.75069	53.9767	-61.2691
13	3	-1.71688	56.9244	-66.4198
14	3	-1.67466	59.7289	-71.4438
15	3.1	-1.64485	62.4344	-76.5428
16	3.1	-1.61644	65.0473	-81.5538
17	3.3	-1.58047	67.5452	-86.7693
18	3.4	-1.55477	69.9625	-92.0555
19	3.5	-1.53007	72.3036	-97.4108
20	3.8	-1.49852	74.5491	-103.105
21	4	-1.47579	76.7271	-109.008
22	4	-1.44663	78.8198	-114.795
23	4	-1.42554	80.852	-120.497
24	4.5	-1.40507	82.8262	-126.82
25	4.6	-1.37866	84.7269	-133.162
26	5	-1.35946	86.5751	-139.959
27	5	-1.34075	88.3727	-146.663
28	5	-1.31652	90.1059	-153.245
29	5	-1.29884	91.7929	-159.74
30	5	-1.27588	93.4208	-166.119
31	5	-1.25908	95.006	-172.414
32	5	-1.24264	96.5502	-178.628
33	5	-1.22123	98.0416	-184.734
34	5	-1.20553	99.4949	-190.761
35	5	-1.19012	100.911	-196.712
36	5	-1.17	102.28	-202.562
37	5	-1.15522	103.615	-208.338
38	5	-1.14069	104.916	-214.041
39	5	-1.12168	106.174	-219.65
40	5	-1.10768	107.401	-225.188
41	5	-1.08935	108.588	-230.635
42	5	-1.07584	109.745	-236.014
43	5	-1.06252	110.874	-241.327
44	5	-1.04505	111.966	-246.552
45	5	-1.03215	113.032	-251.713
46	5	-1.01943	114.071	-256.81
47	5	-1.00271	115.076	-261.823
48	5	-0.990356	116.057	-266.775
49	5	-0.97815	117.014	-271.666
50	5	-0.9621	117.939	-276.477
51	5	-0.950222	118.842	-281.228

52	5	-0.93459	119.716	-285.901
53	5	-0.923014	120.568	-290.516
54	5	-0.911562	121.399	-295.073
55	5	-0.896473	122.202	-299.556
56	5	-0.885291	122.986	-303.982
57	5	-0.874218	123.75	-308.353
58	5	-0.859618	124.489	-312.651
59	5	-0.848786	125.21	-316.895
60	5	-0.834498	125.906	-321.068
61	5	-0.823893	126.585	-325.187
62	5	-0.813379	127.247	-329.254
63	5	-0.7995	127.886	-333.252
64	5	-0.789191	128.509	-337.198
65	5	-0.778966	129.115	-341.093
66	5	-0.765456	129.701	-344.92
67	5	-0.755415	130.272	-348.697
68	5	-0.745449	130.828	-352.424
69	5	-0.732275	131.364	-356.085
70	5	-0.722479	131.886	-359.698
71	5	-0.709522	132.389	-363.245
72	5	-0.699883	132.879	-366.745
73	5	-0.690309	133.356	-370.196
74	5	-0.677639	133.815	-373.585
75	5	-0.668209	134.261	-376.926
76	5	-0.658838	134.695	-380.22
77	5	-0.646431	135.113	-383.452
78	5	-0.637192	135.519	-386.638
79	5	-0.628006	135.914	-389.778
80	5	-0.615839	136.293	-392.857
81	5	-0.606775	136.661	-395.891
82	5	-0.594766	137.015	-398.865
83	5	-0.585815	137.358	-401.794
84	5	-0.576911	137.691	-404.679
85	5	-0.565108	138.01	-407.504
86	5	-0.556308	138.32	-410.286
87	5	-0.547551	138.619	-413.023
88	5	-0.53594	138.907	-415.703
89	5	-0.52728	139.185	-418.339
90	5	-0.515791	139.451	-420.918
91	5	-0.507221	139.708	-423.455
92	5	-0.498687	139.957	-425.948
93	5	-0.487364	140.194	-428.385
94	5	-0.478914	140.424	-430.779
95	5	-0.470498	140.645	-433.132
96	5	-0.459327	140.856	-435.429
97	5	-0.450985	141.059	-437.683
98	5	-0.442676	141.255	-439.897
99	5	-0.431644	141.442	-442.055
100	5	-0.423405	141.621	-444.172
101	5	-0.412463	141.791	-446.234
102	5	-0.40429	141.954	-448.256
103	5	-0.396142	142.111	-450.237
104	5	-0.385321	142.26	-452.163
105	5	-0.377233	142.402	-454.049
106	5	-0.369171	142.538	-455.895
107	5	-0.358459	142.667	-457.687
108	5	-0.350451	142.79	-459.44
109	5	-0.33981	142.905	-461.139
110	5	-0.331854	143.015	-462.798
111	5	-0.323919	143.12	-464.418
112	5	-0.31337	143.218	-465.984
113	5	-0.305481	143.312	-467.512

114	5	-0.297612	143.4	-469
115	5	-0.287147	143.483	-470.436
116	5	-0.279319	143.561	-471.832
117	5	-0.271509	143.635	-473.19
118	5	-0.26112143.703	-474.495	
119	5	-0.253347	143.767	-475.762
120	5	-0.243007	143.826	-476.977
121	5	-0.235269	143.881	-478.154
122	5.2	-0.227545	143.933	-479.337
123	5.4	-0.217267	143.98	-480.51
124	5.5	-0.209575	144.024	-481.663
125	6	-0.201894	144.065	-482.874
126	6	-0.191671	144.102	-484.024
127	6.4	-0.184017	144.136	-485.202
128	6.9	-0.176374	144.167	-486.419
129	7	-0.166199	144.194	-487.582
130	7	-0.158579	144.219	-488.692
131	7	-0.148434	144.241	-489.731
132	7	-0.140835	144.261	-490.717
133	7.2	-0.133244	144.279	-491.676
134	7.6	-0.123135	144.294	-492.612
135	8	-0.115562	144.308	-493.537
136	8	-0.107995	144.319	-494.401
137	8	-0.0979139	144.329	-495.184
138	8	-0.0903606	144.337	-495.907
139	8.5	-0.0802981	144.343	-496.589
140	8.6	-0.0727562	144.349	-497.215
141	8.8	-0.0652187	144.353	-497.789
142	8.8	-0.0551734	144.356	-498.275
143	9	-0.0476439	144.358	-498.703
144	9	-0.0401167	144.36	-499.064
145	9	-0.0300838	144.361	-499.335
146	9.2	-0.0225612	144.361	-499.543
147	9.2	-0.0150408	144.362	-499.681
148	9.9	-0.00501359	144.362	-499.731
149	10	0.00501359	144.362	-499.681
150	10	0.0150408	144.362	-499.53
151	10	0.0225612	144.362	-499.305
152	10	0.0300838	144.363	-499.004
153	10	0.0401167	144.365	-498.603
154	10	0.0476439	144.367	-498.126
155	10	0.0551734	144.37	-497.574
156	11	0.0652187	144.374	-496.857
157	11	0.0727562	144.38	-496.057
158	11	0.0802981	144.386	-495.173
159	11	0.0903606	144.394	-494.179
160	11	0.0979139	144.404	-493.102
161	11	0.107995	144.416	-491.914
162	12	0.115562	144.429	-490.528
163	12	0.123135	144.444	-489.05
164	12	0.133244	144.462	-487.451
165	12	0.140835	144.482	-485.761
166	12	0.148434	144.504	-483.98
167	12	0.158579	144.529	-482.077
168	12	0.166199	144.557	-480.083
169	12	0.176374	144.588	-477.966
170	12	0.184017	144.621	-475.758
171	12	0.191671	144.658	-473.458
172	12	0.201894	144.699	-471.035
173	12	0.209575	144.743	-468.52
174	12	0.217267	144.79	-465.913
175	13	0.227545	144.842	-462.955

176	13	0.235269	144.897	-459.896
177	13	0.243007	144.956	-456.737
178	13	0.253347	145.02	-453.444
179	13	0.26112	145.089	-450.049
180	13	0.271509	145.162	-446.52
181	13	0.279319	145.24	-442.889
182	13	0.287147	145.323	-439.156
183	13	0.297612	145.411	-435.287
184	13	0.305481	145.505	-431.315
185	13	0.31337	145.603	-427.242
186	13	0.323919	145.708	-423.031
187	13	0.331854	145.818	-418.717
188	13	0.33981	145.933	-414.299
189	13	0.350451	146.056	-409.743
190	13	0.358459	146.185	-405.083
191	13	0.369171	146.321	-400.284
192	13	0.377233	146.463	-395.38
193	13	0.385321	146.612	-390.371
194	13	0.396142	146.769	-385.221
195	14	0.40429	146.932	-379.561
196	14	0.412463	147.102	-373.786
197	14	0.423405	147.282	-367.859
198	14	0.431644	147.468	-361.816
199	14	0.442676	147.664	-355.618
200	14	0.450985	147.867	-349.304
201	14	0.459327	148.078	-342.874
202	14	0.470498	148.3	-336.287
203	14	0.478914	148.529	-329.582
204	14	0.487364	148.767	-322.759
205	14	0.498687	149.015	-315.777
206	14	0.507221	149.272	-308.676
207	15	0.515791	149.539	-300.939
208	15	0.52728	149.817	-293.03
209	16	0.53594	150.104	-284.455
210	16	0.547551	150.404	-275.694
211	16	0.556308	150.713	-266.793
212	17	0.565108	151.032	-257.187
213	18	0.576911	151.365	-246.802
214	18	0.585815	151.708	-236.258
215	20	0.594766	152.062	-224.362
216	20	0.606775	152.43	-212.227
217	20	0.615839	152.81	-199.91
218	20	0.628006	153.204	-187.35
219	20	0.637192	153.61	-174.606
220	20	0.646431	154.028	-161.677
221	21	0.658838	154.462	-147.842
222	21	0.668209	154.908	-133.809
223	21	0.677639	155.368	-119.579
224	22	0.690309	155.844	-104.392
225	22	0.699883	156.334	-88.9947
226	22	0.709522	156.837	-73.3852
227	22	0.722479	157.359	-57.4907
228	23	0.732275	157.896	-40.6484
229	23	0.745449	158.451	-23.503
230	23	0.755415	159.022	-6.12848
231	23	0.765456	159.608	11.477
232	24	0.778966	160.215	30.1722
233	24	0.789191	160.837	49.1128
234	25	0.7995	161.477	69.1003
235	25	0.813379	162.138	89.4348
236	27	0.823893	162.817	111.68
237	27	0.834498	163.513	134.211

238	27	0.848786		164.234	157.129
239	28	0.859618		164.973	181.198
240	29	0.874218		165.737	206.55
241	30	0.885291		166.521	233.109
242	30	0.896473		167.325	260.003
243	30	0.911562		168.155	287.35
244	30	0.923014		169.007	315.04
245	31	0.93459	169.881	344.013	
246	32	0.950222		170.784	374.42
247	32	0.9621	171.709	405.207	
248	32	0.97815	172.666	436.508	
249	32	0.990356		173.647	468.199
250	33	1.00271	174.652	501.289	
251	33	1.01943	175.692	534.93	
252	34	1.03215	176.757	570.023	
253	34	1.04505	177.849	605.555	
254	35	1.06252	178.978	642.743	
255	36	1.07584	180.136	681.473	
256	36	1.08935	181.322	720.69	
257	37	1.10768	182.549	761.674	
258	38	1.12168	183.807	804.297	
259	38	1.14069	185.108	847.644	
260	38	1.15522	186.443	891.542	
261	38	1.17	187.812	936.002	
262	38	1.19012	189.228	981.227	
263	39	1.20553	190.682	1028.24	
264	39	1.22123	192.173	1075.87	
265	40	1.24264	193.717	1125.58	
266	40	1.25908	195.302	1175.94	
267	40	1.27588	196.93	1226.97	
268	41	1.29884	198.617	1280.23	
269	41	1.31652	200.351	1334.2	
270	41	1.34075	202.148	1389.17	
271	42	1.35946	203.996	1446.27	
272	42	1.37866	205.897	1504.18	
273	44	1.40507	207.871	1566	
274	44	1.42554	209.903	1628.72	
275	45	1.44663	211.996	1693.82	
276	47	1.47579	214.174	1763.18	
277	48	1.49852	216.42	1835.11	
278	48	1.53007	218.761	1908.56	
279	49	1.55477	221.178	1984.74	
280	52	1.58047	223.676	2066.92	
281	53	1.61644	226.289	2152.59	
282	55	1.64485	228.994	2243.06	
283	59	1.67466	231.799	2341.87	
284	61	1.71688	234.747	2446.6	
285	66	1.75069	237.811	2562.14	
286	68	1.78661	241.003	2683.63	
287	73	1.83843	244.383	2817.84	
288	74	1.88079	247.921	2957.01	
289	75	1.94314	251.696	3102.75	
290	77	1.99539	255.678	3256.4	
291	77	2.05375	259.896	3414.53	
292	79	2.14441	264.494	3583.94	
293	80	2.22621	269.45	3762.04	
294	92	2.32634	274.862	3976.06	
295	109	2.51213	281.173	4249.88	
296	120	2.74777	288.723	4579.62	

Data Set Standard Deviation = 18.7578

Numerator = 2.09729e+007
Denominator = 2.99687e+007
W Statistic = 0.699827 = 2.09729e+007 / 2.99687e+007

5% Critical value of 0.976 exceeds 0.699827
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.699827
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Barium

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.837758
0.837758 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	1.9	0.003367	-2.747	7744.0825	348.683	
2	2	0.00673401	-2.512	1344.35	337.176	
3	2	0.010101	-2.326	3444.35	328.103	
4	2.1	0.013468	-2.226	2144.6175	323.213	
5	2.1	0.016835	-2.144	4144.6175	319.219	
6	2.5	0.020202	-2.053	7545.6875	314.791	
7	2.8	0.023569	-1.995	3946.49	311.942	
8	2.8	0.026936	-1.943	1446.49	309.39	
9	2.8	0.030303	-1.880	7946.49	306.345	
10	2.9	0.03367	-1.838	4346.7575	304.276	
11	2.9	0.037037	-1.786	6146.7575	301.746	
12	3	0.040404	-1.750	6947.025	299.992	
13	3	0.043771	-1.716	8847.025	298.341	
14	3	0.047138	-1.674	6647.025	296.279	
15	3.1	0.0505051	-1.644	8547.2925	294.824	
16	3.1	0.0538721	-1.616	4447.2925	293.436	
17	3.3	0.0572391	-1.580	4747.8275	291.679	
18	3.4	0.0606061	-1.554	7748.095	290.425	
19	3.5	0.0639731	-1.530	0748.3625	289.218	
20	3.8	0.0673401	-1.498	5249.165	287.677	
21	4	0.0707071	-1.475	7949.7	286.568	
22	4	0.0740741	-1.446	6349.7	285.144	
23	4	0.0774411	-1.425	5449.7	284.114	
24	4.5	0.0808081	-1.405	0751.0375	283.114	
25	4.6	0.0841751	-1.378	6651.305	281.824	
26	5	0.0875421	-1.359	4652.375	280.887	
27	5	0.0909091	-1.340	7552.375	279.974	
28	5	0.0942761	-1.316	5252.375	278.79	
29	5	0.0976431	-1.298	8452.375	277.926	
30	5	0.10101	-1.275	8852.375	276.805	
31	5	0.104377	-1.259	0852.375	275.985	
32	5	0.107744	-1.242	6452.375	275.182	
33	5	0.111111	-1.221	2352.375	274.137	
34	5	0.114478	-1.205	5352.375	273.37	
35	5	0.117845	-1.190	1252.375	272.617	
36	5	0.121212	-1.17	52.375	271.635	
37	5	0.124579	-1.155	2252.375	270.913	
38	5	0.127946	-1.140	6952.375	270.204	
39	5	0.131313	-1.121	6852.375	269.275	
40	5	0.13468	-1.107	6852.375	268.592	
41	5	0.138047	-1.089	3552.375	267.697	
42	5	0.141414	-1.075	8452.375	267.037	
43	5	0.144781	-1.062	5252.375	266.386	
44	5	0.148148	-1.045	0552.375	265.533	
45	5	0.151515	-1.032	1552.375	264.904	
46	5	0.154882	-1.019	4352.375	264.282	
47	5	0.158249	-1.002	7152.375	263.466	
48	5	0.161616	-0.990356		52.375	262.862

49	5	0.164983	-0.978155	2.375	262.266
50	5	0.16835	-0.9621	52.375	261.483
51	5	0.171717	-0.950222	52.375	260.903
52	5	0.175084	-0.934595	2.375	260.139
53	5	0.178451	-0.923014	52.375	259.574
54	5	0.181818	-0.911562	52.375	259.015
55	5	0.185185	-0.896473	52.375	258.278
56	5	0.188552	-0.885291	52.375	257.732
57	5	0.191919	-0.874218	52.375	257.191
58	5	0.195286	-0.859618	52.375	256.478
59	5	0.198653	-0.848786	52.375	255.949
60	5	0.20202	-0.834498	52.375	255.251
61	5	0.205387	-0.823893	52.375	254.733
62	5	0.208754	-0.813379	52.375	254.22
63	5	0.212121	-0.7995	52.375	253.542
64	5	0.215488	-0.789191	52.375	253.039
65	5	0.218855	-0.778966	52.375	252.54
66	5	0.222222	-0.765456	52.375	251.88
67	5	0.225589	-0.755415	52.375	251.389
68	5	0.228956	-0.745449	52.375	250.903
69	5	0.232323	-0.732275	52.375	250.259
70	5	0.23569	-0.722479	52.375	249.781
71	5	0.239057	-0.709522	52.375	249.148
72	5	0.242424	-0.699883	52.375	248.678
73	5	0.245791	-0.690309	52.375	248.21
74	5	0.249158	-0.677639	52.375	247.591
75	5	0.252525	-0.668209	52.375	247.131
76	5	0.255892	-0.658838	52.375	246.673
77	5	0.259259	-0.646431	52.375	246.067
78	5	0.262626	-0.637192	52.375	245.616
79	5	0.265993	-0.628006	52.375	245.168
80	5	0.26936	-0.615839	52.375	244.573
81	5	0.272727	-0.606775	52.375	244.131
82	5	0.276094	-0.594766	52.375	243.544
83	5	0.279461	-0.585815	52.375	243.107
84	5	0.282828	-0.576911	52.375	242.672
85	5	0.286195	-0.565108	52.375	242.096
86	5	0.289562	-0.556308	52.375	241.666
87	5	0.292929	-0.547551	52.375	241.239
88	5	0.296296	-0.535945	2.375	240.672
89	5	0.299663	-0.527285	2.375	240.249
90	5	0.30303	-0.515791	52.375	239.688
91	5	0.306397	-0.507221	52.375	239.269
92	5	0.309764	-0.498687	52.375	238.853
93	5	0.313131	-0.487364	52.375	238.3
94	5	0.316498	-0.478914	52.375	237.887
95	5	0.319865	-0.470498	52.375	237.476
96	5	0.323232	-0.459327	52.375	236.93
97	5	0.326599	-0.450985	52.375	236.523
98	5	0.329966	-0.442676	52.375	236.117
99	5	0.333333	-0.431644	52.375	235.579
100	5	0.3367	-0.423405	52.375	235.176
101	5	0.340067	-0.412463	52.375	234.642
102	5	0.343434	-0.404295	2.375	234.243
103	5	0.346801	-0.396142	52.375	233.845
104	5	0.350168	-0.385321	52.375	233.317
105	5	0.353535	-0.377233	52.375	232.922
106	5	0.356902	-0.369171	52.375	232.528
107	5	0.360269	-0.358459	52.375	232.005
108	5	0.363636	-0.350451	52.375	231.614
109	5	0.367003	-0.339815	2.375	231.094
110	5	0.37037	-0.331854	52.375	230.706

111	5	0.373737	-0.323919	52.375	230.318
112	5	0.377104	-0.3133752.375	229.803	
113	5	0.380471	-0.305481	52.375	229.418
114	5	0.383838	-0.297612	52.375	229.033
115	5	0.387205	-0.287147	52.375	228.522
116	5	0.390572	-0.279319	52.375	228.14
117	5	0.393939	-0.271509	52.375	227.759
118	5	0.397306	-0.2611252.375	227.251	
119	5	0.400673	-0.253347	52.375	226.872
120	5	0.40404	-0.243007	52.375	226.367
121	5	0.407407	-0.235269	52.375	225.989
122	5.2	0.410774	-0.227545	52.91	225.612
123	5.4	0.414141	-0.217267	53.445	225.11
124	5.5	0.417508	-0.209575	53.7125	224.734
125	6	0.420875	-0.201894	55.05	224.359
126	6	0.424242	-0.191671	55.05	223.86
127	6.4	0.427609	-0.184017	56.12	223.486
128	6.9	0.430976	-0.176374	57.4575	223.113
129	7	0.434343	-0.166199	57.725	222.616
130	7	0.43771	-0.158579	57.725	222.244
131	7	0.441077	-0.148434	57.725	221.749
132	7	0.444444	-0.140835	57.725	221.377
133	7.2	0.447811	-0.133244	58.26	221.007
134	7.6	0.451178	-0.123135	59.33	220.513
135	8	0.454545	-0.115562	60.4	220.143
136	8	0.457912	-0.107995	60.4	219.774
137	8	0.461279	-0.0979139	60.4	219.281
138	8	0.464646	-0.0903606	60.4	218.913
139	8.5	0.468013	-0.0802981	61.7375	218.421
140	8.6	0.47138	-0.0727562	62.005	218.053
141	8.8	0.474747	-0.0652187	62.54	217.685
142	8.8	0.478114	-0.0551734	62.54	217.194
143	9	0.481481	-0.0476439	63.075	216.827
144	9	0.484848	-0.0401167	63.075	216.459
145	9	0.488215	-0.0300838	63.075	215.969
146	9.2	0.491582	-0.0225612	63.61	215.602
147	9.2	0.494949	-0.0150408	63.61	215.234
148	9.9	0.498316	-0.00501359	65.4825	214.745
149	10	0.501684	0.00501359	65.75	214.255
150	10	0.505051	0.0150408	65.75	213.766
151	10	0.508418	0.0225612	65.75	213.398
152	10	0.511785	0.0300838	65.75	213.031
153	10	0.515152	0.0401167	65.75	212.541
154	10	0.518519	0.0476439	65.75	212.173
155	10	0.521886	0.0551734	65.75	211.806
156	11	0.525253	0.0652187	68.425	211.315
157	11	0.52862	0.0727562	68.425	210.947
158	11	0.531987	0.0802981	68.425	210.579
159	11	0.535354	0.0903606	68.425	210.087
160	11	0.538721	0.0979139	68.425	209.719
161	11	0.542088	0.107995	68.425	209.226
162	12	0.545455	0.115562	71.1	208.857
163	12	0.548822	0.123135	71.1	208.487
164	12	0.552189	0.133244	71.1	207.993
165	12	0.555556	0.140835	71.1	207.623
166	12	0.558923	0.148434	71.1	207.251
167	12	0.56229	0.158579	71.1	206.756
168	12	0.565657	0.166199	71.1	206.384
169	12	0.569024	0.176374	71.1	205.887
170	12	0.572391	0.184017	71.1	205.514
171	12	0.575758	0.191671	71.1	205.14
172	12	0.579125	0.201894	71.1	204.641

173	12	0.582492	0.209575	71.1	204.266
174	12	0.585859	0.217267	71.1	203.89
175	13	0.589226	0.227545	73.775	203.388
176	13	0.592593	0.235269	73.775	203.011
177	13	0.59596	0.243007	73.775	202.633
178	13	0.599327	0.253347	73.775	202.128
179	13	0.602694	0.26112	73.775	201.749
180	13	0.606061	0.271509	73.775	201.241
181	13	0.609428	0.279319	73.775	200.86
182	13	0.612795	0.287147	73.775	200.478
183	13	0.616162	0.297612	73.775	199.967
184	13	0.619529	0.305481	73.775	199.582
185	13	0.622896	0.31337	73.775	199.197
186	13	0.626263	0.323919	73.775	198.682
187	13	0.62963	0.331854	73.775	198.294
188	13	0.632997	0.33981	73.775	197.906
189	13	0.636364	0.350451	73.775	197.386
190	13	0.639731	0.358459	73.775	196.995
191	13	0.643098	0.369171	73.775	196.472
192	13	0.646465	0.377233	73.775	196.078
193	13	0.649832	0.385321	73.775	195.683
194	13	0.653199	0.396142	73.775	195.155
195	14	0.656566	0.40429	76.45	194.757
196	14	0.659933	0.412463	76.45	194.358
197	14	0.6633	0.423405	76.45	193.824
198	14	0.666667	0.431644	76.45	193.421
199	14	0.670034	0.442676	76.45	192.883
200	14	0.673401	0.450985	76.45	192.477
201	14	0.676768	0.459327	76.45	192.07
202	14	0.680135	0.470498	76.45	191.524
203	14	0.683502	0.478914	76.45	191.113
204	14	0.686869	0.487364	76.45	190.7
205	14	0.690236	0.498687	76.45	190.147
206	14	0.693603	0.507221	76.45	189.731
207	15	0.69697	0.515791	79.125	189.312
208	15	0.700337	0.52728	79.125	188.751
209	16	0.703704	0.53594	81.8	188.328
210	16	0.707071	0.547551	81.8	187.761
211	16	0.710438	0.556308	81.8	187.334
212	17	0.713805	0.565108	84.475	186.904
213	18	0.717172	0.576911	87.15	186.328
214	18	0.720539	0.585815	87.15	185.893
215	20	0.723906	0.594766	92.5	185.456
216	20	0.727273	0.606775	92.5	184.869
217	20	0.73064	0.615839	92.5	184.427
218	20	0.734007	0.628006	92.5	183.832
219	20	0.737374	0.637192	92.5	183.384
220	20	0.740741	0.646431	92.5	182.933
221	21	0.744108	0.658838	95.175	182.327
222	21	0.747475	0.668209	95.175	181.869
223	21	0.750842	0.677639	95.175	181.409
224	22	0.754209	0.690309	97.85	180.79
225	22	0.757576	0.699883	97.85	180.322
226	22	0.760943	0.709522	97.85	179.852
227	22	0.76431	0.722479	97.85	179.219
228	23	0.767677	0.732275	100.525	178.741
229	23	0.771044	0.745449	100.525	178.097
230	23	0.774411	0.755415	100.525	177.611
231	23	0.777778	0.765456	100.525	177.12
232	24	0.781145	0.778966	103.2	176.46
233	24	0.784512	0.789191	103.2	175.961
234	25	0.787879	0.7995	105.875	175.458

235	25	0.791246	0.813379	105.875	174.78
236	27	0.794613	0.823893	111.225	174.267
237	27	0.79798	0.834498	111.225	173.749
238	27	0.801347	0.848786	111.225	173.051
239	28	0.804714	0.859618	113.9	172.522
240	29	0.808081	0.874218	116.575	171.809
241	30	0.811448	0.885291	119.25	171.268
242	30	0.814815	0.896473	119.25	170.722
243	30	0.818182	0.911562	119.25	169.985
244	30	0.821549	0.923014	119.25	169.426
245	31	0.824916	0.93459	121.925	168.861
246	32	0.828283	0.950222	124.6	168.097
247	32	0.83165	0.9621	124.6	167.517
248	32	0.835017	0.97815	124.6	166.734
249	32	0.838384	0.990356	124.6	166.138
250	33	0.841751	1.00271	127.275	165.534
251	33	0.845118	1.01943	127.275	164.718
252	34	0.848485	1.03215	129.95	164.096
253	34	0.851852	1.04505	129.95	163.467
254	35	0.855219	1.06252	132.625	162.614
255	36	0.858586	1.07584	135.3	161.963
256	36	0.861953	1.08935	135.3	161.303
257	37	0.86532	1.10768	137.975	160.408
258	38	0.868687	1.12168	140.65	159.725
259	38	0.872054	1.14069	140.65	158.796
260	38	0.875421	1.15522	140.65	158.087
261	38	0.878788	1.17	140.65	157.365
262	38	0.882155	1.19012	140.65	156.383
263	39	0.885522	1.20553	143.325	155.63
264	39	0.888889	1.22123	143.325	154.863
265	40	0.892256	1.24264	146	153.818
266	40	0.895623	1.25908	146	153.015
267	40	0.89899	1.27588	146	152.195
268	41	0.902357	1.29884	148.675	151.074
269	41	0.905724	1.31652	148.675	150.21
270	41	0.909091	1.34075	148.675	149.026
271	42	0.912458	1.35946	151.35	148.113
272	42	0.915825	1.37866	151.35	147.176
273	44	0.919192	1.40507	156.7	145.886
274	44	0.922559	1.42554	156.7	144.886
275	45	0.925926	1.44663	159.375	143.856
276	47	0.929293	1.47579	164.725	142.432
277	48	0.93266	1.49852	167.4	141.323
278	48	0.936027	1.53007	167.4	139.782
279	49	0.939394	1.55477	170.075	138.575
280	52	0.942761	1.58047	178.1	137.321
281	53	0.946128	1.61644	180.775	135.564
282	55	0.949495	1.64485	186.125	134.176
283	59	0.952862	1.67466	196.825	132.721
284	61	0.956229	1.71688	202.175	130.659
285	66	0.959596	1.75069	215.55	129.008
286	68	0.962963	1.78661	220.9	127.254
287	73	0.96633	1.83843	234.275	124.724
288	74	0.969697	1.88079	236.95	122.655
289	75	0.973064	1.94314	239.625	119.61
290	77	0.976431	1.99539	244.975	117.058
291	77	0.979798	2.05375	244.975	114.209
292	79	0.983165	2.14441	250.325	109.781
293	80	0.986532	2.22621	253	105.787
294	92	0.989899	2.32634	285.1	100.897
295	109	0.993266	2.51213	330.575	91.8241
296	120	0.996633	2.74777	360	80.3175

Shapiro-Francia Test of Normality

Parameter: Barium

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.641854	-2.747777.55021	-1.76366	
2	0.693147	-2.5121313.861	-3.50494	
3	0.693147	-2.3263419.2729	-5.11744	
4	0.741937	-2.2262124.2289	-6.76915	
5	0.741937	-2.1444128.8274	-8.36016	
6	0.916291	-2.0537533.0453	-10.242	
7	1.02962	-1.9953937.0269	-12.2965	
8	1.02962	-1.9431440.8026	-14.2972	
9	1.02962	-1.8807944.34	-16.2337	
10	1.06471	-1.8384347.7198	-18.1911	
11	1.06471	-1.7866150.9118	-20.0933	
12	1.09861	-1.7506953.9767	-22.0166	
13	1.09861	-1.7168856.9244	-23.9028	
14	1.09861	-1.6746659.7289	-25.7426	
15	1.1314	-1.6448562.4344	-27.6036	
16	1.1314	-1.6164465.0473	-29.4324	
17	1.19392	-1.5804767.5452	-31.3194	
18	1.22378	-1.5547769.9625	-33.2221	
19	1.25276	-1.5300772.3036	-35.1389	
20	1.335	-1.4985274.5491	-37.1394	
21	1.38629	-1.4757976.7271	-39.1853	
22	1.38629	-1.4466378.8198	-41.1908	
23	1.38629	-1.4255480.852	-43.167	
24	1.50408	-1.4050782.8262	-45.2803	
25	1.52606	-1.3786684.7269	-47.3842	
26	1.60944	-1.3594686.5751	-49.5722	
27	1.60944	-1.3407588.3727	-51.7301	
28	1.60944	-1.3165290.1059	-53.8489	
29	1.60944	-1.2988491.7929	-55.9393	
30	1.60944	-1.2758893.4208	-57.9928	
31	1.60944	-1.2590895.006	-60.0192	
32	1.60944	-1.2426496.5502	-62.0191	
33	1.60944	-1.2212398.0416	-63.9846	
34	1.60944	-1.2055399.4949	-65.9248	
35	1.60944	-1.19012100.911	-67.8403	
36	1.60944	-1.17 102.28	-69.7233	
37	1.60944	-1.15522103.615	-71.5826	
38	1.60944	-1.14069104.916	-73.4184	
39	1.60944	-1.12168106.174	-75.2237	
40	1.60944	-1.10768107.401	-77.0064	
41	1.60944	-1.08935108.588	-78.7597	
42	1.60944	-1.07584109.745	-80.4912	
43	1.60944	-1.06252110.874	-82.2012	
44	1.60944	-1.04505111.966	-83.8832	
45	1.60944	-1.03215113.032	-85.5444	
46	1.60944	-1.01943114.071	-87.1851	
47	1.60944	-1.00271115.076	-88.7989	
48	1.60944	-0.990356	116.057	-90.3928
49	1.60944	-0.97815117.014	-91.9671	
50	1.60944	-0.9621 117.939	-93.5155	
51	1.60944	-0.950222	118.842	-95.0448

52	1.60944	-0.93459	119.716	-96.549
53	1.60944	-0.923014	120.568	-98.0345
54	1.60944	-0.911562	121.399	-99.5016
55	1.60944	-0.896473	122.202	-100.944
56	1.60944	-0.885291	122.986	-102.369
57	1.60944	-0.874218	123.75	-103.776
58	1.60944	-0.859618	124.489	-105.16
59	1.60944	-0.848786	125.21	-106.526
60	1.60944	-0.834498	125.906	-107.869
61	1.60944	-0.823893	126.585	-109.195
62	1.60944	-0.813379	127.247	-110.504
63	1.60944	-0.7995	127.886	-111.791
64	1.60944	-0.789191	128.509	-113.061
65	1.60944	-0.778966	129.115	-114.315
66	1.60944	-0.765456	129.701	-115.547
67	1.60944	-0.755415	130.272	-116.762
68	1.60944	-0.745449	130.828	-117.962
69	1.60944	-0.732275	131.364	-119.141
70	1.60944	-0.722479	131.886	-120.303
71	1.60944	-0.709522	132.389	-121.445
72	1.60944	-0.699883	132.879	-122.572
73	1.60944	-0.690309	133.356	-123.683
74	1.60944	-0.677639	133.815	-124.773
75	1.60944	-0.668209	134.261	-125.849
76	1.60944	-0.658838	134.695	-126.909
77	1.60944	-0.646431	135.113	-127.95
78	1.60944	-0.637192	135.519	-128.975
79	1.60944	-0.628006	135.914	-129.986
80	1.60944	-0.615839	136.293	-130.977
81	1.60944	-0.606775	136.661	-131.954
82	1.60944	-0.594766	137.015	-132.911
83	1.60944	-0.585815	137.358	-133.854
84	1.60944	-0.576911	137.691	-134.782
85	1.60944	-0.565108	138.01	-135.692
86	1.60944	-0.556308	138.32	-136.587
87	1.60944	-0.547551	138.619	-137.468
88	1.60944	-0.53594	138.907	-138.331
89	1.60944	-0.52728	139.185	-139.179
90	1.60944	-0.515791	139.451	-140.01
91	1.60944	-0.507221	139.708	-140.826
92	1.60944	-0.498687	139.957	-141.629
93	1.60944	-0.487364	140.194	-142.413
94	1.60944	-0.478914	140.424	-143.184
95	1.60944	-0.470498	140.645	-143.941
96	1.60944	-0.459327	140.856	-144.68
97	1.60944	-0.450985	141.059	-145.406
98	1.60944	-0.442676	141.255	-146.118
99	1.60944	-0.431644	141.442	-146.813
100	1.60944	-0.423405	141.621	-147.495
101	1.60944	-0.412463	141.791	-148.158
102	1.60944	-0.40429	141.954	-148.809
103	1.60944	-0.396142	142.111	-149.447
104	1.60944	-0.385321	142.26	-150.067
105	1.60944	-0.377233	142.402	-150.674
106	1.60944	-0.369171	142.538	-151.268
107	1.60944	-0.358459	142.667	-151.845
108	1.60944	-0.350451	142.79	-152.409
109	1.60944	-0.33981	142.905	-152.956
110	1.60944	-0.331854	143.015	-153.49
111	1.60944	-0.323919	143.12	-154.011
112	1.60944	-0.31337	143.218	-154.516
113	1.60944	-0.305481	143.312	-155.007

114	1.60944	-0.297612	143.4	-155.486
115	1.60944	-0.287147	143.483	-155.949
116	1.60944	-0.279319	143.561	-156.398
117	1.60944	-0.271509	143.635	-156.835
118	1.60944	-0.26112	143.703	-157.255
119	1.60944	-0.253347	143.767	-157.663
120	1.60944	-0.243007	143.826	-158.054
121	1.60944	-0.235269	143.881	-158.433
122	1.64866	-0.227545	143.933	-158.808
123	1.6864	-0.217267	143.98	-159.174
124	1.70475	-0.209575	144.024	-159.532
125	1.79176	-0.201894	144.065	-159.893
126	1.79176	-0.191671	144.102	-160.237
127	1.8563	-0.184017	144.136	-160.578
128	1.93152	-0.176374	144.167	-160.919
129	1.94591	-0.166199	144.194	-161.242
130	1.94591	-0.158579	144.219	-161.551
131	1.94591	-0.148434	144.241	-161.84
132	1.94591	-0.140835	144.261	-162.114
133	1.97408	-0.133244	144.279	-162.377
134	2.02815	-0.123135	144.294	-162.627
135	2.07944	-0.115562	144.308	-162.867
136	2.07944	-0.107995	144.319	-163.092
137	2.07944	-0.0979139	144.329	-163.295
138	2.07944	-0.0903606	144.337	-163.483
139	2.14007	-0.0802981	144.343	-163.655
140	2.15176	-0.0727562	144.349	-163.812
141	2.17475	-0.0652187	144.353	-163.953
142	2.17475	-0.0551734	144.356	-164.073
143	2.19722	-0.0476439	144.358	-164.178
144	2.19722	-0.0401167	144.36	-164.266
145	2.19722	-0.0300838	144.361	-164.332
146	2.2192	-0.0225612	144.361	-164.382
147	2.2192	-0.0150408	144.362	-164.416
148	2.29253	-0.00501359	144.362	-164.427
149	2.30259	0.00501359	144.362	-164.416
150	2.30259	0.0150408	144.362	-164.381
151	2.30259	0.0225612	144.362	-164.329
152	2.30259	0.0300838	144.363	-164.26
153	2.30259	0.0401167	144.365	-164.167
154	2.30259	0.0476439	144.367	-164.058
155	2.30259	0.0551734	144.37	-163.931
156	2.3979	0.0652187	144.374	-163.774
157	2.3979	0.0727562	144.38	-163.6
158	2.3979	0.0802981	144.386	-163.407
159	2.3979	0.0903606	144.394	-163.191
160	2.3979	0.0979139	144.404	-162.956
161	2.3979	0.107995	144.416	-162.697
162	2.48491	0.115562	144.429	-162.41
163	2.48491	0.123135	144.444	-162.104
164	2.48491	0.133244	144.462	-161.773
165	2.48491	0.140835	144.482	-161.423
166	2.48491	0.148434	144.504	-161.054
167	2.48491	0.158579	144.529	-160.66
168	2.48491	0.166199	144.557	-160.247
169	2.48491	0.176374	144.588	-159.809
170	2.48491	0.184017	144.621	-159.351
171	2.48491	0.191671	144.658	-158.875
172	2.48491	0.201894	144.699	-158.373
173	2.48491	0.209575	144.743	-157.852
174	2.48491	0.217267	144.79	-157.313
175	2.56495	0.227545	144.842	-156.729

176	2.56495	0.235269	144.897	-156.126
177	2.56495	0.243007	144.956	-155.502
178	2.56495	0.253347	145.02	-154.852
179	2.56495	0.26112	145.089	-154.183
180	2.56495	0.271509	145.162	-153.486
181	2.56495	0.279319	145.24	-152.77
182	2.56495	0.287147	145.323	-152.033
183	2.56495	0.297612	145.411	-151.27
184	2.56495	0.305481	145.505	-150.486
185	2.56495	0.31337	145.603	-149.683
186	2.56495	0.323919	145.708	-148.852
187	2.56495	0.331854	145.818	-148.001
188	2.56495	0.33981	145.933	-147.129
189	2.56495	0.350451	146.056	-146.23
190	2.56495	0.358459	146.185	-145.311
191	2.56495	0.369171	146.321	-144.364
192	2.56495	0.377233	146.463	-143.396
193	2.56495	0.385321	146.612	-142.408
194	2.56495	0.396142	146.769	-141.392
195	2.63906	0.40429	146.932	-140.325
196	2.63906	0.412463	147.102	-139.236
197	2.63906	0.423405	147.282	-138.119
198	2.63906	0.431644	147.468	-136.98
199	2.63906	0.442676	147.664	-135.812
200	2.63906	0.450985	147.867	-134.621
201	2.63906	0.459327	148.078	-133.409
202	2.63906	0.470498	148.3	-132.167
203	2.63906	0.478914	148.529	-130.904
204	2.63906	0.487364	148.767	-129.617
205	2.63906	0.498687	149.015	-128.301
206	2.63906	0.507221	149.272	-126.963
207	2.70805	0.515791	149.539	-125.566
208	2.70805	0.52728	149.817	-124.138
209	2.77259	0.53594	150.104	-122.652
210	2.77259	0.547551	150.404	-121.134
211	2.77259	0.556308	150.713	-119.592
212	2.83321	0.565108	151.032	-117.991
213	2.89037	0.576911	151.365	-116.323
214	2.89037	0.585815	151.708	-114.63
215	2.99573	0.594766	152.062	-112.848
216	2.99573	0.606775	152.43	-111.03
217	2.99573	0.615839	152.81	-109.185
218	2.99573	0.628006	153.204	-107.304
219	2.99573	0.637192	153.61	-105.395
220	2.99573	0.646431	154.028	-103.459
221	3.04452	0.658838	154.462	-101.453
222	3.04452	0.668209	154.908	-99.4185
223	3.04452	0.677639	155.368	-97.3554
224	3.09104	0.690309	155.844	-95.2216
225	3.09104	0.699883	156.334	-93.0582
226	3.09104	0.709522	156.837	-90.8651
227	3.09104	0.722479	157.359	-88.6319
228	3.13549	0.732275	157.896	-86.3358
229	3.13549	0.745449	158.451	-83.9985
230	3.13549	0.755415	159.022	-81.6299
231	3.13549	0.765456	159.608	-79.2298
232	3.17805	0.778966	160.215	-76.7542
233	3.17805	0.789191	160.837	-74.2461
234	3.21888	0.7995	161.477	-71.6726
235	3.21888	0.813379	162.138	-69.0544
236	3.29584	0.823893	162.817	-66.339
237	3.29584	0.834498	163.513	-63.5887

238	3.29584	0.848786		164.234	-60.7912
239	3.3322	0.859618		164.973	-57.9268
240	3.3673	0.874218		165.737	-54.983
241	3.4012	0.885291		166.521	-51.972
242	3.4012	0.896473		167.325	-48.9229
243	3.4012	0.911562		168.155	-45.8225
244	3.4012	0.923014		169.007	-42.6831
245	3.43399	0.93459	169.881	-39.4738	
246	3.46574	0.950222		170.784	-36.1806
247	3.46574	0.9621	171.709	-32.8462	
248	3.46574	0.97815	172.666	-29.4562	
249	3.46574	0.990356		173.647	-26.0238
250	3.49651	1.00271	174.652	-22.5179	
251	3.49651	1.01943	175.692	-18.9534	
252	3.52636	1.03215	176.757	-15.3137	
253	3.52636	1.04505	177.849	-11.6285	
254	3.55535	1.06252	178.978	-7.85083	
255	3.58352	1.07584	180.136	-3.99554	
256	3.58352	1.08935	181.322	-0.0918394	
257	3.61092	1.10768	182.549	3.9079	
258	3.63759	1.12168	183.807	7.9881	
259	3.63759	1.14069	185.108	12.1375	
260	3.63759	1.15522	186.443	16.3397	
261	3.63759	1.17	187.812	20.5957	
262	3.63759	1.19012	189.228	24.9248	
263	3.66356	1.20553	190.682	29.3413	
264	3.66356	1.22123	192.173	33.8154	
265	3.68888	1.24264	193.717	38.3993	
266	3.68888	1.25908	195.302	43.0439	
267	3.68888	1.27588	196.93	47.7505	
268	3.71357	1.29884	198.617	52.5738	
269	3.71357	1.31652	200.351	57.4628	
270	3.71357	1.34075	202.148	62.4418	
271	3.73767	1.35946	203.996	67.523	
272	3.73767	1.37866	205.897	72.676	
273	3.78419	1.40507	207.871	77.9931	
274	3.78419	1.42554	209.903	83.3876	
275	3.80666	1.44663	211.996	88.8944	
276	3.85015	1.47579	214.174	94.5764	
277	3.8712	1.49852	216.42	100.378	
278	3.8712	1.53007	218.761	106.301	
279	3.89182	1.55477	221.178	112.352	
280	3.95124	1.58047	223.676	118.596	
281	3.97029	1.61644	226.289	125.014	
282	4.00733	1.64485	228.994	131.606	
283	4.07754	1.67466	231.799	138.434	
284	4.11087	1.71688	234.747	145.492	
285	4.18965	1.75069	237.811	152.827	
286	4.21951	1.78661	241.003	160.365	
287	4.29046	1.83843	244.383	168.253	
288	4.30407	1.88079	247.921	176.348	
289	4.31749	1.94314	251.696	184.738	
290	4.34381	1.99539	255.678	193.405	
291	4.34381	2.05375	259.896	202.326	
292	4.36945	2.14441	264.494	211.696	
293	4.38203	2.22621	269.45	221.451	
294	4.52179	2.32634	274.862	231.971	
295	4.69135	2.51213	281.173	243.756	
296	4.78749	2.74777	288.723	256.911	

Data Set Standard Deviation = 0.913182

Numerator = 66003.2
Denominator = 71026.2
W Statistic = 0.92928 = 66003.2 / 71026.2

5% Critical value of 0.976 exceeds 0.92928
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.92928
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Barium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.96335
0.96335 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	0.641854	0.003367	-2.74777	107.678	348.683
2	0.693147	0.00673401	-2.51213	113.167	337.176
3	0.693147	0.010101	-2.32634	113.167	328.103
4	0.741937	0.013468	-2.22621	118.387	323.213
5	0.741937	0.016835	-2.14441	118.387	319.219
6	0.916291	0.020202	-2.05375	137.043	314.791
7	1.02962	0.023569	-1.99539	149.169	311.942
8	1.02962	0.026936	-1.94314	149.169	309.39
9	1.02962	0.030303	-1.88079	149.169	306.345
10	1.06471	0.03367	-1.83843	152.924	304.276
11	1.06471	0.037037	-1.78661	152.924	301.746
12	1.09861	0.040404	-1.75069	156.552	299.992
13	1.09861	0.043771	-1.71688	156.552	298.341
14	1.09861	0.047138	-1.67466	156.552	296.279
15	1.1314	0.0505051	-1.64485	160.06	294.824
16	1.1314	0.0538721	-1.61644	160.06	293.436
17	1.19392	0.0572391	-1.58047	166.75	291.679
18	1.22378	0.0606061	-1.55477	169.944	290.425
19	1.25276	0.0639731	-1.53007	173.046	289.218
20	1.335	0.0673401	-1.49852	181.845	287.677
21	1.38629	0.0707071	-1.47579	187.333	286.568
22	1.38629	0.0740741	-1.44663	187.333	285.144
23	1.38629	0.0774411	-1.42554	187.333	284.114
24	1.50408	0.0808081	-1.40507	199.936	283.114
25	1.52606	0.0841751	-1.37866	202.288	281.824
26	1.60944	0.0875421	-1.35946	211.21	280.887
27	1.60944	0.0909091	-1.34075	211.21	279.974
28	1.60944	0.0942761	-1.31652	211.21	278.79
29	1.60944	0.0976431	-1.29884	211.21	277.926
30	1.60944	0.10101	-1.27588	211.21	276.805
31	1.60944	0.104377	-1.25908	211.21	275.985
32	1.60944	0.107744	-1.24264	211.21	275.182
33	1.60944	0.111111	-1.22123	211.21	274.137
34	1.60944	0.114478	-1.20553	211.21	273.37
35	1.60944	0.117845	-1.19012	211.21	272.617
36	1.60944	0.121212	-1.17	211.21	271.635
37	1.60944	0.124579	-1.15522	211.21	270.913
38	1.60944	0.127946	-1.14069	211.21	270.204
39	1.60944	0.131313	-1.12168	211.21	269.275
40	1.60944	0.13468	-1.10768	211.21	268.592
41	1.60944	0.138047	-1.08935	211.21	267.697
42	1.60944	0.141414	-1.07584	211.21	267.037
43	1.60944	0.144781	-1.06252	211.21	266.386
44	1.60944	0.148148	-1.04505	211.21	265.533
45	1.60944	0.151515	-1.03215	211.21	264.904
46	1.60944	0.154882	-1.01943	211.21	264.282
47	1.60944	0.158249	-1.00271	211.21	263.466
48	1.60944	0.161616	-0.990356	211.21	262.862

49	1.60944	0.164983	-0.97815	211.21	262.266
50	1.60944	0.16835	-0.9621	211.21	261.483
51	1.60944	0.171717	-0.950222	211.21	260.903
52	1.60944	0.175084	-0.93459	211.21	260.139
53	1.60944	0.178451	-0.923014	211.21	259.574
54	1.60944	0.181818	-0.911562	211.21	259.015
55	1.60944	0.185185	-0.896473	211.21	258.278
56	1.60944	0.188552	-0.885291	211.21	257.732
57	1.60944	0.191919	-0.874218	211.21	257.191
58	1.60944	0.195286	-0.859618	211.21	256.478
59	1.60944	0.198653	-0.848786	211.21	255.949
60	1.60944	0.20202	-0.834498	211.21	255.251
61	1.60944	0.205387	-0.823893	211.21	254.733
62	1.60944	0.208754	-0.813379	211.21	254.22
63	1.60944	0.212121	-0.7995	211.21	253.542
64	1.60944	0.215488	-0.789191	211.21	253.039
65	1.60944	0.218855	-0.778966	211.21	252.54
66	1.60944	0.222222	-0.765456	211.21	251.88
67	1.60944	0.225589	-0.755415	211.21	251.389
68	1.60944	0.228956	-0.745449	211.21	250.903
69	1.60944	0.232323	-0.732275	211.21	250.259
70	1.60944	0.23569	-0.722479	211.21	249.781
71	1.60944	0.239057	-0.709522	211.21	249.148
72	1.60944	0.242424	-0.699883	211.21	248.678
73	1.60944	0.245791	-0.690309	211.21	248.21
74	1.60944	0.249158	-0.677639	211.21	247.591
75	1.60944	0.252525	-0.668209	211.21	247.131
76	1.60944	0.255892	-0.658838	211.21	246.673
77	1.60944	0.259259	-0.646431	211.21	246.067
78	1.60944	0.262626	-0.637192	211.21	245.616
79	1.60944	0.265993	-0.628006	211.21	245.168
80	1.60944	0.26936	-0.615839	211.21	244.573
81	1.60944	0.272727	-0.606775	211.21	244.131
82	1.60944	0.276094	-0.594766	211.21	243.544
83	1.60944	0.279461	-0.585815	211.21	243.107
84	1.60944	0.282828	-0.576911	211.21	242.672
85	1.60944	0.286195	-0.565108	211.21	242.096
86	1.60944	0.289562	-0.556308	211.21	241.666
87	1.60944	0.292929	-0.547551	211.21	241.239
88	1.60944	0.296296	-0.53594	211.21	240.672
89	1.60944	0.299663	-0.52728	211.21	240.249
90	1.60944	0.30303	-0.515791	211.21	239.688
91	1.60944	0.306397	-0.507221	211.21	239.269
92	1.60944	0.309764	-0.498687	211.21	238.853
93	1.60944	0.313131	-0.487364	211.21	238.3
94	1.60944	0.316498	-0.478914	211.21	237.887
95	1.60944	0.319865	-0.470498	211.21	237.476
96	1.60944	0.323232	-0.459327	211.21	236.93
97	1.60944	0.326599	-0.450985	211.21	236.523
98	1.60944	0.329966	-0.442676	211.21	236.117
99	1.60944	0.333333	-0.431644	211.21	235.579
100	1.60944	0.3367	-0.423405	211.21	235.176
101	1.60944	0.340067	-0.412463	211.21	234.642
102	1.60944	0.343434	-0.40429	211.21	234.243
103	1.60944	0.346801	-0.396142	211.21	233.845
104	1.60944	0.350168	-0.385321	211.21	233.317
105	1.60944	0.353535	-0.377233	211.21	232.922
106	1.60944	0.356902	-0.369171	211.21	232.528
107	1.60944	0.360269	-0.358459	211.21	232.005
108	1.60944	0.363636	-0.350451	211.21	231.614
109	1.60944	0.367003	-0.33981	211.21	231.094
110	1.60944	0.37037	-0.331854	211.21	230.706

111	1.60944	0.373737	-0.323919	211.21	230.318
112	1.60944	0.377104	-0.31337	211.21	229.803
113	1.60944	0.380471	-0.305481	211.21	229.418
114	1.60944	0.383838	-0.297612	211.21	229.033
115	1.60944	0.387205	-0.287147	211.21	228.522
116	1.60944	0.390572	-0.279319	211.21	228.14
117	1.60944	0.393939	-0.271509	211.21	227.759
118	1.60944	0.397306	-0.26112	211.21	227.251
119	1.60944	0.400673	-0.253347	211.21	226.872
120	1.60944	0.40404	-0.243007	211.21	226.367
121	1.60944	0.407407	-0.235269	211.21	225.989
122	1.64866	0.410774	-0.227545	215.406	225.612
123	1.6864	0.414141	-0.217267	219.445	225.11
124	1.70475	0.417508	-0.209575	221.408	224.734
125	1.79176	0.420875	-0.201894	230.718	224.359
126	1.79176	0.424242	-0.191671	230.718	223.86
127	1.8563	0.427609	-0.184017	237.624	223.486
128	1.93152	0.430976	-0.176374	245.673	223.113
129	1.94591	0.434343	-0.166199	247.212	222.616
130	1.94591	0.43771	-0.158579	247.212	222.244
131	1.94591	0.441077	-0.148434	247.212	221.749
132	1.94591	0.444444	-0.140835	247.212	221.377
133	1.97408	0.447811	-0.133244	250.227	221.007
134	2.02815	0.451178	-0.123135	256.012	220.513
135	2.07944	0.454545	-0.115562	261.5	220.143
136	2.07944	0.457912	-0.107995	261.5	219.774
137	2.07944	0.461279	-0.0979139	261.5	219.281
138	2.07944	0.464646	-0.0903606	261.5	218.913
139	2.14007	0.468013	-0.0802981	267.987	218.421
140	2.15176	0.47138	-0.0727562	269.239	218.053
141	2.17475	0.474747	-0.0652187	271.698	217.685
142	2.17475	0.478114	-0.0551734	271.698	217.194
143	2.19722	0.481481	-0.0476439	274.103	216.827
144	2.19722	0.484848	-0.0401167	274.103	216.459
145	2.19722	0.488215	-0.0300838	274.103	215.969
146	2.2192	0.491582	-0.0225612	276.455	215.602
147	2.2192	0.494949	-0.0150408	276.455	215.234
148	2.29253	0.498316	-0.00501359	284.301	214.745
149	2.30259	0.501684	0.00501359	285.377	214.255
150	2.30259	0.505051	0.0150408	285.377	213.766
151	2.30259	0.508418	0.0225612	285.377	213.398
152	2.30259	0.511785	0.0300838	285.377	213.031
153	2.30259	0.515152	0.0401167	285.377	212.541
154	2.30259	0.518519	0.0476439	285.377	212.173
155	2.30259	0.521886	0.0551734	285.377	211.806
156	2.3979	0.525253	0.0652187	295.575	211.315
157	2.3979	0.52862	0.0727562	295.575	210.947
158	2.3979	0.531987	0.0802981	295.575	210.579
159	2.3979	0.535354	0.0903606	295.575	210.087
160	2.3979	0.538721	0.0979139	295.575	209.719
161	2.3979	0.542088	0.107995	295.575	209.226
162	2.48491	0.545455	0.115562	304.885	208.857
163	2.48491	0.548822	0.123135	304.885	208.487
164	2.48491	0.552189	0.133244	304.885	207.993
165	2.48491	0.555556	0.140835	304.885	207.623
166	2.48491	0.558923	0.148434	304.885	207.251
167	2.48491	0.56229	0.158579	304.885	206.756
168	2.48491	0.565657	0.166199	304.885	206.384
169	2.48491	0.569024	0.176374	304.885	205.887
170	2.48491	0.572391	0.184017	304.885	205.514
171	2.48491	0.575758	0.191671	304.885	205.14
172	2.48491	0.579125	0.201894	304.885	204.641

173	2.48491	0.582492	0.209575	304.885	204.266
174	2.48491	0.585859	0.217267	304.885	203.89
175	2.56495	0.589226	0.227545	313.45	203.388
176	2.56495	0.592593	0.235269	313.45	203.011
177	2.56495	0.59596	0.243007	313.45	202.633
178	2.56495	0.599327	0.253347	313.45	202.128
179	2.56495	0.602694	0.26112	313.45	201.749
180	2.56495	0.606061	0.271509	313.45	201.241
181	2.56495	0.609428	0.279319	313.45	200.86
182	2.56495	0.612795	0.287147	313.45	200.478
183	2.56495	0.616162	0.297612	313.45	199.967
184	2.56495	0.619529	0.305481	313.45	199.582
185	2.56495	0.622896	0.31337	313.45	199.197
186	2.56495	0.626263	0.323919	313.45	198.682
187	2.56495	0.62963	0.331854	313.45	198.294
188	2.56495	0.632997	0.33981	313.45	197.906
189	2.56495	0.636364	0.350451	313.45	197.386
190	2.56495	0.639731	0.358459	313.45	196.995
191	2.56495	0.643098	0.369171	313.45	196.472
192	2.56495	0.646465	0.377233	313.45	196.078
193	2.56495	0.649832	0.385321	313.45	195.683
194	2.56495	0.653199	0.396142	313.45	195.155
195	2.63906	0.656566	0.40429	321.379	194.757
196	2.63906	0.659933	0.412463	321.379	194.358
197	2.63906	0.6633	0.423405	321.379	193.824
198	2.63906	0.666667	0.431644	321.379	193.421
199	2.63906	0.670034	0.442676	321.379	192.883
200	2.63906	0.673401	0.450985	321.379	192.477
201	2.63906	0.676768	0.459327	321.379	192.07
202	2.63906	0.680135	0.470498	321.379	191.524
203	2.63906	0.683502	0.478914	321.379	191.113
204	2.63906	0.686869	0.487364	321.379	190.7
205	2.63906	0.690236	0.498687	321.379	190.147
206	2.63906	0.693603	0.507221	321.379	189.731
207	2.70805	0.69697	0.515791	328.761	189.312
208	2.70805	0.700337	0.52728	328.761	188.751
209	2.77259	0.703704	0.53594	335.667	188.328
210	2.77259	0.707071	0.547551	335.667	187.761
211	2.77259	0.710438	0.556308	335.667	187.334
212	2.83321	0.713805	0.565108	342.154	186.904
213	2.89037	0.717172	0.576911	348.27	186.328
214	2.89037	0.720539	0.585815	348.27	185.893
215	2.99573	0.723906	0.594766	359.543	185.456
216	2.99573	0.727273	0.606775	359.543	184.869
217	2.99573	0.73064	0.615839	359.543	184.427
218	2.99573	0.734007	0.628006	359.543	183.832
219	2.99573	0.737374	0.637192	359.543	183.384
220	2.99573	0.740741	0.646431	359.543	182.933
221	3.04452	0.744108	0.658838	364.764	182.327
222	3.04452	0.747475	0.668209	364.764	181.869
223	3.04452	0.750842	0.677639	364.764	181.409
224	3.09104	0.754209	0.690309	369.742	180.79
225	3.09104	0.757576	0.699883	369.742	180.322
226	3.09104	0.760943	0.709522	369.742	179.852
227	3.09104	0.76431	0.722479	369.742	179.219
228	3.13549	0.767677	0.732275	374.498	178.741
229	3.13549	0.771044	0.745449	374.498	178.097
230	3.13549	0.774411	0.755415	374.498	177.611
231	3.13549	0.777778	0.765456	374.498	177.12
232	3.17805	0.781145	0.778966	379.052	176.46
233	3.17805	0.784512	0.789191	379.052	175.961
234	3.21888	0.787879	0.7995	383.42	175.458

235	3.21888	0.791246	0.813379	383.42	174.78
236	3.29584	0.794613	0.823893	391.655	174.267
237	3.29584	0.79798	0.834498	391.655	173.749
238	3.29584	0.801347	0.848786	391.655	173.051
239	3.3322	0.804714	0.859618	395.546	172.522
240	3.3673	0.808081	0.874218	399.301	171.809
241	3.4012	0.811448	0.885291	402.928	171.268
242	3.4012	0.814815	0.896473	402.928	170.722
243	3.4012	0.818182	0.911562	402.928	169.985
244	3.4012	0.821549	0.923014	402.928	169.426
245	3.43399	0.824916	0.93459	406.437	168.861
246	3.46574	0.828283	0.950222	409.834	168.097
247	3.46574	0.83165	0.9621	409.834	167.517
248	3.46574	0.835017	0.97815	409.834	166.734
249	3.46574	0.838384	0.990356	409.834	166.138
250	3.49651	0.841751	1.00271	413.126	165.534
251	3.49651	0.845118	1.01943	413.126	164.718
252	3.52636	0.848485	1.03215	416.321	164.096
253	3.52636	0.851852	1.04505	416.321	163.467
254	3.55535	0.855219	1.06252	419.422	162.614
255	3.58352	0.858586	1.07584	422.437	161.963
256	3.58352	0.861953	1.08935	422.437	161.303
257	3.61092	0.86532	1.10768	425.368	160.408
258	3.63759	0.868687	1.12168	428.222	159.725
259	3.63759	0.872054	1.14069	428.222	158.796
260	3.63759	0.875421	1.15522	428.222	158.087
261	3.63759	0.878788	1.17	428.222	157.365
262	3.63759	0.882155	1.19012	428.222	156.383
263	3.66356	0.885522	1.20553	431.001	155.63
264	3.66356	0.888889	1.22123	431.001	154.863
265	3.68888	0.892256	1.24264	433.71	153.818
266	3.68888	0.895623	1.25908	433.71	153.015
267	3.68888	0.89899	1.27588	433.71	152.195
268	3.71357	0.902357	1.29884	436.352	151.074
269	3.71357	0.905724	1.31652	436.352	150.21
270	3.71357	0.909091	1.34075	436.352	149.026
271	3.73767	0.912458	1.35946	438.931	148.113
272	3.73767	0.915825	1.37866	438.931	147.176
273	3.78419	0.919192	1.40507	443.908	145.886
274	3.78419	0.922559	1.42554	443.908	144.886
275	3.80666	0.925926	1.44663	446.313	143.856
276	3.85015	0.929293	1.47579	450.966	142.432
277	3.8712	0.93266	1.49852	453.219	141.323
278	3.8712	0.936027	1.53007	453.219	139.782
279	3.89182	0.939394	1.55477	455.425	138.575
280	3.95124	0.942761	1.58047	461.783	137.321
281	3.97029	0.946128	1.61644	463.821	135.564
282	4.00733	0.949495	1.64485	467.785	134.176
283	4.07754	0.952862	1.67466	475.297	132.721
284	4.11087	0.956229	1.71688	478.864	130.659
285	4.18965	0.959596	1.75069	487.293	129.008
286	4.21951	0.962963	1.78661	490.487	127.254
287	4.29046	0.96633	1.83843	498.079	124.724
288	4.30407	0.969697	1.88079	499.535	122.655
289	4.31749	0.973064	1.94314	500.971	119.61
290	4.34381	0.976431	1.99539	503.787	117.058
291	4.34381	0.979798	2.05375	503.787	114.209
292	4.36945	0.983165	2.14441	506.531	109.781
293	4.38203	0.986532	2.22621	507.877	105.787
294	4.52179	0.989899	2.32634	522.831	100.897
295	4.69135	0.993266	2.51213	540.974	91.8241
296	4.78749	0.996633	2.74777	551.262	80.3175

Kruskal-Wallis Non-Parametric Test

Parameter: Barium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	ND<1.60944	44.5
	3/16/1999	2.99573	215
	9/23/1999	2.07944 J	135
	3/14/2000	ND<1.60944	44.5
	9/23/2003	ND<1.60944	44.5
	3/10/2004	ND<1.60944	44.5
	10/12/2004	ND<1.60944	44.5
	4/1/2005	2.63906	195
	10/26/2005	2.48491	162
	6/19/2006	2.30259	149
	11/18/2006	2.56495	175
	6/2/2007	3.17805	232
	11/15/2007	2.56495	176
	5/20/2008	2.3979	156
	11/20/2008	2.63906	196
	6/11/2009	2.56495	177
	11/16/2009	2.56495	178
	6/30/2010	2.70805	207
	11/17/2010	2.63906	197
	7/6/2011	2.63906	198
	11/22/2011	2.77259	209
	5/16/2012	2.70805	208
	11/16/2012	2.56495	179
	11/16/2013	1.70475	124

Rank Sum = 3690.5
Rank Mean = 153.771

Background Rank Sum = 3690.5
Background Rank Mean = 153.771

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-16	11/18/2006	3.13549	228
	6/2/2007	3.71357	268
	11/15/2007	3.55535	254
	5/20/2008	3.09104	224
	11/20/2008	3.13549	229
	6/11/2009	2.63906	199
	11/16/2009	2.56495	180
	6/30/2010	2.17475	141
	11/17/2010	2.30259	150
	7/6/2011	2.3979	157
	11/22/2011	2.17475	142
	5/16/2012	2.2192	146
	11/16/2012	2.2192	147
	11/16/2013	2.15176	140

Rank Sum = 2605
Rank Mean = 186.071

LMW-10	3/14/2000	ND<1.60944		44.5
	9/23/2003	ND<1.60944		44.5
	3/10/2004	ND<1.60944		44.5
	10/12/2004	ND<1.60944		44.5
	4/1/2005	2.56495		181
	10/26/2005	ND<1.60944		44.5
	6/19/2006	2.99573		216
	11/18/2006	2.3979		158
	6/2/2007	3.04452		221
	11/15/2007	ND<1.60944		44.5
	5/20/2008	2.48491		163
	11/20/2008	2.48491		164
	6/11/2009	2.56495		182
	11/16/2009	2.48491		165
	6/30/2010	2.48491		166
	11/17/2010	2.63906		200
	7/6/2011	3.04452		222
	11/22/2011	3.13549		230
	5/16/2012	3.13549		231
	11/16/2012	3.21888		234
	11/16/2013	2.63906		201

Rank Sum = 3201
Rank Mean = 152.429

LMW-14R	6/2/2007	2.63906		202
	11/15/2007	2.48491		167
	5/20/2008	2.19722	J	143
	11/20/2008	2.56495		183
	6/11/2009	2.56495		184
	11/16/2009	2.48491		168
	11/16/2009	3.8712		277
	11/16/2009	2.63906		203
	6/30/2010	2.56495		185
	11/17/2010	2.48491		169
	7/6/2011	2.3979		159
	11/22/2011	2.63906		204
	5/16/2012	2.56495		186
	11/16/2012	2.56495		187
	11/16/2013	3.09104		225

Rank Sum = 2842
Rank Mean = 189.467

LMW-15R	11/18/2006	3.61092		257
	6/2/2007	3.63759		258
	11/15/2007	ND<1.60944		44.5
	11/15/2007	3.29584		236
	5/20/2008	ND<1.60944		44.5
	5/20/2008	3.17805		233
	11/20/2008	3.63759		259
	11/20/2008	ND<1.60944		44.5
	6/11/2009	3.73767		271
	6/30/2010	3.58352		255
	11/17/2010	3.4012		241
	7/6/2011	3.21888		235
	11/22/2011	3.46574		246
	5/16/2012	3.46574		247
	11/16/2012	3.4012		242
	11/16/2013	3.71357		269

Rank Sum = 3382.5
Rank Mean = 211.406

LMW-3	11/19/1996	ND<1.60944		44.5
	3/24/1997	ND<1.60944		44.5
	1/16/1998	ND<1.60944		44.5
	3/16/1999	2.07944	J	136
	9/23/1999	1.94591	J	129
	3/14/2000	ND<1.60944		44.5
	9/23/2003	ND<1.60944		44.5
	3/10/2004	ND<1.60944		44.5
	10/12/2004	ND<1.60944		44.5
	4/1/2005	ND<1.60944		44.5
	10/26/2005	1.94591	J	130
	6/19/2006	1.60944	J	114
	11/18/2006	1.94591	J	131
	6/2/2007	1.60944		115
	11/15/2007	ND<1.60944		44.5
	5/20/2008	1.60944	J	116
	11/20/2008	1.60944	J	117
	6/11/2009	1.97408		133
	11/16/2009	1.8563		127
	6/30/2010	1.60944		118
	11/17/2010	2.56495		188
	7/6/2011	1.25276		107
	11/22/2011	2.48491		170
	5/16/2012	1.52606		113
	11/16/2012	1.50408		112
	11/16/2013	1.38629		109

Rank Sum = 2565.5
Rank Mean = 98.6731

LMW-6	1/16/1998	ND<1.60944		44.5
	3/16/1999	2.07944	J	137
	9/23/1999	2.89037		213
	3/14/2000	ND<1.60944		44.5
	9/23/2003	ND<1.60944		44.5
	3/10/2004	ND<1.60944		44.5
	10/12/2004	ND<1.60944		44.5
	4/1/2005	2.19722	J	144
	10/26/2005	2.48491		171
	6/19/2006	2.99573		217
	11/18/2006	3.49651		250
	6/2/2007	3.95124		280
	11/15/2007	3.73767		272
	5/20/2008	3.89182		279
	11/20/2008	4.29046		287
	6/11/2009	4.52179		294
	11/16/2009	4.30407		288
	6/30/2010	4.34381		290
	11/17/2010	4.36945		292
	7/6/2011	4.00733		282
	11/22/2011	3.78419	J	273
	5/16/2012	3.58352		256
	11/16/2012	3.49651		251
	11/16/2013	3.29584		237

Rank Sum = 4935.5
Rank Mean = 205.646

LMW-8	1/16/1998	ND<1.60944		44.5
	3/16/1999	2.30259		151
	9/23/1999	4.69135		295
	3/14/2000	ND<1.60944		44.5
	9/23/2003	ND<1.60944		44.5
	3/10/2004	ND<1.60944		44.5

	10/12/2004	ND<1.60944		44.5
	4/1/2005	3.8712	278	
	10/26/2005	3.63759		260
	6/19/2006	3.68888		265
	11/18/2006	3.46574		248
	6/2/2007	3.52636	252	
	11/15/2007	3.71357		270
	5/20/2008	3.52636		253
	11/20/2008	3.3673	240	
	6/11/2009	3.68888		266
	11/16/2009	3.68888		267
	6/30/2010	3.4012	243	
	11/17/2010	3.78419		274
	7/6/2011	3.46574	249	
	11/22/2011	3.80666		275
	5/16/2012	3.66356		263
	11/16/2012	3.63759		261
	11/16/2013	2.77259		210

Rank Sum = 5042.5
Rank Mean = 210.104

LMW-9	1/16/1998	ND<1.60944		44.5
	3/16/1999	2.30259		152
	9/23/1999	3.09104		226
	3/14/2000	ND<1.60944		44.5
	9/23/2003	ND<1.60944		44.5
	3/10/2004	ND<1.60944		44.5
	10/12/2004	ND<1.60944		44.5
	4/1/2005	ND<1.60944	44.5	
	10/26/2005	ND<1.60944		44.5
	6/19/2006	2.30259		153
	11/18/2006	1.09861	J	100
	6/2/2007	1.79176	125	
	11/15/2007	1.09861	J	101
	5/20/2008	0.693147	J	90
	11/20/2008	1.38629	J	110
	6/11/2009	1.1314	103	
	11/16/2009	1.06471		98
	6/30/2010	1.02962		95
	11/17/2010	1.38629		111
	7/6/2011	1.19392	105	
	11/22/2011	1.22378		106
	5/16/2012	2.56495		189
	11/16/2012	3.04452		223
	11/16/2013	2.29253		148

Rank Sum = 2546.5
Rank Mean = 106.104

LMW-9S	11/18/2006	4.34381		291
	6/2/2007	4.38203	293	
	11/15/2007	0.693147	J	91
	5/20/2008	4.31749		289
	11/20/2008	4.11087		284
	6/11/2009	3.3322	239	
	6/30/2010	3.63759		262
	11/17/2010	3.97029		281
	7/6/2011	4.07754	283	
	11/22/2011	4.18965		285
	5/16/2012	3.66356		264
	11/16/2012	4.21951		286
	11/16/2013	3.85015		276

Rank Sum = 3424

Rank Mean = 263.385

LMW-3S	11/18/2006	1.60944	J	119
	6/2/2007	2.89037		214
	11/15/2007	2.56495		190
	5/20/2008	2.07944	J	138
	11/20/2008	2.56495		191
	6/11/2009	2.48491		172
	11/16/2009	2.30259		154
	6/30/2010	2.48491		173
	11/17/2010	2.77259		211
	7/6/2011	2.63906		205
	11/22/2011	1.6864		123
	5/16/2012	2.56495		192
	11/16/2012	2.63906		206
	11/16/2013	2.3979		160

Rank Sum = 2448
Rank Mean = 174.857

LMW-9D	11/18/2006	2.56495		193
	6/2/2007	1.60944		120
	11/15/2007	4.78749		296
	5/20/2008	2.30259		155
	11/20/2008	1.09861	J	102
	6/11/2009	1.1314		104
	11/16/2009	1.06471		99
	6/30/2010	0.741937		92
	11/17/2010	1.02962		96
	7/6/2011	1.335		108
	11/22/2011	1.02962		97
	5/16/2012	0.916291		94
	11/16/2012	0.641854		89
	11/16/2013	0.741937		93

Rank Sum = 1738
Rank Mean = 124.143

LMW-7	1/16/1998	ND<1.60944		44.5
	3/16/1999	2.99573		218
	9/23/1999	3.09104		227
	3/14/2000	ND<1.60944		44.5
	9/23/2003	ND<1.60944		44.5
	3/10/2004	ND<1.60944		44.5
	10/12/2004	ND<1.60944		44.5
	4/1/2005	3.43399		245
	10/26/2005	3.4012		244
	6/19/2006	2.99573		219
	11/18/2006	2.3979		161
	6/2/2007	3.29584		238
	11/15/2007	1.79176	J	126
	5/20/2008	1.60944	J	121
	11/20/2008	1.94591	J	132
	6/11/2009	2.48491		174
	11/17/2010	1.64866		122
	7/6/2011	2.56495		194
	11/22/2011	2.14007		139
	5/16/2012	2.02815		134
	11/16/2012	1.93152		128

Rank Sum = 3044.5
Rank Mean = 144.976

LMW-13	3/14/2000	ND<1.60944		44.5
	9/23/2003	ND<1.60944		44.5

	3/10/2004	ND<1.60944	44.5
	10/12/2004	ND<1.60944	44.5
	4/1/2005	ND<1.60944	44.5
	10/26/2005	ND<1.60944	44.5
	6/19/2006	ND<1.60944	44.5
	6/2/2007	ND<1.60944	44.5
	11/15/2007	ND<1.60944	44.5
	5/20/2008	ND<1.60944	44.5
	11/20/2008	ND<1.60944	44.5

Rank Sum = 489.5
Rank Mean = 44.5

MW-5	1/16/1998	ND<1.60944	44.5
	3/16/1999	2.99573	220
	9/23/1999	2.19722 J	145
	3/14/2000	ND<1.60944	44.5
	9/23/2003	ND<1.60944	44.5
	3/10/2004	ND<1.60944	44.5
	10/12/2004	ND<1.60944	44.5
	4/1/2005	ND<1.60944	44.5
	10/26/2005	ND<1.60944	44.5
	6/19/2006	ND<1.60944	44.5
	11/15/2007	2.83321	212
	5/20/2008	ND<1.60944	44.5
	11/20/2008	ND<1.60944	44.5

Rank Sum = 1022
Rank Mean = 78.6154

LMW-12	3/14/2000	ND<1.60944	44.5
	9/23/2003	ND<1.60944	44.5
	3/10/2004	ND<1.60944	44.5
	10/12/2004	ND<1.60944	44.5
	4/1/2005	ND<1.60944	44.5
	10/26/2005	ND<1.60944	44.5
	6/19/2006	ND<1.60944	44.5
	6/2/2007	ND<1.60944	44.5
	11/15/2007	ND<1.60944	44.5
	5/20/2008	ND<1.60944	44.5
	11/20/2008	ND<1.60944	44.5

Rank Sum = 489.5
Rank Mean = 44.5

LMW-11	3/14/2000	ND<1.60944	44.5
	9/23/2003	ND<1.60944	44.5
	3/10/2004	ND<1.60944	44.5
	10/12/2004	ND<1.60944	44.5
	4/1/2005	ND<1.60944	44.5
	10/26/2005	ND<1.60944	44.5
	6/19/2006	ND<1.60944	44.5
	6/2/2007	ND<1.60944	44.5
	11/15/2007	ND<1.60944	44.5
	5/20/2008	ND<1.60944	44.5
	11/20/2008	ND<1.60944	44.5

Rank Sum = 489.5
Rank Mean = 44.5

Calculation Results:

Kruskal-Wallis H Statistic = 136.047
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 139.718
95% Confidence comparison value is 26.2962 at 16 degrees of freedom

136.047 > 26.2962 indicating a significant group difference at 5% significance level
139.718 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 153.771

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-16	186.071	32.3006	66.9621
LMW-10	152.429	-1.34226	59.4974
LMW-14R	189.467	35.6958	65.5372
LMW-15R	211.406	57.6354	64.2645
LMW-3	98.6731	-55.0978	56.3637
LMW-6	205.646	51.875	57.48
LMW-8	210.104	56.3333	57.48
LMW-9	106.104	-47.6667	57.48
LMW-9S	263.385	109.614	68.5694
LMW-3S	174.857	21.0863	66.9621
LMW-9D	124.143	-29.628	66.9621
LMW-7	144.976	-8.79464	59.4974
LMW-13	44.5	-109.271	72.5002
MW-5	78.6154	-75.1554	68.5694
LMW-12	44.5	-109.271	72.5002
LMW-11	44.5	-109.271	72.5002

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 153.771

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-16	186.071	32.3006	79.0925
LMW-10	152.429	-1.34226	70.2755
LMW-14R	189.467	35.6958	77.4095
LMW-15R	211.406	57.6354	75.9062
LMW-3	98.6731	-55.0978	66.5742
LMW-6	205.646	51.875	67.8926
LMW-8	210.104	56.3333	67.8926
LMW-9	106.104	-47.6667	67.8926
LMW-9S	263.385	109.614	80.991
LMW-3S	174.857	21.0863	79.0925
LMW-9D	124.143	-29.628	79.0925
LMW-7	144.976	-8.79464	70.2755
LMW-13	44.5	-109.271	85.6338
MW-5	78.6154	-75.1554	80.991
LMW-12	44.5	-109.271	85.6338
LMW-11	44.5	-109.271	85.6338

Mann-Kendall Trend Analysis
Parameter: Barium
Location: LMW-9S
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
4.38203		4.34381	0.0382212	1	0
0.693147 J		4.34381	-3.650661	1	
4.31749		4.34381	-0.0263173	1	2
4.11087		4.34381	-0.232932	1	3
3.3322	4.34381	-1.0116	1	4
3.63759		4.34381	-0.706219	1	5
3.97029		4.34381	-0.373514	1	6
4.07754		4.34381	-0.266268	1	7
4.18965		4.34381	-0.154151	1	8
3.66356		4.34381	-0.680244	1	9
4.21951		4.34381	-0.124298	1	10
3.85015		4.34381	-0.493658	1	11
0.693147 J		4.38203	-3.688881	12	
4.31749		4.38203	-0.0645385	1	13
4.11087		4.38203	-0.271153	1	14
3.3322	4.38203	-1.049821	15
3.63759		4.38203	-0.744441	16	
3.97029		4.38203	-0.411735	1	17
4.07754		4.38203	-0.304489	1	18
4.18965		4.38203	-0.192372	1	19
3.66356		4.38203	-0.718465	1	20
4.21951		4.38203	-0.162519	1	21
3.85015		4.38203	-0.531879	1	22
4.31749		0.693147 J	3.62434	2	22
4.11087		0.693147 J	3.41773	3	22
3.3322	0.693147 J	2.63906	4	22
3.63759		0.693147 J	2.94444	5	22
3.97029		0.693147 J	3.27714	6	22
4.07754		0.693147 J	3.38439	7	22
4.18965		0.693147 J	3.49651	8	22
3.66356		0.693147 J	2.97041	9	22
4.21951		0.693147 J	3.52636	10	22
3.85015		0.693147 J	3.157	11	22
4.11087		4.31749	-0.206614	11	23
3.3322	4.31749	-0.985284	11	24
3.63759		4.31749	-0.679902	11	25
3.97029		4.31749	-0.347196	11	26
4.07754		4.31749	-0.239951	11	27
4.18965		4.31749	-0.127833	11	28
3.66356		4.31749	-0.653926	11	29
4.21951		4.31749	-0.0979804	11	30
3.85015		4.31749	-0.467341	11	31
3.3322	4.11087	-0.778669	11	32
3.63759		4.11087	-0.473288	11	33
3.97029		4.11087	-0.140582	11	34
4.07754		4.11087	-0.0333364	11	35

4.18965	4.11087	0.0787809	12	35
3.66356	4.11087	-0.447312	12	36
4.21951	4.11087	0.108634	13	36
3.85015	4.11087	-0.260726	13	37

3.63759	3.3322	0.305382	14	37
3.97029	3.3322	0.638087	15	37
4.07754	3.3322	0.745333	16	37
4.18965	3.3322	0.85745 17	37	
3.66356	3.3322	0.331357	18	37
4.21951	3.3322	0.887303	19	37
3.85015	3.3322	0.517943	20	37

3.97029	3.63759	0.332706	21	37
4.07754	3.63759	0.439951	22	37
4.18965	3.63759	0.552069	23	37
3.66356	3.63759	0.0259755	24	37
4.21951	3.63759	0.581922	25	37
3.85015	3.63759	0.212561	26	37

4.07754	3.97029	0.107246	27	37
4.18965	3.97029	0.219363	28	37
3.66356	3.97029	-0.3067328	38	
4.21951	3.97029	0.249216	29	38
3.85015	3.97029	-0.120144	29	39

4.18965	4.07754	0.112117	30	39
3.66356	4.07754	-0.413976	30	40
4.21951	4.07754	0.14197 31	40	
3.85015	4.07754	-0.2273931	41	

3.66356	4.18965	-0.526093	31	42
4.21951	4.18965	0.029853	32	42
3.85015	4.18965	-0.339507	32	43

4.21951	3.66356	0.555946	33	43
3.85015	3.66356	0.186586	34	43

3.85015	4.21951	-0.3693634	44

S Statistic = 34 - 44 = -10

Tied Group Value Members

Time Period		Observations
11/18/2006		1
6/2/2007	1	
11/15/2007		1
5/20/2008		1
11/20/2008		1
6/11/2009		1
6/30/2010		1
11/17/2010		1
7/6/2011	1	
11/22/2011		1
5/16/2012		1
11/16/2012		1
11/16/2013		1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
Z-Score = -0.54908
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.54908| <= 1.97737 indicating no evidence of a trend

Shewhart-CUSUM Control Chart

Parameter: Barium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = 2.36501
Baseline Std Dev = 0.482381
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std	Mean
11/18/2006	4.34381	3.10214	4.10214	
11/18/2006	4.34381	3.10214	4.10214	
6/2/2007	4.38203	6.28352	4.18138	
6/2/2007	4.38203	6.28352	4.18138	
11/15/2007	0.693147		1.81767	-3.46585
11/15/2007	0.693147		1.81767	-3.46585
5/20/2008	4.31749	4.86525	4.04759	
5/20/2008	4.31749	4.86525	4.04759	
11/20/2008	4.11087	7.48452	3.61926	
11/20/2008	4.11087	7.48452	3.61926	
6/11/2009	3.3322	8.48956	2.00504	
6/11/2009	3.3322	8.48956	2.00504	
6/30/2010	3.63759	10.1277	2.63812	
6/30/2010	3.63759	10.1277	2.63812	
11/17/2010	3.97029	12.4555	3.32783	
11/17/2010	3.97029	12.4555	3.32783	
7/6/2011	4.07754	15.0057	3.55016	
7/6/2011	4.07754	15.0057	3.55016	
11/22/2011	4.18965	17.7882	3.78258	
11/22/2011	4.18965	17.7882	3.78258	
5/16/2012	3.66356	19.4802	2.69196	
5/16/2012	3.66356	19.4802	2.69196	
11/16/2012	4.21951	22.3247	3.84447	
11/16/2012	4.21951	22.3247	3.84447	
11/16/2013	3.85015	24.4034	3.07877	
11/16/2013	3.85015	24.4034	3.07877	

Concentrations (ppb)

Parameter: Beryllium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 269
Percent Non-Detects: 90.8784%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	23 (95.8333%)	1/16/1998	ND<10	ND<10
			3/16/1999	ND<10	ND<10
			9/23/1999	ND<10	ND<10
			3/14/2000	ND<10	ND<10
			9/23/2003	ND<10	ND<10
			3/10/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10
			6/19/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			6/11/2009	ND<0.07 U	ND<0.07 U
			11/16/2009	0.071 J	0.071 J
			6/30/2010	ND<0.07 U	ND<0.07 U
			11/17/2010	ND<0.07 U	ND<0.07 U
			7/6/2011	ND<0.07 U	ND<0.07 U
			11/22/2011	ND<0.07 U	ND<0.07 U
			5/16/2012	ND<0.07 U	ND<0.07 U
			11/16/2012	ND<0.07 U	ND<0.07 U
			11/16/2013	ND<0.07 U	ND<0.07 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-9	24	19 (79.1667%)	1/16/1998	ND<10	ND<10
			3/16/1999	ND<10	ND<10
			9/23/1999	ND<10	ND<10
			3/14/2000	ND<10	ND<10
			9/23/2003	ND<10	ND<10
			3/10/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10
			6/19/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			6/11/2009	0.089 J	0.089 J
			11/16/2009	ND<0.07 U	ND<0.07 U
			6/30/2010	ND<0.07 U	ND<0.07 U
			11/17/2010	0.12 J	0.12 J

			7/6/2011	ND<0.07 U	ND<0.07 U
			11/22/2011	ND<0.07 U	ND<0.07 U
			5/16/2012	0.27	0.27
			11/16/2012	0.38	0.38
			11/16/2013	0.13 J	0.13 J
LMW-8	24	24 (100%)	1/16/1998	ND<10	ND<10
			3/16/1999	ND<10	ND<10
			9/23/1999	ND<10	ND<10
			3/14/2000	ND<10	ND<10
			9/23/2003	ND<10	ND<10
			3/10/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10
			6/19/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			6/11/2009	ND<0.07 U	ND<0.07 U
			11/16/2009	ND<0.07 U	ND<0.07 U
			6/30/2010	ND<0.07 U	ND<0.07 U
			11/17/2010	ND<0.07 U	ND<0.07 U
			7/6/2011	ND<0.07 U	ND<0.07 U
			11/22/2011	ND<0.07 U	ND<0.07 U
			5/16/2012	ND<0.07 U	ND<0.07 U
			11/16/2012	ND<0.07 U	ND<0.07 U
			11/16/2013	ND<0.07 U	ND<0.07 U
LMW-6	24	18 (75%)	1/16/1998	ND<10	ND<10
			3/16/1999	ND<10	ND<10
			9/23/1999	ND<10	ND<10
			3/14/2000	ND<10	ND<10
			9/23/2003	ND<10	ND<10
			3/10/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10
			6/19/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			6/11/2009	0.15 J	0.15 J
			11/16/2009	0.15 J	0.15 J
			6/30/2010	0.13 J	0.13 J
			11/17/2010	0.16 J	0.16 J
			7/6/2011	0.085 J	0.085 J
			11/22/2011	ND<0.07 U	ND<0.07 U
			5/16/2012	0.075 J	0.075 J
			11/16/2012	ND<0.07 U	ND<0.07 U
			11/16/2013	ND<0.07 U	ND<0.07 U
LMW-10	21	21 (100%)	3/14/2000	ND<10	ND<10
			9/23/2003	ND<10	ND<10
			3/10/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10

			6/19/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			6/11/2009	ND<0.07 U	ND<0.07 U
			11/16/2009	ND<0.07 U	ND<0.07 U
			6/30/2010	ND<0.07 U	ND<0.07 U
			11/17/2010	ND<0.07 U	ND<0.07 U
			7/6/2011	ND<0.07 U	ND<0.07 U
			11/22/2011	ND<0.07 U	ND<0.07 U
			5/16/2012	ND<0.07 U	ND<0.07 U
			11/16/2012	ND<0.07 U	ND<0.07 U
			11/16/2013	ND<0.07 U	ND<0.07 U
LMW-16	14	14 (100%)	11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			6/11/2009	ND<0.07 U	ND<0.07 U
			11/16/2009	ND<0.07 U	ND<0.07 U
			6/30/2010	ND<0.07 U	ND<0.07 U
			11/17/2010	ND<0.07 U	ND<0.07 U
			7/6/2011	ND<0.07 U	ND<0.07 U
			11/22/2011	ND<0.07 U	ND<0.07 U
			5/16/2012	ND<0.07 U	ND<0.07 U
			11/16/2012	ND<0.07 U	ND<0.07 U
			11/16/2013	ND<0.07 U	ND<0.07 U
LMW-9D	14	14 (100%)	11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			6/11/2009	ND<0.07 U	ND<0.07 U
			11/16/2009	ND<0.07 U	ND<0.07 U
			6/30/2010	ND<0.07 U	ND<0.07 U
			11/17/2010	ND<0.07 U	ND<0.07 U
			7/6/2011	ND<0.07 U	ND<0.07 U
			11/22/2011	ND<0.07 U	ND<0.07 U
			5/16/2012	ND<0.07 U	ND<0.07 U
			11/16/2012	ND<0.07 U	ND<0.07 U
			11/16/2013	ND<0.07 U	ND<0.07 U
LMW-15R	17	10 (58.8235%)	11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			6/11/2009	0.29	0.29
			11/16/2009	ND<0.07 U	ND<0.07 U
			6/30/2010	0.17 J	0.17 J
			11/17/2010	0.13 J	0.13 J
			7/6/2011	0.13 J	0.13 J
			11/22/2011	ND<0.07 U	ND<0.07 U
			5/16/2012	0.15 J	0.15 J
			11/16/2012	0.15 J	0.15 J

		11/16/2013	0.19 J	0.19 J	
LMW-14R	14	14 (100%)	6/2/2007	ND<10	ND<10
		11/15/2007	ND<10	ND<10	
		5/20/2008	ND<10	ND<10	
		11/20/2008	ND<10	ND<10	
		6/11/2009	ND<0.07 U	ND<0.07 U	
		11/16/2009	ND<0.07 U	ND<0.07 U	
		11/16/2009	ND<0.07 U	ND<0.07 U	
		6/30/2010	ND<0.07 U	ND<0.07 U	
		11/17/2010	ND<0.07 U	ND<0.07 U	
		7/6/2011	ND<0.07 U	ND<0.07 U	
		11/22/2011	ND<0.07 U	ND<0.07 U	
		5/16/2012	ND<0.07 U	ND<0.07 U	
		11/16/2012	ND<0.07 U	ND<0.07 U	
		11/16/2013	ND<0.07 U	ND<0.07 U	
LMW-3	26	26 (100%)	11/19/1996	ND<10	ND<10
		3/24/1997	ND<10	ND<10	
		1/16/1998	ND<10	ND<10	
		3/16/1999	ND<10	ND<10	
		9/23/1999	ND<10	ND<10	
		3/14/2000	ND<10	ND<10	
		9/23/2003	ND<10	ND<10	
		3/10/2004	ND<10	ND<10	
		10/12/2004	ND<10	ND<10	
		4/1/2005	ND<10	ND<10	
		10/26/2005	ND<10	ND<10	
		6/19/2006	ND<10	ND<10	
		11/18/2006	ND<10	ND<10	
		6/2/2007	ND<10	ND<10	
		11/15/2007	ND<10	ND<10	
		5/20/2008	ND<10	ND<10	
		11/20/2008	ND<10	ND<10	
		6/11/2009	ND<0.07 U	ND<0.07 U	
		11/16/2009	ND<0.07 U	ND<0.07 U	
		6/30/2010	ND<0.07 U	ND<0.07 U	
		11/17/2010	ND<0.07 U	ND<0.07 U	
		7/6/2011	ND<0.07 U	ND<0.07 U	
		11/22/2011	ND<0.07 U	ND<0.07 U	
		5/16/2012	ND<0.07 U	ND<0.07 U	
		11/16/2012	ND<0.07 U	ND<0.07 U	
		11/16/2013	ND<0.07 U	ND<0.07 U	
LMW-3S	14	11 (78.5714%)	11/18/2006	ND<10	ND<10
		6/2/2007	ND<10	ND<10	
		11/15/2007	ND<10	ND<10	
		5/20/2008	ND<10	ND<10	
		11/20/2008	ND<10	ND<10	
		6/11/2009	0.076 J	0.076 J	
		11/16/2009	ND<0.07 U	ND<0.07 U	
		6/30/2010	ND<0.07 U	ND<0.07 U	
		11/17/2010	0.12 J	0.12 J	
		7/6/2011	0.1 J	0.1 J	
		11/22/2011	ND<0.07 U	ND<0.07 U	
		5/16/2012	ND<0.07 U	ND<0.07 U	
		11/16/2012	ND<0.07 U	ND<0.07 U	
		11/16/2013	ND<0.07 U	ND<0.07 U	
LMW-9S	13	12 (92.3077%)	11/18/2006	ND<10	ND<10
		6/2/2007	ND<10	ND<10	
		11/15/2007	ND<10	ND<10	

			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			6/11/2009	ND<0.07 U		ND<0.07 U
			6/30/2010	ND<0.07 U		ND<0.07 U
			11/17/2010	0.071 J	0.071 J	
			7/6/2011	ND<0.07 U	ND<0.07 U	
			11/22/2011	ND<0.07 U		ND<0.07 U
			5/16/2012	ND<0.07 U		ND<0.07 U
			11/16/2012	ND<0.07 U		ND<0.07 U
			11/16/2013	ND<0.07 U		ND<0.07 U
LMW-7	21	17 (80.9524%)	1/16/1998	ND<10	ND<10	
			3/16/1999	ND<10	ND<10	
			9/23/1999	ND<10	ND<10	
			3/14/2000	ND<10	ND<10	
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			6/19/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			6/11/2009	0.19 J	0.19 J	
			11/17/2010	ND<0.07 U		ND<0.07 U
			7/6/2011	0.34	0.34	
			11/22/2011	ND<0.07 U		ND<0.07 U
			5/16/2012	0.094 J	0.094 J	
			11/16/2012	0.092 J	0.092 J	
LMW-11	11	11 (100%)	3/14/2000	ND<10	ND<10	
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			6/19/2006	ND<10	ND<10	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
LMW-12	11	11 (100%)	3/14/2000	ND<10	ND<10	
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			6/19/2006	ND<10	ND<10	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
LMW-13	11	11 (100%)	3/14/2000	ND<10	ND<10	
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	

			10/26/2005	ND<10	ND<10	
			6/19/2006	ND<10	ND<10	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
MW-5	13	13 (100%)	1/16/1998	ND<10	ND<10	
			3/16/1999	ND<10	ND<10	
			9/23/1999	ND<10	ND<10	
			3/14/2000	ND<10	ND<10	
			9/23/2003	ND<10	ND<10	
			3/10/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			6/19/2006	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Beryllium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.035	-2.747777.55021	-0.0961718	
2	0.035	-2.5121313.861	-0.184096	
3	0.035	-2.3263419.2729	-0.265518	
4	0.035	-2.2262124.2289	-0.343436	
5	0.035	-2.1444128.8274	-0.41849	
6	0.035	-2.0537533.0453	-0.490371	
7	0.035	-1.9953937.0269	-0.56021	
8	0.035	-1.9431440.8026	-0.62822	
9	0.035	-1.8807944.34	-0.694047	
10	0.035	-1.8384347.7198	-0.758392	
11	0.035	-1.7866150.9118	-0.820924	
12	0.035	-1.7506953.9767	-0.882198	
13	0.035	-1.7168856.9244	-0.942289	
14	0.035	-1.6746659.7289	-1.0009	
15	0.035	-1.6448562.4344	-1.05847	
16	0.035	-1.6164465.0473	-1.11505	
17	0.035	-1.5804767.5452	-1.17036	
18	0.035	-1.5547769.9625	-1.22478	
19	0.035	-1.5300772.3036	-1.27833	
20	0.035	-1.4985274.5491	-1.33078	
21	0.035	-1.4757976.7271	-1.38243	
22	0.035	-1.4466378.8198	-1.43307	
23	0.035	-1.4255480.852	-1.48296	
24	0.035	-1.4050782.8262	-1.53214	
25	0.035	-1.3786684.7269	-1.58039	
26	0.035	-1.3594686.5751	-1.62797	
27	0.035	-1.3407588.3727	-1.6749	
28	0.035	-1.3165290.1059	-1.72098	
29	0.035	-1.2988491.7929	-1.76644	
30	0.035	-1.2758893.4208	-1.81109	
31	0.035	-1.2590895.006	-1.85516	
32	0.035	-1.2426496.5502	-1.89865	
33	0.035	-1.2212398.0416	-1.94139	
34	0.035	-1.2055399.4949	-1.98359	
35	0.035	-1.19012100.911	-2.02524	
36	0.035	-1.17 102.28	-2.06619	
37	0.035	-1.15522103.615	-2.10662	
38	0.035	-1.14069104.916	-2.14655	
39	0.035	-1.12168106.174	-2.18581	
40	0.035	-1.10768107.401	-2.22458	
41	0.035	-1.08935108.588	-2.2627	
42	0.035	-1.07584109.745	-2.30036	
43	0.035	-1.06252110.874	-2.33755	
44	0.035	-1.04505111.966	-2.37412	
45	0.035	-1.03215113.032	-2.41025	
46	0.035	-1.01943114.071	-2.44593	
47	0.035	-1.00271115.076	-2.48102	
48	0.035	-0.990356	116.057	-2.51569
49	0.035	-0.97815117.014	-2.54992	
50	0.035	-0.9621 117.939	-2.58359	
51	0.035	-0.950222	118.842	-2.61685

52	0.035	-0.93459	119.716	-2.64956
53	0.035	-0.923014	120.568	-2.68187
54	0.035	-0.911562	121.399	-2.71377
55	0.035	-0.896473	122.202	-2.74515
56	0.035	-0.885291	122.986	-2.77613
57	0.035	-0.874218	123.75	-2.80673
58	0.035	-0.859618	124.489	-2.83682
59	0.035	-0.848786	125.21	-2.86653
60	0.035	-0.834498	125.906	-2.89573
61	0.035	-0.823893	126.585	-2.92457
62	0.035	-0.813379	127.247	-2.95304
63	0.035	-0.7995	127.886	-2.98102
64	0.035	-0.789191	128.509	-3.00864
65	0.035	-0.778966	129.115	-3.03591
66	0.035	-0.765456	129.701	-3.0627
67	0.035	-0.755415	130.272	-3.08914
68	0.035	-0.745449	130.828	-3.11523
69	0.035	-0.732275	131.364	-3.14086
70	0.035	-0.722479	131.886	-3.16614
71	0.035	-0.709522	132.389	-3.19098
72	0.035	-0.699883	132.879	-3.21547
73	0.035	-0.690309	133.356	-3.23963
74	0.035	-0.677639	133.815	-3.26335
75	0.035	-0.668209	134.261	-3.28674
76	0.035	-0.658838	134.695	-3.3098
77	0.035	-0.646431	135.113	-3.33242
78	0.035	-0.637192	135.519	-3.35472
79	0.035	-0.628006	135.914	-3.3767
80	0.035	-0.615839	136.293	-3.39826
81	0.035	-0.606775	136.661	-3.4195
82	0.035	-0.594766	137.015	-3.44031
83	0.035	-0.585815	137.358	-3.46082
84	0.035	-0.576911	137.691	-3.48101
85	0.035	-0.565108	138.01	-3.50079
86	0.035	-0.556308	138.32	-3.52026
87	0.035	-0.547551	138.619	-3.53942
88	0.071	-0.53594	138.907	-3.57747
89	0.071	-0.52728	139.185	-3.61491
90	0.075	-0.515791	139.451	-3.6536
91	0.076	-0.507221	139.708	-3.69214
92	0.085	-0.498687	139.957	-3.73453
93	0.089	-0.487364	140.194	-3.77791
94	0.092	-0.478914	140.424	-3.82197
95	0.094	-0.470498	140.645	-3.86619
96	0.1	-0.459327	140.856	-3.91213
97	0.12	-0.450985	141.059	-3.96625
98	0.12	-0.442676	141.255	-4.01937
99	0.13	-0.431644	141.442	-4.07548
100	0.13	-0.423405	141.621	-4.13052
101	0.13	-0.412463	141.791	-4.18414
102	0.13	-0.40429	141.954	-4.2367
103	0.15	-0.396142	142.111	-4.29612
104	0.15	-0.385321	142.26	-4.35392
105	0.15	-0.377233	142.402	-4.41051
106	0.15	-0.369171	142.538	-4.46588
107	0.16	-0.358459	142.667	-4.52323
108	0.17	-0.350451	142.79	-4.58281
109	0.19	-0.33981	142.905	-4.64737
110	0.19	-0.331854	143.015	-4.71043
111	0.27	-0.323919	143.12	-4.79789
112	0.29	-0.31337	143.218	-4.88876
113	0.34	-0.305481	143.312	-4.99263

114	0.38	-0.297612	143.4	-5.10572
115	5	-0.287147	143.483	-6.54145
116	5	-0.279319	143.561	-7.93805
117	5	-0.271509	143.635	-9.2956
118	5	-0.26112143.703	-10.6012	
119	5	-0.253347	143.767	-11.8679
120	5	-0.243007	143.826	-13.083
121	5	-0.235269	143.881	-14.2593
122	5	-0.227545	143.933	-15.397
123	5	-0.217267	143.98	-16.4834
124	5	-0.209575	144.024	-17.5312
125	5	-0.201894	144.065	-18.5407
126	5	-0.191671	144.102	-19.4991
127	5	-0.184017	144.136	-20.4192
128	5	-0.176374	144.167	-21.301
129	5	-0.166199	144.194	-22.132
130	5	-0.158579	144.219	-22.9249
131	5	-0.148434	144.241	-23.6671
132	5	-0.140835	144.261	-24.3713
133	5	-0.133244	144.279	-25.0375
134	5	-0.123135	144.294	-25.6532
135	5	-0.115562	144.308	-26.231
136	5	-0.107995	144.319	-26.7709
137	5	-0.0979139	144.329	-27.2605
138	5	-0.0903606	144.337	-27.7123
139	5	-0.0802981	144.343	-28.1138
140	5	-0.0727562	144.349	-28.4776
141	5	-0.0652187	144.353	-28.8037
142	5	-0.0551734	144.356	-29.0795
143	5	-0.0476439	144.358	-29.3178
144	5	-0.0401167	144.36	-29.5184
145	5	-0.0300838	144.361	-29.6688
146	5	-0.0225612	144.361	-29.7816
147	5	-0.0150408	144.362	-29.8568
148	5	-0.00501359	144.362	-29.8818
149	5	0.00501359	144.362	-29.8568
150	5	0.0150408	144.362	-29.7816
151	5	0.0225612	144.362	-29.6688
152	5	0.0300838	144.363	-29.5184
153	5	0.0401167	144.365	-29.3178
154	5	0.0476439	144.367	-29.0795
155	5	0.0551734	144.37	-28.8037
156	5	0.0652187	144.374	-28.4776
157	5	0.0727562	144.38	-28.1138
158	5	0.0802981	144.386	-27.7123
159	5	0.0903606	144.394	-27.2605
160	5	0.0979139	144.404	-26.7709
161	5	0.107995	144.416	-26.231
162	5	0.115562	144.429	-25.6532
163	5	0.123135	144.444	-25.0375
164	5	0.133244	144.462	-24.3713
165	5	0.140835	144.482	-23.6671
166	5	0.148434	144.504	-22.9249
167	5	0.158579	144.529	-22.132
168	5	0.166199	144.557	-21.301
169	5	0.176374	144.588	-20.4192
170	5	0.184017	144.621	-19.4991
171	5	0.191671	144.658	-18.5407
172	5	0.201894	144.699	-17.5312
173	5	0.209575	144.743	-16.4834
174	5	0.217267	144.79	-15.397
175	5	0.227545	144.842	-14.2593

176	5	0.235269	144.897	-13.083
177	5	0.243007	144.956	-11.8679
178	5	0.253347	145.02	-10.6012
179	5	0.26112	145.089	-9.2956
180	5	0.271509	145.162	-7.93805
181	5	0.279319	145.24	-6.54145
182	5	0.287147	145.323	-5.10572
183	5	0.297612	145.411	-3.61766
184	5	0.305481	145.505	-2.09025
185	5	0.31337	145.603	-0.523406
186	5	0.323919	145.708	1.09619
187	5	0.331854	145.818	2.75546
188	5	0.33981	145.933	4.45451
189	5	0.350451	146.056	6.20676
190	5	0.358459	146.185	7.99906
191	5	0.369171	146.321	9.84491
192	5	0.377233	146.463	11.7311
193	5	0.385321	146.612	13.6577
194	5	0.396142	146.769	15.6384
195	5	0.40429	146.932	17.6598
196	5	0.412463	147.102	19.7222
197	5	0.423405	147.282	21.8392
198	5	0.431644	147.468	23.9974
199	5	0.442676	147.664	26.2108
200	5	0.450985	147.867	28.4657
201	5	0.459327	148.078	30.7623
202	5	0.470498	148.3	33.1148
203	5	0.478914	148.529	35.5094
204	5	0.487364	148.767	37.9462
205	5	0.498687	149.015	40.4397
206	5	0.507221	149.272	42.9758
207	5	0.515791	149.539	45.5547
208	5	0.52728	149.817	48.1911
209	5	0.53594	150.104	50.8708
210	5	0.547551	150.404	53.6086
211	5	0.556308	150.713	56.3901
212	5	0.565108	151.032	59.2157
213	5	0.576911	151.365	62.1002
214	5	0.585815	151.708	65.0293
215	5	0.594766	152.062	68.0031
216	5	0.606775	152.43	71.037
217	5	0.615839	152.81	74.1162
218	5	0.628006	153.204	77.2562
219	5	0.637192	153.61	80.4422
220	5	0.646431	154.028	83.6743
221	5	0.658838	154.462	86.9685
222	5	0.668209	154.908	90.3096
223	5	0.677639	155.368	93.6978
224	5	0.690309	155.844	97.1493
225	5	0.699883	156.334	100.649
226	5	0.709522	156.837	104.196
227	5	0.722479	157.359	107.809
228	5	0.732275	157.896	111.47
229	5	0.745449	158.451	115.197
230	5	0.755415	159.022	118.974
231	5	0.765456	159.608	122.802
232	5	0.778966	160.215	126.697
233	5	0.789191	160.837	130.642
234	5	0.7995	161.477	134.64
235	5	0.813379	162.138	138.707
236	5	0.823893	162.817	142.826
237	5	0.834498	163.513	146.999

238	5	0.848786		164.234	151.243
239	5	0.859618		164.973	155.541
240	5	0.874218		165.737	159.912
241	5	0.885291		166.521	164.338
242	5	0.896473		167.325	168.821
243	5	0.911562		168.155	173.379
244	5	0.923014		169.007	177.994
245	5	0.93459	169.881	182.667	
246	5	0.950222		170.784	187.418
247	5	0.9621	171.709	192.228	
248	5	0.97815	172.666	197.119	
249	5	0.990356		173.647	202.071
250	5	1.00271	174.652	207.084	
251	5	1.01943	175.692	212.181	
252	5	1.03215	176.757	217.342	
253	5	1.04505	177.849	222.567	
254	5	1.06252	178.978	227.88	
255	5	1.07584	180.136	233.259	
256	5	1.08935	181.322	238.706	
257	5	1.10768	182.549	244.244	
258	5	1.12168	183.807	249.853	
259	5	1.14069	185.108	255.556	
260	5	1.15522	186.443	261.332	
261	5	1.17	187.812	267.182	
262	5	1.19012	189.228	273.133	
263	5	1.20553	190.682	279.161	
264	5	1.22123	192.173	285.267	
265	5	1.24264	193.717	291.48	
266	5	1.25908	195.302	297.775	
267	5	1.27588	196.93	304.155	
268	5	1.29884	198.617	310.649	
269	5	1.31652	200.351	317.231	
270	5	1.34075	202.148	323.935	
271	5	1.35946	203.996	330.733	
272	5	1.37866	205.897	337.626	
273	5	1.40507	207.871	344.651	
274	5	1.42554	209.903	351.779	
275	5	1.44663	211.996	359.012	
276	5	1.47579	214.174	366.391	
277	5	1.49852	216.42	373.884	
278	5	1.53007	218.761	381.534	
279	5	1.55477	221.178	389.308	
280	5	1.58047	223.676	397.21	
281	5	1.61644	226.289	405.292	
282	5	1.64485	228.994	413.517	
283	5	1.67466	231.799	421.89	
284	5	1.71688	234.747	430.474	
285	5	1.75069	237.811	439.228	
286	5	1.78661	241.003	448.161	
287	5	1.83843	244.383	457.353	
288	5	1.88079	247.921	466.757	
289	5	1.94314	251.696	476.473	
290	5	1.99539	255.678	486.45	
291	5	2.05375	259.896	496.718	
292	5	2.14441	264.494	507.44	
293	5	2.22621	269.45	518.571	
294	5	2.32634	274.862	530.203	
295	5	2.51213	281.173	542.764	
296	5	2.74777	288.723	556.503	

Data Set Standard Deviation = 2.40701

Numerator = 309695
Denominator = 493469
W Statistic = 0.627588 = 309695 / 493469

5% Critical value of 0.976 exceeds 0.627588
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.627588
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Beryllium

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.790061
0.790061 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.035	0.003367		-2.747	42.745	348.683
2	0.035	0.00673401		-2.512	42.745	337.176
3	0.035	0.010101		-2.326	42.745	328.103
4	0.035	0.013468		-2.226	42.745	323.213
5	0.035	0.016835		-2.144	42.745	319.219
6	0.035	0.020202		-2.053	42.745	314.791
7	0.035	0.023569		-1.995	42.745	311.942
8	0.035	0.026936		-1.943	42.745	309.39
9	0.035	0.030303		-1.880	42.745	306.345
10	0.035	0.03367		-1.838	42.745	304.276
11	0.035	0.037037		-1.786	42.745	301.746
12	0.035	0.040404		-1.750	42.745	299.992
13	0.035	0.043771		-1.716	42.745	298.341
14	0.035	0.047138		-1.674	42.745	296.279
15	0.035	0.0505051		-1.644	42.745	294.824
16	0.035	0.0538721		-1.616	42.745	293.436
17	0.035	0.0572391		-1.580	42.745	291.679
18	0.035	0.0606061		-1.554	42.745	290.425
19	0.035	0.0639731		-1.530	42.745	289.218
20	0.035	0.0673401		-1.498	42.745	287.677
21	0.035	0.0707071		-1.475	42.745	286.568
22	0.035	0.0740741		-1.446	42.745	285.144
23	0.035	0.0774411		-1.425	42.745	284.114
24	0.035	0.0808081		-1.405	42.745	283.114
25	0.035	0.0841751		-1.378	42.745	281.824
26	0.035	0.0875421		-1.359	42.745	280.887
27	0.035	0.0909091		-1.340	42.745	279.974
28	0.035	0.0942761		-1.316	42.745	278.79
29	0.035	0.0976431		-1.298	42.745	277.926
30	0.035	0.10101		-1.275	42.745	276.805
31	0.035	0.104377		-1.259	42.745	275.985
32	0.035	0.107744		-1.242	42.745	275.182
33	0.035	0.111111		-1.221	42.745	274.137
34	0.035	0.114478		-1.205	42.745	273.37
35	0.035	0.117845		-1.190	42.745	272.617
36	0.035	0.121212		-1.17	42.745	271.635
37	0.035	0.124579		-1.155	42.745	270.913
38	0.035	0.127946		-1.140	42.745	270.204
39	0.035	0.131313		-1.121	42.745	269.275
40	0.035	0.13468		-1.107	42.745	268.592
41	0.035	0.138047		-1.089	42.745	267.697
42	0.035	0.141414		-1.075	42.745	267.037
43	0.035	0.144781		-1.062	42.745	266.386
44	0.035	0.148148		-1.045	42.745	265.533
45	0.035	0.151515		-1.032	42.745	264.904
46	0.035	0.154882		-1.019	42.745	264.282
47	0.035	0.158249		-1.002	42.745	263.466
48	0.035	0.161616		-0.990	42.745	262.862

49	0.035	0.164983	-0.978	42.745	262.266
50	0.035	0.16835	-0.9621	42.745	261.483
51	0.035	0.171717	-0.950	222	42.745	260.903
52	0.035	0.175084	-0.934	5	42.745	260.139
53	0.035	0.178451	-0.923014	42.745	259.574
54	0.035	0.181818	-0.911562	42.745	259.015
55	0.035	0.185185	-0.896473	42.745	258.278
56	0.035	0.188552	-0.885291	42.745	257.732
57	0.035	0.191919	-0.874218	42.745	257.191
58	0.035	0.195286	-0.859618	42.745	256.478
59	0.035	0.198653	-0.848786	42.745	255.949
60	0.035	0.20202	-0.834498	42.745	255.251
61	0.035	0.205387	-0.823893	42.745	254.733
62	0.035	0.208754	-0.813379	42.745	254.22
63	0.035	0.212121	-0.7995	42.745	253.542
64	0.035	0.215488	-0.789191	42.745	253.039
65	0.035	0.218855	-0.778966	42.745	252.54
66	0.035	0.222222	-0.765456	42.745	251.88
67	0.035	0.225589	-0.755415	42.745	251.389
68	0.035	0.228956	-0.745449	42.745	250.903
69	0.035	0.232323	-0.732275	42.745	250.259
70	0.035	0.23569	-0.722479	42.745	249.781
71	0.035	0.239057	-0.709522	42.745	249.148
72	0.035	0.242424	-0.699883	42.745	248.678
73	0.035	0.245791	-0.690309	42.745	248.21
74	0.035	0.249158	-0.677639	42.745	247.591
75	0.035	0.252525	-0.668209	42.745	247.131
76	0.035	0.255892	-0.658838	42.745	246.673
77	0.035	0.259259	-0.646431	42.745	246.067
78	0.035	0.262626	-0.637192	42.745	245.616
79	0.035	0.265993	-0.628006	42.745	245.168
80	0.035	0.26936	-0.615839	42.745	244.573
81	0.035	0.272727	-0.606775	42.745	244.131
82	0.035	0.276094	-0.594766	42.745	243.544
83	0.035	0.279461	-0.585815	42.745	243.107
84	0.035	0.282828	-0.576911	42.745	242.672
85	0.035	0.286195	-0.565108	42.745	242.096
86	0.035	0.289562	-0.556308	42.745	241.666
87	0.035	0.292929	-0.547551	42.745	241.239
88	0.071	0.296296	-0.535	946.597	240.672
89	0.071	0.299663	-0.527	846.597	240.249
90	0.075	0.30303	-0.515791	47.025	239.688
91	0.076	0.306397	-0.507221	47.132	239.269
92	0.085	0.309764	-0.498687	48.095	238.853
93	0.089	0.313131	-0.487364	48.523	238.3
94	0.092	0.316498	-0.478914	48.844	237.887
95	0.094	0.319865	-0.470498	49.058	237.476
96	0.1	0.323232	-0.459327	49.7	236.93
97	0.12	0.326599	-0.450985	51.84	236.523
98	0.12	0.329966	-0.442676	51.84	236.117
99	0.13	0.333333	-0.431644	52.91	235.579
100	0.13	0.3367	-0.423405	52.91	235.176
101	0.13	0.340067	-0.412463	52.91	234.642
102	0.13	0.343434	-0.404	2952.91	234.243
103	0.15	0.346801	-0.396142	55.05	233.845
104	0.15	0.350168	-0.385321	55.05	233.317
105	0.15	0.353535	-0.377233	55.05	232.922
106	0.15	0.356902	-0.369171	55.05	232.528
107	0.16	0.360269	-0.358459	56.12	232.005
108	0.17	0.363636	-0.350451	57.19	231.614
109	0.19	0.367003	-0.339	8159.33	231.094
110	0.19	0.37037	-0.331854	59.33	230.706

111	0.27	0.373737	-0.323919	67.89	230.318
112	0.29	0.377104	-0.3133770.03	229.803	
113	0.34	0.380471	-0.305481	75.38	229.418
114	0.38	0.383838	-0.297612	79.66	229.033
115	5	0.387205	-0.287147	574	228.522
116	5	0.390572	-0.279319	574	228.14
117	5	0.393939	-0.271509	574	227.759
118	5	0.397306	-0.26112574	227.251	
119	5	0.400673	-0.253347	574	226.872
120	5	0.40404 -0.243007	574	226.367	
121	5	0.407407	-0.235269	574	225.989
122	5	0.410774	-0.227545	574	225.612
123	5	0.414141	-0.217267	574	225.11
124	5	0.417508	-0.209575	574	224.734
125	5	0.420875	-0.201894	574	224.359
126	5	0.424242	-0.191671	574	223.86
127	5	0.427609	-0.184017	574	223.486
128	5	0.430976	-0.176374	574	223.113
129	5	0.434343	-0.166199	574	222.616
130	5	0.43771 -0.158579	574	222.244	
131	5	0.441077	-0.148434	574	221.749
132	5	0.444444	-0.140835	574	221.377
133	5	0.447811	-0.133244	574	221.007
134	5	0.451178	-0.123135	574	220.513
135	5	0.454545	-0.115562	574	220.143
136	5	0.457912	-0.107995	574	219.774
137	5	0.461279	-0.0979139	574	219.281
138	5	0.464646	-0.0903606	574	218.913
139	5	0.468013	-0.0802981	574	218.421
140	5	0.47138 -0.0727562	574	218.053	
141	5	0.474747	-0.0652187	574	217.685
142	5	0.478114	-0.0551734	574	217.194
143	5	0.481481	-0.0476439	574	216.827
144	5	0.484848	-0.0401167	574	216.459
145	5	0.488215	-0.0300838	574	215.969
146	5	0.491582	-0.0225612	574	215.602
147	5	0.494949	-0.0150408	574	215.234
148	5	0.498316	-0.00501359	574	214.745
149	5	0.501684	0.00501359	574	214.255
150	5	0.505051	0.0150408	574	213.766
151	5	0.508418	0.0225612	574	213.398
152	5	0.511785	0.0300838	574	213.031
153	5	0.515152	0.0401167	574	212.541
154	5	0.518519	0.0476439	574	212.173
155	5	0.521886	0.0551734	574	211.806
156	5	0.525253	0.0652187	574	211.315
157	5	0.52862 0.0727562	574	210.947	
158	5	0.531987	0.0802981	574	210.579
159	5	0.535354	0.0903606	574	210.087
160	5	0.538721	0.0979139	574	209.719
161	5	0.542088	0.107995	574	209.226
162	5	0.545455	0.115562	574	208.857
163	5	0.548822	0.123135	574	208.487
164	5	0.552189	0.133244	574	207.993
165	5	0.555556	0.140835	574	207.623
166	5	0.558923	0.148434	574	207.251
167	5	0.56229 0.158579	574	206.756	
168	5	0.565657	0.166199	574	206.384
169	5	0.569024	0.176374	574	205.887
170	5	0.572391	0.184017	574	205.514
171	5	0.575758	0.191671	574	205.14
172	5	0.579125	0.201894	574	204.641

173	5	0.582492	0.209575	574	204.266
174	5	0.585859	0.217267	574	203.89
175	5	0.589226	0.227545	574	203.388
176	5	0.592593	0.235269	574	203.011
177	5	0.59596	0.243007	574	202.633
178	5	0.599327	0.253347	574	202.128
179	5	0.602694	0.26112	574	201.749
180	5	0.606061	0.271509	574	201.241
181	5	0.609428	0.279319	574	200.86
182	5	0.612795	0.287147	574	200.478
183	5	0.616162	0.297612	574	199.967
184	5	0.619529	0.305481	574	199.582
185	5	0.622896	0.31337	574	199.197
186	5	0.626263	0.323919	574	198.682
187	5	0.62963	0.331854	574	198.294
188	5	0.632997	0.33981	574	197.906
189	5	0.636364	0.350451	574	197.386
190	5	0.639731	0.358459	574	196.995
191	5	0.643098	0.369171	574	196.472
192	5	0.646465	0.377233	574	196.078
193	5	0.649832	0.385321	574	195.683
194	5	0.653199	0.396142	574	195.155
195	5	0.656566	0.40429	574	194.757
196	5	0.659933	0.412463	574	194.358
197	5	0.6633	0.423405	574	193.824
198	5	0.666667	0.431644	574	193.421
199	5	0.670034	0.442676	574	192.883
200	5	0.673401	0.450985	574	192.477
201	5	0.676768	0.459327	574	192.07
202	5	0.680135	0.470498	574	191.524
203	5	0.683502	0.478914	574	191.113
204	5	0.686869	0.487364	574	190.7
205	5	0.690236	0.498687	574	190.147
206	5	0.693603	0.507221	574	189.731
207	5	0.69697	0.515791	574	189.312
208	5	0.700337	0.52728	574	188.751
209	5	0.703704	0.53594	574	188.328
210	5	0.707071	0.547551	574	187.761
211	5	0.710438	0.556308	574	187.334
212	5	0.713805	0.565108	574	186.904
213	5	0.717172	0.576911	574	186.328
214	5	0.720539	0.585815	574	185.893
215	5	0.723906	0.594766	574	185.456
216	5	0.727273	0.606775	574	184.869
217	5	0.73064	0.615839	574	184.427
218	5	0.734007	0.628006	574	183.832
219	5	0.737374	0.637192	574	183.384
220	5	0.740741	0.646431	574	182.933
221	5	0.744108	0.658838	574	182.327
222	5	0.747475	0.668209	574	181.869
223	5	0.750842	0.677639	574	181.409
224	5	0.754209	0.690309	574	180.79
225	5	0.757576	0.699883	574	180.322
226	5	0.760943	0.709522	574	179.852
227	5	0.76431	0.722479	574	179.219
228	5	0.767677	0.732275	574	178.741
229	5	0.771044	0.745449	574	178.097
230	5	0.774411	0.755415	574	177.611
231	5	0.777778	0.765456	574	177.12
232	5	0.781145	0.778966	574	176.46
233	5	0.784512	0.789191	574	175.961
234	5	0.787879	0.7995	574	175.458

235	5	0.791246	0.813379	574	174.78
236	5	0.794613	0.823893	574	174.267
237	5	0.79798	0.834498	574	173.749
238	5	0.801347	0.848786	574	173.051
239	5	0.804714	0.859618	574	172.522
240	5	0.808081	0.874218	574	171.809
241	5	0.811448	0.885291	574	171.268
242	5	0.814815	0.896473	574	170.722
243	5	0.818182	0.911562	574	169.985
244	5	0.821549	0.923014	574	169.426
245	5	0.824916	0.93459	574	168.861
246	5	0.828283	0.950222	574	168.097
247	5	0.83165	0.9621	574	167.517
248	5	0.835017	0.97815	574	166.734
249	5	0.838384	0.990356	574	166.138
250	5	0.841751	1.00271	574	165.534
251	5	0.845118	1.01943	574	164.718
252	5	0.848485	1.03215	574	164.096
253	5	0.851852	1.04505	574	163.467
254	5	0.855219	1.06252	574	162.614
255	5	0.858586	1.07584	574	161.963
256	5	0.861953	1.08935	574	161.303
257	5	0.86532	1.10768	574	160.408
258	5	0.868687	1.12168	574	159.725
259	5	0.872054	1.14069	574	158.796
260	5	0.875421	1.15522	574	158.087
261	5	0.878788	1.17	574	157.365
262	5	0.882155	1.19012	574	156.383
263	5	0.885522	1.20553	574	155.63
264	5	0.888889	1.22123	574	154.863
265	5	0.892256	1.24264	574	153.818
266	5	0.895623	1.25908	574	153.015
267	5	0.89899	1.27588	574	152.195
268	5	0.902357	1.29884	574	151.074
269	5	0.905724	1.31652	574	150.21
270	5	0.909091	1.34075	574	149.026
271	5	0.912458	1.35946	574	148.113
272	5	0.915825	1.37866	574	147.176
273	5	0.919192	1.40507	574	145.886
274	5	0.922559	1.42554	574	144.886
275	5	0.925926	1.44663	574	143.856
276	5	0.929293	1.47579	574	142.432
277	5	0.93266	1.49852	574	141.323
278	5	0.936027	1.53007	574	139.782
279	5	0.939394	1.55477	574	138.575
280	5	0.942761	1.58047	574	137.321
281	5	0.946128	1.61644	574	135.564
282	5	0.949495	1.64485	574	134.176
283	5	0.952862	1.67466	574	132.721
284	5	0.956229	1.71688	574	130.659
285	5	0.959596	1.75069	574	129.008
286	5	0.962963	1.78661	574	127.254
287	5	0.96633	1.83843	574	124.724
288	5	0.969697	1.88079	574	122.655
289	5	0.973064	1.94314	574	119.61
290	5	0.976431	1.99539	574	117.058
291	5	0.979798	2.05375	574	114.209
292	5	0.983165	2.14441	574	109.781
293	5	0.986532	2.22621	574	105.787
294	5	0.989899	2.32634	574	100.897
295	5	0.993266	2.51213	574	91.8241
296	5	0.996633	2.74777	574	80.3175

Shapiro-Francia Test of Normality

Parameter: Beryllium

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.35241	-2.74777	7.55021	9.21163
2	-3.35241	-2.51213	13.861	17.6333
3	-3.35241	-2.32634	19.2729	25.4322
4	-3.35241	-2.22621	24.2289	32.8953
5	-3.35241	-2.14441	28.8274	40.0842
6	-3.35241	-2.05375	33.0453	46.9692
7	-3.35241	-1.99539	37.0269	53.6586
8	-3.35241	-1.94314	40.8026	60.1728
9	-3.35241	-1.88079	44.34	66.478
10	-3.35241	-1.83843	47.7198	72.6411
11	-3.35241	-1.78661	50.9118	78.6306
12	-3.35241	-1.75069	53.9767	84.4996
13	-3.35241	-1.71688	56.9244	90.2553
14	-3.35241	-1.67466	59.7289	95.8694
15	-3.35241	-1.64485	62.4344	101.384
16	-3.35241	-1.61644	65.0473	106.803
17	-3.35241	-1.58047	67.5452	112.101
18	-3.35241	-1.55477	69.9625	117.313
19	-3.35241	-1.53007	72.3036	122.443
20	-3.35241	-1.49852	74.5491	127.466
21	-3.35241	-1.47579	76.7271	132.414
22	-3.35241	-1.44663	78.8198	137.263
23	-3.35241	-1.42554	80.852	142.042
24	-3.35241	-1.40507	82.8262	146.753
25	-3.35241	-1.37866	84.7269	151.375
26	-3.35241	-1.35946	86.5751	155.932
27	-3.35241	-1.34075	88.3727	160.427
28	-3.35241	-1.31652	90.1059	164.84
29	-3.35241	-1.29884	91.7929	169.195
30	-3.35241	-1.27588	93.4208	173.472
31	-3.35241	-1.25908	95.006	177.693
32	-3.35241	-1.24264	96.5502	181.859
33	-3.35241	-1.22123	98.0416	185.953
34	-3.35241	-1.20553	99.4949	189.994
35	-3.35241	-1.19012	100.911	193.984
36	-3.35241	-1.17	102.28	197.906
37	-3.35241	-1.15522	103.615	201.779
38	-3.35241	-1.14069	104.916	205.603
39	-3.35241	-1.12168	106.174	209.363
40	-3.35241	-1.10768	107.401	213.077
41	-3.35241	-1.08935	108.588	216.729
42	-3.35241	-1.07584	109.745	220.335
43	-3.35241	-1.06252	110.874	223.897
44	-3.35241	-1.04505	111.966	227.401
45	-3.35241	-1.03215	113.032	230.861
46	-3.35241	-1.01943	114.071	234.278
47	-3.35241	-1.00271	115.076	237.64
48	-3.35241	-0.990356	116.057	240.96
49	-3.35241	-0.97815	117.014	244.239
50	-3.35241	-0.9621	117.939	247.465
51	-3.35241	-0.950222	118.842	250.65

52	-3.35241	-0.93459	119.716	253.783
53	-3.35241	-0.923014	120.568	256.878
54	-3.35241	-0.911562	121.399	259.933
55	-3.35241	-0.896473	122.202	262.939
56	-3.35241	-0.885291	122.986	265.907
57	-3.35241	-0.874218	123.75	268.837
58	-3.35241	-0.859618	124.489	271.719
59	-3.35241	-0.848786	125.21	274.565
60	-3.35241	-0.834498	125.906	277.362
61	-3.35241	-0.823893	126.585	280.124
62	-3.35241	-0.813379	127.247	282.851
63	-3.35241	-0.7995	127.886	285.531
64	-3.35241	-0.789191	128.509	288.177
65	-3.35241	-0.778966	129.115	290.788
66	-3.35241	-0.765456	129.701	293.355
67	-3.35241	-0.755415	130.272	295.887
68	-3.35241	-0.745449	130.828	298.386
69	-3.35241	-0.732275	131.364	300.841
70	-3.35241	-0.722479	131.886	303.263
71	-3.35241	-0.709522	132.389	305.642
72	-3.35241	-0.699883	132.879	307.988
73	-3.35241	-0.690309	133.356	310.302
74	-3.35241	-0.677639	133.815	312.574
75	-3.35241	-0.668209	134.261	314.814
76	-3.35241	-0.658838	134.695	317.023
77	-3.35241	-0.646431	135.113	319.19
78	-3.35241	-0.637192	135.519	321.326
79	-3.35241	-0.628006	135.914	323.431
80	-3.35241	-0.615839	136.293	325.496
81	-3.35241	-0.606775	136.661	327.53
82	-3.35241	-0.594766	137.015	329.524
83	-3.35241	-0.585815	137.358	331.488
84	-3.35241	-0.576911	137.691	333.422
85	-3.35241	-0.565108	138.01	335.316
86	-3.35241	-0.556308	138.32	337.181
87	-3.35241	-0.547551	138.619	339.017
88	-2.64508	-0.53594	138.907	340.434
89	-2.64508	-0.52728	139.185	341.829
90	-2.59027	-0.515791	139.451	343.165
91	-2.57702	-0.507221	139.708	344.472
92	-2.4651	-0.498687	139.957	345.701
93	-2.41912	-0.487364	140.194	346.88
94	-2.38597	-0.478914	140.424	348.023
95	-2.36446	-0.470498	140.645	349.136
96	-2.30259	-0.459327	140.856	350.193
97	-2.12026	-0.450985	141.059	351.149
98	-2.12026	-0.442676	141.255	352.088
99	-2.04022	-0.431644	141.442	352.969
100	-2.04022	-0.423405	141.621	353.833
101	-2.04022	-0.412463	141.791	354.674
102	-2.04022	-0.40429	141.954	355.499
103	-1.89712	-0.396142	142.111	356.25
104	-1.89712	-0.385321	142.26	356.981
105	-1.89712	-0.377233	142.402	357.697
106	-1.89712	-0.369171	142.538	358.397
107	-1.83258	-0.358459	142.667	359.054
108	-1.77196	-0.350451	142.79	359.675
109	-1.66073	-0.33981	142.905	360.24
110	-1.66073	-0.331854	143.015	360.791
111	-1.30933	-0.323919	143.12	361.215
112	-1.23787	-0.31337	143.218	361.603
113	-1.07881	-0.305481	143.312	361.932

114	-0.967584	-0.297612	143.4	362.22
115	1.60944	-0.287147	143.483	361.758
116	1.60944	-0.279319	143.561	361.309
117	1.60944	-0.271509	143.635	360.872
118	1.60944	-0.26112	143.703	360.451
119	1.60944	-0.253347	143.767	360.044
120	1.60944	-0.243007	143.826	359.653
121	1.60944	-0.235269	143.881	359.274
122	1.60944	-0.227545	143.933	358.908
123	1.60944	-0.217267	143.98	358.558
124	1.60944	-0.209575	144.024	358.221
125	1.60944	-0.201894	144.065	357.896
126	1.60944	-0.191671	144.102	357.587
127	1.60944	-0.184017	144.136	357.291
128	1.60944	-0.176374	144.167	357.007
129	1.60944	-0.166199	144.194	356.74
130	1.60944	-0.158579	144.219	356.485
131	1.60944	-0.148434	144.241	356.246
132	1.60944	-0.140835	144.261	356.019
133	1.60944	-0.133244	144.279	355.805
134	1.60944	-0.123135	144.294	355.606
135	1.60944	-0.115562	144.308	355.42
136	1.60944	-0.107995	144.319	355.247
137	1.60944	-0.0979139	144.329	355.089
138	1.60944	-0.0903606	144.337	354.944
139	1.60944	-0.0802981	144.343	354.814
140	1.60944	-0.0727562	144.349	354.697
141	1.60944	-0.0652187	144.353	354.592
142	1.60944	-0.0551734	144.356	354.503
143	1.60944	-0.0476439	144.358	354.427
144	1.60944	-0.0401167	144.36	354.362
145	1.60944	-0.0300838	144.361	354.314
146	1.60944	-0.0225612	144.361	354.277
147	1.60944	-0.0150408	144.362	354.253
148	1.60944	-0.00501359	144.362	354.245
149	1.60944	0.00501359	144.362	354.253
150	1.60944	0.0150408	144.362	354.277
151	1.60944	0.0225612	144.362	354.314
152	1.60944	0.0300838	144.363	354.362
153	1.60944	0.0401167	144.365	354.427
154	1.60944	0.0476439	144.367	354.503
155	1.60944	0.0551734	144.37	354.592
156	1.60944	0.0652187	144.374	354.697
157	1.60944	0.0727562	144.38	354.814
158	1.60944	0.0802981	144.386	354.944
159	1.60944	0.0903606	144.394	355.089
160	1.60944	0.0979139	144.404	355.247
161	1.60944	0.107995	144.416	355.42
162	1.60944	0.115562	144.429	355.606
163	1.60944	0.123135	144.444	355.805
164	1.60944	0.133244	144.462	356.019
165	1.60944	0.140835	144.482	356.246
166	1.60944	0.148434	144.504	356.485
167	1.60944	0.158579	144.529	356.74
168	1.60944	0.166199	144.557	357.007
169	1.60944	0.176374	144.588	357.291
170	1.60944	0.184017	144.621	357.587
171	1.60944	0.191671	144.658	357.896
172	1.60944	0.201894	144.699	358.221
173	1.60944	0.209575	144.743	358.558
174	1.60944	0.217267	144.79	358.908
175	1.60944	0.227545	144.842	359.274

176	1.60944	0.235269		144.897	359.653
177	1.60944	0.243007		144.956	360.044
178	1.60944	0.253347		145.02	360.451
179	1.60944	0.26112	145.089	360.872	
180	1.60944	0.271509		145.162	361.309
181	1.60944	0.279319		145.24	361.758
182	1.60944	0.287147		145.323	362.22
183	1.60944	0.297612		145.411	362.699
184	1.60944	0.305481		145.505	363.191
185	1.60944	0.31337	145.603	363.695	
186	1.60944	0.323919		145.708	364.217
187	1.60944	0.331854		145.818	364.751
188	1.60944	0.33981	145.933	365.298	
189	1.60944	0.350451		146.056	365.862
190	1.60944	0.358459		146.185	366.439
191	1.60944	0.369171		146.321	367.033
192	1.60944	0.377233		146.463	367.64
193	1.60944	0.385321		146.612	368.26
194	1.60944	0.396142		146.769	368.898
195	1.60944	0.40429	146.932	369.548	
196	1.60944	0.412463		147.102	370.212
197	1.60944	0.423405		147.282	370.894
198	1.60944	0.431644		147.468	371.588
199	1.60944	0.442676		147.664	372.301
200	1.60944	0.450985		147.867	373.027
201	1.60944	0.459327		148.078	373.766
202	1.60944	0.470498		148.3	374.523
203	1.60944	0.478914		148.529	375.294
204	1.60944	0.487364		148.767	376.078
205	1.60944	0.498687		149.015	376.881
206	1.60944	0.507221		149.272	377.697
207	1.60944	0.515791		149.539	378.527
208	1.60944	0.52728	149.817	379.376	
209	1.60944	0.53594	150.104	380.238	
210	1.60944	0.547551		150.404	381.12
211	1.60944	0.556308		150.713	382.015
212	1.60944	0.565108		151.032	382.925
213	1.60944	0.576911		151.365	383.853
214	1.60944	0.585815		151.708	384.796
215	1.60944	0.594766		152.062	385.753
216	1.60944	0.606775		152.43	386.73
217	1.60944	0.615839		152.81	387.721
218	1.60944	0.628006		153.204	388.732
219	1.60944	0.637192		153.61	389.757
220	1.60944	0.646431		154.028	390.798
221	1.60944	0.658838		154.462	391.858
222	1.60944	0.668209		154.908	392.933
223	1.60944	0.677639		155.368	394.024
224	1.60944	0.690309		155.844	395.135
225	1.60944	0.699883		156.334	396.261
226	1.60944	0.709522		156.837	397.403
227	1.60944	0.722479		157.359	398.566
228	1.60944	0.732275		157.896	399.745
229	1.60944	0.745449		158.451	400.944
230	1.60944	0.755415		159.022	402.16
231	1.60944	0.765456		159.608	403.392
232	1.60944	0.778966		160.215	404.646
233	1.60944	0.789191		160.837	405.916
234	1.60944	0.7995	161.477	407.203	
235	1.60944	0.813379		162.138	408.512
236	1.60944	0.823893		162.817	409.838
237	1.60944	0.834498		163.513	411.181

238	1.60944	0.848786		164.234	412.547
239	1.60944	0.859618		164.973	413.93
240	1.60944	0.874218		165.737	415.337
241	1.60944	0.885291		166.521	416.762
242	1.60944	0.896473		167.325	418.205
243	1.60944	0.911562		168.155	419.672
244	1.60944	0.923014		169.007	421.158
245	1.60944	0.93459	169.881	422.662	
246	1.60944	0.950222		170.784	424.191
247	1.60944	0.9621	171.709	425.74	
248	1.60944	0.97815	172.666	427.314	
249	1.60944	0.990356		173.647	428.908
250	1.60944	1.00271	174.652	430.522	
251	1.60944	1.01943	175.692	432.162	
252	1.60944	1.03215	176.757	433.824	
253	1.60944	1.04505	177.849	435.506	
254	1.60944	1.06252	178.978	437.216	
255	1.60944	1.07584	180.136	438.947	
256	1.60944	1.08935	181.322	440.7	
257	1.60944	1.10768	182.549	442.483	
258	1.60944	1.12168	183.807	444.288	
259	1.60944	1.14069	185.108	446.124	
260	1.60944	1.15522	186.443	447.983	
261	1.60944	1.17	187.812	449.866	
262	1.60944	1.19012	189.228	451.782	
263	1.60944	1.20553	190.682	453.722	
264	1.60944	1.22123	192.173	455.688	
265	1.60944	1.24264	193.717	457.688	
266	1.60944	1.25908	195.302	459.714	
267	1.60944	1.27588	196.93	461.767	
268	1.60944	1.29884	198.617	463.858	
269	1.60944	1.31652	200.351	465.977	
270	1.60944	1.34075	202.148	468.135	
271	1.60944	1.35946	203.996	470.323	
272	1.60944	1.37866	205.897	472.541	
273	1.60944	1.40507	207.871	474.803	
274	1.60944	1.42554	209.903	477.097	
275	1.60944	1.44663	211.996	479.425	
276	1.60944	1.47579	214.174	481.801	
277	1.60944	1.49852	216.42	484.212	
278	1.60944	1.53007	218.761	486.675	
279	1.60944	1.55477	221.178	489.177	
280	1.60944	1.58047	223.676	491.721	
281	1.60944	1.61644	226.289	494.322	
282	1.60944	1.64485	228.994	496.97	
283	1.60944	1.67466	231.799	499.665	
284	1.60944	1.71688	234.747	502.428	
285	1.60944	1.75069	237.811	505.246	
286	1.60944	1.78661	241.003	508.121	
287	1.60944	1.83843	244.383	511.08	
288	1.60944	1.88079	247.921	514.107	
289	1.60944	1.94314	251.696	517.234	
290	1.60944	1.99539	255.678	520.446	
291	1.60944	2.05375	259.896	523.751	
292	1.60944	2.14441	264.494	527.203	
293	1.60944	2.22621	269.45	530.785	
294	1.60944	2.32634	274.862	534.53	
295	1.60944	2.51213	281.173	538.573	
296	1.60944	2.74777	288.723	542.995	

Data Set Standard Deviation = 2.29449

Numerator = 294844
Denominator = 448412
W Statistic = 0.657528 = 294844 / 448412

5% Critical value of 0.976 exceeds 0.657528
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.657528
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Beryllium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.808757
0.808757 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-3.352410	0.003367	-2.747779	6.7437	348.683
2	-3.352410	0.00673401	-2.512139	6.7437	337.176
3	-3.352410	0.010101	-2.326349	6.7437	328.103
4	-3.352410	0.013468	-2.226219	6.7437	323.213
5	-3.352410	0.016835	-2.144419	6.7437	319.219
6	-3.352410	0.020202	-2.053759	6.7437	314.791
7	-3.352410	0.023569	-1.995399	6.7437	311.942
8	-3.352410	0.026936	-1.943149	6.7437	309.39
9	-3.352410	0.030303	-1.880799	6.7437	306.345
10	-3.352410	0.03367	-1.838439	6.7437	304.276
11	-3.352410	0.037037	-1.786619	6.7437	301.746
12	-3.352410	0.040404	-1.750699	6.7437	299.992
13	-3.352410	0.043771	-1.716889	6.7437	298.341
14	-3.352410	0.047138	-1.674669	6.7437	296.279
15	-3.352410	0.0505051	-1.644859	6.7437	294.824
16	-3.352410	0.0538721	-1.616449	6.7437	293.436
17	-3.352410	0.0572391	-1.580479	6.7437	291.679
18	-3.352410	0.0606061	-1.554779	6.7437	290.425
19	-3.352410	0.0639731	-1.530079	6.7437	289.218
20	-3.352410	0.0673401	-1.498529	6.7437	287.677
21	-3.352410	0.0707071	-1.475799	6.7437	286.568
22	-3.352410	0.0740741	-1.446639	6.7437	285.144
23	-3.352410	0.0774411	-1.425549	6.7437	284.114
24	-3.352410	0.0808081	-1.405079	6.7437	283.114
25	-3.352410	0.0841751	-1.378669	6.7437	281.824
26	-3.352410	0.0875421	-1.359469	6.7437	280.887
27	-3.352410	0.0909091	-1.340759	6.7437	279.974
28	-3.352410	0.0942761	-1.316529	6.7437	278.79
29	-3.352410	0.0976431	-1.298849	6.7437	277.926
30	-3.352410	0.10101	-1.275889	6.7437	276.805
31	-3.352410	0.104377	-1.259089	6.7437	275.985
32	-3.352410	0.107744	-1.242649	6.7437	275.182
33	-3.352410	0.111111	-1.221239	6.7437	274.137
34	-3.352410	0.114478	-1.205539	6.7437	273.37
35	-3.352410	0.117845	-1.190129	6.7437	272.617
36	-3.352410	0.121212	-1.17	6.7437	271.635
37	-3.352410	0.124579	-1.155229	6.7437	270.913
38	-3.352410	0.127946	-1.140699	6.7437	270.204
39	-3.352410	0.131313	-1.121689	6.7437	269.275
40	-3.352410	0.13468	-1.107689	6.7437	268.592
41	-3.352410	0.138047	-1.089359	6.7437	267.697
42	-3.352410	0.141414	-1.075849	6.7437	267.037
43	-3.352410	0.144781	-1.062529	6.7437	266.386
44	-3.352410	0.148148	-1.045059	6.7437	265.533
45	-3.352410	0.151515	-1.032159	6.7437	264.904
46	-3.352410	0.154882	-1.019439	6.7437	264.282
47	-3.352410	0.158249	-1.002719	6.7437	263.466
48	-3.352410	0.161616	-0.990356	6.7437	262.862

49	-3.35241	0.164983	-0.97815	96.7437 262.266
50	-3.35241	0.16835	-0.9621	96.7437 261.483
51	-3.35241	0.171717	-0.950222	96.7437 260.903
52	-3.35241	0.175084	-0.93459	96.7437 260.139
53	-3.35241	0.178451	-0.923014	96.7437 259.574
54	-3.35241	0.181818	-0.911562	96.7437 259.015
55	-3.35241	0.185185	-0.896473	96.7437 258.278
56	-3.35241	0.188552	-0.885291	96.7437 257.732
57	-3.35241	0.191919	-0.874218	96.7437 257.191
58	-3.35241	0.195286	-0.859618	96.7437 256.478
59	-3.35241	0.198653	-0.848786	96.7437 255.949
60	-3.35241	0.20202	-0.834498	96.7437 255.251
61	-3.35241	0.205387	-0.823893	96.7437 254.733
62	-3.35241	0.208754	-0.813379	96.7437 254.22
63	-3.35241	0.212121	-0.7995	96.7437 253.542
64	-3.35241	0.215488	-0.789191	96.7437 253.039
65	-3.35241	0.218855	-0.778966	96.7437 252.54
66	-3.35241	0.222222	-0.765456	96.7437 251.88
67	-3.35241	0.225589	-0.755415	96.7437 251.389
68	-3.35241	0.228956	-0.745449	96.7437 250.903
69	-3.35241	0.232323	-0.732275	96.7437 250.259
70	-3.35241	0.23569	-0.722479	96.7437 249.781
71	-3.35241	0.239057	-0.709522	96.7437 249.148
72	-3.35241	0.242424	-0.699883	96.7437 248.678
73	-3.35241	0.245791	-0.690309	96.7437 248.21
74	-3.35241	0.249158	-0.677639	96.7437 247.591
75	-3.35241	0.252525	-0.668209	96.7437 247.131
76	-3.35241	0.255892	-0.658838	96.7437 246.673
77	-3.35241	0.259259	-0.646431	96.7437 246.067
78	-3.35241	0.262626	-0.637192	96.7437 245.616
79	-3.35241	0.265993	-0.628006	96.7437 245.168
80	-3.35241	0.26936	-0.615839	96.7437 244.573
81	-3.35241	0.272727	-0.606775	96.7437 244.131
82	-3.35241	0.276094	-0.594766	96.7437 243.544
83	-3.35241	0.279461	-0.585815	96.7437 243.107
84	-3.35241	0.282828	-0.576911	96.7437 242.672
85	-3.35241	0.286195	-0.565108	96.7437 242.096
86	-3.35241	0.289562	-0.556308	96.7437 241.666
87	-3.35241	0.292929	-0.547551	96.7437 241.239
88	-2.64508	0.296296	-0.53594	159.814 240.672
89	-2.64508	0.299663	-0.52728	159.814 240.249
90	-2.59027	0.30303	-0.515791	164.701 239.688
91	-2.57702	0.306397	-0.507221	165.882 239.269
92	-2.4651	0.309764	-0.498687	175.862 238.853
93	-2.41912	0.313131	-0.487364	179.962 238.3
94	-2.38597	0.316498	-0.478914	182.918 237.887
95	-2.36446	0.319865	-0.470498	184.836 237.476
96	-2.30259	0.323232	-0.459327	190.353 236.93
97	-2.12026	0.326599	-0.450985	206.61 236.523
98	-2.12026	0.329966	-0.442676	206.61 236.117
99	-2.04022	0.333333	-0.431644	213.747 235.579
100	-2.04022	0.3367	-0.423405	213.747 235.176
101	-2.04022	0.340067	-0.412463	213.747 234.642
102	-2.04022	0.343434	-0.40429	213.747 234.243
103	-1.89712	0.346801	-0.396142	226.507 233.845
104	-1.89712	0.350168	-0.385321	226.507 233.317
105	-1.89712	0.353535	-0.377233	226.507 232.922
106	-1.89712	0.356902	-0.369171	226.507 232.528
107	-1.83258	0.360269	-0.358459	232.261 232.005
108	-1.77196	0.363636	-0.350451	237.667 231.614
109	-1.66073	0.367003	-0.33981	247.585 231.094
110	-1.66073	0.37037	-0.331854	247.585 230.706

111	-1.309330.373737	-0.323919	278.918	230.318	
112	-1.237870.377104	-0.31337285.29	229.803		
113	-1.078810.380471	-0.305481	299.473	229.418	
114	-0.967584	0.383838	-0.297612	309.39	229.033
115	1.60944 0.387205	-0.287147	539.175	228.522	
116	1.60944 0.390572	-0.279319	539.175	228.14	
117	1.60944 0.393939	-0.271509	539.175	227.759	
118	1.60944 0.397306	-0.26112539.175	227.251		
119	1.60944 0.400673	-0.253347	539.175	226.872	
120	1.60944 0.40404	-0.243007	539.175	226.367	
121	1.60944 0.407407	-0.235269	539.175	225.989	
122	1.60944 0.410774	-0.227545	539.175	225.612	
123	1.60944 0.414141	-0.217267	539.175	225.11	
124	1.60944 0.417508	-0.209575	539.175	224.734	
125	1.60944 0.420875	-0.201894	539.175	224.359	
126	1.60944 0.424242	-0.191671	539.175	223.86	
127	1.60944 0.427609	-0.184017	539.175	223.486	
128	1.60944 0.430976	-0.176374	539.175	223.113	
129	1.60944 0.434343	-0.166199	539.175	222.616	
130	1.60944 0.43771	-0.158579	539.175	222.244	
131	1.60944 0.441077	-0.148434	539.175	221.749	
132	1.60944 0.444444	-0.140835	539.175	221.377	
133	1.60944 0.447811	-0.133244	539.175	221.007	
134	1.60944 0.451178	-0.123135	539.175	220.513	
135	1.60944 0.454545	-0.115562	539.175	220.143	
136	1.60944 0.457912	-0.107995	539.175	219.774	
137	1.60944 0.461279	-0.0979139	539.175	219.281	
138	1.60944 0.464646	-0.0903606	539.175	218.913	
139	1.60944 0.468013	-0.0802981	539.175	218.421	
140	1.60944 0.47138	-0.0727562	539.175	218.053	
141	1.60944 0.474747	-0.0652187	539.175	217.685	
142	1.60944 0.478114	-0.0551734	539.175	217.194	
143	1.60944 0.481481	-0.0476439	539.175	216.827	
144	1.60944 0.484848	-0.0401167	539.175	216.459	
145	1.60944 0.488215	-0.0300838	539.175	215.969	
146	1.60944 0.491582	-0.0225612	539.175	215.602	
147	1.60944 0.494949	-0.0150408	539.175	215.234	
148	1.60944 0.498316	-0.00501359	539.175	214.745	
149	1.60944 0.501684	0.00501359	539.175	214.255	
150	1.60944 0.505051	0.0150408	539.175	213.766	
151	1.60944 0.508418	0.0225612	539.175	213.398	
152	1.60944 0.511785	0.0300838	539.175	213.031	
153	1.60944 0.515152	0.0401167	539.175	212.541	
154	1.60944 0.518519	0.0476439	539.175	212.173	
155	1.60944 0.521886	0.0551734	539.175	211.806	
156	1.60944 0.525253	0.0652187	539.175	211.315	
157	1.60944 0.52862	0.0727562	539.175	210.947	
158	1.60944 0.531987	0.0802981	539.175	210.579	
159	1.60944 0.535354	0.0903606	539.175	210.087	
160	1.60944 0.538721	0.0979139	539.175	209.719	
161	1.60944 0.542088	0.107995	539.175	209.226	
162	1.60944 0.545455	0.115562	539.175	208.857	
163	1.60944 0.548822	0.123135	539.175	208.487	
164	1.60944 0.552189	0.133244	539.175	207.993	
165	1.60944 0.555556	0.140835	539.175	207.623	
166	1.60944 0.558923	0.148434	539.175	207.251	
167	1.60944 0.56229	0.158579	539.175	206.756	
168	1.60944 0.565657	0.166199	539.175	206.384	
169	1.60944 0.569024	0.176374	539.175	205.887	
170	1.60944 0.572391	0.184017	539.175	205.514	
171	1.60944 0.575758	0.191671	539.175	205.14	
172	1.60944 0.579125	0.201894	539.175	204.641	

173	1.60944	0.582492	0.209575	539.175	204.266
174	1.60944	0.585859	0.217267	539.175	203.89
175	1.60944	0.589226	0.227545	539.175	203.388
176	1.60944	0.592593	0.235269	539.175	203.011
177	1.60944	0.59596	0.243007	539.175	202.633
178	1.60944	0.599327	0.253347	539.175	202.128
179	1.60944	0.602694	0.26112	539.175	201.749
180	1.60944	0.606061	0.271509	539.175	201.241
181	1.60944	0.609428	0.279319	539.175	200.86
182	1.60944	0.612795	0.287147	539.175	200.478
183	1.60944	0.616162	0.297612	539.175	199.967
184	1.60944	0.619529	0.305481	539.175	199.582
185	1.60944	0.622896	0.31337	539.175	199.197
186	1.60944	0.626263	0.323919	539.175	198.682
187	1.60944	0.62963	0.331854	539.175	198.294
188	1.60944	0.632997	0.33981	539.175	197.906
189	1.60944	0.636364	0.350451	539.175	197.386
190	1.60944	0.639731	0.358459	539.175	196.995
191	1.60944	0.643098	0.369171	539.175	196.472
192	1.60944	0.646465	0.377233	539.175	196.078
193	1.60944	0.649832	0.385321	539.175	195.683
194	1.60944	0.653199	0.396142	539.175	195.155
195	1.60944	0.656566	0.40429	539.175	194.757
196	1.60944	0.659933	0.412463	539.175	194.358
197	1.60944	0.6633	0.423405	539.175	193.824
198	1.60944	0.666667	0.431644	539.175	193.421
199	1.60944	0.670034	0.442676	539.175	192.883
200	1.60944	0.673401	0.450985	539.175	192.477
201	1.60944	0.676768	0.459327	539.175	192.07
202	1.60944	0.680135	0.470498	539.175	191.524
203	1.60944	0.683502	0.478914	539.175	191.113
204	1.60944	0.686869	0.487364	539.175	190.7
205	1.60944	0.690236	0.498687	539.175	190.147
206	1.60944	0.693603	0.507221	539.175	189.731
207	1.60944	0.69697	0.515791	539.175	189.312
208	1.60944	0.700337	0.52728	539.175	188.751
209	1.60944	0.703704	0.53594	539.175	188.328
210	1.60944	0.707071	0.547551	539.175	187.761
211	1.60944	0.710438	0.556308	539.175	187.334
212	1.60944	0.713805	0.565108	539.175	186.904
213	1.60944	0.717172	0.576911	539.175	186.328
214	1.60944	0.720539	0.585815	539.175	185.893
215	1.60944	0.723906	0.594766	539.175	185.456
216	1.60944	0.727273	0.606775	539.175	184.869
217	1.60944	0.73064	0.615839	539.175	184.427
218	1.60944	0.734007	0.628006	539.175	183.832
219	1.60944	0.737374	0.637192	539.175	183.384
220	1.60944	0.740741	0.646431	539.175	182.933
221	1.60944	0.744108	0.658838	539.175	182.327
222	1.60944	0.747475	0.668209	539.175	181.869
223	1.60944	0.750842	0.677639	539.175	181.409
224	1.60944	0.754209	0.690309	539.175	180.79
225	1.60944	0.757576	0.699883	539.175	180.322
226	1.60944	0.760943	0.709522	539.175	179.852
227	1.60944	0.76431	0.722479	539.175	179.219
228	1.60944	0.767677	0.732275	539.175	178.741
229	1.60944	0.771044	0.745449	539.175	178.097
230	1.60944	0.774411	0.755415	539.175	177.611
231	1.60944	0.777778	0.765456	539.175	177.12
232	1.60944	0.781145	0.778966	539.175	176.46
233	1.60944	0.784512	0.789191	539.175	175.961
234	1.60944	0.787879	0.7995	539.175	175.458

235	1.60944	0.791246	0.813379	539.175	174.78
236	1.60944	0.794613	0.823893	539.175	174.267
237	1.60944	0.79798	0.834498	539.175	173.749
238	1.60944	0.801347	0.848786	539.175	173.051
239	1.60944	0.804714	0.859618	539.175	172.522
240	1.60944	0.808081	0.874218	539.175	171.809
241	1.60944	0.811448	0.885291	539.175	171.268
242	1.60944	0.814815	0.896473	539.175	170.722
243	1.60944	0.818182	0.911562	539.175	169.985
244	1.60944	0.821549	0.923014	539.175	169.426
245	1.60944	0.824916	0.93459	539.175	168.861
246	1.60944	0.828283	0.950222	539.175	168.097
247	1.60944	0.83165	0.9621	539.175	167.517
248	1.60944	0.835017	0.97815	539.175	166.734
249	1.60944	0.838384	0.990356	539.175	166.138
250	1.60944	0.841751	1.00271	539.175	165.534
251	1.60944	0.845118	1.01943	539.175	164.718
252	1.60944	0.848485	1.03215	539.175	164.096
253	1.60944	0.851852	1.04505	539.175	163.467
254	1.60944	0.855219	1.06252	539.175	162.614
255	1.60944	0.858586	1.07584	539.175	161.963
256	1.60944	0.861953	1.08935	539.175	161.303
257	1.60944	0.86532	1.10768	539.175	160.408
258	1.60944	0.868687	1.12168	539.175	159.725
259	1.60944	0.872054	1.14069	539.175	158.796
260	1.60944	0.875421	1.15522	539.175	158.087
261	1.60944	0.878788	1.17	539.175	157.365
262	1.60944	0.882155	1.19012	539.175	156.383
263	1.60944	0.885522	1.20553	539.175	155.63
264	1.60944	0.888889	1.22123	539.175	154.863
265	1.60944	0.892256	1.24264	539.175	153.818
266	1.60944	0.895623	1.25908	539.175	153.015
267	1.60944	0.89899	1.27588	539.175	152.195
268	1.60944	0.902357	1.29884	539.175	151.074
269	1.60944	0.905724	1.31652	539.175	150.21
270	1.60944	0.909091	1.34075	539.175	149.026
271	1.60944	0.912458	1.35946	539.175	148.113
272	1.60944	0.915825	1.37866	539.175	147.176
273	1.60944	0.919192	1.40507	539.175	145.886
274	1.60944	0.922559	1.42554	539.175	144.886
275	1.60944	0.925926	1.44663	539.175	143.856
276	1.60944	0.929293	1.47579	539.175	142.432
277	1.60944	0.93266	1.49852	539.175	141.323
278	1.60944	0.936027	1.53007	539.175	139.782
279	1.60944	0.939394	1.55477	539.175	138.575
280	1.60944	0.942761	1.58047	539.175	137.321
281	1.60944	0.946128	1.61644	539.175	135.564
282	1.60944	0.949495	1.64485	539.175	134.176
283	1.60944	0.952862	1.67466	539.175	132.721
284	1.60944	0.956229	1.71688	539.175	130.659
285	1.60944	0.959596	1.75069	539.175	129.008
286	1.60944	0.962963	1.78661	539.175	127.254
287	1.60944	0.96633	1.83843	539.175	124.724
288	1.60944	0.969697	1.88079	539.175	122.655
289	1.60944	0.973064	1.94314	539.175	119.61
290	1.60944	0.976431	1.99539	539.175	117.058
291	1.60944	0.979798	2.05375	539.175	114.209
292	1.60944	0.983165	2.14441	539.175	109.781
293	1.60944	0.986532	2.22621	539.175	105.787
294	1.60944	0.989899	2.32634	539.175	100.897
295	1.60944	0.993266	2.51213	539.175	91.8241
296	1.60944	0.996633	2.74777	539.175	80.3175

Kruskal-Wallis Non-Parametric Test

Parameter: Beryllium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	ND<1.60944	135
	3/16/1999	ND<1.60944	135
	9/23/1999	ND<1.60944	135
	3/14/2000	ND<1.60944	135
	9/23/2003	ND<1.60944	135
	3/10/2004	ND<1.60944	135
	10/12/2004	ND<1.60944	135
	4/1/2005	ND<1.60944	135
	10/26/2005	ND<1.60944	135
	6/19/2006	ND<1.60944	135
	11/18/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	ND<-3.35241 U	135
	11/16/2009	-2.64508 J	270
	6/30/2010	ND<-3.35241 U	135
	11/17/2010	ND<-3.35241 U	135
	7/6/2011	ND<-3.35241 U	135
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	ND<-3.35241 U	135
	11/16/2012	ND<-3.35241 U	135
	11/16/2013	ND<-3.35241 U	135

Rank Sum = 3375
Rank Mean = 140.625

Background Rank Sum = 3375
Background Rank Mean = 140.625

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-9	1/16/1998	ND<1.60944	135
	3/16/1999	ND<1.60944	135
	9/23/1999	ND<1.60944	135
	3/14/2000	ND<1.60944	135
	9/23/2003	ND<1.60944	135
	3/10/2004	ND<1.60944	135
	10/12/2004	ND<1.60944	135
	4/1/2005	ND<1.60944	135
	10/26/2005	ND<1.60944	135
	6/19/2006	ND<1.60944	135
	11/18/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	-2.41912 J	275

	11/16/2009	ND<-3.35241 U	135
	6/30/2010	ND<-3.35241 U	135
	11/17/2010	-2.12026 J	279
	7/6/2011	ND<-3.35241 U	135
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	-1.30933	293
	11/16/2012	-0.967584	296
	11/16/2013	-2.04022 J	281

Rank Sum = 3989
Rank Mean = 166.208

LMW-8	1/16/1998	ND<1.60944	135
	3/16/1999	ND<1.60944	135
	9/23/1999	ND<1.60944	135
	3/14/2000	ND<1.60944	135
	9/23/2003	ND<1.60944	135
	3/10/2004	ND<1.60944	135
	10/12/2004	ND<1.60944	135
	4/1/2005	ND<1.60944	135
	10/26/2005	ND<1.60944	135
	6/19/2006	ND<1.60944	135
	11/18/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	ND<-3.35241 U	135
	11/16/2009	ND<-3.35241 U	135
	6/30/2010	ND<-3.35241 U	135
	11/17/2010	ND<-3.35241 U	135
	7/6/2011	ND<-3.35241 U	135
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	ND<-3.35241 U	135
	11/16/2012	ND<-3.35241 U	135
	11/16/2013	ND<-3.35241 U	135

Rank Sum = 3240
Rank Mean = 135

LMW-6	1/16/1998	ND<1.60944	135
	3/16/1999	ND<1.60944	135
	9/23/1999	ND<1.60944	135
	3/14/2000	ND<1.60944	135
	9/23/2003	ND<1.60944	135
	3/10/2004	ND<1.60944	135
	10/12/2004	ND<1.60944	135
	4/1/2005	ND<1.60944	135
	10/26/2005	ND<1.60944	135
	6/19/2006	ND<1.60944	135
	11/18/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	-1.89712 J	285
	11/16/2009	-1.89712 J	286
	6/30/2010	-2.04022 J	282
	11/17/2010	-1.83258 J	289
	7/6/2011	-2.4651 J	274
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	-2.59027 J	272
	11/16/2012	ND<-3.35241 U	135
	11/16/2013	ND<-3.35241 U	135

Rank Sum = 4118
Rank Mean = 171.583

LMW-10	3/14/2000	ND<1.60944	135
	9/23/2003	ND<1.60944	135
	3/10/2004	ND<1.60944	135
	10/12/2004	ND<1.60944	135
	4/1/2005	ND<1.60944	135
	10/26/2005	ND<1.60944	135
	6/19/2006	ND<1.60944	135
	11/18/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	ND<-3.35241 U	135
	11/16/2009	ND<-3.35241 U	135
	6/30/2010	ND<-3.35241 U	135
	11/17/2010	ND<-3.35241 U	135
	7/6/2011	ND<-3.35241 U	135
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	ND<-3.35241 U	135
	11/16/2012	ND<-3.35241 U	135
	11/16/2013	ND<-3.35241 U	135

Rank Sum = 2835
Rank Mean = 135

LMW-16	11/18/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	ND<-3.35241 U	135
	11/16/2009	ND<-3.35241 U	135
	6/30/2010	ND<-3.35241 U	135
	11/17/2010	ND<-3.35241 U	135
	7/6/2011	ND<-3.35241 U	135
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	ND<-3.35241 U	135
	11/16/2012	ND<-3.35241 U	135
	11/16/2013	ND<-3.35241 U	135

Rank Sum = 1890
Rank Mean = 135

LMW-9D	11/18/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	ND<-3.35241 U	135
	11/16/2009	ND<-3.35241 U	135
	6/30/2010	ND<-3.35241 U	135
	11/17/2010	ND<-3.35241 U	135
	7/6/2011	ND<-3.35241 U	135
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	ND<-3.35241 U	135
	11/16/2012	ND<-3.35241 U	135
	11/16/2013	ND<-3.35241 U	135

Rank Sum = 1890
Rank Mean = 135

LMW-15R	11/18/2006	ND<1.60944	135

	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	-1.23787	294
	11/16/2009	ND<-3.35241 U	135
	6/30/2010	-1.77196 J	290
	11/17/2010	-2.04022 J	283
	7/6/2011	-2.04022 J	284
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	-1.89712 J	287
	11/16/2012	-1.89712 J	288
	11/16/2013	-1.66073 J	291

Rank Sum = 3367
Rank Mean = 198.059

LMW-14R	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	ND<-3.35241 U	135
	11/16/2009	ND<-3.35241 U	135
	11/16/2009	ND<-3.35241 U	135
	6/30/2010	ND<-3.35241 U	135
	11/17/2010	ND<-3.35241 U	135
	7/6/2011	ND<-3.35241 U	135
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	ND<-3.35241 U	135
	11/16/2012	ND<-3.35241 U	135
	11/16/2013	ND<-3.35241 U	135

Rank Sum = 1890
Rank Mean = 135

LMW-3	11/19/1996	ND<1.60944	135
	3/24/1997	ND<1.60944	135
	1/16/1998	ND<1.60944	135
	3/16/1999	ND<1.60944	135
	9/23/1999	ND<1.60944	135
	3/14/2000	ND<1.60944	135
	9/23/2003	ND<1.60944	135
	3/10/2004	ND<1.60944	135
	10/12/2004	ND<1.60944	135
	4/1/2005	ND<1.60944	135
	10/26/2005	ND<1.60944	135
	6/19/2006	ND<1.60944	135
	11/18/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	ND<-3.35241 U	135
	11/16/2009	ND<-3.35241 U	135
	6/30/2010	ND<-3.35241 U	135
	11/17/2010	ND<-3.35241 U	135
	7/6/2011	ND<-3.35241 U	135
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	ND<-3.35241 U	135
	11/16/2012	ND<-3.35241 U	135
	11/16/2013	ND<-3.35241 U	135

Rank Sum = 3510
Rank Mean = 135

LMW-3S	11/18/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	-2.57702 J	273
	11/16/2009	ND<-3.35241 U	135
	6/30/2010	ND<-3.35241 U	135
	11/17/2010	-2.12026 J	280
	7/6/2011	-2.30259 J	278
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	ND<-3.35241 U	135
	11/16/2012	ND<-3.35241 U	135
	11/16/2013	ND<-3.35241 U	135

Rank Sum = 2316
Rank Mean = 165.429

LMW-9S	11/18/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	ND<-3.35241 U	135
	6/30/2010	ND<-3.35241 U	135
	11/17/2010	-2.64508 J	271
	7/6/2011	ND<-3.35241 U	135
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	ND<-3.35241 U	135
	11/16/2012	ND<-3.35241 U	135
	11/16/2013	ND<-3.35241 U	135

Rank Sum = 1891
Rank Mean = 145.462

LMW-7	1/16/1998	ND<1.60944	135
	3/16/1999	ND<1.60944	135
	9/23/1999	ND<1.60944	135
	3/14/2000	ND<1.60944	135
	9/23/2003	ND<1.60944	135
	3/10/2004	ND<1.60944	135
	10/12/2004	ND<1.60944	135
	4/1/2005	ND<1.60944	135
	10/26/2005	ND<1.60944	135
	6/19/2006	ND<1.60944	135
	11/18/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135
	6/11/2009	-1.66073 J	292
	11/17/2010	ND<-3.35241 U	135
	7/6/2011	-1.07881	295
	11/22/2011	ND<-3.35241 U	135
	5/16/2012	-2.36446 J	277
	11/16/2012	-2.38597 J	276

Rank Sum = 3435
Rank Mean = 163.571

LMW-11	3/14/2000	ND<1.60944	135
	9/23/2003	ND<1.60944	135

	3/10/2004	ND<1.60944	135
	10/12/2004	ND<1.60944	135
	4/1/2005	ND<1.60944	135
	10/26/2005	ND<1.60944	135
	6/19/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135

Rank Sum = 1485
Rank Mean = 135

LMW-12	3/14/2000	ND<1.60944	135
	9/23/2003	ND<1.60944	135
	3/10/2004	ND<1.60944	135
	10/12/2004	ND<1.60944	135
	4/1/2005	ND<1.60944	135
	10/26/2005	ND<1.60944	135
	6/19/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135

Rank Sum = 1485
Rank Mean = 135

LMW-13	3/14/2000	ND<1.60944	135
	9/23/2003	ND<1.60944	135
	3/10/2004	ND<1.60944	135
	10/12/2004	ND<1.60944	135
	4/1/2005	ND<1.60944	135
	10/26/2005	ND<1.60944	135
	6/19/2006	ND<1.60944	135
	6/2/2007	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135

Rank Sum = 1485
Rank Mean = 135

MW-5	1/16/1998	ND<1.60944	135
	3/16/1999	ND<1.60944	135
	9/23/1999	ND<1.60944	135
	3/14/2000	ND<1.60944	135
	9/23/2003	ND<1.60944	135
	3/10/2004	ND<1.60944	135
	10/12/2004	ND<1.60944	135
	4/1/2005	ND<1.60944	135
	10/26/2005	ND<1.60944	135
	6/19/2006	ND<1.60944	135
	11/15/2007	ND<1.60944	135
	5/20/2008	ND<1.60944	135
	11/20/2008	ND<1.60944	135

Rank Sum = 1755
Rank Mean = 135

Calculation Results:

Kruskal-Wallis H Statistic = 13.846
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 55.5065
95% Confidence comparison value is 26.2962 at 16 degrees of freedom

13.846 < 26.2962 indicating no significant group difference at 5% significance level
55.5065 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 140.625

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-9	166.208	25.5833	57.48
LMW-8	135	-5.625	57.48
LMW-6	171.583	30.9583	57.48
LMW-10	135	-5.625	59.4974
LMW-16	135	-5.625	66.9621
LMW-9D	135	-5.625	66.9621
LMW-15R	198.059	57.4338	63.1203
LMW-14R	135	-5.625	66.9621
LMW-3	135	-5.625	56.3637
LMW-3S	165.429	24.8036	66.9621
LMW-9S	145.462	4.83654	68.5694
LMW-7	163.571	22.9464	59.4974
LMW-11	135	-5.625	72.5002
LMW-12	135	-5.625	72.5002
LMW-13	135	-5.625	72.5002
MW-5	135	-5.625	68.5694

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 140.625

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-9	166.208	25.5833	67.8926
LMW-8	135	-5.625	67.8926
LMW-6	171.583	30.9583	67.8926
LMW-10	135	-5.625	70.2755
LMW-16	135	-5.625	79.0925
LMW-9D	135	-5.625	79.0925
LMW-15R	198.059	57.4338	74.5547
LMW-14R	135	-5.625	79.0925
LMW-3	135	-5.625	66.5742
LMW-3S	165.429	24.8036	79.0925
LMW-9S	145.462	4.83654	80.991
LMW-7	163.571	22.9464	70.2755
LMW-11	135	-5.625	85.6338
LMW-12	135	-5.625	85.6338
LMW-13	135	-5.625	85.6338
MW-5	135	-5.625	80.991

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Beryllium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 90.8784%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 24
Maximum Background Value = 1.60944
Confidence Level = 75%
False Positive Rate = 25%

Location	Date	Count	Mean	Significant
LMW-9	11/16/2013	1	-2.04022	FALSE
LMW-8	11/16/2013	1	-3.35241	FALSE
LMW-6	11/16/2013	1	-3.35241	FALSE
LMW-10	11/16/2013	1	-3.35241	FALSE
LMW-16	11/16/2013	1	-3.35241	FALSE
LMW-9D	11/16/2013	1	-3.35241	FALSE
LMW-15R	11/16/2013	1	-1.66073	FALSE
LMW-14R	11/16/2013	1	-3.35241	FALSE
LMW-3	11/16/2013	1	-3.35241	FALSE
LMW-3S	11/16/2013	1	-3.35241	FALSE
LMW-9S	11/16/2013	1	-3.35241	FALSE
LMW-7	11/16/2012	1	-2.38597	FALSE
LMW-11	11/20/2008	1	1.60944	FALSE
LMW-12	11/20/2008	1	1.60944	FALSE
LMW-13	11/20/2008	1	1.60944	FALSE
MW-5	11/20/2008	1	1.60944	FALSE

Concentrations (ppb)

Parameter: Chloroform

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 279
Percent Non-Detects: 94.2568%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	23 (95.8333%)	1/16/1998	78	78
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.14 U	ND<0.14 U
			11/16/2009	ND<0.14 U	ND<0.14 U
			6/30/2010	ND<0.14 U	ND<0.14 U
			11/17/2010	ND<0.14 U	ND<0.14 U
			7/6/2011	ND<0.14 U	ND<0.14 U
			11/22/2011	ND<0.14 U	ND<0.14 U
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2013	ND<0.14 U	ND<0.14 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-16	14	14 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.14 U	ND<0.14 U
			11/16/2009	ND<0.14 U	ND<0.14 U
			6/30/2010	ND<0.14 U	ND<0.14 U
			11/17/2010	ND<0.14 U	ND<0.14 U
			7/6/2011	ND<0.14 U	ND<0.14 U
			11/22/2011	ND<0.14 U	ND<0.14 U
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2013	ND<0.14 U	ND<0.14 U
LMW-14R	12	12 (100%)	6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1

			6/11/2009	ND<0.14 U	ND<0.14 U
			6/30/2010	ND<0.14 U	ND<0.14 U
			11/17/2010	ND<0.14 U	ND<0.14 U
			7/6/2011	ND<0.14 U	ND<0.14 U
			11/22/2011	ND<0.14 U	ND<0.14 U
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2013	ND<0.14 U	ND<0.14 U
LMW-15R	19	19 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.14 U	ND<0.14 U
			11/16/2009	ND<0.14 U	ND<0.14 U
			11/16/2009	ND<0.14 U	ND<0.14 U
			11/16/2009	ND<0.14 U	ND<0.14 U
			6/30/2010	ND<0.14 U	ND<0.14 U
			11/17/2010	ND<0.14 U	ND<0.14 U
			7/6/2011	ND<0.14 U	ND<0.14 U
			11/22/2011	ND<0.14 U	ND<0.14 U
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2013	ND<0.14 U	ND<0.14 U
LMW-9D	14	14 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.14 U	ND<0.14 U
			11/16/2009	ND<0.14 U	ND<0.14 U
			6/30/2010	ND<0.14 U	ND<0.14 U
			11/17/2010	ND<0.14 U	ND<0.14 U
			7/6/2011	ND<0.14 U	ND<0.14 U
			11/22/2011	ND<0.14 U	ND<0.14 U
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2013	ND<0.14 U	ND<0.14 U
LMW-9	24	23 (95.8333%)	1/16/1998	ND<1	ND<1
			3/16/1999	3	3
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.14 U	ND<0.14 U
			11/16/2009	ND<0.14 U	ND<0.14 U
			6/30/2010	ND<0.14 U	ND<0.14 U

			11/17/2010	ND<0.14 U	ND<0.14 U
			7/6/2011	ND<0.14 U	ND<0.14 U
			11/22/2011	ND<0.14 U	ND<0.14 U
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2013	ND<0.14 U	ND<0.14 U
LMW-8	24	24 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.14 U	ND<0.14 U
			11/16/2009	ND<0.14 U	ND<0.14 U
			6/30/2010	ND<0.14 U	ND<0.14 U
			11/17/2010	ND<0.14 U	ND<0.14 U
			7/6/2011	ND<0.14 U	ND<0.14 U
			11/22/2011	ND<0.14 U	ND<0.14 U
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2013	ND<0.14 U	ND<0.14 U
LMW-6	24	23 (95.8333%)	1/16/1998	6	6
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.14 U	ND<0.14 U
			11/16/2009	ND<0.14 U	ND<0.14 U
			6/30/2010	ND<0.14 U	ND<0.14 U
			11/17/2010	ND<0.14 U	ND<0.14 U
			7/6/2011	ND<0.14 U	ND<0.14 U
			11/22/2011	ND<0.14 U	ND<0.14 U
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2013	ND<0.14 U	ND<0.14 U
LMW-3S	14	14 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1

			6/11/2009	ND<0.14 U	ND<0.14 U
			11/16/2009	ND<0.14 U	ND<0.14 U
			6/30/2010	ND<0.14 U	ND<0.14 U
			11/17/2010	ND<0.14 U	ND<0.14 U
			7/6/2011	ND<0.14 U	ND<0.14 U
			11/22/2011	ND<0.14 U	ND<0.14 U
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2013	ND<0.14 U	ND<0.14 U
LMW-3	26	17 (65.3846%)	11/19/1996	ND<1	ND<1
			3/24/1997	ND<1	ND<1
			1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<0 J	ND<0 J
			11/20/2008	ND<0 J	ND<0 J
			6/11/2009	0.33 J	0.33 J
			11/16/2009	0.5 J	0.5 J
			6/30/2010	0.31 J	0.31 J
			11/17/2010	0.42 J	0.42 J
			7/6/2011	0.4 J	0.4 J
			11/22/2011	0.44 J	0.44 J
			5/16/2012	0.41 J	0.41 J
			11/16/2012	0.52 J	0.52 J
			11/16/2013	0.3 J	0.3 J
LMW-10	21	17 (80.9524%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.14 U	ND<0.14 U
			11/16/2009	ND<0.14 U	ND<0.14 U
			6/30/2010	ND<0.14 U	ND<0.14 U
			11/17/2010	0.2 J	0.2 J
			7/6/2011	0.14 J	0.14 J
			11/22/2011	0.23 J	0.23 J
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	0.25 J	0.25 J
			11/16/2013	ND<0.14 U	ND<0.14 U
LMW-9S	13	13 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1

			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.14 U	ND<0.14 U
			6/30/2010	ND<0.14 U	ND<0.14 U
			11/17/2010	ND<0.14 U	ND<0.14 U
			7/6/2011	ND<0.14 U	ND<0.14 U
			11/22/2011	ND<0.14 U	ND<0.14 U
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2013	ND<0.14 U	ND<0.14 U
LMW-7	21	21 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.14 U	ND<0.14 U
			11/17/2010	ND<0.14 U	ND<0.14 U
			7/6/2011	ND<0.14 U	ND<0.14 U
			11/22/2011	ND<0.14 U	ND<0.14 U
			5/16/2012	ND<0.14 U	ND<0.14 U
			11/16/2012	ND<0.14 U	ND<0.14 U
MW-5	13	12 (92.3077%)	1/16/1998	8	8
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
LMW-13	11	11 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
LMW-11	11	11 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1

			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
LMW-12	11	11 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Chloroform

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.747777.55021	0	
2	0	-2.5121313.861	0	
3	0.07	-2.3263419.2729	-0.162844	
4	0.07	-2.2262124.2289	-0.318678	
5	0.07	-2.1444128.8274	-0.468787	
6	0.07	-2.0537533.0453	-0.612549	
7	0.07	-1.9953937.0269	-0.752227	
8	0.07	-1.9431440.8026	-0.888246	
9	0.07	-1.8807944.34	-1.0199	
10	0.07	-1.8384347.7198	-1.14859	
11	0.07	-1.7866150.9118	-1.27365	
12	0.07	-1.7506953.9767	-1.3962	
13	0.07	-1.7168856.9244	-1.51638	
14	0.07	-1.6746659.7289	-1.63361	
15	0.07	-1.6448562.4344	-1.74875	
16	0.07	-1.6164465.0473	-1.8619	
17	0.07	-1.5804767.5452	-1.97253	
18	0.07	-1.5547769.9625	-2.08137	
19	0.07	-1.5300772.3036	-2.18847	
20	0.07	-1.4985274.5491	-2.29337	
21	0.07	-1.4757976.7271	-2.39667	
22	0.07	-1.4466378.8198	-2.49794	
23	0.07	-1.4255480.852	-2.59773	
24	0.07	-1.4050782.8262	-2.69608	
25	0.07	-1.3786684.7269	-2.79259	
26	0.07	-1.3594686.5751	-2.88775	
27	0.07	-1.3407588.3727	-2.9816	
28	0.07	-1.3165290.1059	-3.07376	
29	0.07	-1.2988491.7929	-3.16468	
30	0.07	-1.2758893.4208	-3.25399	
31	0.07	-1.2590895.006	-3.34212	
32	0.07	-1.2426496.5502	-3.42911	
33	0.07	-1.2212398.0416	-3.5146	
34	0.07	-1.2055399.4949	-3.59898	
35	0.07	-1.19012100.911	-3.68229	
36	0.07	-1.17 102.28	-3.76419	
37	0.07	-1.15522103.615	-3.84506	
38	0.07	-1.14069104.916	-3.9249	
39	0.07	-1.12168106.174	-4.00342	
40	0.07	-1.10768107.401	-4.08096	
41	0.07	-1.08935108.588	-4.15721	
42	0.07	-1.07584109.745	-4.23252	
43	0.07	-1.06252110.874	-4.3069	
44	0.07	-1.04505111.966	-4.38005	
45	0.07	-1.03215113.032	-4.4523	
46	0.07	-1.01943114.071	-4.52366	
47	0.07	-1.00271115.076	-4.59385	
48	0.07	-0.990356	116.057	-4.66318
49	0.07	-0.97815117.014	-4.73165	
50	0.07	-0.9621 117.939	-4.799	
51	0.07	-0.950222	118.842	-4.86551

52	0.07	-0.93459	119.716	-4.93093
53	0.07	-0.923014	120.568	-4.99554
54	0.07	-0.911562	121.399	-5.05935
55	0.07	-0.896473	122.202	-5.12211
56	0.07	-0.885291	122.986	-5.18408
57	0.07	-0.874218	123.75	-5.24527
58	0.07	-0.859618	124.489	-5.30544
59	0.07	-0.848786	125.21	-5.36486
60	0.07	-0.834498	125.906	-5.42327
61	0.07	-0.823893	126.585	-5.48095
62	0.07	-0.813379	127.247	-5.53788
63	0.07	-0.7995	127.886	-5.59385
64	0.07	-0.789191	128.509	-5.64909
65	0.07	-0.778966	129.115	-5.70362
66	0.07	-0.765456	129.701	-5.7572
67	0.07	-0.755415	130.272	-5.81008
68	0.07	-0.745449	130.828	-5.86226
69	0.07	-0.732275	131.364	-5.91352
70	0.07	-0.722479	131.886	-5.96409
71	0.07	-0.709522	132.389	-6.01376
72	0.07	-0.699883	132.879	-6.06275
73	0.07	-0.690309	133.356	-6.11107
74	0.07	-0.677639	133.815	-6.15851
75	0.07	-0.668209	134.261	-6.20528
76	0.07	-0.658838	134.695	-6.2514
77	0.07	-0.646431	135.113	-6.29665
78	0.07	-0.637192	135.519	-6.34126
79	0.07	-0.628006	135.914	-6.38522
80	0.07	-0.615839	136.293	-6.42833
81	0.07	-0.606775	136.661	-6.4708
82	0.07	-0.594766	137.015	-6.51243
83	0.07	-0.585815	137.358	-6.55344
84	0.07	-0.576911	137.691	-6.59382
85	0.07	-0.565108	138.01	-6.63338
86	0.07	-0.556308	138.32	-6.67232
87	0.07	-0.547551	138.619	-6.71065
88	0.07	-0.53594	138.907	-6.74817
89	0.07	-0.52728	139.185	-6.78508
90	0.07	-0.515791	139.451	-6.82118
91	0.07	-0.507221	139.708	-6.85669
92	0.07	-0.498687	139.957	-6.8916
93	0.07	-0.487364	140.194	-6.92571
94	0.07	-0.478914	140.424	-6.95924
95	0.07	-0.470498	140.645	-6.99217
96	0.07	-0.459327	140.856	-7.02432
97	0.07	-0.450985	141.059	-7.05589
98	0.07	-0.442676	141.255	-7.08688
99	0.07	-0.431644	141.442	-7.11709
100	0.07	-0.423405	141.621	-7.14673
101	0.07	-0.412463	141.791	-7.17561
102	0.07	-0.40429	141.954	-7.20391
103	0.07	-0.396142	142.111	-7.23164
104	0.14	-0.385321	142.26	-7.28558
105	0.2	-0.377233	142.402	-7.36103
106	0.23	-0.369171	142.538	-7.44594
107	0.25	-0.358459	142.667	-7.53555
108	0.3	-0.350451	142.79	-7.64069
109	0.31	-0.33981	142.905	-7.74603
110	0.33	-0.331854	143.015	-7.85554
111	0.4	-0.323919	143.12	-7.98511
112	0.41	-0.31337	143.218	-8.11359
113	0.42	-0.305481	143.312	-8.24189

114	0.44	-0.297612	143.4	-8.37284
115	0.5	-0.287147	143.483	-8.51641
116	0.5	-0.279319	143.561	-8.65607
117	0.5	-0.271509	143.635	-8.79183
118	0.5	-0.26112143.703	-8.92239	
119	0.5	-0.253347	143.767	-9.04906
120	0.5	-0.243007	143.826	-9.17056
121	0.5	-0.235269	143.881	-9.2882
122	0.5	-0.227545	143.933	-9.40197
123	0.5	-0.217267	143.98	-9.51061
124	0.5	-0.209575	144.024	-9.61539
125	0.5	-0.201894	144.065	-9.71634
126	0.5	-0.191671	144.102	-9.81218
127	0.5	-0.184017	144.136	-9.90418
128	0.5	-0.176374	144.167	-9.99237
129	0.5	-0.166199	144.194	-10.0755
130	0.5	-0.158579	144.219	-10.1548
131	0.5	-0.148434	144.241	-10.229
132	0.5	-0.140835	144.261	-10.2994
133	0.5	-0.133244	144.279	-10.366
134	0.5	-0.123135	144.294	-10.4276
135	0.5	-0.115562	144.308	-10.4854
136	0.5	-0.107995	144.319	-10.5394
137	0.5	-0.0979139	144.329	-10.5883
138	0.5	-0.0903606	144.337	-10.6335
139	0.5	-0.0802981	144.343	-10.6736
140	0.5	-0.0727562	144.349	-10.71
141	0.5	-0.0652187	144.353	-10.7426
142	0.5	-0.0551734	144.356	-10.7702
143	0.5	-0.0476439	144.358	-10.794
144	0.5	-0.0401167	144.36	-10.8141
145	0.5	-0.0300838	144.361	-10.8291
146	0.5	-0.0225612	144.361	-10.8404
147	0.5	-0.0150408	144.362	-10.8479
148	0.5	-0.00501359	144.362	-10.8505
149	0.5	0.00501359	144.362	-10.8479
150	0.5	0.0150408	144.362	-10.8404
151	0.5	0.0225612	144.362	-10.8291
152	0.5	0.0300838	144.363	-10.8141
153	0.5	0.0401167	144.365	-10.794
154	0.5	0.0476439	144.367	-10.7702
155	0.5	0.0551734	144.37	-10.7426
156	0.5	0.0652187	144.374	-10.71
157	0.5	0.0727562	144.38	-10.6736
158	0.5	0.0802981	144.386	-10.6335
159	0.5	0.0903606	144.394	-10.5883
160	0.5	0.0979139	144.404	-10.5394
161	0.5	0.107995	144.416	-10.4854
162	0.5	0.115562	144.429	-10.4276
163	0.5	0.123135	144.444	-10.366
164	0.5	0.133244	144.462	-10.2994
165	0.5	0.140835	144.482	-10.229
166	0.5	0.148434	144.504	-10.1548
167	0.5	0.158579	144.529	-10.0755
168	0.5	0.166199	144.557	-9.99237
169	0.5	0.176374	144.588	-9.90418
170	0.5	0.184017	144.621	-9.81218
171	0.5	0.191671	144.658	-9.71634
172	0.5	0.201894	144.699	-9.61539
173	0.5	0.209575	144.743	-9.51061
174	0.5	0.217267	144.79	-9.40197
175	0.5	0.227545	144.842	-9.2882

176	0.5	0.235269	144.897	-9.17056
177	0.5	0.243007	144.956	-9.04906
178	0.5	0.253347	145.02	-8.92239
179	0.5	0.26112	145.089	-8.79183
180	0.5	0.271509	145.162	-8.65607
181	0.5	0.279319	145.24	-8.51641
182	0.5	0.287147	145.323	-8.37284
183	0.5	0.297612	145.411	-8.22403
184	0.5	0.305481	145.505	-8.07129
185	0.5	0.31337	145.603	-7.91461
186	0.5	0.323919	145.708	-7.75265
187	0.5	0.331854	145.818	-7.58672
188	0.5	0.33981	145.933	-7.41682
189	0.5	0.350451	146.056	-7.24159
190	0.5	0.358459	146.185	-7.06236
191	0.5	0.369171	146.321	-6.87778
192	0.5	0.377233	146.463	-6.68916
193	0.5	0.385321	146.612	-6.4965
194	0.5	0.396142	146.769	-6.29843
195	0.5	0.40429	146.932	-6.09628
196	0.5	0.412463	147.102	-5.89005
197	0.5	0.423405	147.282	-5.67835
198	0.5	0.431644	147.468	-5.46253
199	0.5	0.442676	147.664	-5.24119
200	0.5	0.450985	147.867	-5.0157
201	0.5	0.459327	148.078	-4.78603
202	0.5	0.470498	148.3	-4.55078
203	0.5	0.478914	148.529	-4.31133
204	0.5	0.487364	148.767	-4.06765
205	0.5	0.498687	149.015	-3.8183
206	0.5	0.507221	149.272	-3.56469
207	0.5	0.515791	149.539	-3.3068
208	0.5	0.52728	149.817	-3.04316
209	0.5	0.53594	150.104	-2.77519
210	0.5	0.547551	150.404	-2.50141
211	0.5	0.556308	150.713	-2.22326
212	0.5	0.565108	151.032	-1.9407
213	0.5	0.576911	151.365	-1.65225
214	0.5	0.585815	151.708	-1.35934
215	0.5	0.594766	152.062	-1.06196
216	0.5	0.606775	152.43	-0.758569
217	0.5	0.615839	152.81	-0.45065
218	0.5	0.628006	153.204	-0.136647
219	0.5	0.637192	153.61	0.181949
220	0.5	0.646431	154.028	0.505165
221	0.5	0.658838	154.462	0.834584
222	0.5	0.668209	154.908	1.16869
223	0.5	0.677639	155.368	1.50751
224	0.5	0.690309	155.844	1.85266
225	0.5	0.699883	156.334	2.2026
226	0.5	0.709522	156.837	2.55737
227	0.5	0.722479	157.359	2.9186
228	0.5	0.732275	157.896	3.28474
229	0.5	0.745449	158.451	3.65747
230	0.5	0.755415	159.022	4.03517
231	0.5	0.765456	159.608	4.4179
232	0.5	0.778966	160.215	4.80739
233	0.5	0.789191	160.837	5.20198
234	0.5	0.7995	161.477	5.60173
235	0.5	0.813379	162.138	6.00842
236	0.5	0.823893	162.817	6.42037
237	0.5	0.834498	163.513	6.83762

238	0.5	0.848786		164.234	7.26201
239	0.5	0.859618		164.973	7.69182
240	0.5	0.874218		165.737	8.12893
241	0.5	0.885291		166.521	8.57157
242	0.5	0.896473		167.325	9.01981
243	0.5	0.911562		168.155	9.47559
244	0.5	0.923014		169.007	9.9371
245	0.5	0.93459	169.881	10.4044	
246	0.5	0.950222		170.784	10.8795
247	0.5	0.9621	171.709	11.3606	
248	0.5	0.97815	172.666	11.8496	
249	0.5	0.990356		173.647	12.3448
250	0.5	1.00271	174.652	12.8462	
251	0.5	1.01943	175.692	13.3559	
252	0.5	1.03215	176.757	13.872	
253	0.5	1.04505	177.849	14.3945	
254	0.5	1.06252	178.978	14.9257	
255	0.5	1.07584	180.136	15.4637	
256	0.5	1.08935	181.322	16.0083	
257	0.5	1.10768	182.549	16.5622	
258	0.5	1.12168	183.807	17.123	
259	0.5	1.14069	185.108	17.6934	
260	0.5	1.15522	186.443	18.271	
261	0.5	1.17	187.812	18.856	
262	0.5	1.19012	189.228	19.451	
263	0.5	1.20553	190.682	20.0538	
264	0.5	1.22123	192.173	20.6644	
265	0.5	1.24264	193.717	21.2857	
266	0.5	1.25908	195.302	21.9153	
267	0.5	1.27588	196.93	22.5532	
268	0.5	1.29884	198.617	23.2026	
269	0.5	1.31652	200.351	23.8609	
270	0.5	1.34075	202.148	24.5313	
271	0.5	1.35946	203.996	25.211	
272	0.5	1.37866	205.897	25.9003	
273	0.5	1.40507	207.871	26.6029	
274	0.5	1.42554	209.903	27.3156	
275	0.5	1.44663	211.996	28.0389	
276	0.5	1.47579	214.174	28.7768	
277	0.5	1.49852	216.42	29.5261	
278	0.5	1.53007	218.761	30.2911	
279	0.5	1.55477	221.178	31.0685	
280	0.5	1.58047	223.676	31.8587	
281	0.5	1.61644	226.289	32.667	
282	0.5	1.64485	228.994	33.4894	
283	0.5	1.67466	231.799	34.3267	
284	0.5	1.71688	234.747	35.1852	
285	0.5	1.75069	237.811	36.0605	
286	0.5	1.78661	241.003	36.9538	
287	0.5	1.83843	244.383	37.873	
288	0.5	1.88079	247.921	38.8134	
289	0.5	1.94314	251.696	39.785	
290	0.5	1.99539	255.678	40.7827	
291	0.5	2.05375	259.896	41.8096	
292	0.52	2.14441	264.494	42.9247	
293	3	2.22621	269.45	49.6033	
294	6	2.32634	274.862	63.5613	
295	8	2.51213	281.173	83.6584	
296	78	2.74777	288.723	297.984	

Data Set Standard Deviation = 4.55153

Numerator = 88794.5
Denominator = 1.76449e+006
W Statistic = 0.0503231 = 88794.5 / 1.76449e+006

5% Critical value of 0.976 exceeds 0.0503231
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0503231
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Chloroform

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.230696
0.230696 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0		0.003367	-2.7477739	348.683	
2	0		0.00673401	-2.5121339	337.176	
3	0.07		0.010101	-2.3263439.4681	328.103	
4	0.07		0.013468	-2.2262139.4681	323.213	
5	0.07		0.016835	-2.1444139.4681	319.219	
6	0.07		0.020202	-2.0537539.4681	314.791	
7	0.07		0.023569	-1.9953939.4681	311.942	
8	0.07		0.026936	-1.9431439.4681	309.39	
9	0.07		0.030303	-1.8807939.4681	306.345	
10	0.07		0.03367	-1.8384339.4681	304.276	
11	0.07		0.037037	-1.7866139.4681	301.746	
12	0.07		0.040404	-1.7506939.4681	299.992	
13	0.07		0.043771	-1.7168839.4681	298.341	
14	0.07		0.047138	-1.6746639.4681	296.279	
15	0.07		0.0505051	-1.6448539.4681	294.824	
16	0.07		0.0538721	-1.6164439.4681	293.436	
17	0.07		0.0572391	-1.5804739.4681	291.679	
18	0.07		0.0606061	-1.5547739.4681	290.425	
19	0.07		0.0639731	-1.5300739.4681	289.218	
20	0.07		0.0673401	-1.4985239.4681	287.677	
21	0.07		0.0707071	-1.4757939.4681	286.568	
22	0.07		0.0740741	-1.4466339.4681	285.144	
23	0.07		0.0774411	-1.4255439.4681	284.114	
24	0.07		0.0808081	-1.4050739.4681	283.114	
25	0.07		0.0841751	-1.3786639.4681	281.824	
26	0.07		0.0875421	-1.3594639.4681	280.887	
27	0.07		0.0909091	-1.3407539.4681	279.974	
28	0.07		0.0942761	-1.3165239.4681	278.79	
29	0.07		0.0976431	-1.2988439.4681	277.926	
30	0.07		0.10101	-1.2758839.4681	276.805	
31	0.07		0.104377	-1.2590839.4681	275.985	
32	0.07		0.107744	-1.2426439.4681	275.182	
33	0.07		0.111111	-1.2212339.4681	274.137	
34	0.07		0.114478	-1.2055339.4681	273.37	
35	0.07		0.117845	-1.1901239.4681	272.617	
36	0.07		0.121212	-1.17 39.4681	271.635	
37	0.07		0.124579	-1.1552239.4681	270.913	
38	0.07		0.127946	-1.1406939.4681	270.204	
39	0.07		0.131313	-1.1216839.4681	269.275	
40	0.07		0.13468	-1.1076839.4681	268.592	
41	0.07		0.138047	-1.0893539.4681	267.697	
42	0.07		0.141414	-1.0758439.4681	267.037	
43	0.07		0.144781	-1.0625239.4681	266.386	
44	0.07		0.148148	-1.0450539.4681	265.533	
45	0.07		0.151515	-1.0321539.4681	264.904	
46	0.07		0.154882	-1.0194339.4681	264.282	
47	0.07		0.158249	-1.0027139.4681	263.466	
48	0.07		0.161616	-0.990356	39.4681	262.862

49	0.07	0.164983	-0.978153	9.4681	262.266
50	0.07	0.16835	-0.9621	39.4681	261.483
51	0.07	0.171717	-0.950222	39.4681	260.903
52	0.07	0.175084	-0.934593	9.4681	260.139
53	0.07	0.178451	-0.923014	39.4681	259.574
54	0.07	0.181818	-0.911562	39.4681	259.015
55	0.07	0.185185	-0.896473	39.4681	258.278
56	0.07	0.188552	-0.885291	39.4681	257.732
57	0.07	0.191919	-0.874218	39.4681	257.191
58	0.07	0.195286	-0.859618	39.4681	256.478
59	0.07	0.198653	-0.848786	39.4681	255.949
60	0.07	0.20202	-0.834498	39.4681	255.251
61	0.07	0.205387	-0.823893	39.4681	254.733
62	0.07	0.208754	-0.813379	39.4681	254.22
63	0.07	0.212121	-0.7995	39.4681	253.542
64	0.07	0.215488	-0.789191	39.4681	253.039
65	0.07	0.218855	-0.778966	39.4681	252.54
66	0.07	0.222222	-0.765456	39.4681	251.88
67	0.07	0.225589	-0.755415	39.4681	251.389
68	0.07	0.228956	-0.745449	39.4681	250.903
69	0.07	0.232323	-0.732275	39.4681	250.259
70	0.07	0.23569	-0.722479	39.4681	249.781
71	0.07	0.239057	-0.709522	39.4681	249.148
72	0.07	0.242424	-0.699883	39.4681	248.678
73	0.07	0.245791	-0.690309	39.4681	248.21
74	0.07	0.249158	-0.677639	39.4681	247.591
75	0.07	0.252525	-0.668209	39.4681	247.131
76	0.07	0.255892	-0.658838	39.4681	246.673
77	0.07	0.259259	-0.646431	39.4681	246.067
78	0.07	0.262626	-0.637192	39.4681	245.616
79	0.07	0.265993	-0.628006	39.4681	245.168
80	0.07	0.26936	-0.615839	39.4681	244.573
81	0.07	0.272727	-0.606775	39.4681	244.131
82	0.07	0.276094	-0.594766	39.4681	243.544
83	0.07	0.279461	-0.585815	39.4681	243.107
84	0.07	0.282828	-0.576911	39.4681	242.672
85	0.07	0.286195	-0.565108	39.4681	242.096
86	0.07	0.289562	-0.556308	39.4681	241.666
87	0.07	0.292929	-0.547551	39.4681	241.239
88	0.07	0.296296	-0.535943	9.4681	240.672
89	0.07	0.299663	-0.527283	9.4681	240.249
90	0.07	0.30303	-0.515791	39.4681	239.688
91	0.07	0.306397	-0.507221	39.4681	239.269
92	0.07	0.309764	-0.498687	39.4681	238.853
93	0.07	0.313131	-0.487364	39.4681	238.3
94	0.07	0.316498	-0.478914	39.4681	237.887
95	0.07	0.319865	-0.470498	39.4681	237.476
96	0.07	0.323232	-0.459327	39.4681	236.93
97	0.07	0.326599	-0.450985	39.4681	236.523
98	0.07	0.329966	-0.442676	39.4681	236.117
99	0.07	0.333333	-0.431644	39.4681	235.579
100	0.07	0.3367	-0.423405	39.4681	235.176
101	0.07	0.340067	-0.412463	39.4681	234.642
102	0.07	0.343434	-0.404293	9.4681	234.243
103	0.07	0.346801	-0.396142	39.4681	233.845
104	0.14	0.350168	-0.385321	39.9363	233.317
105	0.2	0.353535	-0.377233	40.3375	232.922
106	0.23	0.356902	-0.369171	40.5381	232.528
107	0.25	0.360269	-0.358459	40.6719	232.005
108	0.3	0.363636	-0.350451	41.0063	231.614
109	0.31	0.367003	-0.339814	1.0731	231.094
110	0.33	0.37037	-0.331854	41.2069	230.706

111	0.4	0.373737	-0.323919	41.675	230.318
112	0.41	0.377104	-0.3133741.7419	229.803	
113	0.42	0.380471	-0.305481	41.8088	229.418
114	0.44	0.383838	-0.297612	41.9425	229.033
115	0.5	0.387205	-0.287147	42.3438	228.522
116	0.5	0.390572	-0.279319	42.3438	228.14
117	0.5	0.393939	-0.271509	42.3438	227.759
118	0.5	0.397306	-0.2611242.3438	227.251	
119	0.5	0.400673	-0.253347	42.3438	226.872
120	0.5	0.40404 -0.243007	42.3438	226.367	
121	0.5	0.407407	-0.235269	42.3438	225.989
122	0.5	0.410774	-0.227545	42.3438	225.612
123	0.5	0.414141	-0.217267	42.3438	225.11
124	0.5	0.417508	-0.209575	42.3438	224.734
125	0.5	0.420875	-0.201894	42.3438	224.359
126	0.5	0.424242	-0.191671	42.3438	223.86
127	0.5	0.427609	-0.184017	42.3438	223.486
128	0.5	0.430976	-0.176374	42.3438	223.113
129	0.5	0.434343	-0.166199	42.3438	222.616
130	0.5	0.43771 -0.158579	42.3438	222.244	
131	0.5	0.441077	-0.148434	42.3438	221.749
132	0.5	0.444444	-0.140835	42.3438	221.377
133	0.5	0.447811	-0.133244	42.3438	221.007
134	0.5	0.451178	-0.123135	42.3438	220.513
135	0.5	0.454545	-0.115562	42.3438	220.143
136	0.5	0.457912	-0.107995	42.3438	219.774
137	0.5	0.461279	-0.0979139	42.3438	219.281
138	0.5	0.464646	-0.0903606	42.3438	218.913
139	0.5	0.468013	-0.0802981	42.3438	218.421
140	0.5	0.47138 -0.0727562	42.3438	218.053	
141	0.5	0.474747	-0.0652187	42.3438	217.685
142	0.5	0.478114	-0.0551734	42.3438	217.194
143	0.5	0.481481	-0.0476439	42.3438	216.827
144	0.5	0.484848	-0.0401167	42.3438	216.459
145	0.5	0.488215	-0.0300838	42.3438	215.969
146	0.5	0.491582	-0.0225612	42.3438	215.602
147	0.5	0.494949	-0.0150408	42.3438	215.234
148	0.5	0.498316	-0.00501359	42.3438	214.745
149	0.5	0.501684	0.00501359	42.3438	214.255
150	0.5	0.505051	0.0150408	42.3438	213.766
151	0.5	0.508418	0.0225612	42.3438	213.398
152	0.5	0.511785	0.0300838	42.3438	213.031
153	0.5	0.515152	0.0401167	42.3438	212.541
154	0.5	0.518519	0.0476439	42.3438	212.173
155	0.5	0.521886	0.0551734	42.3438	211.806
156	0.5	0.525253	0.0652187	42.3438	211.315
157	0.5	0.52862 0.0727562	42.3438	210.947	
158	0.5	0.531987	0.0802981	42.3438	210.579
159	0.5	0.535354	0.0903606	42.3438	210.087
160	0.5	0.538721	0.0979139	42.3438	209.719
161	0.5	0.542088	0.107995	42.3438	209.226
162	0.5	0.545455	0.115562	42.3438	208.857
163	0.5	0.548822	0.123135	42.3438	208.487
164	0.5	0.552189	0.133244	42.3438	207.993
165	0.5	0.555556	0.140835	42.3438	207.623
166	0.5	0.558923	0.148434	42.3438	207.251
167	0.5	0.56229 0.158579	42.3438	206.756	
168	0.5	0.565657	0.166199	42.3438	206.384
169	0.5	0.569024	0.176374	42.3438	205.887
170	0.5	0.572391	0.184017	42.3438	205.514
171	0.5	0.575758	0.191671	42.3438	205.14
172	0.5	0.579125	0.201894	42.3438	204.641

173	0.5	0.582492	0.209575	42.3438	204.266
174	0.5	0.585859	0.217267	42.3438	203.89
175	0.5	0.589226	0.227545	42.3438	203.388
176	0.5	0.592593	0.235269	42.3438	203.011
177	0.5	0.59596	0.243007	42.3438	202.633
178	0.5	0.599327	0.253347	42.3438	202.128
179	0.5	0.602694	0.26112	42.3438	201.749
180	0.5	0.606061	0.271509	42.3438	201.241
181	0.5	0.609428	0.279319	42.3438	200.86
182	0.5	0.612795	0.287147	42.3438	200.478
183	0.5	0.616162	0.297612	42.3438	199.967
184	0.5	0.619529	0.305481	42.3438	199.582
185	0.5	0.622896	0.31337	42.3438	199.197
186	0.5	0.626263	0.323919	42.3438	198.682
187	0.5	0.62963	0.331854	42.3438	198.294
188	0.5	0.632997	0.33981	42.3438	197.906
189	0.5	0.636364	0.350451	42.3438	197.386
190	0.5	0.639731	0.358459	42.3438	196.995
191	0.5	0.643098	0.369171	42.3438	196.472
192	0.5	0.646465	0.377233	42.3438	196.078
193	0.5	0.649832	0.385321	42.3438	195.683
194	0.5	0.653199	0.396142	42.3438	195.155
195	0.5	0.656566	0.40429	42.3438	194.757
196	0.5	0.659933	0.412463	42.3438	194.358
197	0.5	0.6633	0.423405	42.3438	193.824
198	0.5	0.666667	0.431644	42.3438	193.421
199	0.5	0.670034	0.442676	42.3438	192.883
200	0.5	0.673401	0.450985	42.3438	192.477
201	0.5	0.676768	0.459327	42.3438	192.07
202	0.5	0.680135	0.470498	42.3438	191.524
203	0.5	0.683502	0.478914	42.3438	191.113
204	0.5	0.686869	0.487364	42.3438	190.7
205	0.5	0.690236	0.498687	42.3438	190.147
206	0.5	0.693603	0.507221	42.3438	189.731
207	0.5	0.69697	0.515791	42.3438	189.312
208	0.5	0.700337	0.52728	42.3438	188.751
209	0.5	0.703704	0.53594	42.3438	188.328
210	0.5	0.707071	0.547551	42.3438	187.761
211	0.5	0.710438	0.556308	42.3438	187.334
212	0.5	0.713805	0.565108	42.3438	186.904
213	0.5	0.717172	0.576911	42.3438	186.328
214	0.5	0.720539	0.585815	42.3438	185.893
215	0.5	0.723906	0.594766	42.3438	185.456
216	0.5	0.727273	0.606775	42.3438	184.869
217	0.5	0.73064	0.615839	42.3438	184.427
218	0.5	0.734007	0.628006	42.3438	183.832
219	0.5	0.737374	0.637192	42.3438	183.384
220	0.5	0.740741	0.646431	42.3438	182.933
221	0.5	0.744108	0.658838	42.3438	182.327
222	0.5	0.747475	0.668209	42.3438	181.869
223	0.5	0.750842	0.677639	42.3438	181.409
224	0.5	0.754209	0.690309	42.3438	180.79
225	0.5	0.757576	0.699883	42.3438	180.322
226	0.5	0.760943	0.709522	42.3438	179.852
227	0.5	0.76431	0.722479	42.3438	179.219
228	0.5	0.767677	0.732275	42.3438	178.741
229	0.5	0.771044	0.745449	42.3438	178.097
230	0.5	0.774411	0.755415	42.3438	177.611
231	0.5	0.777778	0.765456	42.3438	177.12
232	0.5	0.781145	0.778966	42.3438	176.46
233	0.5	0.784512	0.789191	42.3438	175.961
234	0.5	0.787879	0.7995	42.3438	175.458

235	0.5	0.791246	0.813379	42.3438	174.78
236	0.5	0.794613	0.823893	42.3438	174.267
237	0.5	0.79798	0.834498	42.3438	173.749
238	0.5	0.801347	0.848786	42.3438	173.051
239	0.5	0.804714	0.859618	42.3438	172.522
240	0.5	0.808081	0.874218	42.3438	171.809
241	0.5	0.811448	0.885291	42.3438	171.268
242	0.5	0.814815	0.896473	42.3438	170.722
243	0.5	0.818182	0.911562	42.3438	169.985
244	0.5	0.821549	0.923014	42.3438	169.426
245	0.5	0.824916	0.93459	42.3438	168.861
246	0.5	0.828283	0.950222	42.3438	168.097
247	0.5	0.83165	0.9621	42.3438	167.517
248	0.5	0.835017	0.97815	42.3438	166.734
249	0.5	0.838384	0.990356	42.3438	166.138
250	0.5	0.841751	1.00271	42.3438	165.534
251	0.5	0.845118	1.01943	42.3438	164.718
252	0.5	0.848485	1.03215	42.3438	164.096
253	0.5	0.851852	1.04505	42.3438	163.467
254	0.5	0.855219	1.06252	42.3438	162.614
255	0.5	0.858586	1.07584	42.3438	161.963
256	0.5	0.861953	1.08935	42.3438	161.303
257	0.5	0.86532	1.10768	42.3438	160.408
258	0.5	0.868687	1.12168	42.3438	159.725
259	0.5	0.872054	1.14069	42.3438	158.796
260	0.5	0.875421	1.15522	42.3438	158.087
261	0.5	0.878788	1.17	42.3438	157.365
262	0.5	0.882155	1.19012	42.3438	156.383
263	0.5	0.885522	1.20553	42.3438	155.63
264	0.5	0.888889	1.22123	42.3438	154.863
265	0.5	0.892256	1.24264	42.3438	153.818
266	0.5	0.895623	1.25908	42.3438	153.015
267	0.5	0.89899	1.27588	42.3438	152.195
268	0.5	0.902357	1.29884	42.3438	151.074
269	0.5	0.905724	1.31652	42.3438	150.21
270	0.5	0.909091	1.34075	42.3438	149.026
271	0.5	0.912458	1.35946	42.3438	148.113
272	0.5	0.915825	1.37866	42.3438	147.176
273	0.5	0.919192	1.40507	42.3438	145.886
274	0.5	0.922559	1.42554	42.3438	144.886
275	0.5	0.925926	1.44663	42.3438	143.856
276	0.5	0.929293	1.47579	42.3438	142.432
277	0.5	0.93266	1.49852	42.3438	141.323
278	0.5	0.936027	1.53007	42.3438	139.782
279	0.5	0.939394	1.55477	42.3438	138.575
280	0.5	0.942761	1.58047	42.3438	137.321
281	0.5	0.946128	1.61644	42.3438	135.564
282	0.5	0.949495	1.64485	42.3438	134.176
283	0.5	0.952862	1.67466	42.3438	132.721
284	0.5	0.956229	1.71688	42.3438	130.659
285	0.5	0.959596	1.75069	42.3438	129.008
286	0.5	0.962963	1.78661	42.3438	127.254
287	0.5	0.96633	1.83843	42.3438	124.724
288	0.5	0.969697	1.88079	42.3438	122.655
289	0.5	0.973064	1.94314	42.3438	119.61
290	0.5	0.976431	1.99539	42.3438	117.058
291	0.5	0.979798	2.05375	42.3438	114.209
292	0.52	0.983165	2.14441	42.4775	109.781
293	3	0.986532	2.22621	59.0625	105.787
294	6	0.989899	2.32634	79.125	100.897
295	8	0.993266	2.51213	92.5	91.8241
296	78	0.996633	2.74777	560.625	80.3175

Shapiro-Francia Test of Normality

Parameter: Chloroform

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.65926	-2.74777	7.55021	7.30702
2	-2.65926	-2.51213	13.861	13.9874
3	-2.65926	-2.32634	19.2729	20.1738
4	-2.65926	-2.22621	24.2289	26.0938
5	-2.65926	-2.14441	28.8274	31.7964
6	-2.65926	-2.05375	33.0453	37.2578
7	-2.65926	-1.99539	37.0269	42.5641
8	-2.65926	-1.94314	40.8026	47.7314
9	-2.65926	-1.88079	44.34	52.7329
10	-2.65926	-1.83843	47.7198	57.6218
11	-2.65926	-1.78661	50.9118	62.3728
12	-2.65926	-1.75069	53.9767	67.0284
13	-2.65926	-1.71688	56.9244	71.594
14	-2.65926	-1.67466	59.7289	76.0474
15	-2.65926	-1.64485	62.4344	80.4215
16	-2.65926	-1.61644	65.0473	84.72
17	-2.65926	-1.58047	67.5452	88.9229
18	-2.65926	-1.55477	69.9625	93.0574
19	-2.65926	-1.53007	72.3036	97.1262
20	-2.65926	-1.49852	74.5491	101.111
21	-2.65926	-1.47579	76.7271	105.036
22	-2.65926	-1.44663	78.8198	108.883
23	-2.65926	-1.42554	80.852	112.674
24	-2.65926	-1.40507	82.8262	116.41
25	-2.65926	-1.37866	84.7269	120.076
26	-2.65926	-1.35946	86.5751	123.691
27	-2.65926	-1.34075	88.3727	127.257
28	-2.65926	-1.31652	90.1059	130.758
29	-2.65926	-1.29884	91.7929	134.212
30	-2.65926	-1.27588	93.4208	137.605
31	-2.65926	-1.25908	95.006	140.953
32	-2.65926	-1.24264	96.5502	144.257
33	-2.65926	-1.22123	98.0416	147.505
34	-2.65926	-1.20553	99.4949	150.711
35	-2.65926	-1.19012	100.911	153.876
36	-2.65926	-1.17	102.28	156.987
37	-2.65926	-1.15522	103.615	160.059
38	-2.65926	-1.14069	104.916	163.092
39	-2.65926	-1.12168	106.174	166.075
40	-2.65926	-1.10768	107.401	169.021
41	-2.65926	-1.08935	108.588	171.918
42	-2.65926	-1.07584	109.745	174.779
43	-2.65926	-1.06252	110.874	177.604
44	-2.65926	-1.04505	111.966	180.383
45	-2.65926	-1.03215	113.032	183.128
46	-2.65926	-1.01943	114.071	185.839
47	-2.65926	-1.00271	115.076	188.505
48	-2.65926	-0.990356	116.057	191.139
49	-2.65926	-0.97815	117.014	193.74
50	-2.65926	-0.9621	117.939	196.299
51	-2.65926	-0.950222	118.842	198.825

52	-2.65926	-0.93459	119.716	201.311
53	-2.65926	-0.923014	120.568	203.765
54	-2.65926	-0.911562	121.399	206.189
55	-2.65926	-0.896473	122.202	208.573
56	-2.65926	-0.885291	122.986	210.928
57	-2.65926	-0.874218	123.75	213.252
58	-2.65926	-0.859618	124.489	215.538
59	-2.65926	-0.848786	125.21	217.795
60	-2.65926	-0.834498	125.906	220.015
61	-2.65926	-0.823893	126.585	222.205
62	-2.65926	-0.813379	127.247	224.368
63	-2.65926	-0.7995	127.886	226.495
64	-2.65926	-0.789191	128.509	228.593
65	-2.65926	-0.778966	129.115	230.665
66	-2.65926	-0.765456	129.701	232.7
67	-2.65926	-0.755415	130.272	234.709
68	-2.65926	-0.745449	130.828	236.691
69	-2.65926	-0.732275	131.364	238.639
70	-2.65926	-0.722479	131.886	240.56
71	-2.65926	-0.709522	132.389	242.447
72	-2.65926	-0.699883	132.879	244.308
73	-2.65926	-0.690309	133.356	246.144
74	-2.65926	-0.677639	133.815	247.946
75	-2.65926	-0.668209	134.261	249.723
76	-2.65926	-0.658838	134.695	251.475
77	-2.65926	-0.646431	135.113	253.194
78	-2.65926	-0.637192	135.519	254.888
79	-2.65926	-0.628006	135.914	256.558
80	-2.65926	-0.615839	136.293	258.196
81	-2.65926	-0.606775	136.661	259.809
82	-2.65926	-0.594766	137.015	261.391
83	-2.65926	-0.585815	137.358	262.949
84	-2.65926	-0.576911	137.691	264.483
85	-2.65926	-0.565108	138.01	265.986
86	-2.65926	-0.556308	138.32	267.465
87	-2.65926	-0.547551	138.619	268.921
88	-2.65926	-0.53594	138.907	270.346
89	-2.65926	-0.52728	139.185	271.749
90	-2.65926	-0.515791	139.451	273.12
91	-2.65926	-0.507221	139.708	274.469
92	-2.65926	-0.498687	139.957	275.795
93	-2.65926	-0.487364	140.194	277.091
94	-2.65926	-0.478914	140.424	278.365
95	-2.65926	-0.470498	140.645	279.616
96	-2.65926	-0.459327	140.856	280.837
97	-2.65926	-0.450985	141.059	282.037
98	-2.65926	-0.442676	141.255	283.214
99	-2.65926	-0.431644	141.442	284.362
100	-2.65926	-0.423405	141.621	285.488
101	-2.65926	-0.412463	141.791	286.585
102	-1.96611	-0.40429	141.954	287.379
103	-1.60944	-0.396142	142.111	288.017
104	-1.46968	-0.385321	142.26	288.583
105	-1.38629	-0.377233	142.402	289.106
106	-1.20397	-0.369171	142.538	289.551
107	-1.17118	-0.358459	142.667	289.971
108	-1.10866	-0.350451	142.79	290.359
109	-0.916291	-0.33981	142.905	290.67
110	-0.891598	-0.331854	143.015	290.966
111	-0.867501	-0.323919	143.12	291.247
112	-0.820981	-0.31337	143.218	291.505
113	-0.693147	-0.305481	143.312	291.716

114	-0.693147	-0.297612	143.4	291.923
115	-0.693147	-0.287147	143.483	292.122
116	-0.693147	-0.279319	143.561	292.315
117	-0.693147	-0.271509	143.635	292.503
118	-0.693147	-0.26112143.703	292.684	
119	-0.693147	-0.253347	143.767	292.86
120	-0.693147	-0.243007	143.826	293.029
121	-0.693147	-0.235269	143.881	293.192
122	-0.693147	-0.227545	143.933	293.349
123	-0.693147	-0.217267	143.98	293.5
124	-0.693147	-0.209575	144.024	293.645
125	-0.693147	-0.201894	144.065	293.785
126	-0.693147	-0.191671	144.102	293.918
127	-0.693147	-0.184017	144.136	294.046
128	-0.693147	-0.176374	144.167	294.168
129	-0.693147	-0.166199	144.194	294.283
130	-0.693147	-0.158579	144.219	294.393
131	-0.693147	-0.148434	144.241	294.496
132	-0.693147	-0.140835	144.261	294.593
133	-0.693147	-0.133244	144.279	294.686
134	-0.693147	-0.123135	144.294	294.771
135	-0.693147	-0.115562	144.308	294.851
136	-0.693147	-0.107995	144.319	294.926
137	-0.693147	-0.0979139	144.329	294.994
138	-0.693147	-0.0903606	144.337	295.057
139	-0.693147	-0.0802981	144.343	295.112
140	-0.693147	-0.0727562	144.349	295.163
141	-0.693147	-0.0652187	144.353	295.208
142	-0.693147	-0.0551734	144.356	295.246
143	-0.693147	-0.0476439	144.358	295.279
144	-0.693147	-0.0401167	144.36	295.307
145	-0.693147	-0.0300838	144.361	295.328
146	-0.693147	-0.0225612	144.361	295.343
147	-0.693147	-0.0150408	144.362	295.354
148	-0.693147	-0.00501359	144.362	295.357
149	-0.693147	0.00501359	144.362	295.354
150	-0.693147	0.0150408	144.362	295.343
151	-0.693147	0.0225612	144.362	295.328
152	-0.693147	0.0300838	144.363	295.307
153	-0.693147	0.0401167	144.365	295.279
154	-0.693147	0.0476439	144.367	295.246
155	-0.693147	0.0551734	144.37	295.208
156	-0.693147	0.0652187	144.374	295.163
157	-0.693147	0.0727562	144.38	295.112
158	-0.693147	0.0802981	144.386	295.057
159	-0.693147	0.0903606	144.394	294.994
160	-0.693147	0.0979139	144.404	294.926
161	-0.693147	0.107995	144.416	294.851
162	-0.693147	0.115562	144.429	294.771
163	-0.693147	0.123135	144.444	294.686
164	-0.693147	0.133244	144.462	294.593
165	-0.693147	0.140835	144.482	294.496
166	-0.693147	0.148434	144.504	294.393
167	-0.693147	0.158579	144.529	294.283
168	-0.693147	0.166199	144.557	294.168
169	-0.693147	0.176374	144.588	294.046
170	-0.693147	0.184017	144.621	293.918
171	-0.693147	0.191671	144.658	293.785
172	-0.693147	0.201894	144.699	293.645
173	-0.693147	0.209575	144.743	293.5
174	-0.693147	0.217267	144.79	293.349
175	-0.693147	0.227545	144.842	293.192

176	-0.693147	0.235269	144.897	293.029
177	-0.693147	0.243007	144.956	292.86
178	-0.693147	0.253347	145.02	292.684
179	-0.693147	0.26112	145.089	292.503
180	-0.693147	0.271509	145.162	292.315
181	-0.693147	0.279319	145.24	292.122
182	-0.693147	0.287147	145.323	291.923
183	-0.693147	0.297612	145.411	291.716
184	-0.693147	0.305481	145.505	291.505
185	-0.693147	0.31337	145.603	291.287
186	-0.693147	0.323919	145.708	291.063
187	-0.693147	0.331854	145.818	290.833
188	-0.693147	0.33981	145.933	290.597
189	-0.693147	0.350451	146.056	290.354
190	-0.693147	0.358459	146.185	290.106
191	-0.693147	0.369171	146.321	289.85
192	-0.693147	0.377233	146.463	289.589
193	-0.693147	0.385321	146.612	289.321
194	-0.693147	0.396142	146.769	289.047
195	-0.693147	0.40429	146.932	288.767
196	-0.693147	0.412463	147.102	288.481
197	-0.693147	0.423405	147.282	288.187
198	-0.693147	0.431644	147.468	287.888
199	-0.693147	0.442676	147.664	287.581
200	-0.693147	0.450985	147.867	287.269
201	-0.693147	0.459327	148.078	286.95
202	-0.693147	0.470498	148.3	286.624
203	-0.693147	0.478914	148.529	286.292
204	-0.693147	0.487364	148.767	285.954
205	-0.693147	0.498687	149.015	285.609
206	-0.693147	0.507221	149.272	285.257
207	-0.693147	0.515791	149.539	284.9
208	-0.693147	0.52728	149.817	284.534
209	-0.693147	0.53594	150.104	284.163
210	-0.693147	0.547551	150.404	283.783
211	-0.693147	0.556308	150.713	283.398
212	-0.693147	0.565108	151.032	283.006
213	-0.693147	0.576911	151.365	282.606
214	-0.693147	0.585815	151.708	282.2
215	-0.693147	0.594766	152.062	281.788
216	-0.693147	0.606775	152.43	281.367
217	-0.693147	0.615839	152.81	280.94
218	-0.693147	0.628006	153.204	280.505
219	-0.693147	0.637192	153.61	280.063
220	-0.693147	0.646431	154.028	279.615
221	-0.693147	0.658838	154.462	279.158
222	-0.693147	0.668209	154.908	278.695
223	-0.693147	0.677639	155.368	278.226
224	-0.693147	0.690309	155.844	277.747
225	-0.693147	0.699883	156.334	277.262
226	-0.693147	0.709522	156.837	276.77
227	-0.693147	0.722479	157.359	276.269
228	-0.693147	0.732275	157.896	275.762
229	-0.693147	0.745449	158.451	275.245
230	-0.693147	0.755415	159.022	274.721
231	-0.693147	0.765456	159.608	274.191
232	-0.693147	0.778966	160.215	273.651
233	-0.693147	0.789191	160.837	273.104
234	-0.693147	0.7995	161.477	272.55
235	-0.693147	0.813379	162.138	271.986
236	-0.693147	0.823893	162.817	271.415
237	-0.693147	0.834498	163.513	270.836

238	-0.693147		0.848786	164.234	270.248
239	-0.693147		0.859618	164.973	269.652
240	-0.693147		0.874218	165.737	269.046
241	-0.693147		0.885291	166.521	268.433
242	-0.693147		0.896473	167.325	267.811
243	-0.693147		0.911562	168.155	267.179
244	-0.693147		0.923014	169.007	266.54
245	-0.693147		0.93459	169.881	265.892
246	-0.693147		0.950222	170.784	265.233
247	-0.693147		0.9621	171.709	264.566
248	-0.693147		0.97815	172.666	263.888
249	-0.693147		0.990356	173.647	263.202
250	-0.693147		1.00271	174.652	262.507
251	-0.693147		1.01943	175.692	261.8
252	-0.693147		1.03215	176.757	261.085
253	-0.693147		1.04505	177.849	260.36
254	-0.693147		1.06252	178.978	259.624
255	-0.693147		1.07584	180.136	258.878
256	-0.693147		1.08935	181.322	258.123
257	-0.693147		1.10768	182.549	257.355
258	-0.693147		1.12168	183.807	256.578
259	-0.693147		1.14069	185.108	255.787
260	-0.693147		1.15522	186.443	254.987
261	-0.693147		1.17	187.812	254.176
262	-0.693147		1.19012	189.228	253.351
263	-0.693147		1.20553	190.682	252.515
264	-0.693147		1.22123	192.173	251.668
265	-0.693147		1.24264	193.717	250.807
266	-0.693147		1.25908	195.302	249.934
267	-0.693147		1.27588	196.93	249.05
268	-0.693147		1.29884	198.617	248.15
269	-0.693147		1.31652	200.351	247.237
270	-0.693147		1.34075	202.148	246.308
271	-0.693147		1.35946	203.996	245.366
272	-0.693147		1.37866	205.897	244.41
273	-0.693147		1.40507	207.871	243.436
274	-0.693147		1.42554	209.903	242.448
275	-0.693147		1.44663	211.996	241.445
276	-0.693147		1.47579	214.174	240.422
277	-0.693147		1.49852	216.42	239.384
278	-0.693147		1.53007	218.761	238.323
279	-0.693147		1.55477	221.178	237.245
280	-0.693147		1.58047	223.676	236.15
281	-0.693147		1.61644	226.289	235.029
282	-0.693147		1.64485	228.994	233.889
283	-0.693147		1.67466	231.799	232.728
284	-0.693147		1.71688	234.747	231.538
285	-0.693147		1.75069	237.811	230.325
286	-0.693147		1.78661	241.003	229.087
287	-0.693147		1.83843	244.383	227.812
288	-0.693147		1.88079	247.921	226.509
289	-0.693147		1.94314	251.696	225.162
290	-0.653926		1.99539	255.678	223.857
291	0	2.05375	259.896	223.857	
292	0	2.14441	264.494	223.857	
293	1.09861	2.22621	269.45	226.303	
294	1.79176	2.32634	274.862	230.471	
295	2.07944	2.51213	281.173	235.695	
296	4.35671	2.74777	288.723	247.666	

Data Set Standard Deviation = 1.03377

Numerator = 61338.4
Denominator = 91023.7
W Statistic = 0.673873 = 61338.4 / 91023.7

5% Critical value of 0.976 exceeds 0.673873
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.673873
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Chloroform

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.821428
0.821428 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.659260	.003367	-2.747	761.787	348.683
2	-2.659260	.00673401	-2.512	1361.787	337.176
3	-2.659260	.010101	-2.326	3461.787	328.103
4	-2.659260	.013468	-2.226	2161.787	323.213
5	-2.659260	.016835	-2.144	4161.787	319.219
6	-2.659260	.020202	-2.053	7561.787	314.791
7	-2.659260	.023569	-1.995	3961.787	311.942
8	-2.659260	.026936	-1.943	1461.787	309.39
9	-2.659260	.030303	-1.880	7961.787	306.345
10	-2.659260	.03367	-1.838	4361.787	304.276
11	-2.659260	.037037	-1.786	6161.787	301.746
12	-2.659260	.040404	-1.750	6961.787	299.992
13	-2.659260	.043771	-1.716	8861.787	298.341
14	-2.659260	.047138	-1.674	6661.787	296.279
15	-2.659260	.0505051	-1.644	8561.787	294.824
16	-2.659260	.0538721	-1.616	4461.787	293.436
17	-2.659260	.0572391	-1.580	4761.787	291.679
18	-2.659260	.0606061	-1.554	7761.787	290.425
19	-2.659260	.0639731	-1.530	0761.787	289.218
20	-2.659260	.0673401	-1.498	5261.787	287.677
21	-2.659260	.0707071	-1.475	7961.787	286.568
22	-2.659260	.0740741	-1.446	6361.787	285.144
23	-2.659260	.0774411	-1.425	5461.787	284.114
24	-2.659260	.0808081	-1.405	0761.787	283.114
25	-2.659260	.0841751	-1.378	6661.787	281.824
26	-2.659260	.0875421	-1.359	4661.787	280.887
27	-2.659260	.0909091	-1.340	7561.787	279.974
28	-2.659260	.0942761	-1.316	5261.787	278.79
29	-2.659260	.0976431	-1.298	8461.787	277.926
30	-2.659260	.10101	-1.275	8861.787	276.805
31	-2.659260	.104377	-1.259	0861.787	275.985
32	-2.659260	.107744	-1.242	6461.787	275.182
33	-2.659260	.111111	-1.221	2361.787	274.137
34	-2.659260	.114478	-1.205	5361.787	273.37
35	-2.659260	.117845	-1.190	1261.787	272.617
36	-2.659260	.121212	-1.17	61.787	271.635
37	-2.659260	.124579	-1.155	2261.787	270.913
38	-2.659260	.127946	-1.140	6961.787	270.204
39	-2.659260	.131313	-1.121	6861.787	269.275
40	-2.659260	.13468	-1.107	6861.787	268.592
41	-2.659260	.138047	-1.089	3561.787	267.697
42	-2.659260	.141414	-1.075	8461.787	267.037
43	-2.659260	.144781	-1.062	5261.787	266.386
44	-2.659260	.148148	-1.045	0561.787	265.533
45	-2.659260	.151515	-1.032	1561.787	264.904
46	-2.659260	.154882	-1.019	4361.787	264.282
47	-2.659260	.158249	-1.002	7161.787	263.466
48	-2.659260	.161616	-0.990356	61.787	262.862

49	-2.659260.164983	-0.9781561.787	262.266		
50	-2.659260.16835	-0.9621	61.787	261.483	
51	-2.659260.171717	-0.950222	61.787	260.903	
52	-2.659260.175084	-0.9345961.787	260.139		
53	-2.659260.178451	-0.923014	61.787	259.574	
54	-2.659260.181818	-0.911562	61.787	259.015	
55	-2.659260.185185	-0.896473	61.787	258.278	
56	-2.659260.188552	-0.885291	61.787	257.732	
57	-2.659260.191919	-0.874218	61.787	257.191	
58	-2.659260.195286	-0.859618	61.787	256.478	
59	-2.659260.198653	-0.848786	61.787	255.949	
60	-2.659260.20202	-0.834498	61.787	255.251	
61	-2.659260.205387	-0.823893	61.787	254.733	
62	-2.659260.208754	-0.813379	61.787	254.22	
63	-2.659260.212121	-0.7995	61.787	253.542	
64	-2.659260.215488	-0.789191	61.787	253.039	
65	-2.659260.218855	-0.778966	61.787	252.54	
66	-2.659260.222222	-0.765456	61.787	251.88	
67	-2.659260.225589	-0.755415	61.787	251.389	
68	-2.659260.228956	-0.745449	61.787	250.903	
69	-2.659260.232323	-0.732275	61.787	250.259	
70	-2.659260.23569	-0.722479	61.787	249.781	
71	-2.659260.239057	-0.709522	61.787	249.148	
72	-2.659260.242424	-0.699883	61.787	248.678	
73	-2.659260.245791	-0.690309	61.787	248.21	
74	-2.659260.249158	-0.677639	61.787	247.591	
75	-2.659260.252525	-0.668209	61.787	247.131	
76	-2.659260.255892	-0.658838	61.787	246.673	
77	-2.659260.259259	-0.646431	61.787	246.067	
78	-2.659260.262626	-0.637192	61.787	245.616	
79	-2.659260.265993	-0.628006	61.787	245.168	
80	-2.659260.26936	-0.615839	61.787	244.573	
81	-2.659260.272727	-0.606775	61.787	244.131	
82	-2.659260.276094	-0.594766	61.787	243.544	
83	-2.659260.279461	-0.585815	61.787	243.107	
84	-2.659260.282828	-0.576911	61.787	242.672	
85	-2.659260.286195	-0.565108	61.787	242.096	
86	-2.659260.289562	-0.556308	61.787	241.666	
87	-2.659260.292929	-0.547551	61.787	241.239	
88	-2.659260.296296	-0.5359461.787	240.672		
89	-2.659260.299663	-0.5272861.787	240.249		
90	-2.659260.30303	-0.515791	61.787	239.688	
91	-2.659260.306397	-0.507221	61.787	239.269	
92	-2.659260.309764	-0.498687	61.787	238.853	
93	-2.659260.313131	-0.487364	61.787	238.3	
94	-2.659260.316498	-0.478914	61.787	237.887	
95	-2.659260.319865	-0.470498	61.787	237.476	
96	-2.659260.323232	-0.459327	61.787	236.93	
97	-2.659260.326599	-0.450985	61.787	236.523	
98	-2.659260.329966	-0.442676	61.787	236.117	
99	-2.659260.333333	-0.431644	61.787	235.579	
100	-2.659260.3367	-0.423405	61.787	235.176	
101	-2.659260.340067	-0.412463	61.787	234.642	
102	-1.966110.343434	-0.40429108.141	234.243		
103	-1.609440.346801	-0.396142	131.994	233.845	
104	-1.469680.350168	-0.385321	141.34	233.317	
105	-1.386290.353535	-0.377233	146.917	232.922	
106	-1.203970.356902	-0.369171	159.109	232.528	
107	-1.171180.360269	-0.358459	161.302	232.005	
108	-1.108660.363636	-0.350451	165.483	231.614	
109	-0.916291	0.367003	-0.33981178.348	231.094	
110	-0.891598	0.37037	-0.331854	179.999	230.706

111	-0.867501	0.373737	-0.323919	181.611	230.318
112	-0.820981	0.377104	-0.31337	184.722	229.803
113	-0.693147	0.380471	-0.305481	193.271	229.418
114	-0.693147	0.383838	-0.297612	193.271	229.033
115	-0.693147	0.387205	-0.287147	193.271	228.522
116	-0.693147	0.390572	-0.279319	193.271	228.14
117	-0.693147	0.393939	-0.271509	193.271	227.759
118	-0.693147	0.397306	-0.26112	193.271	227.251
119	-0.693147	0.400673	-0.253347	193.271	226.872
120	-0.693147	0.40404	-0.243007	193.271	226.367
121	-0.693147	0.407407	-0.235269	193.271	225.989
122	-0.693147	0.410774	-0.227545	193.271	225.612
123	-0.693147	0.414141	-0.217267	193.271	225.11
124	-0.693147	0.417508	-0.209575	193.271	224.734
125	-0.693147	0.420875	-0.201894	193.271	224.359
126	-0.693147	0.424242	-0.191671	193.271	223.86
127	-0.693147	0.427609	-0.184017	193.271	223.486
128	-0.693147	0.430976	-0.176374	193.271	223.113
129	-0.693147	0.434343	-0.166199	193.271	222.616
130	-0.693147	0.43771	-0.158579	193.271	222.244
131	-0.693147	0.441077	-0.148434	193.271	221.749
132	-0.693147	0.444444	-0.140835	193.271	221.377
133	-0.693147	0.447811	-0.133244	193.271	221.007
134	-0.693147	0.451178	-0.123135	193.271	220.513
135	-0.693147	0.454545	-0.115562	193.271	220.143
136	-0.693147	0.457912	-0.107995	193.271	219.774
137	-0.693147	0.461279	-0.0979139	193.271	219.281
138	-0.693147	0.464646	-0.0903606	193.271	218.913
139	-0.693147	0.468013	-0.0802981	193.271	218.421
140	-0.693147	0.47138	-0.0727562	193.271	218.053
141	-0.693147	0.474747	-0.0652187	193.271	217.685
142	-0.693147	0.478114	-0.0551734	193.271	217.194
143	-0.693147	0.481481	-0.0476439	193.271	216.827
144	-0.693147	0.484848	-0.0401167	193.271	216.459
145	-0.693147	0.488215	-0.0300838	193.271	215.969
146	-0.693147	0.491582	-0.0225612	193.271	215.602
147	-0.693147	0.494949	-0.0150408	193.271	215.234
148	-0.693147	0.498316	-0.00501359	193.271	214.745
149	-0.693147	0.501684	0.00501359	193.271	214.255
150	-0.693147	0.505051	0.0150408	193.271	213.766
151	-0.693147	0.508418	0.0225612	193.271	213.398
152	-0.693147	0.511785	0.0300838	193.271	213.031
153	-0.693147	0.515152	0.0401167	193.271	212.541
154	-0.693147	0.518519	0.0476439	193.271	212.173
155	-0.693147	0.521886	0.0551734	193.271	211.806
156	-0.693147	0.525253	0.0652187	193.271	211.315
157	-0.693147	0.52862	0.0727562	193.271	210.947
158	-0.693147	0.531987	0.0802981	193.271	210.579
159	-0.693147	0.535354	0.0903606	193.271	210.087
160	-0.693147	0.538721	0.0979139	193.271	209.719
161	-0.693147	0.542088	0.107995	193.271	209.226
162	-0.693147	0.545455	0.115562	193.271	208.857
163	-0.693147	0.548822	0.123135	193.271	208.487
164	-0.693147	0.552189	0.133244	193.271	207.993
165	-0.693147	0.555556	0.140835	193.271	207.623
166	-0.693147	0.558923	0.148434	193.271	207.251
167	-0.693147	0.56229	0.158579	193.271	206.756
168	-0.693147	0.565657	0.166199	193.271	206.384
169	-0.693147	0.569024	0.176374	193.271	205.887
170	-0.693147	0.572391	0.184017	193.271	205.514
171	-0.693147	0.575758	0.191671	193.271	205.14
172	-0.693147	0.579125	0.201894	193.271	204.641

173	-0.693147	0.582492	0.209575	193.271	204.266
174	-0.693147	0.585859	0.217267	193.271	203.89
175	-0.693147	0.589226	0.227545	193.271	203.388
176	-0.693147	0.592593	0.235269	193.271	203.011
177	-0.693147	0.59596	0.243007	193.271	202.633
178	-0.693147	0.599327	0.253347	193.271	202.128
179	-0.693147	0.602694	0.26112	193.271	201.749
180	-0.693147	0.606061	0.271509	193.271	201.241
181	-0.693147	0.609428	0.279319	193.271	200.86
182	-0.693147	0.612795	0.287147	193.271	200.478
183	-0.693147	0.616162	0.297612	193.271	199.967
184	-0.693147	0.619529	0.305481	193.271	199.582
185	-0.693147	0.622896	0.31337	193.271	199.197
186	-0.693147	0.626263	0.323919	193.271	198.682
187	-0.693147	0.62963	0.331854	193.271	198.294
188	-0.693147	0.632997	0.33981	193.271	197.906
189	-0.693147	0.636364	0.350451	193.271	197.386
190	-0.693147	0.639731	0.358459	193.271	196.995
191	-0.693147	0.643098	0.369171	193.271	196.472
192	-0.693147	0.646465	0.377233	193.271	196.078
193	-0.693147	0.649832	0.385321	193.271	195.683
194	-0.693147	0.653199	0.396142	193.271	195.155
195	-0.693147	0.656566	0.40429	193.271	194.757
196	-0.693147	0.659933	0.412463	193.271	194.358
197	-0.693147	0.6633	0.423405	193.271	193.824
198	-0.693147	0.666667	0.431644	193.271	193.421
199	-0.693147	0.670034	0.442676	193.271	192.883
200	-0.693147	0.673401	0.450985	193.271	192.477
201	-0.693147	0.676768	0.459327	193.271	192.07
202	-0.693147	0.680135	0.470498	193.271	191.524
203	-0.693147	0.683502	0.478914	193.271	191.113
204	-0.693147	0.686869	0.487364	193.271	190.7
205	-0.693147	0.690236	0.498687	193.271	190.147
206	-0.693147	0.693603	0.507221	193.271	189.731
207	-0.693147	0.69697	0.515791	193.271	189.312
208	-0.693147	0.700337	0.52728	193.271	188.751
209	-0.693147	0.703704	0.53594	193.271	188.328
210	-0.693147	0.707071	0.547551	193.271	187.761
211	-0.693147	0.710438	0.556308	193.271	187.334
212	-0.693147	0.713805	0.565108	193.271	186.904
213	-0.693147	0.717172	0.576911	193.271	186.328
214	-0.693147	0.720539	0.585815	193.271	185.893
215	-0.693147	0.723906	0.594766	193.271	185.456
216	-0.693147	0.727273	0.606775	193.271	184.869
217	-0.693147	0.73064	0.615839	193.271	184.427
218	-0.693147	0.734007	0.628006	193.271	183.832
219	-0.693147	0.737374	0.637192	193.271	183.384
220	-0.693147	0.740741	0.646431	193.271	182.933
221	-0.693147	0.744108	0.658838	193.271	182.327
222	-0.693147	0.747475	0.668209	193.271	181.869
223	-0.693147	0.750842	0.677639	193.271	181.409
224	-0.693147	0.754209	0.690309	193.271	180.79
225	-0.693147	0.757576	0.699883	193.271	180.322
226	-0.693147	0.760943	0.709522	193.271	179.852
227	-0.693147	0.76431	0.722479	193.271	179.219
228	-0.693147	0.767677	0.732275	193.271	178.741
229	-0.693147	0.771044	0.745449	193.271	178.097
230	-0.693147	0.774411	0.755415	193.271	177.611
231	-0.693147	0.777778	0.765456	193.271	177.12
232	-0.693147	0.781145	0.778966	193.271	176.46
233	-0.693147	0.784512	0.789191	193.271	175.961
234	-0.693147	0.787879	0.7995	193.271	175.458

235	-0.693147	0.791246	0.813379	193.271	174.78
236	-0.693147	0.794613	0.823893	193.271	174.267
237	-0.693147	0.79798	0.834498	193.271	173.749
238	-0.693147	0.801347	0.848786	193.271	173.051
239	-0.693147	0.804714	0.859618	193.271	172.522
240	-0.693147	0.808081	0.874218	193.271	171.809
241	-0.693147	0.811448	0.885291	193.271	171.268
242	-0.693147	0.814815	0.896473	193.271	170.722
243	-0.693147	0.818182	0.911562	193.271	169.985
244	-0.693147	0.821549	0.923014	193.271	169.426
245	-0.693147	0.824916	0.93459	193.271	168.861
246	-0.693147	0.828283	0.950222	193.271	168.097
247	-0.693147	0.83165	0.9621	193.271	167.517
248	-0.693147	0.835017	0.97815	193.271	166.734
249	-0.693147	0.838384	0.990356	193.271	166.138
250	-0.693147	0.841751	1.00271	193.271	165.534
251	-0.693147	0.845118	1.01943	193.271	164.718
252	-0.693147	0.848485	1.03215	193.271	164.096
253	-0.693147	0.851852	1.04505	193.271	163.467
254	-0.693147	0.855219	1.06252	193.271	162.614
255	-0.693147	0.858586	1.07584	193.271	161.963
256	-0.693147	0.861953	1.08935	193.271	161.303
257	-0.693147	0.86532	1.10768	193.271	160.408
258	-0.693147	0.868687	1.12168	193.271	159.725
259	-0.693147	0.872054	1.14069	193.271	158.796
260	-0.693147	0.875421	1.15522	193.271	158.087
261	-0.693147	0.878788	1.17	193.271	157.365
262	-0.693147	0.882155	1.19012	193.271	156.383
263	-0.693147	0.885522	1.20553	193.271	155.63
264	-0.693147	0.888889	1.22123	193.271	154.863
265	-0.693147	0.892256	1.24264	193.271	153.818
266	-0.693147	0.895623	1.25908	193.271	153.015
267	-0.693147	0.89899	1.27588	193.271	152.195
268	-0.693147	0.902357	1.29884	193.271	151.074
269	-0.693147	0.905724	1.31652	193.271	150.21
270	-0.693147	0.909091	1.34075	193.271	149.026
271	-0.693147	0.912458	1.35946	193.271	148.113
272	-0.693147	0.915825	1.37866	193.271	147.176
273	-0.693147	0.919192	1.40507	193.271	145.886
274	-0.693147	0.922559	1.42554	193.271	144.886
275	-0.693147	0.925926	1.44663	193.271	143.856
276	-0.693147	0.929293	1.47579	193.271	142.432
277	-0.693147	0.93266	1.49852	193.271	141.323
278	-0.693147	0.936027	1.53007	193.271	139.782
279	-0.693147	0.939394	1.55477	193.271	138.575
280	-0.693147	0.942761	1.58047	193.271	137.321
281	-0.693147	0.946128	1.61644	193.271	135.564
282	-0.693147	0.949495	1.64485	193.271	134.176
283	-0.693147	0.952862	1.67466	193.271	132.721
284	-0.693147	0.956229	1.71688	193.271	130.659
285	-0.693147	0.959596	1.75069	193.271	129.008
286	-0.693147	0.962963	1.78661	193.271	127.254
287	-0.693147	0.96633	1.83843	193.271	124.724
288	-0.693147	0.969697	1.88079	193.271	122.655
289	-0.693147	0.973064	1.94314	193.271	119.61
290	-0.653926	0.976431	1.99539	195.894	117.058
291	0	0.979798	2.05375	239.625	114.209
292	0	0.983165	2.14441	239.625	109.781
293	1.09861	0.986532	2.22621	313.095	105.787
294	1.79176	0.989899	2.32634	359.449	100.897
295	2.07944	0.993266	2.51213	378.688	91.8241
296	4.35671	0.996633	2.74777	530.98	80.3175

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Chloroform

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 94.2568%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 24
Maximum Background Value = 4.35671
Confidence Level = 75%
False Positive Rate = 25%

Location	Date	Count	Mean	Significant
LMW-16	11/16/2013	1	-2.65926	FALSE
LMW-14R	11/16/2013	1	-2.65926	FALSE
LMW-15R	11/16/2013	1	-2.65926	FALSE
LMW-9D	11/16/2013	1	-2.65926	FALSE
LMW-9	11/16/2013	1	-2.65926	FALSE
LMW-8	11/16/2013	1	-2.65926	FALSE
LMW-6	11/16/2013	1	-2.65926	FALSE
LMW-3S	11/16/2013	1	-2.65926	FALSE
LMW-3	11/16/2013	1	-1.20397	FALSE
LMW-10	11/16/2013	1	-2.65926	FALSE
LMW-9S	11/16/2013	1	-2.65926	FALSE
LMW-7	11/16/2012	1	-2.65926	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE
LMW-13	11/20/2008	1	-0.693147	FALSE
LMW-11	11/20/2008	1	-0.693147	FALSE
LMW-12	11/20/2008	1	-0.693147	FALSE

Concentrations (ppb)

Parameter: Chromium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 175
Percent Non-Detects: 59.1216%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	12 (50%)	1/16/1998	345	345
			3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/14/2000	87	87
			9/23/2003	ND<20	ND<20
			3/10/2004	120	120
			10/12/2004	ND<20	ND<20
			4/1/2005	10 J	10 J
			10/26/2005	ND<20	ND<20
			6/19/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			6/2/2007	21	21
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	0.84 J	0.84 J
			11/16/2009	1 B	1 B
			6/30/2010	0.72 J	0.72 J
			11/17/2010	1	1
			7/6/2011	1.7	1.7
			11/22/2011	ND<0.16 U	ND<0.16 U
			5/16/2012	0.23 J	0.23 J
			11/16/2012	0.24 J	0.24 J
			11/16/2013	ND<0.16 U	ND<0.16 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-14R	12	4 (33.3333%)	6/2/2007	ND<20	ND<20
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	1.6	1.6
			6/30/2010	0.49 J	0.49 J
			11/17/2010	0.6 J	0.6 J
			7/6/2011	1.2	1.2
			11/22/2011	0.18 J	0.18 J
			5/16/2012	0.35 J	0.35 J
			11/16/2012	0.37 J	0.37 J
			11/16/2013	0.38 J	0.38 J
LMW-15R	19	11 (57.8947%)	11/18/2006	ND<20	ND<20
			6/2/2007	ND<20	ND<20
			11/15/2007	ND<20	ND<20
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			5/20/2008	ND<20	ND<20

			11/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	5.5	5.5	
			11/16/2009	0.53 J B	0.53 J B	
			11/16/2009	0.16 J B	0.16 J B	
			11/16/2009	0.44 J B	0.44 J B	
			6/30/2010	0.51 J	0.51 J	
			11/17/2010	0.24 J	0.24 J	
			7/6/2011	0.2 J	0.2 J	
			11/22/2011	ND<0.16 U		ND<0.16 U
			5/16/2012	ND<0.16 U		ND<0.16 U
			11/16/2012	0.16 J	0.16 J	
			11/16/2013	ND<0.16 U		ND<0.16 U
LMW-6	24	15 (62.5%)	1/16/1998	13 J	13 J	
			3/16/1999	ND<20	ND<20	
			9/23/1999	6 J	6 J	
			3/14/2000	34	34	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	4 J	4 J	
			11/15/2007	ND<20	ND<20	
			5/20/2008	7 J	7 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.48 J	0.48 J	
			11/16/2009	ND<0.16 U		ND<0.16 U
			6/30/2010	0.57 J	0.57 J	
			11/17/2010	0.24 J	0.24 J	
			7/6/2011	0.18 J	0.18 J	
			11/22/2011	ND<0.16 U		ND<0.16 U
			5/16/2012	ND<0.16 U		ND<0.16 U
			11/16/2012	ND<0.16 U		ND<0.16 U
			11/16/2013	ND<0.16 U		ND<0.16 U
LMW-8	24	16 (66.6667%)	1/16/1998	ND<20	ND<20	
			3/16/1999	6 J	6 J	
			9/23/1999	13 J	13 J	
			3/14/2000	21	21	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.28 J	0.28 J	
			11/16/2009	0.69 J	0.69 J	
			6/30/2010	0.35 J	0.35 J	
			11/17/2010	0.16 J	0.16 J	
			7/6/2011	0.18 J	0.18 J	
			11/22/2011	ND<0.16 U		ND<0.16 U
			5/16/2012	ND<0.16 U		ND<0.16 U
			11/16/2012	ND<0.16 U		ND<0.16 U

			11/16/2013	ND<0.16 U		ND<0.16 U
LMW-9	24	11 (45.8333%)	1/16/1998	23	23	
			3/16/1999	ND<20	ND<20	
			9/23/1999	22	22	
			3/14/2000	17 J	17 J	
			9/23/2003	ND<20	ND<20	
			3/10/2004	19 J	19 J	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	10 J	10 J	
			11/18/2006	ND<20	ND<20	
			6/2/2007	7	7	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	1.2	1.2	
			11/16/2009	0.62 J	0.62 J	
			6/30/2010	0.44 J	0.44 J	
			11/17/2010	2.1	2.1	
			7/6/2011	0.56 J	0.56 J	
			11/22/2011	ND<0.16 U		ND<0.16 U
			5/16/2012	0.32 J	0.32 J	
			11/16/2012	0.44 J	0.44 J	
			11/16/2013	ND<0.16 U		ND<0.16 U
LMW-9S	13	9 (69.2308%)	11/18/2006	ND<20	ND<20	
			6/2/2007	5	5	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	1	1	
			6/30/2010	0.58 J	0.58 J	
			11/17/2010	4.4	4.4	
			7/6/2011	ND<0.16 U	ND<0.16 U	
			11/22/2011	ND<0.16 U		ND<0.16 U
			5/16/2012	ND<0.16 U		ND<0.16 U
			11/16/2012	ND<0.16 U		ND<0.16 U
			11/16/2013	ND<0.16 U		ND<0.16 U
LMW-10	21	9 (42.8571%)	3/14/2000	28	28	
			9/23/2003	ND<20	ND<20	
			3/10/2004	36	36	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	2	2	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.36 J	0.36 J	
			11/16/2009	0.26 J	0.26 J	
			6/30/2010	0.36 J	0.36 J	
			11/17/2010	0.3 J	0.3 J	
			7/6/2011	0.61 J	0.61 J	
			11/22/2011	0.33 J	0.33 J	
			5/16/2012	0.44 J	0.44 J	
			11/16/2012	0.55 J	0.55 J	
			11/16/2013	0.26 J	0.26 J	

LMW-16	14	7 (50%)	11/18/2006	ND<20	ND<20	
			6/2/2007	20	20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.83 J	0.83 J	
			11/16/2009	0.53 J B	0.53 J B	
			6/30/2010	0.56 J	0.56 J	
			11/17/2010	ND<0.16 U		ND<0.16 U
			7/6/2011	0.7 J	0.7 J	
			11/22/2011	ND<0.16 U		ND<0.16 U
			5/16/2012	ND<0.16 U		ND<0.16 U
			11/16/2012	0.94 J	0.94 J	
			11/16/2013	0.18 J	0.18 J	
LMW-3	26	21 (80.7692%)	11/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			1/16/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.32 J	0.32 J	
			11/16/2009	1.1 B	1.1 B	
			6/30/2010	0.76 J	0.76 J	
			11/17/2010	0.94 J	0.94 J	
			7/6/2011	ND<0.16 U	ND<0.16 U	
			11/22/2011	ND<0.16 U		ND<0.16 U
			5/16/2012	ND<0.16 U		ND<0.16 U
			11/16/2012	0.61 J	0.61 J	
			11/16/2013	ND<0.16 U		ND<0.16 U
LMW-3S	14	8 (57.1429%)	11/18/2006	ND<20	ND<20	
			6/2/2007	11	11	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	1.7	1.7	
			11/16/2009	0.54 J	0.54 J	
			6/30/2010	0.37 J	0.37 J	
			11/17/2010	4.1	4.1	
			7/6/2011	3.3	3.3	
			11/22/2011	ND<0.16 U		ND<0.16 U
			5/16/2012	ND<0.16 U		ND<0.16 U
			11/16/2012	ND<0.16 U		ND<0.16 U
			11/16/2013	ND<0.16 U		ND<0.16 U
LMW-9D	14	5 (35.7143%)	11/18/2006	6 J	6 J	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	3 J	3 J	

			11/20/2008	ND<20	ND<20	
			6/11/2009	1	1	
			11/16/2009	1.1	1.1	
			6/30/2010	0.5 J	0.5 J	
			11/17/2010	0.58 J	0.58 J	
			7/6/2011	3.1	3.1	
			11/22/2011	ND<0.16 U		ND<0.16 U
			5/16/2012	0.35 J	0.35 J	
			11/16/2012	0.98 J	0.98 J	
			11/16/2013	ND<0.16 U		ND<0.16 U
LMW-7	21	7 (33.3333%)	1/16/1998	10 J	10 J	
			3/16/1999	ND<20	ND<20	
			9/23/1999	5 J	5 J	
			3/14/2000	34	34	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	19 J	19 J	
			10/26/2005	23	23	
			6/19/2006	ND<20	ND<20	
			11/18/2006	5 J	5 J	
			6/2/2007	24	24	
			11/15/2007	ND<20	ND<20	
			5/20/2008	7 J	7 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	5.8	5.8	
			11/17/2010	0.25 J	0.25 J	
			7/6/2011	12	12	
			11/22/2011	0.27 J	0.27 J	
			5/16/2012	0.37 J	0.37 J	
			11/16/2012	1.6	1.6	
LMW-11	11	9 (81.8182%)	3/14/2000	20	20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	40	40	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
LMW-12	11	10 (90.9091%)	3/14/2000	93	93	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
LMW-13	11	10 (90.9091%)	3/14/2000	27	27	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	

			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
MW-5	13	11 (84.6154%)	1/16/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	79	79	
			9/23/2003	ND<20	ND<20	
			3/10/2004	84	84	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	

There are 0 unused locations

Loc.	Meas. ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Chromium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.08	-2.747777	55021	-0.219821
2	0.08	-2.512131	3.861	-0.420792
3	0.08	-2.326341	9.2729	-0.606899
4	0.08	-2.226212	4.2289	-0.784996
5	0.08	-2.144412	8.8274	-0.956548
6	0.08	-2.053753	3.0453	-1.12085
7	0.08	-1.995393	7.0269	-1.28048
8	0.08	-1.943144	0.8026	-1.43593
9	0.08	-1.880794	4.34	-1.58639
10	0.08	-1.838434	7.7198	-1.73347
11	0.08	-1.786615	0.9118	-1.8764
12	0.08	-1.750695	3.9767	-2.01645
13	0.08	-1.716885	6.9244	-2.1538
14	0.08	-1.674665	9.7289	-2.28778
15	0.08	-1.644856	2.4344	-2.41936
16	0.08	-1.616446	5.0473	-2.54868
17	0.08	-1.580476	7.5452	-2.67512
18	0.08	-1.554776	9.9625	-2.7995
19	0.08	-1.530077	2.3036	-2.9219
20	0.08	-1.498527	4.5491	-3.04178
21	0.08	-1.475797	6.7271	-3.15985
22	0.08	-1.446637	8.8198	-3.27558
23	0.08	-1.425548	0.852	-3.38962
24	0.08	-1.405078	2.8262	-3.50203
25	0.08	-1.378668	4.7269	-3.61232
26	0.08	-1.359468	6.5751	-3.72108
27	0.08	-1.340758	8.3727	-3.82834
28	0.08	-1.316529	0.1059	-3.93366
29	0.08	-1.298849	1.7929	-4.03757
30	0.08	-1.275889	3.4208	-4.13964
31	0.08	-1.259089	5.006	-4.24036
32	0.08	-1.242649	6.5502	-4.33977
33	0.08	-1.221239	8.0416	-4.43747
34	0.08	-1.205539	9.4949	-4.53391
35	0.16	-1.19012	100.911	-4.72433
36	0.16	-1.17	102.28	-4.91153
37	0.16	-1.15522	103.615	-5.09637
38	0.18	-1.14069	104.916	-5.30169
39	0.18	-1.12168	106.174	-5.5036
40	0.18	-1.10768	107.401	-5.70298
41	0.18	-1.08935	108.588	-5.89906
42	0.2	-1.07584	109.745	-6.11423
43	0.23	-1.06252	110.874	-6.35861
44	0.24	-1.04505	111.966	-6.60942
45	0.24	-1.03215	113.032	-6.85714
46	0.24	-1.01943	114.071	-7.1018
47	0.25	-1.00271	115.076	-7.35248
48	0.26	-0.990356	116.057	-7.60997
49	0.26	-0.97815	117.014	-7.86429
50	0.27	-0.9621	117.939	-8.12406
51	0.28	-0.950222	118.842	-8.39012

52	0.3	-0.93459	119.716	-8.67049
53	0.32	-0.923014	120.568	-8.96586
54	0.32	-0.911562	121.399	-9.25756
55	0.33	-0.896473	122.202	-9.55339
56	0.35	-0.885291	122.986	-9.86325
57	0.35	-0.874218	123.75	-10.1692
58	0.35	-0.859618	124.489	-10.4701
59	0.36	-0.848786	125.21	-10.7757
60	0.36	-0.834498	125.906	-11.0761
61	0.37	-0.823893	126.585	-11.3809
62	0.37	-0.813379	127.247	-11.6819
63	0.37	-0.7995	127.886	-11.9777
64	0.38	-0.789191	128.509	-12.2776
65	0.44	-0.778966	129.115	-12.6203
66	0.44	-0.765456	129.701	-12.9571
67	0.44	-0.755415	130.272	-13.2895
68	0.44	-0.745449	130.828	-13.6175
69	0.48	-0.732275	131.364	-13.969
70	0.49	-0.722479	131.886	-14.323
71	0.5	-0.709522	132.389	-14.6778
72	0.51	-0.699883	132.879	-15.0347
73	0.53	-0.690309	133.356	-15.4006
74	0.53	-0.677639	133.815	-15.7597
75	0.54	-0.668209	134.261	-16.1205
76	0.55	-0.658838	134.695	-16.4829
77	0.56	-0.646431	135.113	-16.8449
78	0.56	-0.637192	135.519	-17.2017
79	0.57	-0.628006	135.914	-17.5597
80	0.58	-0.615839	136.293	-17.9169
81	0.58	-0.606775	136.661	-18.2688
82	0.6	-0.594766	137.015	-18.6257
83	0.61	-0.585815	137.358	-18.983
84	0.61	-0.576911	137.691	-19.3349
85	0.62	-0.565108	138.01	-19.6853
86	0.69	-0.556308	138.32	-20.0692
87	0.7	-0.547551	138.619	-20.4524
88	0.72	-0.53594	138.907	-20.8383
89	0.76	-0.52728	139.185	-21.2391
90	0.83	-0.515791	139.451	-21.6672
91	0.84	-0.507221	139.708	-22.0932
92	0.94	-0.498687	139.957	-22.562
93	0.94	-0.487364	140.194	-23.0201
94	0.98	-0.478914	140.424	-23.4895
95	1	-0.470498	140.645	-23.9599
96	1	-0.459327	140.856	-24.4193
97	1	-0.450985	141.059	-24.8703
98	1	-0.442676	141.255	-25.3129
99	1.1	-0.431644	141.442	-25.7877
100	1.1	-0.423405	141.621	-26.2535
101	1.2	-0.412463	141.791	-26.7484
102	1.2	-0.40429	141.954	-27.2336
103	1.6	-0.396142	142.111	-27.8674
104	1.6	-0.385321	142.26	-28.4839
105	1.7	-0.377233	142.402	-29.1252
106	1.7	-0.369171	142.538	-29.7528
107	2	-0.358459	142.667	-30.4697
108	2.1	-0.350451	142.79	-31.2057
109	3	-0.33981	142.905	-32.2251
110	3.1	-0.331854	143.015	-33.2539
111	3.3	-0.323919	143.12	-34.3228
112	4	-0.31337	143.218	-35.5763
113	4.1	-0.305481	143.312	-36.8287

114	4.4	-0.297612	143.4	-38.1382
115	5	-0.287147	143.483	-39.574
116	5	-0.279319	143.561	-40.9706
117	5	-0.271509	143.635	-42.3281
118	5.5	-0.26112143.703	-43.7643	
119	5.8	-0.253347	143.767	-45.2337
120	6	-0.243007	143.826	-46.6917
121	6	-0.235269	143.881	-48.1033
122	6	-0.227545	143.933	-49.4686
123	7	-0.217267	143.98	-50.9895
124	7	-0.209575	144.024	-52.4565
125	7	-0.201894	144.065	-53.8698
126	10	-0.191671	144.102	-55.7865
127	10	-0.184017	144.136	-57.6267
128	10	-0.176374	144.167	-59.3904
129	10	-0.166199	144.194	-61.0524
130	10	-0.158579	144.219	-62.6382
131	10	-0.148434	144.241	-64.1225
132	10	-0.140835	144.261	-65.5309
133	10	-0.133244	144.279	-66.8633
134	10	-0.123135	144.294	-68.0947
135	10	-0.115562	144.308	-69.2503
136	10	-0.107995	144.319	-70.3302
137	10	-0.0979139	144.329	-71.3094
138	10	-0.0903606	144.337	-72.213
139	10	-0.0802981	144.343	-73.016
140	10	-0.0727562	144.349	-73.7435
141	10	-0.0652187	144.353	-74.3957
142	10	-0.0551734	144.356	-74.9474
143	10	-0.0476439	144.358	-75.4239
144	10	-0.0401167	144.36	-75.825
145	10	-0.0300838	144.361	-76.1259
146	10	-0.0225612	144.361	-76.3515
147	10	-0.0150408	144.362	-76.5019
148	10	-0.00501359	144.362	-76.552
149	10	0.00501359	144.362	-76.5019
150	10	0.0150408	144.362	-76.3515
151	10	0.0225612	144.362	-76.1259
152	10	0.0300838	144.363	-75.825
153	10	0.0401167	144.365	-75.4239
154	10	0.0476439	144.367	-74.9474
155	10	0.0551734	144.37	-74.3957
156	10	0.0652187	144.374	-73.7435
157	10	0.0727562	144.38	-73.016
158	10	0.0802981	144.386	-72.213
159	10	0.0903606	144.394	-71.3094
160	10	0.0979139	144.404	-70.3302
161	10	0.107995	144.416	-69.2503
162	10	0.115562	144.429	-68.0947
163	10	0.123135	144.444	-66.8633
164	10	0.133244	144.462	-65.5309
165	10	0.140835	144.482	-64.1225
166	10	0.148434	144.504	-62.6382
167	10	0.158579	144.529	-61.0524
168	10	0.166199	144.557	-59.3904
169	10	0.176374	144.588	-57.6267
170	10	0.184017	144.621	-55.7865
171	10	0.191671	144.658	-53.8698
172	10	0.201894	144.699	-51.8508
173	10	0.209575	144.743	-49.7551
174	10	0.217267	144.79	-47.5824
175	10	0.227545	144.842	-45.307

176	10	0.235269	144.897	-42.9543
177	10	0.243007	144.956	-40.5242
178	10	0.253347	145.02	-37.9907
179	10	0.26112	145.089	-35.3795
180	10	0.271509	145.162	-32.6644
181	10	0.279319	145.24	-29.8712
182	10	0.287147	145.323	-26.9998
183	10	0.297612	145.411	-24.0237
184	10	0.305481	145.505	-20.9688
185	10	0.31337	145.603	-17.8351
186	10	0.323919	145.708	-14.596
187	10	0.331854	145.818	-11.2774
188	10	0.33981	145.933	-7.87932
189	10	0.350451	146.056	-4.37481
190	10	0.358459	146.185	-0.790215
191	10	0.369171	146.321	2.90149
192	10	0.377233	146.463	6.67383
193	10	0.385321	146.612	10.527
194	10	0.396142	146.769	14.4885
195	10	0.40429	146.932	18.5314
196	10	0.412463	147.102	22.656
197	10	0.423405	147.282	26.89
198	10	0.431644	147.468	31.2065
199	10	0.442676	147.664	35.6332
200	10	0.450985	147.867	40.1431
201	10	0.459327	148.078	44.7363
202	10	0.470498	148.3	49.4413
203	10	0.478914	148.529	54.2305
204	10	0.487364	148.767	59.1041
205	10	0.498687	149.015	64.091
206	10	0.507221	149.272	69.1632
207	10	0.515791	149.539	74.3211
208	10	0.52728	149.817	79.5939
209	10	0.53594	150.104	84.9533
210	10	0.547551	150.404	90.4288
211	10	0.556308	150.713	95.9919
212	10	0.565108	151.032	101.643
213	10	0.576911	151.365	107.412
214	10	0.585815	151.708	113.27
215	10	0.594766	152.062	119.218
216	10	0.606775	152.43	125.286
217	10	0.615839	152.81	131.444
218	10	0.628006	153.204	137.724
219	10	0.637192	153.61	144.096
220	10	0.646431	154.028	150.56
221	10	0.658838	154.462	157.149
222	10	0.668209	154.908	163.831
223	10	0.677639	155.368	170.607
224	10	0.690309	155.844	177.51
225	10	0.699883	156.334	184.509
226	10	0.709522	156.837	191.604
227	10	0.722479	157.359	198.829
228	10	0.732275	157.896	206.152
229	10	0.745449	158.451	213.606
230	10	0.755415	159.022	221.161
231	10	0.765456	159.608	228.815
232	10	0.778966	160.215	236.605
233	10	0.789191	160.837	244.497
234	10	0.7995	161.477	252.492
235	10	0.813379	162.138	260.625
236	10	0.823893	162.817	268.864
237	10	0.834498	163.513	277.209

238	10	0.848786		164.234	285.697
239	10	0.859618		164.973	294.293
240	10	0.874218		165.737	303.036
241	10	0.885291		166.521	311.888
242	10	0.896473		167.325	320.853
243	10	0.911562		168.155	329.969
244	10	0.923014		169.007	339.199
245	10	0.93459	169.881	348.545	
246	10	0.950222		170.784	358.047
247	10	0.9621	171.709	367.668	
248	10	0.97815	172.666	377.45	
249	10	0.990356		173.647	387.353
250	10	1.00271	174.652	397.38	
251	10	1.01943	175.692	407.575	
252	10	1.03215	176.757	417.896	
253	10	1.04505	177.849	428.347	
254	10	1.06252	178.978	438.972	
255	10	1.07584	180.136	449.73	
256	10	1.08935	181.322	460.624	
257	10	1.10768	182.549	471.7	
258	10	1.12168	183.807	482.917	
259	10	1.14069	185.108	494.324	
260	10	1.15522	186.443	505.876	
261	10	1.17	187.812	517.576	
262	10	1.19012	189.228	529.478	
263	10	1.20553	190.682	541.533	
264	10	1.22123	192.173	553.745	
265	10	1.24264	193.717	566.171	
266	10	1.25908	195.302	578.762	
267	10	1.27588	196.93	591.521	
268	10	1.29884	198.617	604.509	
269	10	1.31652	200.351	617.675	
270	11	1.34075	202.148	632.423	
271	12	1.35946	203.996	648.736	
272	13	1.37866	205.897	666.659	
273	13	1.40507	207.871	684.925	
274	17	1.42554	209.903	709.159	
275	19	1.44663	211.996	736.645	
276	19	1.47579	214.174	764.685	
277	20	1.49852	216.42	794.656	
278	20	1.53007	218.761	825.257	
279	21	1.55477	221.178	857.907	
280	21	1.58047	223.676	891.097	
281	22	1.61644	226.289	926.659	
282	23	1.64485	228.994	964.49	
283	23	1.67466	231.799	1003.01	
284	24	1.71688	234.747	1044.21	
285	27	1.75069	237.811	1091.48	
286	28	1.78661	241.003	1141.51	
287	34	1.83843	244.383	1204.01	
288	34	1.88079	247.921	1267.96	
289	36	1.94314	251.696	1337.91	
290	40	1.99539	255.678	1417.73	
291	79	2.05375	259.896	1579.97	
292	84	2.14441	264.494	1760.1	
293	87	2.22621	269.45	1953.78	
294	93	2.32634	274.862	2170.13	
295	120	2.51213	281.173	2471.59	
296	345	2.74777	288.723	3419.57	

Data Set Standard Deviation = 23.4586

Numerator = 1.16935e+007
Denominator = 4.68716e+007
W Statistic = 0.249479 = 1.16935e+007 / 4.68716e+007

5% Critical value of 0.976 exceeds 0.249479
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.249479
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Chromium

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.505156
0.505156 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.08	0.003367	-2.747	739.107	348.683	
2	0.08	0.00673401	-2.512	1339.107	337.176	
3	0.08	0.010101	-2.326	3439.107	328.103	
4	0.08	0.013468	-2.226	2139.107	323.213	
5	0.08	0.016835	-2.144	4139.107	319.219	
6	0.08	0.020202	-2.053	7539.107	314.791	
7	0.08	0.023569	-1.995	3939.107	311.942	
8	0.08	0.026936	-1.943	1439.107	309.39	
9	0.08	0.030303	-1.880	7939.107	306.345	
10	0.08	0.03367	-1.838	4339.107	304.276	
11	0.08	0.037037	-1.786	6139.107	301.746	
12	0.08	0.040404	-1.750	6939.107	299.992	
13	0.08	0.043771	-1.716	8839.107	298.341	
14	0.08	0.047138	-1.674	6639.107	296.279	
15	0.08	0.0505051	-1.644	8539.107	294.824	
16	0.08	0.0538721	-1.616	4439.107	293.436	
17	0.08	0.0572391	-1.580	4739.107	291.679	
18	0.08	0.0606061	-1.554	7739.107	290.425	
19	0.08	0.0639731	-1.530	0739.107	289.218	
20	0.08	0.0673401	-1.498	5239.107	287.677	
21	0.08	0.0707071	-1.475	7939.107	286.568	
22	0.08	0.0740741	-1.446	6339.107	285.144	
23	0.08	0.0774411	-1.425	5439.107	284.114	
24	0.08	0.0808081	-1.405	0739.107	283.114	
25	0.08	0.0841751	-1.378	6639.107	281.824	
26	0.08	0.0875421	-1.359	4639.107	280.887	
27	0.08	0.0909091	-1.340	7539.107	279.974	
28	0.08	0.0942761	-1.316	5239.107	278.79	
29	0.08	0.0976431	-1.298	8439.107	277.926	
30	0.08	0.10101	-1.275	8839.107	276.805	
31	0.08	0.104377	-1.259	0839.107	275.985	
32	0.08	0.107744	-1.242	6439.107	275.182	
33	0.08	0.111111	-1.221	2339.107	274.137	
34	0.08	0.114478	-1.205	5339.107	273.37	
35	0.16	0.117845	-1.190	1239.214	272.617	
36	0.16	0.121212	-1.17	39.214	271.635	
37	0.16	0.124579	-1.155	2239.214	270.913	
38	0.18	0.127946	-1.140	6939.2407	270.204	
39	0.18	0.131313	-1.121	6839.2407	269.275	
40	0.18	0.13468	-1.107	6839.2407	268.592	
41	0.18	0.138047	-1.089	3539.2407	267.697	
42	0.2	0.141414	-1.075	8439.2675	267.037	
43	0.23	0.144781	-1.062	5239.3076	266.386	
44	0.24	0.148148	-1.045	0539.321	265.533	
45	0.24	0.151515	-1.032	1539.321	264.904	
46	0.24	0.154882	-1.019	4339.321	264.282	
47	0.25	0.158249	-1.002	7139.3344	263.466	
48	0.26	0.161616	-0.990356		39.3477	262.862

49	0.26	0.164983	-0.978153	9.3477	262.266
50	0.27	0.16835	-0.9621	39.3611	261.483
51	0.28	0.171717	-0.950222	39.3745	260.903
52	0.3	0.175084	-0.934593	9.4012	260.139
53	0.32	0.178451	-0.923014	39.428	259.574
54	0.32	0.181818	-0.911562	39.428	259.015
55	0.33	0.185185	-0.896473	39.4414	258.278
56	0.35	0.188552	-0.885291	39.4681	257.732
57	0.35	0.191919	-0.874218	39.4681	257.191
58	0.35	0.195286	-0.859618	39.4681	256.478
59	0.36	0.198653	-0.848786	39.4815	255.949
60	0.36	0.20202	-0.834498	39.4815	255.251
61	0.37	0.205387	-0.823893	39.4949	254.733
62	0.37	0.208754	-0.813379	39.4949	254.22
63	0.37	0.212121	-0.7995	39.4949	253.542
64	0.38	0.215488	-0.789191	39.5082	253.039
65	0.44	0.218855	-0.778966	39.5885	252.54
66	0.44	0.222222	-0.765456	39.5885	251.88
67	0.44	0.225589	-0.755415	39.5885	251.389
68	0.44	0.228956	-0.745449	39.5885	250.903
69	0.48	0.232323	-0.732275	39.642	250.259
70	0.49	0.23569	-0.722479	39.6554	249.781
71	0.5	0.239057	-0.709522	39.6688	249.148
72	0.51	0.242424	-0.699883	39.6821	248.678
73	0.53	0.245791	-0.690309	39.7089	248.21
74	0.53	0.249158	-0.677639	39.7089	247.591
75	0.54	0.252525	-0.668209	39.7223	247.131
76	0.55	0.255892	-0.658838	39.7356	246.673
77	0.56	0.259259	-0.646431	39.749	246.067
78	0.56	0.262626	-0.637192	39.749	245.616
79	0.57	0.265993	-0.628006	39.7624	245.168
80	0.58	0.26936	-0.615839	39.7758	244.573
81	0.58	0.272727	-0.606775	39.7758	244.131
82	0.6	0.276094	-0.594766	39.8025	243.544
83	0.61	0.279461	-0.585815	39.8159	243.107
84	0.61	0.282828	-0.576911	39.8159	242.672
85	0.62	0.286195	-0.565108	39.8293	242.096
86	0.69	0.289562	-0.556308	39.9229	241.666
87	0.7	0.292929	-0.547551	39.9363	241.239
88	0.72	0.296296	-0.535943	9.963	240.672
89	0.76	0.299663	-0.527284	0.0165	240.249
90	0.83	0.30303	-0.515791	40.1101	239.688
91	0.84	0.306397	-0.507221	40.1235	239.269
92	0.94	0.309764	-0.498687	40.2572	238.853
93	0.94	0.313131	-0.487364	40.2572	238.3
94	0.98	0.316498	-0.478914	40.3107	237.887
95	1	0.319865	-0.470498	40.3375	237.476
96	1	0.323232	-0.459327	40.3375	236.93
97	1	0.326599	-0.450985	40.3375	236.523
98	1	0.329966	-0.442676	40.3375	236.117
99	1.1	0.333333	-0.431644	40.4712	235.579
100	1.1	0.3367	-0.423405	40.4712	235.176
101	1.2	0.340067	-0.412463	40.605	234.642
102	1.2	0.343434	-0.404294	0.605	234.243
103	1.6	0.346801	-0.396142	41.14	233.845
104	1.6	0.350168	-0.385321	41.14	233.317
105	1.7	0.353535	-0.377233	41.2738	232.922
106	1.7	0.356902	-0.369171	41.2738	232.528
107	2	0.360269	-0.358459	41.675	232.005
108	2.1	0.363636	-0.350451	41.8088	231.614
109	3	0.367003	-0.339814	3.0125	231.094
110	3.1	0.37037	-0.331854	43.1463	230.706

111	3.3	0.373737	-0.323919	43.4138	230.318
112	4	0.377104	-0.3133744.35	229.803	
113	4.1	0.380471	-0.305481	44.4838	229.418
114	4.4	0.383838	-0.297612	44.885	229.033
115	5	0.387205	-0.287147	45.6875	228.522
116	5	0.390572	-0.279319	45.6875	228.14
117	5	0.393939	-0.271509	45.6875	227.759
118	5.5	0.397306	-0.2611246.3563	227.251	
119	5.8	0.400673	-0.253347	46.7575	226.872
120	6	0.40404	-0.243007	47.025	226.367
121	6	0.407407	-0.235269	47.025	225.989
122	6	0.410774	-0.227545	47.025	225.612
123	7	0.414141	-0.217267	48.3625	225.11
124	7	0.417508	-0.209575	48.3625	224.734
125	7	0.420875	-0.201894	48.3625	224.359
126	10	0.424242	-0.191671	52.375	223.86
127	10	0.427609	-0.184017	52.375	223.486
128	10	0.430976	-0.176374	52.375	223.113
129	10	0.434343	-0.166199	52.375	222.616
130	10	0.43771	-0.158579	52.375	222.244
131	10	0.441077	-0.148434	52.375	221.749
132	10	0.444444	-0.140835	52.375	221.377
133	10	0.447811	-0.133244	52.375	221.007
134	10	0.451178	-0.123135	52.375	220.513
135	10	0.454545	-0.115562	52.375	220.143
136	10	0.457912	-0.107995	52.375	219.774
137	10	0.461279	-0.0979139	52.375	219.281
138	10	0.464646	-0.0903606	52.375	218.913
139	10	0.468013	-0.0802981	52.375	218.421
140	10	0.47138	-0.0727562	52.375	218.053
141	10	0.474747	-0.0652187	52.375	217.685
142	10	0.478114	-0.0551734	52.375	217.194
143	10	0.481481	-0.0476439	52.375	216.827
144	10	0.484848	-0.0401167	52.375	216.459
145	10	0.488215	-0.0300838	52.375	215.969
146	10	0.491582	-0.0225612	52.375	215.602
147	10	0.494949	-0.0150408	52.375	215.234
148	10	0.498316	-0.00501359	52.375	214.745
149	10	0.501684	0.00501359	52.375	214.255
150	10	0.505051	0.0150408	52.375	213.766
151	10	0.508418	0.0225612	52.375	213.398
152	10	0.511785	0.0300838	52.375	213.031
153	10	0.515152	0.0401167	52.375	212.541
154	10	0.518519	0.0476439	52.375	212.173
155	10	0.521886	0.0551734	52.375	211.806
156	10	0.525253	0.0652187	52.375	211.315
157	10	0.52862	0.0727562	52.375	210.947
158	10	0.531987	0.0802981	52.375	210.579
159	10	0.535354	0.0903606	52.375	210.087
160	10	0.538721	0.0979139	52.375	209.719
161	10	0.542088	0.107995	52.375	209.226
162	10	0.545455	0.115562	52.375	208.857
163	10	0.548822	0.123135	52.375	208.487
164	10	0.552189	0.133244	52.375	207.993
165	10	0.555556	0.140835	52.375	207.623
166	10	0.558923	0.148434	52.375	207.251
167	10	0.56229	0.158579	52.375	206.756
168	10	0.565657	0.166199	52.375	206.384
169	10	0.569024	0.176374	52.375	205.887
170	10	0.572391	0.184017	52.375	205.514
171	10	0.575758	0.191671	52.375	205.14
172	10	0.579125	0.201894	52.375	204.641

173	10	0.582492	0.209575	52.375	204.266
174	10	0.585859	0.217267	52.375	203.89
175	10	0.589226	0.227545	52.375	203.388
176	10	0.592593	0.235269	52.375	203.011
177	10	0.59596	0.243007	52.375	202.633
178	10	0.599327	0.253347	52.375	202.128
179	10	0.602694	0.26112	52.375	201.749
180	10	0.606061	0.271509	52.375	201.241
181	10	0.609428	0.279319	52.375	200.86
182	10	0.612795	0.287147	52.375	200.478
183	10	0.616162	0.297612	52.375	199.967
184	10	0.619529	0.305481	52.375	199.582
185	10	0.622896	0.31337	52.375	199.197
186	10	0.626263	0.323919	52.375	198.682
187	10	0.62963	0.331854	52.375	198.294
188	10	0.632997	0.33981	52.375	197.906
189	10	0.636364	0.350451	52.375	197.386
190	10	0.639731	0.358459	52.375	196.995
191	10	0.643098	0.369171	52.375	196.472
192	10	0.646465	0.377233	52.375	196.078
193	10	0.649832	0.385321	52.375	195.683
194	10	0.653199	0.396142	52.375	195.155
195	10	0.656566	0.40429	52.375	194.757
196	10	0.659933	0.412463	52.375	194.358
197	10	0.6633	0.423405	52.375	193.824
198	10	0.666667	0.431644	52.375	193.421
199	10	0.670034	0.442676	52.375	192.883
200	10	0.673401	0.450985	52.375	192.477
201	10	0.676768	0.459327	52.375	192.07
202	10	0.680135	0.470498	52.375	191.524
203	10	0.683502	0.478914	52.375	191.113
204	10	0.686869	0.487364	52.375	190.7
205	10	0.690236	0.498687	52.375	190.147
206	10	0.693603	0.507221	52.375	189.731
207	10	0.69697	0.515791	52.375	189.312
208	10	0.700337	0.52728	52.375	188.751
209	10	0.703704	0.53594	52.375	188.328
210	10	0.707071	0.547551	52.375	187.761
211	10	0.710438	0.556308	52.375	187.334
212	10	0.713805	0.565108	52.375	186.904
213	10	0.717172	0.576911	52.375	186.328
214	10	0.720539	0.585815	52.375	185.893
215	10	0.723906	0.594766	52.375	185.456
216	10	0.727273	0.606775	52.375	184.869
217	10	0.73064	0.615839	52.375	184.427
218	10	0.734007	0.628006	52.375	183.832
219	10	0.737374	0.637192	52.375	183.384
220	10	0.740741	0.646431	52.375	182.933
221	10	0.744108	0.658838	52.375	182.327
222	10	0.747475	0.668209	52.375	181.869
223	10	0.750842	0.677639	52.375	181.409
224	10	0.754209	0.690309	52.375	180.79
225	10	0.757576	0.699883	52.375	180.322
226	10	0.760943	0.709522	52.375	179.852
227	10	0.76431	0.722479	52.375	179.219
228	10	0.767677	0.732275	52.375	178.741
229	10	0.771044	0.745449	52.375	178.097
230	10	0.774411	0.755415	52.375	177.611
231	10	0.777778	0.765456	52.375	177.12
232	10	0.781145	0.778966	52.375	176.46
233	10	0.784512	0.789191	52.375	175.961
234	10	0.787879	0.7995	52.375	175.458

235	10	0.791246	0.813379	52.375	174.78
236	10	0.794613	0.823893	52.375	174.267
237	10	0.79798	0.834498	52.375	173.749
238	10	0.801347	0.848786	52.375	173.051
239	10	0.804714	0.859618	52.375	172.522
240	10	0.808081	0.874218	52.375	171.809
241	10	0.811448	0.885291	52.375	171.268
242	10	0.814815	0.896473	52.375	170.722
243	10	0.818182	0.911562	52.375	169.985
244	10	0.821549	0.923014	52.375	169.426
245	10	0.824916	0.93459	52.375	168.861
246	10	0.828283	0.950222	52.375	168.097
247	10	0.83165	0.9621	52.375	167.517
248	10	0.835017	0.97815	52.375	166.734
249	10	0.838384	0.990356	52.375	166.138
250	10	0.841751	1.00271	52.375	165.534
251	10	0.845118	1.01943	52.375	164.718
252	10	0.848485	1.03215	52.375	164.096
253	10	0.851852	1.04505	52.375	163.467
254	10	0.855219	1.06252	52.375	162.614
255	10	0.858586	1.07584	52.375	161.963
256	10	0.861953	1.08935	52.375	161.303
257	10	0.86532	1.10768	52.375	160.408
258	10	0.868687	1.12168	52.375	159.725
259	10	0.872054	1.14069	52.375	158.796
260	10	0.875421	1.15522	52.375	158.087
261	10	0.878788	1.17	52.375	157.365
262	10	0.882155	1.19012	52.375	156.383
263	10	0.885522	1.20553	52.375	155.63
264	10	0.888889	1.22123	52.375	154.863
265	10	0.892256	1.24264	52.375	153.818
266	10	0.895623	1.25908	52.375	153.015
267	10	0.89899	1.27588	52.375	152.195
268	10	0.902357	1.29884	52.375	151.074
269	10	0.905724	1.31652	52.375	150.21
270	11	0.909091	1.34075	53.7125	149.026
271	12	0.912458	1.35946	55.05	148.113
272	13	0.915825	1.37866	56.3875	147.176
273	13	0.919192	1.40507	56.3875	145.886
274	17	0.922559	1.42554	61.7375	144.886
275	19	0.925926	1.44663	64.4125	143.856
276	19	0.929293	1.47579	64.4125	142.432
277	20	0.93266	1.49852	65.75	141.323
278	20	0.936027	1.53007	65.75	139.782
279	21	0.939394	1.55477	67.0875	138.575
280	21	0.942761	1.58047	67.0875	137.321
281	22	0.946128	1.61644	68.425	135.564
282	23	0.949495	1.64485	69.7625	134.176
283	23	0.952862	1.67466	69.7625	132.721
284	24	0.956229	1.71688	71.1	130.659
285	27	0.959596	1.75069	75.1125	129.008
286	28	0.962963	1.78661	76.45	127.254
287	34	0.96633	1.83843	84.475	124.724
288	34	0.969697	1.88079	84.475	122.655
289	36	0.973064	1.94314	87.15	119.61
290	40	0.976431	1.99539	92.5	117.058
291	79	0.979798	2.05375	144.663	114.209
292	84	0.983165	2.14441	151.35	109.781
293	87	0.986532	2.22621	155.363	105.787
294	93	0.989899	2.32634	163.387	100.897
295	120	0.993266	2.51213	199.5	91.8241
296	345	0.996633	2.74777	500.438	80.3175

Shapiro-Francia Test of Normality

Parameter: Chromium

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.52573	-2.74777	7.55021	6.94011
2	-2.52573	-2.51213	13.861	13.2851
3	-2.52573	-2.32634	19.2729	19.1608
4	-2.52573	-2.22621	24.2289	24.7836
5	-2.52573	-2.14441	28.8274	30.1998
6	-2.52573	-2.05375	33.0453	35.387
7	-2.52573	-1.99539	37.0269	40.4268
8	-2.52573	-1.94314	40.8026	45.3346
9	-2.52573	-1.88079	44.34	50.085
10	-2.52573	-1.83843	47.7198	54.7284
11	-2.52573	-1.78661	50.9118	59.2409
12	-2.52573	-1.75069	53.9767	63.6626
13	-2.52573	-1.71688	56.9244	67.999
14	-2.52573	-1.67466	59.7289	72.2287
15	-2.52573	-1.64485	62.4344	76.3832
16	-2.52573	-1.61644	65.0473	80.4659
17	-2.52573	-1.58047	67.5452	84.4577
18	-2.52573	-1.55477	69.9625	88.3846
19	-2.52573	-1.53007	72.3036	92.2492
20	-2.52573	-1.49852	74.5491	96.034
21	-2.52573	-1.47579	76.7271	99.7615
22	-2.52573	-1.44663	78.8198	103.415
23	-2.52573	-1.42554	80.852	107.016
24	-2.52573	-1.40507	82.8262	110.565
25	-2.52573	-1.37866	84.7269	114.047
26	-2.52573	-1.35946	86.5751	117.48
27	-2.52573	-1.34075	88.3727	120.867
28	-2.52573	-1.31652	90.1059	124.192
29	-2.52573	-1.29884	91.7929	127.472
30	-2.52573	-1.27588	93.4208	130.695
31	-2.52573	-1.25908	95.006	133.875
32	-2.52573	-1.24264	96.5502	137.014
33	-2.52573	-1.22123	98.0416	140.098
34	-2.52573	-1.20553	99.4949	143.143
35	-1.83258	-1.19012	100.911	145.324
36	-1.83258	-1.17	102.28	147.468
37	-1.83258	-1.15522	103.615	149.585
38	-1.7148	-1.14069	104.916	151.541
39	-1.7148	-1.12168	106.174	153.465
40	-1.7148	-1.10768	107.401	155.364
41	-1.7148	-1.08935	108.588	157.232
42	-1.60944	-1.07584	109.745	158.964
43	-1.46968	-1.06252	110.874	160.525
44	-1.42712	-1.04505	111.966	162.017
45	-1.42712	-1.03215	113.032	163.49
46	-1.42712	-1.01943	114.071	164.944
47	-1.38629	-1.00271	115.076	166.334
48	-1.34707	-0.990356	116.057	167.669
49	-1.34707	-0.97815	117.014	168.986
50	-1.30933	-0.9621	117.939	170.246
51	-1.27297	-0.950222	118.842	171.455

52	-1.20397	-0.93459	119.716	172.581
53	-1.13943	-0.923014	120.568	173.632
54	-1.13943	-0.911562	121.399	174.671
55	-1.10866	-0.896473	122.202	175.665
56	-1.04982	-0.885291	122.986	176.594
57	-1.04982	-0.874218	123.75	177.512
58	-1.04982	-0.859618	124.489	178.415
59	-1.02165	-0.848786	125.21	179.282
60	-1.02165	-0.834498	125.906	180.134
61	-0.994252	-0.823893	126.585	180.953
62	-0.994252	-0.813379	127.247	181.762
63	-0.994252	-0.7995	127.886	182.557
64	-0.967584	-0.789191	128.509	183.321
65	-0.820981	-0.778966	129.115	183.96
66	-0.820981	-0.765456	129.701	184.589
67	-0.820981	-0.755415	130.272	185.209
68	-0.820981	-0.745449	130.828	185.821
69	-0.733969	-0.732275	131.364	186.358
70	-0.71335	-0.722479	131.886	186.874
71	-0.693147	-0.709522	132.389	187.365
72	-0.673345	-0.699883	132.879	187.837
73	-0.634878	-0.690309	133.356	188.275
74	-0.634878	-0.677639	133.815	188.705
75	-0.616186	-0.668209	134.261	189.117
76	-0.597837	-0.658838	134.695	189.511
77	-0.579818	-0.646431	135.113	189.886
78	-0.579818	-0.637192	135.519	190.255
79	-0.562119	-0.628006	135.914	190.608
80	-0.544727	-0.615839	136.293	190.944
81	-0.544727	-0.606775	136.661	191.274
82	-0.510826	-0.594766	137.015	191.578
83	-0.494296	-0.585815	137.358	191.867
84	-0.494296	-0.576911	137.691	192.153
85	-0.478036	-0.565108	138.01	192.423
86	-0.371064	-0.556308	138.32	192.629
87	-0.356675	-0.547551	138.619	192.825
88	-0.328504	-0.53594	138.907	193.001
89	-0.274437	-0.52728	139.185	193.145
90	-0.18633	-0.515791	139.451	193.241
91	-0.174353	-0.507221	139.708	193.33
92	-0.0618754	-0.498687	139.957	193.361
93	-0.0618754	-0.487364	140.194	193.391
94	-0.0202027	-0.478914	140.424	193.401
95	0	-0.470498	140.645	193.401
96	0	-0.459327	140.856	193.401
97	0	-0.450985	141.059	193.401
98	0	-0.442676	141.255	193.401
99	0.0953102	-0.431644	141.442	193.359
100	0.0953102	-0.423405	141.621	193.319
101	0.182322	-0.412463	141.791	193.244
102	0.182322	-0.40429	141.954	193.17
103	0.470004	-0.396142	142.111	192.984
104	0.470004	-0.385321	142.26	192.803
105	0.530628	-0.377233	142.402	192.603
106	0.530628	-0.369171	142.538	192.407
107	0.693147	-0.358459	142.667	192.158
108	0.741937	-0.350451	142.79	191.898
109	1.09861	-0.33981	142.905	191.525
110	1.1314	-0.331854	143.015	191.149
111	1.19392	-0.323919	143.12	190.763
112	1.38629	-0.31337	143.218	190.328
113	1.41099	-0.305481	143.312	189.897

114	1.4816	-0.297612	143.4	189.456
115	1.60944	-0.287147	143.483	188.994
116	1.60944	-0.279319	143.561	188.545
117	1.60944	-0.271509	143.635	188.108
118	1.70475	-0.26112	143.703	187.663
119	1.75786	-0.253347	143.767	187.217
120	1.79176	-0.243007	143.826	186.782
121	1.79176	-0.235269	143.881	186.36
122	1.79176	-0.227545	143.933	185.953
123	1.94591	-0.217267	143.98	185.53
124	1.94591	-0.209575	144.024	185.122
125	1.94591	-0.201894	144.065	184.729
126	2.30259	-0.191671	144.102	184.288
127	2.30259	-0.184017	144.136	183.864
128	2.30259	-0.176374	144.167	183.458
129	2.30259	-0.166199	144.194	183.075
130	2.30259	-0.158579	144.219	182.71
131	2.30259	-0.148434	144.241	182.368
132	2.30259	-0.140835	144.261	182.044
133	2.30259	-0.133244	144.279	181.737
134	2.30259	-0.123135	144.294	181.454
135	2.30259	-0.115562	144.308	181.188
136	2.30259	-0.107995	144.319	180.939
137	2.30259	-0.0979139	144.329	180.713
138	2.30259	-0.0903606	144.337	180.505
139	2.30259	-0.0802981	144.343	180.32
140	2.30259	-0.0727562	144.349	180.153
141	2.30259	-0.0652187	144.353	180.003
142	2.30259	-0.0551734	144.356	179.876
143	2.30259	-0.0476439	144.358	179.766
144	2.30259	-0.0401167	144.36	179.674
145	2.30259	-0.0300838	144.361	179.604
146	2.30259	-0.0225612	144.361	179.552
147	2.30259	-0.0150408	144.362	179.518
148	2.30259	-0.00501359	144.362	179.506
149	2.30259	0.00501359	144.362	179.518
150	2.30259	0.0150408	144.362	179.552
151	2.30259	0.0225612	144.362	179.604
152	2.30259	0.0300838	144.363	179.674
153	2.30259	0.0401167	144.365	179.766
154	2.30259	0.0476439	144.367	179.876
155	2.30259	0.0551734	144.37	180.003
156	2.30259	0.0652187	144.374	180.153
157	2.30259	0.0727562	144.38	180.32
158	2.30259	0.0802981	144.386	180.505
159	2.30259	0.0903606	144.394	180.713
160	2.30259	0.0979139	144.404	180.939
161	2.30259	0.107995	144.416	181.188
162	2.30259	0.115562	144.429	181.454
163	2.30259	0.123135	144.444	181.737
164	2.30259	0.133244	144.462	182.044
165	2.30259	0.140835	144.482	182.368
166	2.30259	0.148434	144.504	182.71
167	2.30259	0.158579	144.529	183.075
168	2.30259	0.166199	144.557	183.458
169	2.30259	0.176374	144.588	183.864
170	2.30259	0.184017	144.621	184.288
171	2.30259	0.191671	144.658	184.729
172	2.30259	0.201894	144.699	185.194
173	2.30259	0.209575	144.743	185.677
174	2.30259	0.217267	144.79	186.177
175	2.30259	0.227545	144.842	186.701

176	2.30259	0.235269		144.897	187.242
177	2.30259	0.243007		144.956	187.802
178	2.30259	0.253347		145.02	188.385
179	2.30259	0.26112	145.089	188.987	
180	2.30259	0.271509		145.162	189.612
181	2.30259	0.279319		145.24	190.255
182	2.30259	0.287147		145.323	190.916
183	2.30259	0.297612		145.411	191.601
184	2.30259	0.305481		145.505	192.305
185	2.30259	0.31337	145.603	193.026	
186	2.30259	0.323919		145.708	193.772
187	2.30259	0.331854		145.818	194.536
188	2.30259	0.33981	145.933	195.319	
189	2.30259	0.350451		146.056	196.126
190	2.30259	0.358459		146.185	196.951
191	2.30259	0.369171		146.321	197.801
192	2.30259	0.377233		146.463	198.67
193	2.30259	0.385321		146.612	199.557
194	2.30259	0.396142		146.769	200.469
195	2.30259	0.40429	146.932	201.4	
196	2.30259	0.412463		147.102	202.35
197	2.30259	0.423405		147.282	203.325
198	2.30259	0.431644		147.468	204.319
199	2.30259	0.442676		147.664	205.338
200	2.30259	0.450985		147.867	206.376
201	2.30259	0.459327		148.078	207.434
202	2.30259	0.470498		148.3	208.517
203	2.30259	0.478914		148.529	209.62
204	2.30259	0.487364		148.767	210.742
205	2.30259	0.498687		149.015	211.891
206	2.30259	0.507221		149.272	213.058
207	2.30259	0.515791		149.539	214.246
208	2.30259	0.52728	149.817	215.46	
209	2.30259	0.53594	150.104	216.694	
210	2.30259	0.547551		150.404	217.955
211	2.30259	0.556308		150.713	219.236
212	2.30259	0.565108		151.032	220.537
213	2.30259	0.576911		151.365	221.866
214	2.30259	0.585815		151.708	223.214
215	2.30259	0.594766		152.062	224.584
216	2.30259	0.606775		152.43	225.981
217	2.30259	0.615839		152.81	227.399
218	2.30259	0.628006		153.204	228.845
219	2.30259	0.637192		153.61	230.312
220	2.30259	0.646431		154.028	231.801
221	2.30259	0.658838		154.462	233.318
222	2.30259	0.668209		154.908	234.856
223	2.30259	0.677639		155.368	236.417
224	2.30259	0.690309		155.844	238.006
225	2.30259	0.699883		156.334	239.618
226	2.30259	0.709522		156.837	241.252
227	2.30259	0.722479		157.359	242.915
228	2.30259	0.732275		157.896	244.601
229	2.30259	0.745449		158.451	246.318
230	2.30259	0.755415		159.022	248.057
231	2.30259	0.765456		159.608	249.82
232	2.30259	0.778966		160.215	251.613
233	2.30259	0.789191		160.837	253.43
234	2.30259	0.7995	161.477	255.271	
235	2.30259	0.813379		162.138	257.144
236	2.30259	0.823893		162.817	259.041
237	2.30259	0.834498		163.513	260.963

238	2.30259	0.848786		164.234	262.917
239	2.30259	0.859618		164.973	264.897
240	2.30259	0.874218		165.737	266.91
241	2.30259	0.885291		166.521	268.948
242	2.30259	0.896473		167.325	271.012
243	2.30259	0.911562		168.155	273.111
244	2.30259	0.923014		169.007	275.236
245	2.30259	0.93459	169.881	277.388	
246	2.30259	0.950222		170.784	279.576
247	2.30259	0.9621	171.709	281.792	
248	2.30259	0.97815	172.666	284.044	
249	2.30259	0.990356		173.647	286.324
250	2.30259	1.00271	174.652	288.633	
251	2.30259	1.01943	175.692	290.981	
252	2.30259	1.03215	176.757	293.357	
253	2.30259	1.04505	177.849	295.763	
254	2.30259	1.06252	178.978	298.21	
255	2.30259	1.07584	180.136	300.687	
256	2.30259	1.08935	181.322	303.196	
257	2.30259	1.10768	182.549	305.746	
258	2.30259	1.12168	183.807	308.329	
259	2.30259	1.14069	185.108	310.955	
260	2.30259	1.15522	186.443	313.615	
261	2.30259	1.17	187.812	316.309	
262	2.30259	1.19012	189.228	319.05	
263	2.30259	1.20553	190.682	321.826	
264	2.30259	1.22123	192.173	324.638	
265	2.30259	1.24264	193.717	327.499	
266	2.30259	1.25908	195.302	330.398	
267	2.30259	1.27588	196.93	333.336	
268	2.30259	1.29884	198.617	336.326	
269	2.30259	1.31652	200.351	339.358	
270	2.3979	1.34075	202.148	342.573	
271	2.48491	1.35946	203.996	345.951	
272	2.56495	1.37866	205.897	349.487	
273	2.56495	1.40507	207.871	353.091	
274	2.83321	1.42554	209.903	357.13	
275	2.94444	1.44663	211.996	361.39	
276	2.94444	1.47579	214.174	365.735	
277	2.99573	1.49852	216.42	370.224	
278	2.99573	1.53007	218.761	374.808	
279	3.04452	1.55477	221.178	379.541	
280	3.04452	1.58047	223.676	384.353	
281	3.09104	1.61644	226.289	389.35	
282	3.13549	1.64485	228.994	394.507	
283	3.13549	1.67466	231.799	399.758	
284	3.17805	1.71688	234.747	405.214	
285	3.29584	1.75069	237.811	410.984	
286	3.3322	1.78661	241.003	416.938	
287	3.52636	1.83843	244.383	423.42	
288	3.52636	1.88079	247.921	430.053	
289	3.58352	1.94314	251.696	437.016	
290	3.68888	1.99539	255.678	444.377	
291	4.36945	2.05375	259.896	453.351	
292	4.43082	2.14441	264.494	462.852	
293	4.46591	2.22621	269.45	472.794	
294	4.5326	2.32634	274.862	483.338	
295	4.78749	2.51213	281.173	495.365	
296	5.84354	2.74777	288.723	511.422	

Data Set Standard Deviation = 1.92643

Numerator = 261552
Denominator = 316089
W Statistic = 0.827464 = 261552 / 316089

5% Critical value of 0.976 exceeds 0.827464
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.827464
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Chromium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.908944
0.908944 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.52573	0.003367	-2.74777	67.1928	348.683
2	-2.52573	0.00673401	-2.51213	67.1928	337.176
3	-2.52573	0.010101	-2.32634	67.1928	328.103
4	-2.52573	0.013468	-2.22621	67.1928	323.213
5	-2.52573	0.016835	-2.14441	67.1928	319.219
6	-2.52573	0.020202	-2.05375	67.1928	314.791
7	-2.52573	0.023569	-1.99539	67.1928	311.942
8	-2.52573	0.026936	-1.94314	67.1928	309.39
9	-2.52573	0.030303	-1.88079	67.1928	306.345
10	-2.52573	0.03367	-1.83843	67.1928	304.276
11	-2.52573	0.037037	-1.78661	67.1928	301.746
12	-2.52573	0.040404	-1.75069	67.1928	299.992
13	-2.52573	0.043771	-1.71688	67.1928	298.341
14	-2.52573	0.047138	-1.67466	67.1928	296.279
15	-2.52573	0.0505051	-1.64485	67.1928	294.824
16	-2.52573	0.0538721	-1.61644	67.1928	293.436
17	-2.52573	0.0572391	-1.58047	67.1928	291.679
18	-2.52573	0.0606061	-1.55477	67.1928	290.425
19	-2.52573	0.0639731	-1.53007	67.1928	289.218
20	-2.52573	0.0673401	-1.49852	67.1928	287.677
21	-2.52573	0.0707071	-1.47579	67.1928	286.568
22	-2.52573	0.0740741	-1.44663	67.1928	285.144
23	-2.52573	0.0774411	-1.42554	67.1928	284.114
24	-2.52573	0.0808081	-1.40507	67.1928	283.114
25	-2.52573	0.0841751	-1.37866	67.1928	281.824
26	-2.52573	0.0875421	-1.35946	67.1928	280.887
27	-2.52573	0.0909091	-1.34075	67.1928	279.974
28	-2.52573	0.0942761	-1.31652	67.1928	278.79
29	-2.52573	0.0976431	-1.29884	67.1928	277.926
30	-2.52573	0.10101	-1.27588	67.1928	276.805
31	-2.52573	0.104377	-1.25908	67.1928	275.985
32	-2.52573	0.107744	-1.24264	67.1928	275.182
33	-2.52573	0.111111	-1.22123	67.1928	274.137
34	-2.52573	0.114478	-1.20553	67.1928	273.37
35	-1.83258	0.117845	-1.19012	108.397	272.617
36	-1.83258	0.121212	-1.17	108.397	271.635
37	-1.83258	0.124579	-1.15522	108.397	270.913
38	-1.7148	0.127946	-1.14069	115.398	270.204
39	-1.7148	0.131313	-1.12168	115.398	269.275
40	-1.7148	0.13468	-1.10768	115.398	268.592
41	-1.7148	0.138047	-1.08935	115.398	267.697
42	-1.60944	0.141414	-1.07584	121.661	267.037
43	-1.46968	0.144781	-1.06252	129.969	266.386
44	-1.42712	0.148148	-1.04505	132.499	265.533
45	-1.42712	0.151515	-1.03215	132.499	264.904
46	-1.42712	0.154882	-1.01943	132.499	264.282
47	-1.38629	0.158249	-1.00271	134.926	263.466
48	-1.34707	0.161616	-0.990356	137.257	262.862

49	-1.34707	0.164983	-0.97815	137.257	262.266
50	-1.30933	0.16835	-0.9621	139.501	261.483
51	-1.27297	0.171717	-0.950222	141.663	260.903
52	-1.20397	0.175084	-0.93459	145.764	260.139
53	-1.13943	0.178451	-0.923014	149.6	259.574
54	-1.13943	0.181818	-0.911562	149.6	259.015
55	-1.10866	0.185185	-0.896473	151.429	258.278
56	-1.04982	0.188552	-0.885291	154.927	257.732
57	-1.04982	0.191919	-0.874218	154.927	257.191
58	-1.04982	0.195286	-0.859618	154.927	256.478
59	-1.02165	0.198653	-0.848786	156.602	255.949
60	-1.02165	0.20202	-0.834498	156.602	255.251
61	-0.994252	0.205387	-0.823893	158.231	254.733
62	-0.994252	0.208754	-0.813379	158.231	254.22
63	-0.994252	0.212121	-0.7995	158.231	253.542
64	-0.967584	0.215488	-0.789191	159.816	253.039
65	-0.820981	0.218855	-0.778966	168.531	252.54
66	-0.820981	0.222222	-0.765456	168.531	251.88
67	-0.820981	0.225589	-0.755415	168.531	251.389
68	-0.820981	0.228956	-0.745449	168.531	250.903
69	-0.733969	0.232323	-0.732275	173.703	250.259
70	-0.71335	0.23569	-0.722479	174.929	249.781
71	-0.693147	0.239057	-0.709522	176.13	249.148
72	-0.673345	0.242424	-0.699883	177.307	248.678
73	-0.634878	0.245791	-0.690309	179.593	248.21
74	-0.634878	0.249158	-0.677639	179.593	247.591
75	-0.616186	0.252525	-0.668209	180.704	247.131
76	-0.597837	0.255892	-0.658838	181.795	246.673
77	-0.579818	0.259259	-0.646431	182.866	246.067
78	-0.579818	0.262626	-0.637192	182.866	245.616
79	-0.562119	0.265993	-0.628006	183.918	245.168
80	-0.544727	0.26936	-0.615839	184.952	244.573
81	-0.544727	0.272727	-0.606775	184.952	244.131
82	-0.510826	0.276094	-0.594766	186.968	243.544
83	-0.494296	0.279461	-0.585815	187.95	243.107
84	-0.494296	0.282828	-0.576911	187.95	242.672
85	-0.478036	0.286195	-0.565108	188.917	242.096
86	-0.371064	0.289562	-0.556308	195.276	241.666
87	-0.356675	0.292929	-0.547551	196.131	241.239
88	-0.328504	0.296296	-0.53594	197.806	240.672
89	-0.274437	0.299663	-0.52728	201.02	240.249
90	-0.18633	0.30303	-0.515791	206.257	239.688
91	-0.174353	0.306397	-0.507221	206.969	239.269
92	-0.0618754	0.309764	-0.498687	213.655	238.853
93	-0.0618754	0.313131	-0.487364	213.655	238.3
94	-0.0202027	0.316498	-0.478914	216.132	237.887
95	0	0.319865	-0.470498	217.333	237.476
96	0	0.323232	-0.459327	217.333	236.93
97	0	0.326599	-0.450985	217.333	236.523
98	0	0.329966	-0.442676	217.333	236.117
99	0.0953102	0.333333	-0.431644	222.999	235.579
100	0.0953102	0.3367	-0.423405	222.999	235.176
101	0.182322	0.340067	-0.412463	228.171	234.642
102	0.182322	0.343434	-0.40429	228.171	234.243
103	0.470004	0.346801	-0.396142	245.272	233.845
104	0.470004	0.350168	-0.385321	245.272	233.317
105	0.530628	0.353535	-0.377233	248.876	232.922
106	0.530628	0.356902	-0.369171	248.876	232.528
107	0.693147	0.360269	-0.358459	258.537	232.005
108	0.741937	0.363636	-0.350451	261.437	231.614
109	1.09861	0.367003	-0.33981	282.64	231.094
110	1.1314	0.37037	-0.331854	284.589	230.706

111	1.19392	0.373737	-0.323919	288.305	230.318
112	1.38629	0.377104	-0.31337299.741	229.803	
113	1.41099	0.380471	-0.305481	301.209	229.418
114	1.4816	0.383838	-0.297612	305.406	229.033
115	1.60944	0.387205	-0.287147	313.005	228.522
116	1.60944	0.390572	-0.279319	313.005	228.14
117	1.60944	0.393939	-0.271509	313.005	227.759
118	1.70475	0.397306	-0.26112318.671	227.251	
119	1.75786	0.400673	-0.253347	321.828	226.872
120	1.79176	0.40404	-0.243007	323.843	226.367
121	1.79176	0.407407	-0.235269	323.843	225.989
122	1.79176	0.410774	-0.227545	323.843	225.612
123	1.94591	0.414141	-0.217267	333.007	225.11
124	1.94591	0.417508	-0.209575	333.007	224.734
125	1.94591	0.420875	-0.201894	333.007	224.359
126	2.30259	0.424242	-0.191671	354.209	223.86
127	2.30259	0.427609	-0.184017	354.209	223.486
128	2.30259	0.430976	-0.176374	354.209	223.113
129	2.30259	0.434343	-0.166199	354.209	222.616
130	2.30259	0.43771	-0.158579	354.209	222.244
131	2.30259	0.441077	-0.148434	354.209	221.749
132	2.30259	0.444444	-0.140835	354.209	221.377
133	2.30259	0.447811	-0.133244	354.209	221.007
134	2.30259	0.451178	-0.123135	354.209	220.513
135	2.30259	0.454545	-0.115562	354.209	220.143
136	2.30259	0.457912	-0.107995	354.209	219.774
137	2.30259	0.461279	-0.0979139	354.209	219.281
138	2.30259	0.464646	-0.0903606	354.209	218.913
139	2.30259	0.468013	-0.0802981	354.209	218.421
140	2.30259	0.47138	-0.0727562	354.209	218.053
141	2.30259	0.474747	-0.0652187	354.209	217.685
142	2.30259	0.478114	-0.0551734	354.209	217.194
143	2.30259	0.481481	-0.0476439	354.209	216.827
144	2.30259	0.484848	-0.0401167	354.209	216.459
145	2.30259	0.488215	-0.0300838	354.209	215.969
146	2.30259	0.491582	-0.0225612	354.209	215.602
147	2.30259	0.494949	-0.0150408	354.209	215.234
148	2.30259	0.498316	-0.00501359	354.209	214.745
149	2.30259	0.501684	0.00501359	354.209	214.255
150	2.30259	0.505051	0.0150408	354.209	213.766
151	2.30259	0.508418	0.0225612	354.209	213.398
152	2.30259	0.511785	0.0300838	354.209	213.031
153	2.30259	0.515152	0.0401167	354.209	212.541
154	2.30259	0.518519	0.0476439	354.209	212.173
155	2.30259	0.521886	0.0551734	354.209	211.806
156	2.30259	0.525253	0.0652187	354.209	211.315
157	2.30259	0.52862	0.0727562	354.209	210.947
158	2.30259	0.531987	0.0802981	354.209	210.579
159	2.30259	0.535354	0.0903606	354.209	210.087
160	2.30259	0.538721	0.0979139	354.209	209.719
161	2.30259	0.542088	0.107995	354.209	209.226
162	2.30259	0.545455	0.115562	354.209	208.857
163	2.30259	0.548822	0.123135	354.209	208.487
164	2.30259	0.552189	0.133244	354.209	207.993
165	2.30259	0.555556	0.140835	354.209	207.623
166	2.30259	0.558923	0.148434	354.209	207.251
167	2.30259	0.56229	0.158579	354.209	206.756
168	2.30259	0.565657	0.166199	354.209	206.384
169	2.30259	0.569024	0.176374	354.209	205.887
170	2.30259	0.572391	0.184017	354.209	205.514
171	2.30259	0.575758	0.191671	354.209	205.14
172	2.30259	0.579125	0.201894	354.209	204.641

173	2.30259	0.582492	0.209575	354.209	204.266
174	2.30259	0.585859	0.217267	354.209	203.89
175	2.30259	0.589226	0.227545	354.209	203.388
176	2.30259	0.592593	0.235269	354.209	203.011
177	2.30259	0.59596	0.243007	354.209	202.633
178	2.30259	0.599327	0.253347	354.209	202.128
179	2.30259	0.602694	0.26112	354.209	201.749
180	2.30259	0.606061	0.271509	354.209	201.241
181	2.30259	0.609428	0.279319	354.209	200.86
182	2.30259	0.612795	0.287147	354.209	200.478
183	2.30259	0.616162	0.297612	354.209	199.967
184	2.30259	0.619529	0.305481	354.209	199.582
185	2.30259	0.622896	0.31337	354.209	199.197
186	2.30259	0.626263	0.323919	354.209	198.682
187	2.30259	0.62963	0.331854	354.209	198.294
188	2.30259	0.632997	0.33981	354.209	197.906
189	2.30259	0.636364	0.350451	354.209	197.386
190	2.30259	0.639731	0.358459	354.209	196.995
191	2.30259	0.643098	0.369171	354.209	196.472
192	2.30259	0.646465	0.377233	354.209	196.078
193	2.30259	0.649832	0.385321	354.209	195.683
194	2.30259	0.653199	0.396142	354.209	195.155
195	2.30259	0.656566	0.40429	354.209	194.757
196	2.30259	0.659933	0.412463	354.209	194.358
197	2.30259	0.6633	0.423405	354.209	193.824
198	2.30259	0.666667	0.431644	354.209	193.421
199	2.30259	0.670034	0.442676	354.209	192.883
200	2.30259	0.673401	0.450985	354.209	192.477
201	2.30259	0.676768	0.459327	354.209	192.07
202	2.30259	0.680135	0.470498	354.209	191.524
203	2.30259	0.683502	0.478914	354.209	191.113
204	2.30259	0.686869	0.487364	354.209	190.7
205	2.30259	0.690236	0.498687	354.209	190.147
206	2.30259	0.693603	0.507221	354.209	189.731
207	2.30259	0.69697	0.515791	354.209	189.312
208	2.30259	0.700337	0.52728	354.209	188.751
209	2.30259	0.703704	0.53594	354.209	188.328
210	2.30259	0.707071	0.547551	354.209	187.761
211	2.30259	0.710438	0.556308	354.209	187.334
212	2.30259	0.713805	0.565108	354.209	186.904
213	2.30259	0.717172	0.576911	354.209	186.328
214	2.30259	0.720539	0.585815	354.209	185.893
215	2.30259	0.723906	0.594766	354.209	185.456
216	2.30259	0.727273	0.606775	354.209	184.869
217	2.30259	0.73064	0.615839	354.209	184.427
218	2.30259	0.734007	0.628006	354.209	183.832
219	2.30259	0.737374	0.637192	354.209	183.384
220	2.30259	0.740741	0.646431	354.209	182.933
221	2.30259	0.744108	0.658838	354.209	182.327
222	2.30259	0.747475	0.668209	354.209	181.869
223	2.30259	0.750842	0.677639	354.209	181.409
224	2.30259	0.754209	0.690309	354.209	180.79
225	2.30259	0.757576	0.699883	354.209	180.322
226	2.30259	0.760943	0.709522	354.209	179.852
227	2.30259	0.76431	0.722479	354.209	179.219
228	2.30259	0.767677	0.732275	354.209	178.741
229	2.30259	0.771044	0.745449	354.209	178.097
230	2.30259	0.774411	0.755415	354.209	177.611
231	2.30259	0.777778	0.765456	354.209	177.12
232	2.30259	0.781145	0.778966	354.209	176.46
233	2.30259	0.784512	0.789191	354.209	175.961
234	2.30259	0.787879	0.7995	354.209	175.458

235	2.30259	0.791246	0.813379	354.209	174.78
236	2.30259	0.794613	0.823893	354.209	174.267
237	2.30259	0.79798	0.834498	354.209	173.749
238	2.30259	0.801347	0.848786	354.209	173.051
239	2.30259	0.804714	0.859618	354.209	172.522
240	2.30259	0.808081	0.874218	354.209	171.809
241	2.30259	0.811448	0.885291	354.209	171.268
242	2.30259	0.814815	0.896473	354.209	170.722
243	2.30259	0.818182	0.911562	354.209	169.985
244	2.30259	0.821549	0.923014	354.209	169.426
245	2.30259	0.824916	0.93459	354.209	168.861
246	2.30259	0.828283	0.950222	354.209	168.097
247	2.30259	0.83165	0.9621	354.209	167.517
248	2.30259	0.835017	0.97815	354.209	166.734
249	2.30259	0.838384	0.990356	354.209	166.138
250	2.30259	0.841751	1.00271	354.209	165.534
251	2.30259	0.845118	1.01943	354.209	164.718
252	2.30259	0.848485	1.03215	354.209	164.096
253	2.30259	0.851852	1.04505	354.209	163.467
254	2.30259	0.855219	1.06252	354.209	162.614
255	2.30259	0.858586	1.07584	354.209	161.963
256	2.30259	0.861953	1.08935	354.209	161.303
257	2.30259	0.86532	1.10768	354.209	160.408
258	2.30259	0.868687	1.12168	354.209	159.725
259	2.30259	0.872054	1.14069	354.209	158.796
260	2.30259	0.875421	1.15522	354.209	158.087
261	2.30259	0.878788	1.17	354.209	157.365
262	2.30259	0.882155	1.19012	354.209	156.383
263	2.30259	0.885522	1.20553	354.209	155.63
264	2.30259	0.888889	1.22123	354.209	154.863
265	2.30259	0.892256	1.24264	354.209	153.818
266	2.30259	0.895623	1.25908	354.209	153.015
267	2.30259	0.89899	1.27588	354.209	152.195
268	2.30259	0.902357	1.29884	354.209	151.074
269	2.30259	0.905724	1.31652	354.209	150.21
270	2.3979	0.909091	1.34075	359.875	149.026
271	2.48491	0.912458	1.35946	365.047	148.113
272	2.56495	0.915825	1.37866	369.805	147.176
273	2.56495	0.919192	1.40507	369.805	145.886
274	2.83321	0.922559	1.42554	385.752	144.886
275	2.94444	0.925926	1.44663	392.364	143.856
276	2.94444	0.929293	1.47579	392.364	142.432
277	2.99573	0.93266	1.49852	395.413	141.323
278	2.99573	0.936027	1.53007	395.413	139.782
279	3.04452	0.939394	1.55477	398.313	138.575
280	3.04452	0.942761	1.58047	398.313	137.321
281	3.09104	0.946128	1.61644	401.079	135.564
282	3.13549	0.949495	1.64485	403.721	134.176
283	3.13549	0.952862	1.67466	403.721	132.721
284	3.17805	0.956229	1.71688	406.251	130.659
285	3.29584	0.959596	1.75069	413.253	129.008
286	3.3322	0.962963	1.78661	415.414	127.254
287	3.52636	0.96633	1.83843	426.956	124.724
288	3.52636	0.969697	1.88079	426.956	122.655
289	3.58352	0.973064	1.94314	430.354	119.61
290	3.68888	0.976431	1.99539	436.617	117.058
291	4.36945	0.979798	2.05375	477.073	114.209
292	4.43082	0.983165	2.14441	480.721	109.781
293	4.46591	0.986532	2.22621	482.807	105.787
294	4.5326	0.989899	2.32634	486.771	100.897
295	4.78749	0.993266	2.51213	501.923	91.8241
296	5.84354	0.996633	2.74777	564.7	80.3175

Kruskal-Wallis Non-Parametric Test

Parameter: Chromium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	5.84354	296
	3/16/1999	ND<2.30259	88
	9/23/1999	ND<2.30259	88
	3/14/2000	4.46591	293
	9/23/2003	ND<2.30259	88
	3/10/2004	4.78749	295
	10/12/2004	ND<2.30259	88
	4/1/2005	2.30259 J	267
	10/26/2005	ND<2.30259	88
	6/19/2006	ND<2.30259	88
	11/18/2006	ND<2.30259	88
	6/2/2007	3.04452	279
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88
	6/11/2009	-0.174353 J	232
	11/16/2009	0 B	236
	6/30/2010	-0.328504 J	229
	11/17/2010	0	237
	7/6/2011	0.530628	246
	11/22/2011	ND<-2.52573 U	88
	5/16/2012	-1.46968 J	184
	11/16/2012	-1.42712 J	185
	11/16/2013	ND<-2.52573 U	88

Rank Sum = 4035
Rank Mean = 168.125

Background Rank Sum = 4035
Background Rank Mean = 168.125

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-14R	6/2/2007	ND<2.30259	88
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88
	6/11/2009	0.470004	244
	6/30/2010	-0.71335 J	211
	11/17/2010	-0.510826 J	223
	7/6/2011	0.182322	242
	11/22/2011	-1.7148 J	179
	5/16/2012	-1.04982 J	197
	11/16/2012	-0.994252 J	202
	11/16/2013	-0.967584 J	205

Rank Sum = 2055
Rank Mean = 171.25

LMW-15R	11/18/2006	ND<2.30259	88

	6/2/2007	ND<2.30259	88
	11/15/2007	ND<2.30259	88
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88
	6/11/2009	1.70475	259
	11/16/2009	-0.634878 J B	214
	11/16/2009	-1.83258 J B	176
	11/16/2009	-0.820981 J B	206
	6/30/2010	-0.673345 J	213
	11/17/2010	-1.42712 J	186
	7/6/2011	-1.60944 J	183
	11/22/2011	ND<-2.52573 U	88
	5/16/2012	ND<-2.52573 U	88
	11/16/2012	-1.83258 J	177
	11/16/2013	ND<-2.52573 U	88

Rank Sum = 2582
Rank Mean = 135.895

LMW-6	1/16/1998	2.56495 J	272
	3/16/1999	ND<2.30259	88
	9/23/1999	1.79176 J	261
	3/14/2000	3.52636	287
	9/23/2003	ND<2.30259	88
	3/10/2004	ND<2.30259	88
	10/12/2004	ND<2.30259	88
	4/1/2005	ND<2.30259	88
	10/26/2005	ND<2.30259	88
	6/19/2006	ND<2.30259	88
	11/18/2006	ND<2.30259	88
	6/2/2007	1.38629 J	253
	11/15/2007	ND<2.30259	88
	5/20/2008	1.94591 J	264
	11/20/2008	ND<2.30259	88
	6/11/2009	-0.733969 J	210
	11/16/2009	ND<-2.52573 U	88
	6/30/2010	-0.562119 J	220
	11/17/2010	-1.42712 J	187
	7/6/2011	-1.7148 J	180
	11/22/2011	ND<-2.52573 U	88
	5/16/2012	ND<-2.52573 U	88
	11/16/2012	ND<-2.52573 U	88
	11/16/2013	ND<-2.52573 U	88

Rank Sum = 3454
Rank Mean = 143.917

LMW-8	1/16/1998	ND<2.30259	88
	3/16/1999	1.79176 J	262
	9/23/1999	2.56495 J	273
	3/14/2000	3.04452	280
	9/23/2003	ND<2.30259	88
	3/10/2004	ND<2.30259	88
	10/12/2004	ND<2.30259	88
	4/1/2005	ND<2.30259	88
	10/26/2005	ND<2.30259	88
	6/19/2006	ND<2.30259	88
	11/18/2006	ND<2.30259	88
	6/2/2007	ND<2.30259	88
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88

	11/20/2008	ND<2.30259	88
	6/11/2009	-1.27297 J	192
	11/16/2009	-0.371064 J	227
	6/30/2010	-1.04982 J	198
	11/17/2010	-1.83258 J	178
	7/6/2011	-1.7148 J	181
	11/22/2011	ND<-2.52573 U	88
	5/16/2012	ND<-2.52573 U	88
	11/16/2012	ND<-2.52573 U	88
	11/16/2013	ND<-2.52573 U	88

Rank Sum = 3199
Rank Mean = 133.292

LMW-9	1/16/1998	3.13549	282
	3/16/1999	ND<2.30259	88
	9/23/1999	3.09104	281
	3/14/2000	2.83321 J	274
	9/23/2003	ND<2.30259	88
	3/10/2004	2.94444 J	275
	10/12/2004	ND<2.30259	88
	4/1/2005	ND<2.30259	88
	10/26/2005	ND<2.30259	88
	6/19/2006	2.30259 J	268
	11/18/2006	ND<2.30259	88
	6/2/2007	1.94591	265
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88
	6/11/2009	0.182322	243
	11/16/2009	-0.478036 J	226
	6/30/2010	-0.820981 J	207
	11/17/2010	0.741937	249
	7/6/2011	-0.579818 J	218
	11/22/2011	ND<-2.52573 U	88
	5/16/2012	-1.13943 J	194
	11/16/2012	-0.820981 J	208
	11/16/2013	ND<-2.52573 U	88

Rank Sum = 4158
Rank Mean = 173.25

LMW-9S	11/18/2006	ND<2.30259	88
	6/2/2007	1.60944	256
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88
	6/11/2009	0	238
	6/30/2010	-0.544727 J	221
	11/17/2010	1.4816	255
	7/6/2011	ND<-2.52573 U	88
	11/22/2011	ND<-2.52573 U	88
	5/16/2012	ND<-2.52573 U	88
	11/16/2012	ND<-2.52573 U	88
	11/16/2013	ND<-2.52573 U	88

Rank Sum = 1762
Rank Mean = 135.538

LMW-10	3/14/2000	3.3322	286
	9/23/2003	ND<2.30259	88
	3/10/2004	3.58352	289
	10/12/2004	ND<2.30259	88
	4/1/2005	ND<2.30259	88
	10/26/2005	ND<2.30259	88

	6/19/2006	ND<2.30259	88
	11/18/2006	ND<2.30259	88
	6/2/2007	0.693147	248
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88
	6/11/2009	-1.02165 J	200
	11/16/2009	-1.34707 J	189
	6/30/2010	-1.02165 J	201
	11/17/2010	-1.20397 J	193
	7/6/2011	-0.494296 J	224
	11/22/2011	-1.10866 J	196
	5/16/2012	-0.820981 J	209
	11/16/2012	-0.597837 J	217
	11/16/2013	-1.34707 J	190

Rank Sum = 3434
Rank Mean = 163.524

LMW-16	11/18/2006	ND<2.30259	88
	6/2/2007	2.99573	277
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88
	6/11/2009	-0.18633 J	231
	11/16/2009	-0.634878 J B	215
	6/30/2010	-0.579818 J	219
	11/17/2010	ND<-2.52573 U	88
	7/6/2011	-0.356675 J	228
	11/22/2011	ND<-2.52573 U	88
	5/16/2012	ND<-2.52573 U	88
	11/16/2012	-0.0618754 J	233
	11/16/2013	-1.7148 J	182

Rank Sum = 2201
Rank Mean = 157.214

LMW-3	11/19/1996	ND<2.30259	88
	3/24/1997	ND<2.30259	88
	1/16/1998	ND<2.30259	88
	3/16/1999	ND<2.30259	88
	9/23/1999	ND<2.30259	88
	3/14/2000	ND<2.30259	88
	9/23/2003	ND<2.30259	88
	3/10/2004	ND<2.30259	88
	10/12/2004	ND<2.30259	88
	4/1/2005	ND<2.30259	88
	10/26/2005	ND<2.30259	88
	6/19/2006	ND<2.30259	88
	11/18/2006	ND<2.30259	88
	6/2/2007	ND<2.30259	88
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88
	6/11/2009	-1.13943 J	195
	11/16/2009	0.0953102 B	240
	6/30/2010	-0.274437 J	230
	11/17/2010	-0.0618754 J	234
	7/6/2011	ND<-2.52573 U	88
	11/22/2011	ND<-2.52573 U	88
	5/16/2012	ND<-2.52573 U	88
	11/16/2012	-0.494296 J	225
	11/16/2013	ND<-2.52573 U	88

Rank Sum = 2972

Rank Mean = 114.308

LMW-3S	11/18/2006	ND<2.30259	88
	6/2/2007	2.3979	270
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88
	6/11/2009	0.530628	247
	11/16/2009	-0.616186 J	216
	6/30/2010	-0.994252 J	203
	11/17/2010	1.41099	254
	7/6/2011	1.19392	252
	11/22/2011	ND<-2.52573 U	88
	5/16/2012	ND<-2.52573 U	88
	11/16/2012	ND<-2.52573 U	88
	11/16/2013	ND<-2.52573 U	88

Rank Sum = 2146
Rank Mean = 153.286

LMW-9D	11/18/2006	1.79176 J	263
	6/2/2007	ND<2.30259	88
	11/15/2007	ND<2.30259	88
	5/20/2008	1.09861 J	250
	11/20/2008	ND<2.30259	88
	6/11/2009	0	239
	11/16/2009	0.0953102	241
	6/30/2010	-0.693147 J	212
	11/17/2010	-0.544727 J	222
	7/6/2011	1.1314	251
	11/22/2011	ND<-2.52573 U	88
	5/16/2012	-1.04982 J	199
	11/16/2012	-0.0202027 J	235
	11/16/2013	ND<-2.52573 U	88

Rank Sum = 2552
Rank Mean = 182.286

LMW-7	1/16/1998	2.30259 J	269
	3/16/1999	ND<2.30259	88
	9/23/1999	1.60944 J	257
	3/14/2000	3.52636	288
	9/23/2003	ND<2.30259	88
	3/10/2004	ND<2.30259	88
	10/12/2004	ND<2.30259	88
	4/1/2005	2.94444 J	276
	10/26/2005	3.13549	283
	6/19/2006	ND<2.30259	88
	11/18/2006	1.60944 J	258
	6/2/2007	3.17805	284
	11/15/2007	ND<2.30259	88
	5/20/2008	1.94591 J	266
	11/20/2008	ND<2.30259	88
	6/11/2009	1.75786	260
	11/17/2010	-1.38629 J	188
	7/6/2011	2.48491	271
	11/22/2011	-1.30933 J	191
	5/16/2012	-0.994252 J	204
	11/16/2012	0.470004	245

Rank Sum = 4156
Rank Mean = 197.905

LMW-11	3/14/2000	2.99573	278
	9/23/2003	ND<2.30259	88

	3/10/2004	3.68888	290
	10/12/2004	ND<2.30259	88
	4/1/2005	ND<2.30259	88
	10/26/2005	ND<2.30259	88
	6/19/2006	ND<2.30259	88
	6/2/2007	ND<2.30259	88
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88

Rank Sum = 1360
Rank Mean = 123.636

LMW-12	3/14/2000	4.5326	294
	9/23/2003	ND<2.30259	88
	3/10/2004	ND<2.30259	88
	10/12/2004	ND<2.30259	88
	4/1/2005	ND<2.30259	88
	10/26/2005	ND<2.30259	88
	6/19/2006	ND<2.30259	88
	6/2/2007	ND<2.30259	88
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88

Rank Sum = 1174
Rank Mean = 106.727

LMW-13	3/14/2000	3.29584	285
	9/23/2003	ND<2.30259	88
	3/10/2004	ND<2.30259	88
	10/12/2004	ND<2.30259	88
	4/1/2005	ND<2.30259	88
	10/26/2005	ND<2.30259	88
	6/19/2006	ND<2.30259	88
	6/2/2007	ND<2.30259	88
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88

Rank Sum = 1165
Rank Mean = 105.909

MW-5	1/16/1998	ND<2.30259	88
	3/16/1999	ND<2.30259	88
	9/23/1999	ND<2.30259	88
	3/14/2000	4.36945	291
	9/23/2003	ND<2.30259	88
	3/10/2004	4.43082	292
	10/12/2004	ND<2.30259	88
	4/1/2005	ND<2.30259	88
	10/26/2005	ND<2.30259	88
	6/19/2006	ND<2.30259	88
	11/15/2007	ND<2.30259	88
	5/20/2008	ND<2.30259	88
	11/20/2008	ND<2.30259	88

Rank Sum = 1551
Rank Mean = 119.308

Calculation Results:

Kruskal-Wallis H Statistic = 27.6003
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 34.7894
95% Confidence comparison value is 26.2962 at 16 degrees of freedom

27.6003 > 26.2962 indicating a significant group difference at 5% significance level
34.7894 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 168.125

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-14R	171.25	3.125	70.3983
LMW-15R	135.895	-32.2303	61.1447
LMW-6	143.917	-24.2083	57.48
LMW-8	133.292	-34.8333	57.48
LMW-9	173.25	5.125	57.48
LMW-9S	135.538	-32.5865	68.5694
LMW-10	163.524	-4.60119	59.4974
LMW-16	157.214	-10.9107	66.9621
LMW-3	114.308	-53.8173	56.3637
LMW-3S	153.286	-14.8393	66.9621
LMW-9D	182.286	14.1607	66.9621
LMW-7	197.905	29.7798	59.4974
LMW-11	123.636	-44.4886	72.5002
LMW-12	106.727	-61.3977	72.5002
LMW-13	105.909	-62.2159	72.5002
MW-5	119.308	-48.8173	68.5694

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 168.125

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-14R	171.25	3.125	83.1511
LMW-15R	135.895	-32.2303	72.2212
LMW-6	143.917	-24.2083	67.8926
LMW-8	133.292	-34.8333	67.8926
LMW-9	173.25	5.125	67.8926
LMW-9S	135.538	-32.5865	80.991
LMW-10	163.524	-4.60119	70.2755
LMW-16	157.214	-10.9107	79.0925
LMW-3	114.308	-53.8173	66.5742
LMW-3S	153.286	-14.8393	79.0925
LMW-9D	182.286	14.1607	79.0925
LMW-7	197.905	29.7798	70.2755
LMW-11	123.636	-44.4886	85.6338
LMW-12	106.727	-61.3977	85.6338
LMW-13	105.909	-62.2159	85.6338
MW-5	119.308	-48.8173	80.991

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Chromium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 59.1216%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 24
Maximum Background Value = 5.84354
Confidence Level = 75%
False Positive Rate = 25%

Location	Date	Count	Mean	Significant
LMW-14R	11/16/2013	1	-0.967584	FALSE
LMW-15R	11/16/2013	1	-2.52573	FALSE
LMW-6	11/16/2013	1	-2.52573	FALSE
LMW-8	11/16/2013	1	-2.52573	FALSE
LMW-9	11/16/2013	1	-2.52573	FALSE
LMW-9S	11/16/2013	1	-2.52573	FALSE
LMW-10	11/16/2013	1	-1.34707	FALSE
LMW-16	11/16/2013	1	-1.7148	FALSE
LMW-3	11/16/2013	1	-2.52573	FALSE
LMW-3S	11/16/2013	1	-2.52573	FALSE
LMW-9D	11/16/2013	1	-2.52573	FALSE
LMW-7	11/16/2012	1	0.470004	FALSE
LMW-11	11/20/2008	1	2.30259	FALSE
LMW-12	11/20/2008	1	2.30259	FALSE
LMW-13	11/20/2008	1	2.30259	FALSE
MW-5	11/20/2008	1	2.30259	FALSE

Concentrations (ppb)

Parameter: Cobalt

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 184
Percent Non-Detects: 62.1622%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	15 (62.5%)	1/16/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/14/2000	ND<20	ND<20
			9/23/2003	ND<20	ND<20
			3/10/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/26/2005	ND<20	ND<20
			6/19/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			6/2/2007	ND<20	ND<20
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	0.24	0.24
			11/16/2009	0.24	0.24
			6/30/2010	0.27	0.27
			11/17/2010	0.29	0.29
			7/6/2011	0.27	0.27
			11/22/2011	0.25	0.25
			5/16/2012	0.26	0.26
			11/16/2012	0.26	0.26
			11/16/2013	0.15 J	0.15 J

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-16	14	7 (50%)	11/18/2006	ND<20	ND<20
			6/2/2007	ND<20	ND<20
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	ND<0.078 U	ND<0.078 U
			11/16/2009	0.08 J	0.08 J
			6/30/2010	0.098 J	0.098 J
			11/17/2010	0.078 J	0.078 J
			7/6/2011	0.13 J	0.13 J
			11/22/2011	ND<0.078 U	ND<0.078 U
			5/16/2012	0.14 J	0.14 J
			11/16/2012	0.11 J	0.11 J
			11/16/2013	0.45	0.45
LMW-6	24	14 (58.3333%)	1/16/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20
			9/23/1999	11 J	11 J
			3/14/2000	ND<20	ND<20

		9/23/2003	ND<20	ND<20	
		3/10/2004	ND<20	ND<20	
		10/12/2004	ND<20	ND<20	
		4/1/2005	ND<20	ND<20	
		10/26/2005	ND<20	ND<20	
		6/19/2006	ND<20	ND<20	
		11/18/2006	ND<0 J	ND<0 J	
		6/2/2007	ND<20	ND<20	
		11/15/2007	ND<20	ND<20	
		5/20/2008	ND<0 J	ND<0 J	
		11/20/2008	ND<20	ND<20	
		6/11/2009	1.4	1.4	
		11/16/2009	1.2	1.2	
		6/30/2010	1.2	1.2	
		11/17/2010	1.1	1.1	
		7/6/2011	0.72	0.72	
		11/22/2011	0.52	0.52	
		5/16/2012	0.46	0.46	
		11/16/2012	0.41	0.41	
		11/16/2013	0.33	0.33	
LMW-9S	13	2 (15.3846%)	11/18/2006	1 J	1 J
		6/2/2007	1 J	1 J	
		11/15/2007	ND<20	ND<20	
		5/20/2008	1 J	1 J	
		11/20/2008	ND<20	ND<20	
		6/11/2009	0.13 J	0.13 J	
		6/30/2010	0.16 J	0.16 J	
		11/17/2010	0.26	0.26	
		7/6/2011	0.87	0.87	
		11/22/2011	1.1	1.1	
		5/16/2012	1	1	
		11/16/2012	0.89	0.89	
		11/16/2013	0.92	0.92	
LMW-9D	14	11 (78.5714%)	11/18/2006	ND<20	ND<20
		6/2/2007	ND<20	ND<20	
		11/15/2007	3 J	3 J	
		5/20/2008	ND<20	ND<20	
		11/20/2008	ND<20	ND<20	
		6/11/2009	ND<0.078 U	ND<0.078 U	
		11/16/2009	ND<0.078 U	ND<0.078 U	
		6/30/2010	ND<0.078 U	ND<0.078 U	
		11/17/2010	0.081 J	0.081 J	
		7/6/2011	0.13 J	0.13 J	
		11/22/2011	ND<0.078 U	ND<0.078 U	
		5/16/2012	ND<0.078 U	ND<0.078 U	
		11/16/2012	ND<0.078 U	ND<0.078 U	
		11/16/2013	ND<0.078 U	ND<0.078 U	
LMW-9	24	14 (58.3333%)	1/16/1998	ND<20	ND<20
		3/16/1999	ND<20	ND<20	
		9/23/1999	ND<20	ND<20	
		3/14/2000	ND<20	ND<20	
		9/23/2003	ND<20	ND<20	
		3/10/2004	ND<20	ND<20	
		10/12/2004	ND<20	ND<20	
		4/1/2005	ND<20	ND<20	
		10/26/2005	ND<20	ND<20	
		6/19/2006	10 J	10 J	
		11/18/2006	ND<20	ND<20	
		6/2/2007	ND<20	ND<20	

			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.15 J	0.15 J	
			11/16/2009	0.13 J	0.13 J	
			6/30/2010	0.13 J	0.13 J	
			11/17/2010	0.16 J	0.16 J	
			7/6/2011	0.13 J	0.13 J	
			11/22/2011	0.11 J	0.11 J	
			5/16/2012	1.3	1.3	
			11/16/2012	1.8	1.8	
			11/16/2013	0.71	0.71	
LMW-15R	19	8 (42.1053%)	11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			5/20/2008	ND<0 J	ND<0 J	
			11/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.83	0.83	
			11/16/2009	0.25	0.25	
			11/16/2009	0.26	0.26	
			11/16/2009	0.3	0.3	
			6/30/2010	0.7	0.7	
			11/17/2010	0.58	0.58	
			7/6/2011	0.75	0.75	
			11/22/2011	0.6	0.6	
			5/16/2012	0.58	0.58	
			11/16/2012	0.57	0.57	
			11/16/2013	0.84	0.84	
LMW-8	24	15 (62.5%)	1/16/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<0 J	ND<0 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.47	0.47	
			11/16/2009	0.71	0.71	
			6/30/2010	0.78	0.78	
			11/17/2010	0.71	0.71	
			7/6/2011	1.5	1.5	
			11/22/2011	1.4	1.4	
			5/16/2012	1.2	1.2	
			11/16/2012	0.98	0.98	
			11/16/2013	0.32	0.32	
LMW-14R	12	4 (33.3333%)	6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<0 J	ND<0 J	
			11/20/2008	ND<20	ND<20	

			6/11/2009	0.24	0.24	
			6/30/2010	0.17 J	0.17 J	
			11/17/2010	0.21	0.21	
			7/6/2011	0.2	0.2	
			11/22/2011	0.18 J	0.18 J	
			5/16/2012	0.15 J	0.15 J	
			11/16/2012	0.19 J	0.19 J	
			11/16/2013	0.22	0.22	
LMW-3	26	17 (65.3846%)	11/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			1/16/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.16 J	0.16 J	
			11/16/2009	0.16 J	0.16 J	
			6/30/2010	0.17 J	0.17 J	
			11/17/2010	0.51	0.51	
			7/6/2011	0.16 J	0.16 J	
			11/22/2011	0.43	0.43	
			5/16/2012	0.18 J	0.18 J	
			11/16/2012	0.18 J	0.18 J	
			11/16/2013	0.17 J	0.17 J	
LMW-10	21	12 (57.1429%)	3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.13 J	0.13 J	
			11/16/2009	0.15 J	0.15 J	
			6/30/2010	0.2	0.2	
			11/17/2010	0.16 J	0.16 J	
			7/6/2011	0.23	0.23	
			11/22/2011	0.19 J	0.19 J	
			5/16/2012	0.25	0.25	
			11/16/2012	0.23	0.23	
			11/16/2013	0.15 J	0.15 J	
LMW-3S	14	5 (35.7143%)	11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<0 J	ND<0 J	

			11/20/2008	ND<20	ND<20	
			6/11/2009	0.42	0.42	
			11/16/2009	0.42	0.42	
			6/30/2010	0.57	0.57	
			11/17/2010	0.53	0.53	
			7/6/2011	0.45	0.45	
			11/22/2011	0.2	0.2	
			5/16/2012	0.52	0.52	
			11/16/2012	0.61	0.61	
			11/16/2013	0.51	0.51	
LMW-7	21	14 (66.6667%)	1/16/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	1 J	1 J	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.63	0.63	
			11/17/2010	0.19 J	0.19 J	
			7/6/2011	2.7	2.7	
			11/22/2011	0.44	0.44	
			5/16/2012	0.29	0.29	
			11/16/2012	0.41	0.41	
LMW-11	11	11 (100%)	3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
LMW-12	11	11 (100%)	3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
MW-5	13	13 (100%)	1/16/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	

			3/10/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/26/2005	ND<20	ND<20
			6/19/2006	ND<20	ND<20
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
LMW-13	11	11 (100%)	3/14/2000	ND<20	ND<20
			9/23/2003	ND<20	ND<20
			3/10/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/26/2005	ND<20	ND<20
			6/19/2006	ND<20	ND<20
			6/2/2007	ND<20	ND<20
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Cobalt

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.747777.55021	0	
2	0	-2.5121313.861	0	
3	0	-2.3263419.2729	0	
4	0	-2.2262124.2289	0	
5	0	-2.1444128.8274	0	
6	0	-2.0537533.0453	0	
7	0.039	-1.9953937.0269	-0.0778204	
8	0.039	-1.9431440.8026	-0.153603	
9	0.039	-1.8807944.34	-0.226953	
10	0.039	-1.8384347.7198	-0.298652	
11	0.039	-1.7866150.9118	-0.36833	
12	0.039	-1.7506953.9767	-0.436607	
13	0.039	-1.7168856.9244	-0.503565	
14	0.039	-1.6746659.7289	-0.568877	
15	0.039	-1.6448562.4344	-0.633026	
16	0.078	-1.6164465.0473	-0.759108	
17	0.08	-1.5804767.5452	-0.885545	
18	0.081	-1.5547769.9625	-1.01148	
19	0.098	-1.5300772.3036	-1.16143	
20	0.11	-1.4985274.5491	-1.32627	
21	0.11	-1.4757976.7271	-1.4886	
22	0.13	-1.4466378.8198	-1.67666	
23	0.13	-1.4255480.852	-1.86199	
24	0.13	-1.4050782.8262	-2.04464	
25	0.13	-1.3786684.7269	-2.22387	
26	0.13	-1.3594686.5751	-2.4006	
27	0.13	-1.3407588.3727	-2.5749	
28	0.13	-1.3165290.1059	-2.74605	
29	0.14	-1.2988491.7929	-2.92788	
30	0.15	-1.2758893.4208	-3.11926	
31	0.15	-1.2590895.006	-3.30813	
32	0.15	-1.2426496.5502	-3.49452	
33	0.15	-1.2212398.0416	-3.67771	
34	0.15	-1.2055399.4949	-3.85854	
35	0.16	-1.19012100.911	-4.04896	
36	0.16	-1.17 102.28	-4.23616	
37	0.16	-1.15522103.615	-4.42099	
38	0.16	-1.14069104.916	-4.6035	
39	0.16	-1.12168106.174	-4.78297	
40	0.16	-1.10768107.401	-4.9602	
41	0.17	-1.08935108.588	-5.14539	
42	0.17	-1.07584109.745	-5.32828	
43	0.17	-1.06252110.874	-5.50891	
44	0.18	-1.04505111.966	-5.69702	
45	0.18	-1.03215113.032	-5.88281	
46	0.18	-1.01943114.071	-6.0663	
47	0.19	-1.00271115.076	-6.25682	
48	0.19	-0.990356	116.057	-6.44499
49	0.19	-0.97815117.014	-6.63083	
50	0.2	-0.9621 117.939	-6.82325	
51	0.2	-0.950222	118.842	-7.0133

52	0.2	-0.93459	119.716	-7.20022
53	0.21	-0.923014	120.568	-7.39405
54	0.22	-0.911562	121.399	-7.59459
55	0.23	-0.896473	122.202	-7.80078
56	0.23	-0.885291	122.986	-8.0044
57	0.24	-0.874218	123.75	-8.21421
58	0.24	-0.859618	124.489	-8.42052
59	0.24	-0.848786	125.21	-8.62423
60	0.25	-0.834498	125.906	-8.83285
61	0.25	-0.823893	126.585	-9.03883
62	0.25	-0.813379	127.247	-9.24217
63	0.26	-0.7995	127.886	-9.45004
64	0.26	-0.789191	128.509	-9.65523
65	0.26	-0.778966	129.115	-9.85776
66	0.26	-0.765456	129.701	-10.0568
67	0.27	-0.755415	130.272	-10.2607
68	0.27	-0.745449	130.828	-10.462
69	0.29	-0.732275	131.364	-10.6744
70	0.29	-0.722479	131.886	-10.8839
71	0.3	-0.709522	132.389	-11.0967
72	0.32	-0.699883	132.879	-11.3207
73	0.33	-0.690309	133.356	-11.5485
74	0.41	-0.677639	133.815	-11.8263
75	0.41	-0.668209	134.261	-12.1003
76	0.42	-0.658838	134.695	-12.377
77	0.42	-0.646431	135.113	-12.6485
78	0.43	-0.637192	135.519	-12.9225
79	0.44	-0.628006	135.914	-13.1988
80	0.45	-0.615839	136.293	-13.476
81	0.45	-0.606775	136.661	-13.749
82	0.46	-0.594766	137.015	-14.0226
83	0.47	-0.585815	137.358	-14.2979
84	0.51	-0.576911	137.691	-14.5922
85	0.51	-0.565108	138.01	-14.8804
86	0.52	-0.556308	138.32	-15.1697
87	0.52	-0.547551	138.619	-15.4544
88	0.53	-0.53594	138.907	-15.7384
89	0.57	-0.52728	139.185	-16.039
90	0.57	-0.515791	139.451	-16.333
91	0.58	-0.507221	139.708	-16.6272
92	0.58	-0.498687	139.957	-16.9164
93	0.6	-0.487364	140.194	-17.2088
94	0.61	-0.478914	140.424	-17.501
95	0.63	-0.470498	140.645	-17.7974
96	0.7	-0.459327	140.856	-18.1189
97	0.71	-0.450985	141.059	-18.4391
98	0.71	-0.442676	141.255	-18.7534
99	0.71	-0.431644	141.442	-19.0599
100	0.72	-0.423405	141.621	-19.3647
101	0.75	-0.412463	141.791	-19.6741
102	0.78	-0.40429	141.954	-19.9894
103	0.83	-0.396142	142.111	-20.3182
104	0.84	-0.385321	142.26	-20.6419
105	0.87	-0.377233	142.402	-20.9701
106	0.89	-0.369171	142.538	-21.2986
107	0.92	-0.358459	142.667	-21.6284
108	0.98	-0.350451	142.79	-21.9719
109	1	-0.33981	142.905	-22.3117
110	1	-0.331854	143.015	-22.6435
111	1	-0.323919	143.12	-22.9674
112	1	-0.31337	143.218	-23.2808
113	1	-0.305481	143.312	-23.5863

114	1.1	-0.297612	143.4	-23.9137
115	1.1	-0.287147	143.483	-24.2295
116	1.2	-0.279319	143.561	-24.5647
117	1.2	-0.271509	143.635	-24.8905
118	1.2	-0.26112143.703	-25.2039	
119	1.3	-0.253347	143.767	-25.5332
120	1.4	-0.243007	143.826	-25.8734
121	1.4	-0.235269	143.881	-26.2028
122	1.5	-0.227545	143.933	-26.5441
123	1.8	-0.217267	143.98	-26.9352
124	2.7	-0.209575	144.024	-27.5011
125	3	-0.201894	144.065	-28.1067
126	10	-0.191671	144.102	-30.0235
127	10	-0.184017	144.136	-31.8636
128	10	-0.176374	144.167	-33.6274
129	10	-0.166199	144.194	-35.2893
130	10	-0.158579	144.219	-36.8751
131	10	-0.148434	144.241	-38.3595
132	10	-0.140835	144.261	-39.7678
133	10	-0.133244	144.279	-41.1003
134	10	-0.123135	144.294	-42.3316
135	10	-0.115562	144.308	-43.4872
136	10	-0.107995	144.319	-44.5672
137	10	-0.0979139	144.329	-45.5463
138	10	-0.0903606	144.337	-46.4499
139	10	-0.0802981	144.343	-47.2529
140	10	-0.0727562	144.349	-47.9805
141	10	-0.0652187	144.353	-48.6327
142	10	-0.0551734	144.356	-49.1844
143	10	-0.0476439	144.358	-49.6608
144	10	-0.0401167	144.36	-50.062
145	10	-0.0300838	144.361	-50.3628
146	10	-0.0225612	144.361	-50.5885
147	10	-0.0150408	144.362	-50.7389
148	10	-0.00501359	144.362	-50.789
149	10	0.00501359	144.362	-50.7389
150	10	0.0150408	144.362	-50.5885
151	10	0.0225612	144.362	-50.3628
152	10	0.0300838	144.363	-50.062
153	10	0.0401167	144.365	-49.6608
154	10	0.0476439	144.367	-49.1844
155	10	0.0551734	144.37	-48.6327
156	10	0.0652187	144.374	-47.9805
157	10	0.0727562	144.38	-47.2529
158	10	0.0802981	144.386	-46.4499
159	10	0.0903606	144.394	-45.5463
160	10	0.0979139	144.404	-44.5672
161	10	0.107995	144.416	-43.4872
162	10	0.115562	144.429	-42.3316
163	10	0.123135	144.444	-41.1003
164	10	0.133244	144.462	-39.7678
165	10	0.140835	144.482	-38.3595
166	10	0.148434	144.504	-36.8751
167	10	0.158579	144.529	-35.2893
168	10	0.166199	144.557	-33.6274
169	10	0.176374	144.588	-31.8636
170	10	0.184017	144.621	-30.0235
171	10	0.191671	144.658	-28.1067
172	10	0.201894	144.699	-26.0878
173	10	0.209575	144.743	-23.992
174	10	0.217267	144.79	-21.8194
175	10	0.227545	144.842	-19.5439

176	10	0.235269	144.897	-17.1912
177	10	0.243007	144.956	-14.7612
178	10	0.253347	145.02	-12.2277
179	10	0.26112	145.089	-9.61649
180	10	0.271509	145.162	-6.9014
181	10	0.279319	145.24	-4.10821
182	10	0.287147	145.323	-1.23674
183	10	0.297612	145.411	1.73938
184	10	0.305481	145.505	4.79419
185	10	0.31337	145.603	7.92789
186	10	0.323919	145.708	11.1671
187	10	0.331854	145.818	14.4856
188	10	0.33981	145.933	17.8837
189	10	0.350451	146.056	21.3882
190	10	0.358459	146.185	24.9728
191	10	0.369171	146.321	28.6645
192	10	0.377233	146.463	32.4369
193	10	0.385321	146.612	36.2901
194	10	0.396142	146.769	40.2515
195	10	0.40429	146.932	44.2944
196	10	0.412463	147.102	48.419
197	10	0.423405	147.282	52.6531
198	10	0.431644	147.468	56.9695
199	10	0.442676	147.664	61.3963
200	10	0.450985	147.867	65.9061
201	10	0.459327	148.078	70.4994
202	10	0.470498	148.3	75.2044
203	10	0.478914	148.529	79.9935
204	10	0.487364	148.767	84.8671
205	10	0.498687	149.015	89.854
206	10	0.507221	149.272	94.9262
207	10	0.515791	149.539	100.084
208	10	0.52728	149.817	105.357
209	10	0.53594	150.104	110.716
210	10	0.547551	150.404	116.192
211	10	0.556308	150.713	121.755
212	10	0.565108	151.032	127.406
213	10	0.576911	151.365	133.175
214	10	0.585815	151.708	139.033
215	10	0.594766	152.062	144.981
216	10	0.606775	152.43	151.049
217	10	0.615839	152.81	157.207
218	10	0.628006	153.204	163.487
219	10	0.637192	153.61	169.859
220	10	0.646431	154.028	176.323
221	10	0.658838	154.462	182.912
222	10	0.668209	154.908	189.594
223	10	0.677639	155.368	196.37
224	10	0.690309	155.844	203.273
225	10	0.699883	156.334	210.272
226	10	0.709522	156.837	217.367
227	10	0.722479	157.359	224.592
228	10	0.732275	157.896	231.915
229	10	0.745449	158.451	239.369
230	10	0.755415	159.022	246.924
231	10	0.765456	159.608	254.578
232	10	0.778966	160.215	262.368
233	10	0.789191	160.837	270.26
234	10	0.7995	161.477	278.255
235	10	0.813379	162.138	286.388
236	10	0.823893	162.817	294.627
237	10	0.834498	163.513	302.972

238	10	0.848786		164.234	311.46
239	10	0.859618		164.973	320.056
240	10	0.874218		165.737	328.799
241	10	0.885291		166.521	337.652
242	10	0.896473		167.325	346.616
243	10	0.911562		168.155	355.732
244	10	0.923014		169.007	364.962
245	10	0.93459	169.881	374.308	
246	10	0.950222		170.784	383.81
247	10	0.9621	171.709	393.431	
248	10	0.97815	172.666	403.213	
249	10	0.990356		173.647	413.116
250	10	1.00271	174.652	423.143	
251	10	1.01943	175.692	433.338	
252	10	1.03215	176.757	443.659	
253	10	1.04505	177.849	454.11	
254	10	1.06252	178.978	464.735	
255	10	1.07584	180.136	475.493	
256	10	1.08935	181.322	486.387	
257	10	1.10768	182.549	497.463	
258	10	1.12168	183.807	508.68	
259	10	1.14069	185.108	520.087	
260	10	1.15522	186.443	531.639	
261	10	1.17	187.812	543.339	
262	10	1.19012	189.228	555.241	
263	10	1.20553	190.682	567.296	
264	10	1.22123	192.173	579.508	
265	10	1.24264	193.717	591.935	
266	10	1.25908	195.302	604.525	
267	10	1.27588	196.93	617.284	
268	10	1.29884	198.617	630.272	
269	10	1.31652	200.351	643.438	
270	10	1.34075	202.148	656.845	
271	10	1.35946	203.996	670.44	
272	10	1.37866	205.897	684.226	
273	10	1.40507	207.871	698.277	
274	10	1.42554	209.903	712.533	
275	10	1.44663	211.996	726.999	
276	10	1.47579	214.174	741.757	
277	10	1.49852	216.42	756.742	
278	10	1.53007	218.761	772.043	
279	10	1.55477	221.178	787.59	
280	10	1.58047	223.676	803.395	
281	10	1.61644	226.289	819.559	
282	10	1.64485	228.994	836.008	
283	10	1.67466	231.799	852.755	
284	10	1.71688	234.747	869.923	
285	10	1.75069	237.811	887.43	
286	10	1.78661	241.003	905.296	
287	10	1.83843	244.383	923.681	
288	10	1.88079	247.921	942.489	
289	10	1.94314	251.696	961.92	
290	10	1.99539	255.678	981.874	
291	10	2.05375	259.896	1002.41	
292	10	2.14441	264.494	1023.86	
293	10	2.22621	269.45	1046.12	
294	10	2.32634	274.862	1069.38	
295	10	2.51213	281.173	1094.5	
296	11	2.74777	288.723	1124.73	

Data Set Standard Deviation = 4.7369

Numerator = 1.26501e+006
Denominator = 1.91114e+006
W Statistic = 0.661916 = 1.26501e+006 / 1.91114e+006

5% Critical value of 0.976 exceeds 0.661916
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.661916
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Cobalt

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.811459
0.811459 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.003367	-2.747773	9	348.683	
2	0	0.00673401	-2.512133	9	337.176	
3	0	0.010101	-2.326343	9	328.103	
4	0	0.013468	-2.226213	9	323.213	
5	0	0.016835	-2.144413	9	319.219	
6	0	0.020202	-2.053753	9	314.791	
7	0.039	0.023569	-1.995394	0.0433	311.942	
8	0.039	0.026936	-1.943144	0.0433	309.39	
9	0.039	0.030303	-1.880794	0.0433	306.345	
10	0.039	0.03367	-1.838434	0.0433	304.276	
11	0.039	0.037037	-1.786614	0.0433	301.746	
12	0.039	0.040404	-1.750694	0.0433	299.992	
13	0.039	0.043771	-1.716884	0.0433	298.341	
14	0.039	0.047138	-1.674664	0.0433	296.279	
15	0.039	0.0505051	-1.644854	0.0433	294.824	
16	0.078	0.0538721	-1.616444	1.0865	293.436	
17	0.08	0.0572391	-1.580474	1.14	291.679	
18	0.081	0.0606061	-1.554774	1.1668	290.425	
19	0.098	0.0639731	-1.530074	1.6215	289.218	
20	0.11	0.0673401	-1.498524	1.9425	287.677	
21	0.11	0.0707071	-1.475794	1.9425	286.568	
22	0.13	0.0740741	-1.446634	2.4775	285.144	
23	0.13	0.0774411	-1.425544	2.4775	284.114	
24	0.13	0.0808081	-1.405074	2.4775	283.114	
25	0.13	0.0841751	-1.378664	2.4775	281.824	
26	0.13	0.0875421	-1.359464	2.4775	280.887	
27	0.13	0.0909091	-1.340754	2.4775	279.974	
28	0.13	0.0942761	-1.316524	2.4775	278.79	
29	0.14	0.0976431	-1.298844	2.745	277.926	
30	0.15	0.10101	-1.275884	3.0125	276.805	
31	0.15	0.104377	-1.259084	3.0125	275.985	
32	0.15	0.107744	-1.242644	3.0125	275.182	
33	0.15	0.111111	-1.221234	3.0125	274.137	
34	0.15	0.114478	-1.205534	3.0125	273.37	
35	0.16	0.117845	-1.190124	3.28	272.617	
36	0.16	0.121212	-1.17	43.28	271.635	
37	0.16	0.124579	-1.155224	3.28	270.913	
38	0.16	0.127946	-1.140694	3.28	270.204	
39	0.16	0.131313	-1.121684	3.28	269.275	
40	0.16	0.13468	-1.107684	3.28	268.592	
41	0.17	0.138047	-1.089354	3.5475	267.697	
42	0.17	0.141414	-1.075844	3.5475	267.037	
43	0.17	0.144781	-1.062524	3.5475	266.386	
44	0.18	0.148148	-1.045054	3.815	265.533	
45	0.18	0.151515	-1.032154	3.815	264.904	
46	0.18	0.154882	-1.019434	3.815	264.282	
47	0.19	0.158249	-1.002714	4.0825	263.466	
48	0.19	0.161616	-0.990356	44.0825	262.862	

49	0.19	0.164983	-0.978	154.0825	262.266
50	0.2	0.16835	-0.9621	44.35	261.483
51	0.2	0.171717	-0.950222	44.35	260.903
52	0.2	0.175084	-0.934	594.35	260.139
53	0.21	0.178451	-0.923014	44.6175	259.574
54	0.22	0.181818	-0.911562	44.885	259.015
55	0.23	0.185185	-0.896473	45.1525	258.278
56	0.23	0.188552	-0.885291	45.1525	257.732
57	0.24	0.191919	-0.874218	45.42	257.191
58	0.24	0.195286	-0.859618	45.42	256.478
59	0.24	0.198653	-0.848786	45.42	255.949
60	0.25	0.20202	-0.834498	45.6875	255.251
61	0.25	0.205387	-0.823893	45.6875	254.733
62	0.25	0.208754	-0.813379	45.6875	254.22
63	0.26	0.212121	-0.7995	45.955	253.542
64	0.26	0.215488	-0.789191	45.955	253.039
65	0.26	0.218855	-0.778966	45.955	252.54
66	0.26	0.222222	-0.765456	45.955	251.88
67	0.27	0.225589	-0.755415	46.2225	251.389
68	0.27	0.228956	-0.745449	46.2225	250.903
69	0.29	0.232323	-0.732275	46.7575	250.259
70	0.29	0.23569	-0.722479	46.7575	249.781
71	0.3	0.239057	-0.709522	47.025	249.148
72	0.32	0.242424	-0.699883	47.56	248.678
73	0.33	0.245791	-0.690309	47.8275	248.21
74	0.41	0.249158	-0.677639	49.9675	247.591
75	0.41	0.252525	-0.668209	49.9675	247.131
76	0.42	0.255892	-0.658838	50.235	246.673
77	0.42	0.259259	-0.646431	50.235	246.067
78	0.43	0.262626	-0.637192	50.5025	245.616
79	0.44	0.265993	-0.628006	50.77	245.168
80	0.45	0.26936	-0.615839	51.0375	244.573
81	0.45	0.272727	-0.606775	51.0375	244.131
82	0.46	0.276094	-0.594766	51.305	243.544
83	0.47	0.279461	-0.585815	51.5725	243.107
84	0.51	0.282828	-0.576911	52.6425	242.672
85	0.51	0.286195	-0.565108	52.6425	242.096
86	0.52	0.289562	-0.556308	52.91	241.666
87	0.52	0.292929	-0.547551	52.91	241.239
88	0.53	0.296296	-0.535945	3.1775	240.672
89	0.57	0.299663	-0.527285	4.2475	240.249
90	0.57	0.30303	-0.515791	54.2475	239.688
91	0.58	0.306397	-0.507221	54.515	239.269
92	0.58	0.309764	-0.498687	54.515	238.853
93	0.6	0.313131	-0.487364	55.05	238.3
94	0.61	0.316498	-0.478914	55.3175	237.887
95	0.63	0.319865	-0.470498	55.8525	237.476
96	0.7	0.323232	-0.459327	57.725	236.93
97	0.71	0.326599	-0.450985	57.9925	236.523
98	0.71	0.329966	-0.442676	57.9925	236.117
99	0.71	0.333333	-0.431644	57.9925	235.579
100	0.72	0.3367	-0.423405	58.26	235.176
101	0.75	0.340067	-0.412463	59.0625	234.642
102	0.78	0.343434	-0.404295	9.865	234.243
103	0.83	0.346801	-0.396142	61.2025	233.845
104	0.84	0.350168	-0.385321	61.47	233.317
105	0.87	0.353535	-0.377233	62.2725	232.922
106	0.89	0.356902	-0.369171	62.8075	232.528
107	0.92	0.360269	-0.358459	63.61	232.005
108	0.98	0.363636	-0.350451	65.215	231.614
109	1	0.367003	-0.339816	5.75	231.094
110	1	0.37037	-0.331854	65.75	230.706

111	1	0.373737	-0.323919	65.75	230.318
112	1	0.377104	-0.3133765.75	229.803	
113	1	0.380471	-0.305481	65.75	229.418
114	1.1	0.383838	-0.297612	68.425	229.033
115	1.1	0.387205	-0.287147	68.425	228.522
116	1.2	0.390572	-0.279319	71.1	228.14
117	1.2	0.393939	-0.271509	71.1	227.759
118	1.2	0.397306	-0.2611271.1	227.251	
119	1.3	0.400673	-0.253347	73.775	226.872
120	1.4	0.40404 -0.243007	76.45	226.367	
121	1.4	0.407407	-0.235269	76.45	225.989
122	1.5	0.410774	-0.227545	79.125	225.612
123	1.8	0.414141	-0.217267	87.15	225.11
124	2.7	0.417508	-0.209575	111.225	224.734
125	3	0.420875	-0.201894	119.25	224.359
126	10	0.424242	-0.191671	306.5	223.86
127	10	0.427609	-0.184017	306.5	223.486
128	10	0.430976	-0.176374	306.5	223.113
129	10	0.434343	-0.166199	306.5	222.616
130	10	0.43771 -0.158579	306.5	222.244	
131	10	0.441077	-0.148434	306.5	221.749
132	10	0.444444	-0.140835	306.5	221.377
133	10	0.447811	-0.133244	306.5	221.007
134	10	0.451178	-0.123135	306.5	220.513
135	10	0.454545	-0.115562	306.5	220.143
136	10	0.457912	-0.107995	306.5	219.774
137	10	0.461279	-0.0979139	306.5	219.281
138	10	0.464646	-0.0903606	306.5	218.913
139	10	0.468013	-0.0802981	306.5	218.421
140	10	0.47138 -0.0727562	306.5	218.053	
141	10	0.474747	-0.0652187	306.5	217.685
142	10	0.478114	-0.0551734	306.5	217.194
143	10	0.481481	-0.0476439	306.5	216.827
144	10	0.484848	-0.0401167	306.5	216.459
145	10	0.488215	-0.0300838	306.5	215.969
146	10	0.491582	-0.0225612	306.5	215.602
147	10	0.494949	-0.0150408	306.5	215.234
148	10	0.498316	-0.00501359	306.5	214.745
149	10	0.501684	0.00501359	306.5	214.255
150	10	0.505051	0.0150408	306.5	213.766
151	10	0.508418	0.0225612	306.5	213.398
152	10	0.511785	0.0300838	306.5	213.031
153	10	0.515152	0.0401167	306.5	212.541
154	10	0.518519	0.0476439	306.5	212.173
155	10	0.521886	0.0551734	306.5	211.806
156	10	0.525253	0.0652187	306.5	211.315
157	10	0.52862 0.0727562	306.5	210.947	
158	10	0.531987	0.0802981	306.5	210.579
159	10	0.535354	0.0903606	306.5	210.087
160	10	0.538721	0.0979139	306.5	209.719
161	10	0.542088	0.107995	306.5	209.226
162	10	0.545455	0.115562	306.5	208.857
163	10	0.548822	0.123135	306.5	208.487
164	10	0.552189	0.133244	306.5	207.993
165	10	0.555556	0.140835	306.5	207.623
166	10	0.558923	0.148434	306.5	207.251
167	10	0.56229 0.158579	306.5	206.756	
168	10	0.565657	0.166199	306.5	206.384
169	10	0.569024	0.176374	306.5	205.887
170	10	0.572391	0.184017	306.5	205.514
171	10	0.575758	0.191671	306.5	205.14
172	10	0.579125	0.201894	306.5	204.641

173	10	0.582492	0.209575	306.5	204.266
174	10	0.585859	0.217267	306.5	203.89
175	10	0.589226	0.227545	306.5	203.388
176	10	0.592593	0.235269	306.5	203.011
177	10	0.59596	0.243007	306.5	202.633
178	10	0.599327	0.253347	306.5	202.128
179	10	0.602694	0.26112	306.5	201.749
180	10	0.606061	0.271509	306.5	201.241
181	10	0.609428	0.279319	306.5	200.86
182	10	0.612795	0.287147	306.5	200.478
183	10	0.616162	0.297612	306.5	199.967
184	10	0.619529	0.305481	306.5	199.582
185	10	0.622896	0.31337	306.5	199.197
186	10	0.626263	0.323919	306.5	198.682
187	10	0.62963	0.331854	306.5	198.294
188	10	0.632997	0.33981	306.5	197.906
189	10	0.636364	0.350451	306.5	197.386
190	10	0.639731	0.358459	306.5	196.995
191	10	0.643098	0.369171	306.5	196.472
192	10	0.646465	0.377233	306.5	196.078
193	10	0.649832	0.385321	306.5	195.683
194	10	0.653199	0.396142	306.5	195.155
195	10	0.656566	0.40429	306.5	194.757
196	10	0.659933	0.412463	306.5	194.358
197	10	0.6633	0.423405	306.5	193.824
198	10	0.666667	0.431644	306.5	193.421
199	10	0.670034	0.442676	306.5	192.883
200	10	0.673401	0.450985	306.5	192.477
201	10	0.676768	0.459327	306.5	192.07
202	10	0.680135	0.470498	306.5	191.524
203	10	0.683502	0.478914	306.5	191.113
204	10	0.686869	0.487364	306.5	190.7
205	10	0.690236	0.498687	306.5	190.147
206	10	0.693603	0.507221	306.5	189.731
207	10	0.69697	0.515791	306.5	189.312
208	10	0.700337	0.52728	306.5	188.751
209	10	0.703704	0.53594	306.5	188.328
210	10	0.707071	0.547551	306.5	187.761
211	10	0.710438	0.556308	306.5	187.334
212	10	0.713805	0.565108	306.5	186.904
213	10	0.717172	0.576911	306.5	186.328
214	10	0.720539	0.585815	306.5	185.893
215	10	0.723906	0.594766	306.5	185.456
216	10	0.727273	0.606775	306.5	184.869
217	10	0.73064	0.615839	306.5	184.427
218	10	0.734007	0.628006	306.5	183.832
219	10	0.737374	0.637192	306.5	183.384
220	10	0.740741	0.646431	306.5	182.933
221	10	0.744108	0.658838	306.5	182.327
222	10	0.747475	0.668209	306.5	181.869
223	10	0.750842	0.677639	306.5	181.409
224	10	0.754209	0.690309	306.5	180.79
225	10	0.757576	0.699883	306.5	180.322
226	10	0.760943	0.709522	306.5	179.852
227	10	0.76431	0.722479	306.5	179.219
228	10	0.767677	0.732275	306.5	178.741
229	10	0.771044	0.745449	306.5	178.097
230	10	0.774411	0.755415	306.5	177.611
231	10	0.777778	0.765456	306.5	177.12
232	10	0.781145	0.778966	306.5	176.46
233	10	0.784512	0.789191	306.5	175.961
234	10	0.787879	0.7995	306.5	175.458

235	10	0.791246	0.813379	306.5	174.78
236	10	0.794613	0.823893	306.5	174.267
237	10	0.79798	0.834498	306.5	173.749
238	10	0.801347	0.848786	306.5	173.051
239	10	0.804714	0.859618	306.5	172.522
240	10	0.808081	0.874218	306.5	171.809
241	10	0.811448	0.885291	306.5	171.268
242	10	0.814815	0.896473	306.5	170.722
243	10	0.818182	0.911562	306.5	169.985
244	10	0.821549	0.923014	306.5	169.426
245	10	0.824916	0.93459	306.5	168.861
246	10	0.828283	0.950222	306.5	168.097
247	10	0.83165	0.9621	306.5	167.517
248	10	0.835017	0.97815	306.5	166.734
249	10	0.838384	0.990356	306.5	166.138
250	10	0.841751	1.00271	306.5	165.534
251	10	0.845118	1.01943	306.5	164.718
252	10	0.848485	1.03215	306.5	164.096
253	10	0.851852	1.04505	306.5	163.467
254	10	0.855219	1.06252	306.5	162.614
255	10	0.858586	1.07584	306.5	161.963
256	10	0.861953	1.08935	306.5	161.303
257	10	0.86532	1.10768	306.5	160.408
258	10	0.868687	1.12168	306.5	159.725
259	10	0.872054	1.14069	306.5	158.796
260	10	0.875421	1.15522	306.5	158.087
261	10	0.878788	1.17	306.5	157.365
262	10	0.882155	1.19012	306.5	156.383
263	10	0.885522	1.20553	306.5	155.63
264	10	0.888889	1.22123	306.5	154.863
265	10	0.892256	1.24264	306.5	153.818
266	10	0.895623	1.25908	306.5	153.015
267	10	0.89899	1.27588	306.5	152.195
268	10	0.902357	1.29884	306.5	151.074
269	10	0.905724	1.31652	306.5	150.21
270	10	0.909091	1.34075	306.5	149.026
271	10	0.912458	1.35946	306.5	148.113
272	10	0.915825	1.37866	306.5	147.176
273	10	0.919192	1.40507	306.5	145.886
274	10	0.922559	1.42554	306.5	144.886
275	10	0.925926	1.44663	306.5	143.856
276	10	0.929293	1.47579	306.5	142.432
277	10	0.93266	1.49852	306.5	141.323
278	10	0.936027	1.53007	306.5	139.782
279	10	0.939394	1.55477	306.5	138.575
280	10	0.942761	1.58047	306.5	137.321
281	10	0.946128	1.61644	306.5	135.564
282	10	0.949495	1.64485	306.5	134.176
283	10	0.952862	1.67466	306.5	132.721
284	10	0.956229	1.71688	306.5	130.659
285	10	0.959596	1.75069	306.5	129.008
286	10	0.962963	1.78661	306.5	127.254
287	10	0.96633	1.83843	306.5	124.724
288	10	0.969697	1.88079	306.5	122.655
289	10	0.973064	1.94314	306.5	119.61
290	10	0.976431	1.99539	306.5	117.058
291	10	0.979798	2.05375	306.5	114.209
292	10	0.983165	2.14441	306.5	109.781
293	10	0.986532	2.22621	306.5	105.787
294	10	0.989899	2.32634	306.5	100.897
295	10	0.993266	2.51213	306.5	91.8241
296	11	0.996633	2.74777	333.25	80.3175

Shapiro-Francia Test of Normality

Parameter: Cobalt

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.24419	-2.74777	7.55021	8.91428
2	-3.24419	-2.51213	13.861	17.0641
3	-3.24419	-2.32634	19.2729	24.6112
4	-3.24419	-2.22621	24.2289	31.8335
5	-3.24419	-2.14441	28.8274	38.7903
6	-3.24419	-2.05375	33.0453	45.4531
7	-3.24419	-1.99539	37.0269	51.9266
8	-3.24419	-1.94314	40.8026	58.2305
9	-3.24419	-1.88079	44.34	64.3321
10	-2.55105	-1.83843	47.7198	69.022
11	-2.52573	-1.78661	50.9118	73.5345
12	-2.51331	-1.75069	53.9767	77.9345
13	-2.32279	-1.71688	56.9244	81.9225
14	-2.20727	-1.67466	59.7289	85.6189
15	-2.20727	-1.64485	62.4344	89.2496
16	-2.04022	-1.61644	65.0473	92.5474
17	-2.04022	-1.58047	67.5452	95.7719
18	-2.04022	-1.55477	69.9625	98.944
19	-2.04022	-1.53007	72.3036	102.066
20	-2.04022	-1.49852	74.5491	105.123
21	-2.04022	-1.47579	76.7271	108.134
22	-2.04022	-1.44663	78.8198	111.085
23	-1.96611	-1.42554	80.852	113.888
24	-1.89712	-1.40507	82.8262	116.554
25	-1.89712	-1.37866	84.7269	119.169
26	-1.89712	-1.35946	86.5751	121.748
27	-1.89712	-1.34075	88.3727	124.292
28	-1.89712	-1.31652	90.1059	126.789
29	-1.83258	-1.29884	91.7929	129.17
30	-1.83258	-1.27588	93.4208	131.508
31	-1.83258	-1.25908	95.006	133.815
32	-1.83258	-1.24264	96.5502	136.092
33	-1.83258	-1.22123	98.0416	138.33
34	-1.83258	-1.20553	99.4949	140.54
35	-1.77196	-1.19012	100.911	142.649
36	-1.77196	-1.17	102.28	144.722
37	-1.77196	-1.15522	103.615	146.769
38	-1.7148	-1.14069	104.916	148.725
39	-1.7148	-1.12168	106.174	150.648
40	-1.7148	-1.10768	107.401	152.548
41	-1.66073	-1.08935	108.588	154.357
42	-1.66073	-1.07584	109.745	156.143
43	-1.66073	-1.06252	110.874	157.908
44	-1.60944	-1.04505	111.966	159.59
45	-1.60944	-1.03215	113.032	161.251
46	-1.60944	-1.01943	114.071	162.892
47	-1.56065	-1.00271	115.076	164.457
48	-1.51413	-0.990356	116.057	165.956
49	-1.46968	-0.97815	117.014	167.394
50	-1.46968	-0.9621	117.939	168.808
51	-1.42712	-0.950222	118.842	170.164

52	-1.42712	-0.93459	119.716	171.498
53	-1.42712	-0.923014	120.568	172.815
54	-1.38629	-0.911562	121.399	174.079
55	-1.38629	-0.896473	122.202	175.321
56	-1.38629	-0.885291	122.986	176.549
57	-1.34707	-0.874218	123.75	177.726
58	-1.34707	-0.859618	124.489	178.884
59	-1.34707	-0.848786	125.21	180.028
60	-1.34707	-0.834498	125.906	181.152
61	-1.30933	-0.823893	126.585	182.231
62	-1.30933	-0.813379	127.247	183.295
63	-1.23787	-0.7995	127.886	184.285
64	-1.23787	-0.789191	128.509	185.262
65	-1.20397	-0.778966	129.115	186.2
66	-1.13943	-0.765456	129.701	187.072
67	-1.10866	-0.755415	130.272	187.91
68	-0.891598	-0.745449	130.828	188.574
69	-0.891598	-0.732275	131.364	189.227
70	-0.867501	-0.722479	131.886	189.854
71	-0.867501	-0.709522	132.389	190.469
72	-0.84397	-0.699883	132.879	191.06
73	-0.820981	-0.690309	133.356	191.627
74	-0.798508	-0.677639	133.815	192.168
75	-0.798508	-0.668209	134.261	192.702
76	-0.776529	-0.658838	134.695	193.213
77	-0.755023	-0.646431	135.113	193.701
78	-0.673345	-0.637192	135.519	194.13
79	-0.673345	-0.628006	135.914	194.553
80	-0.653926	-0.615839	136.293	194.956
81	-0.653926	-0.606775	136.661	195.353
82	-0.634878	-0.594766	137.015	195.73
83	-0.562119	-0.585815	137.358	196.06
84	-0.562119	-0.576911	137.691	196.384
85	-0.544727	-0.565108	138.01	196.692
86	-0.544727	-0.556308	138.32	196.995
87	-0.510826	-0.547551	138.619	197.274
88	-0.494296	-0.53594	138.907	197.539
89	-0.462035	-0.52728	139.185	197.783
90	-0.356675	-0.515791	139.451	197.967
91	-0.34249	-0.507221	139.708	198.141
92	-0.34249	-0.498687	139.957	198.311
93	-0.34249	-0.487364	140.194	198.478
94	-0.328504	-0.478914	140.424	198.636
95	-0.287682	-0.470498	140.645	198.771
96	-0.248461	-0.459327	140.856	198.885
97	-0.18633	-0.450985	141.059	198.969
98	-0.174353	-0.442676	141.255	199.046
99	-0.139262	-0.431644	141.442	199.106
100	-0.116534	-0.423405	141.621	199.156
101	-0.0833816	-0.412463	141.791	199.19
102	-0.0202027	-0.40429	141.954	199.198
103	0	-0.396142	142.111	199.198
104	0	-0.385321	142.26	199.198
105	0	-0.377233	142.402	199.198
106	0	-0.369171	142.538	199.198
107	0	-0.358459	142.667	199.198
108	0	-0.350451	142.79	199.198
109	0	-0.33981	142.905	199.198
110	0	-0.331854	143.015	199.198
111	0	-0.323919	143.12	199.198
112	0	-0.31337	143.218	199.198
113	0	-0.305481	143.312	199.198

114	0.0953102	-0.297612	143.4	199.17
115	0.0953102	-0.287147	143.483	199.143
116	0.182322	-0.279319	143.561	199.092
117	0.182322	-0.271509	143.635	199.042
118	0.182322	-0.26112	143.703	198.995
119	0.262364	-0.253347	143.767	198.928
120	0.336472	-0.243007	143.826	198.846
121	0.336472	-0.235269	143.881	198.767
122	0.405465	-0.227545	143.933	198.675
123	0.587787	-0.217267	143.98	198.547
124	0.993252	-0.209575	144.024	198.339
125	1.09861	-0.201894	144.065	198.117
126	2.30259	-0.191671	144.102	197.676
127	2.30259	-0.184017	144.136	197.252
128	2.30259	-0.176374	144.167	196.846
129	2.30259	-0.166199	144.194	196.463
130	2.30259	-0.158579	144.219	196.098
131	2.30259	-0.148434	144.241	195.756
132	2.30259	-0.140835	144.261	195.432
133	2.30259	-0.133244	144.279	195.125
134	2.30259	-0.123135	144.294	194.842
135	2.30259	-0.115562	144.308	194.576
136	2.30259	-0.107995	144.319	194.327
137	2.30259	-0.0979139	144.329	194.102
138	2.30259	-0.0903606	144.337	193.894
139	2.30259	-0.0802981	144.343	193.709
140	2.30259	-0.0727562	144.349	193.541
141	2.30259	-0.0652187	144.353	193.391
142	2.30259	-0.0551734	144.356	193.264
143	2.30259	-0.0476439	144.358	193.154
144	2.30259	-0.0401167	144.36	193.062
145	2.30259	-0.0300838	144.361	192.993
146	2.30259	-0.0225612	144.361	192.941
147	2.30259	-0.0150408	144.362	192.906
148	2.30259	-0.00501359	144.362	192.894
149	2.30259	0.00501359	144.362	192.906
150	2.30259	0.0150408	144.362	192.941
151	2.30259	0.0225612	144.362	192.993
152	2.30259	0.0300838	144.363	193.062
153	2.30259	0.0401167	144.365	193.154
154	2.30259	0.0476439	144.367	193.264
155	2.30259	0.0551734	144.37	193.391
156	2.30259	0.0652187	144.374	193.541
157	2.30259	0.0727562	144.38	193.709
158	2.30259	0.0802981	144.386	193.894
159	2.30259	0.0903606	144.394	194.102
160	2.30259	0.0979139	144.404	194.327
161	2.30259	0.107995	144.416	194.576
162	2.30259	0.115562	144.429	194.842
163	2.30259	0.123135	144.444	195.125
164	2.30259	0.133244	144.462	195.432
165	2.30259	0.140835	144.482	195.756
166	2.30259	0.148434	144.504	196.098
167	2.30259	0.158579	144.529	196.463
168	2.30259	0.166199	144.557	196.846
169	2.30259	0.176374	144.588	197.252
170	2.30259	0.184017	144.621	197.676
171	2.30259	0.191671	144.658	198.117
172	2.30259	0.201894	144.699	198.582
173	2.30259	0.209575	144.743	199.065
174	2.30259	0.217267	144.79	199.565
175	2.30259	0.227545	144.842	200.089

176	2.30259	0.235269		144.897	200.631
177	2.30259	0.243007		144.956	201.19
178	2.30259	0.253347		145.02	201.774
179	2.30259	0.26112	145.089	202.375	
180	2.30259	0.271509		145.162	203
181	2.30259	0.279319		145.24	203.643
182	2.30259	0.287147		145.323	204.304
183	2.30259	0.297612		145.411	204.99
184	2.30259	0.305481		145.505	205.693
185	2.30259	0.31337	145.603	206.415	
186	2.30259	0.323919		145.708	207.16
187	2.30259	0.331854		145.818	207.924
188	2.30259	0.33981	145.933	208.707	
189	2.30259	0.350451		146.056	209.514
190	2.30259	0.358459		146.185	210.339
191	2.30259	0.369171		146.321	211.189
192	2.30259	0.377233		146.463	212.058
193	2.30259	0.385321		146.612	212.945
194	2.30259	0.396142		146.769	213.857
195	2.30259	0.40429	146.932	214.788	
196	2.30259	0.412463		147.102	215.738
197	2.30259	0.423405		147.282	216.713
198	2.30259	0.431644		147.468	217.707
199	2.30259	0.442676		147.664	218.726
200	2.30259	0.450985		147.867	219.764
201	2.30259	0.459327		148.078	220.822
202	2.30259	0.470498		148.3	221.905
203	2.30259	0.478914		148.529	223.008
204	2.30259	0.487364		148.767	224.13
205	2.30259	0.498687		149.015	225.279
206	2.30259	0.507221		149.272	226.447
207	2.30259	0.515791		149.539	227.634
208	2.30259	0.52728	149.817	228.848	
209	2.30259	0.53594	150.104	230.082	
210	2.30259	0.547551		150.404	231.343
211	2.30259	0.556308		150.713	232.624
212	2.30259	0.565108		151.032	233.925
213	2.30259	0.576911		151.365	235.254
214	2.30259	0.585815		151.708	236.603
215	2.30259	0.594766		152.062	237.972
216	2.30259	0.606775		152.43	239.369
217	2.30259	0.615839		152.81	240.787
218	2.30259	0.628006		153.204	242.233
219	2.30259	0.637192		153.61	243.701
220	2.30259	0.646431		154.028	245.189
221	2.30259	0.658838		154.462	246.706
222	2.30259	0.668209		154.908	248.245
223	2.30259	0.677639		155.368	249.805
224	2.30259	0.690309		155.844	251.394
225	2.30259	0.699883		156.334	253.006
226	2.30259	0.709522		156.837	254.64
227	2.30259	0.722479		157.359	256.303
228	2.30259	0.732275		157.896	257.989
229	2.30259	0.745449		158.451	259.706
230	2.30259	0.755415		159.022	261.445
231	2.30259	0.765456		159.608	263.208
232	2.30259	0.778966		160.215	265.001
233	2.30259	0.789191		160.837	266.819
234	2.30259	0.7995	161.477	268.66	
235	2.30259	0.813379		162.138	270.532
236	2.30259	0.823893		162.817	272.43
237	2.30259	0.834498		163.513	274.351

238	2.30259	0.848786		164.234	276.305
239	2.30259	0.859618		164.973	278.285
240	2.30259	0.874218		165.737	280.298
241	2.30259	0.885291		166.521	282.336
242	2.30259	0.896473		167.325	284.4
243	2.30259	0.911562		168.155	286.499
244	2.30259	0.923014		169.007	288.625
245	2.30259	0.93459	169.881	290.777	
246	2.30259	0.950222		170.784	292.965
247	2.30259	0.9621	171.709	295.18	
248	2.30259	0.97815	172.666	297.432	
249	2.30259	0.990356		173.647	299.713
250	2.30259	1.00271	174.652	302.021	
251	2.30259	1.01943	175.692	304.369	
252	2.30259	1.03215	176.757	306.745	
253	2.30259	1.04505	177.849	309.152	
254	2.30259	1.06252	178.978	311.598	
255	2.30259	1.07584	180.136	314.075	
256	2.30259	1.08935	181.322	316.584	
257	2.30259	1.10768	182.549	319.134	
258	2.30259	1.12168	183.807	321.717	
259	2.30259	1.14069	185.108	324.344	
260	2.30259	1.15522	186.443	327.004	
261	2.30259	1.17	187.812	329.698	
262	2.30259	1.19012	189.228	332.438	
263	2.30259	1.20553	190.682	335.214	
264	2.30259	1.22123	192.173	338.026	
265	2.30259	1.24264	193.717	340.887	
266	2.30259	1.25908	195.302	343.786	
267	2.30259	1.27588	196.93	346.724	
268	2.30259	1.29884	198.617	349.715	
269	2.30259	1.31652	200.351	352.746	
270	2.30259	1.34075	202.148	355.833	
271	2.30259	1.35946	203.996	358.964	
272	2.30259	1.37866	205.897	362.138	
273	2.30259	1.40507	207.871	365.373	
274	2.30259	1.42554	209.903	368.656	
275	2.30259	1.44663	211.996	371.987	
276	2.30259	1.47579	214.174	375.385	
277	2.30259	1.49852	216.42	378.835	
278	2.30259	1.53007	218.761	382.358	
279	2.30259	1.55477	221.178	385.938	
280	2.30259	1.58047	223.676	389.578	
281	2.30259	1.61644	226.289	393.3	
282	2.30259	1.64485	228.994	397.087	
283	2.30259	1.67466	231.799	400.943	
284	2.30259	1.71688	234.747	404.896	
285	2.30259	1.75069	237.811	408.927	
286	2.30259	1.78661	241.003	413.041	
287	2.30259	1.83843	244.383	417.274	
288	2.30259	1.88079	247.921	421.605	
289	2.30259	1.94314	251.696	426.079	
290	2.30259	1.99539	255.678	430.674	
291	2.30259	2.05375	259.896	435.403	
292	2.30259	2.14441	264.494	440.34	
293	2.30259	2.22621	269.45	445.466	
294	2.30259	2.32634	274.862	450.823	
295	2.30259	2.51213	281.173	456.607	
296	2.3979	2.74777	288.723	463.196	

Data Set Standard Deviation = 1.82417

Numerator = 214551
Denominator = 283424
W Statistic = 0.756996 = 214551 / 283424

5% Critical value of 0.976 exceeds 0.756996
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.756996
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Cobalt

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.868601
0.868601 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-3.24419	0.003367	-2.74777	96.7652	348.683
2	-3.24419	0.00673401	-2.51213	96.7652	337.176
3	-3.24419	0.010101	-2.32634	96.7652	328.103
4	-3.24419	0.013468	-2.22621	96.7652	323.213
5	-3.24419	0.016835	-2.14441	96.7652	319.219
6	-3.24419	0.020202	-2.05375	96.7652	314.791
7	-3.24419	0.023569	-1.99539	96.7652	311.942
8	-3.24419	0.026936	-1.94314	96.7652	309.39
9	-3.24419	0.030303	-1.88079	96.7652	306.345
10	-2.55105	0.03367	-1.83843	149.741	304.276
11	-2.52573	0.037037	-1.78661	151.676	301.746
12	-2.51331	0.040404	-1.75069	152.626	299.992
13	-2.32279	0.043771	-1.71688	167.187	298.341
14	-2.20727	0.047138	-1.67466	176.015	296.279
15	-2.20727	0.0505051	-1.64485	176.015	294.824
16	-2.04022	0.0538721	-1.61644	188.783	293.436
17	-2.04022	0.0572391	-1.58047	188.783	291.679
18	-2.04022	0.0606061	-1.55477	188.783	290.425
19	-2.04022	0.0639731	-1.53007	188.783	289.218
20	-2.04022	0.0673401	-1.49852	188.783	287.677
21	-2.04022	0.0707071	-1.47579	188.783	286.568
22	-2.04022	0.0740741	-1.44663	188.783	285.144
23	-1.96611	0.0774411	-1.42554	194.447	284.114
24	-1.89712	0.0808081	-1.40507	199.72	283.114
25	-1.89712	0.0841751	-1.37866	199.72	281.824
26	-1.89712	0.0875421	-1.35946	199.72	280.887
27	-1.89712	0.0909091	-1.34075	199.72	279.974
28	-1.89712	0.0942761	-1.31652	199.72	278.79
29	-1.83258	0.0976431	-1.29884	204.653	277.926
30	-1.83258	0.10101	-1.27588	204.653	276.805
31	-1.83258	0.104377	-1.25908	204.653	275.985
32	-1.83258	0.107744	-1.24264	204.653	275.182
33	-1.83258	0.111111	-1.22123	204.653	274.137
34	-1.83258	0.114478	-1.20553	204.653	273.37
35	-1.77196	0.117845	-1.19012	209.286	272.617
36	-1.77196	0.121212	-1.17	209.286	271.635
37	-1.77196	0.124579	-1.15522	209.286	270.913
38	-1.7148	0.127946	-1.14069	213.655	270.204
39	-1.7148	0.131313	-1.12168	213.655	269.275
40	-1.7148	0.13468	-1.10768	213.655	268.592
41	-1.66073	0.138047	-1.08935	217.787	267.697
42	-1.66073	0.141414	-1.07584	217.787	267.037
43	-1.66073	0.144781	-1.06252	217.787	266.386
44	-1.60944	0.148148	-1.04505	221.707	265.533
45	-1.60944	0.151515	-1.03215	221.707	264.904
46	-1.60944	0.154882	-1.01943	221.707	264.282
47	-1.56065	0.158249	-1.00271	225.436	263.466
48	-1.51413	0.161616	-0.990356	228.992	262.862

49	-1.46968	0.164983	-0.97815	232.389	262.266
50	-1.46968	0.16835	-0.9621	232.389	261.483
51	-1.42712	0.171717	-0.950222	235.642	260.903
52	-1.42712	0.175084	-0.93459	235.642	260.139
53	-1.42712	0.178451	-0.923014	235.642	259.574
54	-1.38629	0.181818	-0.911562	238.762	259.015
55	-1.38629	0.185185	-0.896473	238.762	258.278
56	-1.38629	0.188552	-0.885291	238.762	257.732
57	-1.34707	0.191919	-0.874218	241.759	257.191
58	-1.34707	0.195286	-0.859618	241.759	256.478
59	-1.34707	0.198653	-0.848786	241.759	255.949
60	-1.34707	0.20202	-0.834498	241.759	255.251
61	-1.30933	0.205387	-0.823893	244.644	254.733
62	-1.30933	0.208754	-0.813379	244.644	254.22
63	-1.23787	0.212121	-0.7995	250.105	253.542
64	-1.23787	0.215488	-0.789191	250.105	253.039
65	-1.20397	0.218855	-0.778966	252.696	252.54
66	-1.13943	0.222222	-0.765456	257.629	251.88
67	-1.10866	0.225589	-0.755415	259.981	251.389
68	-0.891598	0.228956	-0.745449	276.571	250.903
69	-0.891598	0.232323	-0.732275	276.571	250.259
70	-0.867501	0.23569	-0.722479	278.412	249.781
71	-0.867501	0.239057	-0.709522	278.412	249.148
72	-0.84397	0.242424	-0.699883	280.211	248.678
73	-0.820981	0.245791	-0.690309	281.968	248.21
74	-0.798508	0.249158	-0.677639	283.685	247.591
75	-0.798508	0.252525	-0.668209	283.685	247.131
76	-0.776529	0.255892	-0.658838	285.365	246.673
77	-0.755023	0.259259	-0.646431	287.009	246.067
78	-0.673345	0.262626	-0.637192	293.252	245.616
79	-0.673345	0.265993	-0.628006	293.252	245.168
80	-0.653926	0.26936	-0.615839	294.736	244.573
81	-0.653926	0.272727	-0.606775	294.736	244.131
82	-0.634878	0.276094	-0.594766	296.191	243.544
83	-0.562119	0.279461	-0.585815	301.752	243.107
84	-0.562119	0.282828	-0.576911	301.752	242.672
85	-0.544727	0.286195	-0.565108	303.082	242.096
86	-0.544727	0.289562	-0.556308	303.082	241.666
87	-0.510826	0.292929	-0.547551	305.673	241.239
88	-0.494296	0.296296	-0.53594	306.936	240.672
89	-0.462035	0.299663	-0.52728	309.402	240.249
90	-0.356675	0.30303	-0.515791	317.454	239.688
91	-0.34249	0.306397	-0.507221	318.538	239.269
92	-0.34249	0.309764	-0.498687	318.538	238.853
93	-0.34249	0.313131	-0.487364	318.538	238.3
94	-0.328504	0.316498	-0.478914	319.607	237.887
95	-0.287682	0.319865	-0.470498	322.727	237.476
96	-0.248461	0.323232	-0.459327	325.725	236.93
97	-0.18633	0.326599	-0.450985	330.473	236.523
98	-0.174353	0.329966	-0.442676	331.389	236.117
99	-0.139262	0.333333	-0.431644	334.071	235.579
100	-0.116534	0.3367	-0.423405	335.808	235.176
101	-0.0833816	0.340067	-0.412463	338.342	234.642
102	-0.0202027	0.343434	-0.40429	343.17	234.243
103	0	0.346801	-0.396142	344.714	233.845
104	0	0.350168	-0.385321	344.714	233.317
105	0	0.353535	-0.377233	344.714	232.922
106	0	0.356902	-0.369171	344.714	232.528
107	0	0.360269	-0.358459	344.714	232.005
108	0	0.363636	-0.350451	344.714	231.614
109	0	0.367003	-0.33981	344.714	231.094
110	0	0.37037	-0.331854	344.714	230.706

111	0	0.373737	-0.323919	344.714	230.318
112	0	0.377104	-0.31337	344.714	229.803
113	0	0.380471	-0.305481	344.714	229.418
114	0.0953102	0.383838	-0.297612	351.999	229.033
115	0.0953102	0.387205	-0.287147	351.999	228.522
116	0.182322	0.390572	-0.279319	358.649	228.14
117	0.182322	0.393939	-0.271509	358.649	227.759
118	0.182322	0.397306	-0.26112	358.649	227.251
119	0.262364	0.400673	-0.253347	364.766	226.872
120	0.336472	0.40404	-0.243007	370.43	226.367
121	0.336472	0.407407	-0.235269	370.43	225.989
122	0.405465	0.410774	-0.227545	375.703	225.612
123	0.587787	0.414141	-0.217267	389.638	225.11
124	0.993252	0.417508	-0.209575	420.627	224.734
125	1.09861	0.420875	-0.201894	428.68	224.359
126	2.30259	0.424242	-0.191671	520.698	223.86
127	2.30259	0.427609	-0.184017	520.698	223.486
128	2.30259	0.430976	-0.176374	520.698	223.113
129	2.30259	0.434343	-0.166199	520.698	222.616
130	2.30259	0.43771	-0.158579	520.698	222.244
131	2.30259	0.441077	-0.148434	520.698	221.749
132	2.30259	0.444444	-0.140835	520.698	221.377
133	2.30259	0.447811	-0.133244	520.698	221.007
134	2.30259	0.451178	-0.123135	520.698	220.513
135	2.30259	0.454545	-0.115562	520.698	220.143
136	2.30259	0.457912	-0.107995	520.698	219.774
137	2.30259	0.461279	-0.0979139	520.698	219.281
138	2.30259	0.464646	-0.0903606	520.698	218.913
139	2.30259	0.468013	-0.0802981	520.698	218.421
140	2.30259	0.47138	-0.0727562	520.698	218.053
141	2.30259	0.474747	-0.0652187	520.698	217.685
142	2.30259	0.478114	-0.0551734	520.698	217.194
143	2.30259	0.481481	-0.0476439	520.698	216.827
144	2.30259	0.484848	-0.0401167	520.698	216.459
145	2.30259	0.488215	-0.0300838	520.698	215.969
146	2.30259	0.491582	-0.0225612	520.698	215.602
147	2.30259	0.494949	-0.0150408	520.698	215.234
148	2.30259	0.498316	-0.00501359	520.698	214.745
149	2.30259	0.501684	0.00501359	520.698	214.255
150	2.30259	0.505051	0.0150408	520.698	213.766
151	2.30259	0.508418	0.0225612	520.698	213.398
152	2.30259	0.511785	0.0300838	520.698	213.031
153	2.30259	0.515152	0.0401167	520.698	212.541
154	2.30259	0.518519	0.0476439	520.698	212.173
155	2.30259	0.521886	0.0551734	520.698	211.806
156	2.30259	0.525253	0.0652187	520.698	211.315
157	2.30259	0.52862	0.0727562	520.698	210.947
158	2.30259	0.531987	0.0802981	520.698	210.579
159	2.30259	0.535354	0.0903606	520.698	210.087
160	2.30259	0.538721	0.0979139	520.698	209.719
161	2.30259	0.542088	0.107995	520.698	209.226
162	2.30259	0.545455	0.115562	520.698	208.857
163	2.30259	0.548822	0.123135	520.698	208.487
164	2.30259	0.552189	0.133244	520.698	207.993
165	2.30259	0.555556	0.140835	520.698	207.623
166	2.30259	0.558923	0.148434	520.698	207.251
167	2.30259	0.56229	0.158579	520.698	206.756
168	2.30259	0.565657	0.166199	520.698	206.384
169	2.30259	0.569024	0.176374	520.698	205.887
170	2.30259	0.572391	0.184017	520.698	205.514
171	2.30259	0.575758	0.191671	520.698	205.14
172	2.30259	0.579125	0.201894	520.698	204.641

173	2.30259	0.582492	0.209575	520.698	204.266
174	2.30259	0.585859	0.217267	520.698	203.89
175	2.30259	0.589226	0.227545	520.698	203.388
176	2.30259	0.592593	0.235269	520.698	203.011
177	2.30259	0.59596	0.243007	520.698	202.633
178	2.30259	0.599327	0.253347	520.698	202.128
179	2.30259	0.602694	0.26112	520.698	201.749
180	2.30259	0.606061	0.271509	520.698	201.241
181	2.30259	0.609428	0.279319	520.698	200.86
182	2.30259	0.612795	0.287147	520.698	200.478
183	2.30259	0.616162	0.297612	520.698	199.967
184	2.30259	0.619529	0.305481	520.698	199.582
185	2.30259	0.622896	0.31337	520.698	199.197
186	2.30259	0.626263	0.323919	520.698	198.682
187	2.30259	0.62963	0.331854	520.698	198.294
188	2.30259	0.632997	0.33981	520.698	197.906
189	2.30259	0.636364	0.350451	520.698	197.386
190	2.30259	0.639731	0.358459	520.698	196.995
191	2.30259	0.643098	0.369171	520.698	196.472
192	2.30259	0.646465	0.377233	520.698	196.078
193	2.30259	0.649832	0.385321	520.698	195.683
194	2.30259	0.653199	0.396142	520.698	195.155
195	2.30259	0.656566	0.40429	520.698	194.757
196	2.30259	0.659933	0.412463	520.698	194.358
197	2.30259	0.6633	0.423405	520.698	193.824
198	2.30259	0.666667	0.431644	520.698	193.421
199	2.30259	0.670034	0.442676	520.698	192.883
200	2.30259	0.673401	0.450985	520.698	192.477
201	2.30259	0.676768	0.459327	520.698	192.07
202	2.30259	0.680135	0.470498	520.698	191.524
203	2.30259	0.683502	0.478914	520.698	191.113
204	2.30259	0.686869	0.487364	520.698	190.7
205	2.30259	0.690236	0.498687	520.698	190.147
206	2.30259	0.693603	0.507221	520.698	189.731
207	2.30259	0.69697	0.515791	520.698	189.312
208	2.30259	0.700337	0.52728	520.698	188.751
209	2.30259	0.703704	0.53594	520.698	188.328
210	2.30259	0.707071	0.547551	520.698	187.761
211	2.30259	0.710438	0.556308	520.698	187.334
212	2.30259	0.713805	0.565108	520.698	186.904
213	2.30259	0.717172	0.576911	520.698	186.328
214	2.30259	0.720539	0.585815	520.698	185.893
215	2.30259	0.723906	0.594766	520.698	185.456
216	2.30259	0.727273	0.606775	520.698	184.869
217	2.30259	0.73064	0.615839	520.698	184.427
218	2.30259	0.734007	0.628006	520.698	183.832
219	2.30259	0.737374	0.637192	520.698	183.384
220	2.30259	0.740741	0.646431	520.698	182.933
221	2.30259	0.744108	0.658838	520.698	182.327
222	2.30259	0.747475	0.668209	520.698	181.869
223	2.30259	0.750842	0.677639	520.698	181.409
224	2.30259	0.754209	0.690309	520.698	180.79
225	2.30259	0.757576	0.699883	520.698	180.322
226	2.30259	0.760943	0.709522	520.698	179.852
227	2.30259	0.76431	0.722479	520.698	179.219
228	2.30259	0.767677	0.732275	520.698	178.741
229	2.30259	0.771044	0.745449	520.698	178.097
230	2.30259	0.774411	0.755415	520.698	177.611
231	2.30259	0.777778	0.765456	520.698	177.12
232	2.30259	0.781145	0.778966	520.698	176.46
233	2.30259	0.784512	0.789191	520.698	175.961
234	2.30259	0.787879	0.7995	520.698	175.458

235	2.30259	0.791246	0.813379	520.698	174.78
236	2.30259	0.794613	0.823893	520.698	174.267
237	2.30259	0.79798	0.834498	520.698	173.749
238	2.30259	0.801347	0.848786	520.698	173.051
239	2.30259	0.804714	0.859618	520.698	172.522
240	2.30259	0.808081	0.874218	520.698	171.809
241	2.30259	0.811448	0.885291	520.698	171.268
242	2.30259	0.814815	0.896473	520.698	170.722
243	2.30259	0.818182	0.911562	520.698	169.985
244	2.30259	0.821549	0.923014	520.698	169.426
245	2.30259	0.824916	0.93459	520.698	168.861
246	2.30259	0.828283	0.950222	520.698	168.097
247	2.30259	0.83165	0.9621	520.698	167.517
248	2.30259	0.835017	0.97815	520.698	166.734
249	2.30259	0.838384	0.990356	520.698	166.138
250	2.30259	0.841751	1.00271	520.698	165.534
251	2.30259	0.845118	1.01943	520.698	164.718
252	2.30259	0.848485	1.03215	520.698	164.096
253	2.30259	0.851852	1.04505	520.698	163.467
254	2.30259	0.855219	1.06252	520.698	162.614
255	2.30259	0.858586	1.07584	520.698	161.963
256	2.30259	0.861953	1.08935	520.698	161.303
257	2.30259	0.86532	1.10768	520.698	160.408
258	2.30259	0.868687	1.12168	520.698	159.725
259	2.30259	0.872054	1.14069	520.698	158.796
260	2.30259	0.875421	1.15522	520.698	158.087
261	2.30259	0.878788	1.17	520.698	157.365
262	2.30259	0.882155	1.19012	520.698	156.383
263	2.30259	0.885522	1.20553	520.698	155.63
264	2.30259	0.888889	1.22123	520.698	154.863
265	2.30259	0.892256	1.24264	520.698	153.818
266	2.30259	0.895623	1.25908	520.698	153.015
267	2.30259	0.89899	1.27588	520.698	152.195
268	2.30259	0.902357	1.29884	520.698	151.074
269	2.30259	0.905724	1.31652	520.698	150.21
270	2.30259	0.909091	1.34075	520.698	149.026
271	2.30259	0.912458	1.35946	520.698	148.113
272	2.30259	0.915825	1.37866	520.698	147.176
273	2.30259	0.919192	1.40507	520.698	145.886
274	2.30259	0.922559	1.42554	520.698	144.886
275	2.30259	0.925926	1.44663	520.698	143.856
276	2.30259	0.929293	1.47579	520.698	142.432
277	2.30259	0.93266	1.49852	520.698	141.323
278	2.30259	0.936027	1.53007	520.698	139.782
279	2.30259	0.939394	1.55477	520.698	138.575
280	2.30259	0.942761	1.58047	520.698	137.321
281	2.30259	0.946128	1.61644	520.698	135.564
282	2.30259	0.949495	1.64485	520.698	134.176
283	2.30259	0.952862	1.67466	520.698	132.721
284	2.30259	0.956229	1.71688	520.698	130.659
285	2.30259	0.959596	1.75069	520.698	129.008
286	2.30259	0.962963	1.78661	520.698	127.254
287	2.30259	0.96633	1.83843	520.698	124.724
288	2.30259	0.969697	1.88079	520.698	122.655
289	2.30259	0.973064	1.94314	520.698	119.61
290	2.30259	0.976431	1.99539	520.698	117.058
291	2.30259	0.979798	2.05375	520.698	114.209
292	2.30259	0.983165	2.14441	520.698	109.781
293	2.30259	0.986532	2.22621	520.698	105.787
294	2.30259	0.989899	2.32634	520.698	100.897
295	2.30259	0.993266	2.51213	520.698	91.8241
296	2.3979	0.996633	2.74777	527.982	80.3175

Kruskal-Wallis Non-Parametric Test

Parameter: Cobalt

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	ND<2.30259	92.5
	3/16/1999	ND<2.30259	92.5
	9/23/1999	ND<2.30259	92.5
	3/14/2000	ND<2.30259	92.5
	9/23/2003	ND<2.30259	92.5
	3/10/2004	ND<2.30259	92.5
	10/12/2004	ND<2.30259	92.5
	4/1/2005	ND<2.30259	92.5
	10/26/2005	ND<2.30259	92.5
	6/19/2006	ND<2.30259	92.5
	11/18/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5
	6/11/2009	-1.42712	226
	11/16/2009	-1.42712	227
	6/30/2010	-1.30933	236
	11/17/2010	-1.23787	238
	7/6/2011	-1.30933	237
	11/22/2011	-1.38629	229
	5/16/2012	-1.34707	232
	11/16/2012	-1.34707	233
	11/16/2013	-1.89712 J	199

Rank Sum = 3444.5
Rank Mean = 143.521

Background Rank Sum = 3444.5
Background Rank Mean = 143.521

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-16	11/18/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5
	6/11/2009	ND<-3.24419 U	92.5
	11/16/2009	-2.52573 J	186
	6/30/2010	-2.32279 J	188
	11/17/2010	-2.55105 J	185
	7/6/2011	-2.04022 J	191
	11/22/2011	ND<-3.24419 U	92.5
	5/16/2012	-1.96611 J	198
	11/16/2012	-2.20727 J	189
	11/16/2013	-0.798508	249

Rank Sum = 2033.5
Rank Mean = 145.25

LMW-6	1/16/1998	ND<2.30259	92.5
	3/16/1999	ND<2.30259	92.5
	9/23/1999	2.3979 J	296
	3/14/2000	ND<2.30259	92.5
	9/23/2003	ND<2.30259	92.5
	3/10/2004	ND<2.30259	92.5
	10/12/2004	ND<2.30259	92.5
	4/1/2005	ND<2.30259	92.5
	10/26/2005	ND<2.30259	92.5
	6/19/2006	ND<2.30259	92.5
	11/18/2006	ND<0 J	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<0 J	92.5
	11/20/2008	ND<2.30259	92.5
	6/11/2009	0.336472	289
	11/16/2009	0.182322	285
	6/30/2010	0.182322	286
	11/17/2010	0.0953102	283
	7/6/2011	-0.328504	269
	11/22/2011	-0.653926	255
	5/16/2012	-0.776529	251
	11/16/2012	-0.891598	243
	11/16/2013	-1.10866	242

Rank Sum = 3994
Rank Mean = 166.417

LMW-9S	11/18/2006	0 J	278
	6/2/2007	0 J	279
	11/15/2007	ND<2.30259	92.5
	5/20/2008	0 J	280
	11/20/2008	ND<2.30259	92.5
	6/11/2009	-2.04022 J	192
	6/30/2010	-1.83258 J	204
	11/17/2010	-1.34707	234
	7/6/2011	-0.139262	274
	11/22/2011	0.0953102	284
	5/16/2012	0	281
	11/16/2012	-0.116534	275
	11/16/2013	-0.0833816	276

Rank Sum = 3042
Rank Mean = 234

LMW-9D	11/18/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	1.09861 J	294
	5/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5
	6/11/2009	ND<-3.24419 U	92.5
	11/16/2009	ND<-3.24419 U	92.5
	6/30/2010	ND<-3.24419 U	92.5
	11/17/2010	-2.51331 J	187
	7/6/2011	-2.04022 J	193
	11/22/2011	ND<-3.24419 U	92.5
	5/16/2012	ND<-3.24419 U	92.5
	11/16/2012	ND<-3.24419 U	92.5
	11/16/2013	ND<-3.24419 U	92.5

Rank Sum = 1691.5
Rank Mean = 120.821

LMW-9	1/16/1998	ND<2.30259	92.5

	3/16/1999	ND<2.30259	92.5
	9/23/1999	ND<2.30259	92.5
	3/14/2000	ND<2.30259	92.5
	9/23/2003	ND<2.30259	92.5
	3/10/2004	ND<2.30259	92.5
	10/12/2004	ND<2.30259	92.5
	4/1/2005	ND<2.30259	92.5
	10/26/2005	ND<2.30259	92.5
	6/19/2006	2.30259 J	295
	11/18/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5
	6/11/2009	-1.89712 J	200
	11/16/2009	-2.04022 J	194
	6/30/2010	-2.04022 J	195
	11/17/2010	-1.83258 J	205
	7/6/2011	-2.04022 J	196
	11/22/2011	-2.20727 J	190
	5/16/2012	0.262364	288
	11/16/2012	0.587787	292
	11/16/2013	-0.34249	266

Rank Sum = 3616
Rank Mean = 150.667

LMW-15R	11/18/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<2.30259	92.5
	5/20/2008	ND<0 J	92.5
	11/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5
	6/11/2009	-0.18633	272
	11/16/2009	-1.38629	230
	11/16/2009	-1.34707	235
	11/16/2009	-1.20397	240
	6/30/2010	-0.356675	265
	11/17/2010	-0.544727	260
	7/6/2011	-0.287682	270
	11/22/2011	-0.510826	262
	5/16/2012	-0.544727	261
	11/16/2012	-0.562119	258
	11/16/2013	-0.174353	273

Rank Sum = 3566
Rank Mean = 187.684

LMW-8	1/16/1998	ND<2.30259	92.5
	3/16/1999	ND<2.30259	92.5
	9/23/1999	ND<2.30259	92.5
	3/14/2000	ND<2.30259	92.5
	9/23/2003	ND<2.30259	92.5
	3/10/2004	ND<2.30259	92.5
	10/12/2004	ND<2.30259	92.5
	4/1/2005	ND<2.30259	92.5
	10/26/2005	ND<2.30259	92.5
	6/19/2006	ND<2.30259	92.5
	11/18/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<0 J	92.5

	11/20/2008	ND<2.30259	92.5
	6/11/2009	-0.755023	252
	11/16/2009	-0.34249	267
	6/30/2010	-0.248461	271
	11/17/2010	-0.34249	268
	7/6/2011	0.405465	291
	11/22/2011	0.336472	290
	5/16/2012	0.182322	287
	11/16/2012	-0.0202027	277
	11/16/2013	-1.13943	241

Rank Sum = 3831.5
Rank Mean = 159.646

LMW-14R	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<0 J	92.5
	11/20/2008	ND<2.30259	92.5
	6/11/2009	-1.42712	228
	6/30/2010	-1.77196 J	210
	11/17/2010	-1.56065	222
	7/6/2011	-1.60944	219
	11/22/2011	-1.7148 J	213
	5/16/2012	-1.89712 J	201
	11/16/2012	-1.66073 J	216
	11/16/2013	-1.51413	223

Rank Sum = 2102
Rank Mean = 175.167

LMW-3	11/19/1996	ND<2.30259	92.5
	3/24/1997	ND<2.30259	92.5
	1/16/1998	ND<2.30259	92.5
	3/16/1999	ND<2.30259	92.5
	9/23/1999	ND<2.30259	92.5
	3/14/2000	ND<2.30259	92.5
	9/23/2003	ND<2.30259	92.5
	3/10/2004	ND<2.30259	92.5
	10/12/2004	ND<2.30259	92.5
	4/1/2005	ND<2.30259	92.5
	10/26/2005	ND<2.30259	92.5
	6/19/2006	ND<2.30259	92.5
	11/18/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5
	6/11/2009	-1.83258 J	206
	11/16/2009	-1.83258 J	207
	6/30/2010	-1.77196 J	211
	11/17/2010	-0.673345	253
	7/6/2011	-1.83258 J	208
	11/22/2011	-0.84397	247
	5/16/2012	-1.7148 J	214
	11/16/2012	-1.7148 J	215
	11/16/2013	-1.77196 J	212

Rank Sum = 3545.5
Rank Mean = 136.365

LMW-10	3/14/2000	ND<2.30259	92.5
	9/23/2003	ND<2.30259	92.5
	3/10/2004	ND<2.30259	92.5
	10/12/2004	ND<2.30259	92.5
	4/1/2005	ND<2.30259	92.5

	10/26/2005	ND<2.30259	92.5
	6/19/2006	ND<2.30259	92.5
	11/18/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5
	6/11/2009	-2.04022 J	197
	11/16/2009	-1.89712 J	202
	6/30/2010	-1.60944	220
	11/17/2010	-1.83258 J	209
	7/6/2011	-1.46968	224
	11/22/2011	-1.66073 J	217
	5/16/2012	-1.38629	231
	11/16/2012	-1.46968	225
	11/16/2013	-1.89712 J	203

Rank Sum = 3038
Rank Mean = 144.667

LMW-3S	11/18/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<0 J	92.5
	11/20/2008	ND<2.30259	92.5
	6/11/2009	-0.867501	245
	11/16/2009	-0.867501	246
	6/30/2010	-0.562119	259
	11/17/2010	-0.634878	257
	7/6/2011	-0.798508	250
	11/22/2011	-1.60944	221
	5/16/2012	-0.653926	256
	11/16/2012	-0.494296	263
	11/16/2013	-0.673345	254

Rank Sum = 2713.5
Rank Mean = 193.821

LMW-7	1/16/1998	ND<2.30259	92.5
	3/16/1999	ND<2.30259	92.5
	9/23/1999	ND<2.30259	92.5
	3/14/2000	ND<2.30259	92.5
	9/23/2003	ND<2.30259	92.5
	3/10/2004	ND<2.30259	92.5
	10/12/2004	ND<2.30259	92.5
	4/1/2005	ND<2.30259	92.5
	10/26/2005	ND<2.30259	92.5
	6/19/2006	ND<2.30259	92.5
	11/18/2006	0 J	282
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5
	6/11/2009	-0.462035	264
	11/17/2010	-1.66073 J	218
	7/6/2011	0.993252	293
	11/22/2011	-0.820981	248
	5/16/2012	-1.23787	239
	11/16/2012	-0.891598	244

Rank Sum = 3083
Rank Mean = 146.81

LMW-11	3/14/2000	ND<2.30259	92.5
	9/23/2003	ND<2.30259	92.5

	3/10/2004	ND<2.30259	92.5
	10/12/2004	ND<2.30259	92.5
	4/1/2005	ND<2.30259	92.5
	10/26/2005	ND<2.30259	92.5
	6/19/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5

Rank Sum = 1017.5
Rank Mean = 92.5

LMW-12	3/14/2000	ND<2.30259	92.5
	9/23/2003	ND<2.30259	92.5
	3/10/2004	ND<2.30259	92.5
	10/12/2004	ND<2.30259	92.5
	4/1/2005	ND<2.30259	92.5
	10/26/2005	ND<2.30259	92.5
	6/19/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5

Rank Sum = 1017.5
Rank Mean = 92.5

MW-5	1/16/1998	ND<2.30259	92.5
	3/16/1999	ND<2.30259	92.5
	9/23/1999	ND<2.30259	92.5
	3/14/2000	ND<2.30259	92.5
	9/23/2003	ND<2.30259	92.5
	3/10/2004	ND<2.30259	92.5
	10/12/2004	ND<2.30259	92.5
	4/1/2005	ND<2.30259	92.5
	10/26/2005	ND<2.30259	92.5
	6/19/2006	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5

Rank Sum = 1202.5
Rank Mean = 92.5

LMW-13	3/14/2000	ND<2.30259	92.5
	9/23/2003	ND<2.30259	92.5
	3/10/2004	ND<2.30259	92.5
	10/12/2004	ND<2.30259	92.5
	4/1/2005	ND<2.30259	92.5
	10/26/2005	ND<2.30259	92.5
	6/19/2006	ND<2.30259	92.5
	6/2/2007	ND<2.30259	92.5
	11/15/2007	ND<2.30259	92.5
	5/20/2008	ND<2.30259	92.5
	11/20/2008	ND<2.30259	92.5

Rank Sum = 1017.5
Rank Mean = 92.5

Calculation Results:

Kruskal-Wallis H Statistic = 45.3474
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 59.6833
95% Confidence comparison value is 26.2962 at 16 degrees of freedom

45.3474 > 26.2962 indicating a significant group difference at 5% significance level
59.6833 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 143.521

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-16	145.25	1.72917	66.9621
LMW-6	166.417	22.8958	57.48
LMW-9S	234	90.4792	68.5694
LMW-9D	120.821	-22.6994	66.9621
LMW-9	150.667	7.14583	57.48
LMW-15R		187.684	44.1634	61.1447
LMW-8	159.646	16.125	57.48
LMW-14R		175.167	31.6458	70.3983
LMW-3	136.365	-7.15545	56.3637
LMW-10	144.667	1.14583	59.4974
LMW-3S	193.821	50.3006	66.9621
LMW-7	146.81	3.28869	59.4974
LMW-11	92.5	-51.0208	72.5002
LMW-12	92.5	-51.0208	72.5002
MW-5	92.5	-51.0208	68.5694
LMW-13	92.5	-51.0208	72.5002

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 143.521

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-16	145.25	1.72917	79.0925
LMW-6	166.417	22.8958	67.8926
LMW-9S	234	90.4792	80.991
LMW-9D	120.821	-22.6994	79.0925
LMW-9	150.667	7.14583	67.8926
LMW-15R		187.684	44.1634	72.2212
LMW-8	159.646	16.125	67.8926
LMW-14R		175.167	31.6458	83.1511
LMW-3	136.365	-7.15545	66.5742
LMW-10	144.667	1.14583	70.2755
LMW-3S	193.821	50.3006	79.0925
LMW-7	146.81	3.28869	70.2755
LMW-11	92.5	-51.0208	85.6338
LMW-12	92.5	-51.0208	85.6338
MW-5	92.5	-51.0208	80.991
LMW-13	92.5	-51.0208	85.6338

Mann-Kendall Trend Analysis
Parameter: Cobalt
Location: LMW-9S
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
0 J	0 J	0	0	0
ND<2.30259	0 J	2.30259	1	0
0 J	0 J	0	1	0
ND<2.30259	0 J	2.30259	2	0
-2.04022 J	0 J	-2.04022	2	1
-1.83258 J	0 J	-1.83258	2	2
-1.34707	0 J	-1.34707	2	3
-0.139262	0 J	-0.139262	2	4
0.0953102	0 J	0.0953102	3	4
0	0 J	0	3	4
-0.116534	0 J	-0.116534	3	5
-0.0833816	0 J	-0.0833816	3	6
ND<2.30259	0 J	2.30259	4	6
0 J	0 J	0	4	6
ND<2.30259	0 J	2.30259	5	6
-2.04022 J	0 J	-2.04022	5	7
-1.83258 J	0 J	-1.83258	5	8
-1.34707	0 J	-1.34707	5	9
-0.139262	0 J	-0.139262	5	10
0.0953102	0 J	0.0953102	6	10
0	0 J	0	6	10
-0.116534	0 J	-0.116534	6	11
-0.0833816	0 J	-0.0833816	6	12
0 J	ND<2.30259	-2.30259	6	13
ND<2.30259	ND<2.30259	0	6	13
-2.04022 J	ND<2.30259	-4.34281	6	14
-1.83258 J	ND<2.30259	-4.13517	6	15
-1.34707	ND<2.30259	-3.64966	6	16
-0.139262	ND<2.30259	-2.44185	6	17
0.0953102	ND<2.30259	-2.20727	6	18
0	ND<2.30259	-2.30259	6	19
-0.116534	ND<2.30259	-2.41912	6	20
-0.0833816	ND<2.30259	-2.38597	6	21
ND<2.30259	0 J	2.30259	7	21
-2.04022 J	0 J	-2.04022	7	22
-1.83258 J	0 J	-1.83258	7	23
-1.34707	0 J	-1.34707	7	24
-0.139262	0 J	-0.139262	7	25
0.0953102	0 J	0.0953102	8	25
0	0 J	0	8	25
-0.116534	0 J	-0.116534	8	26
-0.0833816	0 J	-0.0833816	8	27
-2.04022 J	ND<2.30259	-4.34281	8	28
-1.83258 J	ND<2.30259	-4.13517	8	29
-1.34707	ND<2.30259	-3.64966	8	30
-0.139262	ND<2.30259	-2.44185	8	31

0.0953102	ND<2.30259	-2.207278	32	
0	ND<2.30259	-2.302598	33	
-0.116534	ND<2.30259	-2.419128	34	
-0.0833816	ND<2.30259	-2.385978	35	
-1.83258 J	-2.04022 J	0.207639	9	35
-1.34707	-2.04022 J	0.693147	10	35
-0.139262	-2.04022 J	1.90096	11	35
0.0953102	-2.04022 J	2.13553	12	35
0	-2.04022 J	2.04022	13	35
-0.116534	-2.04022 J	1.92369	14	35
-0.0833816	-2.04022 J	1.95684	15	35
-1.34707	-1.83258 J	0.485508	16	35
-0.139262	-1.83258 J	1.69332	17	35
0.0953102	-1.83258 J	1.92789	18	35
0	-1.83258 J	1.83258	19	35
-0.116534	-1.83258 J	1.71605	20	35
-0.0833816	-1.83258 J	1.7492	21	35
-0.139262	-1.34707	1.20781	22	35
0.0953102	-1.34707	1.44238	23	35
0	-1.34707	1.34707	24	35
-0.116534	-1.34707	1.23054	25	35
-0.0833816	-1.34707	1.26369	26	35
0.0953102	-0.139262	0.234572	27	35
0	-0.139262	0.139262	28	35
-0.116534	-0.139262	0.0227283	29	35
-0.0833816	-0.139262	0.0558805	30	35
0	0.0953102	-0.0953102	30	36
-0.116534	0.0953102	-0.211844	30	37
-0.0833816	0.0953102	-0.178692	30	38
-0.116534	0	-0.116534	30	39
-0.0833816	0	-0.0833816	30	40
-0.0833816	-0.116534	0.0331522	31	40

S Statistic = 31 - 40 = -9

Tied Group	Value	Members
1	0	4
2	2.30259	2

Time Period	Observations
11/18/2006	1
6/2/2007	1
11/15/2007	1
5/20/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1
11/17/2010	1
7/6/2011	1
11/22/2011	1
5/16/2012	1
11/16/2012	1

11/16/2013 1

There are 0 time periods with multiple data

A = 174
B = 0
C = 24
D = 0
E = 14
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 259
Z-Score = -0.497096
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.497096| <= 1.97737 indicating no evidence of a trend

Shewhart-CUSUM Control Chart

Parameter: Cobalt

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = 0.910435
Baseline Std Dev = 1.83942
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	0	0	-0.494958
11/18/2006	0	0	-0.494958
6/2/2007	0	0	-0.494958
6/2/2007	0	0	-0.494958
11/15/2007	2.30259	0	0.756843
11/15/2007	2.30259	0	0.756843
5/20/2008	0	0	-0.494958
5/20/2008	0	0	-0.494958
11/20/2008	2.30259	0	0.756843
11/20/2008	2.30259	0	0.756843
6/11/2009	-2.04022	0	-1.60413
6/11/2009	-2.04022	0	-1.60413
6/30/2010	-1.83258	0	-1.49124
6/30/2010	-1.83258	0	-1.49124
11/17/2010	-1.34707	0	-1.2273
11/17/2010	-1.34707	0	-1.2273
7/6/2011	-0.139262	0	-0.570668
7/6/2011	-0.139262	0	-0.570668
11/22/2011	0.0953102	0	-0.443143
11/22/2011	0.0953102	0	-0.443143
5/16/2012	0	0	-0.494958
5/16/2012	0	0	-0.494958
11/16/2012	-0.116534	0	-0.558312
11/16/2012	-0.116534	0	-0.558312
11/16/2013	-0.0833816	0	-0.540289
11/16/2013	-0.0833816	0	-0.540289

Concentrations (ppb)

Parameter: Copper

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 291
Total Non-Detect: 149
Percent Non-Detects: 51.2027%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	11 (45.8333%)	1/16/1998	73	73
			3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/14/2000	ND<20	ND<20
			9/23/2003	ND<20	ND<20
			3/10/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/26/2005	ND<20	ND<20
			6/19/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			6/2/2007	8 J	8 J
			11/15/2007	5 J	5 J
			5/20/2008	8 J	8 J
			11/20/2008	ND<20	ND<20
			6/11/2009	0.74 J	0.74 J
			11/16/2009	0.78 J	0.78 J
			6/30/2010	1.3	1.3
			11/17/2010	0.87 J	0.87 J
			7/6/2011	1.1	1.1
			11/22/2011	0.79 J	0.79 J
			5/16/2012	0.87 J	0.87 J
			11/16/2012	0.23 J	0.23 J
			11/16/2013	0.28 J	0.28 J

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-15R	18	5 (27.7778%)	11/18/2006	3 J	3 J
			6/2/2007	5 J	5 J
			11/15/2007	ND<20	ND<20
			11/15/2007	5 J	5 J
			5/20/2008	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			11/20/2008	5 J	5 J
			6/11/2009	3.7	3.7
			11/16/2009	0.57 J	0.57 J
			11/16/2009	0.92 J	0.92 J
			11/16/2009	1.7	1.7
			11/17/2010	2.3	2.3
			7/6/2011	0.59 J	0.59 J
			11/22/2011	0.74 J	0.74 J
			5/16/2012	0.51 J	0.51 J
			11/16/2012	ND<0.21 U	ND<0.21 U
			11/16/2013	0.35 J	0.35 J

LMW-16	13	2 (15.3846%)	11/18/2006		ND<20	ND<20
			6/2/2007	7 J	7 J	
			11/15/2007	6 J	6 J	
			5/20/2008	ND<20	ND<20	
			11/20/2008	5 J	5 J	
			6/11/2009	0.36 J	0.36 J	
			11/16/2009	0.59 J	0.59 J	
			11/17/2010	0.46 J	0.46 J	
			7/6/2011	0.67 J	0.67 J	
			11/22/2011	0.95 J	0.95 J	
			5/16/2012	0.27 J	0.27 J	
			11/16/2012	0.3 J	0.3 J	
			11/16/2013	0.37 J	0.37 J	
LMW-10	21	14 (66.6667%)	3/14/2000		ND<20	ND<20
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	2 J	2 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.51 J	0.51 J	
			11/16/2009	ND<0.21 U		ND<0.21 U
			6/30/2010	1.9	1.9	
			11/17/2010	0.39 J	0.39 J	
			7/6/2011	0.35 J	0.35 J	
			11/22/2011	0.57 J	0.57 J	
			5/16/2012	ND<0.21 U		ND<0.21 U
			11/16/2012	ND<0.21 U		ND<0.21 U
			11/16/2013	0.26 J	0.26 J	
LMW-3	25	15 (60%)	11/19/1996		ND<20	ND<20
			3/24/1997	ND<20	ND<20	
			1/16/1998	4 J	4 J	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	9 J	9 J	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.7 J	0.7 J	
			11/16/2009	1.1	1.1	
			11/17/2010	1.6	1.6	
			7/6/2011	1	1	
			11/22/2011	0.84 J	0.84 J	
			5/16/2012	0.78 J	0.78 J	
			11/16/2012	0.4 J	0.4 J	
			11/16/2013	0.62 J	0.62 J	

LMW-3S	13	3 (23.0769%)	11/18/2006	2 J	2 J	
			6/2/2007	ND<20	ND<20	
			11/15/2007	6 J	6 J	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	1.4	1.4	
			11/16/2009	0.82 J	0.82 J	
			11/17/2010	1.7	1.7	
			7/6/2011	1.3	1.3	
			11/22/2011	1.1	1.1	
			5/16/2012	0.81 J	0.81 J	
			11/16/2012	0.99 J	0.99 J	
			11/16/2013	0.78 J	0.78 J	
LMW-6	24	12 (50%)	1/16/1998	18 J	18 J	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	7 J	7 J	
			11/15/2007	7 J	7 J	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	1.7	1.7	
			11/16/2009	1.2	1.2	
			6/30/2010	3	3	
			11/17/2010	2.2	2.2	
			7/6/2011	1.1	1.1	
			11/22/2011	0.55 J	0.55 J	
			5/16/2012	0.49 J	0.49 J	
			11/16/2012	0.78 J	0.78 J	
			11/16/2013	0.48 J	0.48 J	
LMW-8	24	13 (54.1667%)	1/16/1998	2 J	2 J	
			3/16/1999	5 J	5 J	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	6 J	6 J	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.75 J	0.75 J	
			11/16/2009	0.65 J	0.65 J	
			6/30/2010	1.3	1.3	
			11/17/2010	0.75 J	0.75 J	
			7/6/2011	0.48 J	0.48 J	
			11/22/2011	2.1	2.1	
			5/16/2012	0.46 J	0.46 J	
			11/16/2012	ND<0.21 U	ND<0.21 U	

			11/16/2013	0.38 J	0.38 J	
LMW-9	24	11 (45.8333%)	1/16/1998	9 J	9 J	
			3/16/1999	ND<20	ND<20	
			9/23/1999	12 J	12 J	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	5 J	5 J	
			11/15/2007	7 J	7 J	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.88 J	0.88 J	
			11/16/2009	0.59 J	0.59 J	
			6/30/2010	2.4	2.4	
			11/17/2010	1.7	1.7	
			7/6/2011	0.65 J	0.65 J	
			11/22/2011	0.78 J	0.78 J	
			5/16/2012	4.2	4.2	
			11/16/2012	5	5	
			11/16/2013	2.2	2.2	
LMW-9D	14	2 (14.2857%)	11/18/2006	6 J	6 J	
			6/2/2007	ND<20	ND<20	
			11/15/2007	9 J	9 J	
			5/20/2008	2 J	2 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.69 J	0.69 J	
			11/16/2009	0.75 J	0.75 J	
			6/30/2010	0.9 J	0.9 J	
			11/17/2010	0.53 J	0.53 J	
			7/6/2011	2	2	
			11/22/2011	0.94 J	0.94 J	
			5/16/2012	0.63 J	0.63 J	
			11/16/2012	0.66 J	0.66 J	
			11/16/2013	0.52 J	0.52 J	
LMW-9S	13	5 (38.4615%)	11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	7 J	7 J	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.83 J	0.83 J	
			6/30/2010	1.7	1.7	
			11/17/2010	1.6	1.6	
			7/6/2011	0.49 J	0.49 J	
			11/22/2011	0.76 J	0.76 J	
			5/16/2012	0.23 J	0.23 J	
			11/16/2012	ND<0.21 U	ND<0.21 U	
			11/16/2013	0.35 J	0.35 J	
LMW-14R	11	5 (45.4545%)	6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.81 J	0.81 J	
			11/17/2010	0.96 J	0.96 J	

			7/6/2011	2	2	
			11/22/2011	0.72 J	0.72 J	
			5/16/2012	0.41 J	0.41 J	
			11/16/2012	ND<0.21 U		ND<0.21 U
			11/16/2013	0.51 J	0.51 J	
LMW-7	21	7 (33.3333%)	1/16/1998	20	20	
			3/16/1999	5 J	5 J	
			9/23/1999	5 J	5 J	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	10 J	10 J	
			10/26/2005	11 J	11 J	
			6/19/2006	10 J	10 J	
			11/18/2006	ND<20	ND<20	
			6/2/2007	6 J	6 J	
			11/15/2007	8 J	8 J	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	4	4	
			11/17/2010	3.8	3.8	
			7/6/2011	13	13	
			11/22/2011	3.5	3.5	
			5/16/2012	2.1	2.1	
			11/16/2012	1.5	1.5	
LMW-12	11	11 (100%)	3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
LMW-11	11	11 (100%)	3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
LMW-13	11	11 (100%)	3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	

			11/20/2008	ND<20	ND<20	
MW-5	13	11 (84.6154%)	1/16/1998	3 J	3 J	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/15/2007	5 J	5 J	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Copper

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 291

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.105	-2.747777	55021	-0.288515
2	0.105	-2.512131	3.861	-0.552289
3	0.105	-2.326341	9.2729	-0.796555
4	0.105	-2.226212	4.2289	-1.03031
5	0.105	-2.120072	8.7236	-1.25291
6	0.105	-2.053753	2.9415	-1.46856
7	0.105	-1.995393	6.9231	-1.67807
8	0.23	-1.926844	0.6358	-2.12125
9	0.23	-1.880794	4.1731	-2.55383
10	0.26	-1.825014	7.5038	-3.02833
11	0.27	-1.786615	0.6958	-3.51071
12	0.28	-1.7392	53.7206	-3.99769
13	0.3	-1.706045	6.6312	-4.5095
14	0.35	-1.674665	9.4357	-5.09564
15	0.35	-1.635246	2.1096	-5.66797
16	0.35	-1.607256	4.6929	-6.23051
17	0.36	-1.571796	7.1634	-6.79635
18	0.37	-1.546436	9.5549	-7.36853
19	0.38	-1.5141	71.8474	-7.94389
20	0.39	-1.490857	4.07	-8.52532
21	0.4	-1.468387	6.2262	-9.11267
22	0.41	-1.439537	8.2984	-9.70288
23	0.46	-1.418658	0.311	-10.3555
24	0.46	-1.391758	2.248	-10.9957
25	0.48	-1.3722	84.1309	-11.6543
26	0.48	-1.346948	5.9451	-12.3009
27	0.49	-1.328548	7.7102	-12.9518
28	0.49	-1.310588	9.4278	-13.594
29	0.51	-1.287279	1.0848	-14.2505
30	0.51	-1.270249	2.6983	-14.8984
31	0.51	-1.248099	4.2561	-15.5349
32	0.52	-1.231879	5.7736	-16.1754
33	0.53	-1.210739	7.2394	-16.8171
34	0.55	-1.195229	8.668	-17.4745
35	0.57	-1.18	100.06	-18.1471
36	0.57	-1.16012	101.406	-18.8084
37	0.59	-1.1455	102.718	-19.4842
38	0.59	-1.12639	103.987	-20.1488
39	0.59	-1.11232	105.224	-20.8051
40	0.62	-1.09847	106.431	-21.4861
41	0.63	-1.08032	107.598	-22.1667
42	0.65	-1.06694	108.737	-22.8602
43	0.65	-1.04939	109.838	-23.5423
44	0.66	-1.03643	110.912	-24.2264
45	0.67	-1.01943	111.951	-24.9094
46	0.69	-1.00687	112.965	-25.6041
47	0.7	-0.994457	113.954	-26.3002
48	0.72	-0.97815	114.911	-27.0045
49	0.74	-0.966088	115.844	-27.7194
50	0.74	-0.950222	116.747	-28.4226
51	0.75	-0.938476	117.628	-29.1264

52	0.75	-0.923014	118.48	-29.8187
53	0.75	-0.911562	119.311	-30.5024
54	0.76	-0.900227	120.121	-31.1865
55	0.78	-0.885291	120.905	-31.8771
56	0.78	-0.874218	121.669	-32.559
57	0.78	-0.859618	122.408	-33.2295
58	0.78	-0.848786	123.128	-33.8915
59	0.78	-0.834498	123.825	-34.5424
60	0.79	-0.823893	124.504	-35.1933
61	0.81	-0.813379	125.165	-35.8521
62	0.81	-0.7995	125.804	-36.4997
63	0.82	-0.789191	126.427	-37.1469
64	0.83	-0.775574	127.029	-37.7906
65	0.84	-0.765456	127.615	-38.4336
66	0.87	-0.752084	128.18	-39.0879
67	0.87	-0.742143	128.731	-39.7336
68	0.88	-0.732275	129.267	-40.378
69	0.9	-0.719228	129.784	-41.0253
70	0.92	-0.709522	130.288	-41.678
71	0.94	-0.696684	130.773	-42.3329
72	0.95	-0.687131	131.245	-42.9857
73	0.96	-0.67449	131.7	-43.6332
74	0.99	-0.665079	132.143	-44.2916
75	1	-0.655726	132.573	-44.9473
76	1.1	-0.643345	132.987	-45.655
77	1.1	-0.634124	133.389	-46.3526
78	1.1	-0.621911	133.775	-47.0367
79	1.1	-0.612813	134.151	-47.7108
80	1.2	-0.603765	134.516	-48.4353
81	1.3	-0.591776	134.866	-49.2046
82	1.3	-0.582841	135.205	-49.9623
83	1.3	-0.570999	135.531	-50.7046
84	1.4	-0.56217	135.848	-51.4916
85	1.5	-0.550465	136.151	-52.3173
86	1.6	-0.541736	136.444	-53.1841
87	1.6	-0.533048	136.728	-54.037
88	1.7	-0.521527	137	-54.9236
89	1.7	-0.51293	137.263	-55.7955
90	1.7	-0.501527	137.515	-56.6481
91	1.7	-0.493018	137.758	-57.4863
92	1.7	-0.481728	137.99	-58.3052
93	1.9	-0.473299	138.214	-59.2045
94	2	-0.464904	138.43	-60.1343
95	2	-0.453763	138.636	-61.0418
96	2	-0.445443	138.834	-61.9327
97	2	-0.434397	139.023	-62.8015
98	2	-0.426148	139.205	-63.6538
99	2	-0.415193	139.377	-64.4842
100	2.1	-0.40701	139.543	-65.3389
101	2.1	-0.398855	139.702	-66.1765
102	2.2	-0.388022	139.852	-67.0301
103	2.2	-0.379927	139.997	-67.866
104	2.3	-0.369171	140.133	-68.7151
105	2.4	-0.361133	140.263	-69.5818
106	3	-0.350451	140.386	-70.6331
107	3	-0.342466	140.503	-71.6605
108	3	-0.334503	140.615	-72.664
109	3.5	-0.323919	140.72	-73.7978
110	3.7	-0.316004	140.82	-74.967
111	3.8	-0.305481	140.913	-76.1278
112	4	-0.297612	141.002	-77.3183
113	4	-0.28976	141.086	-78.4773

114	4.2	-0.279319	141.164	-79.6504
115	5	-0.271509	141.238	-81.008
116	5	-0.26112	141.306	-82.3136
117	5	-0.253347	141.37	-83.5803
118	5	-0.243007	141.429	-84.7954
119	5	-0.235269	141.485	-85.9717
120	5	-0.227545	141.536	-87.1094
121	5	-0.217267	141.584	-88.1958
122	5	-0.209575	141.627	-89.2436
123	5	-0.199336	141.667	-90.2403
124	5	-0.191671	141.704	-91.1987
125	5	-0.181468	141.737	-92.106
126	6	-0.173829	141.767	-93.149
127	6	-0.166199	141.795	-94.1462
128	6	-0.156042	141.819	-95.0824
129	6	-0.148434	141.841	-95.973
130	6	-0.138305	141.86	-96.8029
131	7	-0.130716	141.877	-97.7179
132	7	-0.12061	141.892	-98.5621
133	7	-0.113039	141.905	-99.3534
134	7	-0.105474	141.916	-100.092
135	7	-0.0953969	141.925	-100.76
136	8	-0.0878447	141.933	-101.462
137	8	-0.0777834	141.939	-102.085
138	8	-0.0702426	141.944	-102.646
139	9	-0.0601949	141.947	-103.188
140	9	-0.0526632	141.95	-103.662
141	9	-0.0451348	141.952	-104.068
142	10	-0.0350997	141.953	-104.419
143	10	-0.0275759	141.954	-104.695
144	10	-0.0175476	141.954	-104.871
145	10	-0.0100272	141.954	-104.971
146	10	0	141.954	-104.971
147	10	0.0100272	141.954	-104.871
148	10	0.0175476	141.955	-104.695
149	10	0.0275759	141.956	-104.419
150	10	0.0350997	141.957	-104.068
151	10	0.0451348	141.959	-103.617
152	10	0.0526632	141.962	-103.09
153	10	0.0601949	141.965	-102.488
154	10	0.0702426	141.97	-101.786
155	10	0.0777834	141.976	-101.008
156	10	0.0878447	141.984	-100.13
157	10	0.0953969	141.993	-99.1758
158	10	0.105474	142.004	-98.1211
159	10	0.113039	142.017	-96.9907
160	10	0.12061	142.031	-95.7846
161	10	0.130716	142.049	-94.4774
162	10	0.138305	142.068	-93.0944
163	10	0.148434	142.09	-91.61
164	10	0.156042	142.114	-90.0496
165	10	0.166199	142.142	-88.3876
166	10	0.173829	142.172	-86.6493
167	10	0.181468	142.205	-84.8347
168	10	0.191671	142.242	-82.9179
169	10	0.199336	142.281	-80.9246
170	10	0.209575	142.325	-78.8288
171	10	0.217267	142.372	-76.6562
172	10	0.227545	142.424	-74.3807
173	10	0.235269	142.48	-72.028
174	10	0.243007	142.539	-69.5979
175	10	0.253347	142.603	-67.0645

176	10	0.26112	142.671	-64.4533
177	10	0.271509	142.745	-61.7382
178	10	0.279319	142.823	-58.945
179	10	0.28976	142.907	-56.0474
180	10	0.297612	142.995	-53.0713
181	10	0.305481	143.089	-50.0165
182	10	0.316004	143.188	-46.8564
183	10	0.323919	143.293	-43.6172
184	10	0.334503	143.405	-40.2722
185	10	0.342466	143.523	-36.8475
186	10	0.350451	143.645	-33.343
187	10	0.361133	143.776	-29.7317
188	10	0.369171	143.912	-26.04
189	10	0.379927	144.056	-22.2407
190	10	0.388022	144.207	-18.3605
191	10	0.398855	144.366	-14.3719
192	10	0.40701	144.532	-10.3018
193	10	0.415193	144.704	-6.14991
194	10	0.426148	144.886	-1.88843
195	10	0.434397	145.074	2.45555
196	10	0.445443	145.273	6.90998
197	10	0.453763	145.479	11.4476
198	10	0.464904	145.695	16.0966
199	10	0.473299	145.919	20.8296
200	10	0.481728	146.151	25.6469
201	10	0.493018	146.394	30.5771
202	10	0.501527	146.645	35.5924
203	10	0.51293	146.909	40.7217
204	10	0.521527	147.181	45.9369
205	10	0.533048	147.465	51.2674
206	10	0.541736	147.758	56.6848
207	10	0.550465	148.061	62.1894
208	10	0.56217	148.377	67.8111
209	10	0.570999	148.703	73.5211
210	10	0.582841	149.043	79.3495
211	10	0.591776	149.393	85.2673
212	10	0.603765	149.758	91.3049
213	10	0.612813	150.133	97.4331
214	10	0.621911	150.52	103.652
215	10	0.634124	150.922	109.993
216	10	0.643345	151.336	116.427
217	10	0.655726	151.766	122.984
218	10	0.665079	152.208	129.635
219	10	0.67449	152.663	136.38
220	10	0.687131	153.135	143.251
221	10	0.696684	153.621	150.218
222	10	0.709522	154.124	157.313
223	10	0.719228	154.642	164.505
224	10	0.732275	155.178	171.828
225	10	0.742143	155.729	179.25
226	10	0.752084	156.294	186.77
227	10	0.765456	156.88	194.425
228	10	0.775574	157.482	202.181
229	10	0.789191	158.104	210.073
230	10	0.7995	158.744	218.068
231	10	0.813379	159.405	226.201
232	10	0.823893	160.084	234.44
233	10	0.834498	160.78	242.785
234	10	0.848786	161.501	251.273
235	10	0.859618	162.24	259.869
236	10	0.874218	163.004	268.612
237	10	0.885291	163.788	277.465

238	10	0.900227		164.598	286.467
239	10	0.911562		165.429	295.582
240	10	0.923014		166.281	304.813
241	10	0.938476		167.162	314.197
242	10	0.950222		168.065	323.7
243	10	0.966088		168.998	333.36
244	10	0.97815	169.955	343.142	
245	10	0.994457		170.944	353.086
246	10	1.00687	171.958	363.155	
247	10	1.01943	172.997	373.349	
248	10	1.03643	174.071	383.714	
249	10	1.04939	175.172	394.208	
250	10	1.06694	176.311	404.877	
251	10	1.08032	177.478	415.68	
252	10	1.09847	178.684	426.665	
253	10	1.11232	179.922	437.788	
254	10	1.12639	181.19	449.052	
255	10	1.1455	182.502	460.507	
256	10	1.16012	183.848	472.108	
257	10	1.18	185.241	483.908	
258	10	1.19522	186.669	495.86	
259	10	1.21073	188.135	507.968	
260	10	1.23187	189.653	520.286	
261	10	1.24809	191.21	532.767	
262	10	1.27024	192.824	545.47	
263	10	1.28727	194.481	558.342	
264	10	1.31058	196.199	571.448	
265	10	1.32854	197.964	584.734	
266	10	1.34694	199.778	598.203	
267	10	1.3722	201.661	611.925	
268	10	1.39175	203.598	625.842	
269	10	1.41865	205.61	640.029	
270	10	1.43953	207.683	654.424	
271	10	1.46838	209.839	669.108	
272	10	1.49085	212.061	684.017	
273	10	1.5141	214.354	699.158	
274	10	1.54643	216.745	714.622	
275	10	1.57179	219.216	730.34	
276	10	1.60725	221.799	746.412	
277	10	1.63524	224.473	762.765	
278	10	1.67466	227.278	779.511	
279	10	1.70604	230.188	796.572	
280	10	1.7392	233.213	813.964	
281	10	1.78661	236.405	831.83	
282	10	1.82501	239.736	850.08	
283	10	1.88079	243.273	868.888	
284	10	1.92684	246.986	888.156	
285	10	1.99539	250.967	908.11	
286	11	2.05375	255.185	930.701	
287	12	2.12007	259.68	956.142	
288	13	2.22621	264.636	985.083	
289	18	2.32634	270.048	1026.96	
290	20	2.51213	276.359	1077.2	
291	73	2.74777	283.909	1277.79	

Data Set Standard Deviation = 5.8884
Numerator = 1.63274e+006
Denominator = 2.85477e+006
W Statistic = 0.571933 = 1.63274e+006 / 2.85477e+006

5% Critical value of 0.976 exceeds 0.571933

Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.571933
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Copper

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.75889
0.75889 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.105	0.00342466		-2.747	739.7022	348.683
2	0.105	0.00684932		-2.512	1339.7022	337.176
3	0.105	0.010274		-2.326	3439.7022	328.103
4	0.105	0.0136986		-2.226	2139.7022	323.213
5	0.105	0.0171233		-2.120	0739.7022	318.03
6	0.105	0.0205479		-2.053	7539.7022	314.791
7	0.105	0.0239726		-1.995	3939.7022	311.942
8	0.23	0.0273973		-1.926	8440.5381	308.594
9	0.23	0.0308219		-1.880	7940.5381	306.345
10	0.26	0.0342466		-1.825	0140.7388	303.621
11	0.27	0.0376712		-1.786	6140.8056	301.746
12	0.28	0.0410959		-1.7392	40.8725	299.431
13	0.3	0.0445205		-1.706	0441.0063	297.812
14	0.35	0.0479452		-1.674	6641.3406	296.279
15	0.35	0.0513699		-1.635	2441.3406	294.354
16	0.35	0.0547945		-1.607	2541.3406	292.987
17	0.36	0.0582192		-1.571	7941.4075	291.256
18	0.37	0.0616438		-1.546	4341.4744	290.017
19	0.38	0.0650685		-1.5141	41.5412	288.439
20	0.39	0.0684932		-1.490	8541.6081	287.303
21	0.4	0.0719178		-1.468	3841.675	286.206
22	0.41	0.0753425		-1.439	5341.7419	284.797
23	0.46	0.0787671		-1.418	6542.0763	283.778
24	0.46	0.0821918		-1.391	7542.0763	282.464
25	0.48	0.0856164		-1.3722	42.21	281.509
26	0.48	0.0890411		-1.346	9442.21	280.276
27	0.49	0.0924658		-1.328	5442.2769	279.377
28	0.49	0.0958904		-1.310	5842.2769	278.5
29	0.51	0.0993151		-1.287	2742.4106	277.362
30	0.51	0.10274		-1.270	2442.4106	276.53
31	0.51	0.106164		-1.248	0942.4106	275.448
32	0.52	0.109589		-1.231	8742.4775	274.656
33	0.53	0.113014		-1.210	7342.5444	273.624
34	0.55	0.116438		-1.195	2242.6781	272.867
35	0.57	0.119863		-1.18	42.8119	272.123
36	0.57	0.123288		-1.160	1242.8119	271.153
37	0.59	0.126712		-1.1455	42.9456	270.439
38	0.59	0.130137		-1.126	3942.9456	269.505
39	0.59	0.133562		-1.112	3242.9456	268.818
40	0.62	0.136986		-1.098	4743.1463	268.142
41	0.63	0.140411		-1.080	3243.2131	267.256
42	0.65	0.143836		-1.066	9443.3469	266.602
43	0.65	0.14726		-1.049	3943.3469	265.745
44	0.66	0.150685		-1.036	4343.4138	265.112
45	0.67	0.15411		-1.019	4343.4806	264.282
46	0.69	0.157534		-1.006	8743.6144	263.669
47	0.7	0.160959		-0.994457	43.6812	263.063
48	0.72	0.164384		-0.978	1543.815	262.266

49	0.74	0.167808	-0.966088	43.9487	261.677
50	0.74	0.171233	-0.950222	43.9487	260.903
51	0.75	0.174658	-0.938476	44.0156	260.329
52	0.75	0.178082	-0.923014	44.0156	259.574
53	0.75	0.181507	-0.911562	44.0156	259.015
54	0.76	0.184932	-0.900227	44.0825	258.461
55	0.78	0.188356	-0.885291	44.2163	257.732
56	0.78	0.191781	-0.874218	44.2163	257.191
57	0.78	0.195205	-0.859618	44.2163	256.478
58	0.78	0.19863	-0.848786	44.2163	255.949
59	0.78	0.202055	-0.834498	44.2163	255.251
60	0.79	0.205479	-0.823893	44.2831	254.733
61	0.81	0.208904	-0.813379	44.4169	254.22
62	0.81	0.212329	-0.7995	44.4169	253.542
63	0.82	0.215753	-0.789191	44.4838	253.039
64	0.83	0.219178	-0.775574	44.5506	252.374
65	0.84	0.222603	-0.765456	44.6175	251.88
66	0.87	0.226027	-0.752084	44.8181	251.227
67	0.87	0.229452	-0.742143	44.8181	250.741
68	0.88	0.232877	-0.732275	44.885	250.259
69	0.9	0.236301	-0.719228	45.0187	249.622
70	0.92	0.239726	-0.709522	45.1525	249.148
71	0.94	0.243151	-0.696684	45.2863	248.521
72	0.95	0.246575	-0.687131	45.3531	248.055
73	0.96	0.25	-0.674494	5.42	247.438
74	0.99	0.253425	-0.665079	45.6206	246.978
75	1	0.256849	-0.655726	45.6875	246.521
76	1.1	0.260274	-0.643345	46.3563	245.917
77	1.1	0.263699	-0.634124	46.3563	245.466
78	1.1	0.267123	-0.621911	46.3563	244.87
79	1.1	0.270548	-0.612813	46.3563	244.426
80	1.2	0.273973	-0.603765	47.025	243.984
81	1.3	0.277397	-0.591776	47.6938	243.398
82	1.3	0.280822	-0.582841	47.6938	242.962
83	1.3	0.284247	-0.570999	47.6938	242.384
84	1.4	0.287671	-0.562174	8.3625	241.953
85	1.5	0.291096	-0.550465	49.0313	241.381
86	1.6	0.294521	-0.541736	49.7	240.955
87	1.6	0.297945	-0.533048	49.7	240.531
88	1.7	0.30137	-0.521527	50.3687	239.968
89	1.7	0.304795	-0.512935	0.3687	239.548
90	1.7	0.308219	-0.501527	50.3687	238.991
91	1.7	0.311644	-0.493018	50.3687	238.576
92	1.7	0.315068	-0.481728	50.3687	238.024
93	1.9	0.318493	-0.473299	51.7062	237.613
94	2	0.321918	-0.464904	52.375	237.203
95	2	0.325342	-0.453763	52.375	236.659
96	2	0.328767	-0.445443	52.375	236.252
97	2	0.332192	-0.434397	52.375	235.713
98	2	0.335616	-0.426148	52.375	235.31
99	2	0.339041	-0.415193	52.375	234.775
100	2.1	0.342466	-0.407015	3.0438	234.376
101	2.1	0.34589	-0.398855	53.0438	233.977
102	2.2	0.349315	-0.388022	53.7125	233.448
103	2.2	0.35274	-0.379927	53.7125	233.053
104	2.3	0.356164	-0.369171	54.3813	232.528
105	2.4	0.359589	-0.361133	55.05	232.135
106	3	0.363014	-0.350451	59.0625	231.614
107	3	0.366438	-0.342466	59.0625	231.224
108	3	0.369863	-0.334503	59.0625	230.835
109	3.5	0.373288	-0.323919	62.4063	230.318
110	3.7	0.376712	-0.316004	63.7437	229.932

111	3.8	0.380137	-0.305481	64.4125	229.418
112	4	0.383562	-0.297612	65.75	229.033
113	4	0.386986	-0.2897665.75	228.65	
114	4.2	0.390411	-0.279319	67.0875	228.14
115	5	0.393836	-0.271509	72.4375	227.759
116	5	0.39726 -0.2611272.4375	227.251		
117	5	0.400685	-0.253347	72.4375	226.872
118	5	0.40411 -0.243007	72.4375	226.367	
119	5	0.407534	-0.235269	72.4375	225.989
120	5	0.410959	-0.227545	72.4375	225.612
121	5	0.414384	-0.217267	72.4375	225.11
122	5	0.417808	-0.209575	72.4375	224.734
123	5	0.421233	-0.199336	72.4375	224.234
124	5	0.424658	-0.191671	72.4375	223.86
125	5	0.428082	-0.181468	72.4375	223.362
126	6	0.431507	-0.173829	79.125	222.989
127	6	0.434932	-0.166199	79.125	222.616
128	6	0.438356	-0.156042	79.125	222.12
129	6	0.441781	-0.148434	79.125	221.749
130	6	0.445205	-0.138305	79.125	221.254
131	7	0.44863 -0.130716	85.8125	220.883	
132	7	0.452055	-0.1206185.8125	220.39	
133	7	0.455479	-0.113039	85.8125	220.02
134	7	0.458904	-0.105474	85.8125	219.651
135	7	0.462329	-0.0953969	85.8125	219.159
136	8	0.465753	-0.0878447	92.5	218.79
137	8	0.469178	-0.0777834	92.5	218.298
138	8	0.472603	-0.0702426	92.5	217.93
139	9	0.476027	-0.0601949	99.1875	217.44
140	9	0.479452	-0.0526632	99.1875	217.072
141	9	0.482877	-0.0451348	99.1875	216.704
142	10	0.486301	-0.0350997	105.875	216.214
143	10	0.489726	-0.0275759	105.875	215.847
144	10	0.493151	-0.0175476	105.875	215.357
145	10	0.496575	-0.0100272	105.875	214.99
146	10	0.5 0	105.875 214.5		
147	10	0.503425	0.0100272	105.875	214.01
148	10	0.506849	0.0175476	105.875	213.643
149	10	0.510274	0.0275759	105.875	213.153
150	10	0.513699	0.0350997	105.875	212.786
151	10	0.517123	0.0451348	105.875	212.296
152	10	0.520548	0.0526632	105.875	211.928
153	10	0.523973	0.0601949	105.875	211.56
154	10	0.527397	0.0702426	105.875	211.07
155	10	0.530822	0.0777834	105.875	210.702
156	10	0.534247	0.0878447	105.875	210.21
157	10	0.537671	0.0953969	105.875	209.841
158	10	0.541096	0.105474	105.875	209.349
159	10	0.544521	0.113039	105.875	208.98
160	10	0.547945	0.12061 105.875	208.61	
161	10	0.55137 0.130716	105.875	208.117	
162	10	0.554795	0.138305	105.875	207.746
163	10	0.558219	0.148434	105.875	207.251
164	10	0.561644	0.156042	105.875	206.88
165	10	0.565068	0.166199	105.875	206.384
166	10	0.568493	0.173829	105.875	206.011
167	10	0.571918	0.181468	105.875	205.638
168	10	0.575342	0.191671	105.875	205.14
169	10	0.578767	0.199336	105.875	204.766
170	10	0.582192	0.209575	105.875	204.266
171	10	0.585616	0.217267	105.875	203.89
172	10	0.589041	0.227545	105.875	203.388

173	10	0.592466	0.235269	105.875	203.011
174	10	0.59589	0.243007	105.875	202.633
175	10	0.599315	0.253347	105.875	202.128
176	10	0.60274	0.26112	105.875	201.749
177	10	0.606164	0.271509	105.875	201.241
178	10	0.609589	0.279319	105.875	200.86
179	10	0.613014	0.28976	105.875	200.35
180	10	0.616438	0.297612	105.875	199.967
181	10	0.619863	0.305481	105.875	199.582
182	10	0.623288	0.316004	105.875	199.068
183	10	0.626712	0.323919	105.875	198.682
184	10	0.630137	0.334503	105.875	198.165
185	10	0.633562	0.342466	105.875	197.776
186	10	0.636986	0.350451	105.875	197.386
187	10	0.640411	0.361133	105.875	196.865
188	10	0.643836	0.369171	105.875	196.472
189	10	0.64726	0.379927	105.875	195.947
190	10	0.650685	0.388022	105.875	195.552
191	10	0.65411	0.398855	105.875	195.023
192	10	0.657534	0.40701	105.875	194.624
193	10	0.660959	0.415193	105.875	194.225
194	10	0.664384	0.426148	105.875	193.69
195	10	0.667808	0.434397	105.875	193.287
196	10	0.671233	0.445443	105.875	192.748
197	10	0.674658	0.453763	105.875	192.341
198	10	0.678082	0.464904	105.875	191.797
199	10	0.681507	0.473299	105.875	191.387
200	10	0.684932	0.481728	105.875	190.976
201	10	0.688356	0.493018	105.875	190.424
202	10	0.691781	0.501527	105.875	190.009
203	10	0.695205	0.51293	105.875	189.452
204	10	0.69863	0.521527	105.875	189.032
205	10	0.702055	0.533048	105.875	188.469
206	10	0.705479	0.541736	105.875	188.045
207	10	0.708904	0.550465	105.875	187.619
208	10	0.712329	0.56217	105.875	187.047
209	10	0.715753	0.570999	105.875	186.616
210	10	0.719178	0.582841	105.875	186.038
211	10	0.722603	0.591776	105.875	185.602
212	10	0.726027	0.603765	105.875	185.016
213	10	0.729452	0.612813	105.875	184.574
214	10	0.732877	0.621911	105.875	184.13
215	10	0.736301	0.634124	105.875	183.534
216	10	0.739726	0.643345	105.875	183.083
217	10	0.743151	0.655726	105.875	182.479
218	10	0.746575	0.665079	105.875	182.022
219	10	0.75	0.67449	105.875	181.562
220	10	0.753425	0.687131	105.875	180.945
221	10	0.756849	0.696684	105.875	180.479
222	10	0.760274	0.709522	105.875	179.852
223	10	0.763699	0.719228	105.875	179.378
224	10	0.767123	0.732275	105.875	178.741
225	10	0.770548	0.742143	105.875	178.259
226	10	0.773973	0.752084	105.875	177.773
227	10	0.777397	0.765456	105.875	177.12
228	10	0.780822	0.775574	105.875	176.626
229	10	0.784247	0.789191	105.875	175.961
230	10	0.787671	0.7995	105.875	175.458
231	10	0.791096	0.813379	105.875	174.78
232	10	0.794521	0.823893	105.875	174.267
233	10	0.797945	0.834498	105.875	173.749
234	10	0.80137	0.848786	105.875	173.051

235	10	0.804795	0.859618	105.875	172.522
236	10	0.808219	0.874218	105.875	171.809
237	10	0.811644	0.885291	105.875	171.268
238	10	0.815068	0.900227	105.875	170.539
239	10	0.818493	0.911562	105.875	169.985
240	10	0.821918	0.923014	105.875	169.426
241	10	0.825342	0.938476	105.875	168.671
242	10	0.828767	0.950222	105.875	168.097
243	10	0.832192	0.966088	105.875	167.323
244	10	0.835616	0.97815	105.875	166.734
245	10	0.839041	0.994457	105.875	165.937
246	10	0.842466	1.00687	105.875	165.331
247	10	0.84589	1.01943	105.875	164.718
248	10	0.849315	1.03643	105.875	163.888
249	10	0.85274	1.04939	105.875	163.255
250	10	0.856164	1.06694	105.875	162.398
251	10	0.859589	1.08032	105.875	161.744
252	10	0.863014	1.09847	105.875	160.858
253	10	0.866438	1.11232	105.875	160.182
254	10	0.869863	1.12639	105.875	159.495
255	10	0.873288	1.1455	105.875	158.561
256	10	0.876712	1.16012	105.875	157.847
257	10	0.880137	1.18	105.875	156.877
258	10	0.883562	1.19522	105.875	156.133
259	10	0.886986	1.21073	105.875	155.376
260	10	0.890411	1.23187	105.875	154.344
261	10	0.893836	1.24809	105.875	153.552
262	10	0.89726	1.27024	105.875	152.47
263	10	0.900685	1.28727	105.875	151.638
264	10	0.90411	1.31058	105.875	150.5
265	10	0.907534	1.32854	105.875	149.623
266	10	0.910959	1.34694	105.875	148.724
267	10	0.914384	1.3722	105.875	147.491
268	10	0.917808	1.39175	105.875	146.536
269	10	0.921233	1.41865	105.875	145.222
270	10	0.924658	1.43953	105.875	144.203
271	10	0.928082	1.46838	105.875	142.794
272	10	0.931507	1.49085	105.875	141.697
273	10	0.934932	1.5141	105.875	140.561
274	10	0.938356	1.54643	105.875	138.983
275	10	0.941781	1.57179	105.875	137.744
276	10	0.945205	1.60725	105.875	136.013
277	10	0.94863	1.63524	105.875	134.646
278	10	0.952055	1.67466	105.875	132.721
279	10	0.955479	1.70604	105.875	131.188
280	10	0.958904	1.7392	105.875	129.569
281	10	0.962329	1.78661	105.875	127.254
282	10	0.965753	1.82501	105.875	125.379
283	10	0.969178	1.88079	105.875	122.655
284	10	0.972603	1.92684	105.875	120.406
285	10	0.976027	1.99539	105.875	117.058
286	11	0.979452	2.05375	112.563	114.209
287	12	0.982877	2.12007	119.25	110.97
288	13	0.986301	2.22621	125.938	105.787
289	18	0.989726	2.32634	159.375	100.897
290	20	0.993151	2.51213	172.75	91.8241
291	73	0.996575	2.74777	527.188	80.3175

Shapiro-Francia Test of Normality

Parameter: Copper

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 291

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.25379	-2.74777	7.55021	6.1929
2	-2.25379	-2.51213	13.861	11.8547
3	-2.25379	-2.32634	19.2729	17.0978
4	-2.25379	-2.22621	24.2289	22.1152
5	-2.25379	-2.12007	28.7236	26.8934
6	-2.25379	-2.05375	32.9415	31.5222
7	-2.25379	-1.99539	36.9231	36.0194
8	-1.46968	-1.92684	40.6358	38.8512
9	-1.46968	-1.88079	44.1731	41.6154
10	-1.34707	-1.82501	47.5038	44.0738
11	-1.30933	-1.78661	50.6958	46.413
12	-1.27297	-1.7392	53.7206	48.627
13	-1.20397	-1.70604	56.6312	50.681
14	-1.04982	-1.67465	59.4357	52.4391
15	-1.04982	-1.63524	62.1096	54.1558
16	-1.04982	-1.60725	64.6929	55.8431
17	-1.02165	-1.57179	67.1634	57.449
18	-0.994252	-1.54643	69.5549	58.9865
19	-0.967584	-1.5141	71.8474	60.4515
20	-0.941609	-1.49085	74.07	61.8553
21	-0.916291	-1.46838	76.2262	63.2008
22	-0.891598	-1.43953	78.2984	64.4843
23	-0.776529	-1.41865	80.311	65.5859
24	-0.776529	-1.39175	82.248	66.6666
25	-0.733969	-1.3722	84.1309	67.6738
26	-0.733969	-1.34694	85.9451	68.6624
27	-0.71335	-1.32854	87.7102	69.6101
28	-0.71335	-1.31058	89.4278	70.545
29	-0.673345	-1.28727	91.0848	71.4118
30	-0.673345	-1.27024	92.6983	72.2671
31	-0.673345	-1.24809	94.2561	73.1075
32	-0.653926	-1.23187	95.7736	73.913
33	-0.634878	-1.21073	97.2394	74.6817
34	-0.597837	-1.19522	98.668	75.3963
35	-0.562119	-1.18	100.06	76.0596
36	-0.562119	-1.16012	101.406	76.7117
37	-0.527633	-1.1455	102.718	77.3161
38	-0.527633	-1.12639	103.987	77.9104
39	-0.527633	-1.11232	105.224	78.4973
40	-0.478036	-1.09847	106.431	79.0224
41	-0.462035	-1.08032	107.598	79.5216
42	-0.430783	-1.06694	108.737	79.9812
43	-0.430783	-1.04939	109.838	80.4332
44	-0.415515	-1.03643	110.912	80.8639
45	-0.400478	-1.01943	111.951	81.2721
46	-0.371064	-1.00687	112.965	81.6458
47	-0.356675	-0.994457	113.954	82.0005
48	-0.328504	-0.97815	114.911	82.3218
49	-0.301105	-0.966088	115.844	82.6127
50	-0.301105	-0.950222	116.747	82.8988
51	-0.287682	-0.938476	117.628	83.1688

52	-0.287682	-0.923014	118.48	83.4343
53	-0.287682	-0.911562	119.311	83.6966
54	-0.274437	-0.900227	120.121	83.9436
55	-0.248461	-0.885291	120.905	84.1636
56	-0.248461	-0.874218	121.669	84.3808
57	-0.248461	-0.859618	122.408	84.5944
58	-0.248461	-0.848786	123.128	84.8053
59	-0.248461	-0.834498	123.825	85.0126
60	-0.235722	-0.823893	124.504	85.2068
61	-0.210721	-0.813379	125.165	85.3782
62	-0.210721	-0.7995	125.804	85.5467
63	-0.198451	-0.789191	126.427	85.7033
64	-0.18633	-0.775574	127.029	85.8478
65	-0.174353	-0.765456	127.615	85.9813
66	-0.139262	-0.752084	128.18	86.086
67	-0.139262	-0.742143	128.731	86.1893
68	-0.127833	-0.732275	129.267	86.283
69	-0.105361	-0.719228	129.784	86.3587
70	-0.0833816	-0.709522	130.288	86.4179
71	-0.0618754	-0.696684	130.773	86.461
72	-0.0512933	-0.687131	131.245	86.4962
73	-0.040822	-0.67449	131.7	86.5238
74	-0.0100503	-0.665079	132.143	86.5305
75	0	-0.655726	132.573	86.5305
76	0.0953102	-0.643345	132.987	86.4691
77	0.0953102	-0.634124	133.389	86.4087
78	0.0953102	-0.621911	133.775	86.3494
79	0.0953102	-0.612813	134.151	86.291
80	0.182322	-0.603765	134.516	86.1809
81	0.262364	-0.591776	134.866	86.0257
82	0.262364	-0.582841	135.205	85.8728
83	0.262364	-0.570999	135.531	85.723
84	0.336472	-0.56217	135.848	85.5338
85	0.405465	-0.550465	136.151	85.3106
86	0.470004	-0.541736	136.444	85.056
87	0.470004	-0.533048	136.728	84.8055
88	0.530628	-0.521527	137	84.5287
89	0.530628	-0.51293	137.263	84.2565
90	0.530628	-0.501527	137.515	83.9904
91	0.530628	-0.493018	137.758	83.7288
92	0.530628	-0.481728	137.99	83.4732
93	0.641854	-0.473299	138.214	83.1694
94	0.693147	-0.464904	138.43	82.8472
95	0.693147	-0.453763	138.636	82.5326
96	0.693147	-0.445443	138.834	82.2239
97	0.693147	-0.434397	139.023	81.9228
98	0.693147	-0.426148	139.205	81.6274
99	0.693147	-0.415193	139.377	81.3396
100	0.741937	-0.40701	139.543	81.0376
101	0.741937	-0.398855	139.702	80.7417
102	0.788457	-0.388022	139.852	80.4358
103	0.788457	-0.379927	139.997	80.1362
104	0.832909	-0.369171	140.133	79.8287
105	0.875469	-0.361133	140.263	79.5126
106	1.09861	-0.350451	140.386	79.1276
107	1.09861	-0.342466	140.503	78.7513
108	1.09861	-0.334503	140.615	78.3838
109	1.25276	-0.323919	140.72	77.978
110	1.30833	-0.316004	140.82	77.5646
111	1.335	-0.305481	140.913	77.1568
112	1.38629	-0.297612	141.002	76.7442
113	1.38629	-0.28976	141.086	76.3425

114	1.43508	-0.279319	141.164	75.9417
115	1.60944	-0.271509	141.238	75.5047
116	1.60944	-0.26112	141.306	75.0844
117	1.60944	-0.253347	141.37	74.6767
118	1.60944	-0.243007	141.429	74.2856
119	1.60944	-0.235269	141.485	73.9069
120	1.60944	-0.227545	141.536	73.5407
121	1.60944	-0.217267	141.584	73.191
122	1.60944	-0.209575	141.627	72.8537
123	1.60944	-0.199336	141.667	72.5329
124	1.60944	-0.191671	141.704	72.2244
125	1.60944	-0.181468	141.737	71.9324
126	1.79176	-0.173829	141.767	71.6209
127	1.79176	-0.166199	141.795	71.3231
128	1.79176	-0.156042	141.819	71.0435
129	1.79176	-0.148434	141.841	70.7776
130	1.79176	-0.138305	141.86	70.5298
131	1.94591	-0.130716	141.877	70.2754
132	1.94591	-0.12061	141.892	70.0407
133	1.94591	-0.113039	141.905	69.8207
134	1.94591	-0.105474	141.916	69.6155
135	1.94591	-0.0953969	141.925	69.4299
136	2.07944	-0.0878447	141.933	69.2472
137	2.07944	-0.0777834	141.939	69.0854
138	2.07944	-0.0702426	141.944	68.9394
139	2.19722	-0.0601949	141.947	68.8071
140	2.19722	-0.0526632	141.95	68.6914
141	2.19722	-0.0451348	141.952	68.5922
142	2.30259	-0.0350997	141.953	68.5114
143	2.30259	-0.0275759	141.954	68.4479
144	2.30259	-0.0175476	141.954	68.4075
145	2.30259	-0.0100272	141.954	68.3844
146	2.30259	0	141.954	68.3844
147	2.30259	0.0100272	141.954	68.4075
148	2.30259	0.0175476	141.955	68.4479
149	2.30259	0.0275759	141.956	68.5114
150	2.30259	0.0350997	141.957	68.5922
151	2.30259	0.0451348	141.959	68.6962
152	2.30259	0.0526632	141.962	68.8174
153	2.30259	0.0601949	141.965	68.956
154	2.30259	0.0702426	141.97	69.1178
155	2.30259	0.0777834	141.976	69.2969
156	2.30259	0.0878447	141.984	69.4991
157	2.30259	0.0953969	141.993	69.7188
158	2.30259	0.105474	142.004	69.9617
159	2.30259	0.113039	142.017	70.2219
160	2.30259	0.12061	142.031	70.4997
161	2.30259	0.130716	142.049	70.8006
162	2.30259	0.138305	142.068	71.1191
163	2.30259	0.148434	142.09	71.4609
164	2.30259	0.156042	142.114	71.8202
165	2.30259	0.166199	142.142	72.2029
166	2.30259	0.173829	142.172	72.6031
167	2.30259	0.181468	142.205	73.021
168	2.30259	0.191671	142.242	73.4623
169	2.30259	0.199336	142.281	73.9213
170	2.30259	0.209575	142.325	74.4039
171	2.30259	0.217267	142.372	74.9041
172	2.30259	0.227545	142.424	75.4281
173	2.30259	0.235269	142.48	75.9698
174	2.30259	0.243007	142.539	76.5294
175	2.30259	0.253347	142.603	77.1127

176	2.30259	0.26112	142.671	77.714	
177	2.30259	0.271509		142.745	78.3391
178	2.30259	0.279319		142.823	78.9823
179	2.30259	0.28976	142.907	79.6495	
180	2.30259	0.297612		142.995	80.3348
181	2.30259	0.305481		143.089	81.0382
182	2.30259	0.316004		143.188	81.7658
183	2.30259	0.323919		143.293	82.5116
184	2.30259	0.334503		143.405	83.2819
185	2.30259	0.342466		143.523	84.0704
186	2.30259	0.350451		143.645	84.8774
187	2.30259	0.361133		143.776	85.7089
188	2.30259	0.369171		143.912	86.5589
189	2.30259	0.379927		144.056	87.4338
190	2.30259	0.388022		144.207	88.3272
191	2.30259	0.398855		144.366	89.2456
192	2.30259	0.40701	144.532	90.1828	
193	2.30259	0.415193		144.704	91.1388
194	2.30259	0.426148		144.886	92.12
195	2.30259	0.434397		145.074	93.1203
196	2.30259	0.445443		145.273	94.146
197	2.30259	0.453763		145.479	95.1908
198	2.30259	0.464904		145.695	96.2613
199	2.30259	0.473299		145.919	97.3511
200	2.30259	0.481728		146.151	98.4603
201	2.30259	0.493018		146.394	99.5955
202	2.30259	0.501527		146.645	100.75
203	2.30259	0.51293	146.909	101.931	
204	2.30259	0.521527		147.181	103.132
205	2.30259	0.533048		147.465	104.36
206	2.30259	0.541736		147.758	105.607
207	2.30259	0.550465		148.061	106.875
208	2.30259	0.56217	148.377	108.169	
209	2.30259	0.570999		148.703	109.484
210	2.30259	0.582841		149.043	110.826
211	2.30259	0.591776		149.393	112.188
212	2.30259	0.603765		149.758	113.579
213	2.30259	0.612813		150.133	114.99
214	2.30259	0.621911		150.52	116.422
215	2.30259	0.634124		150.922	117.882
216	2.30259	0.643345		151.336	119.363
217	2.30259	0.655726		151.766	120.873
218	2.30259	0.665079		152.208	122.404
219	2.30259	0.67449	152.663	123.957	
220	2.30259	0.687131		153.135	125.54
221	2.30259	0.696684		153.621	127.144
222	2.30259	0.709522		154.124	128.778
223	2.30259	0.719228		154.642	130.434
224	2.30259	0.732275		155.178	132.12
225	2.30259	0.742143		155.729	133.829
226	2.30259	0.752084		156.294	135.56
227	2.30259	0.765456		156.88	137.323
228	2.30259	0.775574		157.482	139.109
229	2.30259	0.789191		158.104	140.926
230	2.30259	0.7995	158.744	142.767	
231	2.30259	0.813379		159.405	144.64
232	2.30259	0.823893		160.084	146.537
233	2.30259	0.834498		160.78	148.458
234	2.30259	0.848786		161.501	150.413
235	2.30259	0.859618		162.24	152.392
236	2.30259	0.874218		163.004	154.405
237	2.30259	0.885291		163.788	156.443

238	2.30259	0.900227		164.598	158.516
239	2.30259	0.911562		165.429	160.615
240	2.30259	0.923014		166.281	162.741
241	2.30259	0.938476		167.162	164.901
242	2.30259	0.950222		168.065	167.089
243	2.30259	0.966088		168.998	169.314
244	2.30259	0.97815	169.955	171.566	
245	2.30259	0.994457		170.944	173.856
246	2.30259	1.00687	171.958	176.174	
247	2.30259	1.01943	172.997	178.522	
248	2.30259	1.03643	174.071	180.908	
249	2.30259	1.04939	175.172	183.325	
250	2.30259	1.06694	176.311	185.781	
251	2.30259	1.08032	177.478	188.269	
252	2.30259	1.09847	178.684	190.798	
253	2.30259	1.11232	179.922	193.359	
254	2.30259	1.12639	181.19	195.953	
255	2.30259	1.1455	182.502	198.591	
256	2.30259	1.16012	183.848	201.262	
257	2.30259	1.18	185.241	203.979	
258	2.30259	1.19522	186.669	206.731	
259	2.30259	1.21073	188.135	209.519	
260	2.30259	1.23187	189.653	212.355	
261	2.30259	1.24809	191.21	215.229	
262	2.30259	1.27024	192.824	218.154	
263	2.30259	1.28727	194.481	221.118	
264	2.30259	1.31058	196.199	224.136	
265	2.30259	1.32854	197.964	227.195	
266	2.30259	1.34694	199.778	230.296	
267	2.30259	1.3722	201.661	233.456	
268	2.30259	1.39175	203.598	236.66	
269	2.30259	1.41865	205.61	239.927	
270	2.30259	1.43953	207.683	243.242	
271	2.30259	1.46838	209.839	246.623	
272	2.30259	1.49085	212.061	250.056	
273	2.30259	1.5141	214.354	253.542	
274	2.30259	1.54643	216.745	257.103	
275	2.30259	1.57179	219.216	260.722	
276	2.30259	1.60725	221.799	264.423	
277	2.30259	1.63524	224.473	268.188	
278	2.30259	1.67466	227.278	272.044	
279	2.30259	1.70604	230.188	275.972	
280	2.30259	1.7392	233.213	279.977	
281	2.30259	1.78661	236.405	284.091	
282	2.30259	1.82501	239.736	288.293	
283	2.30259	1.88079	243.273	292.624	
284	2.30259	1.92684	246.986	297.06	
285	2.30259	1.99539	250.967	301.655	
286	2.3979	2.05375	255.185	306.58	
287	2.48491	2.12007	259.68	311.848	
288	2.56495	2.22621	264.636	317.558	
289	2.89037	2.32634	270.048	324.282	
290	2.99573	2.51213	276.359	331.808	
291	4.29046	2.74777	283.909	343.597	

Data Set Standard Deviation = 1.34007
Numerator = 118059
Denominator = 147854
W Statistic = 0.798481 = 118059 / 147854

5% Critical value of 0.976 exceeds 0.798481

Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.798481
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Copper

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.8931
0.8931 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y	
1	-2.25379	0.00342466	-2.74777	88.9025	348.683	
2	-2.25379	0.00684932	-2.51213	88.9025	337.176	
3	-2.25379	0.010274	-2.32634	88.9025	328.103	
4	-2.25379	0.0136986	-2.22621	88.9025	323.213	
5	-2.25379	0.0171233	-2.12007	88.9025	318.03	
6	-2.25379	0.0205479	-2.05375	88.9025	314.791	
7	-2.25379	0.0239726	-1.99539	88.9025	311.942	
8	-1.46968	0.0273973	-1.92684	141.34	308.594	
9	-1.46968	0.0308219	-1.88079	141.34	306.345	
10	-1.34707	0.0342466	-1.82501	149.539	303.621	
11	-1.30933	0.0376712	-1.78661	152.063	301.746	
12	-1.27297	0.0410959	-1.7392	154.495	299.431	
13	-1.20397	0.0445205	-1.70604	159.109	297.812	
14	-1.04982	0.0479452	-1.67466	169.418	296.279	
15	-1.04982	0.0513699	-1.63524	169.418	294.354	
16	-1.04982	0.0547945	-1.60725	169.418	292.987	
17	-1.02165	0.0582192	-1.57179	171.302	291.256	
18	-0.994252	0.0616438	-1.54643	173.134	290.017	
19	-0.967584	0.0650685	-1.5141	174.918	288.439	
20	-0.941609	0.0684932	-1.49085	176.655	287.303	
21	-0.916291	0.0719178	-1.46838	178.348	286.206	
22	-0.891598	0.0753425	-1.43953	179.999	284.797	
23	-0.776529	0.0787671	-1.41865	187.695	283.778	
24	-0.776529	0.0821918	-1.39175	187.695	282.464	
25	-0.733969	0.0856164	-1.3722	190.541	281.509	
26	-0.733969	0.0890411	-1.34694	190.541	280.276	
27	-0.71335	0.0924658	-1.32854	191.92	279.377	
28	-0.71335	0.0958904	-1.31058	191.92	278.5	
29	-0.673345	0.0993151	-1.28727	194.595	277.362	
30	-0.673345	0.10274	-1.27024	194.595	276.53	
31	-0.673345	0.106164	-1.24809	194.595	275.448	
32	-0.653926	0.109589	-1.23187	195.894	274.656	
33	-0.634878	0.113014	-1.21073	197.168	273.624	
34	-0.597837	0.116438	-1.19522	199.645	272.867	
35	-0.562119	0.119863	-1.18	202.033	272.123	
36	-0.562119	0.123288	-1.16012	202.033	271.153	
37	-0.527633	0.126712	-1.1455	204.34	270.439	
38	-0.527633	0.130137	-1.12639	204.34	269.505	
39	-0.527633	0.133562	-1.11232	204.34	268.818	
40	-0.478036	0.136986	-1.09847	207.656	268.142	
41	-0.462035	0.140411	-1.08032	208.726	267.256	
42	-0.430783	0.143836	-1.06694	210.816	266.602	
43	-0.430783	0.14726	-1.04939	210.816	265.745	
44	-0.415515	0.150685	-1.03643	211.837	265.112	
45	-0.400478	0.15411	-1.01943	212.843	264.282	
46	-0.371064	0.157534	-1.00687	214.81	263.669	
47	-0.356675	0.160959	-0.994457		215.772	263.063
48	-0.328504	0.164384	-0.97815	217.656	262.266	

49	-0.301105	0.167808	-0.966088	219.489	261.677
50	-0.301105	0.171233	-0.950222	219.489	260.903
51	-0.287682	0.174658	-0.938476	220.386	260.329
52	-0.287682	0.178082	-0.923014	220.386	259.574
53	-0.287682	0.181507	-0.911562	220.386	259.015
54	-0.274437	0.184932	-0.900227	221.272	258.461
55	-0.248461	0.188356	-0.885291	223.009	257.732
56	-0.248461	0.191781	-0.874218	223.009	257.191
57	-0.248461	0.195205	-0.859618	223.009	256.478
58	-0.248461	0.19863	-0.848786	223.009	255.949
59	-0.248461	0.202055	-0.834498	223.009	255.251
60	-0.235722	0.205479	-0.823893	223.861	254.733
61	-0.210721	0.208904	-0.813379	225.533	254.22
62	-0.210721	0.212329	-0.7995	225.533	253.542
63	-0.198451	0.215753	-0.789191	226.354	253.039
64	-0.186330	0.219178	-0.775574	227.164	252.374
65	-0.174353	0.222603	-0.765456	227.965	251.88
66	-0.139262	0.226027	-0.752084	230.312	251.227
67	-0.139262	0.229452	-0.742143	230.312	250.741
68	-0.127833	0.232877	-0.732275	231.076	250.259
69	-0.105361	0.236301	-0.719228	232.579	249.622
70	-0.0833816	0.239726	-0.709522	234.049	249.148
71	-0.0618754	0.243151	-0.696684	235.487	248.521
72	-0.0512933	0.246575	-0.687131	236.195	248.055
73	-0.040822	0.25	-0.67449	236.895	247.438
74	-0.0100503	0.253425	-0.665079	238.953	246.978
75	0	0.256849	-0.655726	239.625	246.521
76	0.0953102	0.260274	-0.643345	245.999	245.917
77	0.0953102	0.263699	-0.634124	245.999	245.466
78	0.0953102	0.267123	-0.621911	245.999	244.87
79	0.0953102	0.270548	-0.612813	245.999	244.426
80	0.182322	0.273973	-0.603765	251.818	243.984
81	0.262364	0.277397	-0.591776	257.171	243.398
82	0.262364	0.280822	-0.582841	257.171	242.962
83	0.262364	0.284247	-0.570999	257.171	242.384
84	0.336472	0.287671	-0.56217	262.127	241.953
85	0.405465	0.291096	-0.550465	266.74	241.381
86	0.470004	0.294521	-0.541736	271.056	240.955
87	0.470004	0.297945	-0.533048	271.056	240.531
88	0.530628	0.30137	-0.521527	275.111	239.968
89	0.530628	0.304795	-0.51293	275.111	239.548
90	0.530628	0.308219	-0.501527	275.111	238.991
91	0.530628	0.311644	-0.493018	275.111	238.576
92	0.530628	0.315068	-0.481728	275.111	238.024
93	0.641854	0.318493	-0.473299	282.549	237.613
94	0.693147	0.321918	-0.464904	285.979	237.203
95	0.693147	0.325342	-0.453763	285.979	236.659
96	0.693147	0.328767	-0.445443	285.979	236.252
97	0.693147	0.332192	-0.434397	285.979	235.713
98	0.693147	0.335616	-0.426148	285.979	235.31
99	0.693147	0.339041	-0.415193	285.979	234.775
100	0.741937	0.342466	-0.40701	289.242	234.376
101	0.741937	0.34589	-0.398855	289.242	233.977
102	0.788457	0.349315	-0.388022	292.353	233.448
103	0.788457	0.35274	-0.379927	292.353	233.053
104	0.832909	0.356164	-0.369171	295.326	232.528
105	0.875469	0.359589	-0.361133	298.172	232.135
106	1.09861	0.363014	-0.350451	313.095	231.614
107	1.09861	0.366438	-0.342466	313.095	231.224
108	1.09861	0.369863	-0.334503	313.095	230.835
109	1.25276	0.373288	-0.323919	323.404	230.318
110	1.30833	0.376712	-0.316004	327.12	229.932

111	1.335	0.380137	-0.305481	328.903	229.418
112	1.38629	0.383562	-0.297612	332.333	229.033
113	1.38629	0.386986	-0.28976	332.333	228.65
114	1.43508	0.390411	-0.279319	335.596	228.14
115	1.60944	0.393836	-0.271509	347.256	227.759
116	1.60944	0.39726	-0.26112	347.256	227.251
117	1.60944	0.400685	-0.253347	347.256	226.872
118	1.60944	0.40411	-0.243007	347.256	226.367
119	1.60944	0.407534	-0.235269	347.256	225.989
120	1.60944	0.410959	-0.227545	347.256	225.612
121	1.60944	0.414384	-0.217267	347.256	225.11
122	1.60944	0.417808	-0.209575	347.256	224.734
123	1.60944	0.421233	-0.199336	347.256	224.234
124	1.60944	0.424658	-0.191671	347.256	223.86
125	1.60944	0.428082	-0.181468	347.256	223.362
126	1.79176	0.431507	-0.173829	359.449	222.989
127	1.79176	0.434932	-0.166199	359.449	222.616
128	1.79176	0.438356	-0.156042	359.449	222.12
129	1.79176	0.441781	-0.148434	359.449	221.749
130	1.79176	0.445205	-0.138305	359.449	221.254
131	1.94591	0.44863	-0.130716	369.758	220.883
132	1.94591	0.452055	-0.12061	369.758	220.39
133	1.94591	0.455479	-0.113039	369.758	220.02
134	1.94591	0.458904	-0.105474	369.758	219.651
135	1.94591	0.462329	-0.0953969	369.758	219.159
136	2.07944	0.465753	-0.0878447	378.688	218.79
137	2.07944	0.469178	-0.0777834	378.688	218.298
138	2.07944	0.472603	-0.0702426	378.688	217.93
139	2.19722	0.476027	-0.0601949	386.564	217.44
140	2.19722	0.479452	-0.0526632	386.564	217.072
141	2.19722	0.482877	-0.0451348	386.564	216.704
142	2.30259	0.486301	-0.0350997	393.61	216.214
143	2.30259	0.489726	-0.0275759	393.61	215.847
144	2.30259	0.493151	-0.0175476	393.61	215.357
145	2.30259	0.496575	-0.0100272	393.61	214.99
146	2.30259	0.5	0	393.61	214.5
147	2.30259	0.503425	0.0100272	393.61	214.01
148	2.30259	0.506849	0.0175476	393.61	213.643
149	2.30259	0.510274	0.0275759	393.61	213.153
150	2.30259	0.513699	0.0350997	393.61	212.786
151	2.30259	0.517123	0.0451348	393.61	212.296
152	2.30259	0.520548	0.0526632	393.61	211.928
153	2.30259	0.523973	0.0601949	393.61	211.56
154	2.30259	0.527397	0.0702426	393.61	211.07
155	2.30259	0.530822	0.0777834	393.61	210.702
156	2.30259	0.534247	0.0878447	393.61	210.21
157	2.30259	0.537671	0.0953969	393.61	209.841
158	2.30259	0.541096	0.105474	393.61	209.349
159	2.30259	0.544521	0.113039	393.61	208.98
160	2.30259	0.547945	0.12061	393.61	208.61
161	2.30259	0.55137	0.130716	393.61	208.117
162	2.30259	0.554795	0.138305	393.61	207.746
163	2.30259	0.558219	0.148434	393.61	207.251
164	2.30259	0.561644	0.156042	393.61	206.88
165	2.30259	0.565068	0.166199	393.61	206.384
166	2.30259	0.568493	0.173829	393.61	206.011
167	2.30259	0.571918	0.181468	393.61	205.638
168	2.30259	0.575342	0.191671	393.61	205.14
169	2.30259	0.578767	0.199336	393.61	204.766
170	2.30259	0.582192	0.209575	393.61	204.266
171	2.30259	0.585616	0.217267	393.61	203.89
172	2.30259	0.589041	0.227545	393.61	203.388

173	2.30259	0.592466	0.235269	393.61	203.011
174	2.30259	0.59589	0.243007	393.61	202.633
175	2.30259	0.599315	0.253347	393.61	202.128
176	2.30259	0.60274	0.26112	393.61	201.749
177	2.30259	0.606164	0.271509	393.61	201.241
178	2.30259	0.609589	0.279319	393.61	200.86
179	2.30259	0.613014	0.28976	393.61	200.35
180	2.30259	0.616438	0.297612	393.61	199.967
181	2.30259	0.619863	0.305481	393.61	199.582
182	2.30259	0.623288	0.316004	393.61	199.068
183	2.30259	0.626712	0.323919	393.61	198.682
184	2.30259	0.630137	0.334503	393.61	198.165
185	2.30259	0.633562	0.342466	393.61	197.776
186	2.30259	0.636986	0.350451	393.61	197.386
187	2.30259	0.640411	0.361133	393.61	196.865
188	2.30259	0.643836	0.369171	393.61	196.472
189	2.30259	0.64726	0.379927	393.61	195.947
190	2.30259	0.650685	0.388022	393.61	195.552
191	2.30259	0.65411	0.398855	393.61	195.023
192	2.30259	0.657534	0.40701	393.61	194.624
193	2.30259	0.660959	0.415193	393.61	194.225
194	2.30259	0.664384	0.426148	393.61	193.69
195	2.30259	0.667808	0.434397	393.61	193.287
196	2.30259	0.671233	0.445443	393.61	192.748
197	2.30259	0.674658	0.453763	393.61	192.341
198	2.30259	0.678082	0.464904	393.61	191.797
199	2.30259	0.681507	0.473299	393.61	191.387
200	2.30259	0.684932	0.481728	393.61	190.976
201	2.30259	0.688356	0.493018	393.61	190.424
202	2.30259	0.691781	0.501527	393.61	190.009
203	2.30259	0.695205	0.51293	393.61	189.452
204	2.30259	0.69863	0.521527	393.61	189.032
205	2.30259	0.702055	0.533048	393.61	188.469
206	2.30259	0.705479	0.541736	393.61	188.045
207	2.30259	0.708904	0.550465	393.61	187.619
208	2.30259	0.712329	0.56217	393.61	187.047
209	2.30259	0.715753	0.570999	393.61	186.616
210	2.30259	0.719178	0.582841	393.61	186.038
211	2.30259	0.722603	0.591776	393.61	185.602
212	2.30259	0.726027	0.603765	393.61	185.016
213	2.30259	0.729452	0.612813	393.61	184.574
214	2.30259	0.732877	0.621911	393.61	184.13
215	2.30259	0.736301	0.634124	393.61	183.534
216	2.30259	0.739726	0.643345	393.61	183.083
217	2.30259	0.743151	0.655726	393.61	182.479
218	2.30259	0.746575	0.665079	393.61	182.022
219	2.30259	0.75	0.67449	393.61	181.562
220	2.30259	0.753425	0.687131	393.61	180.945
221	2.30259	0.756849	0.696684	393.61	180.479
222	2.30259	0.760274	0.709522	393.61	179.852
223	2.30259	0.763699	0.719228	393.61	179.378
224	2.30259	0.767123	0.732275	393.61	178.741
225	2.30259	0.770548	0.742143	393.61	178.259
226	2.30259	0.773973	0.752084	393.61	177.773
227	2.30259	0.777397	0.765456	393.61	177.12
228	2.30259	0.780822	0.775574	393.61	176.626
229	2.30259	0.784247	0.789191	393.61	175.961
230	2.30259	0.787671	0.7995	393.61	175.458
231	2.30259	0.791096	0.813379	393.61	174.78
232	2.30259	0.794521	0.823893	393.61	174.267
233	2.30259	0.797945	0.834498	393.61	173.749
234	2.30259	0.80137	0.848786	393.61	173.051

235	2.30259	0.804795		0.859618	393.61	172.522
236	2.30259	0.808219		0.874218	393.61	171.809
237	2.30259	0.811644		0.885291	393.61	171.268
238	2.30259	0.815068		0.900227	393.61	170.539
239	2.30259	0.818493		0.911562	393.61	169.985
240	2.30259	0.821918		0.923014	393.61	169.426
241	2.30259	0.825342		0.938476	393.61	168.671
242	2.30259	0.828767		0.950222	393.61	168.097
243	2.30259	0.832192		0.966088	393.61	167.323
244	2.30259	0.835616		0.97815	393.61	166.734
245	2.30259	0.839041		0.994457	393.61	165.937
246	2.30259	0.842466		1.00687	393.61	165.331
247	2.30259	0.84589	1.01943	393.61	164.718	
248	2.30259	0.849315		1.03643	393.61	163.888
249	2.30259	0.85274	1.04939	393.61	163.255	
250	2.30259	0.856164		1.06694	393.61	162.398
251	2.30259	0.859589		1.08032	393.61	161.744
252	2.30259	0.863014		1.09847	393.61	160.858
253	2.30259	0.866438		1.11232	393.61	160.182
254	2.30259	0.869863		1.12639	393.61	159.495
255	2.30259	0.873288		1.1455	393.61	158.561
256	2.30259	0.876712		1.16012	393.61	157.847
257	2.30259	0.880137		1.18	393.61	156.877
258	2.30259	0.883562		1.19522	393.61	156.133
259	2.30259	0.886986		1.21073	393.61	155.376
260	2.30259	0.890411		1.23187	393.61	154.344
261	2.30259	0.893836		1.24809	393.61	153.552
262	2.30259	0.89726	1.27024	393.61	152.47	
263	2.30259	0.900685		1.28727	393.61	151.638
264	2.30259	0.90411	1.31058	393.61	150.5	
265	2.30259	0.907534		1.32854	393.61	149.623
266	2.30259	0.910959		1.34694	393.61	148.724
267	2.30259	0.914384		1.3722	393.61	147.491
268	2.30259	0.917808		1.39175	393.61	146.536
269	2.30259	0.921233		1.41865	393.61	145.222
270	2.30259	0.924658		1.43953	393.61	144.203
271	2.30259	0.928082		1.46838	393.61	142.794
272	2.30259	0.931507		1.49085	393.61	141.697
273	2.30259	0.934932		1.5141	393.61	140.561
274	2.30259	0.938356		1.54643	393.61	138.983
275	2.30259	0.941781		1.57179	393.61	137.744
276	2.30259	0.945205		1.60725	393.61	136.013
277	2.30259	0.94863	1.63524	393.61	134.646	
278	2.30259	0.952055		1.67466	393.61	132.721
279	2.30259	0.955479		1.70604	393.61	131.188
280	2.30259	0.958904		1.7392	393.61	129.569
281	2.30259	0.962329		1.78661	393.61	127.254
282	2.30259	0.965753		1.82501	393.61	125.379
283	2.30259	0.969178		1.88079	393.61	122.655
284	2.30259	0.972603		1.92684	393.61	120.406
285	2.30259	0.976027		1.99539	393.61	117.058
286	2.3979	0.979452		2.05375	399.984	114.209
287	2.48491	0.982877		2.12007	405.803	110.97
288	2.56495	0.986301		2.22621	411.156	105.787
289	2.89037	0.989726		2.32634	432.919	100.897
290	2.99573	0.993151		2.51213	439.965	91.8241
291	4.29046	0.996575		2.74777	526.549	80.3175

Kruskal-Wallis Non-Parametric Test

Parameter: Copper

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	4.29046	291
	3/16/1999	ND<2.30259	75
	9/23/1999	ND<2.30259	75
	3/14/2000	ND<2.30259	75
	9/23/2003	ND<2.30259	75
	3/10/2004	ND<2.30259	75
	10/12/2004	ND<2.30259	75
	4/1/2005	ND<2.30259	75
	10/26/2005	ND<2.30259	75
	6/19/2006	ND<2.30259	75
	11/18/2006	ND<2.30259	75
	6/2/2007	2.07944 J	278
	11/15/2007	1.60944 J	257
	5/20/2008	2.07944 J	279
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.301105 J	191
	11/16/2009	-0.248461 J	197
	6/30/2010	0.262364	223
	11/17/2010	-0.139262 J	208
	7/6/2011	0.0953102	218
	11/22/2011	-0.235722 J	202
	5/16/2012	-0.139262 J	209
	11/16/2012	-1.46968 J	150
	11/16/2013	-1.27297 J	154

Rank Sum = 3682
Rank Mean = 153.417

Background Rank Sum = 3682
Background Rank Mean = 153.417

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-15R	11/18/2006	1.09861 J	248
	6/2/2007	1.60944 J	258
	11/15/2007	ND<2.30259	75
	11/15/2007	1.60944 J	259
	5/20/2008	ND<2.30259	75
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	11/20/2008	1.60944 J	260
	6/11/2009	1.30833	252
	11/16/2009	-0.562119 J	177
	11/16/2009	-0.0833816 J	212
	11/16/2009	0.530628	230
	11/17/2010	0.832909	246
	7/6/2011	-0.527633 J	179
	11/22/2011	-0.301105 J	192
	5/16/2012	-0.673345 J	171

	11/16/2012	ND<-2.25379 U	75
	11/16/2013	-1.04982 J	156

Rank Sum = 3215
Rank Mean = 178.611

LMW-16	11/18/2006	ND<2.30259	75
	6/2/2007	1.94591 J	273
	11/15/2007	1.79176 J	268
	5/20/2008	ND<2.30259	75
	11/20/2008	1.60944 J	261
	6/11/2009	-1.02165 J	159
	11/16/2009	-0.527633 J	180
	11/17/2010	-0.776529 J	165
	7/6/2011	-0.400478 J	187
	11/22/2011	-0.0512933 J	214
	5/16/2012	-1.30933 J	153
	11/16/2012	-1.20397 J	155
	11/16/2013	-0.994252 J	160

Rank Sum = 2325
Rank Mean = 178.846

LMW-10	3/14/2000	ND<2.30259	75
	9/23/2003	ND<2.30259	75
	3/10/2004	ND<2.30259	75
	10/12/2004	ND<2.30259	75
	4/1/2005	ND<2.30259	75
	10/26/2005	ND<2.30259	75
	6/19/2006	ND<2.30259	75
	11/18/2006	ND<2.30259	75
	6/2/2007	ND<2.30259	75
	11/15/2007	ND<2.30259	75
	5/20/2008	0.693147 J	236
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.673345 J	172
	11/16/2009	ND<-2.25379 U	75
	6/30/2010	0.641854	235
	11/17/2010	-0.941609 J	162
	7/6/2011	-1.04982 J	157
	11/22/2011	-0.562119 J	178
	5/16/2012	ND<-2.25379 U	75
	11/16/2012	ND<-2.25379 U	75
	11/16/2013	-1.34707 J	152

Rank Sum = 2342
Rank Mean = 111.524

LMW-3	11/19/1996	ND<2.30259	75
	3/24/1997	ND<2.30259	75
	1/16/1998	1.38629 J	254
	3/16/1999	ND<2.30259	75
	9/23/1999	ND<2.30259	75
	3/14/2000	ND<2.30259	75
	9/23/2003	ND<2.30259	75
	3/10/2004	ND<2.30259	75
	10/12/2004	ND<2.30259	75
	4/1/2005	ND<2.30259	75
	10/26/2005	ND<2.30259	75
	6/19/2006	ND<2.30259	75
	11/18/2006	ND<2.30259	75
	6/2/2007	ND<2.30259	75
	11/15/2007	2.19722 J	281
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75

	6/11/2009	-0.356675 J	189
	11/16/2009	0.0953102	219
	11/17/2010	0.470004	228
	7/6/2011	0	217
	11/22/2011	-0.174353 J	207
	5/16/2012	-0.248461 J	198
	11/16/2012	-0.916291 J	163
	11/16/2013	-0.478036 J	182

Rank Sum = 3263
Rank Mean = 130.52

LMW-3S	11/18/2006	0.693147 J	237
	6/2/2007	ND<2.30259	75
	11/15/2007	1.79176 J	269
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	6/11/2009	0.336472	226
	11/16/2009	-0.198451 J	205
	11/17/2010	0.530628	231
	7/6/2011	0.262364	224
	11/22/2011	0.0953102	220
	5/16/2012	-0.210721 J	203
	11/16/2012	-0.0100503 J	216
	11/16/2013	-0.248461 J	199

Rank Sum = 2455
Rank Mean = 188.846

LMW-6	1/16/1998	2.89037 J	289
	3/16/1999	ND<2.30259	75
	9/23/1999	ND<2.30259	75
	3/14/2000	ND<2.30259	75
	9/23/2003	ND<2.30259	75
	3/10/2004	ND<2.30259	75
	10/12/2004	ND<2.30259	75
	4/1/2005	ND<2.30259	75
	10/26/2005	ND<2.30259	75
	6/19/2006	ND<2.30259	75
	11/18/2006	ND<2.30259	75
	6/2/2007	1.94591 J	274
	11/15/2007	1.94591 J	275
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	6/11/2009	0.530628	232
	11/16/2009	0.182322	222
	6/30/2010	1.09861	249
	11/17/2010	0.788457	244
	7/6/2011	0.0953102	221
	11/22/2011	-0.597837 J	176
	5/16/2012	-0.71335 J	169
	11/16/2012	-0.248461 J	200
	11/16/2013	-0.733969 J	167

Rank Sum = 3618
Rank Mean = 150.75

LMW-8	1/16/1998	0.693147 J	238
	3/16/1999	1.60944 J	262
	9/23/1999	ND<2.30259	75
	3/14/2000	ND<2.30259	75
	9/23/2003	ND<2.30259	75
	3/10/2004	ND<2.30259	75
	10/12/2004	ND<2.30259	75
	4/1/2005	ND<2.30259	75

	10/26/2005	ND<2.30259	75
	6/19/2006	ND<2.30259	75
	11/18/2006	ND<2.30259	75
	6/2/2007	ND<2.30259	75
	11/15/2007	1.79176 J	270
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.287682 J	193
	11/16/2009	-0.430783 J	184
	6/30/2010	0.262364	225
	11/17/2010	-0.287682 J	194
	7/6/2011	-0.733969 J	168
	11/22/2011	0.741937	242
	5/16/2012	-0.776529 J	166
	11/16/2012	ND<-2.25379 U	75
	11/16/2013	-0.967584 J	161

Rank Sum = 3278
Rank Mean = 136.583

LMW-9	1/16/1998	2.19722 J	282
	3/16/1999	ND<2.30259	75
	9/23/1999	2.48491 J	287
	3/14/2000	ND<2.30259	75
	9/23/2003	ND<2.30259	75
	3/10/2004	ND<2.30259	75
	10/12/2004	ND<2.30259	75
	4/1/2005	ND<2.30259	75
	10/26/2005	ND<2.30259	75
	6/19/2006	ND<2.30259	75
	11/18/2006	ND<2.30259	75
	6/2/2007	1.60944 J	263
	11/15/2007	1.94591 J	276
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.127833 J	210
	11/16/2009	-0.527633 J	181
	6/30/2010	0.875469	247
	11/17/2010	0.530628	233
	7/6/2011	-0.430783 J	185
	11/22/2011	-0.248461 J	201
	5/16/2012	1.43508	256
	11/16/2012	1.60944	264
	11/16/2013	0.788457	245

Rank Sum = 3955
Rank Mean = 164.792

LMW-9D	11/18/2006	1.79176 J	271
	6/2/2007	ND<2.30259	75
	11/15/2007	2.19722 J	283
	5/20/2008	0.693147 J	239
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.371064 J	188
	11/16/2009	-0.287682 J	195
	6/30/2010	-0.105361 J	211
	11/17/2010	-0.634878 J	175
	7/6/2011	0.693147	240
	11/22/2011	-0.0618754 J	213
	5/16/2012	-0.462035 J	183
	11/16/2012	-0.415515 J	186
	11/16/2013	-0.653926 J	174

Rank Sum = 2708
Rank Mean = 193.429

LMW-9S	11/18/2006	ND<2.30259		75
	6/2/2007	ND<2.30259		75
	11/15/2007	1.94591	J	277
	5/20/2008	ND<2.30259		75
	11/20/2008	ND<2.30259		75
	6/11/2009	-0.18633	J	206
	6/30/2010	0.530628		234
	11/17/2010	0.470004		229
	7/6/2011	-0.71335	J	170
	11/22/2011	-0.274437	J	196
	5/16/2012	-1.46968	J	151
	11/16/2012	ND<-2.25379	U	75
	11/16/2013	-1.04982	J	158

Rank Sum = 1996
Rank Mean = 153.538

LMW-14R	6/2/2007	ND<2.30259		75
	11/15/2007	ND<2.30259		75
	5/20/2008	ND<2.30259		75
	11/20/2008	ND<2.30259		75
	6/11/2009	-0.210721	J	204
	11/17/2010	-0.040822	J	215
	7/6/2011	0.693147		241
	11/22/2011	-0.328504	J	190
	5/16/2012	-0.891598	J	164
	11/16/2012	ND<-2.25379	U	75
	11/16/2013	-0.673345	J	173

Rank Sum = 1562
Rank Mean = 142

LMW-7	1/16/1998	2.99573		290
	3/16/1999	1.60944	J	265
	9/23/1999	1.60944	J	266
	3/14/2000	ND<2.30259		75
	9/23/2003	ND<2.30259		75
	3/10/2004	ND<2.30259		75
	10/12/2004	ND<2.30259		75
	4/1/2005	2.30259	J	284
	10/26/2005	2.3979	J	286
	6/19/2006	2.30259	J	285
	11/18/2006	ND<2.30259		75
	6/2/2007	1.79176	J	272
	11/15/2007	2.07944	J	280
	5/20/2008	ND<2.30259		75
	11/20/2008	ND<2.30259		75
	6/11/2009	1.38629		255
	11/17/2010	1.335		253
	7/6/2011	2.56495		288
	11/22/2011	1.25276		251
	5/16/2012	0.741937		243
	11/16/2012	0.405465		227

Rank Sum = 4270
Rank Mean = 203.333

LMW-12	3/14/2000	ND<2.30259		75
	9/23/2003	ND<2.30259		75
	3/10/2004	ND<2.30259		75
	10/12/2004	ND<2.30259		75
	4/1/2005	ND<2.30259		75
	10/26/2005	ND<2.30259		75
	6/19/2006	ND<2.30259		75

	6/2/2007	ND<2.30259	75
	11/15/2007	ND<2.30259	75
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75

Rank Sum = 825
Rank Mean = 75

LMW-11	3/14/2000	ND<2.30259	75
	9/23/2003	ND<2.30259	75
	3/10/2004	ND<2.30259	75
	10/12/2004	ND<2.30259	75
	4/1/2005	ND<2.30259	75
	10/26/2005	ND<2.30259	75
	6/19/2006	ND<2.30259	75
	6/2/2007	ND<2.30259	75
	11/15/2007	ND<2.30259	75
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75

Rank Sum = 825
Rank Mean = 75

LMW-13	3/14/2000	ND<2.30259	75
	9/23/2003	ND<2.30259	75
	3/10/2004	ND<2.30259	75
	10/12/2004	ND<2.30259	75
	4/1/2005	ND<2.30259	75
	10/26/2005	ND<2.30259	75
	6/19/2006	ND<2.30259	75
	6/2/2007	ND<2.30259	75
	11/15/2007	ND<2.30259	75
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75

Rank Sum = 825
Rank Mean = 75

MW-5	1/16/1998	1.09861 J	250
	3/16/1999	ND<2.30259	75
	9/23/1999	ND<2.30259	75
	3/14/2000	ND<2.30259	75
	9/23/2003	ND<2.30259	75
	3/10/2004	ND<2.30259	75
	10/12/2004	ND<2.30259	75
	4/1/2005	ND<2.30259	75
	10/26/2005	ND<2.30259	75
	6/19/2006	ND<2.30259	75
	11/15/2007	1.60944 J	267
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75

Rank Sum = 1342
Rank Mean = 103.231

Calculation Results:

Kruskal-Wallis H Statistic = 55.3621
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 63.9459
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
55.3621 > 26.2962 indicating a significant group difference at 5% significance level
63.9459 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 153.417

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-15R	178.611	25.1944	61.0385
LMW-16	178.846	25.4295	67.4131
LMW-10	111.524	-41.8929	58.4941
LMW-3	130.52	-22.8967	55.9427
LMW-3S	188.846	35.4295	67.4131
LMW-6	150.75	-2.66667	56.5106
LMW-8	136.583	-16.8333	56.5106
LMW-9	164.792	11.375	56.5106
LMW-9D	193.429	40.0119	65.8329
LMW-9S	153.538	0.121795	67.4131
LMW-14R	142	-11.4167	71.2776
LMW-7	203.333	49.9167	58.4941
LMW-12	75	-78.4167	71.2776
LMW-11	75	-78.4167	71.2776
LMW-13	75	-78.4167	71.2776
MW-5	103.231	-50.1859	67.4131

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 153.417

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-15R	178.611	25.1944	72.0958
LMW-16	178.846	25.4295	79.6252
LMW-10	111.524	-41.8929	69.0904
LMW-3	130.52	-22.8967	66.0769
LMW-3S	188.846	35.4295	79.6252
LMW-6	150.75	-2.66667	66.7477
LMW-8	136.583	-16.8333	66.7477
LMW-9	164.792	11.375	66.7477
LMW-9D	193.429	40.0119	77.7587
LMW-9S	153.538	0.121795	79.6252
LMW-14R	142	-11.4167	84.1897
LMW-7	203.333	49.9167	69.0904
LMW-12	75	-78.4167	84.1897
LMW-11	75	-78.4167	84.1897
LMW-13	75	-78.4167	84.1897
MW-5	103.231	-50.1859	79.6252

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Copper

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 51.2027%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 24
Maximum Background Value = 4.29046
Confidence Level = 75%
False Positive Rate = 25%

Location	Date	Count	Mean	Significant
LMW-15R	11/16/2013	1	-1.04982	FALSE
LMW-16	11/16/2013	1	-0.994252	FALSE
LMW-10	11/16/2013	1	-1.34707	FALSE
LMW-3	11/16/2013	1	-0.478036	FALSE
LMW-3S	11/16/2013	1	-0.248461	FALSE
LMW-6	11/16/2013	1	-0.733969	FALSE
LMW-8	11/16/2013	1	-0.967584	FALSE
LMW-9	11/16/2013	1	0.788457	FALSE
LMW-9D	11/16/2013	1	-0.653926	FALSE
LMW-9S	11/16/2013	1	-1.04982	FALSE
LMW-14R	11/16/2013	1	-0.673345	FALSE
LMW-7	11/16/2012	1	0.405465	FALSE
LMW-12	11/20/2008	1	2.30259	FALSE
LMW-11	11/20/2008	1	2.30259	FALSE
LMW-13	11/20/2008	1	2.30259	FALSE
MW-5	11/20/2008	1	2.30259	FALSE

Concentrations (ppb)

Parameter: Dichlorodifluoromethane

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 283
Total Non-Detect: 250
Percent Non-Detects: 88.3392%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	23	17 (73.913%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<0 J	ND<0 J
			11/18/2006	ND<0 J	ND<0 J
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<0 J	ND<0 J
			11/20/2008	1	1
			11/16/2009	1.1	1.1
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	0.81 J	0.81 J
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	1	1
			5/16/2012	0.66 J	0.66 J
			11/16/2012	0.6 J	0.6 J
			11/16/2013	ND<0.25 U	ND<0.25 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-8	23	23 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			11/16/2009	ND<0.25 U	ND<0.25 U
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U

			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-9S	12	12 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-9	23	23 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			11/16/2009	ND<0.25 U	ND<0.25 U
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-3	25	22 (88%)	11/19/1996	ND<1	ND<1
			3/24/1997	ND<1	ND<1
			1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<0 J	ND<0 J
			11/20/2008	ND<0 J	ND<0 J
			11/16/2009	0.41 J	0.41 J
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U

			11/22/2011	ND<0.25 U		ND<0.25 U
			5/16/2012	0.31 J	0.31 J	
			11/16/2012	0.51 J	0.51 J	
			11/16/2013	ND<0.25 U		ND<0.25 U
LMW-6	23	20 (86.9565%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<0 J	ND<0 J	
			11/18/2006	2	2	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<0 J	ND<0 J	
			11/20/2008	ND<0 J	ND<0 J	
			11/16/2009	ND<0.25 U		ND<0.25 U
			6/30/2010	ND<0.25 U		ND<0.25 U
			11/17/2010	ND<0.25 U		ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U	
			11/22/2011	ND<0.25 U		ND<0.25 U
			5/16/2012	0.69 J	0.69 J	
			11/16/2012	0.47 J	0.47 J	
			11/16/2013	ND<0.25 U		ND<0.25 U
LMW-10	20	10 (50%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	2	2	
			11/18/2006	9	9	
			6/2/2007	2	2	
			11/15/2007	ND<1	ND<1	
			5/20/2008	4	4	
			11/20/2008	2	2	
			11/16/2009	4.9	4.9	
			6/30/2010	ND<0.25 U		ND<0.25 U
			11/17/2010	ND<0.25 U		ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U	
			11/22/2011	10	10	
			5/16/2012	6.7	6.7	
			11/16/2012	6.2	6.2	
			11/16/2013	1.6	1.6	
LMW-3S	13	3 (23.0769%)	11/18/2006	12	12	
			6/2/2007	ND<1	ND<1	
			11/15/2007	2	2	
			5/20/2008	ND<0 J	ND<0 J	
			11/20/2008	2	2	
			11/16/2009	2.2	2.2	
			6/30/2010	4	4	
			11/17/2010	2.3	2.3	
			7/6/2011	0.76 J	0.76 J	
			11/22/2011	ND<0.25 U		ND<0.25 U
			5/16/2012	2.1	2.1	
			11/16/2012	3.2	3.2	

			11/16/2013	1.9	1.9
LMW-16	13	13 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			11/16/2009	ND<0.25 U	ND<0.25 U
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-9D	13	13 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			11/16/2009	ND<0.25 U	ND<0.25 U
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-15R	18	18 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			11/16/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	ND<0.25 U	ND<0.25 U
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-14R	11	11 (100%)	6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-7	20	20 (100%)	1/16/1998	ND<1	ND<1

			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			11/17/2010	ND<0.25 U	ND<0.25 U	
			7/6/2011	ND<0.25 U	ND<0.25 U	
			11/22/2011	ND<0.25 U	ND<0.25 U	
			5/16/2012	ND<0.25 U	ND<0.25 U	
			11/16/2012	ND<0.25 U	ND<0.25 U	
MW-5	13	12 (92.3077%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/15/2007	3	3	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
LMW-13	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
LMW-11	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
LMW-12	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	

4/1/2005	ND<1	ND<1	
10/26/2005		ND<1	ND<1
6/19/2006		ND<1	ND<1
6/2/2007	ND<1	ND<1	
11/15/2007		ND<1	ND<1
5/20/2008		ND<1	ND<1
11/20/2008		ND<1	ND<1

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Dichlorodifluoromethane

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 283

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.747777.55021	0	
2	0	-2.4572713.5884	0	
3	0	-2.3263419.0003	0	
4	0	-2.1972823.8283	0	
5	0	-2.1200728.323	0	
6	0	-2.0335232.4582	0	
7	0	-1.9773736.3682	0	
8	0	-1.9110340.0203	0	
9	0	-1.8662943.5033	0	
10	0.125	-1.8119146.7863	-0.226489	
11	0.125	-1.7743849.9348	-0.448287	
12	0.125	-1.7279352.9205	-0.664278	
13	0.125	-1.6954 55.7949	-0.876203	
14	0.125	-1.6546358.5327	-1.08303	
15	0.125	-1.6257661.1758	-1.28625	
16	0.125	-1.5892763.7015	-1.48491	
17	0.125	-1.5632266.1452	-1.68031	
18	0.125	-1.5300768.4863	-1.87157	
19	0.125	-1.5062670.7551	-2.05985	
20	0.125	-1.4757972.9331	-2.24433	
21	0.125	-1.4538 75.0466	-2.42605	
22	0.125	-1.4255477.0788	-2.60425	
23	0.125	-1.4050779.053	-2.77988	
24	0.125	-1.3786680.9537	-2.95221	
25	0.125	-1.3531782.7848	-3.12136	
26	0.125	-1.3346284.566	-3.28819	
27	0.125	-1.3105886.2837	-3.45201	
28	0.125	-1.2930387.9556	-3.61364	
29	0.125	-1.2702489.5691	-3.77242	
30	0.125	-1.2535791.1405	-3.92911	
31	0.125	-1.2318792.658	-4.0831	
32	0.125	-1.2159694.1366	-4.23509	
33	0.125	-1.1952295.5651	-4.38449	
34	0.125	-1.18 96.9575	-4.53199	
35	0.125	-1.1601298.3034	-4.67701	
36	0.125	-1.1455 99.6156	-4.8202	
37	0.125	-1.12639100.884	-4.961	
38	0.125	-1.11232102.122	-5.10004	
39	0.125	-1.0939 103.318	-5.23677	
40	0.125	-1.08032104.485	-5.37181	
41	0.125	-1.06252105.614	-5.50463	
42	0.125	-1.04939106.715	-5.6358	
43	0.125	-1.03215107.781	-5.76482	
44	0.125	-1.01943108.82	-5.89225	
45	0.125	-1.00271109.825	-6.01759	
46	0.125	-0.990356	110.806	-6.14138
47	0.125	-0.974114	111.755	-6.26315
48	0.125	-0.958125	112.673	-6.38291
49	0.125	-0.946291	113.569	-6.5012
50	0.125	-0.930718	114.435	-6.61754
51	0.125	-0.919183	115.28	-6.73244

52	0.125	-0.903992	116.097	-6.84544
53	0.125	-0.892733	116.894	-6.95703
54	0.125	-0.877897	117.665	-7.06676
55	0.125	-0.866894	118.416	-7.17513
56	0.125	-0.852385	119.143	-7.28167
57	0.125	-0.841621	119.851	-7.38688
58	0.125	-0.827417	120.536	-7.4903
59	0.125	-0.816874	121.203	-7.59241
60	0.125	-0.802956	121.848	-7.69278
61	0.125	-0.792618	122.476	-7.79186
62	0.125	-0.778966	123.083	-7.88923
63	0.125	-0.768821	123.674	-7.98533
64	0.125	-0.755415	124.244	-8.07976
65	0.125	-0.745449	124.8	-8.17294
66	0.125	-0.732275	125.336	-8.26448
67	0.125	-0.722479	125.858	-8.35479
68	0.125	-0.709522	126.362	-8.44348
69	0.125	-0.699883	126.852	-8.53096
70	0.125	-0.687131	127.324	-8.61685
71	0.125	-0.67449	127.779	-8.70116
72	0.125	-0.665079	128.221	-8.7843
73	0.125	-0.652622	128.647	-8.86588
74	0.125	-0.643345	129.061	-8.9463
75	0.125	-0.631062	129.459	-9.02518
76	0.125	-0.621911	129.846	-9.10292
77	0.125	-0.609791	130.218	-9.17914
78	0.125	-0.60076	130.579	-9.25424
79	0.125	-0.588793	130.925	-9.32783
80	0.125	-0.579873	131.262	-9.40032
81	0.125	-0.568052	131.584	-9.47133
82	0.125	-0.559237	131.897	-9.54123
83	0.125	-0.547551	132.197	-9.60967
84	0.125	-0.538836	132.487	-9.67703
85	0.125	-0.52728	132.765	-9.74294
86	0.125	-0.518658	133.034	-9.80777
87	0.125	-0.507221	133.291	-9.87117
88	0.125	-0.498687	133.54	-9.93351
89	0.31	-0.487364	133.778	-10.0846
90	0.41	-0.478914	134.007	-10.2809
91	0.47	-0.467699	134.226	-10.5008
92	0.5	-0.459327	134.437	-10.7304
93	0.5	-0.448213	134.638	-10.9545
94	0.5	-0.439913	134.831	-11.1745
95	0.5	-0.428895	135.015	-11.3889
96	0.5	-0.417928	135.19	-11.5979
97	0.5	-0.409735	135.358	-11.8028
98	0.5	-0.398855	135.517	-12.0022
99	0.5	-0.390726	135.669	-12.1976
100	0.5	-0.379927	135.814	-12.3875
101	0.5	-0.371856	135.952	-12.5735
102	0.5	-0.361133	136.082	-12.754
103	0.5	-0.353118	136.207	-12.9306
104	0.5	-0.342466	136.324	-13.1018
105	0.5	-0.334503	136.436	-13.2691
106	0.5	-0.323919	136.541	-13.431
107	0.5	-0.316004	136.641	-13.589
108	0.5	-0.305481	136.734	-13.7418
109	0.5	-0.297612	136.823	-13.8906
110	0.5	-0.287147	136.905	-14.0341
111	0.5	-0.279319	136.983	-14.1738
112	0.5	-0.268908	137.056	-14.3083
113	0.5	-0.26112	137.124	-14.4388

114	0.5	-0.250759	137.187	-14.5642
115	0.5	-0.243007	137.246	-14.6857
116	0.5	-0.232693	137.3	-14.802
117	0.5	-0.224974	137.351	-14.9145
118	0.5	-0.214702	137.397	-15.0219
119	0.5	-0.204452	137.439	-15.1241
120	0.5	-0.196779	137.477	-15.2225
121	0.5	-0.186567	137.512	-15.3158
122	0.5	-0.17892	137.544	-15.4052
123	0.5	-0.168741	137.573	-15.4896
124	0.5	-0.161119	137.598	-15.5702
125	0.5	-0.150969	137.621	-15.6457
126	0.5	-0.143367	137.642	-15.7173
127	0.5	-0.133244	137.66	-15.784
128	0.5	-0.125661	137.675	-15.8468
129	0.5	-0.115562	137.689	-15.9046
130	0.5	-0.107995	137.7	-15.9586
131	0.5	-0.0979139	137.71	-16.0075
132	0.5	-0.0903606	137.718	-16.0527
133	0.5	-0.0802981	137.725	-16.0929
134	0.5	-0.0727562	137.73	-16.1292
135	0.5	-0.0627062	137.734	-16.1606
136	0.5	-0.0551734	137.737	-16.1882
137	0.5	-0.0451348	137.739	-16.2107
138	0.5	-0.0376076	137.74	-16.2295
139	0.5	-0.0275759	137.741	-16.2433
140	0.5	-0.0200544	137.741	-16.2534
141	0.5	-0.0100272	137.742	-16.2584
142	0.5	0	137.742	-16.2584
143	0.5	0.0100272	137.742	-16.2534
144	0.5	0.0200544	137.742	-16.2433
145	0.5	0.0275759	137.743	-16.2295
146	0.5	0.0376076	137.744	-16.2107
147	0.5	0.0451348	137.746	-16.1882
148	0.5	0.0551734	137.749	-16.1606
149	0.5	0.0627062	137.753	-16.1292
150	0.5	0.0727562	137.759	-16.0929
151	0.5	0.0802981	137.765	-16.0527
152	0.5	0.0903606	137.773	-16.0075
153	0.5	0.0979139	137.783	-15.9586
154	0.5	0.107995	137.794	-15.9046
155	0.5	0.115562	137.808	-15.8468
156	0.5	0.125661	137.824	-15.784
157	0.5	0.133244	137.841	-15.7173
158	0.5	0.143367	137.862	-15.6457
159	0.5	0.150969	137.885	-15.5702
160	0.5	0.161119	137.911	-15.4896
161	0.5	0.168741	137.939	-15.4052
162	0.5	0.17892	137.971	-15.3158
163	0.5	0.186567	138.006	-15.2225
164	0.5	0.196779	138.045	-15.1241
165	0.5	0.204452	138.086	-15.0219
166	0.5	0.214702	138.133	-14.9145
167	0.5	0.224974	138.183	-14.802
168	0.5	0.232693	138.237	-14.6857
169	0.5	0.243007	138.296	-14.5642
170	0.5	0.250759	138.359	-14.4388
171	0.5	0.26112	138.427	-14.3083
172	0.5	0.268908	138.5	-14.1738
173	0.5	0.279319	138.578	-14.0341
174	0.5	0.287147	138.66	-13.8906
175	0.5	0.297612	138.749	-13.7418

176	0.5	0.305481	138.842	-13.589
177	0.5	0.316004	138.942	-13.431
178	0.5	0.323919	139.047	-13.2691
179	0.5	0.334503	139.159	-13.1018
180	0.5	0.342466	139.276	-12.9306
181	0.5	0.353118	139.401	-12.754
182	0.5	0.361133	139.531	-12.5735
183	0.5	0.371856	139.669	-12.3875
184	0.5	0.379927	139.814	-12.1976
185	0.5	0.390726	139.966	-12.0022
186	0.5	0.398855	140.126	-11.8028
187	0.5	0.409735	140.293	-11.5979
188	0.5	0.417928	140.468	-11.3889
189	0.5	0.428895	140.652	-11.1745
190	0.5	0.439913	140.846	-10.9545
191	0.5	0.448213	141.046	-10.7304
192	0.5	0.459327	141.257	-10.5008
193	0.5	0.467699	141.476	-10.2669
194	0.5	0.478914	141.706	-10.0275
195	0.5	0.487364	141.943	-9.78378
196	0.5	0.498687	142.192	-9.53443
197	0.5	0.507221	142.449	-9.28082
198	0.5	0.518658	142.718	-9.02149
199	0.5	0.52728	142.996	-8.75785
200	0.5	0.538836	143.286	-8.48844
201	0.5	0.547551	143.586	-8.21466
202	0.5	0.559237	143.899	-7.93504
203	0.5	0.568052	144.222	-7.65102
204	0.5	0.579873	144.558	-7.36108
205	0.5	0.588793	144.905	-7.06668
206	0.5	0.60076	145.265	-6.7663
207	0.5	0.609791	145.637	-6.46141
208	0.5	0.621911	146.024	-6.15045
209	0.5	0.631062	146.422	-5.83492
210	0.5	0.643345	146.836	-5.51325
211	0.5	0.652622	147.262	-5.18694
212	0.5	0.665079	147.704	-4.8544
213	0.5	0.67449	148.159	-4.51715
214	0.5	0.687131	148.632	-4.17359
215	0.5	0.699883	149.121	-3.82365
216	0.5	0.709522	149.625	-3.46888
217	0.5	0.722479	150.147	-3.10765
218	0.5	0.732275	150.683	-2.74151
219	0.5	0.745449	151.239	-2.36878
220	0.5	0.755415	151.809	-1.99108
221	0.5	0.768821	152.4	-1.60667
222	0.5	0.778966	153.007	-1.21718
223	0.5	0.792618	153.635	-0.820873
224	0.5	0.802956	154.28	-0.419395
225	0.5	0.816874	154.948	-0.0109579
226	0.5	0.827417	155.632	0.402751
227	0.5	0.841621	156.34	0.823562
228	0.5	0.852385	157.067	1.24975
229	0.5	0.866894	157.819	1.6832
230	0.5	0.877897	158.589	2.12215
231	0.5	0.892733	159.386	2.56852
232	0.5	0.903992	160.203	3.02051
233	0.5	0.919183	161.048	3.4801
234	0.5	0.930718	161.915	3.94546
235	0.5	0.946291	162.81	4.41861
236	0.5	0.958125	163.728	4.89767
237	0.5	0.974114	164.677	5.38473

238	0.5	0.990356		165.658	5.87991
239	0.5	1.00271	166.663	6.38126	
240	0.5	1.01943	167.702	6.89097	
241	0.5	1.03215	168.768	7.40705	
242	0.5	1.04939	169.869	7.93174	
243	0.5	1.06252	170.998	8.463	
244	0.5	1.08032	172.165	9.00316	
245	0.5	1.0939	173.362	9.55011	
246	0.5	1.11232	174.599	10.1063	
247	0.5	1.12639	175.868	10.6695	
248	0.5	1.1455	177.18	11.2422	
249	0.5	1.16012	178.526	11.8223	
250	0.5	1.18	179.918	12.4123	
251	0.5	1.19522	181.347	13.0099	
252	0.5	1.21596	182.825	13.6179	
253	0.5	1.23187	184.343	14.2338	
254	0.51	1.25357	185.914	14.8731	
255	0.6	1.27024	187.528	15.6353	
256	0.66	1.29303	189.2	16.4887	
257	0.69	1.31058	190.917	17.393	
258	0.76	1.33462	192.698	18.4073	
259	0.81	1.35317	194.529	19.5034	
260	1	1.37866	196.43	20.882	
261	1	1.40507	198.404	22.2871	
262	1.1	1.42554	200.437	23.8552	
263	1.6	1.4538	202.55	26.1813	
264	1.9	1.47579	204.728	28.9853	
265	2	1.50626	206.997	31.9978	
266	2	1.53007	209.338	35.0579	
267	2	1.56322	211.782	38.1844	
268	2	1.58927	214.307	41.3629	
269	2	1.62576	216.951	44.6144	
270	2	1.65463	219.688	47.9237	
271	2.1	1.6954	222.563	51.484	
272	2.2	1.72793	225.548	55.2855	
273	2.3	1.77438	228.697	59.3665	
274	3	1.81191	231.98	64.8023	
275	3.2	1.86629	235.463	70.7744	
276	4	1.91103	239.115	78.4185	
277	4	1.97737	243.025	86.328	
278	4.9	2.03352	247.16	96.2923	
279	6.2	2.12007	251.655	109.437	
280	6.7	2.19728	256.483	124.158	
281	9	2.32634	261.895	145.096	
282	10	2.45727	267.933	169.668	
283	12	2.74777	275.483	202.641	

Data Set Standard Deviation = 1.27227
Numerator = 41063.6
Denominator = 125749
W Statistic = 0.326551 = 41063.6 / 125749

5% Critical value of 0.976 exceeds 0.326551
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.326551
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Dichlorodifluoromethane

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.577297
0.577297 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.00352113		-2.747773	9	348.683
2	0	0.00704225		-2.457273	9	334.497
3	0	0.0105634		-2.326343	9	328.103
4	0	0.0140845		-2.197283	9	321.801
5	0	0.0176056		-2.120073	9	318.03
6	0	0.0211268		-2.033523	9	313.804
7	0	0.0246479		-1.977373	9	311.062
8	0	0.028169		-1.911033	9	307.822
9	0	0.0316901		-1.866293	9	305.637
10	0.125	0.0352113		-1.811914	2.3438	302.982
11	0.125	0.0387324		-1.774384	2.3438	301.149
12	0.125	0.0422535		-1.727934	2.3438	298.881
13	0.125	0.0457746		-1.6954	42.3438	297.292
14	0.125	0.0492958		-1.654634	2.3438	295.301
15	0.125	0.0528169		-1.625764	2.3438	293.891
16	0.125	0.056338		-1.589274	2.3438	292.109
17	0.125	0.0598592		-1.563224	2.3438	290.837
18	0.125	0.0633803		-1.530074	2.3438	289.218
19	0.125	0.0669014		-1.506264	2.3438	288.056
20	0.125	0.0704225		-1.475794	2.3438	286.568
21	0.125	0.0739437		-1.4538	42.3438	285.494
22	0.125	0.0774648		-1.425544	2.3438	284.114
23	0.125	0.0809859		-1.405074	2.3438	283.114
24	0.125	0.084507		-1.378664	2.3438	281.824
25	0.125	0.0880282		-1.353174	2.3438	280.58
26	0.125	0.0915493		-1.334624	2.3438	279.674
27	0.125	0.0950704		-1.310584	2.3438	278.5
28	0.125	0.0985915		-1.293034	2.3438	277.643
29	0.125	0.102113		-1.270244	2.3438	276.53
30	0.125	0.105634		-1.253574	2.3438	275.716
31	0.125	0.109155		-1.231874	2.3438	274.656
32	0.125	0.112676		-1.215964	2.3438	273.879
33	0.125	0.116197		-1.195224	2.3438	272.867
34	0.125	0.119718		-1.18	42.3438	272.123
35	0.125	0.123239		-1.160124	2.3438	271.153
36	0.125	0.126761		-1.1455	42.3438	270.439
37	0.125	0.130282		-1.126394	2.3438	269.505
38	0.125	0.133803		-1.112324	2.3438	268.818
39	0.125	0.137324		-1.0939	42.3438	267.919
40	0.125	0.140845		-1.080324	2.3438	267.256
41	0.125	0.144366		-1.062524	2.3438	266.386
42	0.125	0.147887		-1.049394	2.3438	265.745
43	0.125	0.151408		-1.032154	2.3438	264.904
44	0.125	0.15493	-1.019434	2.3438	264.282	
45	0.125	0.158451		-1.002714	2.3438	263.466
46	0.125	0.161972		-0.990356	42.3438	262.862
47	0.125	0.165493		-0.974114	42.3438	262.069
48	0.125	0.169014		-0.958125	42.3438	261.288

49	0.125	0.172535	-0.946291	42.3438	260.711
50	0.125	0.176056	-0.930718	42.3438	259.95
51	0.125	0.179577	-0.919183	42.3438	259.387
52	0.125	0.183099	-0.903992	42.3438	258.645
53	0.125	0.18662	-0.892733	42.3438	258.095
54	0.125	0.190141	-0.877897	42.3438	257.371
55	0.125	0.193662	-0.866894	42.3438	256.833
56	0.125	0.197183	-0.852385	42.3438	256.125
57	0.125	0.200704	-0.841621	42.3438	255.599
58	0.125	0.204225	-0.827417	42.3438	254.906
59	0.125	0.207746	-0.816874	42.3438	254.391
60	0.125	0.211268	-0.802956	42.3438	253.711
61	0.125	0.214789	-0.792618	42.3438	253.206
62	0.125	0.21831	-0.778966	42.3438	252.54
63	0.125	0.221831	-0.768821	42.3438	252.044
64	0.125	0.225352	-0.755415	42.3438	251.389
65	0.125	0.228873	-0.745449	42.3438	250.903
66	0.125	0.232394	-0.732275	42.3438	250.259
67	0.125	0.235915	-0.722479	42.3438	249.781
68	0.125	0.239437	-0.709522	42.3438	249.148
69	0.125	0.242958	-0.699883	42.3438	248.678
70	0.125	0.246479	-0.687131	42.3438	248.055
71	0.125	0.25	-0.674494	2.3438	247.438
72	0.125	0.253521	-0.665079	42.3438	246.978
73	0.125	0.257042	-0.652622	42.3438	246.37
74	0.125	0.260563	-0.643345	42.3438	245.917
75	0.125	0.264085	-0.631062	42.3438	245.317
76	0.125	0.267606	-0.621911	42.3438	244.87
77	0.125	0.271127	-0.609791	42.3438	244.278
78	0.125	0.274648	-0.600764	2.3438	243.837
79	0.125	0.278169	-0.588793	42.3438	243.253
80	0.125	0.28169	-0.579873	42.3438	242.817
81	0.125	0.285211	-0.568052	42.3438	242.24
82	0.125	0.288732	-0.559237	42.3438	241.809
83	0.125	0.292254	-0.547551	42.3438	241.239
84	0.125	0.295775	-0.538836	42.3438	240.813
85	0.125	0.299296	-0.527284	2.3438	240.249
86	0.125	0.302817	-0.518658	42.3438	239.828
87	0.125	0.306338	-0.507221	42.3438	239.269
88	0.125	0.309859	-0.498687	42.3438	238.853
89	0.31	0.31338	-0.487364	47.2925	238.3
90	0.41	0.316901	-0.478914	49.9675	237.887
91	0.47	0.320423	-0.467699	51.5725	237.339
92	0.5	0.323944	-0.459327	52.375	236.93
93	0.5	0.327465	-0.448213	52.375	236.388
94	0.5	0.330986	-0.439913	52.375	235.982
95	0.5	0.334507	-0.428895	52.375	235.444
96	0.5	0.338028	-0.417928	52.375	234.909
97	0.5	0.341549	-0.409735	52.375	234.509
98	0.5	0.34507	-0.398855	52.375	233.977
99	0.5	0.348592	-0.390726	52.375	233.58
100	0.5	0.352113	-0.379927	52.375	233.053
101	0.5	0.355634	-0.371856	52.375	232.659
102	0.5	0.359155	-0.361133	52.375	232.135
103	0.5	0.362676	-0.353118	52.375	231.744
104	0.5	0.366197	-0.342466	52.375	231.224
105	0.5	0.369718	-0.334503	52.375	230.835
106	0.5	0.373239	-0.323919	52.375	230.318
107	0.5	0.376761	-0.316004	52.375	229.932
108	0.5	0.380282	-0.305481	52.375	229.418
109	0.5	0.383803	-0.297612	52.375	229.033
110	0.5	0.387324	-0.287147	52.375	228.522

111	0.5	0.390845	-0.279319	52.375	228.14
112	0.5	0.394366	-0.268908	52.375	227.632
113	0.5	0.397887	-0.261125	52.375	227.251
114	0.5	0.401408	-0.250759	52.375	226.745
115	0.5	0.40493	-0.243007	52.375	226.367
116	0.5	0.408451	-0.232693	52.375	225.863
117	0.5	0.411972	-0.224974	52.375	225.486
118	0.5	0.415493	-0.214702	52.375	224.985
119	0.5	0.419014	-0.204452	52.375	224.484
120	0.5	0.422535	-0.196779	52.375	224.109
121	0.5	0.426056	-0.186567	52.375	223.611
122	0.5	0.429577	-0.178925	52.375	223.237
123	0.5	0.433099	-0.168741	52.375	222.74
124	0.5	0.43662	-0.161119	52.375	222.368
125	0.5	0.440141	-0.150969	52.375	221.872
126	0.5	0.443662	-0.143367	52.375	221.501
127	0.5	0.447183	-0.133244	52.375	221.007
128	0.5	0.450704	-0.125661	52.375	220.636
129	0.5	0.454225	-0.115562	52.375	220.143
130	0.5	0.457746	-0.107995	52.375	219.774
131	0.5	0.461268	-0.0979139	52.375	219.281
132	0.5	0.464789	-0.0903606	52.375	218.913
133	0.5	0.46831	-0.0802981	52.375	218.421
134	0.5	0.471831	-0.0727562	52.375	218.053
135	0.5	0.475352	-0.0627062	52.375	217.562
136	0.5	0.478873	-0.0551734	52.375	217.194
137	0.5	0.482394	-0.0451348	52.375	216.704
138	0.5	0.485915	-0.0376076	52.375	216.337
139	0.5	0.489437	-0.0275759	52.375	215.847
140	0.5	0.492958	-0.0200544	52.375	215.479
141	0.5	0.496479	-0.0100272	52.375	214.99
142	0.5	0.5	0	52.375	214.5
143	0.5	0.503521	0.0100272	52.375	214.01
144	0.5	0.507042	0.0200544	52.375	213.521
145	0.5	0.510563	0.0275759	52.375	213.153
146	0.5	0.514085	0.0376076	52.375	212.663
147	0.5	0.517606	0.0451348	52.375	212.296
148	0.5	0.521127	0.0551734	52.375	211.806
149	0.5	0.524648	0.0627062	52.375	211.438
150	0.5	0.528169	0.0727562	52.375	210.947
151	0.5	0.53169	0.0802981	52.375	210.579
152	0.5	0.535211	0.0903606	52.375	210.087
153	0.5	0.538732	0.0979139	52.375	209.719
154	0.5	0.542254	0.107995	52.375	209.226
155	0.5	0.545775	0.115562	52.375	208.857
156	0.5	0.549296	0.125661	52.375	208.364
157	0.5	0.552817	0.133244	52.375	207.993
158	0.5	0.556338	0.143367	52.375	207.499
159	0.5	0.559859	0.150969	52.375	207.128
160	0.5	0.56338	0.161119	52.375	206.632
161	0.5	0.566901	0.168741	52.375	206.26
162	0.5	0.570423	0.17892	52.375	205.763
163	0.5	0.573944	0.186567	52.375	205.389
164	0.5	0.577465	0.196779	52.375	204.891
165	0.5	0.580986	0.204452	52.375	204.516
166	0.5	0.584507	0.214702	52.375	204.015
167	0.5	0.588028	0.224974	52.375	203.514
168	0.5	0.591549	0.232693	52.375	203.137
169	0.5	0.59507	0.243007	52.375	202.633
170	0.5	0.598592	0.250759	52.375	202.255
171	0.5	0.602113	0.26112	52.375	201.749
172	0.5	0.605634	0.268908	52.375	201.368

173	0.5	0.609155	0.279319	52.375	200.86
174	0.5	0.612676	0.287147	52.375	200.478
175	0.5	0.616197	0.297612	52.375	199.967
176	0.5	0.619718	0.305481	52.375	199.582
177	0.5	0.623239	0.316004	52.375	199.068
178	0.5	0.626761	0.323919	52.375	198.682
179	0.5	0.630282	0.334503	52.375	198.165
180	0.5	0.633803	0.342466	52.375	197.776
181	0.5	0.637324	0.353118	52.375	197.256
182	0.5	0.640845	0.361133	52.375	196.865
183	0.5	0.644366	0.371856	52.375	196.341
184	0.5	0.647887	0.379927	52.375	195.947
185	0.5	0.651408	0.390726	52.375	195.42
186	0.5	0.65493	0.398855	52.375	195.023
187	0.5	0.658451	0.409735	52.375	194.491
188	0.5	0.661972	0.417928	52.375	194.091
189	0.5	0.665493	0.428895	52.375	193.556
190	0.5	0.669014	0.439913	52.375	193.018
191	0.5	0.672535	0.448213	52.375	192.612
192	0.5	0.676056	0.459327	52.375	192.07
193	0.5	0.679577	0.467699	52.375	191.661
194	0.5	0.683099	0.478914	52.375	191.113
195	0.5	0.68662	0.487364	52.375	190.7
196	0.5	0.690141	0.498687	52.375	190.147
197	0.5	0.693662	0.507221	52.375	189.731
198	0.5	0.697183	0.518658	52.375	189.172
199	0.5	0.700704	0.52728	52.375	188.751
200	0.5	0.704225	0.538836	52.375	188.187
201	0.5	0.707746	0.547551	52.375	187.761
202	0.5	0.711268	0.559237	52.375	187.191
203	0.5	0.714789	0.568052	52.375	186.76
204	0.5	0.71831	0.579873	52.375	186.183
205	0.5	0.721831	0.588793	52.375	185.747
206	0.5	0.725352	0.60076	52.375	185.163
207	0.5	0.728873	0.609791	52.375	184.722
208	0.5	0.732394	0.621911	52.375	184.13
209	0.5	0.735915	0.631062	52.375	183.683
210	0.5	0.739437	0.643345	52.375	183.083
211	0.5	0.742958	0.652622	52.375	182.63
212	0.5	0.746479	0.665079	52.375	182.022
213	0.5	0.75	0.67449	52.375	181.562
214	0.5	0.753521	0.687131	52.375	180.945
215	0.5	0.757042	0.699883	52.375	180.322
216	0.5	0.760563	0.709522	52.375	179.852
217	0.5	0.764085	0.722479	52.375	179.219
218	0.5	0.767606	0.732275	52.375	178.741
219	0.5	0.771127	0.745449	52.375	178.097
220	0.5	0.774648	0.755415	52.375	177.611
221	0.5	0.778169	0.768821	52.375	176.956
222	0.5	0.78169	0.778966	52.375	176.46
223	0.5	0.785211	0.792618	52.375	175.794
224	0.5	0.788732	0.802956	52.375	175.289
225	0.5	0.792254	0.816874	52.375	174.609
226	0.5	0.795775	0.827417	52.375	174.094
227	0.5	0.799296	0.841621	52.375	173.401
228	0.5	0.802817	0.852385	52.375	172.875
229	0.5	0.806338	0.866894	52.375	172.167
230	0.5	0.809859	0.877897	52.375	171.629
231	0.5	0.81338	0.892733	52.375	170.905
232	0.5	0.816901	0.903992	52.375	170.355
233	0.5	0.820423	0.919183	52.375	169.613
234	0.5	0.823944	0.930718	52.375	169.05

235	0.5	0.827465	0.946291	52.375	168.289	
236	0.5	0.830986	0.958125	52.375	167.712	
237	0.5	0.834507	0.974114	52.375	166.931	
238	0.5	0.838028	0.990356	52.375	166.138	
239	0.5	0.841549	1.00271	52.375	165.534	
240	0.5	0.84507	1.01943	52.375	164.718	
241	0.5	0.848592	1.03215	52.375	164.096	
242	0.5	0.852113	1.04939	52.375	163.255	
243	0.5	0.855634	1.06252	52.375	162.614	
244	0.5	0.859155	1.08032	52.375	161.744	
245	0.5	0.862676	1.0939	52.375	161.081	
246	0.5	0.866197	1.11232	52.375	160.182	
247	0.5	0.869718	1.12639	52.375	159.495	
248	0.5	0.873239	1.1455	52.375	158.561	
249	0.5	0.876761	1.16012	52.375	157.847	
250	0.5	0.880282	1.18	52.375	156.877	
251	0.5	0.883803	1.19522	52.375	156.133	
252	0.5	0.887324	1.21596	52.375	155.121	
253	0.5	0.890845	1.23187	52.375	154.344	
254	0.51	0.894366	1.25357	52.6425	153.284	
255	0.6	0.897887	1.27024	55.05	152.47	
256	0.66	0.901408	1.29303	56.655	151.357	
257	0.69	0.90493	1.31058	57.4575	150.5	
258	0.76	0.908451	1.33462	59.33	149.326	
259	0.81	0.911972	1.35317	60.6675	148.42	
260	1	0.915493	1.37866	65.75	147.176	
261	1	0.919014	1.40507	65.75	145.886	
262	1.1	0.922535	1.42554	68.425	144.886	
263	1.6	0.926056	1.4538	81.8	143.506	
264	1.9	0.929577	1.47579	89.825	142.432	
265	2	0.933099	1.50626	92.5	140.944	
266	2	0.93662	1.53007	92.5	139.782	
267	2	0.940141	1.56322	92.5	138.163	
268	2	0.943662	1.58927	92.5	136.891	
269	2	0.947183	1.62576	92.5	135.109	
270	2	0.950704	1.65463	92.5	133.699	
271	2.1	0.954225	1.6954	95.175	131.708	
272	2.2	0.957746	1.72793	97.85	130.119	
273	2.3	0.961268	1.77438	100.525	127.851	
274	3	0.964789	1.81191	119.25	126.018	
275	3.2	0.96831	1.86629	124.6	123.363	
276	4	0.971831	1.91103	146	121.178	
277	4	0.975352	1.97737	146	117.938	
278	4.9	0.978873	2.03352	170.075	115.196	
279	6.2	0.982394	2.12007	204.85	110.97	
280	6.7	0.985915	2.19728	218.225	107.199	
281	9	0.989437	2.32634	279.75	100.897	
282	10	0.992958	2.45727	306.5	94.5032	
283	12	0.996479	2.74777	360	80.3175	

Shapiro-Francia Test of Normality

Parameter: Dichlorodifluoromethane

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 283

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.07944	-2.74777	7.55021	5.71382
2	-2.07944	-2.45727	13.5884	10.8236
3	-2.07944	-2.32634	19.0003	15.6611
4	-2.07944	-2.19728	23.8283	20.2302
5	-2.07944	-2.12007	28.323	24.6387
6	-2.07944	-2.03352	32.4582	28.8673
7	-2.07944	-1.97737	36.3682	32.9792
8	-2.07944	-1.91103	40.0203	36.953
9	-2.07944	-1.86629	43.5033	40.8339
10	-2.07944	-1.81191	46.7863	44.6016
11	-2.07944	-1.77438	49.9348	48.2914
12	-2.07944	-1.72793	52.9205	51.8845
13	-2.07944	-1.6954	55.7949	55.41
14	-2.07944	-1.65463	58.5327	58.8507
15	-2.07944	-1.62576	61.1758	62.2314
16	-2.07944	-1.58927	63.7015	65.5361
17	-2.07944	-1.56322	66.1452	68.7868
18	-2.07944	-1.53007	68.4863	71.9685
19	-2.07944	-1.50626	70.7551	75.1006
20	-2.07944	-1.47579	72.9331	78.1695
21	-2.07944	-1.4538	75.0466	81.1926
22	-2.07944	-1.42554	77.0788	84.1569
23	-2.07944	-1.40507	79.053	87.0787
24	-2.07944	-1.37866	80.9537	89.9455
25	-2.07944	-1.35317	82.7848	92.7593
26	-2.07944	-1.33462	84.566	95.5346
27	-2.07944	-1.31058	86.2837	98.2599
28	-2.07944	-1.29303	87.9556	100.949
29	-2.07944	-1.27024	89.5691	103.59
30	-2.07944	-1.25357	91.1405	106.197
31	-2.07944	-1.23187	92.658	108.758
32	-2.07944	-1.21596	94.1366	111.287
33	-2.07944	-1.19522	95.5651	113.772
34	-2.07944	-1.18	96.9575	116.226
35	-2.07944	-1.16012	98.3034	118.638
36	-2.07944	-1.1455	99.6156	121.02
37	-2.07944	-1.12639	100.884	123.363
38	-2.07944	-1.11232	102.122	125.676
39	-2.07944	-1.0939	103.318	127.95
40	-2.07944	-1.08032	104.485	130.197
41	-2.07944	-1.06252	105.614	132.406
42	-2.07944	-1.04939	106.715	134.588
43	-2.07944	-1.03215	107.781	136.735
44	-2.07944	-1.01943	108.82	138.855
45	-2.07944	-1.00271	109.825	140.94
46	-2.07944	-0.990356	110.806	142.999
47	-2.07944	-0.974114	111.755	145.025
48	-2.07944	-0.958125	112.673	147.017
49	-2.07944	-0.946291	113.569	148.985
50	-2.07944	-0.930718	114.435	150.92
51	-2.07944	-0.919183	115.28	152.832

52	-2.07944	-0.903992	116.097	154.711
53	-2.07944	-0.892733	116.894	156.568
54	-2.07944	-0.877897	117.665	158.393
55	-2.07944	-0.866894	118.416	160.196
56	-2.07944	-0.852385	119.143	161.968
57	-2.07944	-0.841621	119.851	163.719
58	-2.07944	-0.827417	120.536	165.439
59	-2.07944	-0.816874	121.203	167.138
60	-2.07944	-0.802956	121.848	168.807
61	-2.07944	-0.792618	122.476	170.456
62	-2.07944	-0.778966	123.083	172.075
63	-2.07944	-0.768821	123.674	173.674
64	-2.07944	-0.755415	124.244	175.245
65	-2.07944	-0.745449	124.8	176.795
66	-2.07944	-0.732275	125.336	178.318
67	-2.07944	-0.722479	125.858	179.82
68	-2.07944	-0.709522	126.362	181.296
69	-2.07944	-0.699883	126.852	182.751
70	-2.07944	-0.687131	127.324	184.18
71	-2.07944	-0.67449	127.779	185.582
72	-2.07944	-0.665079	128.221	186.965
73	-2.07944	-0.652622	128.647	188.322
74	-2.07944	-0.643345	129.061	189.66
75	-2.07944	-0.631062	129.459	190.973
76	-2.07944	-0.621911	129.846	192.266
77	-2.07944	-0.609791	130.218	193.534
78	-2.07944	-0.60076	130.579	194.783
79	-2.07944	-0.588793	130.925	196.007
80	-1.17118	-0.579873	131.262	196.687
81	-0.891598	-0.568052	131.584	197.193
82	-0.755023	-0.559237	131.897	197.615
83	-0.693147	-0.547551	132.197	197.995
84	-0.693147	-0.538836	132.487	198.368
85	-0.693147	-0.52728	132.765	198.734
86	-0.693147	-0.518658	133.034	199.093
87	-0.693147	-0.507221	133.291	199.445
88	-0.693147	-0.498687	133.54	199.79
89	-0.693147	-0.487364	133.778	200.128
90	-0.693147	-0.478914	134.007	200.46
91	-0.693147	-0.467699	134.226	200.784
92	-0.693147	-0.459327	134.437	201.103
93	-0.693147	-0.448213	134.638	201.414
94	-0.693147	-0.439913	134.831	201.718
95	-0.693147	-0.428895	135.015	202.016
96	-0.693147	-0.417928	135.19	202.305
97	-0.693147	-0.409735	135.358	202.589
98	-0.693147	-0.398855	135.517	202.866
99	-0.693147	-0.390726	135.669	203.137
100	-0.693147	-0.379927	135.814	203.4
101	-0.693147	-0.371856	135.952	203.658
102	-0.693147	-0.361133	136.082	203.908
103	-0.693147	-0.353118	136.207	204.153
104	-0.693147	-0.342466	136.324	204.39
105	-0.693147	-0.334503	136.436	204.622
106	-0.693147	-0.323919	136.541	204.847
107	-0.693147	-0.316004	136.641	205.066
108	-0.693147	-0.305481	136.734	205.277
109	-0.693147	-0.297612	136.823	205.484
110	-0.693147	-0.287147	136.905	205.683
111	-0.693147	-0.279319	136.983	205.876
112	-0.693147	-0.268908	137.056	206.063
113	-0.693147	-0.26112	137.124	206.244

114	-0.693147	-0.250759	137.187	206.418
115	-0.693147	-0.243007	137.246	206.586
116	-0.693147	-0.232693	137.3	206.747
117	-0.693147	-0.224974	137.351	206.903
118	-0.693147	-0.214702	137.397	207.052
119	-0.693147	-0.204452	137.439	207.194
120	-0.693147	-0.196779	137.477	207.33
121	-0.693147	-0.186567	137.512	207.459
122	-0.693147	-0.17892	137.544	207.583
123	-0.693147	-0.168741	137.573	207.7
124	-0.693147	-0.161119	137.598	207.812
125	-0.693147	-0.150969	137.621	207.917
126	-0.693147	-0.143367	137.642	208.016
127	-0.693147	-0.133244	137.66	208.109
128	-0.693147	-0.125661	137.675	208.196
129	-0.693147	-0.115562	137.689	208.276
130	-0.693147	-0.107995	137.7	208.351
131	-0.693147	-0.0979139	137.71	208.418
132	-0.693147	-0.0903606	137.718	208.481
133	-0.693147	-0.0802981	137.725	208.537
134	-0.693147	-0.0727562	137.73	208.587
135	-0.693147	-0.0627062	137.734	208.631
136	-0.693147	-0.0551734	137.737	208.669
137	-0.693147	-0.0451348	137.739	208.7
138	-0.693147	-0.0376076	137.74	208.726
139	-0.693147	-0.0275759	137.741	208.745
140	-0.693147	-0.0200544	137.741	208.759
141	-0.693147	-0.0100272	137.742	208.766
142	-0.693147	0	137.742	208.766
143	-0.693147	0.0100272	137.742	208.759
144	-0.693147	0.0200544	137.742	208.745
145	-0.693147	0.0275759	137.743	208.726
146	-0.693147	0.0376076	137.744	208.7
147	-0.693147	0.0451348	137.746	208.669
148	-0.693147	0.0551734	137.749	208.631
149	-0.693147	0.0627062	137.753	208.587
150	-0.693147	0.0727562	137.759	208.537
151	-0.693147	0.0802981	137.765	208.481
152	-0.693147	0.0903606	137.773	208.418
153	-0.693147	0.0979139	137.783	208.351
154	-0.693147	0.107995	137.794	208.276
155	-0.693147	0.115562	137.808	208.196
156	-0.693147	0.125661	137.824	208.109
157	-0.693147	0.133244	137.841	208.016
158	-0.693147	0.143367	137.862	207.917
159	-0.693147	0.150969	137.885	207.812
160	-0.693147	0.161119	137.911	207.7
161	-0.693147	0.168741	137.939	207.583
162	-0.693147	0.17892	137.971	207.459
163	-0.693147	0.186567	138.006	207.33
164	-0.693147	0.196779	138.045	207.194
165	-0.693147	0.204452	138.086	207.052
166	-0.693147	0.214702	138.133	206.903
167	-0.693147	0.224974	138.183	206.747
168	-0.693147	0.232693	138.237	206.586
169	-0.693147	0.243007	138.296	206.418
170	-0.693147	0.250759	138.359	206.244
171	-0.693147	0.26112	138.427	206.063
172	-0.693147	0.268908	138.5	205.876
173	-0.693147	0.279319	138.578	205.683
174	-0.693147	0.287147	138.66	205.484
175	-0.693147	0.297612	138.749	205.277

176	-0.693147	0.305481	138.842	205.066
177	-0.693147	0.316004	138.942	204.847
178	-0.693147	0.323919	139.047	204.622
179	-0.693147	0.334503	139.159	204.39
180	-0.693147	0.342466	139.276	204.153
181	-0.693147	0.353118	139.401	203.908
182	-0.693147	0.361133	139.531	203.658
183	-0.693147	0.371856	139.669	203.4
184	-0.693147	0.379927	139.814	203.137
185	-0.693147	0.390726	139.966	202.866
186	-0.693147	0.398855	140.126	202.589
187	-0.693147	0.409735	140.293	202.305
188	-0.693147	0.417928	140.468	202.016
189	-0.693147	0.428895	140.652	201.718
190	-0.693147	0.439913	140.846	201.414
191	-0.693147	0.448213	141.046	201.103
192	-0.693147	0.459327	141.257	200.784
193	-0.693147	0.467699	141.476	200.46
194	-0.693147	0.478914	141.706	200.128
195	-0.693147	0.487364	141.943	199.79
196	-0.693147	0.498687	142.192	199.445
197	-0.693147	0.507221	142.449	199.093
198	-0.693147	0.518658	142.718	198.734
199	-0.693147	0.52728	142.996	198.368
200	-0.693147	0.538836	143.286	197.995
201	-0.693147	0.547551	143.586	197.615
202	-0.693147	0.559237	143.899	197.228
203	-0.693147	0.568052	144.222	196.834
204	-0.693147	0.579873	144.558	196.432
205	-0.693147	0.588793	144.905	196.024
206	-0.693147	0.60076	145.265	195.607
207	-0.693147	0.609791	145.637	195.185
208	-0.693147	0.621911	146.024	194.754
209	-0.693147	0.631062	146.422	194.316
210	-0.693147	0.643345	146.836	193.87
211	-0.693147	0.652622	147.262	193.418
212	-0.693147	0.665079	147.704	192.957
213	-0.693147	0.67449	148.159	192.489
214	-0.693147	0.687131	148.632	192.013
215	-0.693147	0.699883	149.121	191.528
216	-0.693147	0.709522	149.625	191.036
217	-0.693147	0.722479	150.147	190.535
218	-0.693147	0.732275	150.683	190.028
219	-0.693147	0.745449	151.239	189.511
220	-0.693147	0.755415	151.809	188.988
221	-0.693147	0.768821	152.4	188.455
222	-0.693147	0.778966	153.007	187.915
223	-0.693147	0.792618	153.635	187.365
224	-0.693147	0.802956	154.28	186.809
225	-0.693147	0.816874	154.948	186.242
226	-0.693147	0.827417	155.632	185.669
227	-0.693147	0.841621	156.34	185.086
228	-0.693147	0.852385	157.067	184.495
229	-0.693147	0.866894	157.819	183.894
230	-0.693147	0.877897	158.589	183.285
231	-0.693147	0.892733	159.386	182.667
232	-0.693147	0.903992	160.203	182.04
233	-0.693147	0.919183	161.048	181.403
234	-0.693147	0.930718	161.915	180.758
235	-0.693147	0.946291	162.81	180.102
236	-0.693147	0.958125	163.728	179.438
237	-0.693147	0.974114	164.677	178.762

238	-0.693147		0.990356	165.658	178.076
239	-0.693147		1.00271	166.663	177.381
240	-0.693147		1.01943	167.702	176.674
241	-0.693147		1.03215	168.768	175.959
242	-0.693147		1.04939	169.869	175.232
243	-0.693147		1.06252	170.998	174.495
244	-0.693147		1.08032	172.165	173.746
245	-0.673345		1.0939	173.362	173.01
246	-0.510826		1.11232	174.599	172.441
247	-0.415515		1.12639	175.868	171.973
248	-0.371064		1.1455	177.18	171.548
249	-0.274437		1.16012	178.526	171.23
250	-0.210721		1.18	179.918	170.981
251	0	1.19522	181.347	170.981	
252	0	1.21596	182.825	170.981	
253	0	1.23187	184.343	170.981	
254	0	1.25357	185.914	170.981	
255	0	1.27024	187.528	170.981	
256	0	1.29303	189.2	170.981	
257	0	1.31058	190.917	170.981	
258	0	1.33462	192.698	170.981	
259	0	1.35317	194.529	170.981	
260	0	1.37866	196.43	170.981	
261	0	1.40507	198.404	170.981	
262	0.0953102		1.42554	200.437	171.117
263	0.470004		1.4538	202.55	171.801
264	0.641854		1.47579	204.728	172.748
265	0.693147		1.50626	206.997	173.792
266	0.693147		1.53007	209.338	174.852
267	0.693147		1.56322	211.782	175.936
268	0.693147		1.58927	214.307	177.038
269	0.693147		1.62576	216.951	178.164
270	0.693147		1.65463	219.688	179.311
271	0.741937		1.6954	222.563	180.569
272	0.788457		1.72793	225.548	181.932
273	0.832909		1.77438	228.697	183.409
274	1.09861	1.81191	231.98	185.4	
275	1.16315	1.86629	235.463	187.571	
276	1.38629	1.91103	239.115	190.22	
277	1.38629	1.97737	243.025	192.961	
278	1.58924	2.03352	247.16	196.193	
279	1.82455	2.12007	251.655	200.061	
280	1.90211	2.19728	256.483	204.241	
281	2.19722	2.32634	261.895	209.352	
282	2.30259	2.45727	267.933	215.01	
283	2.48491	2.74777	275.483	221.838	

Data Set Standard Deviation = 0.898989
Numerator = 49212.2
Denominator = 62784.6
W Statistic = 0.783826 = 49212.2 / 62784.6

5% Critical value of 0.976 exceeds 0.783826
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.783826
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Dichlorodifluoromethane

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.885843
0.885843 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.079440	0.00352113	-2.74777	121.083	348.683
2	-2.079440	0.00704225	-2.45727	121.083	334.497
3	-2.079440	0.0105634	-2.32634	121.083	328.103
4	-2.079440	0.0140845	-2.19728	121.083	321.801
5	-2.079440	0.0176056	-2.12007	121.083	318.03
6	-2.079440	0.0211268	-2.03352	121.083	313.804
7	-2.079440	0.0246479	-1.97737	121.083	311.062
8	-2.079440	0.028169	-1.91103	121.083	307.822
9	-2.079440	0.0316901	-1.86629	121.083	305.637
10	-2.079440	0.0352113	-1.81191	121.083	302.982
11	-2.079440	0.0387324	-1.77438	121.083	301.149
12	-2.079440	0.0422535	-1.72793	121.083	298.881
13	-2.079440	0.0457746	-1.6954	121.083	297.292
14	-2.079440	0.0492958	-1.65463	121.083	295.301
15	-2.079440	0.0528169	-1.62576	121.083	293.891
16	-2.079440	0.056338	-1.58927	121.083	292.109
17	-2.079440	0.0598592	-1.56322	121.083	290.837
18	-2.079440	0.0633803	-1.53007	121.083	289.218
19	-2.079440	0.0669014	-1.50626	121.083	288.056
20	-2.079440	0.0704225	-1.47579	121.083	286.568
21	-2.079440	0.0739437	-1.4538	121.083	285.494
22	-2.079440	0.0774648	-1.42554	121.083	284.114
23	-2.079440	0.0809859	-1.40507	121.083	283.114
24	-2.079440	0.084507	-1.37866	121.083	281.824
25	-2.079440	0.0880282	-1.35317	121.083	280.58
26	-2.079440	0.0915493	-1.33462	121.083	279.674
27	-2.079440	0.0950704	-1.31058	121.083	278.5
28	-2.079440	0.0985915	-1.29303	121.083	277.643
29	-2.079440	0.102113	-1.27024	121.083	276.53
30	-2.079440	0.105634	-1.25357	121.083	275.716
31	-2.079440	0.109155	-1.23187	121.083	274.656
32	-2.079440	0.112676	-1.21596	121.083	273.879
33	-2.079440	0.116197	-1.19522	121.083	272.867
34	-2.079440	0.119718	-1.18	121.083	272.123
35	-2.079440	0.123239	-1.16012	121.083	271.153
36	-2.079440	0.126761	-1.1455	121.083	270.439
37	-2.079440	0.130282	-1.12639	121.083	269.505
38	-2.079440	0.133803	-1.11232	121.083	268.818
39	-2.079440	0.137324	-1.0939	121.083	267.919
40	-2.079440	0.140845	-1.08032	121.083	267.256
41	-2.079440	0.144366	-1.06252	121.083	266.386
42	-2.079440	0.147887	-1.04939	121.083	265.745
43	-2.079440	0.151408	-1.03215	121.083	264.904
44	-2.079440	0.15493	-1.01943	121.083	264.282
45	-2.079440	0.158451	-1.00271	121.083	263.466
46	-2.079440	0.161972	-0.990356	121.083	262.862
47	-2.079440	0.165493	-0.974114	121.083	262.069
48	-2.079440	0.169014	-0.958125	121.083	261.288

49	-2.079440.172535	-0.946291	121.083	260.711	
50	-2.079440.176056	-0.930718	121.083	259.95	
51	-2.079440.179577	-0.919183	121.083	259.387	
52	-2.079440.183099	-0.903992	121.083	258.645	
53	-2.079440.18662	-0.892733	121.083	258.095	
54	-2.079440.190141	-0.877897	121.083	257.371	
55	-2.079440.193662	-0.866894	121.083	256.833	
56	-2.079440.197183	-0.852385	121.083	256.125	
57	-2.079440.200704	-0.841621	121.083	255.599	
58	-2.079440.204225	-0.827417	121.083	254.906	
59	-2.079440.207746	-0.816874	121.083	254.391	
60	-2.079440.211268	-0.802956	121.083	253.711	
61	-2.079440.214789	-0.792618	121.083	253.206	
62	-2.079440.21831	-0.778966	121.083	252.54	
63	-2.079440.221831	-0.768821	121.083	252.044	
64	-2.079440.225352	-0.755415	121.083	251.389	
65	-2.079440.228873	-0.745449	121.083	250.903	
66	-2.079440.232394	-0.732275	121.083	250.259	
67	-2.079440.235915	-0.722479	121.083	249.781	
68	-2.079440.239437	-0.709522	121.083	249.148	
69	-2.079440.242958	-0.699883	121.083	248.678	
70	-2.079440.246479	-0.687131	121.083	248.055	
71	-2.079440.25	-0.67449	121.083	247.438	
72	-2.079440.253521	-0.665079	121.083	246.978	
73	-2.079440.257042	-0.652622	121.083	246.37	
74	-2.079440.260563	-0.643345	121.083	245.917	
75	-2.079440.264085	-0.631062	121.083	245.317	
76	-2.079440.267606	-0.621911	121.083	244.87	
77	-2.079440.271127	-0.609791	121.083	244.278	
78	-2.079440.274648	-0.60076	121.083	243.837	
79	-2.079440.278169	-0.588793	121.083	243.253	
80	-1.171180.28169	-0.579873	202.07	242.817	
81	-0.891598	0.285211	-0.568052	226.999	242.24
82	-0.755023	0.288732	-0.559237	239.177	241.809
83	-0.693147	0.292254	-0.547551	244.694	241.239
84	-0.693147	0.295775	-0.538836	244.694	240.813
85	-0.693147	0.299296	-0.52728	244.694	240.249
86	-0.693147	0.302817	-0.518658	244.694	239.828
87	-0.693147	0.306338	-0.507221	244.694	239.269
88	-0.693147	0.309859	-0.498687	244.694	238.853
89	-0.693147	0.31338	-0.487364	244.694	238.3
90	-0.693147	0.316901	-0.478914	244.694	237.887
91	-0.693147	0.320423	-0.467699	244.694	237.339
92	-0.693147	0.323944	-0.459327	244.694	236.93
93	-0.693147	0.327465	-0.448213	244.694	236.388
94	-0.693147	0.330986	-0.439913	244.694	235.982
95	-0.693147	0.334507	-0.428895	244.694	235.444
96	-0.693147	0.338028	-0.417928	244.694	234.909
97	-0.693147	0.341549	-0.409735	244.694	234.509
98	-0.693147	0.34507	-0.398855	244.694	233.977
99	-0.693147	0.348592	-0.390726	244.694	233.58
100	-0.693147	0.352113	-0.379927	244.694	233.053
101	-0.693147	0.355634	-0.371856	244.694	232.659
102	-0.693147	0.359155	-0.361133	244.694	232.135
103	-0.693147	0.362676	-0.353118	244.694	231.744
104	-0.693147	0.366197	-0.342466	244.694	231.224
105	-0.693147	0.369718	-0.334503	244.694	230.835
106	-0.693147	0.373239	-0.323919	244.694	230.318
107	-0.693147	0.376761	-0.316004	244.694	229.932
108	-0.693147	0.380282	-0.305481	244.694	229.418
109	-0.693147	0.383803	-0.297612	244.694	229.033
110	-0.693147	0.387324	-0.287147	244.694	228.522

111	-0.693147	0.390845	-0.279319	244.694	228.14
112	-0.693147	0.394366	-0.268908	244.694	227.632
113	-0.693147	0.397887	-0.26112	244.694	227.251
114	-0.693147	0.401408	-0.250759	244.694	226.745
115	-0.693147	0.40493	-0.243007	244.694	226.367
116	-0.693147	0.408451	-0.232693	244.694	225.863
117	-0.693147	0.411972	-0.224974	244.694	225.486
118	-0.693147	0.415493	-0.214702	244.694	224.985
119	-0.693147	0.419014	-0.204452	244.694	224.484
120	-0.693147	0.422535	-0.196779	244.694	224.109
121	-0.693147	0.426056	-0.186567	244.694	223.611
122	-0.693147	0.429577	-0.17892	244.694	223.237
123	-0.693147	0.433099	-0.168741	244.694	222.74
124	-0.693147	0.43662	-0.161119	244.694	222.368
125	-0.693147	0.440141	-0.150969	244.694	221.872
126	-0.693147	0.443662	-0.143367	244.694	221.501
127	-0.693147	0.447183	-0.133244	244.694	221.007
128	-0.693147	0.450704	-0.125661	244.694	220.636
129	-0.693147	0.454225	-0.115562	244.694	220.143
130	-0.693147	0.457746	-0.107995	244.694	219.774
131	-0.693147	0.461268	-0.0979139	244.694	219.281
132	-0.693147	0.464789	-0.0903606	244.694	218.913
133	-0.693147	0.46831	-0.0802981	244.694	218.421
134	-0.693147	0.471831	-0.0727562	244.694	218.053
135	-0.693147	0.475352	-0.0627062	244.694	217.562
136	-0.693147	0.478873	-0.0551734	244.694	217.194
137	-0.693147	0.482394	-0.0451348	244.694	216.704
138	-0.693147	0.485915	-0.0376076	244.694	216.337
139	-0.693147	0.489437	-0.0275759	244.694	215.847
140	-0.693147	0.492958	-0.0200544	244.694	215.479
141	-0.693147	0.496479	-0.0100272	244.694	214.99
142	-0.693147	0.5	0	244.694	214.5
143	-0.693147	0.503521	0.0100272	244.694	214.01
144	-0.693147	0.507042	0.0200544	244.694	213.521
145	-0.693147	0.510563	0.0275759	244.694	213.153
146	-0.693147	0.514085	0.0376076	244.694	212.663
147	-0.693147	0.517606	0.0451348	244.694	212.296
148	-0.693147	0.521127	0.0551734	244.694	211.806
149	-0.693147	0.524648	0.0627062	244.694	211.438
150	-0.693147	0.528169	0.0727562	244.694	210.947
151	-0.693147	0.53169	0.0802981	244.694	210.579
152	-0.693147	0.535211	0.0903606	244.694	210.087
153	-0.693147	0.538732	0.0979139	244.694	209.719
154	-0.693147	0.542254	0.107995	244.694	209.226
155	-0.693147	0.545775	0.115562	244.694	208.857
156	-0.693147	0.549296	0.125661	244.694	208.364
157	-0.693147	0.552817	0.133244	244.694	207.993
158	-0.693147	0.556338	0.143367	244.694	207.499
159	-0.693147	0.559859	0.150969	244.694	207.128
160	-0.693147	0.56338	0.161119	244.694	206.632
161	-0.693147	0.566901	0.168741	244.694	206.26
162	-0.693147	0.570423	0.17892	244.694	205.763
163	-0.693147	0.573944	0.186567	244.694	205.389
164	-0.693147	0.577465	0.196779	244.694	204.891
165	-0.693147	0.580986	0.204452	244.694	204.516
166	-0.693147	0.584507	0.214702	244.694	204.015
167	-0.693147	0.588028	0.224974	244.694	203.514
168	-0.693147	0.591549	0.232693	244.694	203.137
169	-0.693147	0.59507	0.243007	244.694	202.633
170	-0.693147	0.598592	0.250759	244.694	202.255
171	-0.693147	0.602113	0.26112	244.694	201.749
172	-0.693147	0.605634	0.268908	244.694	201.368

173	-0.693147	0.609155	0.279319	244.694	200.86
174	-0.693147	0.612676	0.287147	244.694	200.478
175	-0.693147	0.616197	0.297612	244.694	199.967
176	-0.693147	0.619718	0.305481	244.694	199.582
177	-0.693147	0.623239	0.316004	244.694	199.068
178	-0.693147	0.626761	0.323919	244.694	198.682
179	-0.693147	0.630282	0.334503	244.694	198.165
180	-0.693147	0.633803	0.342466	244.694	197.776
181	-0.693147	0.637324	0.353118	244.694	197.256
182	-0.693147	0.640845	0.361133	244.694	196.865
183	-0.693147	0.644366	0.371856	244.694	196.341
184	-0.693147	0.647887	0.379927	244.694	195.947
185	-0.693147	0.651408	0.390726	244.694	195.42
186	-0.693147	0.65493	0.398855	244.694	195.023
187	-0.693147	0.658451	0.409735	244.694	194.491
188	-0.693147	0.661972	0.417928	244.694	194.091
189	-0.693147	0.665493	0.428895	244.694	193.556
190	-0.693147	0.669014	0.439913	244.694	193.018
191	-0.693147	0.672535	0.448213	244.694	192.612
192	-0.693147	0.676056	0.459327	244.694	192.07
193	-0.693147	0.679577	0.467699	244.694	191.661
194	-0.693147	0.683099	0.478914	244.694	191.113
195	-0.693147	0.68662	0.487364	244.694	190.7
196	-0.693147	0.690141	0.498687	244.694	190.147
197	-0.693147	0.693662	0.507221	244.694	189.731
198	-0.693147	0.697183	0.518658	244.694	189.172
199	-0.693147	0.700704	0.52728	244.694	188.751
200	-0.693147	0.704225	0.538836	244.694	188.187
201	-0.693147	0.707746	0.547551	244.694	187.761
202	-0.693147	0.711268	0.559237	244.694	187.191
203	-0.693147	0.714789	0.568052	244.694	186.76
204	-0.693147	0.71831	0.579873	244.694	186.183
205	-0.693147	0.721831	0.588793	244.694	185.747
206	-0.693147	0.725352	0.60076	244.694	185.163
207	-0.693147	0.728873	0.609791	244.694	184.722
208	-0.693147	0.732394	0.621911	244.694	184.13
209	-0.693147	0.735915	0.631062	244.694	183.683
210	-0.693147	0.739437	0.643345	244.694	183.083
211	-0.693147	0.742958	0.652622	244.694	182.63
212	-0.693147	0.746479	0.665079	244.694	182.022
213	-0.693147	0.75	0.67449	244.694	181.562
214	-0.693147	0.753521	0.687131	244.694	180.945
215	-0.693147	0.757042	0.699883	244.694	180.322
216	-0.693147	0.760563	0.709522	244.694	179.852
217	-0.693147	0.764085	0.722479	244.694	179.219
218	-0.693147	0.767606	0.732275	244.694	178.741
219	-0.693147	0.771127	0.745449	244.694	178.097
220	-0.693147	0.774648	0.755415	244.694	177.611
221	-0.693147	0.778169	0.768821	244.694	176.956
222	-0.693147	0.78169	0.778966	244.694	176.46
223	-0.693147	0.785211	0.792618	244.694	175.794
224	-0.693147	0.788732	0.802956	244.694	175.289
225	-0.693147	0.792254	0.816874	244.694	174.609
226	-0.693147	0.795775	0.827417	244.694	174.094
227	-0.693147	0.799296	0.841621	244.694	173.401
228	-0.693147	0.802817	0.852385	244.694	172.875
229	-0.693147	0.806338	0.866894	244.694	172.167
230	-0.693147	0.809859	0.877897	244.694	171.629
231	-0.693147	0.81338	0.892733	244.694	170.905
232	-0.693147	0.816901	0.903992	244.694	170.355
233	-0.693147	0.820423	0.919183	244.694	169.613
234	-0.693147	0.823944	0.930718	244.694	169.05

235	-0.693147	0.827465	0.946291	244.694	168.289	
236	-0.693147	0.830986	0.958125	244.694	167.712	
237	-0.693147	0.834507	0.974114	244.694	166.931	
238	-0.693147	0.838028	0.990356	244.694	166.138	
239	-0.693147	0.841549	1.00271	244.694	165.534	
240	-0.693147	0.84507	1.01943	244.694	164.718	
241	-0.693147	0.848592	1.03215	244.694	164.096	
242	-0.693147	0.852113	1.04939	244.694	163.255	
243	-0.693147	0.855634	1.06252	244.694	162.614	
244	-0.693147	0.859155	1.08032	244.694	161.744	
245	-0.673345	0.862676	1.0939	246.46	161.081	
246	-0.510826	0.866197	1.11232	260.951	160.182	
247	-0.415515	0.869718	1.12639	269.45	159.495	
248	-0.371064	0.873239	1.1455	273.413	158.561	
249	-0.274437	0.876761	1.16012	282.029	157.847	
250	-0.210721	0.880282	1.18	287.711	156.877	
251	0	0.883803	1.19522	306.5	156.133	
252	0	0.887324	1.21596	306.5	155.121	
253	0	0.890845	1.23187	306.5	154.344	
254	0	0.894366	1.25357	306.5	153.284	
255	0	0.897887	1.27024	306.5	152.47	
256	0	0.901408	1.29303	306.5	151.357	
257	0	0.90493	1.31058	306.5	150.5	
258	0	0.908451	1.33462	306.5	149.326	
259	0	0.911972	1.35317	306.5	148.42	
260	0	0.915493	1.37866	306.5	147.176	
261	0	0.919014	1.40507	306.5	145.886	
262	0.0953102	0.922535	1.42554	314.998	144.886	
263	0.470004	0.926056	1.4538	348.409	143.506	
264	0.641854	0.929577	1.47579	363.732	142.432	
265	0.693147	0.933099	1.50626	368.306	140.944	
266	0.693147	0.93662	1.53007	368.306	139.782	
267	0.693147	0.940141	1.56322	368.306	138.163	
268	0.693147	0.943662	1.58927	368.306	136.891	
269	0.693147	0.947183	1.62576	368.306	135.109	
270	0.693147	0.950704	1.65463	368.306	133.699	
271	0.741937	0.954225	1.6954	372.656	131.708	
272	0.788457	0.957746	1.72793	376.804	130.119	
273	0.832909	0.961268	1.77438	380.768	127.851	
274	1.09861	0.964789	1.81191	404.46	126.018	
275	1.16315	0.96831	1.86629	410.214	123.363	
276	1.38629	0.971831	1.91103	430.111	121.178	
277	1.38629	0.975352	1.97737	430.111	117.938	
278	1.58924	0.978873	2.03352	448.207	115.196	
279	1.82455	0.982394	2.12007	469.189	110.97	
280	1.90211	0.985915	2.19728	476.105	107.199	
281	2.19722	0.989437	2.32634	502.419	100.897	
282	2.30259	0.992958	2.45727	511.814	94.5032	
283	2.48491	0.996479	2.74777	528.071	80.3175	

Kruskal-Wallis Non-Parametric Test

Parameter: Dichlorodifluoromethane

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	ND<-0.693147	125.5
	3/16/1999	ND<-0.693147	125.5
	9/23/1999	ND<-0.693147	125.5
	3/14/2000	ND<-0.693147	125.5
	9/23/2003	ND<-0.693147	125.5
	3/10/2004	ND<-0.693147	125.5
	10/12/2004	ND<-0.693147	125.5
	4/1/2005	ND<-0.693147	125.5
	10/26/2005	ND<-0.693147	125.5
	6/19/2006	ND<0 J	125.5
	11/18/2006	ND<0 J	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<0 J	125.5
	11/20/2008	0	260
	11/16/2009	0.0953102	262
	6/30/2010	ND<-2.07944 U	125.5
	11/17/2010	-0.210721 J	259
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	0	261
	5/16/2012	-0.415515 J	256
	11/16/2012	-0.510826 J	255
	11/16/2013	ND<-2.07944 U	125.5

Rank Sum = 3686.5
Rank Mean = 160.283

Background Rank Sum = 3686.5
Background Rank Mean = 160.283

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-8	1/16/1998	ND<-0.693147	125.5
	3/16/1999	ND<-0.693147	125.5
	9/23/1999	ND<-0.693147	125.5
	3/14/2000	ND<-0.693147	125.5
	9/23/2003	ND<-0.693147	125.5
	3/10/2004	ND<-0.693147	125.5
	10/12/2004	ND<-0.693147	125.5
	4/1/2005	ND<-0.693147	125.5
	10/26/2005	ND<-0.693147	125.5
	6/19/2006	ND<-0.693147	125.5
	11/18/2006	ND<-0.693147	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5
	11/16/2009	ND<-2.07944 U	125.5
	6/30/2010	ND<-2.07944 U	125.5

	11/17/2010	ND<-2.07944 U	125.5
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	ND<-2.07944 U	125.5
	5/16/2012	ND<-2.07944 U	125.5
	11/16/2012	ND<-2.07944 U	125.5
	11/16/2013	ND<-2.07944 U	125.5

Rank Sum = 2886.5
Rank Mean = 125.5

LMW-9S	11/18/2006	ND<-0.693147	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5
	6/30/2010	ND<-2.07944 U	125.5
	11/17/2010	ND<-2.07944 U	125.5
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	ND<-2.07944 U	125.5
	5/16/2012	ND<-2.07944 U	125.5
	11/16/2012	ND<-2.07944 U	125.5
	11/16/2013	ND<-2.07944 U	125.5

Rank Sum = 1506
Rank Mean = 125.5

LMW-9	1/16/1998	ND<-0.693147	125.5
	3/16/1999	ND<-0.693147	125.5
	9/23/1999	ND<-0.693147	125.5
	3/14/2000	ND<-0.693147	125.5
	9/23/2003	ND<-0.693147	125.5
	3/10/2004	ND<-0.693147	125.5
	10/12/2004	ND<-0.693147	125.5
	4/1/2005	ND<-0.693147	125.5
	10/26/2005	ND<-0.693147	125.5
	6/19/2006	ND<-0.693147	125.5
	11/18/2006	ND<-0.693147	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5
	11/16/2009	ND<-2.07944 U	125.5
	6/30/2010	ND<-2.07944 U	125.5
	11/17/2010	ND<-2.07944 U	125.5
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	ND<-2.07944 U	125.5
	5/16/2012	ND<-2.07944 U	125.5
	11/16/2012	ND<-2.07944 U	125.5
	11/16/2013	ND<-2.07944 U	125.5

Rank Sum = 2886.5
Rank Mean = 125.5

LMW-3	11/19/1996	ND<-0.693147	125.5
	3/24/1997	ND<-0.693147	125.5
	1/16/1998	ND<-0.693147	125.5
	3/16/1999	ND<-0.693147	125.5
	9/23/1999	ND<-0.693147	125.5
	3/14/2000	ND<-0.693147	125.5
	9/23/2003	ND<-0.693147	125.5
	3/10/2004	ND<-0.693147	125.5
	10/12/2004	ND<-0.693147	125.5
	4/1/2005	ND<-0.693147	125.5
	10/26/2005	ND<-0.693147	125.5
	6/19/2006	ND<-0.693147	125.5

	11/18/2006	ND<-0.693147	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<0 J	125.5
	11/20/2008	ND<0 J	125.5
	11/16/2009	-0.891598 J	252
	6/30/2010	ND<-2.07944 U	125.5
	11/17/2010	ND<-2.07944 U	125.5
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	ND<-2.07944 U	125.5
	5/16/2012	-1.17118 J	251
	11/16/2012	-0.673345 J	254
	11/16/2013	ND<-2.07944 U	125.5

Rank Sum = 3518
Rank Mean = 140.72

LMW-6	1/16/1998	ND<-0.693147	125.5
	3/16/1999	ND<-0.693147	125.5
	9/23/1999	ND<-0.693147	125.5
	3/14/2000	ND<-0.693147	125.5
	9/23/2003	ND<-0.693147	125.5
	3/10/2004	ND<-0.693147	125.5
	10/12/2004	ND<-0.693147	125.5
	4/1/2005	ND<-0.693147	125.5
	10/26/2005	ND<-0.693147	125.5
	6/19/2006	ND<0 J	125.5
	11/18/2006	0.693147	265
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<0 J	125.5
	11/20/2008	ND<0 J	125.5
	11/16/2009	ND<-2.07944 U	125.5
	6/30/2010	ND<-2.07944 U	125.5
	11/17/2010	ND<-2.07944 U	125.5
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	ND<-2.07944 U	125.5
	5/16/2012	-0.371064 J	257
	11/16/2012	-0.755023 J	253
	11/16/2013	ND<-2.07944 U	125.5

Rank Sum = 3285
Rank Mean = 142.826

LMW-10	3/14/2000	ND<-0.693147	125.5
	9/23/2003	ND<-0.693147	125.5
	3/10/2004	ND<-0.693147	125.5
	10/12/2004	ND<-0.693147	125.5
	4/1/2005	ND<-0.693147	125.5
	10/26/2005	ND<-0.693147	125.5
	6/19/2006	0.693147	266
	11/18/2006	2.19722	281
	6/2/2007	0.693147	267
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	1.38629	276
	11/20/2008	0.693147	268
	11/16/2009	1.58924	278
	6/30/2010	ND<-2.07944 U	125.5
	11/17/2010	ND<-2.07944 U	125.5
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	2.30259	282
	5/16/2012	1.90211	280
	11/16/2012	1.82455	279
	11/16/2013	0.470004	263

Rank Sum = 3995
Rank Mean = 199.75

LMW-3S	11/18/2006	2.48491	283
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	0.693147	269
	5/20/2008	ND<0 J	125.5
	11/20/2008	0.693147	270
	11/16/2009	0.788457	272
	6/30/2010	1.38629	277
	11/17/2010	0.832909	273
	7/6/2011	-0.274437 J	258
	11/22/2011	ND<-2.07944 U	125.5
	5/16/2012	0.741937	271
	11/16/2012	1.16315	275
	11/16/2013	0.641854	264

Rank Sum = 3088.5
Rank Mean = 237.577

LMW-16	11/18/2006	ND<-0.693147	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5
	11/16/2009	ND<-2.07944 U	125.5
	6/30/2010	ND<-2.07944 U	125.5
	11/17/2010	ND<-2.07944 U	125.5
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	ND<-2.07944 U	125.5
	5/16/2012	ND<-2.07944 U	125.5
	11/16/2012	ND<-2.07944 U	125.5
	11/16/2013	ND<-2.07944 U	125.5

Rank Sum = 1631.5
Rank Mean = 125.5

LMW-9D	11/18/2006	ND<-0.693147	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5
	11/16/2009	ND<-2.07944 U	125.5
	6/30/2010	ND<-2.07944 U	125.5
	11/17/2010	ND<-2.07944 U	125.5
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	ND<-2.07944 U	125.5
	5/16/2012	ND<-2.07944 U	125.5
	11/16/2012	ND<-2.07944 U	125.5
	11/16/2013	ND<-2.07944 U	125.5

Rank Sum = 1631.5
Rank Mean = 125.5

LMW-15R	11/18/2006	ND<-0.693147	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5
	11/16/2009	ND<-2.07944 U	125.5
	11/16/2009	ND<-2.07944 U	125.5
	11/16/2009	ND<-2.07944 U	125.5

	6/30/2010	ND<-2.07944 U	125.5
	11/17/2010	ND<-2.07944 U	125.5
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	ND<-2.07944 U	125.5
	5/16/2012	ND<-2.07944 U	125.5
	11/16/2012	ND<-2.07944 U	125.5
	11/16/2013	ND<-2.07944 U	125.5

Rank Sum = 2259
Rank Mean = 125.5

LMW-14R	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5
	6/30/2010	ND<-2.07944 U	125.5
	11/17/2010	ND<-2.07944 U	125.5
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	ND<-2.07944 U	125.5
	5/16/2012	ND<-2.07944 U	125.5
	11/16/2012	ND<-2.07944 U	125.5
	11/16/2013	ND<-2.07944 U	125.5

Rank Sum = 1380.5
Rank Mean = 125.5

LMW-7	1/16/1998	ND<-0.693147	125.5
	3/16/1999	ND<-0.693147	125.5
	9/23/1999	ND<-0.693147	125.5
	3/14/2000	ND<-0.693147	125.5
	9/23/2003	ND<-0.693147	125.5
	3/10/2004	ND<-0.693147	125.5
	10/12/2004	ND<-0.693147	125.5
	4/1/2005	ND<-0.693147	125.5
	10/26/2005	ND<-0.693147	125.5
	6/19/2006	ND<-0.693147	125.5
	11/18/2006	ND<-0.693147	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5
	11/17/2010	ND<-2.07944 U	125.5
	7/6/2011	ND<-2.07944 U	125.5
	11/22/2011	ND<-2.07944 U	125.5
	5/16/2012	ND<-2.07944 U	125.5
	11/16/2012	ND<-2.07944 U	125.5

Rank Sum = 2510
Rank Mean = 125.5

MW-5	1/16/1998	ND<-0.693147	125.5
	3/16/1999	ND<-0.693147	125.5
	9/23/1999	ND<-0.693147	125.5
	3/14/2000	ND<-0.693147	125.5
	9/23/2003	ND<-0.693147	125.5
	3/10/2004	ND<-0.693147	125.5
	10/12/2004	ND<-0.693147	125.5
	4/1/2005	ND<-0.693147	125.5
	10/26/2005	ND<-0.693147	125.5
	6/19/2006	ND<-0.693147	125.5
	11/15/2007	1.09861	274
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5

Rank Sum = 1780
Rank Mean = 136.923

LMW-13	3/14/2000	ND<-0.693147	125.5
	9/23/2003	ND<-0.693147	125.5
	3/10/2004	ND<-0.693147	125.5
	10/12/2004	ND<-0.693147	125.5
	4/1/2005	ND<-0.693147	125.5
	10/26/2005	ND<-0.693147	125.5
	6/19/2006	ND<-0.693147	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5

Rank Sum = 1380.5
Rank Mean = 125.5

LMW-11	3/14/2000	ND<-0.693147	125.5
	9/23/2003	ND<-0.693147	125.5
	3/10/2004	ND<-0.693147	125.5
	10/12/2004	ND<-0.693147	125.5
	4/1/2005	ND<-0.693147	125.5
	10/26/2005	ND<-0.693147	125.5
	6/19/2006	ND<-0.693147	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5

Rank Sum = 1380.5
Rank Mean = 125.5

LMW-12	3/14/2000	ND<-0.693147	125.5
	9/23/2003	ND<-0.693147	125.5
	3/10/2004	ND<-0.693147	125.5
	10/12/2004	ND<-0.693147	125.5
	4/1/2005	ND<-0.693147	125.5
	10/26/2005	ND<-0.693147	125.5
	6/19/2006	ND<-0.693147	125.5
	6/2/2007	ND<-0.693147	125.5
	11/15/2007	ND<-0.693147	125.5
	5/20/2008	ND<-0.693147	125.5
	11/20/2008	ND<-0.693147	125.5

Rank Sum = 1380.5
Rank Mean = 125.5

Calculation Results:

Kruskal-Wallis H Statistic = 35.6436
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 114.75
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
35.6436 > 26.2962 indicating a significant group difference at 5% significance level
114.75 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 160.283

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-8	**125.5**	**-34.782**	**56.1418**
LMW-9S	**125.5**	**-34.782**	**67.7977**
LMW-9	**125.5**	**-34.782**	**56.1418**
LMW-3	**140.72**	**-19.562**	**55.0075**
LMW-6	**142.826**	**-17.456**	**56.1418**

LMW-10	199.75	39.4674	58.2091
LMW-3S	237.577	77.2943	66.0619
LMW-16	125.5	-34.782	66.0619
LMW-9D	125.5	-34.782	66.0619
LMW-15R	125.5	-34.782	59.9138
LMW-14R	125.5	-34.782	69.7934
LMW-7	125.5	-34.782	58.2091
MW-5	136.923	-23.359	56 0.0619
LMW-13	125.5	-34.782	69.7934
LMW-11	125.5	-34.782	69.7934
LMW-12	125.5	-34.782	69.7934

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777

Mean background rank is 160.283

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-8	125.5	-34.782	66.3121
LMW-9S	125.5	-34.782	80.0794
LMW-9	125.5	-34.782	66.3121
LMW-3	140.72	-19.562	64.9723
LMW-6	142.826	-17.456	56 6.3121
LMW-10	199.75	39.4674	68.7538
LMW-3S	237.577	77.2943	78.0292
LMW-16	125.5	-34.782	78.0292
LMW-9D	125.5	-34.782	78.0292
LMW-15R	125.5	-34.782	70.7674
LMW-14R	125.5	-34.782	82.4367
LMW-7	125.5	-34.782	68.7538
MW-5	136.923	-23.359	78.0292
LMW-13	125.5	-34.782	82.4367
LMW-11	125.5	-34.782	82.4367
LMW-12	125.5	-34.782	82.4367

Mann-Kendall Trend Analysis
Parameter: Dichlorodifluoromethane
Location: LMW-3S
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
ND<-0.693147	2.48491	-3.178050	1	
0.693147	2.48491	-1.791760	2	
ND<0 J	2.48491	-2.484910	3	
0.693147	2.48491	-1.791760	4	
0.788457	2.48491	-1.696450	5	
1.38629	2.48491	-1.098610	6	
0.832909	2.48491	-1.652 0	7	
-0.274437 J	2.48491	-2.759340	8	
ND<-2.07944 U	2.48491	-4.564350	9	
0.741937	2.48491	-1.742970	10	
1.16315	2.48491	-1.321760	11	
0.641854	2.48491	-1.843050	12	
0.693147	ND<-0.693147	1.38629 1	12	
ND<0 J	ND<-0.693147	0.693147 2	12	
0.693147	ND<-0.693147	1.38629 3	12	
0.788457	ND<-0.693147	1.4816 4	12	
1.38629	ND<-0.693147	2.07944 5	12	
0.832909	ND<-0.693147	1.52606 6	12	
-0.274437 J	ND<-0.693147	0.41871 7	12	
ND<-2.07944 U	ND<-0.693147	-1.386297	13	
0.741937	ND<-0.693147	1.43508 8	13	
1.16315	ND<-0.693147	1.8563 9	13	
0.641854	ND<-0.693147	1.335 10	13	
ND<0 J	0.693147	-0.693147 10	14	
0.693147	0.693147	0 10	14	
0.788457	0.693147	0.0953102	11	14
1.38629	0.693147	0.693147	12	14
0.832909	0.693147	0.139762	13	14
-0.274437 J	0.693147	-0.967584	13	15
ND<-2.07944 U	0.693147	-2.7725913	16	
0.741937	0.693147	0.0487902	14	16
1.16315	0.693147	0.470004	15	16
0.641854	0.693147	-0.0512933	15	17
0.693147	ND<0 J	0.693147 16	17	
0.788457	ND<0 J	0.788457 17	17	
1.38629	ND<0 J	1.38629 18	17	
0.832909	ND<0 J	0.832909 19	17	
-0.274437 J	ND<0 J	-0.274437 19	18	
ND<-2.07944 U	ND<0 J	-2.0794419	19	
0.741937	ND<0 J	0.741937 20	19	
1.16315	ND<0 J	1.16315 21	19	
0.641854	ND<0 J	0.641854 22	19	
0.788457	0.693147	0.0953102	23	19
1.38629	0.693147	0.693147	24	19
0.832909	0.693147	0.139762	25	19
-0.274437 J	0.693147	-0.967584	25	20

ND<-2.07944 U	0.693147	-2.7725925	21	
0.741937	0.693147	0.0487902	26	21
1.16315	0.693147	0.470004	27	21
0.641854	0.693147	-0.0512933	27	22
1.38629	0.788457	0.597837	28	22
0.832909	0.788457	0.0444518	29	22
-0.274437 J	0.788457	-1.0628929	23	
ND<-2.07944 U	0.788457	-2.8679 29	24	
0.741937	0.788457	-0.0465229	25	
1.16315	0.788457	0.374693	30	25
0.641854	0.788457	-0.146603	30	26
0.832909	1.38629	-0.553385	30	27
-0.274437 J	1.38629	-1.6607330	28	
ND<-2.07944 U	1.38629	-3.4657430	29	
0.741937	1.38629	-0.644357	30	30
1.16315	1.38629	-0.223144	30	31
0.641854	1.38629	-0.7444430	32	
-0.274437 J	0.832909	-1.1073530	33	
ND<-2.07944 U	0.832909	-2.9123530	34	
0.741937	0.832909	-0.0909718	30	35
1.16315	0.832909	0.330242	31	35
0.641854	0.832909	-0.191055	31	36
ND<-2.07944 U	-0.274437 J	-1.805 31	37	
0.741937	-0.274437 J	1.01637 32	37	
1.16315	-0.274437 J	1.43759 33	37	
0.641854	-0.274437 J	0.916291	34	37
0.741937	ND<-2.07944 U	2.82138 35	37	
1.16315	ND<-2.07944 U	3.24259 36	37	
0.641854	ND<-2.07944 U	2.7213 37	37	
1.16315	0.741937	0.421213	38	37
0.641854	0.741937	-0.100083	38	38
0.641854	1.16315	-0.521297	38	39

S Statistic = 38 - 39 = -1

Tied Group	Value	Members
1	0.693147	2

Time Period		Observations
11/18/2006		1
6/2/2007	1	
11/15/2007		1
5/20/2008		1
11/20/2008		1
11/16/2009		1
6/30/2010		1
11/17/2010		1
7/6/2011	1	
11/22/2011		1
5/16/2012		1
11/16/2012		1
11/16/2013		1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 267.667
Z-Score = 0
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|0| <= 1.97737 indicating no evidence of a trend

Shewhart-CUSUM Control Chart

Parameter: Dichlorodifluoromethane

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -0.64803
Baseline Std Dev = 0.642637
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std	Mean
11/18/2006	2.48491	3.87513	4.87513	
11/18/2006	2.48491	3.87513	4.87513	
6/2/2007	-0.693147	2.80492	-0.070206	
6/2/2007	-0.693147	2.80492	-0.070206	
11/15/2007	0.693147	3.89191	2.08699	
11/15/2007	0.693147	3.89191	2.08699	
5/20/2008	0	3.90031	1.00839	
5/20/2008	0	3.90031	1.00839	
11/20/2008	0.693147	4.9873	2.08699	
11/20/2008	0.693147	4.9873	2.08699	
11/16/2009	0.788457	6.2226	2.2353	
11/16/2009	0.788457	6.2226	2.2353	
6/30/2010	1.38629	8.38819	3.16559	
6/30/2010	1.38629	8.38819	3.16559	
11/17/2010	0.832909	9.69266	2.30447	
11/17/2010	0.832909	9.69266	2.30447	
7/6/2011	-0.274437	9.27401	0.581345	
7/6/2011	-0.274437	9.27401	0.581345	
11/22/2011	-2.079441	6.04661	-2.2274	
11/22/2011	-2.079441	6.04661	-2.2274	
5/16/2012	0.741937	7.20952	2.16291	
5/16/2012	0.741937	7.20952	2.16291	
11/16/2012	1.16315	9.02788	2.81836	
11/16/2012	1.16315	9.02788	2.81836	
11/16/2013	0.641854	10.0351	2.00717	
11/16/2013	0.641854	10.0351	2.00717	

Concentrations (ppb)

Parameter: Hexachlorobutadiene

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 12
Total Non-Detect: 11
Percent Non-Detects: 91.6667%
Total Background Measurements: 1
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	1	1 (100%)	11/16/2013	ND<0.4 U	ND<0.4 U

There are 11 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-3S	1	0 (0%)	11/16/2013	0.4 U J	0.4 U J
LMW-9	1	1 (100%)	11/16/2013	ND<0.4 U	ND<0.4 U
LMW-9D	1	1 (100%)	11/16/2013	ND<0.4 U	ND<0.4 U
LMW-9S	1	1 (100%)	11/16/2013	ND<0.4 U	ND<0.4 U
LMW-8	1	1 (100%)	11/16/2013	ND<0.4 U	ND<0.4 U
LMW-14R	1	1 (100%)	11/16/2013	ND<0.4 U	ND<0.4 U
LMW-3	1	1 (100%)	11/16/2013	ND<0.4 U	ND<0.4 U
LMW-10	1	1 (100%)	11/16/2013	ND<0.4 U	ND<0.4 U
LMW-15R	1	1 (100%)	11/16/2013	ND<0.4 U	ND<0.4 U
LMW-16	1	1 (100%)	11/16/2013	ND<0.4 U	ND<0.4 U
LMW-6	1	1 (100%)	11/16/2013	ND<0.4 U	ND<0.4 U

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Wilks Test of Normality

Parameter: Hexachlorobutadiene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

K = 6 for 12 measurements

i	x(i)	x(n-i+1)		x(n-1+1)-x(i)	a(n-i+1)	b(i)
1	0.2	0.4	0.2	0.5475	0.1095	
2	0.2	0.2	0	0.3325	0	
3	0.2	0.2	0	0.2347	0	
4	0.2	0.2	0	0.1586	0	
5	0.2	0.2	0	0.0922	0	
6	0.2	0.2	0	0.0303	0	
7	0.2	0.2	0			
8	0.2	0.2	0			
9	0.2	0.2	0			
10	0.2	0.2	0			
11	0.2	0.2	0			
12	0.4	0.2	-0.2			

Sum of b values = 0.1095
Sample Standard Deviation = 0.057735
W Statistic = 0.327007

5% Critical value of 0.859 exceeds 0.327007
Evidence of non-normality at 95% level of significance

1% Critical value of 0.805 exceeds 0.327007
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Hexachlorobutadiene

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.539057
0.539057 < 0.926 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value Prob.	Quantile.		x	y
1	0.2	0.0769231	-1.4325	306.5	319.431	
2	0.2	0.153846	-1.02365	306.5	289.483	
3	0.2	0.230769	-0.738846		306.5	268.62
4	0.2	0.307692	-0.504372		306.5	251.445
5	0.2	0.384615	-0.294992		306.5	236.108
6	0.2	0.461538	-0.0979139		306.5	221.672
7	0.2	0.538462	0.0979139		306.5	207.328
8	0.2	0.615385	0.294992		306.5	192.892
9	0.2	0.692308	0.504372		306.5	177.555
10	0.2	0.769231	0.738846		306.5	160.38
11	0.2	0.846154	1.02365	306.5	139.517	
12	0.4	0.923077	1.4325	574	109.569	

Shapiro-Wilks Test of Normality

Parameter: Hexachlorobutadiene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

K = 6 for 12 measurements

i	x(i)	x(n-i+1)	x(n-1+1)-x(i)	a(n-i+1)	b(i)
1	-1.60944	-0.916291	0.693147	0.5475	0.379498
2	-1.60944	-1.609440	0.3325	0	
3	-1.60944	-1.609440	0.2347	0	
4	-1.60944	-1.609440	0.1586	0	
5	-1.60944	-1.609440	0.0922	0	
6	-1.60944	-1.609440	0.0303	0	
7	-1.60944	-1.609440			
8	-1.60944	-1.609440			
9	-1.60944	-1.609440			
10	-1.60944	-1.609440			
11	-1.60944	-1.609440			
12	-0.916291	-1.60944	-0.693147		

Sum of b values = 0.379498
Sample Standard Deviation = 0.200094
W Statistic = 0.327007

5% Critical value of 0.859 exceeds 0.327007
Evidence of non-normality at 95% level of significance

1% Critical value of 0.805 exceeds 0.327007
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Hexachlorobutadiene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.539057
0.539057 < 0.926 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-1.609440	0.0769231	-1.4325	143.475	319.431
2	-1.609440	0.153846	-1.02365	143.475	289.483
3	-1.609440	0.230769	-0.738846	143.475	268.62
4	-1.609440	0.307692	-0.504372	143.475	251.445
5	-1.609440	0.384615	-0.294992	143.475	236.108
6	-1.609440	0.461538	-0.0979139	143.475	221.672
7	-1.609440	0.538462	0.0979139	143.475	207.328
8	-1.609440	0.615385	0.294992	143.475	192.892
9	-1.609440	0.692308	0.504372	143.475	177.555
10	-1.609440	0.769231	0.738846	143.475	160.38
11	-1.609440	0.846154	1.02365	143.475	139.517
12	-0.916291	0.923077	1.4325	328.892	109.569

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Hexachlorobutadiene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 91.6667%
Number of comparisons = 11
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 1
Maximum Background Value = 0
Confidence Level = 11.1%
False Positive Rate = 88.9%

Location	Date	Count	Mean	Significant
LMW-3S	11/16/2013	1	-0.916291	FALSE
LMW-9	11/16/2013	1	-1.60944	FALSE
LMW-9D	11/16/2013	1	-1.60944	FALSE
LMW-9S	11/16/2013	1	-1.60944	FALSE
LMW-8	11/16/2013	1	-1.60944	FALSE
LMW-14R	11/16/2013	1	-1.60944	FALSE
LMW-3	11/16/2013	1	-1.60944	FALSE
LMW-10	11/16/2013	1	-1.60944	FALSE
LMW-15R	11/16/2013	1	-1.60944	FALSE
LMW-16	11/16/2013	1	-1.60944	FALSE
LMW-6	11/16/2013	1	-1.60944	FALSE

Concentrations (ppb)

Parameter: Lead

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 190
Percent Non-Detects: 64.1892%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	12 (50%)	1/16/1998	17	17
			3/16/1999	ND<1	ND<1
			9/23/1999	9	9
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	25	25
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<0 J	ND<0 J
			6/2/2007	3	3
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	0.13 J	0.13 J
			11/16/2009	0.3 J	0.3 J
			6/30/2010	0.19 J	0.19 J
			11/17/2010	0.16 J	0.16 J
			7/6/2011	0.26 J	0.26 J
			11/22/2011	0.13 J	0.13 J
			5/16/2012	0.3	0.3
			11/16/2012	ND<0.08 U	ND<0.08 U
			11/16/2013	0.19 J	0.19 J

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-3S	14	8 (57.1429%)	11/18/2006	ND<1	ND<1
			6/2/2007	3	3
			11/15/2007	1	1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	0.58	0.58
			11/16/2009	ND<0.08 U	ND<0.08 U
			6/30/2010	0.093 J	0.093 J
			11/17/2010	1.7	1.7
			7/6/2011	1.7	1.7
			11/22/2011	ND<0.08 U	ND<0.08 U
			5/16/2012	ND<0.08 U	ND<0.08 U
			11/16/2012	ND<0.08 U	ND<0.08 U
			11/16/2013	ND<0.08 U	ND<0.08 U
LMW-3	26	19 (73.0769%)	11/19/1996	ND<1	ND<1
			3/24/1997	11	11
			1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1

		9/23/1999	8	8	
		3/14/2000	ND<1	ND<1	
		9/23/2003	ND<1	ND<1	
		3/10/2004	ND<1	ND<1	
		10/12/2004	ND<1	ND<1	
		4/1/2005	ND<1	ND<1	
		10/26/2005	ND<1	ND<1	
		6/19/2006	ND<1	ND<1	
		11/18/2006	ND<1	ND<1	
		6/2/2007	ND<1	ND<1	
		11/15/2007	1	1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.08 U		ND<0.08 U
		11/16/2009	0.37	0.37	
		6/30/2010	0.17 J	0.17 J	
		11/17/2010	0.51	0.51	
		7/6/2011	0.12 J	0.12 J	
		11/22/2011	ND<0.08 U		ND<0.08 U
		5/16/2012	ND<0.08 U		ND<0.08 U
		11/16/2012	ND<0.08 U		ND<0.08 U
		11/16/2013	ND<0.08 U		ND<0.08 U
LMW-14R	12	5 (41.6667%)	6/2/2007	4	4
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	0.22 J	0.22 J	
		6/30/2010	0.1 J	0.1 J	
		11/17/2010	0.11 J	0.11 J	
		7/6/2011	0.3	0.3	
		11/22/2011	ND<0.08 U		ND<0.08 U
		5/16/2012	0.12 J	0.12 J	
		11/16/2012	ND<0.08 U		ND<0.08 U
		11/16/2013	0.09 J	0.09 J	
LMW-16	14	8 (57.1429%)	11/18/2006	ND<0 J	ND<0 J
		6/2/2007	5	5	
		11/15/2007	2	2	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.08 U		ND<0.08 U
		11/16/2009	0.099 J	0.099 J	
		6/30/2010	0.26 J	0.26 J	
		11/17/2010	ND<0.08 U		ND<0.08 U
		7/6/2011	0.16 J	0.16 J	
		11/22/2011	ND<0.08 U		ND<0.08 U
		5/16/2012	ND<0.08 U		ND<0.08 U
		11/16/2012	ND<0.08 U		ND<0.08 U
		11/16/2013	0.19 J	0.19 J	
LMW-15R	19	11 (57.8947%)	11/18/2006	ND<0 J	ND<0 J
		6/2/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		11/20/2008	1	1	
		6/11/2009	0.89	0.89	
		11/16/2009	0.21 J	0.21 J	
		11/16/2009	0.14 J	0.14 J	

			11/16/2009	ND<0.08 U	ND<0.08 U
			6/30/2010	0.08 J	0.08 J
			11/17/2010	0.16 J	0.16 J
			7/6/2011	0.48	0.48
			11/22/2011	ND<0.08 U	ND<0.08 U
			5/16/2012	0.15 J	0.15 J
			11/16/2012	ND<0.08 U	ND<0.08 U
			11/16/2013	ND<0.08 U	ND<0.08 U
LMW-10	21	15 (71.4286%)	3/14/2000	50	50
			9/23/2003	ND<1	ND<1
			3/10/2004	130	130
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<0 J	ND<0 J
			11/18/2006	ND<1	ND<1
			6/2/2007	4	4
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<0 J	ND<0 J
			6/11/2009	ND<0.08 U	ND<0.08 U
			11/16/2009	ND<0.08 U	ND<0.08 U
			6/30/2010	0.11 J	0.11 J
			11/17/2010	ND<0.08 U	ND<0.08 U
			7/6/2011	ND<0.08 U	ND<0.08 U
			11/22/2011	ND<0.08 U	ND<0.08 U
			5/16/2012	0.25 J	0.25 J
			11/16/2012	ND<0.08 U	ND<0.08 U
			11/16/2013	0.14 J	0.14 J
LMW-9S	13	9 (69.2308%)	11/18/2006	ND<1	ND<1
			6/2/2007	2	2
			11/15/2007	1	1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<0 J	ND<0 J
			6/11/2009	ND<0.08 U	ND<0.08 U
			6/30/2010	0.11 J	0.11 J
			11/17/2010	0.55	0.55
			7/6/2011	ND<0.08 U	ND<0.08 U
			11/22/2011	ND<0.08 U	ND<0.08 U
			5/16/2012	ND<0.08 U	ND<0.08 U
			11/16/2012	ND<0.08 U	ND<0.08 U
			11/16/2013	ND<0.08 U	ND<0.08 U
LMW-9D	14	2 (14.2857%)	11/18/2006	3	3
			6/2/2007	3	3
			11/15/2007	ND<0 J	ND<0 J
			5/20/2008	3	3
			11/20/2008	ND<1	ND<1
			6/11/2009	0.71	0.71
			11/16/2009	0.31	0.31
			6/30/2010	0.23 J	0.23 J
			11/17/2010	0.44	0.44
			7/6/2011	0.46	0.46
			11/22/2011	0.12 J	0.12 J
			5/16/2012	0.49	0.49
			11/16/2012	0.29 J	0.29 J
			11/16/2013	0.18 J	0.18 J
LMW-8	24	23 (95.8333%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1

			9/23/1999	21	21	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.08 U	ND<0.08 U	
			11/16/2009	ND<0.08 U	ND<0.08 U	
			6/30/2010	ND<0.08 U	ND<0.08 U	
			11/17/2010	ND<0.08 U	ND<0.08 U	
			7/6/2011	ND<0.08 U	ND<0.08 U	
			11/22/2011	ND<0.08 U	ND<0.08 U	
			5/16/2012	ND<0.08 U	ND<0.08 U	
			11/16/2012	ND<0.08 U	ND<0.08 U	
			11/16/2013	ND<0.08 U	ND<0.08 U	
LMW-6	24	18 (75%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	16	16	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<0 J	ND<0 J	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	0.084 J	0.084 J	
			11/16/2009	ND<0.08 U	ND<0.08 U	
			6/30/2010	0.14 J	0.14 J	
			11/17/2010	0.17 J	0.17 J	
			7/6/2011	0.099 J	0.099 J	
			11/22/2011	ND<0.08 U	ND<0.08 U	
			5/16/2012	ND<0.08 U	ND<0.08 U	
			11/16/2012	0.11 J	0.11 J	
			11/16/2013	ND<0.08 U	ND<0.08 U	
LMW-9	24	15 (62.5%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	27	27	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	13	13	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<0 J	ND<0 J	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<0 J	ND<0 J	
			11/18/2006	ND<0 J	ND<0 J	
			6/2/2007	1	1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	1	1	

			11/20/2008	ND<1	ND<1	
			6/11/2009	0.17 J	0.17 J	
			11/16/2009	ND<0.08 U		ND<0.08 U
			6/30/2010	0.16 J	0.16 J	
			11/17/2010	0.57	0.57	
			7/6/2011	ND<0.08 U	ND<0.08 U	
			11/22/2011	ND<0.08 U		ND<0.08 U
			5/16/2012	0.097 J	0.097 J	
			11/16/2012	0.094 J	0.094 J	
			11/16/2013	ND<0.08 U		ND<0.08 U
LMW-7	21	8 (38.0952%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	18	18	
			3/14/2000	16	16	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	3	3	
			10/26/2005	3	3	
			6/19/2006	3	3	
			11/18/2006	1	1	
			6/2/2007	3	3	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	0.88	0.88	
			11/17/2010	0.86	0.86	
			7/6/2011	2.5	2.5	
			11/22/2011	0.36	0.36	
			5/16/2012	0.4	0.4	
			11/16/2012	0.26 J	0.26 J	
LMW-11	11	9 (81.8182%)	3/14/2000	19	19	
			9/23/2003	ND<1	ND<1	
			3/10/2004	46	46	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
LMW-13	11	9 (81.8182%)	3/14/2000	44	44	
			9/23/2003	ND<1	ND<1	
			3/10/2004	35	35	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
MW-5	13	10 (76.9231%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	14	14	
			3/14/2000	22	22	
			9/23/2003	ND<1	ND<1	

			3/10/2004	52	52
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
LMW-12	11	9 (81.8182%)	3/14/2000	49	49
			9/23/2003	ND<1	ND<1
			3/10/2004	18	18
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Lead

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.747777.55021	0	
2	0	-2.5121313.861	0	
3	0	-2.3263419.2729	0	
4	0	-2.2262124.2289	0	
5	0	-2.1444128.8274	0	
6	0	-2.0537533.0453	0	
7	0	-1.9953937.0269	0	
8	0	-1.9431440.8026	0	
9	0	-1.8807944.34	0	
10	0	-1.8384347.7198	0	
11	0	-1.7866150.9118	0	
12	0.04	-1.7506953.9767	-0.0700275	
13	0.04	-1.7168856.9244	-0.138703	
14	0.04	-1.6746659.7289	-0.205689	
15	0.04	-1.6448562.4344	-0.271483	
16	0.04	-1.6164465.0473	-0.336141	
17	0.04	-1.5804767.5452	-0.399359	
18	0.04	-1.5547769.9625	-0.46155	
19	0.04	-1.5300772.3036	-0.522753	
20	0.04	-1.4985274.5491	-0.582694	
21	0.04	-1.4757976.7271	-0.641725	
22	0.04	-1.4466378.8198	-0.699591	
23	0.04	-1.4255480.852	-0.756612	
24	0.04	-1.4050782.8262	-0.812815	
25	0.04	-1.3786684.7269	-0.867962	
26	0.04	-1.3594686.5751	-0.92234	
27	0.04	-1.3407588.3727	-0.97597	
28	0.04	-1.3165290.1059	-1.02863	
29	0.04	-1.2988491.7929	-1.08058	
30	0.04	-1.2758893.4208	-1.13162	
31	0.04	-1.2590895.006	-1.18198	
32	0.04	-1.2426496.5502	-1.23169	
33	0.04	-1.2212398.0416	-1.28054	
34	0.04	-1.2055399.4949	-1.32876	
35	0.04	-1.19012100.911	-1.37636	
36	0.04	-1.17 102.28	-1.42316	
37	0.04	-1.15522103.615	-1.46937	
38	0.04	-1.14069104.916	-1.515	
39	0.04	-1.12168106.174	-1.55987	
40	0.04	-1.10768107.401	-1.60417	
41	0.04	-1.08935108.588	-1.64775	
42	0.04	-1.07584109.745	-1.69078	
43	0.04	-1.06252110.874	-1.73328	
44	0.04	-1.04505111.966	-1.77508	
45	0.04	-1.03215113.032	-1.81637	
46	0.04	-1.01943114.071	-1.85715	
47	0.04	-1.00271115.076	-1.89726	
48	0.04	-0.990356	116.057	-1.93687
49	0.04	-0.97815117.014	-1.976	
50	0.04	-0.9621 117.939	-2.01448	
51	0.04	-0.950222	118.842	-2.05249

52	0.04	-0.93459	119.716	-2.08987
53	0.04	-0.923014	120.568	-2.12679
54	0.04	-0.911562	121.399	-2.16326
55	0.04	-0.896473	122.202	-2.19911
56	0.04	-0.885291	122.986	-2.23453
57	0.04	-0.874218	123.75	-2.2695
58	0.04	-0.859618	124.489	-2.30388
59	0.04	-0.848786	125.21	-2.33783
60	0.04	-0.834498	125.906	-2.37121
61	0.04	-0.823893	126.585	-2.40417
62	0.04	-0.813379	127.247	-2.4367
63	0.08	-0.7995	127.886	-2.50066
64	0.084	-0.789191	128.509	-2.56695
65	0.09	-0.778966	129.115	-2.63706
66	0.093	-0.765456	129.701	-2.70825
67	0.094	-0.755415	130.272	-2.77926
68	0.097	-0.745449	130.828	-2.85157
69	0.099	-0.732275	131.364	-2.92406
70	0.099	-0.722479	131.886	-2.99559
71	0.1	-0.709522	132.389	-3.06654
72	0.11	-0.699883	132.879	-3.14353
73	0.11	-0.690309	133.356	-3.21946
74	0.11	-0.677639	133.815	-3.294
75	0.11	-0.668209	134.261	-3.3675
76	0.12	-0.658838	134.695	-3.44656
77	0.12	-0.646431	135.113	-3.52414
78	0.12	-0.637192	135.519	-3.6006
79	0.13	-0.628006	135.914	-3.68224
80	0.13	-0.615839	136.293	-3.7623
81	0.14	-0.606775	136.661	-3.84725
82	0.14	-0.594766	137.015	-3.93051
83	0.14	-0.585815	137.358	-4.01253
84	0.15	-0.576911	137.691	-4.09907
85	0.16	-0.565108	138.01	-4.18948
86	0.16	-0.556308	138.32	-4.27849
87	0.16	-0.547551	138.619	-4.3661
88	0.16	-0.53594	138.907	-4.45185
89	0.17	-0.52728	139.185	-4.54149
90	0.17	-0.515791	139.451	-4.62917
91	0.17	-0.507221	139.708	-4.7154
92	0.18	-0.498687	139.957	-4.80516
93	0.19	-0.487364	140.194	-4.89776
94	0.19	-0.478914	140.424	-4.98876
95	0.19	-0.470498	140.645	-5.07815
96	0.21	-0.459327	140.856	-5.17461
97	0.22	-0.450985	141.059	-5.27383
98	0.23	-0.442676	141.255	-5.37564
99	0.25	-0.431644	141.442	-5.48355
100	0.26	-0.423405	141.621	-5.59364
101	0.26	-0.412463	141.791	-5.70088
102	0.26	-0.40429	141.954	-5.80599
103	0.29	-0.396142	142.111	-5.92088
104	0.3	-0.385321	142.26	-6.03647
105	0.3	-0.377233	142.402	-6.14964
106	0.3	-0.369171	142.538	-6.26039
107	0.31	-0.358459	142.667	-6.37151
108	0.36	-0.350451	142.79	-6.49768
109	0.37	-0.33981	142.905	-6.62341
110	0.4	-0.331854	143.015	-6.75615
111	0.44	-0.323919	143.12	-6.89867
112	0.46	-0.31337	143.218	-7.04282
113	0.48	-0.305481	143.312	-7.18945

114	0.49	-0.297612	143.4	-7.33528
115	0.5	-0.287147	143.483	-7.47886
116	0.5	-0.279319	143.561	-7.61852
117	0.5	-0.271509	143.635	-7.75427
118	0.5	-0.26112143.703	-7.88483	
119	0.5	-0.253347	143.767	-8.0115
120	0.5	-0.243007	143.826	-8.13301
121	0.5	-0.235269	143.881	-8.25064
122	0.5	-0.227545	143.933	-8.36442
123	0.5	-0.217267	143.98	-8.47305
124	0.5	-0.209575	144.024	-8.57784
125	0.5	-0.201894	144.065	-8.67878
126	0.5	-0.191671	144.102	-8.77462
127	0.5	-0.184017	144.136	-8.86663
128	0.5	-0.176374	144.167	-8.95481
129	0.5	-0.166199	144.194	-9.03791
130	0.5	-0.158579	144.219	-9.1172
131	0.5	-0.148434	144.241	-9.19142
132	0.5	-0.140835	144.261	-9.26184
133	0.5	-0.133244	144.279	-9.32846
134	0.5	-0.123135	144.294	-9.39003
135	0.5	-0.115562	144.308	-9.44781
136	0.5	-0.107995	144.319	-9.50181
137	0.5	-0.0979139	144.329	-9.55076
138	0.5	-0.0903606	144.337	-9.59594
139	0.5	-0.0802981	144.343	-9.63609
140	0.5	-0.0727562	144.349	-9.67247
141	0.5	-0.0652187	144.353	-9.70508
142	0.5	-0.0551734	144.356	-9.73267
143	0.5	-0.0476439	144.358	-9.75649
144	0.5	-0.0401167	144.36	-9.77655
145	0.5	-0.0300838	144.361	-9.79159
146	0.5	-0.0225612	144.361	-9.80287
147	0.5	-0.0150408	144.362	-9.81039
148	0.5	-0.00501359	144.362	-9.8129
149	0.5	0.00501359	144.362	-9.81039
150	0.5	0.0150408	144.362	-9.80287
151	0.5	0.0225612	144.362	-9.79159
152	0.5	0.0300838	144.363	-9.77655
153	0.5	0.0401167	144.365	-9.75649
154	0.5	0.0476439	144.367	-9.73267
155	0.5	0.0551734	144.37	-9.70508
156	0.5	0.0652187	144.374	-9.67247
157	0.5	0.0727562	144.38	-9.63609
158	0.5	0.0802981	144.386	-9.59594
159	0.5	0.0903606	144.394	-9.55076
160	0.5	0.0979139	144.404	-9.50181
161	0.5	0.107995	144.416	-9.44781
162	0.5	0.115562	144.429	-9.39003
163	0.5	0.123135	144.444	-9.32846
164	0.5	0.133244	144.462	-9.26184
165	0.5	0.140835	144.482	-9.19142
166	0.5	0.148434	144.504	-9.1172
167	0.5	0.158579	144.529	-9.03791
168	0.5	0.166199	144.557	-8.95481
169	0.5	0.176374	144.588	-8.86663
170	0.5	0.184017	144.621	-8.77462
171	0.5	0.191671	144.658	-8.67878
172	0.5	0.201894	144.699	-8.57784
173	0.5	0.209575	144.743	-8.47305
174	0.5	0.217267	144.79	-8.36442
175	0.5	0.227545	144.842	-8.25064

176	0.5	0.235269	144.897	-8.13301
177	0.5	0.243007	144.956	-8.0115
178	0.5	0.253347	145.02	-7.88483
179	0.5	0.26112	145.089	-7.75427
180	0.5	0.271509	145.162	-7.61852
181	0.5	0.279319	145.24	-7.47886
182	0.5	0.287147	145.323	-7.33528
183	0.5	0.297612	145.411	-7.18648
184	0.5	0.305481	145.505	-7.03374
185	0.5	0.31337	145.603	-6.87705
186	0.5	0.323919	145.708	-6.71509
187	0.5	0.331854	145.818	-6.54917
188	0.5	0.33981	145.933	-6.37926
189	0.5	0.350451	146.056	-6.20404
190	0.5	0.358459	146.185	-6.02481
191	0.5	0.369171	146.321	-5.84022
192	0.5	0.377233	146.463	-5.6516
193	0.5	0.385321	146.612	-5.45894
194	0.5	0.396142	146.769	-5.26087
195	0.5	0.40429	146.932	-5.05873
196	0.5	0.412463	147.102	-4.8525
197	0.5	0.423405	147.282	-4.64079
198	0.5	0.431644	147.468	-4.42497
199	0.5	0.442676	147.664	-4.20363
200	0.5	0.450985	147.867	-3.97814
201	0.5	0.459327	148.078	-3.74848
202	0.5	0.470498	148.3	-3.51323
203	0.5	0.478914	148.529	-3.27377
204	0.5	0.487364	148.767	-3.03009
205	0.5	0.498687	149.015	-2.78075
206	0.5	0.507221	149.272	-2.52714
207	0.5	0.515791	149.539	-2.26924
208	0.5	0.52728	149.817	-2.0056
209	0.5	0.53594	150.104	-1.73763
210	0.5	0.547551	150.404	-1.46385
211	0.5	0.556308	150.713	-1.1857
212	0.5	0.565108	151.032	-0.903147
213	0.5	0.576911	151.365	-0.614691
214	0.5	0.585815	151.708	-0.321784
215	0.5	0.594766	152.062	-0.0244009
216	0.5	0.606775	152.43	0.278987
217	0.5	0.615839	152.81	0.586906
218	0.5	0.628006	153.204	0.900909
219	0.5	0.637192	153.61	1.21951
220	0.5	0.646431	154.028	1.54272
221	0.5	0.658838	154.462	1.87214
222	0.5	0.668209	154.908	2.20624
223	0.5	0.677639	155.368	2.54506
224	0.5	0.690309	155.844	2.89022
225	0.5	0.699883	156.334	3.24016
226	0.5	0.709522	156.837	3.59492
227	0.5	0.722479	157.359	3.95616
228	0.5	0.732275	157.896	4.3223
229	0.5	0.745449	158.451	4.69502
230	0.5	0.755415	159.022	5.07273
231	0.5	0.765456	159.608	5.45546
232	0.5	0.778966	160.215	5.84494
233	0.5	0.789191	160.837	6.23954
234	0.5	0.7995	161.477	6.63929
235	0.5	0.813379	162.138	7.04598
236	0.5	0.823893	162.817	7.45792
237	0.5	0.834498	163.513	7.87517

238	0.5	0.848786		164.234	8.29957
239	0.5	0.859618		164.973	8.72937
240	0.5	0.874218		165.737	9.16648
241	0.5	0.885291		166.521	9.60913
242	0.5	0.896473		167.325	10.0574
243	0.51	0.911562		168.155	10.5223
244	0.55	0.923014		169.007	11.0299
245	0.57	0.93459	169.881	11.5626	
246	0.58	0.950222		170.784	12.1138
247	0.71	0.9621	171.709	12.7969	
248	0.86	0.97815	172.666	13.6381	
249	0.88	0.990356		173.647	14.5096
250	0.89	1.00271	174.652	15.402	
251	1	1.01943	175.692	16.4214	
252	1	1.03215	176.757	17.4536	
253	1	1.04505	177.849	18.4986	
254	1	1.06252	178.978	19.5611	
255	1	1.07584	180.136	20.637	
256	1	1.08935	181.322	21.7263	
257	1	1.10768	182.549	22.834	
258	1.7	1.12168	183.807	24.7409	
259	1.7	1.14069	185.108	26.68	
260	2	1.15522	186.443	28.9905	
261	2	1.17	187.812	31.3305	
262	2.5	1.19012	189.228	34.3058	
263	3	1.20553	190.682	37.9224	
264	3	1.22123	192.173	41.586	
265	3	1.24264	193.717	45.314	
266	3	1.25908	195.302	49.0912	
267	3	1.27588	196.93	52.9188	
268	3	1.29884	198.617	56.8154	
269	3	1.31652	200.351	60.7649	
270	3	1.34075	202.148	64.7872	
271	3	1.35946	203.996	68.8656	
272	4	1.37866	205.897	74.3802	
273	4	1.40507	207.871	80.0005	
274	5	1.42554	209.903	87.1282	
275	8	1.44663	211.996	98.7013	
276	9	1.47579	214.174	111.983	
277	11	1.49852	216.42	128.467	
278	13	1.53007	218.761	148.358	
279	14	1.55477	221.178	170.125	
280	16	1.58047	223.676	195.412	
281	16	1.61644	226.289	221.275	
282	17	1.64485	228.994	249.238	
283	18	1.67466	231.799	279.382	
284	18	1.71688	234.747	310.285	
285	19	1.75069	237.811	343.549	
286	21	1.78661	241.003	381.067	
287	22	1.83843	244.383	421.513	
288	25	1.88079	247.921	468.532	
289	27	1.94314	251.696	520.997	
290	35	1.99539	255.678	590.836	
291	44	2.05375	259.896	681.201	
292	46	2.14441	264.494	779.844	
293	49	2.22621	269.45	888.928	
294	50	2.32634	274.862	1005.24	
295	52	2.51213	281.173	1135.88	
296	130	2.74777	288.723	1493.09	

Data Set Standard Deviation = 10.5041

Numerator = 2.2293e+006
Denominator = 9.39763e+006
W Statistic = 0.23722 = 2.2293e+006 / 9.39763e+006

5% Critical value of 0.976 exceeds 0.23722
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.23722
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Lead

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.492328
0.492328 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.003367	-2.7477739	348.683		
2	0	0.00673401	-2.5121339	337.176		
3	0	0.010101	-2.3263439	328.103		
4	0	0.013468	-2.2262139	323.213		
5	0	0.016835	-2.1444139	319.219		
6	0	0.020202	-2.0537539	314.791		
7	0	0.023569	-1.9953939	311.942		
8	0	0.026936	-1.9431439	309.39		
9	0	0.030303	-1.8807939	306.345		
10	0	0.03367	-1.8384339	304.276		
11	0	0.037037	-1.7866139	301.746		
12	0.04	0.040404	-1.7506939.107	299.992		
13	0.04	0.043771	-1.7168839.107	298.341		
14	0.04	0.047138	-1.6746639.107	296.279		
15	0.04	0.0505051	-1.6448539.107	294.824		
16	0.04	0.0538721	-1.6164439.107	293.436		
17	0.04	0.0572391	-1.5804739.107	291.679		
18	0.04	0.0606061	-1.5547739.107	290.425		
19	0.04	0.0639731	-1.5300739.107	289.218		
20	0.04	0.0673401	-1.4985239.107	287.677		
21	0.04	0.0707071	-1.4757939.107	286.568		
22	0.04	0.0740741	-1.4466339.107	285.144		
23	0.04	0.0774411	-1.4255439.107	284.114		
24	0.04	0.0808081	-1.4050739.107	283.114		
25	0.04	0.0841751	-1.3786639.107	281.824		
26	0.04	0.0875421	-1.3594639.107	280.887		
27	0.04	0.0909091	-1.3407539.107	279.974		
28	0.04	0.0942761	-1.3165239.107	278.79		
29	0.04	0.0976431	-1.2988439.107	277.926		
30	0.04	0.10101	-1.2758839.107	276.805		
31	0.04	0.104377	-1.2590839.107	275.985		
32	0.04	0.107744	-1.2426439.107	275.182		
33	0.04	0.111111	-1.2212339.107	274.137		
34	0.04	0.114478	-1.2055339.107	273.37		
35	0.04	0.117845	-1.1901239.107	272.617		
36	0.04	0.121212	-1.17 39.107	271.635		
37	0.04	0.124579	-1.1552239.107	270.913		
38	0.04	0.127946	-1.1406939.107	270.204		
39	0.04	0.131313	-1.1216839.107	269.275		
40	0.04	0.13468	-1.1076839.107	268.592		
41	0.04	0.138047	-1.0893539.107	267.697		
42	0.04	0.141414	-1.0758439.107	267.037		
43	0.04	0.144781	-1.0625239.107	266.386		
44	0.04	0.148148	-1.0450539.107	265.533		
45	0.04	0.151515	-1.0321539.107	264.904		
46	0.04	0.154882	-1.0194339.107	264.282		
47	0.04	0.158249	-1.0027139.107	263.466		
48	0.04	0.161616	-0.990356	39.107	262.862	

49	0.04	0.164983	-0.978153	9.107	262.266
50	0.04	0.16835	-0.9621	39.107	261.483
51	0.04	0.171717	-0.950222	39.107	260.903
52	0.04	0.175084	-0.934593	9.107	260.139
53	0.04	0.178451	-0.923014	39.107	259.574
54	0.04	0.181818	-0.911562	39.107	259.015
55	0.04	0.185185	-0.896473	39.107	258.278
56	0.04	0.188552	-0.885291	39.107	257.732
57	0.04	0.191919	-0.874218	39.107	257.191
58	0.04	0.195286	-0.859618	39.107	256.478
59	0.04	0.198653	-0.848786	39.107	255.949
60	0.04	0.20202	-0.834498	39.107	255.251
61	0.04	0.205387	-0.823893	39.107	254.733
62	0.04	0.208754	-0.813379	39.107	254.22
63	0.08	0.212121	-0.7995	39.214	253.542
64	0.084	0.215488	-0.789191	39.2247	253.039
65	0.09	0.218855	-0.778966	39.2407	252.54
66	0.093	0.222222	-0.765456	39.2488	251.88
67	0.094	0.225589	-0.755415	39.2514	251.389
68	0.097	0.228956	-0.745449	39.2595	250.903
69	0.099	0.232323	-0.732275	39.2648	250.259
70	0.099	0.23569	-0.722479	39.2648	249.781
71	0.1	0.239057	-0.709522	39.2675	249.148
72	0.11	0.242424	-0.699883	39.2942	248.678
73	0.11	0.245791	-0.690309	39.2942	248.21
74	0.11	0.249158	-0.677639	39.2942	247.591
75	0.11	0.252525	-0.668209	39.2942	247.131
76	0.12	0.255892	-0.658838	39.321	246.673
77	0.12	0.259259	-0.646431	39.321	246.067
78	0.12	0.262626	-0.637192	39.321	245.616
79	0.13	0.265993	-0.628006	39.3477	245.168
80	0.13	0.26936	-0.615839	39.3477	244.573
81	0.14	0.272727	-0.606775	39.3745	244.131
82	0.14	0.276094	-0.594766	39.3745	243.544
83	0.14	0.279461	-0.585815	39.3745	243.107
84	0.15	0.282828	-0.576911	39.4012	242.672
85	0.16	0.286195	-0.565108	39.428	242.096
86	0.16	0.289562	-0.556308	39.428	241.666
87	0.16	0.292929	-0.547551	39.428	241.239
88	0.16	0.296296	-0.535943	9.428	240.672
89	0.17	0.299663	-0.527283	9.4547	240.249
90	0.17	0.30303	-0.515791	39.4547	239.688
91	0.17	0.306397	-0.507221	39.4547	239.269
92	0.18	0.309764	-0.498687	39.4815	238.853
93	0.19	0.313131	-0.487364	39.5082	238.3
94	0.19	0.316498	-0.478914	39.5082	237.887
95	0.19	0.319865	-0.470498	39.5082	237.476
96	0.21	0.323232	-0.459327	39.5618	236.93
97	0.22	0.326599	-0.450985	39.5885	236.523
98	0.23	0.329966	-0.442676	39.6153	236.117
99	0.25	0.333333	-0.431644	39.6688	235.579
100	0.26	0.3367	-0.423405	39.6955	235.176
101	0.26	0.340067	-0.412463	39.6955	234.642
102	0.26	0.343434	-0.404293	9.6955	234.243
103	0.29	0.346801	-0.396142	39.7758	233.845
104	0.3	0.350168	-0.385321	39.8025	233.317
105	0.3	0.353535	-0.377233	39.8025	232.922
106	0.3	0.356902	-0.369171	39.8025	232.528
107	0.31	0.360269	-0.358459	39.8293	232.005
108	0.36	0.363636	-0.350451	39.963	231.614
109	0.37	0.367003	-0.339813	9.9898	231.094
110	0.4	0.37037	-0.331854	40.07	230.706

111	0.44	0.373737	-0.323919	40.177	230.318
112	0.46	0.377104	-0.313374	0.2305	229.803
113	0.48	0.380471	-0.305481	40.284	229.418
114	0.49	0.383838	-0.297612	40.3107	229.033
115	0.5	0.387205	-0.287147	40.3375	228.522
116	0.5	0.390572	-0.279319	40.3375	228.14
117	0.5	0.393939	-0.271509	40.3375	227.759
118	0.5	0.397306	-0.261124	0.3375	227.251
119	0.5	0.400673	-0.253347	40.3375	226.872
120	0.5	0.40404	-0.243007	40.3375	226.367
121	0.5	0.407407	-0.235269	40.3375	225.989
122	0.5	0.410774	-0.227545	40.3375	225.612
123	0.5	0.414141	-0.217267	40.3375	225.11
124	0.5	0.417508	-0.209575	40.3375	224.734
125	0.5	0.420875	-0.201894	40.3375	224.359
126	0.5	0.424242	-0.191671	40.3375	223.86
127	0.5	0.427609	-0.184017	40.3375	223.486
128	0.5	0.430976	-0.176374	40.3375	223.113
129	0.5	0.434343	-0.166199	40.3375	222.616
130	0.5	0.43771	-0.158579	40.3375	222.244
131	0.5	0.441077	-0.148434	40.3375	221.749
132	0.5	0.444444	-0.140835	40.3375	221.377
133	0.5	0.447811	-0.133244	40.3375	221.007
134	0.5	0.451178	-0.123135	40.3375	220.513
135	0.5	0.454545	-0.115562	40.3375	220.143
136	0.5	0.457912	-0.107995	40.3375	219.774
137	0.5	0.461279	-0.0979139	40.3375	219.281
138	0.5	0.464646	-0.0903606	40.3375	218.913
139	0.5	0.468013	-0.0802981	40.3375	218.421
140	0.5	0.47138	-0.0727562	40.3375	218.053
141	0.5	0.474747	-0.0652187	40.3375	217.685
142	0.5	0.478114	-0.0551734	40.3375	217.194
143	0.5	0.481481	-0.0476439	40.3375	216.827
144	0.5	0.484848	-0.0401167	40.3375	216.459
145	0.5	0.488215	-0.0300838	40.3375	215.969
146	0.5	0.491582	-0.0225612	40.3375	215.602
147	0.5	0.494949	-0.0150408	40.3375	215.234
148	0.5	0.498316	-0.00501359	40.3375	214.745
149	0.5	0.501684	0.00501359	40.3375	214.255
150	0.5	0.505051	0.0150408	40.3375	213.766
151	0.5	0.508418	0.0225612	40.3375	213.398
152	0.5	0.511785	0.0300838	40.3375	213.031
153	0.5	0.515152	0.0401167	40.3375	212.541
154	0.5	0.518519	0.0476439	40.3375	212.173
155	0.5	0.521886	0.0551734	40.3375	211.806
156	0.5	0.525253	0.0652187	40.3375	211.315
157	0.5	0.52862	0.0727562	40.3375	210.947
158	0.5	0.531987	0.0802981	40.3375	210.579
159	0.5	0.535354	0.0903606	40.3375	210.087
160	0.5	0.538721	0.0979139	40.3375	209.719
161	0.5	0.542088	0.107995	40.3375	209.226
162	0.5	0.545455	0.115562	40.3375	208.857
163	0.5	0.548822	0.123135	40.3375	208.487
164	0.5	0.552189	0.133244	40.3375	207.993
165	0.5	0.555556	0.140835	40.3375	207.623
166	0.5	0.558923	0.148434	40.3375	207.251
167	0.5	0.56229	0.158579	40.3375	206.756
168	0.5	0.565657	0.166199	40.3375	206.384
169	0.5	0.569024	0.176374	40.3375	205.887
170	0.5	0.572391	0.184017	40.3375	205.514
171	0.5	0.575758	0.191671	40.3375	205.14
172	0.5	0.579125	0.201894	40.3375	204.641

173	0.5	0.582492	0.209575	40.3375	204.266
174	0.5	0.585859	0.217267	40.3375	203.89
175	0.5	0.589226	0.227545	40.3375	203.388
176	0.5	0.592593	0.235269	40.3375	203.011
177	0.5	0.59596	0.243007	40.3375	202.633
178	0.5	0.599327	0.253347	40.3375	202.128
179	0.5	0.602694	0.26112	40.3375	201.749
180	0.5	0.606061	0.271509	40.3375	201.241
181	0.5	0.609428	0.279319	40.3375	200.86
182	0.5	0.612795	0.287147	40.3375	200.478
183	0.5	0.616162	0.297612	40.3375	199.967
184	0.5	0.619529	0.305481	40.3375	199.582
185	0.5	0.622896	0.31337	40.3375	199.197
186	0.5	0.626263	0.323919	40.3375	198.682
187	0.5	0.62963	0.331854	40.3375	198.294
188	0.5	0.632997	0.33981	40.3375	197.906
189	0.5	0.636364	0.350451	40.3375	197.386
190	0.5	0.639731	0.358459	40.3375	196.995
191	0.5	0.643098	0.369171	40.3375	196.472
192	0.5	0.646465	0.377233	40.3375	196.078
193	0.5	0.649832	0.385321	40.3375	195.683
194	0.5	0.653199	0.396142	40.3375	195.155
195	0.5	0.656566	0.40429	40.3375	194.757
196	0.5	0.659933	0.412463	40.3375	194.358
197	0.5	0.6633	0.423405	40.3375	193.824
198	0.5	0.666667	0.431644	40.3375	193.421
199	0.5	0.670034	0.442676	40.3375	192.883
200	0.5	0.673401	0.450985	40.3375	192.477
201	0.5	0.676768	0.459327	40.3375	192.07
202	0.5	0.680135	0.470498	40.3375	191.524
203	0.5	0.683502	0.478914	40.3375	191.113
204	0.5	0.686869	0.487364	40.3375	190.7
205	0.5	0.690236	0.498687	40.3375	190.147
206	0.5	0.693603	0.507221	40.3375	189.731
207	0.5	0.69697	0.515791	40.3375	189.312
208	0.5	0.700337	0.52728	40.3375	188.751
209	0.5	0.703704	0.53594	40.3375	188.328
210	0.5	0.707071	0.547551	40.3375	187.761
211	0.5	0.710438	0.556308	40.3375	187.334
212	0.5	0.713805	0.565108	40.3375	186.904
213	0.5	0.717172	0.576911	40.3375	186.328
214	0.5	0.720539	0.585815	40.3375	185.893
215	0.5	0.723906	0.594766	40.3375	185.456
216	0.5	0.727273	0.606775	40.3375	184.869
217	0.5	0.73064	0.615839	40.3375	184.427
218	0.5	0.734007	0.628006	40.3375	183.832
219	0.5	0.737374	0.637192	40.3375	183.384
220	0.5	0.740741	0.646431	40.3375	182.933
221	0.5	0.744108	0.658838	40.3375	182.327
222	0.5	0.747475	0.668209	40.3375	181.869
223	0.5	0.750842	0.677639	40.3375	181.409
224	0.5	0.754209	0.690309	40.3375	180.79
225	0.5	0.757576	0.699883	40.3375	180.322
226	0.5	0.760943	0.709522	40.3375	179.852
227	0.5	0.76431	0.722479	40.3375	179.219
228	0.5	0.767677	0.732275	40.3375	178.741
229	0.5	0.771044	0.745449	40.3375	178.097
230	0.5	0.774411	0.755415	40.3375	177.611
231	0.5	0.777778	0.765456	40.3375	177.12
232	0.5	0.781145	0.778966	40.3375	176.46
233	0.5	0.784512	0.789191	40.3375	175.961
234	0.5	0.787879	0.7995	40.3375	175.458

235	0.5	0.791246	0.813379	40.3375	174.78
236	0.5	0.794613	0.823893	40.3375	174.267
237	0.5	0.79798	0.834498	40.3375	173.749
238	0.5	0.801347	0.848786	40.3375	173.051
239	0.5	0.804714	0.859618	40.3375	172.522
240	0.5	0.808081	0.874218	40.3375	171.809
241	0.5	0.811448	0.885291	40.3375	171.268
242	0.5	0.814815	0.896473	40.3375	170.722
243	0.51	0.818182	0.911562	40.3642	169.985
244	0.55	0.821549	0.923014	40.4712	169.426
245	0.57	0.824916	0.93459	40.5247	168.861
246	0.58	0.828283	0.950222	40.5515	168.097
247	0.71	0.83165	0.9621	40.8993	167.517
248	0.86	0.835017	0.97815	41.3005	166.734
249	0.88	0.838384	0.990356	41.354	166.138
250	0.89	0.841751	1.00271	41.3807	165.534
251	1	0.845118	1.01943	41.675	164.718
252	1	0.848485	1.03215	41.675	164.096
253	1	0.851852	1.04505	41.675	163.467
254	1	0.855219	1.06252	41.675	162.614
255	1	0.858586	1.07584	41.675	161.963
256	1	0.861953	1.08935	41.675	161.303
257	1	0.86532	1.10768	41.675	160.408
258	1.7	0.868687	1.12168	43.5475	159.725
259	1.7	0.872054	1.14069	43.5475	158.796
260	2	0.875421	1.15522	44.35	158.087
261	2	0.878788	1.17	44.35	157.365
262	2.5	0.882155	1.19012	45.6875	156.383
263	3	0.885522	1.20553	47.025	155.63
264	3	0.888889	1.22123	47.025	154.863
265	3	0.892256	1.24264	47.025	153.818
266	3	0.895623	1.25908	47.025	153.015
267	3	0.89899	1.27588	47.025	152.195
268	3	0.902357	1.29884	47.025	151.074
269	3	0.905724	1.31652	47.025	150.21
270	3	0.909091	1.34075	47.025	149.026
271	3	0.912458	1.35946	47.025	148.113
272	4	0.915825	1.37866	49.7	147.176
273	4	0.919192	1.40507	49.7	145.886
274	5	0.922559	1.42554	52.375	144.886
275	8	0.925926	1.44663	60.4	143.856
276	9	0.929293	1.47579	63.075	142.432
277	11	0.93266	1.49852	68.425	141.323
278	13	0.936027	1.53007	73.775	139.782
279	14	0.939394	1.55477	76.45	138.575
280	16	0.942761	1.58047	81.8	137.321
281	16	0.946128	1.61644	81.8	135.564
282	17	0.949495	1.64485	84.475	134.176
283	18	0.952862	1.67466	87.15	132.721
284	18	0.956229	1.71688	87.15	130.659
285	19	0.959596	1.75069	89.825	129.008
286	21	0.962963	1.78661	95.175	127.254
287	22	0.96633	1.83843	97.85	124.724
288	25	0.969697	1.88079	105.875	122.655
289	27	0.973064	1.94314	111.225	119.61
290	35	0.976431	1.99539	132.625	117.058
291	44	0.979798	2.05375	156.7	114.209
292	46	0.983165	2.14441	162.05	109.781
293	49	0.986532	2.22621	170.075	105.787
294	50	0.989899	2.32634	172.75	100.897
295	52	0.993266	2.51213	178.1	91.8241
296	130	0.996633	2.74777	386.75	80.3175

Shapiro-Francia Test of Normality

Parameter: Lead

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.21888	-2.74777	7.55021	8.84472
2	-3.21888	-2.51213	13.861	16.931
3	-3.21888	-2.32634	19.2729	24.4192
4	-3.21888	-2.22621	24.2289	31.585
5	-3.21888	-2.14441	28.8274	38.4876
6	-3.21888	-2.05375	33.0453	45.0984
7	-3.21888	-1.99539	37.0269	51.5213
8	-3.21888	-1.94314	40.8026	57.776
9	-3.21888	-1.88079	44.34	63.8301
10	-3.21888	-1.83843	47.7198	69.7477
11	-3.21888	-1.78661	50.9118	75.4986
12	-3.21888	-1.75069	53.9767	81.1338
13	-3.21888	-1.71688	56.9244	86.6603
14	-3.21888	-1.67466	59.7289	92.0508
15	-3.21888	-1.64485	62.4344	97.3454
16	-3.21888	-1.61644	65.0473	102.548
17	-3.21888	-1.58047	67.5452	107.636
18	-3.21888	-1.55477	69.9625	112.64
19	-3.21888	-1.53007	72.3036	117.566
20	-3.21888	-1.49852	74.5491	122.389
21	-3.21888	-1.47579	76.7271	127.139
22	-3.21888	-1.44663	78.8198	131.796
23	-3.21888	-1.42554	80.852	136.385
24	-3.21888	-1.40507	82.8262	140.907
25	-3.21888	-1.37866	84.7269	145.345
26	-3.21888	-1.35946	86.5751	149.721
27	-3.21888	-1.34075	88.3727	154.037
28	-3.21888	-1.31652	90.1059	158.274
29	-3.21888	-1.29884	91.7929	162.455
30	-3.21888	-1.27588	93.4208	166.562
31	-3.21888	-1.25908	95.006	170.615
32	-3.21888	-1.24264	96.5502	174.615
33	-3.21888	-1.22123	98.0416	178.546
34	-3.21888	-1.20553	99.4949	182.426
35	-3.21888	-1.19012	100.911	186.257
36	-3.21888	-1.17	102.28	190.023
37	-3.21888	-1.15522	103.615	193.742
38	-3.21888	-1.14069	104.916	197.414
39	-3.21888	-1.12168	106.174	201.024
40	-3.21888	-1.10768	107.401	204.59
41	-3.21888	-1.08935	108.588	208.096
42	-3.21888	-1.07584	109.745	211.559
43	-3.21888	-1.06252	110.874	214.979
44	-3.21888	-1.04505	111.966	218.343
45	-3.21888	-1.03215	113.032	221.665
46	-3.21888	-1.01943	114.071	224.947
47	-3.21888	-1.00271	115.076	228.174
48	-3.21888	-0.990356	116.057	231.362
49	-3.21888	-0.97815	117.014	234.511
50	-3.21888	-0.9621	117.939	237.608
51	-3.21888	-0.950222	118.842	240.666

52	-2.52573	-0.93459	119.716	243.027
53	-2.47694	-0.923014	120.568	245.313
54	-2.40795	-0.911562	121.399	247.508
55	-2.37516	-0.896473	122.202	249.637
56	-2.36446	-0.885291	122.986	251.731
57	-2.33304	-0.874218	123.75	253.77
58	-2.31264	-0.859618	124.489	255.758
59	-2.31264	-0.848786	125.21	257.721
60	-2.30259	-0.834498	125.906	259.643
61	-2.20727	-0.823893	126.585	261.461
62	-2.20727	-0.813379	127.247	263.256
63	-2.20727	-0.7995	127.886	265.021
64	-2.20727	-0.789191	128.509	266.763
65	-2.12026	-0.778966	129.115	268.415
66	-2.12026	-0.765456	129.701	270.038
67	-2.12026	-0.755415	130.272	271.639
68	-2.04022	-0.745449	130.828	273.16
69	-2.04022	-0.732275	131.364	274.654
70	-1.96611	-0.722479	131.886	276.075
71	-1.96611	-0.709522	132.389	277.47
72	-1.96611	-0.699883	132.879	278.846
73	-1.89712	-0.690309	133.356	280.155
74	-1.83258	-0.677639	133.815	281.397
75	-1.83258	-0.668209	134.261	282.622
76	-1.83258	-0.658838	134.695	283.829
77	-1.83258	-0.646431	135.113	285.014
78	-1.77196	-0.637192	135.519	286.143
79	-1.77196	-0.628006	135.914	287.256
80	-1.77196	-0.615839	136.293	288.347
81	-1.7148	-0.606775	136.661	289.387
82	-1.66073	-0.594766	137.015	290.375
83	-1.66073	-0.585815	137.358	291.348
84	-1.66073	-0.576911	137.691	292.306
85	-1.56065	-0.565108	138.01	293.188
86	-1.51413	-0.556308	138.32	294.03
87	-1.46968	-0.547551	138.619	294.835
88	-1.38629	-0.53594	138.907	295.578
89	-1.34707	-0.52728	139.185	296.288
90	-1.34707	-0.515791	139.451	296.983
91	-1.34707	-0.507221	139.708	297.666
92	-1.23787	-0.498687	139.957	298.284
93	-1.20397	-0.487364	140.194	298.871
94	-1.20397	-0.478914	140.424	299.447
95	-1.20397	-0.470498	140.645	300.014
96	-1.17118	-0.459327	140.856	300.552
97	-1.02165	-0.450985	141.059	301.012
98	-0.994252	-0.442676	141.255	301.452
99	-0.916291	-0.431644	141.442	301.848
100	-0.820981	-0.423405	141.621	302.196
101	-0.776529	-0.412463	141.791	302.516
102	-0.733969	-0.40429	141.954	302.813
103	-0.71335	-0.396142	142.111	303.095
104	-0.693147	-0.385321	142.26	303.362
105	-0.693147	-0.377233	142.402	303.624
106	-0.693147	-0.369171	142.538	303.88
107	-0.693147	-0.358459	142.667	304.128
108	-0.693147	-0.350451	142.79	304.371
109	-0.693147	-0.33981	142.905	304.607
110	-0.693147	-0.331854	143.015	304.837
111	-0.693147	-0.323919	143.12	305.061
112	-0.693147	-0.31337	143.218	305.278
113	-0.693147	-0.305481	143.312	305.49

114	-0.693147	-0.297612	143.4	305.696
115	-0.693147	-0.287147	143.483	305.895
116	-0.693147	-0.279319	143.561	306.089
117	-0.693147	-0.271509	143.635	306.277
118	-0.693147	-0.26112143.703	306.458	
119	-0.693147	-0.253347	143.767	306.634
120	-0.693147	-0.243007	143.826	306.802
121	-0.693147	-0.235269	143.881	306.965
122	-0.693147	-0.227545	143.933	307.123
123	-0.693147	-0.217267	143.98	307.274
124	-0.693147	-0.209575	144.024	307.419
125	-0.693147	-0.201894	144.065	307.559
126	-0.693147	-0.191671	144.102	307.692
127	-0.693147	-0.184017	144.136	307.819
128	-0.693147	-0.176374	144.167	307.941
129	-0.693147	-0.166199	144.194	308.057
130	-0.693147	-0.158579	144.219	308.167
131	-0.693147	-0.148434	144.241	308.27
132	-0.693147	-0.140835	144.261	308.367
133	-0.693147	-0.133244	144.279	308.459
134	-0.693147	-0.123135	144.294	308.545
135	-0.693147	-0.115562	144.308	308.625
136	-0.693147	-0.107995	144.319	308.7
137	-0.693147	-0.0979139	144.329	308.768
138	-0.693147	-0.0903606	144.337	308.83
139	-0.693147	-0.0802981	144.343	308.886
140	-0.693147	-0.0727562	144.349	308.936
141	-0.693147	-0.0652187	144.353	308.982
142	-0.693147	-0.0551734	144.356	309.02
143	-0.693147	-0.0476439	144.358	309.053
144	-0.693147	-0.0401167	144.36	309.081
145	-0.693147	-0.0300838	144.361	309.102
146	-0.693147	-0.0225612	144.361	309.117
147	-0.693147	-0.0150408	144.362	309.128
148	-0.693147	-0.00501359	144.362	309.131
149	-0.693147	0.00501359	144.362	309.128
150	-0.693147	0.0150408	144.362	309.117
151	-0.693147	0.0225612	144.362	309.102
152	-0.693147	0.0300838	144.363	309.081
153	-0.693147	0.0401167	144.365	309.053
154	-0.693147	0.0476439	144.367	309.02
155	-0.693147	0.0551734	144.37	308.982
156	-0.693147	0.0652187	144.374	308.936
157	-0.693147	0.0727562	144.38	308.886
158	-0.693147	0.0802981	144.386	308.83
159	-0.693147	0.0903606	144.394	308.768
160	-0.693147	0.0979139	144.404	308.7
161	-0.693147	0.107995	144.416	308.625
162	-0.693147	0.115562	144.429	308.545
163	-0.693147	0.123135	144.444	308.459
164	-0.693147	0.133244	144.462	308.367
165	-0.693147	0.140835	144.482	308.27
166	-0.693147	0.148434	144.504	308.167
167	-0.693147	0.158579	144.529	308.057
168	-0.693147	0.166199	144.557	307.941
169	-0.693147	0.176374	144.588	307.819
170	-0.693147	0.184017	144.621	307.692
171	-0.693147	0.191671	144.658	307.559
172	-0.693147	0.201894	144.699	307.419
173	-0.693147	0.209575	144.743	307.274
174	-0.693147	0.217267	144.79	307.123
175	-0.693147	0.227545	144.842	306.965

176	-0.693147	0.235269	144.897	306.802
177	-0.693147	0.243007	144.956	306.634
178	-0.693147	0.253347	145.02	306.458
179	-0.693147	0.26112	145.089	306.277
180	-0.693147	0.271509	145.162	306.089
181	-0.693147	0.279319	145.24	305.895
182	-0.693147	0.287147	145.323	305.696
183	-0.693147	0.297612	145.411	305.49
184	-0.693147	0.305481	145.505	305.278
185	-0.693147	0.31337	145.603	305.061
186	-0.693147	0.323919	145.708	304.837
187	-0.693147	0.331854	145.818	304.607
188	-0.693147	0.33981	145.933	304.371
189	-0.693147	0.350451	146.056	304.128
190	-0.693147	0.358459	146.185	303.88
191	-0.693147	0.369171	146.321	303.624
192	-0.693147	0.377233	146.463	303.362
193	-0.693147	0.385321	146.612	303.095
194	-0.693147	0.396142	146.769	302.821
195	-0.693147	0.40429	146.932	302.54
196	-0.693147	0.412463	147.102	302.254
197	-0.693147	0.423405	147.282	301.961
198	-0.693147	0.431644	147.468	301.662
199	-0.693147	0.442676	147.664	301.355
200	-0.693147	0.450985	147.867	301.042
201	-0.693147	0.459327	148.078	300.724
202	-0.693147	0.470498	148.3	300.398
203	-0.693147	0.478914	148.529	300.066
204	-0.693147	0.487364	148.767	299.728
205	-0.693147	0.498687	149.015	299.382
206	-0.693147	0.507221	149.272	299.031
207	-0.693147	0.515791	149.539	298.673
208	-0.693147	0.52728	149.817	298.308
209	-0.693147	0.53594	150.104	297.936
210	-0.693147	0.547551	150.404	297.557
211	-0.693147	0.556308	150.713	297.171
212	-0.693147	0.565108	151.032	296.78
213	-0.693147	0.576911	151.365	296.38
214	-0.693147	0.585815	151.708	295.974
215	-0.693147	0.594766	152.062	295.561
216	-0.693147	0.606775	152.43	295.141
217	-0.693147	0.615839	152.81	294.714
218	-0.693147	0.628006	153.204	294.279
219	-0.693147	0.637192	153.61	293.837
220	-0.693147	0.646431	154.028	293.389
221	-0.693147	0.658838	154.462	292.932
222	-0.693147	0.668209	154.908	292.469
223	-0.693147	0.677639	155.368	291.999
224	-0.693147	0.690309	155.844	291.521
225	-0.693147	0.699883	156.334	291.036
226	-0.693147	0.709522	156.837	290.544
227	-0.693147	0.722479	157.359	290.043
228	-0.693147	0.732275	157.896	289.536
229	-0.693147	0.745449	158.451	289.019
230	-0.693147	0.755415	159.022	288.495
231	-0.693147	0.765456	159.608	287.965
232	-0.673345	0.778966	160.215	287.44
233	-0.597837	0.789191	160.837	286.968
234	-0.562119	0.7995	161.477	286.519
235	-0.544727	0.813379	162.138	286.076
236	-0.342490	0.823893	162.817	285.794
237	-0.150823	0.834498	163.513	285.668

238	-0.127833		0.848786	164.234	285.559
239	-0.116534		0.859618	164.973	285.459
240	0	0.874218	165.737	285.459	
241	0	0.885291	166.521	285.459	
242	0	0.896473	167.325	285.459	
243	0	0.911562	168.155	285.459	
244	0	0.923014	169.007	285.459	
245	0	0.93459	169.881	285.459	
246	0	0.950222	170.784	285.459	
247	0	0.9621	171.709	285.459	
248	0	0.97815	172.666	285.459	
249	0	0.990356	173.647	285.459	
250	0	1.00271	174.652	285.459	
251	0	1.01943	175.692	285.459	
252	0	1.03215	176.757	285.459	
253	0	1.04505	177.849	285.459	
254	0	1.06252	178.978	285.459	
255	0	1.07584	180.136	285.459	
256	0	1.08935	181.322	285.459	
257	0	1.10768	182.549	285.459	
258	0.530628		1.12168	183.807	286.054
259	0.530628		1.14069	185.108	286.66
260	0.693147		1.15522	186.443	287.46
261	0.693147		1.17	187.812	288.271
262	0.916291		1.19012	189.228	289.362
263	1.09861	1.20553	190.682	290.686	
264	1.09861	1.22123	192.173	292.028	
265	1.09861	1.24264	193.717	293.393	
266	1.09861	1.25908	195.302	294.776	
267	1.09861	1.27588	196.93	296.178	
268	1.09861	1.29884	198.617	297.605	
269	1.09861	1.31652	200.351	299.051	
270	1.09861	1.34075	202.148	300.524	
271	1.09861	1.35946	203.996	302.018	
272	1.38629	1.37866	205.897	303.929	
273	1.38629	1.40507	207.871	305.877	
274	1.60944	1.42554	209.903	308.171	
275	2.07944	1.44663	211.996	311.179	
276	2.19722	1.47579	214.174	314.422	
277	2.3979	1.49852	216.42	318.015	
278	2.56495	1.53007	218.761	321.94	
279	2.63906	1.55477	221.178	326.043	
280	2.77259	1.58047	223.676	330.425	
281	2.77259	1.61644	226.289	334.907	
282	2.83321	1.64485	228.994	339.567	
283	2.89037	1.67466	231.799	344.407	
284	2.89037	1.71688	234.747	349.37	
285	2.94444	1.75069	237.811	354.524	
286	3.04452	1.78661	241.003	359.964	
287	3.09104	1.83843	244.383	365.646	
288	3.21888	1.88079	247.921	371.701	
289	3.29584	1.94314	251.696	378.105	
290	3.55535	1.99539	255.678	385.199	
291	3.78419	2.05375	259.896	392.971	
292	3.82864	2.14441	264.494	401.181	
293	3.89182	2.22621	269.45	409.845	
294	3.91202	2.32634	274.862	418.946	
295	3.95124	2.51213	281.173	428.872	
296	4.86753	2.74777	288.723	442.247	

Data Set Standard Deviation = 1.62805

Numerator = 195582
Denominator = 225755
W Statistic = 0.866345 = 195582 / 225755

5% Critical value of 0.976 exceeds 0.866345
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.866345
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Lead

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.930822
0.930822 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-3.218880	0.003367	-2.747778	5.4335	348.683
2	-3.218880	0.00673401	-2.512138	5.4335	337.176
3	-3.218880	0.010101	-2.326348	5.4335	328.103
4	-3.218880	0.013468	-2.226218	5.4335	323.213
5	-3.218880	0.016835	-2.144418	5.4335	319.219
6	-3.218880	0.020202	-2.053758	5.4335	314.791
7	-3.218880	0.023569	-1.995398	5.4335	311.942
8	-3.218880	0.026936	-1.943148	5.4335	309.39
9	-3.218880	0.030303	-1.880798	5.4335	306.345
10	-3.218880	0.03367	-1.838438	5.4335	304.276
11	-3.218880	0.037037	-1.786618	5.4335	301.746
12	-3.218880	0.040404	-1.750698	5.4335	299.992
13	-3.218880	0.043771	-1.716888	5.4335	298.341
14	-3.218880	0.047138	-1.674668	5.4335	296.279
15	-3.218880	0.0505051	-1.644858	5.4335	294.824
16	-3.218880	0.0538721	-1.616448	5.4335	293.436
17	-3.218880	0.0572391	-1.580478	5.4335	291.679
18	-3.218880	0.0606061	-1.554778	5.4335	290.425
19	-3.218880	0.0639731	-1.530078	5.4335	289.218
20	-3.218880	0.0673401	-1.498528	5.4335	287.677
21	-3.218880	0.0707071	-1.475798	5.4335	286.568
22	-3.218880	0.0740741	-1.446638	5.4335	285.144
23	-3.218880	0.0774411	-1.425548	5.4335	284.114
24	-3.218880	0.0808081	-1.405078	5.4335	283.114
25	-3.218880	0.0841751	-1.378668	5.4335	281.824
26	-3.218880	0.0875421	-1.359468	5.4335	280.887
27	-3.218880	0.0909091	-1.340758	5.4335	279.974
28	-3.218880	0.0942761	-1.316528	5.4335	278.79
29	-3.218880	0.0976431	-1.298848	5.4335	277.926
30	-3.218880	0.10101	-1.275888	5.4335	276.805
31	-3.218880	0.104377	-1.259088	5.4335	275.985
32	-3.218880	0.107744	-1.242648	5.4335	275.182
33	-3.218880	0.111111	-1.221238	5.4335	274.137
34	-3.218880	0.114478	-1.205538	5.4335	273.37
35	-3.218880	0.117845	-1.190128	5.4335	272.617
36	-3.218880	0.121212	-1.17	85.4335	271.635
37	-3.218880	0.124579	-1.155228	5.4335	270.913
38	-3.218880	0.127946	-1.140698	5.4335	270.204
39	-3.218880	0.131313	-1.121688	5.4335	269.275
40	-3.218880	0.13468	-1.107688	5.4335	268.592
41	-3.218880	0.138047	-1.089358	5.4335	267.697
42	-3.218880	0.141414	-1.075848	5.4335	267.037
43	-3.218880	0.144781	-1.062528	5.4335	266.386
44	-3.218880	0.148148	-1.045058	5.4335	265.533
45	-3.218880	0.151515	-1.032158	5.4335	264.904
46	-3.218880	0.154882	-1.019438	5.4335	264.282
47	-3.218880	0.158249	-1.002718	5.4335	263.466
48	-3.218880	0.161616	-0.990356	85.4335	262.862

49	-3.21888	0.164983	-0.97815	85.4335	262.266
50	-3.21888	0.16835	-0.9621	85.4335	261.483
51	-3.21888	0.171717	-0.950222	85.4335	260.903
52	-2.52573	0.175084	-0.93459	126.637	260.139
53	-2.47694	0.178451	-0.923014	129.538	259.574
54	-2.40795	0.181818	-0.911562	133.639	259.015
55	-2.37516	0.185185	-0.896473	135.588	258.278
56	-2.36446	0.188552	-0.885291	136.224	257.732
57	-2.33304	0.191919	-0.874218	138.091	257.191
58	-2.31264	0.195286	-0.859618	139.304	256.478
59	-2.31264	0.198653	-0.848786	139.304	255.949
60	-2.30259	0.20202	-0.834498	139.902	255.251
61	-2.20727	0.205387	-0.823893	145.568	254.733
62	-2.20727	0.208754	-0.813379	145.568	254.22
63	-2.20727	0.212121	-0.7995	145.568	253.542
64	-2.20727	0.215488	-0.789191	145.568	253.039
65	-2.12026	0.218855	-0.778966	150.74	252.54
66	-2.12026	0.222222	-0.765456	150.74	251.88
67	-2.12026	0.225589	-0.755415	150.74	251.389
68	-2.04022	0.228956	-0.745449	155.498	250.903
69	-2.04022	0.232323	-0.732275	155.498	250.259
70	-1.96611	0.23569	-0.722479	159.903	249.781
71	-1.96611	0.239057	-0.709522	159.903	249.148
72	-1.96611	0.242424	-0.699883	159.903	248.678
73	-1.89712	0.245791	-0.690309	164.005	248.21
74	-1.83258	0.249158	-0.677639	167.841	247.591
75	-1.83258	0.252525	-0.668209	167.841	247.131
76	-1.83258	0.255892	-0.658838	167.841	246.673
77	-1.83258	0.259259	-0.646431	167.841	246.067
78	-1.77196	0.262626	-0.637192	171.445	245.616
79	-1.77196	0.265993	-0.628006	171.445	245.168
80	-1.77196	0.26936	-0.615839	171.445	244.573
81	-1.7148	0.272727	-0.606775	174.843	244.131
82	-1.66073	0.276094	-0.594766	178.057	243.544
83	-1.66073	0.279461	-0.585815	178.057	243.107
84	-1.66073	0.282828	-0.576911	178.057	242.672
85	-1.56065	0.286195	-0.565108	184.006	242.096
86	-1.51413	0.289562	-0.556308	186.771	241.666
87	-1.46968	0.292929	-0.547551	189.414	241.239
88	-1.38629	0.296296	-0.53594	194.37	240.672
89	-1.34707	0.299663	-0.52728	196.702	240.249
90	-1.34707	0.30303	-0.515791	196.702	239.688
91	-1.34707	0.306397	-0.507221	196.702	239.269
92	-1.23787	0.309764	-0.498687	203.193	238.853
93	-1.20397	0.313131	-0.487364	205.208	238.3
94	-1.20397	0.316498	-0.478914	205.208	237.887
95	-1.20397	0.319865	-0.470498	205.208	237.476
96	-1.17118	0.323232	-0.459327	207.157	236.93
97	-1.02165	0.326599	-0.450985	216.046	236.523
98	-0.994252	0.329966	-0.442676	217.675	236.117
99	-0.916291	0.333333	-0.431644	222.309	235.579
100	-0.820981	0.3367	-0.423405	227.975	235.176
101	-0.776529	0.340067	-0.412463	230.617	234.642
102	-0.733969	0.343434	-0.40429	233.147	234.243
103	-0.71335	0.346801	-0.396142	234.373	233.845
104	-0.693147	0.350168	-0.385321	235.574	233.317
105	-0.693147	0.353535	-0.377233	235.574	232.922
106	-0.693147	0.356902	-0.369171	235.574	232.528
107	-0.693147	0.360269	-0.358459	235.574	232.005
108	-0.693147	0.363636	-0.350451	235.574	231.614
109	-0.693147	0.367003	-0.33981	235.574	231.094
110	-0.693147	0.37037	-0.331854	235.574	230.706

111	-0.693147	0.373737	-0.323919	235.574	230.318
112	-0.693147	0.377104	-0.31337	235.574	229.803
113	-0.693147	0.380471	-0.305481	235.574	229.418
114	-0.693147	0.383838	-0.297612	235.574	229.033
115	-0.693147	0.387205	-0.287147	235.574	228.522
116	-0.693147	0.390572	-0.279319	235.574	228.14
117	-0.693147	0.393939	-0.271509	235.574	227.759
118	-0.693147	0.397306	-0.26112	235.574	227.251
119	-0.693147	0.400673	-0.253347	235.574	226.872
120	-0.693147	0.40404	-0.243007	235.574	226.367
121	-0.693147	0.407407	-0.235269	235.574	225.989
122	-0.693147	0.410774	-0.227545	235.574	225.612
123	-0.693147	0.414141	-0.217267	235.574	225.11
124	-0.693147	0.417508	-0.209575	235.574	224.734
125	-0.693147	0.420875	-0.201894	235.574	224.359
126	-0.693147	0.424242	-0.191671	235.574	223.86
127	-0.693147	0.427609	-0.184017	235.574	223.486
128	-0.693147	0.430976	-0.176374	235.574	223.113
129	-0.693147	0.434343	-0.166199	235.574	222.616
130	-0.693147	0.43771	-0.158579	235.574	222.244
131	-0.693147	0.441077	-0.148434	235.574	221.749
132	-0.693147	0.444444	-0.140835	235.574	221.377
133	-0.693147	0.447811	-0.133244	235.574	221.007
134	-0.693147	0.451178	-0.123135	235.574	220.513
135	-0.693147	0.454545	-0.115562	235.574	220.143
136	-0.693147	0.457912	-0.107995	235.574	219.774
137	-0.693147	0.461279	-0.0979139	235.574	219.281
138	-0.693147	0.464646	-0.0903606	235.574	218.913
139	-0.693147	0.468013	-0.0802981	235.574	218.421
140	-0.693147	0.47138	-0.0727562	235.574	218.053
141	-0.693147	0.474747	-0.0652187	235.574	217.685
142	-0.693147	0.478114	-0.0551734	235.574	217.194
143	-0.693147	0.481481	-0.0476439	235.574	216.827
144	-0.693147	0.484848	-0.0401167	235.574	216.459
145	-0.693147	0.488215	-0.0300838	235.574	215.969
146	-0.693147	0.491582	-0.0225612	235.574	215.602
147	-0.693147	0.494949	-0.0150408	235.574	215.234
148	-0.693147	0.498316	-0.00501359	235.574	214.745
149	-0.693147	0.501684	0.00501359	235.574	214.255
150	-0.693147	0.505051	0.0150408	235.574	213.766
151	-0.693147	0.508418	0.0225612	235.574	213.398
152	-0.693147	0.511785	0.0300838	235.574	213.031
153	-0.693147	0.515152	0.0401167	235.574	212.541
154	-0.693147	0.518519	0.0476439	235.574	212.173
155	-0.693147	0.521886	0.0551734	235.574	211.806
156	-0.693147	0.525253	0.0652187	235.574	211.315
157	-0.693147	0.52862	0.0727562	235.574	210.947
158	-0.693147	0.531987	0.0802981	235.574	210.579
159	-0.693147	0.535354	0.0903606	235.574	210.087
160	-0.693147	0.538721	0.0979139	235.574	209.719
161	-0.693147	0.542088	0.107995	235.574	209.226
162	-0.693147	0.545455	0.115562	235.574	208.857
163	-0.693147	0.548822	0.123135	235.574	208.487
164	-0.693147	0.552189	0.133244	235.574	207.993
165	-0.693147	0.555556	0.140835	235.574	207.623
166	-0.693147	0.558923	0.148434	235.574	207.251
167	-0.693147	0.56229	0.158579	235.574	206.756
168	-0.693147	0.565657	0.166199	235.574	206.384
169	-0.693147	0.569024	0.176374	235.574	205.887
170	-0.693147	0.572391	0.184017	235.574	205.514
171	-0.693147	0.575758	0.191671	235.574	205.14
172	-0.693147	0.579125	0.201894	235.574	204.641

173	-0.693147	0.582492	0.209575	235.574	204.266
174	-0.693147	0.585859	0.217267	235.574	203.89
175	-0.693147	0.589226	0.227545	235.574	203.388
176	-0.693147	0.592593	0.235269	235.574	203.011
177	-0.693147	0.59596	0.243007	235.574	202.633
178	-0.693147	0.599327	0.253347	235.574	202.128
179	-0.693147	0.602694	0.26112	235.574	201.749
180	-0.693147	0.606061	0.271509	235.574	201.241
181	-0.693147	0.609428	0.279319	235.574	200.86
182	-0.693147	0.612795	0.287147	235.574	200.478
183	-0.693147	0.616162	0.297612	235.574	199.967
184	-0.693147	0.619529	0.305481	235.574	199.582
185	-0.693147	0.622896	0.31337	235.574	199.197
186	-0.693147	0.626263	0.323919	235.574	198.682
187	-0.693147	0.62963	0.331854	235.574	198.294
188	-0.693147	0.632997	0.33981	235.574	197.906
189	-0.693147	0.636364	0.350451	235.574	197.386
190	-0.693147	0.639731	0.358459	235.574	196.995
191	-0.693147	0.643098	0.369171	235.574	196.472
192	-0.693147	0.646465	0.377233	235.574	196.078
193	-0.693147	0.649832	0.385321	235.574	195.683
194	-0.693147	0.653199	0.396142	235.574	195.155
195	-0.693147	0.656566	0.40429	235.574	194.757
196	-0.693147	0.659933	0.412463	235.574	194.358
197	-0.693147	0.6633	0.423405	235.574	193.824
198	-0.693147	0.666667	0.431644	235.574	193.421
199	-0.693147	0.670034	0.442676	235.574	192.883
200	-0.693147	0.673401	0.450985	235.574	192.477
201	-0.693147	0.676768	0.459327	235.574	192.07
202	-0.693147	0.680135	0.470498	235.574	191.524
203	-0.693147	0.683502	0.478914	235.574	191.113
204	-0.693147	0.686869	0.487364	235.574	190.7
205	-0.693147	0.690236	0.498687	235.574	190.147
206	-0.693147	0.693603	0.507221	235.574	189.731
207	-0.693147	0.69697	0.515791	235.574	189.312
208	-0.693147	0.700337	0.52728	235.574	188.751
209	-0.693147	0.703704	0.53594	235.574	188.328
210	-0.693147	0.707071	0.547551	235.574	187.761
211	-0.693147	0.710438	0.556308	235.574	187.334
212	-0.693147	0.713805	0.565108	235.574	186.904
213	-0.693147	0.717172	0.576911	235.574	186.328
214	-0.693147	0.720539	0.585815	235.574	185.893
215	-0.693147	0.723906	0.594766	235.574	185.456
216	-0.693147	0.727273	0.606775	235.574	184.869
217	-0.693147	0.73064	0.615839	235.574	184.427
218	-0.693147	0.734007	0.628006	235.574	183.832
219	-0.693147	0.737374	0.637192	235.574	183.384
220	-0.693147	0.740741	0.646431	235.574	182.933
221	-0.693147	0.744108	0.658838	235.574	182.327
222	-0.693147	0.747475	0.668209	235.574	181.869
223	-0.693147	0.750842	0.677639	235.574	181.409
224	-0.693147	0.754209	0.690309	235.574	180.79
225	-0.693147	0.757576	0.699883	235.574	180.322
226	-0.693147	0.760943	0.709522	235.574	179.852
227	-0.693147	0.76431	0.722479	235.574	179.219
228	-0.693147	0.767677	0.732275	235.574	178.741
229	-0.693147	0.771044	0.745449	235.574	178.097
230	-0.693147	0.774411	0.755415	235.574	177.611
231	-0.693147	0.777778	0.765456	235.574	177.12
232	-0.673345	0.781145	0.778966	236.751	176.46
233	-0.597837	0.784512	0.789191	241.24	175.961
234	-0.562119	0.787879	0.7995	243.363	175.458

235	-0.544727	0.791246	0.813379	244.397	174.78	
236	-0.342490	0.794613	0.823893	256.419	174.267	
237	-0.150823	0.79798	0.834498	267.812	173.749	
238	-0.127833	0.801347	0.848786	269.179	173.051	
239	-0.116534	0.804714	0.859618	269.85	172.522	
240	0	0.808081	0.874218	276.778	171.809	
241	0	0.811448	0.885291	276.778	171.268	
242	0	0.814815	0.896473	276.778	170.722	
243	0	0.818182	0.911562	276.778	169.985	
244	0	0.821549	0.923014	276.778	169.426	
245	0	0.824916	0.93459	276.778	168.861	
246	0	0.828283	0.950222	276.778	168.097	
247	0	0.83165	0.9621	276.778	167.517	
248	0	0.835017	0.97815	276.778	166.734	
249	0	0.838384	0.990356	276.778	166.138	
250	0	0.841751	1.00271	276.778	165.534	
251	0	0.845118	1.01943	276.778	164.718	
252	0	0.848485	1.03215	276.778	164.096	
253	0	0.851852	1.04505	276.778	163.467	
254	0	0.855219	1.06252	276.778	162.614	
255	0	0.858586	1.07584	276.778	161.963	
256	0	0.861953	1.08935	276.778	161.303	
257	0	0.86532	1.10768	276.778	160.408	
258	0.530628	0.868687	1.12168	308.321	159.725	
259	0.530628	0.872054	1.14069	308.321	158.796	
260	0.693147	0.875421	1.15522	317.982	158.087	
261	0.693147	0.878788	1.17	317.982	157.365	
262	0.916291	0.882155	1.19012	331.246	156.383	
263	1.09861	0.885522	1.20553	342.084	155.63	
264	1.09861	0.888889	1.22123	342.084	154.863	
265	1.09861	0.892256	1.24264	342.084	153.818	
266	1.09861	0.895623	1.25908	342.084	153.015	
267	1.09861	0.89899	1.27588	342.084	152.195	
268	1.09861	0.902357	1.29884	342.084	151.074	
269	1.09861	0.905724	1.31652	342.084	150.21	
270	1.09861	0.909091	1.34075	342.084	149.026	
271	1.09861	0.912458	1.35946	342.084	148.113	
272	1.38629	0.915825	1.37866	359.185	147.176	
273	1.38629	0.919192	1.40507	359.185	145.886	
274	1.60944	0.922559	1.42554	372.45	144.886	
275	2.07944	0.925926	1.44663	400.389	143.856	
276	2.19722	0.929293	1.47579	407.391	142.432	
277	2.3979	0.93266	1.49852	419.319	141.323	
278	2.56495	0.936027	1.53007	429.25	139.782	
279	2.63906	0.939394	1.55477	433.655	138.575	
280	2.77259	0.942761	1.58047	441.593	137.321	
281	2.77259	0.946128	1.61644	441.593	135.564	
282	2.83321	0.949495	1.64485	445.197	134.176	
283	2.89037	0.952862	1.67466	448.594	132.721	
284	2.89037	0.956229	1.71688	448.594	130.659	
285	2.94444	0.959596	1.75069	451.808	129.008	
286	3.04452	0.962963	1.78661	457.758	127.254	
287	3.09104	0.96633	1.83843	460.523	124.724	
288	3.21888	0.969697	1.88079	468.122	122.655	
289	3.29584	0.973064	1.94314	472.697	119.61	
290	3.55535	0.976431	1.99539	488.123	117.058	
291	3.78419	0.979798	2.05375	501.727	114.209	
292	3.82864	0.983165	2.14441	504.369	109.781	
293	3.89182	0.986532	2.22621	508.125	105.787	
294	3.91202	0.989899	2.32634	509.326	100.897	
295	3.95124	0.993266	2.51213	511.657	91.8241	
296	4.86753	0.996633	2.74777	566.126	80.3175	

Kruskal-Wallis Non-Parametric Test

Parameter: Lead

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	2.83321	282
	3/16/1999	ND<-0.693147	95.5
	9/23/1999	2.19722	276
	3/14/2000	ND<-0.693147	95.5
	9/23/2003	ND<-0.693147	95.5
	3/10/2004	3.21888	288
	10/12/2004	ND<-0.693147	95.5
	4/1/2005	ND<-0.693147	95.5
	10/26/2005	ND<-0.693147	95.5
	6/19/2006	ND<-0.693147	95.5
	11/18/2006	ND<0 J	95.5
	6/2/2007	1.09861	263
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5
	6/11/2009	-2.04022 J	207
	11/16/2009	-1.20397 J	232
	6/30/2010	-1.66073 J	221
	11/17/2010	-1.83258 J	213
	7/6/2011	-1.34707 J	228
	11/22/2011	-2.04022 J	208
	5/16/2012	-1.20397	233
	11/16/2012	ND<-3.21888 U	95.5
	11/16/2013	-1.66073 J	222

Rank Sum = 4019
Rank Mean = 167.458

Background Rank Sum = 4019
Background Rank Mean = 167.458

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-3S	11/18/2006	ND<-0.693147	95.5
	6/2/2007	1.09861	264
	11/15/2007	0	251
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5
	6/11/2009	-0.544727	246
	11/16/2009	ND<-3.21888 U	95.5
	6/30/2010	-2.37516 J	194
	11/17/2010	0.530628	258
	7/6/2011	0.530628	259
	11/22/2011	ND<-3.21888 U	95.5
	5/16/2012	ND<-3.21888 U	95.5
	11/16/2012	ND<-3.21888 U	95.5
	11/16/2013	ND<-3.21888 U	95.5

Rank Sum = 2236
Rank Mean = 159.714

LMW-3	11/19/1996	ND<-0.693147	95.5
	3/24/1997	2.3979	277
	1/16/1998	ND<-0.693147	95.5
	3/16/1999	ND<-0.693147	95.5
	9/23/1999	2.07944	275
	3/14/2000	ND<-0.693147	95.5
	9/23/2003	ND<-0.693147	95.5
	3/10/2004	ND<-0.693147	95.5
	10/12/2004	ND<-0.693147	95.5
	4/1/2005	ND<-0.693147	95.5
	10/26/2005	ND<-0.693147	95.5
	6/19/2006	ND<-0.693147	95.5
	11/18/2006	ND<-0.693147	95.5
	6/2/2007	ND<-0.693147	95.5
	11/15/2007	0	252
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5
	6/11/2009	ND<-3.21888 U	95.5
	11/16/2009	-0.994252	237
	6/30/2010	-1.77196 J	217
	11/17/2010	-0.673345	243
	7/6/2011	-2.12026 J	204
	11/22/2011	ND<-3.21888 U	95.5
	5/16/2012	ND<-3.21888 U	95.5
	11/16/2012	ND<-3.21888 U	95.5
	11/16/2013	ND<-3.21888 U	95.5

Rank Sum = 3519.5
Rank Mean = 135.365

LMW-14R	6/2/2007	1.38629	272
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5
	6/11/2009	-1.51413 J	225
	6/30/2010	-2.30259 J	199
	11/17/2010	-2.20727 J	200
	7/6/2011	-1.20397	234
	11/22/2011	ND<-3.21888 U	95.5
	5/16/2012	-2.12026 J	205
	11/16/2012	ND<-3.21888 U	95.5
	11/16/2013	-2.40795 J	193

Rank Sum = 2005.5
Rank Mean = 167.125

LMW-16	11/18/2006	ND<0 J	95.5
	6/2/2007	1.60944	274
	11/15/2007	0.693147	260
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5
	6/11/2009	ND<-3.21888 U	95.5
	11/16/2009	-2.31264 J	197
	6/30/2010	-1.34707 J	229
	11/17/2010	ND<-3.21888 U	95.5
	7/6/2011	-1.83258 J	214
	11/22/2011	ND<-3.21888 U	95.5
	5/16/2012	ND<-3.21888 U	95.5
	11/16/2012	ND<-3.21888 U	95.5
	11/16/2013	-1.66073 J	223

Rank Sum = 2161
Rank Mean = 154.357

LMW-15R	11/18/2006	ND<0 J	95.5
	6/2/2007	ND<-0.693147	95.5
	11/15/2007	ND<-0.693147	95.5
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5
	11/20/2008	0	253
	6/11/2009	-0.116534	250
	11/16/2009	-1.56065 J	224
	11/16/2009	-1.96611 J	209
	11/16/2009	ND<-3.21888 U	95.5
	6/30/2010	-2.52573 J	191
	11/17/2010	-1.83258 J	215
	7/6/2011	-0.733969	241
	11/22/2011	ND<-3.21888 U	95.5
	5/16/2012	-1.89712 J	212
	11/16/2012	ND<-3.21888 U	95.5
	11/16/2013	ND<-3.21888 U	95.5

Rank Sum = 2845.5
Rank Mean = 149.763

LMW-10	3/14/2000	3.91202	294
	9/23/2003	ND<-0.693147	95.5
	3/10/2004	4.86753	296
	10/12/2004	ND<-0.693147	95.5
	4/1/2005	ND<-0.693147	95.5
	10/26/2005	ND<-0.693147	95.5
	6/19/2006	ND<0 J	95.5
	11/18/2006	ND<-0.693147	95.5
	6/2/2007	1.38629	273
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<0 J	95.5
	6/11/2009	ND<-3.21888 U	95.5
	11/16/2009	ND<-3.21888 U	95.5
	6/30/2010	-2.20727 J	201
	11/17/2010	ND<-3.21888 U	95.5
	7/6/2011	ND<-3.21888 U	95.5
	11/22/2011	ND<-3.21888 U	95.5
	5/16/2012	-1.38629 J	227
	11/16/2012	ND<-3.21888 U	95.5
	11/16/2013	-1.96611 J	210

Rank Sum = 2933.5
Rank Mean = 139.69

LMW-9S	11/18/2006	ND<-0.693147	95.5
	6/2/2007	0.693147	261
	11/15/2007	0	254
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<0 J	95.5
	6/11/2009	ND<-3.21888 U	95.5
	6/30/2010	-2.20727 J	202
	11/17/2010	-0.597837	244
	7/6/2011	ND<-3.21888 U	95.5
	11/22/2011	ND<-3.21888 U	95.5
	5/16/2012	ND<-3.21888 U	95.5
	11/16/2012	ND<-3.21888 U	95.5
	11/16/2013	ND<-3.21888 U	95.5

Rank Sum = 1820.5
Rank Mean = 140.038

LMW-9D	11/18/2006	1.09861	265
	6/2/2007	1.09861	266
	11/15/2007	ND<0 J	95.5
	5/20/2008	1.09861	267
	11/20/2008	ND<-0.693147	95.5
	6/11/2009	-0.34249	247
	11/16/2009	-1.17118	235
	6/30/2010	-1.46968 J	226
	11/17/2010	-0.820981	239
	7/6/2011	-0.776529	240
	11/22/2011	-2.12026 J	206
	5/16/2012	-0.71335	242
	11/16/2012	-1.23787 J	231
	11/16/2013	-1.7148 J	220

Rank Sum = 3075
Rank Mean = 219.643

LMW-8	1/16/1998	ND<-0.693147	95.5
	3/16/1999	ND<-0.693147	95.5
	9/23/1999	3.04452	286
	3/14/2000	ND<-0.693147	95.5
	9/23/2003	ND<-0.693147	95.5
	3/10/2004	ND<-0.693147	95.5
	10/12/2004	ND<-0.693147	95.5
	4/1/2005	ND<-0.693147	95.5
	10/26/2005	ND<-0.693147	95.5
	6/19/2006	ND<-0.693147	95.5
	11/18/2006	ND<-0.693147	95.5
	6/2/2007	ND<-0.693147	95.5
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5
	6/11/2009	ND<-3.21888 U	95.5
	11/16/2009	ND<-3.21888 U	95.5
	6/30/2010	ND<-3.21888 U	95.5
	11/17/2010	ND<-3.21888 U	95.5
	7/6/2011	ND<-3.21888 U	95.5
	11/22/2011	ND<-3.21888 U	95.5
	5/16/2012	ND<-3.21888 U	95.5
	11/16/2012	ND<-3.21888 U	95.5
	11/16/2013	ND<-3.21888 U	95.5

Rank Sum = 2482.5
Rank Mean = 103.438

LMW-6	1/16/1998	ND<-0.693147	95.5
	3/16/1999	ND<-0.693147	95.5
	9/23/1999	2.77259	280
	3/14/2000	ND<-0.693147	95.5
	9/23/2003	ND<-0.693147	95.5
	3/10/2004	ND<-0.693147	95.5
	10/12/2004	ND<-0.693147	95.5
	4/1/2005	ND<-0.693147	95.5
	10/26/2005	ND<-0.693147	95.5
	6/19/2006	ND<-0.693147	95.5
	11/18/2006	ND<-0.693147	95.5
	6/2/2007	ND<0 J	95.5
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5
	6/11/2009	-2.47694 J	192
	11/16/2009	ND<-3.21888 U	95.5
	6/30/2010	-1.96611 J	211

	11/17/2010	-1.77196 J	218
	7/6/2011	-2.31264 J	198
	11/22/2011	ND<-3.21888 U	95.5
	5/16/2012	ND<-3.21888 U	95.5
	11/16/2012	-2.20727 J	203
	11/16/2013	ND<-3.21888 U	95.5

Rank Sum = 3021
Rank Mean = 125.875

LMW-9	1/16/1998	ND<-0.693147	95.5
	3/16/1999	ND<-0.693147	95.5
	9/23/1999	3.29584	289
	3/14/2000	ND<-0.693147	95.5
	9/23/2003	ND<-0.693147	95.5
	3/10/2004	2.56495	278
	10/12/2004	ND<-0.693147	95.5
	4/1/2005	ND<0 J	95.5
	10/26/2005	ND<-0.693147	95.5
	6/19/2006	ND<0 J	95.5
	11/18/2006	ND<0 J	95.5
	6/2/2007	0	255
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	0	256
	11/20/2008	ND<-0.693147	95.5
	6/11/2009	-1.77196 J	219
	11/16/2009	ND<-3.21888 U	95.5
	6/30/2010	-1.83258 J	216
	11/17/2010	-0.562119	245
	7/6/2011	ND<-3.21888 U	95.5
	11/22/2011	ND<-3.21888 U	95.5
	5/16/2012	-2.33304 J	196
	11/16/2012	-2.36446 J	195
	11/16/2013	ND<-3.21888 U	95.5

Rank Sum = 3581.5
Rank Mean = 149.229

LMW-7	1/16/1998	ND<-0.693147	95.5
	3/16/1999	ND<-0.693147	95.5
	9/23/1999	2.89037	283
	3/14/2000	2.77259	281
	9/23/2003	ND<-0.693147	95.5
	3/10/2004	ND<-0.693147	95.5
	10/12/2004	ND<-0.693147	95.5
	4/1/2005	1.09861	268
	10/26/2005	1.09861	269
	6/19/2006	1.09861	270
	11/18/2006	0	257
	6/2/2007	1.09861	271
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5
	6/11/2009	-0.127833	249
	11/17/2010	-0.150823	248
	7/6/2011	0.916291	262
	11/22/2011	-1.02165	236
	5/16/2012	-0.916291	238
	11/16/2012	-1.34707 J	230

Rank Sum = 4126
Rank Mean = 196.476

LMW-11	3/14/2000	2.94444	285
	9/23/2003	ND<-0.693147	95.5

	3/10/2004	3.82864	292
	10/12/2004	ND<-0.693147	95.5
	4/1/2005	ND<-0.693147	95.5
	10/26/2005	ND<-0.693147	95.5
	6/19/2006	ND<-0.693147	95.5
	6/2/2007	ND<-0.693147	95.5
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5

Rank Sum = 1436.5
Rank Mean = 130.591

LMW-13	3/14/2000	3.78419	291
	9/23/2003	ND<-0.693147	95.5
	3/10/2004	3.55535	290
	10/12/2004	ND<-0.693147	95.5
	4/1/2005	ND<-0.693147	95.5
	10/26/2005	ND<-0.693147	95.5
	6/19/2006	ND<-0.693147	95.5
	6/2/2007	ND<-0.693147	95.5
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5

Rank Sum = 1440.5
Rank Mean = 130.955

MW-5	1/16/1998	ND<-0.693147	95.5
	3/16/1999	ND<-0.693147	95.5
	9/23/1999	2.63906	279
	3/14/2000	3.09104	287
	9/23/2003	ND<-0.693147	95.5
	3/10/2004	3.95124	295
	10/12/2004	ND<-0.693147	95.5
	4/1/2005	ND<-0.693147	95.5
	10/26/2005	ND<-0.693147	95.5
	6/19/2006	ND<-0.693147	95.5
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5

Rank Sum = 1816
Rank Mean = 139.692

LMW-12	3/14/2000	3.89182	293
	9/23/2003	ND<-0.693147	95.5
	3/10/2004	2.89037	284
	10/12/2004	ND<-0.693147	95.5
	4/1/2005	ND<-0.693147	95.5
	10/26/2005	ND<-0.693147	95.5
	6/19/2006	ND<-0.693147	95.5
	6/2/2007	ND<-0.693147	95.5
	11/15/2007	ND<-0.693147	95.5
	5/20/2008	ND<-0.693147	95.5
	11/20/2008	ND<-0.693147	95.5

Rank Sum = 1436.5
Rank Mean = 130.591

Calculation Results:

Kruskal-Wallis H Statistic = 29.1816
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 39.6743
95% Confidence comparison value is 26.2962 at 16 degrees of freedom

29.1816 > 26.2962 indicating a significant group difference at 5% significance level
39.6743 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 167.458

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-3S	159.714	-7.7440	56.9621
LMW-3	135.365	-32.0929	56.3637
LMW-14R	167.125	-0.333333	70.3983
LMW-16	154.357	-13.1012	66.9621
LMW-15R	149.763	-17.6952	61.1447
LMW-10	139.69	-27.7679	59.4974
LMW-9S	140.038	-27.4199	68.5694
LMW-9D	219.643	52.1845	66.9621
LMW-8	103.438	-64.0208	57.48
LMW-6	125.875	-41.5833	57.48
LMW-9	149.229	-18.2292	57.48
LMW-7	196.476	29.0179	59.4974
LMW-11	130.591	-36.8674	72.5002
LMW-13	130.955	-36.5038	72.5002
MW-5	139.692	-27.766	68.5694
LMW-12	130.591	-36.8674	72.5002

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 167.458

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-3S	159.714	-7.7440	79.0925
LMW-3	135.365	-32.0929	66.5742
LMW-14R	167.125	-0.333333	83.1511
LMW-16	154.357	-13.1012	79.0925
LMW-15R	149.763	-17.6952	72.2212
LMW-10	139.69	-27.7679	70.2755
LMW-9S	140.038	-27.4199	80.991
LMW-9D	219.643	52.1845	79.0925
LMW-8	103.438	-64.0208	67.8926
LMW-6	125.875	-41.5833	67.8926
LMW-9	149.229	-18.2292	67.8926
LMW-7	196.476	29.0179	70.2755
LMW-11	130.591	-36.8674	85.6338
LMW-13	130.955	-36.5038	85.6338
MW-5	139.692	-27.766	80.991
LMW-12	130.591	-36.8674	85.6338

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Lead

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 64.1892%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 24
Maximum Background Value = 3.21888
Confidence Level = 75%
False Positive Rate = 25%

Location	Date	Count	Mean	Significant
LMW-3S	11/16/2013	1	-3.21888	FALSE
LMW-3	11/16/2013	1	-3.21888	FALSE
LMW-14R	11/16/2013	1	-2.40795	FALSE
LMW-16	11/16/2013	1	-1.66073	FALSE
LMW-15R	11/16/2013	1	-3.21888	FALSE
LMW-10	11/16/2013	1	-1.96611	FALSE
LMW-9S	11/16/2013	1	-3.21888	FALSE
LMW-9D	11/16/2013	1	-1.7148	FALSE
LMW-8	11/16/2013	1	-3.21888	FALSE
LMW-6	11/16/2013	1	-3.21888	FALSE
LMW-9	11/16/2013	1	-3.21888	FALSE
LMW-7	11/16/2012	1	-1.34707	FALSE
LMW-11	11/20/2008	1	-0.693147	FALSE
LMW-13	11/20/2008	1	-0.693147	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE
LMW-12	11/20/2008	1	-0.693147	FALSE

Concentrations (ppb)

Parameter: Naphthalene

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 164
Total Non-Detect: 163
Percent Non-Detects: 99.3902%
Total Background Measurements: 10
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	10	10 (100%)	4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<1 U	ND<1 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-3	10	10 (100%)	4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<1 U	ND<1 U
LMW-6	10	10 (100%)	4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<0 J	ND<0 J
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<1 U	ND<1 U
LMW-3S	10	9 (90%)	4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<0 J	ND<0 J
			11/20/2008	ND<10	ND<10
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	1 U J	1 U J

LMW-14R	10	10 (100%)	4/1/2005	ND<10	ND<10
		10/26/2005	ND<10	ND<10	
		11/18/2006	ND<10	ND<10	
		6/2/2007	ND<10	ND<10	
		11/15/2007	ND<10	ND<10	
		5/20/2008	ND<10	ND<10	
		11/20/2008	ND<10	ND<10	
		5/16/2012	ND<0.1 U		ND<0.1 U
		11/16/2012	ND<0.1 U		ND<0.1 U
		11/16/2013	ND<1 U	ND<1 U	
LMW-16	10	10 (100%)	4/1/2005	ND<10	ND<10
		10/26/2005	ND<10	ND<10	
		11/18/2006	ND<10	ND<10	
		6/2/2007	ND<10	ND<10	
		11/15/2007	ND<10	ND<10	
		5/20/2008	ND<10	ND<10	
		11/20/2008	ND<10	ND<10	
		5/16/2012	ND<0.1 U		ND<0.1 U
		11/16/2012	ND<0.1 U		ND<0.1 U
		11/16/2013	ND<1 U	ND<1 U	
LMW-15R	17	17 (100%)	4/1/2005	ND<10	ND<10
		4/1/2005	ND<10	ND<10	
		10/26/2005	ND<10	ND<10	
		10/26/2005	ND<10	ND<10	
		11/18/2006	ND<10	ND<10	
		11/18/2006	ND<10	ND<10	
		6/2/2007	ND<10	ND<10	
		6/2/2007	ND<10	ND<10	
		11/15/2007	ND<10	ND<10	
		11/15/2007	ND<10	ND<10	
		5/20/2008	ND<10	ND<10	
		5/20/2008	ND<10	ND<10	
		11/20/2008	ND<10	ND<10	
		11/20/2008	ND<10	ND<10	
		5/16/2012	ND<0.1 U		ND<0.1 U
		11/16/2012	ND<0.1 U		ND<0.1 U
		11/16/2013	ND<1 U	ND<1 U	
LMW-8	10	10 (100%)	4/1/2005	ND<10	ND<10
		10/26/2005	ND<10	ND<10	
		11/18/2006	ND<10	ND<10	
		6/2/2007	ND<10	ND<10	
		11/15/2007	ND<10	ND<10	
		5/20/2008	ND<10	ND<10	
		11/20/2008	ND<10	ND<10	
		5/16/2012	ND<0.1 U		ND<0.1 U
		11/16/2012	ND<0.1 U		ND<0.1 U
		11/16/2013	ND<1 U	ND<1 U	
LMW-9	10	10 (100%)	4/1/2005	ND<10	ND<10
		10/26/2005	ND<10	ND<10	
		11/18/2006	ND<10	ND<10	
		6/2/2007	ND<10	ND<10	
		11/15/2007	ND<10	ND<10	
		5/20/2008	ND<10	ND<10	
		11/20/2008	ND<10	ND<10	
		5/16/2012	ND<0.1 U		ND<0.1 U
		11/16/2012	ND<0.1 U		ND<0.1 U
		11/16/2013	ND<1 U	ND<1 U	

LMW-9D	10	10 (100%)	4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			5/16/2012	ND<0.1 U		ND<0.1 U
			11/16/2012	ND<0.1 U		ND<0.1 U
			11/16/2013	ND<1 U	ND<1 U	
LMW-9S	10	10 (100%)	4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<0 J	ND<0 J	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			5/16/2012	ND<0.1 U		ND<0.1 U
			11/16/2012	ND<0.1 U		ND<0.1 U
			11/16/2013	ND<1 U	ND<1 U	
LMW-10	10	10 (100%)	4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			5/16/2012	ND<0.1 U		ND<0.1 U
			11/16/2012	ND<0.1 U		ND<0.1 U
			11/16/2013	ND<1 U	ND<1 U	
LMW-7	9	9 (100%)	4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			5/16/2012	ND<0.1 U		ND<0.1 U
			11/16/2012	ND<0.1 U		ND<0.1 U
MW-5	7	7 (100%)	4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
LMW-12	7	7 (100%)	4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
LMW-11	7	7 (100%)	4/1/2005	ND<10	ND<10	
			10/26/2005	ND<10	ND<10	

			11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
LMW-13	7	7 (100%)	4/1/2005	ND<10	ND<10
			10/26/2005	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			6/2/2007	ND<10	ND<10
			11/15/2007	ND<10	ND<10
			5/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Naphthalene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 164

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.512136.31081	0	
2	0	-2.2571311.4054	0	
3	0	-2.0969315.8026	0	
4	0.05	-1.9773719.7126	-0.0988684	
5	0.05	-1.8807923.2499	-0.192908	
6	0.05	-1.7991226.4867	-0.282864	
7	0.05	-1.7279329.4725	-0.36926	
8	0.05	-1.6645632.2433	-0.452488	
9	0.05	-1.6072534.8265	-0.532851	
10	0.05	-1.5547737.2438	-0.610589	
11	0.05	-1.5062639.5126	-0.685902	
12	0.05	-1.4610641.6473	-0.758955	
13	0.05	-1.4186543.6599	-0.829888	
14	0.05	-1.3786645.5606	-0.898821	
15	0.05	-1.3407547.3582	-0.965859	
16	0.05	-1.3046949.0604	-1.03109	
17	0.05	-1.2646450.6597	-1.09432	
18	0.05	-1.2318752.1772	-1.15592	
19	0.05	-1.2003653.6181	-1.21594	
20	0.05	-1.17 54.987	-1.27444	
21	0.05	-1.1406956.2882	-1.33147	
22	0.05	-1.1123257.5254	-1.38709	
23	0.05	-1.0848258.7023	-1.44133	
24	0.05	-1.0581259.8219	-1.49423	
25	0.05	-1.0321560.8872	-1.54584	
26	0.05	-1.0068761.901	-1.59618	
27	0.05	-0.982202	62.8657	-1.6453
28	0.05	-0.958125	63.7837	-1.6932
29	0.05	-0.9345964.6572	-1.73993	
30	0.5	-0.911562	65.4881	-2.19571
31	0.5	-0.889006	66.2785	-2.64021
32	0.5	-0.866894	67.03	-3.07366
33	0.5	-0.841621	67.7383	-3.49447
34	0.5	-0.820379	68.4113	-3.90466
35	0.5	-0.7995 69.0505	-4.30441	
36	0.5	-0.778966	69.6573	-4.6939
37	0.5	-0.758753	70.233	-5.07327
38	0.5	-0.738846	70.7789	-5.44269
39	0.5	-0.719228	71.2962	-5.80231
40	0.5	-0.699883	71.786	-6.15225
41	1	-0.680797	72.2495	-6.83305
42	5	-0.661955	72.6877	-10.1428
43	5	-0.643345	73.1016	-13.3595
44	5	-0.624956	73.4922	-16.4843
45	5	-0.606775	73.8604	-19.5182
46	5	-0.588793	74.207	-22.4622
47	5	-0.570999	74.5331	-25.3172
48	5	-0.553384	74.8393	-28.0841
49	5	-0.5359475.1265	-30.7638	
50	5	-0.515791	75.3926	-33.3427
51	5	-0.498687	75.6413	-35.8362

52	5	-0.481728	75.8733	-38.2448
53	5	-0.464904	76.0895	-40.5693
54	5	-0.448213	76.2904	-42.8104
55	5	-0.431644	76.4767	-44.9686
56	5	-0.415193	76.6491	-47.0446
57	5	-0.398855	76.8081	-49.0389
58	5	-0.382622	76.9545	-50.952
59	5	-0.3664977.0889	-52.7844	
60	5	-0.350451	77.2117	-54.5367
61	5	-0.334503	77.3236	-56.2092
62	5	-0.318639	77.4251	-57.8024
63	5	-0.302855	77.5168	-59.3167
64	5	-0.287147	77.5993	-60.7524
65	5	-0.271509	77.673	-62.1099
66	5	-0.253347	77.7372	-63.3767
67	5	-0.237847	77.7937	-64.5659
68	5	-0.222403	77.8432	-65.6779
69	5	-0.207012	77.8861	-66.713
70	5	-0.191671	77.9228	-67.6713
71	5	-0.176374	77.9539	-68.5532
72	5	-0.161119	77.9799	-69.3588
73	5	-0.1459 78.0012	-70.0883	
74	5	-0.130716	78.0182	-70.7419
75	5	-0.115562	78.0316	-71.3197
76	5	-0.100433	78.0417	-71.8219
77	5	-0.0853288	78.049	-72.2485
78	5	-0.0702426	78.0539	-72.5997
79	5	-0.0551734	78.0569	-72.8756
80	5	-0.0401167	78.0586	-73.0762
81	5	-0.0250691	78.0592	-73.2015
82	5	-0.0100272	78.0593	-73.2517
83	5	0.0100272	78.0594	-73.2015
84	5	0.0250691	78.06	-73.0762
85	5	0.0401167	78.0616	-72.8756
86	5	0.0551734	78.0647	-72.5997
87	5	0.0702426	78.0696	-72.2485
88	5	0.0853288	78.0769	-71.8219
89	5	0.100433	78.087	-71.3197
90	5	0.115562	78.1003	-70.7419
91	5	0.130716	78.1174	-70.0883
92	5	0.1459 78.1387	-69.3588	
93	5	0.161119	78.1647	-68.5532
94	5	0.176374	78.1958	-67.6713
95	5	0.191671	78.2325	-66.713
96	5	0.207012	78.2754	-65.6779
97	5	0.222403	78.3248	-64.5659
98	5	0.237847	78.3814	-63.3767
99	5	0.253347	78.4456	-62.1099
100	5	0.271509	78.5193	-60.7524
101	5	0.287147	78.6017	-59.3167
102	5	0.302855	78.6935	-57.8024
103	5	0.318639	78.795	-56.2092
104	5	0.334503	78.9069	-54.5367
105	5	0.350451	79.0297	-52.7844
106	5	0.36649 79.164	-50.952	
107	5	0.382622	79.3104	-49.0389
108	5	0.398855	79.4695	-47.0446
109	5	0.415193	79.6419	-44.9686
110	5	0.431644	79.8282	-42.8104
111	5	0.448213	80.0291	-40.5693
112	5	0.464904	80.2452	-38.2448
113	5	0.481728	80.4773	-35.8362

114	5	0.498687		80.726	-33.3427
115	5	0.515791		80.992	-30.7638
116	5	0.53594	81.2793	-28.0841	
117	5	0.553384		81.5855	-25.3172
118	5	0.570999		81.9115	-22.4622
119	5	0.588793		82.2582	-19.5182
120	5	0.606775		82.6264	-16.4843
121	5	0.624956		83.017	-13.3595
122	5	0.643345		83.4308	-10.1428
123	5	0.661955		83.869	-6.83305
124	5	0.680797		84.3325	-3.42906
125	5	0.699883		84.8224	0.0703531
126	5	0.719228		85.3396	3.6665
127	5	0.738846		85.8855	7.36073
128	5	0.758753		86.4612	11.1545
129	5	0.778966		87.068	15.0493
130	5	0.7995	87.7072	19.0468	
131	5	0.820379		88.3803	23.1487
132	5	0.841621		89.0886	27.3568
133	5	0.866894		89.8401	31.6913
134	5	0.889006		90.6304	36.1363
135	5	0.911562		91.4614	40.6941
136	5	0.93459	92.3348	45.3671	
137	5	0.958125		93.2528	50.1577
138	5	0.982202		94.2175	55.0687
139	5	1.00687	95.2313	60.103	
140	5	1.03215	96.2967	65.2638	
141	5	1.05812	97.4163	70.5544	
142	5	1.08482	98.5931	75.9785	
143	5	1.11232	99.8304	81.5401	
144	5	1.14069	101.132	87.2436	
145	5	1.17	102.5	93.0936	
146	5	1.20036	103.941	99.0954	
147	5	1.23187	105.459	105.255	
148	5	1.26464	107.058	111.578	
149	5	1.30469	108.76	118.101	
150	5	1.34075	110.558	124.805	
151	5	1.37866	112.459	131.698	
152	5	1.41865	114.471	138.792	
153	5	1.46106	116.606	146.097	
154	5	1.50626	118.875	153.628	
155	5	1.55477	121.292	161.402	
156	5	1.60725	123.875	169.438	
157	5	1.66456	126.646	177.761	
158	5	1.72793	129.632	186.401	
159	5	1.79912	132.869	195.396	
160	5	1.88079	136.406	204.8	
161	5	1.97737	140.316	214.687	
162	5	2.09693	144.713	225.172	
163	5	2.25713	149.808	236.458	
164	5	2.51213	156.119	249.018	

Data Set Standard Deviation = 2.09248
Numerator = 62010.1
Denominator = 111421
W Statistic = 0.556539 = 62010.1 / 111421

5% Critical value of 0.976 exceeds 0.556539
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.556539

Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Naphthalene

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.744107
0.744107 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	0	0.00606061	-2.5121339	337.176	
2	0	0.0121212	-2.2571339	324.723	
3	0	0.0181818	-2.0969339	316.9	
4	0.05	0.0242424	-1.9773	44.35	311.062
5	0.05	0.030303	-1.8807	44.35	306.345
6	0.05	0.0363636	-1.7991	44.35	302.357
7	0.05	0.0424242	-1.7279	44.35	298.881
8	0.05	0.0484848	-1.6645	44.35	295.786
9	0.05	0.0545455	-1.6072	44.35	292.987
10	0.05	0.0606061	-1.5547	44.35	290.425
11	0.05	0.0666667	-1.5062	44.35	288.056
12	0.05	0.0727273	-1.4610	44.35	285.848
13	0.05	0.0787879	-1.4186	44.35	283.778
14	0.05	0.0848485	-1.3786	44.35	281.824
15	0.05	0.0909091	-1.3407	44.35	279.974
16	0.05	0.0969697	-1.3046	44.35	278.212
17	0.05	0.10303	-1.2646	44.35	276.257
18	0.05	0.109091	-1.2318	44.35	274.656
19	0.05	0.115152	-1.2003	44.35	273.118
20	0.05	0.121212	-1.17	44.35	271.635
21	0.05	0.127273	-1.1406	44.35	270.204
22	0.05	0.133333	-1.1123	44.35	268.818
23	0.05	0.139394	-1.0848	44.35	267.476
24	0.05	0.145455	-1.0581	44.35	266.172
25	0.05	0.151515	-1.0321	44.35	264.904
26	0.05	0.157576	-1.0068	44.35	263.669
27	0.05	0.163636	-0.982202	44.35	262.464
28	0.05	0.169697	-0.958125	44.35	261.288
29	0.05	0.175758	-0.9345	44.35	260.139
30	0.5	0.181818	-0.911562	92.5	259.015
31	0.5	0.187879	-0.889006	92.5	257.913
32	0.5	0.193939	-0.866894	92.5	256.833
33	0.5	0.2	-0.841621	92.5	255.599
34	0.5	0.206061	-0.820379	92.5	254.562
35	0.5	0.212121	-0.7995	92.5	253.542
36	0.5	0.218182	-0.778966	92.5	252.54
37	0.5	0.224242	-0.758753	92.5	251.552
38	0.5	0.230303	-0.738846	92.5	250.58
39	0.5	0.236364	-0.719228	92.5	249.622
40	0.5	0.242424	-0.699883	92.5	248.678
41	1	0.248485	-0.680797	146	247.746
42	5	0.254545	-0.661955	574	246.825
43	5	0.260606	-0.643345	574	245.917
44	5	0.266667	-0.624956	574	245.019
45	5	0.272727	-0.606775	574	244.131
46	5	0.278788	-0.588793	574	243.253
47	5	0.284848	-0.570999	574	242.384
48	5	0.290909	-0.553384	574	241.524

49	5	0.29697	-0.53594574	240.672	
50	5	0.30303	-0.515791	574	239.688
51	5	0.309091	-0.498687	574	238.853
52	5	0.315152	-0.481728	574	238.024
53	5	0.321212	-0.464904	574	237.203
54	5	0.327273	-0.448213	574	236.388
55	5	0.333333	-0.431644	574	235.579
56	5	0.339394	-0.415193	574	234.775
57	5	0.345455	-0.398855	574	233.977
58	5	0.351515	-0.382622	574	233.185
59	5	0.357576	-0.36649574	232.397	
60	5	0.363636	-0.350451	574	231.614
61	5	0.369697	-0.334503	574	230.835
62	5	0.375758	-0.318639	574	230.06
63	5	0.381818	-0.302855	574	229.289
64	5	0.387879	-0.287147	574	228.522
65	5	0.393939	-0.271509	574	227.759
66	5	0.4	-0.253347	574	226.872
67	5	0.406061	-0.237847	574	226.115
68	5	0.412121	-0.222403	574	225.361
69	5	0.418182	-0.207012	574	224.609
70	5	0.424242	-0.191671	574	223.86
71	5	0.430303	-0.176374	574	223.113
72	5	0.436364	-0.161119	574	222.368
73	5	0.442424	-0.1459	574	221.625
74	5	0.448485	-0.130716	574	220.883
75	5	0.454545	-0.115562	574	220.143
76	5	0.460606	-0.100433	574	219.404
77	5	0.466667	-0.0853288	574	218.667
78	5	0.472727	-0.0702426	574	217.93
79	5	0.478788	-0.0551734	574	217.194
80	5	0.484848	-0.0401167	574	216.459
81	5	0.490909	-0.0250691	574	215.724
82	5	0.49697	-0.0100272	574	214.99
83	5	0.50303	0.0100272	574	214.01
84	5	0.509091	0.0250691	574	213.276
85	5	0.515152	0.0401167	574	212.541
86	5	0.521212	0.0551734	574	211.806
87	5	0.527273	0.0702426	574	211.07
88	5	0.533333	0.0853288	574	210.333
89	5	0.539394	0.100433	574	209.596
90	5	0.545455	0.115562	574	208.857
91	5	0.551515	0.130716	574	208.117
92	5	0.557576	0.1459	574	207.375
93	5	0.563636	0.161119	574	206.632
94	5	0.569697	0.176374	574	205.887
95	5	0.575758	0.191671	574	205.14
96	5	0.581818	0.207012	574	204.391
97	5	0.587879	0.222403	574	203.639
98	5	0.593939	0.237847	574	202.885
99	5	0.6	0.253347	574	202.128
100	5	0.606061	0.271509	574	201.241
101	5	0.612121	0.287147	574	200.478
102	5	0.618182	0.302855	574	199.711
103	5	0.624242	0.318639	574	198.94
104	5	0.630303	0.334503	574	198.165
105	5	0.636364	0.350451	574	197.386
106	5	0.642424	0.36649	574	196.603
107	5	0.648485	0.382622	574	195.815
108	5	0.654545	0.398855	574	195.023
109	5	0.660606	0.415193	574	194.225
110	5	0.666667	0.431644	574	193.421

111	5	0.672727	0.448213	574	192.612
112	5	0.678788	0.464904	574	191.797
113	5	0.684848	0.481728	574	190.976
114	5	0.690909	0.498687	574	190.147
115	5	0.69697	0.515791	574	189.312
116	5	0.70303	0.53594	574	188.328
117	5	0.709091	0.553384	574	187.476
118	5	0.715152	0.570999	574	186.616
119	5	0.721212	0.588793	574	185.747
120	5	0.727273	0.606775	574	184.869
121	5	0.733333	0.624956	574	183.981
122	5	0.739394	0.643345	574	183.083
123	5	0.745455	0.661955	574	182.175
124	5	0.751515	0.680797	574	181.254
125	5	0.757576	0.699883	574	180.322
126	5	0.763636	0.719228	574	179.378
127	5	0.769697	0.738846	574	178.42
128	5	0.775758	0.758753	574	177.448
129	5	0.781818	0.778966	574	176.46
130	5	0.787879	0.7995	574	175.458
131	5	0.793939	0.820379	574	174.438
132	5	0.8	0.841621	574	173.401
133	5	0.806061	0.866894	574	172.167
134	5	0.812121	0.889006	574	171.087
135	5	0.818182	0.911562	574	169.985
136	5	0.824242	0.93459	574	168.861
137	5	0.830303	0.958125	574	167.712
138	5	0.836364	0.982202	574	166.536
139	5	0.842424	1.00687	574	165.331
140	5	0.848485	1.03215	574	164.096
141	5	0.854545	1.05812	574	162.828
142	5	0.860606	1.08482	574	161.524
143	5	0.866667	1.11232	574	160.182
144	5	0.872727	1.14069	574	158.796
145	5	0.878788	1.17	574	157.365
146	5	0.884848	1.20036	574	155.882
147	5	0.890909	1.23187	574	154.344
148	5	0.89697	1.26464	574	152.743
149	5	0.90303	1.30469	574	150.788
150	5	0.909091	1.34075	574	149.026
151	5	0.915152	1.37866	574	147.176
152	5	0.921212	1.41865	574	145.222
153	5	0.927273	1.46106	574	143.152
154	5	0.933333	1.50626	574	140.944
155	5	0.939394	1.55477	574	138.575
156	5	0.945455	1.60725	574	136.013
157	5	0.951515	1.66456	574	133.214
158	5	0.957576	1.72793	574	130.119
159	5	0.963636	1.79912	574	126.643
160	5	0.969697	1.88079	574	122.655
161	5	0.975758	1.97737	574	117.938
162	5	0.981818	2.09693	574	112.1
163	5	0.987879	2.25713	574	104.277
164	5	0.993939	2.51213	574	91.8241

Shapiro-Francia Test of Normality

Parameter: Naphthalene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 164

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.99573	-2.51213	6.31081	7.52568
2	-2.99573	-2.25713	11.4054	14.2874
3	-2.99573	-2.09693	15.8026	20.5693
4	-2.99573	-1.97737	19.7126	26.4929
5	-2.99573	-1.88079	23.2499	32.1273
6	-2.99573	-1.79912	26.4867	37.517
7	-2.99573	-1.72793	29.4725	42.6934
8	-2.99573	-1.66456	32.2433	47.68
9	-2.99573	-1.60725	34.8265	52.4949
10	-2.99573	-1.55477	37.2438	57.1525
11	-2.99573	-1.50626	39.5126	61.6649
12	-2.99573	-1.46106	41.6473	66.0418
13	-2.99573	-1.41865	43.6599	70.2917
14	-2.99573	-1.37866	45.5606	74.4218
15	-2.99573	-1.34075	47.3582	78.4384
16	-2.99573	-1.30469	49.0604	82.3468
17	-2.99573	-1.26464	50.6597	86.1354
18	-2.99573	-1.23187	52.1772	89.8257
19	-2.99573	-1.20036	53.6181	93.4217
20	-2.99573	-1.17	54.987	96.9267
21	-2.99573	-1.14069	56.2882	100.344
22	-2.99573	-1.11232	57.5254	103.676
23	-2.99573	-1.08482	58.7023	106.926
24	-2.99573	-1.05812	59.8219	110.096
25	-2.99573	-1.03215	60.8872	113.188
26	-2.99573	-1.00687	61.901	116.204
27	-0.693147	-0.982202	62.8657	116.885
28	-0.693147	-0.958125	63.7837	117.549
29	-0.693147	-0.934596	4.6572	118.197
30	-0.693147	-0.911562	65.4881	118.829
31	-0.693147	-0.889006	66.2785	119.445
32	-0.693147	-0.866894	67.03	120.046
33	-0.693147	-0.841621	67.7383	120.629
34	-0.693147	-0.820379	68.4113	121.198
35	-0.693147	-0.7995	69.0505	121.752
36	-0.693147	-0.778966	69.6573	122.292
37	-0.693147	-0.758753	70.233	122.818
38	0	-0.738846	70.7789	122.818
39	0	-0.719228	71.2962	122.818
40	0	-0.699883	71.786	122.818
41	0	-0.680797	72.2495	122.818
42	1.60944	-0.661955	72.6877	121.752
43	1.60944	-0.643345	73.1016	120.717
44	1.60944	-0.624956	73.4922	119.711
45	1.60944	-0.606775	73.8604	118.735
46	1.60944	-0.588793	74.207	117.787
47	1.60944	-0.570999	74.5331	116.868
48	1.60944	-0.553384	74.8393	115.977
49	1.60944	-0.535947	5.1265	115.115
50	1.60944	-0.515791	75.3926	114.285
51	1.60944	-0.498687	75.6413	113.482

52	1.60944	-0.481728	75.8733	112.707
53	1.60944	-0.464904	76.0895	111.959
54	1.60944	-0.448213	76.2904	111.237
55	1.60944	-0.431644	76.4767	110.542
56	1.60944	-0.415193	76.6491	109.874
57	1.60944	-0.398855	76.8081	109.232
58	1.60944	-0.382622	76.9545	108.617
59	1.60944	-0.3664977.0889	108.027	
60	1.60944	-0.350451	77.2117	107.463
61	1.60944	-0.334503	77.3236	106.924
62	1.60944	-0.318639	77.4251	106.411
63	1.60944	-0.302855	77.5168	105.924
64	1.60944	-0.287147	77.5993	105.462
65	1.60944	-0.271509	77.673	105.025
66	1.60944	-0.253347	77.7372	104.617
67	1.60944	-0.237847	77.7937	104.234
68	1.60944	-0.222403	77.8432	103.876
69	1.60944	-0.207012	77.8861	103.543
70	1.60944	-0.191671	77.9228	103.235
71	1.60944	-0.176374	77.9539	102.951
72	1.60944	-0.161119	77.9799	102.692
73	1.60944	-0.1459 78.0012	102.457	
74	1.60944	-0.130716	78.0182	102.246
75	1.60944	-0.115562	78.0316	102.06
76	1.60944	-0.100433	78.0417	101.899
77	1.60944	-0.0853288	78.049	101.761
78	1.60944	-0.0702426	78.0539	101.648
79	1.60944	-0.0551734	78.0569	101.56
80	1.60944	-0.0401167	78.0586	101.495
81	1.60944	-0.0250691	78.0592	101.455
82	1.60944	-0.0100272	78.0593	101.439
83	1.60944	0.0100272	78.0594	101.455
84	1.60944	0.0250691	78.06	101.495
85	1.60944	0.0401167	78.0616	101.56
86	1.60944	0.0551734	78.0647	101.648
87	1.60944	0.0702426	78.0696	101.761
88	1.60944	0.0853288	78.0769	101.899
89	1.60944	0.100433	78.087	102.06
90	1.60944	0.115562	78.1003	102.246
91	1.60944	0.130716	78.1174	102.457
92	1.60944	0.1459 78.1387	102.692	
93	1.60944	0.161119	78.1647	102.951
94	1.60944	0.176374	78.1958	103.235
95	1.60944	0.191671	78.2325	103.543
96	1.60944	0.207012	78.2754	103.876
97	1.60944	0.222403	78.3248	104.234
98	1.60944	0.237847	78.3814	104.617
99	1.60944	0.253347	78.4456	105.025
100	1.60944	0.271509	78.5193	105.462
101	1.60944	0.287147	78.6017	105.924
102	1.60944	0.302855	78.6935	106.411
103	1.60944	0.318639	78.795	106.924
104	1.60944	0.334503	78.9069	107.463
105	1.60944	0.350451	79.0297	108.027
106	1.60944	0.36649 79.164	108.617	
107	1.60944	0.382622	79.3104	109.232
108	1.60944	0.398855	79.4695	109.874
109	1.60944	0.415193	79.6419	110.542
110	1.60944	0.431644	79.8282	111.237
111	1.60944	0.448213	80.0291	111.959
112	1.60944	0.464904	80.2452	112.707
113	1.60944	0.481728	80.4773	113.482

114	1.60944	0.498687		80.726	114.285
115	1.60944	0.515791		80.992	115.115
116	1.60944	0.53594	81.2793	115.977	
117	1.60944	0.553384		81.5855	116.868
118	1.60944	0.570999		81.9115	117.787
119	1.60944	0.588793		82.2582	118.735
120	1.60944	0.606775		82.6264	119.711
121	1.60944	0.624956		83.017	120.717
122	1.60944	0.643345		83.4308	121.752
123	1.60944	0.661955		83.869	122.818
124	1.60944	0.680797		84.3325	123.914
125	1.60944	0.699883		84.8224	125.04
126	1.60944	0.719228		85.3396	126.198
127	1.60944	0.738846		85.8855	127.387
128	1.60944	0.758753		86.4612	128.608
129	1.60944	0.778966		87.068	129.862
130	1.60944	0.7995	87.7072	131.148	
131	1.60944	0.820379		88.3803	132.469
132	1.60944	0.841621		89.0886	133.823
133	1.60944	0.866894		89.8401	135.218
134	1.60944	0.889006		90.6304	136.649
135	1.60944	0.911562		91.4614	138.116
136	1.60944	0.93459	92.3348	139.62	
137	1.60944	0.958125		93.2528	141.162
138	1.60944	0.982202		94.2175	142.743
139	1.60944	1.00687	95.2313	144.364	
140	1.60944	1.03215	96.2967	146.025	
141	1.60944	1.05812	97.4163	147.728	
142	1.60944	1.08482	98.5931	149.474	
143	1.60944	1.11232	99.8304	151.264	
144	1.60944	1.14069	101.132	153.1	
145	1.60944	1.17	102.5	154.983	
146	1.60944	1.20036	103.941	156.915	
147	1.60944	1.23187	105.459	158.898	
148	1.60944	1.26464	107.058	160.933	
149	1.60944	1.30469	108.76	163.033	
150	1.60944	1.34075	110.558	165.191	
151	1.60944	1.37866	112.459	167.409	
152	1.60944	1.41865	114.471	169.693	
153	1.60944	1.46106	116.606	172.044	
154	1.60944	1.50626	118.875	174.468	
155	1.60944	1.55477	121.292	176.971	
156	1.60944	1.60725	123.875	179.557	
157	1.60944	1.66456	126.646	182.236	
158	1.60944	1.72793	129.632	185.017	
159	1.60944	1.79912	132.869	187.913	
160	1.60944	1.88079	136.406	190.94	
161	1.60944	1.97737	140.316	194.122	
162	1.60944	2.09693	144.713	197.497	
163	1.60944	2.25713	149.808	201.13	
164	1.60944	2.51213	156.119	205.173	

Data Set Standard Deviation = 1.71626
Numerator = 42096
Denominator = 74956.5
W Statistic = 0.561606 = 42096 / 74956.5

5% Critical value of 0.976 exceeds 0.561606
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.561606

Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Naphthalene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.748153
0.748153 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.995730	0.00606061	-2.512133	9.4566	337.176
2	-2.995730	0.0121212	-2.257133	9.4566	324.723
3	-2.995730	0.0181818	-2.096933	9.4566	316.9
4	-2.995730	0.0242424	-1.977373	9.4566	311.062
5	-2.995730	0.030303	-1.880793	9.4566	306.345
6	-2.995730	0.0363636	-1.799123	9.4566	302.357
7	-2.995730	0.0424242	-1.727933	9.4566	298.881
8	-2.995730	0.0484848	-1.664563	9.4566	295.786
9	-2.995730	0.0545455	-1.607253	9.4566	292.987
10	-2.995730	0.0606061	-1.554773	9.4566	290.425
11	-2.995730	0.0666667	-1.506263	9.4566	288.056
12	-2.995730	0.0727273	-1.461063	9.4566	285.848
13	-2.995730	0.0787879	-1.418653	9.4566	283.778
14	-2.995730	0.0848485	-1.378663	9.4566	281.824
15	-2.995730	0.0909091	-1.340753	9.4566	279.974
16	-2.995730	0.0969697	-1.304693	9.4566	278.212
17	-2.995730	0.10303	-1.264643	9.4566	276.257
18	-2.995730	0.109091	-1.231873	9.4566	274.656
19	-2.995730	0.115152	-1.200363	9.4566	273.118
20	-2.995730	0.121212	-1.17	39.4566	271.635
21	-2.995730	0.127273	-1.140693	9.4566	270.204
22	-2.995730	0.133333	-1.112323	9.4566	268.818
23	-2.995730	0.139394	-1.084823	9.4566	267.476
24	-2.995730	0.145455	-1.058123	9.4566	266.172
25	-2.995730	0.151515	-1.032153	9.4566	264.904
26	-2.995730	0.157576	-1.006873	9.4566	263.669
27	-0.693147	0.163636	-0.982202	285.833	262.464
28	-0.693147	0.169697	-0.958125	285.833	261.288
29	-0.693147	0.175758	-0.93459	285.833	260.139
30	-0.693147	0.181818	-0.911562	285.833	259.015
31	-0.693147	0.187879	-0.889006	285.833	257.913
32	-0.693147	0.193939	-0.866894	285.833	256.833
33	-0.693147	0.2	-0.841621	285.833	255.599
34	-0.693147	0.206061	-0.820379	285.833	254.562
35	-0.693147	0.212121	-0.7995	285.833	253.542
36	-0.693147	0.218182	-0.778966	285.833	252.54
37	-0.693147	0.224242	-0.758753	285.833	251.552
38	0	0.230303	-0.738846	360	250.58
39	0	0.236364	-0.719228	360	249.622
40	0	0.242424	-0.699883	360	248.678
41	0	0.248485	-0.680797	360	247.746
42	1.60944	0.254545	-0.661955	532.21	246.825
43	1.60944	0.260606	-0.643345	532.21	245.917
44	1.60944	0.266667	-0.624956	532.21	245.019
45	1.60944	0.272727	-0.606775	532.21	244.131
46	1.60944	0.278788	-0.588793	532.21	243.253
47	1.60944	0.284848	-0.570999	532.21	242.384
48	1.60944	0.290909	-0.553384	532.21	241.524

49	1.60944	0.29697	-0.53594	532.21	240.672
50	1.60944	0.30303	-0.515791	532.21	239.688
51	1.60944	0.309091	-0.498687	532.21	238.853
52	1.60944	0.315152	-0.481728	532.21	238.024
53	1.60944	0.321212	-0.464904	532.21	237.203
54	1.60944	0.327273	-0.448213	532.21	236.388
55	1.60944	0.333333	-0.431644	532.21	235.579
56	1.60944	0.339394	-0.415193	532.21	234.775
57	1.60944	0.345455	-0.398855	532.21	233.977
58	1.60944	0.351515	-0.382622	532.21	233.185
59	1.60944	0.357576	-0.36649	532.21	232.397
60	1.60944	0.363636	-0.350451	532.21	231.614
61	1.60944	0.369697	-0.334503	532.21	230.835
62	1.60944	0.375758	-0.318639	532.21	230.06
63	1.60944	0.381818	-0.302855	532.21	229.289
64	1.60944	0.387879	-0.287147	532.21	228.522
65	1.60944	0.393939	-0.271509	532.21	227.759
66	1.60944	0.4	-0.253347	532.21	226.872
67	1.60944	0.406061	-0.237847	532.21	226.115
68	1.60944	0.412121	-0.222403	532.21	225.361
69	1.60944	0.418182	-0.207012	532.21	224.609
70	1.60944	0.424242	-0.191671	532.21	223.86
71	1.60944	0.430303	-0.176374	532.21	223.113
72	1.60944	0.436364	-0.161119	532.21	222.368
73	1.60944	0.442424	-0.1459	532.21	221.625
74	1.60944	0.448485	-0.130716	532.21	220.883
75	1.60944	0.454545	-0.115562	532.21	220.143
76	1.60944	0.460606	-0.100433	532.21	219.404
77	1.60944	0.466667	-0.0853288	532.21	218.667
78	1.60944	0.472727	-0.0702426	532.21	217.93
79	1.60944	0.478788	-0.0551734	532.21	217.194
80	1.60944	0.484848	-0.0401167	532.21	216.459
81	1.60944	0.490909	-0.0250691	532.21	215.724
82	1.60944	0.49697	-0.0100272	532.21	214.99
83	1.60944	0.50303	0.0100272	532.21	214.01
84	1.60944	0.509091	0.0250691	532.21	213.276
85	1.60944	0.515152	0.0401167	532.21	212.541
86	1.60944	0.521212	0.0551734	532.21	211.806
87	1.60944	0.527273	0.0702426	532.21	211.07
88	1.60944	0.533333	0.0853288	532.21	210.333
89	1.60944	0.539394	0.100433	532.21	209.596
90	1.60944	0.545455	0.115562	532.21	208.857
91	1.60944	0.551515	0.130716	532.21	208.117
92	1.60944	0.557576	0.1459	532.21	207.375
93	1.60944	0.563636	0.161119	532.21	206.632
94	1.60944	0.569697	0.176374	532.21	205.887
95	1.60944	0.575758	0.191671	532.21	205.14
96	1.60944	0.581818	0.207012	532.21	204.391
97	1.60944	0.587879	0.222403	532.21	203.639
98	1.60944	0.593939	0.237847	532.21	202.885
99	1.60944	0.6	0.253347	532.21	202.128
100	1.60944	0.606061	0.271509	532.21	201.241
101	1.60944	0.612121	0.287147	532.21	200.478
102	1.60944	0.618182	0.302855	532.21	199.711
103	1.60944	0.624242	0.318639	532.21	198.94
104	1.60944	0.630303	0.334503	532.21	198.165
105	1.60944	0.636364	0.350451	532.21	197.386
106	1.60944	0.642424	0.36649	532.21	196.603
107	1.60944	0.648485	0.382622	532.21	195.815
108	1.60944	0.654545	0.398855	532.21	195.023
109	1.60944	0.660606	0.415193	532.21	194.225
110	1.60944	0.666667	0.431644	532.21	193.421

111	1.60944	0.672727	0.448213	532.21	192.612
112	1.60944	0.678788	0.464904	532.21	191.797
113	1.60944	0.684848	0.481728	532.21	190.976
114	1.60944	0.690909	0.498687	532.21	190.147
115	1.60944	0.69697	0.515791	532.21	189.312
116	1.60944	0.70303	0.53594	532.21	188.328
117	1.60944	0.709091	0.553384	532.21	187.476
118	1.60944	0.715152	0.570999	532.21	186.616
119	1.60944	0.721212	0.588793	532.21	185.747
120	1.60944	0.727273	0.606775	532.21	184.869
121	1.60944	0.733333	0.624956	532.21	183.981
122	1.60944	0.739394	0.643345	532.21	183.083
123	1.60944	0.745455	0.661955	532.21	182.175
124	1.60944	0.751515	0.680797	532.21	181.254
125	1.60944	0.757576	0.699883	532.21	180.322
126	1.60944	0.763636	0.719228	532.21	179.378
127	1.60944	0.769697	0.738846	532.21	178.42
128	1.60944	0.775758	0.758753	532.21	177.448
129	1.60944	0.781818	0.778966	532.21	176.46
130	1.60944	0.787879	0.7995	532.21	175.458
131	1.60944	0.793939	0.820379	532.21	174.438
132	1.60944	0.8	0.841621	532.21	173.401
133	1.60944	0.806061	0.866894	532.21	172.167
134	1.60944	0.812121	0.889006	532.21	171.087
135	1.60944	0.818182	0.911562	532.21	169.985
136	1.60944	0.824242	0.93459	532.21	168.861
137	1.60944	0.830303	0.958125	532.21	167.712
138	1.60944	0.836364	0.982202	532.21	166.536
139	1.60944	0.842424	1.00687	532.21	165.331
140	1.60944	0.848485	1.03215	532.21	164.096
141	1.60944	0.854545	1.05812	532.21	162.828
142	1.60944	0.860606	1.08482	532.21	161.524
143	1.60944	0.866667	1.11232	532.21	160.182
144	1.60944	0.872727	1.14069	532.21	158.796
145	1.60944	0.878788	1.17	532.21	157.365
146	1.60944	0.884848	1.20036	532.21	155.882
147	1.60944	0.890909	1.23187	532.21	154.344
148	1.60944	0.89697	1.26464	532.21	152.743
149	1.60944	0.90303	1.30469	532.21	150.788
150	1.60944	0.909091	1.34075	532.21	149.026
151	1.60944	0.915152	1.37866	532.21	147.176
152	1.60944	0.921212	1.41865	532.21	145.222
153	1.60944	0.927273	1.46106	532.21	143.152
154	1.60944	0.933333	1.50626	532.21	140.944
155	1.60944	0.939394	1.55477	532.21	138.575
156	1.60944	0.945455	1.60725	532.21	136.013
157	1.60944	0.951515	1.66456	532.21	133.214
158	1.60944	0.957576	1.72793	532.21	130.119
159	1.60944	0.963636	1.79912	532.21	126.643
160	1.60944	0.969697	1.88079	532.21	122.655
161	1.60944	0.975758	1.97737	532.21	117.938
162	1.60944	0.981818	2.09693	532.21	112.1
163	1.60944	0.987879	2.25713	532.21	104.277
164	1.60944	0.993939	2.51213	532.21	91.8241

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Naphthalene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 99.3902%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 10
Maximum Background Value = 1.60944
Confidence Level = 55.6%
False Positive Rate = 44.4%

Location	Date	Count	Mean	Significant
LMW-3	11/16/2013	1	-0.693147	FALSE
LMW-6	11/16/2013	1	-0.693147	FALSE
LMW-3S	11/16/2013	1	0	FALSE
LMW-14R	11/16/2013	1	-0.693147	FALSE
LMW-16	11/16/2013	1	-0.693147	FALSE
LMW-15R	11/16/2013	1	-0.693147	FALSE
LMW-8	11/16/2013	1	-0.693147	FALSE
LMW-9	11/16/2013	1	-0.693147	FALSE
LMW-9D	11/16/2013	1	-0.693147	FALSE
LMW-9S	11/16/2013	1	-0.693147	FALSE
LMW-10	11/16/2013	1	-0.693147	FALSE
LMW-7	11/16/2012	1	-2.99573	FALSE
MW-5	11/20/2008	1	1.60944	FALSE
LMW-12	11/20/2008	1	1.60944	FALSE
LMW-11	11/20/2008	1	1.60944	FALSE
LMW-13	11/20/2008	1	1.60944	FALSE

Concentrations (ppb)

Parameter: Nickel

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 153
Percent Non-Detects: 51.6892%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	11 (45.8333%)	1/16/1998	ND<30	ND<30
			3/16/1999	ND<30	ND<30
			9/23/1999	ND<30	ND<30
			3/14/2000	ND<30	ND<30
			9/23/2003	ND<30	ND<30
			3/10/2004	ND<30	ND<30
			10/12/2004	ND<30	ND<30
			4/1/2005	ND<30	ND<30
			10/26/2005	ND<30	ND<30
			6/19/2006	ND<30	ND<30
			11/18/2006	1 J	1 J
			6/2/2007	6	6
			11/15/2007	3 J	3 J
			5/20/2008	5 J	5 J
			11/20/2008	ND<30	ND<30
			6/11/2009	0.79	0.79
			11/16/2009	1.2	1.2
			6/30/2010	0.76 J	0.76 J
			11/17/2010	1.1	1.1
			7/6/2011	1.2	1.2
			11/22/2011	1.1	1.1
			5/16/2012	0.62 J	0.62 J
			11/16/2012	1.1	1.1
			11/16/2013	0.42 J	0.42 J

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-8	24	13 (54.1667%)	1/16/1998	ND<30	ND<30
			3/16/1999	6 J	6 J
			9/23/1999	ND<30	ND<30
			3/14/2000	ND<30	ND<30
			9/23/2003	ND<30	ND<30
			3/10/2004	ND<30	ND<30
			10/12/2004	ND<30	ND<30
			4/1/2005	ND<30	ND<30
			10/26/2005	ND<30	ND<30
			6/19/2006	ND<30	ND<30
			11/18/2006	1 J	1 J
			6/2/2007	ND<30	ND<30
			11/15/2007	ND<30	ND<30
			5/20/2008	1 J	1 J
			11/20/2008	ND<30	ND<30
			6/11/2009	0.61	0.61
			11/16/2009	0.64	0.64
			6/30/2010	0.69 J	0.69 J
			11/17/2010	0.65 J	0.65 J

			7/6/2011	0.95 J	0.95 J	
			11/22/2011	1.3	1.3	
			5/16/2012	0.55 J	0.55 J	
			11/16/2012	0.64 J	0.64 J	
			11/16/2013	ND<0.4 U		ND<0.4 U
LMW-9	24	12 (50%)	1/16/1998	ND<30	ND<30	
			3/16/1999	6 J	6 J	
			9/23/1999	ND<30	ND<30	
			3/14/2000	ND<30	ND<30	
			9/23/2003	ND<30	ND<30	
			3/10/2004	ND<30	ND<30	
			10/12/2004	ND<30	ND<30	
			4/1/2005	ND<30	ND<30	
			10/26/2005	ND<30	ND<30	
			6/19/2006	ND<30	ND<30	
			11/18/2006	ND<30	ND<30	
			6/2/2007	3 J	3 J	
			11/15/2007	ND<30	ND<30	
			5/20/2008	1 J	1 J	
			11/20/2008	9 J	9 J	
			6/11/2009	0.33 J	0.33 J	
			11/16/2009	0.46 J	0.46 J	
			6/30/2010	ND<0.4 U		ND<0.4 U
			11/17/2010	0.63 J	0.63 J	
			7/6/2011	0.98 J	0.98 J	
			11/22/2011	0.55 J	0.55 J	
			5/16/2012	2.4	2.4	
			11/16/2012	3.5	3.5	
			11/16/2013	1.1	1.1	
LMW-10	21	14 (66.6667%)	3/14/2000	ND<30	ND<30	
			9/23/2003	ND<30	ND<30	
			3/10/2004	ND<30	ND<30	
			10/12/2004	ND<30	ND<30	
			4/1/2005	ND<30	ND<30	
			10/26/2005	ND<30	ND<30	
			6/19/2006	ND<30	ND<30	
			11/18/2006	ND<30	ND<30	
			6/2/2007	ND<30	ND<30	
			11/15/2007	ND<30	ND<30	
			5/20/2008	1 J	1 J	
			11/20/2008	ND<30	ND<30	
			6/11/2009	0.38 J	0.38 J	
			11/16/2009	0.5 J	0.5 J	
			6/30/2010	ND<0.4 U		ND<0.4 U
			11/17/2010	ND<0.4 U		ND<0.4 U
			7/6/2011	0.7 J	0.7 J	
			11/22/2011	0.89 J	0.89 J	
			5/16/2012	ND<0.4 U		ND<0.4 U
			11/16/2012	0.71 J	0.71 J	
			11/16/2013	0.45 J	0.45 J	
LMW-14R	12	2 (16.6667%)	6/2/2007	ND<30	ND<30	
			11/15/2007	ND<30	ND<30	
			5/20/2008	2 J	2 J	
			11/20/2008	3 J	3 J	
			6/11/2009	2.2	2.2	
			6/30/2010	0.84 J	0.84 J	
			11/17/2010	1.9	1.9	
			7/6/2011	1.8	1.8	
			11/22/2011	1.6	1.6	

			5/16/2012	0.65 J	0.65 J	
			11/16/2012	1.1	1.1	
			11/16/2013	0.87 J	0.87 J	
LMW-15R	16	6 (37.5%)	11/18/2006	1 J	1 J	
			6/2/2007	ND<30	ND<30	
			11/15/2007	ND<30	ND<30	
			11/15/2007	ND<30	ND<30	
			5/20/2008	ND<30	ND<30	
			5/20/2008	1 J	1 J	
			11/20/2008	ND<30	ND<30	
			11/20/2008	ND<30	ND<30	
			6/11/2009	3	3	
			6/30/2010	1	1	
			11/17/2010	0.98 J	0.98 J	
			7/6/2011	0.93 J	0.93 J	
			11/22/2011	0.9 J	0.9 J	
			5/16/2012	0.6 J	0.6 J	
			11/16/2012	0.78 J	0.78 J	
			11/16/2013	0.86 J	0.86 J	
LMW-16	14	5 (35.7143%)	11/18/2006	1 J	1 J	
			6/2/2007	ND<30	ND<30	
			11/15/2007	ND<30	ND<30	
			5/20/2008	ND<30	ND<30	
			11/20/2008	ND<30	ND<30	
			6/11/2009	0.72	0.72	
			11/16/2009	0.66	0.66	
			6/30/2010	0.97 J	0.97 J	
			11/17/2010	ND<0.4 U	ND<0.4 U	
			7/6/2011	0.65 J	0.65 J	
			11/22/2011	0.9 J	0.9 J	
			5/16/2012	0.55 J	0.55 J	
			11/16/2012	0.95 J	0.95 J	
			11/16/2013	0.49 J	0.49 J	
LMW-3	26	16 (61.5385%)	11/19/1996	ND<30	ND<30	
			3/24/1997	ND<30	ND<30	
			1/16/1998	ND<30	ND<30	
			3/16/1999	ND<30	ND<30	
			9/23/1999	ND<30	ND<30	
			3/14/2000	ND<30	ND<30	
			9/23/2003	ND<30	ND<30	
			3/10/2004	ND<30	ND<30	
			10/12/2004	ND<30	ND<30	
			4/1/2005	ND<30	ND<30	
			10/26/2005	ND<30	ND<30	
			6/19/2006	ND<30	ND<30	
			11/18/2006	ND<30	ND<30	
			6/2/2007	ND<30	ND<30	
			11/15/2007	ND<30	ND<30	
			5/20/2008	1 J	1 J	
			11/20/2008	ND<30	ND<30	
			6/11/2009	0.54 J	0.54 J	
			11/16/2009	1.1	1.1	
			6/30/2010	1.3	1.3	
			11/17/2010	3	3	
			7/6/2011	0.85 J	0.85 J	
			11/22/2011	3	3	
			5/16/2012	0.51 J	0.51 J	
			11/16/2012	1	1	
			11/16/2013	0.41 J	0.41 J	

LMW-3S	14	0 (0%)	11/18/2006	2 J	2 J
			6/2/2007	4 J	4 J
			11/15/2007	5 J	5 J
			5/20/2008	3 J	3 J
			11/20/2008	3 J	3 J
			6/11/2009	2.6	2.6
			11/16/2009	2.8	2.8
			6/30/2010	4.1	4.1
			11/17/2010	3.1	3.1
			7/6/2011	3.1	3.1
			11/22/2011	0.95 J	0.95 J
			5/16/2012	2.8	2.8
			11/16/2012	3	3
			11/16/2013	2.5	2.5
LMW-9S	16	5 (31.25%)	11/18/2006	1 J	1 J
			6/2/2007	ND<30	ND<30
			11/15/2007	ND<30	ND<30
			5/20/2008	1 J	1 J
			11/20/2008	ND<30	ND<30
			6/11/2009	1.2	1.2
			11/16/2009	0.8 J B	0.8 J B
			11/16/2009	0.97 J B	0.97 J B
			11/16/2009	1.6 J B	1.6 J B
			6/30/2010	ND<0.4 U	ND<0.4 U
			11/17/2010	0.44 J	0.44 J
			7/6/2011	0.67 J	0.67 J
			11/22/2011	0.72 J	0.72 J
			5/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2012	0.71 J	0.71 J
			11/16/2013	0.41 J	0.41 J
LMW-9D	14	4 (28.5714%)	11/18/2006	2 J	2 J
			6/2/2007	ND<30	ND<30
			11/15/2007	ND<30	ND<30
			5/20/2008	1 J	1 J
			11/20/2008	ND<30	ND<30
			6/11/2009	0.55 J	0.55 J
			11/16/2009	0.69	0.69
			6/30/2010	0.53 J	0.53 J
			11/17/2010	0.6 J	0.6 J
			7/6/2011	2.5	2.5
			11/22/2011	0.75 J	0.75 J
			5/16/2012	ND<0.4 U	ND<0.4 U
			11/16/2012	0.73 J	0.73 J
			11/16/2013	0.52 J	0.52 J
LMW-6	24	12 (50%)	1/16/1998	ND<30	ND<30
			3/16/1999	ND<30	ND<30
			9/23/1999	ND<30	ND<30
			3/14/2000	ND<30	ND<30
			9/23/2003	ND<30	ND<30
			3/10/2004	ND<30	ND<30
			10/12/2004	ND<30	ND<30
			4/1/2005	ND<30	ND<30
			10/26/2005	ND<30	ND<30
			6/19/2006	ND<30	ND<30
			11/18/2006	1 J	1 J
			6/2/2007	5	5
			11/15/2007	ND<30	ND<30
			5/20/2008	2 J	2 J

			11/20/2008	ND<30	ND<30	
			6/11/2009	2.2	2.2	
			11/16/2009	1.8 J	1.8 J	
			6/30/2010	1.9	1.9	
			11/17/2010	1.9	1.9	
			7/6/2011	1.1	1.1	
			11/22/2011	0.99 J	0.99 J	
			5/16/2012	0.64 J	0.64 J	
			11/16/2012	0.85 J	0.85 J	
			11/16/2013	0.72 J	0.72 J	
LMW-7	21	9 (42.8571%)	1/16/1998		ND<30	ND<30
			3/16/1999	ND<30	ND<30	
			9/23/1999	ND<30	ND<30	
			3/14/2000	ND<30	ND<30	
			9/23/2003	ND<30	ND<30	
			3/10/2004	ND<30	ND<30	
			10/12/2004	ND<30	ND<30	
			4/1/2005	18 J	18 J	
			10/26/2005	ND<30	ND<30	
			6/19/2006	ND<30	ND<30	
			11/18/2006	4 J	4 J	
			6/2/2007	7	7	
			11/15/2007	5 J	5 J	
			5/20/2008	2 J	2 J	
			11/20/2008	3 J	3 J	
			6/11/2009	5.5	5.5	
			11/17/2010	1.7	1.7	
			7/6/2011	7.5	7.5	
			11/22/2011	1.5	1.5	
			5/16/2012	4.2	4.2	
			11/16/2012	2.1	2.1	
MW-5	13	11 (84.6154%)	1/16/1998		ND<30	ND<30
			3/16/1999	6 J	6 J	
			9/23/1999	ND<30	ND<30	
			3/14/2000	ND<30	ND<30	
			9/23/2003	ND<30	ND<30	
			3/10/2004	ND<30	ND<30	
			10/12/2004	ND<30	ND<30	
			4/1/2005	ND<30	ND<30	
			10/26/2005	ND<30	ND<30	
			6/19/2006	ND<30	ND<30	
			11/15/2007	3 J	3 J	
			5/20/2008	ND<30	ND<30	
			11/20/2008	ND<30	ND<30	
LMW-11	11	11 (100%)	3/14/2000		ND<30	ND<30
			9/23/2003	ND<30	ND<30	
			3/10/2004	ND<30	ND<30	
			10/12/2004	ND<30	ND<30	
			4/1/2005	ND<30	ND<30	
			10/26/2005	ND<30	ND<30	
			6/19/2006	ND<30	ND<30	
			6/2/2007	ND<30	ND<30	
			11/15/2007	ND<30	ND<30	
			5/20/2008	ND<30	ND<30	
			11/20/2008	ND<30	ND<30	
LMW-12	11	11 (100%)	3/14/2000		ND<30	ND<30
			9/23/2003	ND<30	ND<30	
			3/10/2004	ND<30	ND<30	

			10/12/2004	ND<30	ND<30	
			4/1/2005	ND<30	ND<30	
			10/26/2005	ND<30	ND<30	
			6/19/2006	ND<30	ND<30	
			6/2/2007	ND<30	ND<30	
			11/15/2007	ND<30	ND<30	
			5/20/2008	ND<30	ND<30	
			11/20/2008	ND<30	ND<30	
LMW-13	11	11 (100%)	3/14/2000	ND<30	ND<30	
			9/23/2003	ND<30	ND<30	
			3/10/2004	ND<30	ND<30	
			10/12/2004	ND<30	ND<30	
			4/1/2005	ND<30	ND<30	
			10/26/2005	ND<30	ND<30	
			6/19/2006	ND<30	ND<30	
			6/2/2007	ND<30	ND<30	
			11/15/2007	ND<30	ND<30	
			5/20/2008	ND<30	ND<30	
			11/20/2008	ND<30	ND<30	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Nickel

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.2	-2.74777	7.55021	-0.549553
2	0.2	-2.51213	13.861	-1.05198
3	0.2	-2.32634	19.2729	-1.51725
4	0.2	-2.22621	24.2289	-1.96249
5	0.2	-2.14441	28.8274	-2.39137
6	0.2	-2.05375	33.0453	-2.80212
7	0.2	-1.99539	37.0269	-3.2012
8	0.2	-1.94314	40.8026	-3.58983
9	0.2	-1.88079	44.34	-3.96598
10	0.33	-1.83843	47.7198	-4.57266
11	0.38	-1.78661	50.9118	-5.25158
12	0.41	-1.75069	53.9767	-5.96936
13	0.41	-1.71688	56.9244	-6.67328
14	0.42	-1.67466	59.7289	-7.37664
15	0.44	-1.64485	62.4344	-8.10037
16	0.45	-1.61644	65.0473	-8.82777
17	0.46	-1.58047	67.5452	-9.55478
18	0.49	-1.55477	69.9625	-10.3166
19	0.5	-1.53007	72.3036	-11.0817
20	0.51	-1.49852	74.5491	-11.8459
21	0.52	-1.47579	76.7271	-12.6133
22	0.53	-1.44663	78.8198	-13.38
23	0.54	-1.42554	80.852	-14.1498
24	0.55	-1.40507	82.8262	-14.9226
25	0.55	-1.37866	84.7269	-15.6809
26	0.55	-1.35946	86.5751	-16.4286
27	0.55	-1.34075	88.3727	-17.166
28	0.6	-1.31652	90.1059	-17.9559
29	0.6	-1.29884	91.7929	-18.7352
30	0.61	-1.27588	93.4208	-19.5135
31	0.62	-1.25908	95.006	-20.2941
32	0.63	-1.24264	96.5502	-21.077
33	0.64	-1.22123	98.0416	-21.8586
34	0.64	-1.20553	99.4949	-22.6301
35	0.64	-1.19012	100.911	-23.3918
36	0.65	-1.17	102.28	-24.1523
37	0.65	-1.15522	103.615	-24.9032
38	0.65	-1.14069	104.916	-25.6446
39	0.66	-1.12168	106.174	-26.3849
40	0.67	-1.10768	107.401	-27.1271
41	0.69	-1.08935	108.588	-27.8787
42	0.69	-1.07584	109.745	-28.6211
43	0.7	-1.06252	110.874	-29.3648
44	0.71	-1.04505	111.966	-30.1068
45	0.71	-1.03215	113.032	-30.8396
46	0.72	-1.01943	114.071	-31.5736
47	0.72	-1.00271	115.076	-32.2956
48	0.72	-0.990356	116.057	-33.0086
49	0.73	-0.97815	117.014	-33.7227
50	0.75	-0.9621	117.939	-34.4443
51	0.76	-0.950222	118.842	-35.1664

52	0.78	-0.93459	119.716	-35.8954
53	0.79	-0.923014	120.568	-36.6246
54	0.8	-0.911562	121.399	-37.3538
55	0.84	-0.896473	122.202	-38.1069
56	0.85	-0.885291	122.986	-38.8594
57	0.85	-0.874218	123.75	-39.6025
58	0.86	-0.859618	124.489	-40.3417
59	0.87	-0.848786	125.21	-41.0802
60	0.89	-0.834498	125.906	-41.8229
61	0.9	-0.823893	126.585	-42.5644
62	0.9	-0.813379	127.247	-43.2964
63	0.93	-0.7995	127.886	-44.04
64	0.95	-0.789191	128.509	-44.7897
65	0.95	-0.778966	129.115	-45.5297
66	0.95	-0.765456	129.701	-46.2569
67	0.97	-0.755415	130.272	-46.9896
68	0.97	-0.745449	130.828	-47.7127
69	0.98	-0.732275	131.364	-48.4304
70	0.98	-0.722479	131.886	-49.1384
71	0.99	-0.709522	132.389	-49.8408
72	1	-0.699883	132.879	-50.5407
73	1	-0.690309	133.356	-51.231
74	1	-0.677639	133.815	-51.9086
75	1	-0.668209	134.261	-52.5769
76	1	-0.658838	134.695	-53.2357
77	1	-0.646431	135.113	-53.8821
78	1	-0.637192	135.519	-54.5193
79	1	-0.628006	135.914	-55.1473
80	1	-0.615839	136.293	-55.7632
81	1	-0.606775	136.661	-56.3699
82	1	-0.594766	137.015	-56.9647
83	1	-0.585815	137.358	-57.5505
84	1	-0.576911	137.691	-58.1274
85	1	-0.565108	138.01	-58.6925
86	1	-0.556308	138.32	-59.2488
87	1.1	-0.547551	138.619	-59.8511
88	1.1	-0.53594	138.907	-60.4407
89	1.1	-0.52728	139.185	-61.0207
90	1.1	-0.515791	139.451	-61.5881
91	1.1	-0.507221	139.708	-62.146
92	1.1	-0.498687	139.957	-62.6946
93	1.1	-0.487364	140.194	-63.2307
94	1.2	-0.478914	140.424	-63.8054
95	1.2	-0.470498	140.645	-64.37
96	1.2	-0.459327	140.856	-64.9211
97	1.3	-0.450985	141.059	-65.5074
98	1.3	-0.442676	141.255	-66.0829
99	1.5	-0.431644	141.442	-66.7304
100	1.6	-0.423405	141.621	-67.4078
101	1.6	-0.412463	141.791	-68.0678
102	1.7	-0.40429	141.954	-68.7551
103	1.8	-0.396142	142.111	-69.4681
104	1.8	-0.385321	142.26	-70.1617
105	1.9	-0.377233	142.402	-70.8784
106	1.9	-0.369171	142.538	-71.5799
107	1.9	-0.358459	142.667	-72.2609
108	2	-0.350451	142.79	-72.9618
109	2	-0.33981	142.905	-73.6414
110	2	-0.331854	143.015	-74.3052
111	2	-0.323919	143.12	-74.953
112	2	-0.31337	143.218	-75.5797
113	2.1	-0.305481	143.312	-76.2212

114	2.2	-0.297612	143.4	-76.876
115	2.2	-0.287147	143.483	-77.5077
116	2.4	-0.279319	143.561	-78.1781
117	2.5	-0.271509	143.635	-78.8569
118	2.5	-0.26112143.703	-79.5097	
119	2.6	-0.253347	143.767	-80.1684
120	2.8	-0.243007	143.826	-80.8488
121	2.8	-0.235269	143.881	-81.5075
122	3	-0.227545	143.933	-82.1902
123	3	-0.217267	143.98	-82.842
124	3	-0.209575	144.024	-83.4707
125	3	-0.201894	144.065	-84.0764
126	3	-0.191671	144.102	-84.6514
127	3	-0.184017	144.136	-85.2034
128	3	-0.176374	144.167	-85.7326
129	3	-0.166199	144.194	-86.2312
130	3	-0.158579	144.219	-86.7069
131	3	-0.148434	144.241	-87.1522
132	3	-0.140835	144.261	-87.5747
133	3.1	-0.133244	144.279	-87.9878
134	3.1	-0.123135	144.294	-88.3695
135	3.5	-0.115562	144.308	-88.7739
136	4	-0.107995	144.319	-89.2059
137	4	-0.0979139	144.329	-89.5976
138	4.1	-0.0903606	144.337	-89.9681
139	4.2	-0.0802981	144.343	-90.3053
140	5	-0.0727562	144.349	-90.6691
141	5	-0.0652187	144.353	-90.9952
142	5	-0.0551734	144.356	-91.271
143	5	-0.0476439	144.358	-91.5093
144	5.5	-0.0401167	144.36	-91.7299
145	6	-0.0300838	144.361	-91.9104
146	6	-0.0225612	144.361	-92.0458
147	6	-0.0150408	144.362	-92.136
148	6	-0.00501359	144.362	-92.1661
149	7	0.00501359	144.362	-92.131
150	7.5	0.0150408	144.362	-92.0182
151	9	0.0225612	144.362	-91.8152
152	15	0.0300838	144.363	-91.3639
153	15	0.0401167	144.365	-90.7621
154	15	0.0476439	144.367	-90.0475
155	15	0.0551734	144.37	-89.2199
156	15	0.0652187	144.374	-88.2416
157	15	0.0727562	144.38	-87.1503
158	15	0.0802981	144.386	-85.9458
159	15	0.0903606	144.394	-84.5904
160	15	0.0979139	144.404	-83.1217
161	15	0.107995	144.416	-81.5018
162	15	0.115562	144.429	-79.7683
163	15	0.123135	144.444	-77.9213
164	15	0.133244	144.462	-75.9226
165	15	0.140835	144.482	-73.8101
166	15	0.148434	144.504	-71.5836
167	15	0.158579	144.529	-69.2049
168	15	0.166199	144.557	-66.7119
169	15	0.176374	144.588	-64.0663
170	15	0.184017	144.621	-61.3061
171	15	0.191671	144.658	-58.431
172	15	0.201894	144.699	-55.4026
173	15	0.209575	144.743	-52.259
174	15	0.217267	144.79	-49
175	15	0.227545	144.842	-45.5868

176	15	0.235269	144.897	-42.0577
177	15	0.243007	144.956	-38.4126
178	15	0.253347	145.02	-34.6124
179	15	0.26112	145.089	-30.6956
180	15	0.271509	145.162	-26.623
181	15	0.279319	145.24	-22.4332
182	15	0.287147	145.323	-18.126
183	15	0.297612	145.411	-13.6618
184	15	0.305481	145.505	-9.0796
185	15	0.31337	145.603	-4.37906
186	15	0.323919	145.708	0.479725
187	15	0.331854	145.818	5.45754
188	15	0.33981	145.933	10.5547
189	15	0.350451	146.056	15.8115
190	15	0.358459	146.185	21.1883
191	15	0.369171	146.321	26.7259
192	15	0.377233	146.463	32.3844
193	15	0.385321	146.612	38.1642
194	15	0.396142	146.769	44.1063
195	15	0.40429	146.932	50.1707
196	15	0.412463	147.102	56.3576
197	15	0.423405	147.282	62.7087
198	15	0.431644	147.468	69.1834
199	15	0.442676	147.664	75.8235
200	15	0.450985	147.867	82.5883
201	15	0.459327	148.078	89.4782
202	15	0.470498	148.3	96.5357
203	15	0.478914	148.529	103.719
204	15	0.487364	148.767	111.03
205	15	0.498687	149.015	118.51
206	15	0.507221	149.272	126.118
207	15	0.515791	149.539	133.855
208	15	0.52728	149.817	141.765
209	15	0.53594	150.104	149.804
210	15	0.547551	150.404	158.017
211	15	0.556308	150.713	166.361
212	15	0.565108	151.032	174.838
213	15	0.576911	151.365	183.492
214	15	0.585815	151.708	192.279
215	15	0.594766	152.062	201.2
216	15	0.606775	152.43	210.302
217	15	0.615839	152.81	219.54
218	15	0.628006	153.204	228.96
219	15	0.637192	153.61	238.518
220	15	0.646431	154.028	248.214
221	15	0.658838	154.462	258.097
222	15	0.668209	154.908	268.12
223	15	0.677639	155.368	278.284
224	15	0.690309	155.844	288.639
225	15	0.699883	156.334	299.137
226	15	0.709522	156.837	309.78
227	15	0.722479	157.359	320.617
228	15	0.732275	157.896	331.601
229	15	0.745449	158.451	342.783
230	15	0.755415	159.022	354.114
231	15	0.765456	159.608	365.596
232	15	0.778966	160.215	377.281
233	15	0.789191	160.837	389.119
234	15	0.7995	161.477	401.111
235	15	0.813379	162.138	413.312
236	15	0.823893	162.817	425.67
237	15	0.834498	163.513	438.188

238	15	0.848786		164.234	450.919
239	15	0.859618		164.973	463.814
240	15	0.874218		165.737	476.927
241	15	0.885291		166.521	490.206
242	15	0.896473		167.325	503.653
243	15	0.911562		168.155	517.327
244	15	0.923014		169.007	531.172
245	15	0.93459	169.881	545.191	
246	15	0.950222		170.784	559.444
247	15	0.9621	171.709	573.876	
248	15	0.97815	172.666	588.548	
249	15	0.990356		173.647	603.403
250	15	1.00271	174.652	618.444	
251	15	1.01943	175.692	633.735	
252	15	1.03215	176.757	649.218	
253	15	1.04505	177.849	664.894	
254	15	1.06252	178.978	680.831	
255	15	1.07584	180.136	696.969	
256	15	1.08935	181.322	713.309	
257	15	1.10768	182.549	729.924	
258	15	1.12168	183.807	746.749	
259	15	1.14069	185.108	763.86	
260	15	1.15522	186.443	781.188	
261	15	1.17	187.812	798.738	
262	15	1.19012	189.228	816.59	
263	15	1.20553	190.682	834.673	
264	15	1.22123	192.173	852.991	
265	15	1.24264	193.717	871.631	
266	15	1.25908	195.302	890.517	
267	15	1.27588	196.93	909.655	
268	15	1.29884	198.617	929.138	
269	15	1.31652	200.351	948.886	
270	15	1.34075	202.148	968.997	
271	15	1.35946	203.996	989.389	
272	15	1.37866	205.897	1010.07	
273	15	1.40507	207.871	1031.14	
274	15	1.42554	209.903	1052.53	
275	15	1.44663	211.996	1074.23	
276	15	1.47579	214.174	1096.36	
277	15	1.49852	216.42	1118.84	
278	15	1.53007	218.761	1141.79	
279	15	1.55477	221.178	1165.11	
280	15	1.58047	223.676	1188.82	
281	15	1.61644	226.289	1213.07	
282	15	1.64485	228.994	1237.74	
283	15	1.67466	231.799	1262.86	
284	15	1.71688	234.747	1288.61	
285	15	1.75069	237.811	1314.87	
286	15	1.78661	241.003	1341.67	
287	15	1.83843	244.383	1369.25	
288	15	1.88079	247.921	1397.46	
289	15	1.94314	251.696	1426.61	
290	15	1.99539	255.678	1456.54	
291	15	2.05375	259.896	1487.35	
292	15	2.14441	264.494	1519.51	
293	15	2.22621	269.45	1552.91	
294	15	2.32634	274.862	1587.8	
295	15	2.51213	281.173	1625.48	
296	18	2.74777	288.723	1674.94	

Data Set Standard Deviation = 6.78413

Numerator = 2.80543e+006
Denominator = 3.92005e+006
W Statistic = 0.715662 = 2.80543e+006 / 3.92005e+006

5% Critical value of 0.976 exceeds 0.715662
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.715662
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Nickel

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.843824
0.843824 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.2	0.003367	-2.747	7744.35	348.683	
2	0.2	0.00673401	-2.512	1344.35	337.176	
3	0.2	0.010101	-2.326	3444.35	328.103	
4	0.2	0.013468	-2.226	2144.35	323.213	
5	0.2	0.016835	-2.144	4144.35	319.219	
6	0.2	0.020202	-2.053	7544.35	314.791	
7	0.2	0.023569	-1.995	3944.35	311.942	
8	0.2	0.026936	-1.943	1444.35	309.39	
9	0.2	0.030303	-1.880	7944.35	306.345	
10	0.33	0.03367	-1.838	4347.8275	304.276	
11	0.38	0.037037	-1.786	6149.165	301.746	
12	0.41	0.040404	-1.750	6949.9675	299.992	
13	0.41	0.043771	-1.716	8849.9675	298.341	
14	0.42	0.047138	-1.674	6650.235	296.279	
15	0.44	0.0505051	-1.644	8550.77	294.824	
16	0.45	0.0538721	-1.616	4451.0375	293.436	
17	0.46	0.0572391	-1.580	4751.305	291.679	
18	0.49	0.0606061	-1.554	7752.1075	290.425	
19	0.5	0.0639731	-1.530	0752.375	289.218	
20	0.51	0.0673401	-1.498	5252.6425	287.677	
21	0.52	0.0707071	-1.475	7952.91	286.568	
22	0.53	0.0740741	-1.446	6353.1775	285.144	
23	0.54	0.0774411	-1.425	5453.445	284.114	
24	0.55	0.0808081	-1.405	0753.7125	283.114	
25	0.55	0.0841751	-1.378	6653.7125	281.824	
26	0.55	0.0875421	-1.359	4653.7125	280.887	
27	0.55	0.0909091	-1.340	7553.7125	279.974	
28	0.6	0.0942761	-1.316	5255.05	278.79	
29	0.6	0.0976431	-1.298	8455.05	277.926	
30	0.61	0.10101	-1.275	8855.3175	276.805	
31	0.62	0.104377	-1.259	0855.585	275.985	
32	0.63	0.107744	-1.242	6455.8525	275.182	
33	0.64	0.111111	-1.221	2356.12	274.137	
34	0.64	0.114478	-1.205	5356.12	273.37	
35	0.64	0.117845	-1.190	1256.12	272.617	
36	0.65	0.121212	-1.17	56.3875	271.635	
37	0.65	0.124579	-1.155	2256.3875	270.913	
38	0.65	0.127946	-1.140	6956.3875	270.204	
39	0.66	0.131313	-1.121	6856.655	269.275	
40	0.67	0.13468	-1.107	6856.9225	268.592	
41	0.69	0.138047	-1.089	3557.4575	267.697	
42	0.69	0.141414	-1.075	8457.4575	267.037	
43	0.7	0.144781	-1.062	5257.725	266.386	
44	0.71	0.148148	-1.045	0557.9925	265.533	
45	0.71	0.151515	-1.032	1557.9925	264.904	
46	0.72	0.154882	-1.019	4358.26	264.282	
47	0.72	0.158249	-1.002	7158.26	263.466	
48	0.72	0.161616	-0.990	356	58.26	262.862

49	0.73	0.164983	-0.978155	8.5275	262.266
50	0.75	0.16835	-0.9621	59.0625	261.483
51	0.76	0.171717	-0.950222	59.33	260.903
52	0.78	0.175084	-0.934595	9.865	260.139
53	0.79	0.178451	-0.923014	60.1325	259.574
54	0.8	0.181818	-0.911562	60.4	259.015
55	0.84	0.185185	-0.896473	61.47	258.278
56	0.85	0.188552	-0.885291	61.7375	257.732
57	0.85	0.191919	-0.874218	61.7375	257.191
58	0.86	0.195286	-0.859618	62.005	256.478
59	0.87	0.198653	-0.848786	62.2725	255.949
60	0.89	0.20202	-0.834498	62.8075	255.251
61	0.9	0.205387	-0.823893	63.075	254.733
62	0.9	0.208754	-0.813379	63.075	254.22
63	0.93	0.212121	-0.7995	63.8775	253.542
64	0.95	0.215488	-0.789191	64.4125	253.039
65	0.95	0.218855	-0.778966	64.4125	252.54
66	0.95	0.222222	-0.765456	64.4125	251.88
67	0.97	0.225589	-0.755415	64.9475	251.389
68	0.97	0.228956	-0.745449	64.9475	250.903
69	0.98	0.232323	-0.732275	65.215	250.259
70	0.98	0.23569	-0.722479	65.215	249.781
71	0.99	0.239057	-0.709522	65.4825	249.148
72	1	0.242424	-0.699883	65.75	248.678
73	1	0.245791	-0.690309	65.75	248.21
74	1	0.249158	-0.677639	65.75	247.591
75	1	0.252525	-0.668209	65.75	247.131
76	1	0.255892	-0.658838	65.75	246.673
77	1	0.259259	-0.646431	65.75	246.067
78	1	0.262626	-0.637192	65.75	245.616
79	1	0.265993	-0.628006	65.75	245.168
80	1	0.26936	-0.615839	65.75	244.573
81	1	0.272727	-0.606775	65.75	244.131
82	1	0.276094	-0.594766	65.75	243.544
83	1	0.279461	-0.585815	65.75	243.107
84	1	0.282828	-0.576911	65.75	242.672
85	1	0.286195	-0.565108	65.75	242.096
86	1	0.289562	-0.556308	65.75	241.666
87	1.1	0.292929	-0.547551	68.425	241.239
88	1.1	0.296296	-0.535946	8.425	240.672
89	1.1	0.299663	-0.527286	8.425	240.249
90	1.1	0.30303	-0.515791	68.425	239.688
91	1.1	0.306397	-0.507221	68.425	239.269
92	1.1	0.309764	-0.498687	68.425	238.853
93	1.1	0.313131	-0.487364	68.425	238.3
94	1.2	0.316498	-0.478914	71.1	237.887
95	1.2	0.319865	-0.470498	71.1	237.476
96	1.2	0.323232	-0.459327	71.1	236.93
97	1.3	0.326599	-0.450985	73.775	236.523
98	1.3	0.329966	-0.442676	73.775	236.117
99	1.5	0.333333	-0.431644	79.125	235.579
100	1.6	0.3367	-0.423405	81.8	235.176
101	1.6	0.340067	-0.412463	81.8	234.642
102	1.7	0.343434	-0.404298	4.475	234.243
103	1.8	0.346801	-0.396142	87.15	233.845
104	1.8	0.350168	-0.385321	87.15	233.317
105	1.9	0.353535	-0.377233	89.825	232.922
106	1.9	0.356902	-0.369171	89.825	232.528
107	1.9	0.360269	-0.358459	89.825	232.005
108	2	0.363636	-0.350451	92.5	231.614
109	2	0.367003	-0.339819	2.5	231.094
110	2	0.37037	-0.331854	92.5	230.706

111	2	0.373737	-0.323919	92.5	230.318
112	2	0.377104	-0.3133792.5	229.803	
113	2.1	0.380471	-0.305481	95.175	229.418
114	2.2	0.383838	-0.297612	97.85	229.033
115	2.2	0.387205	-0.287147	97.85	228.522
116	2.4	0.390572	-0.279319	103.2	228.14
117	2.5	0.393939	-0.271509	105.875	227.759
118	2.5	0.397306	-0.26112105.875	227.251	
119	2.6	0.400673	-0.253347	108.55	226.872
120	2.8	0.40404	-0.243007	113.9	226.367
121	2.8	0.407407	-0.235269	113.9	225.989
122	3	0.410774	-0.227545	119.25	225.612
123	3	0.414141	-0.217267	119.25	225.11
124	3	0.417508	-0.209575	119.25	224.734
125	3	0.420875	-0.201894	119.25	224.359
126	3	0.424242	-0.191671	119.25	223.86
127	3	0.427609	-0.184017	119.25	223.486
128	3	0.430976	-0.176374	119.25	223.113
129	3	0.434343	-0.166199	119.25	222.616
130	3	0.43771	-0.158579	119.25	222.244
131	3	0.441077	-0.148434	119.25	221.749
132	3	0.444444	-0.140835	119.25	221.377
133	3.1	0.447811	-0.133244	121.925	221.007
134	3.1	0.451178	-0.123135	121.925	220.513
135	3.5	0.454545	-0.115562	132.625	220.143
136	4	0.457912	-0.107995	146	219.774
137	4	0.461279	-0.0979139	146	219.281
138	4.1	0.464646	-0.0903606	148.675	218.913
139	4.2	0.468013	-0.0802981	151.35	218.421
140	5	0.47138	-0.0727562	172.75	218.053
141	5	0.474747	-0.0652187	172.75	217.685
142	5	0.478114	-0.0551734	172.75	217.194
143	5	0.481481	-0.0476439	172.75	216.827
144	5.5	0.484848	-0.0401167	186.125	216.459
145	6	0.488215	-0.0300838	199.5	215.969
146	6	0.491582	-0.0225612	199.5	215.602
147	6	0.494949	-0.0150408	199.5	215.234
148	6	0.498316	-0.00501359	199.5	214.745
149	7	0.501684	0.00501359	226.25	214.255
150	7.5	0.505051	0.0150408	239.625	213.766
151	9	0.508418	0.0225612	279.75	213.398
152	15	0.511785	0.0300838	440.25	213.031
153	15	0.515152	0.0401167	440.25	212.541
154	15	0.518519	0.0476439	440.25	212.173
155	15	0.521886	0.0551734	440.25	211.806
156	15	0.525253	0.0652187	440.25	211.315
157	15	0.52862	0.0727562	440.25	210.947
158	15	0.531987	0.0802981	440.25	210.579
159	15	0.535354	0.0903606	440.25	210.087
160	15	0.538721	0.0979139	440.25	209.719
161	15	0.542088	0.107995	440.25	209.226
162	15	0.545455	0.115562	440.25	208.857
163	15	0.548822	0.123135	440.25	208.487
164	15	0.552189	0.133244	440.25	207.993
165	15	0.555556	0.140835	440.25	207.623
166	15	0.558923	0.148434	440.25	207.251
167	15	0.56229	0.158579	440.25	206.756
168	15	0.565657	0.166199	440.25	206.384
169	15	0.569024	0.176374	440.25	205.887
170	15	0.572391	0.184017	440.25	205.514
171	15	0.575758	0.191671	440.25	205.14
172	15	0.579125	0.201894	440.25	204.641

173	15	0.582492	0.209575	440.25	204.266
174	15	0.585859	0.217267	440.25	203.89
175	15	0.589226	0.227545	440.25	203.388
176	15	0.592593	0.235269	440.25	203.011
177	15	0.59596	0.243007	440.25	202.633
178	15	0.599327	0.253347	440.25	202.128
179	15	0.602694	0.26112	440.25	201.749
180	15	0.606061	0.271509	440.25	201.241
181	15	0.609428	0.279319	440.25	200.86
182	15	0.612795	0.287147	440.25	200.478
183	15	0.616162	0.297612	440.25	199.967
184	15	0.619529	0.305481	440.25	199.582
185	15	0.622896	0.31337	440.25	199.197
186	15	0.626263	0.323919	440.25	198.682
187	15	0.62963	0.331854	440.25	198.294
188	15	0.632997	0.33981	440.25	197.906
189	15	0.636364	0.350451	440.25	197.386
190	15	0.639731	0.358459	440.25	196.995
191	15	0.643098	0.369171	440.25	196.472
192	15	0.646465	0.377233	440.25	196.078
193	15	0.649832	0.385321	440.25	195.683
194	15	0.653199	0.396142	440.25	195.155
195	15	0.656566	0.40429	440.25	194.757
196	15	0.659933	0.412463	440.25	194.358
197	15	0.6633	0.423405	440.25	193.824
198	15	0.666667	0.431644	440.25	193.421
199	15	0.670034	0.442676	440.25	192.883
200	15	0.673401	0.450985	440.25	192.477
201	15	0.676768	0.459327	440.25	192.07
202	15	0.680135	0.470498	440.25	191.524
203	15	0.683502	0.478914	440.25	191.113
204	15	0.686869	0.487364	440.25	190.7
205	15	0.690236	0.498687	440.25	190.147
206	15	0.693603	0.507221	440.25	189.731
207	15	0.69697	0.515791	440.25	189.312
208	15	0.700337	0.52728	440.25	188.751
209	15	0.703704	0.53594	440.25	188.328
210	15	0.707071	0.547551	440.25	187.761
211	15	0.710438	0.556308	440.25	187.334
212	15	0.713805	0.565108	440.25	186.904
213	15	0.717172	0.576911	440.25	186.328
214	15	0.720539	0.585815	440.25	185.893
215	15	0.723906	0.594766	440.25	185.456
216	15	0.727273	0.606775	440.25	184.869
217	15	0.73064	0.615839	440.25	184.427
218	15	0.734007	0.628006	440.25	183.832
219	15	0.737374	0.637192	440.25	183.384
220	15	0.740741	0.646431	440.25	182.933
221	15	0.744108	0.658838	440.25	182.327
222	15	0.747475	0.668209	440.25	181.869
223	15	0.750842	0.677639	440.25	181.409
224	15	0.754209	0.690309	440.25	180.79
225	15	0.757576	0.699883	440.25	180.322
226	15	0.760943	0.709522	440.25	179.852
227	15	0.76431	0.722479	440.25	179.219
228	15	0.767677	0.732275	440.25	178.741
229	15	0.771044	0.745449	440.25	178.097
230	15	0.774411	0.755415	440.25	177.611
231	15	0.777778	0.765456	440.25	177.12
232	15	0.781145	0.778966	440.25	176.46
233	15	0.784512	0.789191	440.25	175.961
234	15	0.787879	0.7995	440.25	175.458

235	15	0.791246	0.813379	440.25	174.78
236	15	0.794613	0.823893	440.25	174.267
237	15	0.79798	0.834498	440.25	173.749
238	15	0.801347	0.848786	440.25	173.051
239	15	0.804714	0.859618	440.25	172.522
240	15	0.808081	0.874218	440.25	171.809
241	15	0.811448	0.885291	440.25	171.268
242	15	0.814815	0.896473	440.25	170.722
243	15	0.818182	0.911562	440.25	169.985
244	15	0.821549	0.923014	440.25	169.426
245	15	0.824916	0.93459	440.25	168.861
246	15	0.828283	0.950222	440.25	168.097
247	15	0.83165	0.9621	440.25	167.517
248	15	0.835017	0.97815	440.25	166.734
249	15	0.838384	0.990356	440.25	166.138
250	15	0.841751	1.00271	440.25	165.534
251	15	0.845118	1.01943	440.25	164.718
252	15	0.848485	1.03215	440.25	164.096
253	15	0.851852	1.04505	440.25	163.467
254	15	0.855219	1.06252	440.25	162.614
255	15	0.858586	1.07584	440.25	161.963
256	15	0.861953	1.08935	440.25	161.303
257	15	0.86532	1.10768	440.25	160.408
258	15	0.868687	1.12168	440.25	159.725
259	15	0.872054	1.14069	440.25	158.796
260	15	0.875421	1.15522	440.25	158.087
261	15	0.878788	1.17	440.25	157.365
262	15	0.882155	1.19012	440.25	156.383
263	15	0.885522	1.20553	440.25	155.63
264	15	0.888889	1.22123	440.25	154.863
265	15	0.892256	1.24264	440.25	153.818
266	15	0.895623	1.25908	440.25	153.015
267	15	0.89899	1.27588	440.25	152.195
268	15	0.902357	1.29884	440.25	151.074
269	15	0.905724	1.31652	440.25	150.21
270	15	0.909091	1.34075	440.25	149.026
271	15	0.912458	1.35946	440.25	148.113
272	15	0.915825	1.37866	440.25	147.176
273	15	0.919192	1.40507	440.25	145.886
274	15	0.922559	1.42554	440.25	144.886
275	15	0.925926	1.44663	440.25	143.856
276	15	0.929293	1.47579	440.25	142.432
277	15	0.93266	1.49852	440.25	141.323
278	15	0.936027	1.53007	440.25	139.782
279	15	0.939394	1.55477	440.25	138.575
280	15	0.942761	1.58047	440.25	137.321
281	15	0.946128	1.61644	440.25	135.564
282	15	0.949495	1.64485	440.25	134.176
283	15	0.952862	1.67466	440.25	132.721
284	15	0.956229	1.71688	440.25	130.659
285	15	0.959596	1.75069	440.25	129.008
286	15	0.962963	1.78661	440.25	127.254
287	15	0.96633	1.83843	440.25	124.724
288	15	0.969697	1.88079	440.25	122.655
289	15	0.973064	1.94314	440.25	119.61
290	15	0.976431	1.99539	440.25	117.058
291	15	0.979798	2.05375	440.25	114.209
292	15	0.983165	2.14441	440.25	109.781
293	15	0.986532	2.22621	440.25	105.787
294	15	0.989899	2.32634	440.25	100.897
295	15	0.993266	2.51213	440.25	91.8241
296	18	0.996633	2.74777	520.5	80.3175

Shapiro-Francia Test of Normality

Parameter: Nickel

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.60944	-2.74777	7.55021	4.42236
2	-1.60944	-2.51213	13.861	8.46548
3	-1.60944	-2.32634	19.2729	12.2096
4	-1.60944	-2.22621	24.2289	15.7925
5	-1.60944	-2.14441	28.8274	19.2438
6	-1.60944	-2.05375	33.0453	22.5492
7	-1.60944	-1.99539	37.0269	25.7607
8	-1.60944	-1.94314	40.8026	28.888
9	-1.60944	-1.88079	44.34	31.915
10	-1.10866	-1.83843	47.7198	33.9532
11	-0.967584	-1.78661	50.9118	35.6819
12	-0.891598	-1.75069	53.9767	37.2428
13	-0.891598	-1.71688	56.9244	38.7736
14	-0.867501	-1.67466	59.7289	40.2264
15	-0.820981	-1.64485	62.4344	41.5768
16	-0.798508	-1.61644	65.0473	42.8675
17	-0.776529	-1.58047	67.5452	44.0948
18	-0.71335	-1.55477	69.9625	45.2039
19	-0.693147	-1.53007	72.3036	46.2644
20	-0.673345	-1.49852	74.5491	47.2734
21	-0.653926	-1.47579	76.7271	48.2385
22	-0.634878	-1.44663	78.8198	49.1569
23	-0.616186	-1.42554	80.852	50.0353
24	-0.597837	-1.40507	82.8262	50.8753
25	-0.597837	-1.37866	84.7269	51.6996
26	-0.597837	-1.35946	86.5751	52.5123
27	-0.597837	-1.34075	88.3727	53.3139
28	-0.510826	-1.31652	90.1059	53.9864
29	-0.510826	-1.29884	91.7929	54.6498
30	-0.494296	-1.27588	93.4208	55.2805
31	-0.478036	-1.25908	95.006	55.8824
32	-0.462035	-1.24264	96.5502	56.4565
33	-0.446287	-1.22123	98.0416	57.0016
34	-0.446287	-1.20553	99.4949	57.5396
35	-0.446287	-1.19012	100.911	58.0707
36	-0.430783	-1.17	102.28	58.5747
37	-0.430783	-1.15522	103.615	59.0724
38	-0.430783	-1.14069	104.916	59.5638
39	-0.415515	-1.12168	106.174	60.0298
40	-0.400478	-1.10768	107.401	60.4734
41	-0.371064	-1.08935	108.588	60.8776
42	-0.371064	-1.07584	109.745	61.2769
43	-0.356675	-1.06252	110.874	61.6558
44	-0.34249	-1.04505	111.966	62.0137
45	-0.34249	-1.03215	113.032	62.3672
46	-0.328504	-1.01943	114.071	62.7021
47	-0.328504	-1.00271	115.076	63.0315
48	-0.328504	-0.990356	116.057	63.3569
49	-0.314711	-0.97815	117.014	63.6647
50	-0.287682	-0.9621	117.939	63.9415
51	-0.274437	-0.950222	118.842	64.2023

52	-0.248461	-0.93459	119.716	64.4345
53	-0.235722	-0.923014	120.568	64.652
54	-0.223144	-0.911562	121.399	64.8554
55	-0.174353	-0.896473	122.202	65.0118
56	-0.162519	-0.885291	122.986	65.1556
57	-0.162519	-0.874218	123.75	65.2977
58	-0.150823	-0.859618	124.489	65.4274
59	-0.139262	-0.848786	125.21	65.5456
60	-0.116534	-0.834498	125.906	65.6428
61	-0.105361	-0.823893	126.585	65.7296
62	-0.105361	-0.813379	127.247	65.8153
63	-0.0725707	-0.7995	127.886	65.8733
64	-0.0512933	-0.789191	128.509	65.9138
65	-0.0512933	-0.778966	129.115	65.9538
66	-0.0512933	-0.765456	129.701	65.993
67	-0.0304592	-0.755415	130.272	66.016
68	-0.0304592	-0.745449	130.828	66.0387
69	-0.0202027	-0.732275	131.364	66.0535
70	-0.0202027	-0.722479	131.886	66.0681
71	-0.0100503	-0.709522	132.389	66.0753
72	0	-0.699883	132.879	66.0753
73	0	-0.690309	133.356	66.0753
74	0	-0.677639	133.815	66.0753
75	0	-0.668209	134.261	66.0753
76	0	-0.658838	134.695	66.0753
77	0	-0.646431	135.113	66.0753
78	0	-0.637192	135.519	66.0753
79	0	-0.628006	135.914	66.0753
80	0	-0.615839	136.293	66.0753
81	0	-0.606775	136.661	66.0753
82	0	-0.594766	137.015	66.0753
83	0	-0.585815	137.358	66.0753
84	0	-0.576911	137.691	66.0753
85	0	-0.565108	138.01	66.0753
86	0	-0.556308	138.32	66.0753
87	0.0953102	-0.547551	138.619	66.0231
88	0.0953102	-0.53594	138.907	65.972
89	0.0953102	-0.52728	139.185	65.9217
90	0.0953102	-0.515791	139.451	65.8726
91	0.0953102	-0.507221	139.708	65.8242
92	0.0953102	-0.498687	139.957	65.7767
93	0.0953102	-0.487364	140.194	65.7303
94	0.182322	-0.478914	140.424	65.6429
95	0.182322	-0.470498	140.645	65.5572
96	0.182322	-0.459327	140.856	65.4734
97	0.262364	-0.450985	141.059	65.3551
98	0.262364	-0.442676	141.255	65.2389
99	0.405465	-0.431644	141.442	65.0639
100	0.470004	-0.423405	141.621	64.8649
101	0.470004	-0.412463	141.791	64.6711
102	0.530628	-0.40429	141.954	64.4565
103	0.587787	-0.396142	142.111	64.2237
104	0.587787	-0.385321	142.26	63.9972
105	0.641854	-0.377233	142.402	63.7551
106	0.641854	-0.369171	142.538	63.5181
107	0.641854	-0.358459	142.667	63.2881
108	0.693147	-0.350451	142.79	63.0451
109	0.693147	-0.33981	142.905	62.8096
110	0.693147	-0.331854	143.015	62.5796
111	0.693147	-0.323919	143.12	62.3551
112	0.693147	-0.31337	143.218	62.1378
113	0.741937	-0.305481	143.312	61.9112

114	0.788457	-0.297612	143.4	61.6765
115	0.788457	-0.287147	143.483	61.4501
116	0.875469	-0.279319	143.561	61.2056
117	0.916291	-0.271509	143.635	60.9568
118	0.916291	-0.26112	143.703	60.7176
119	0.955511	-0.253347	143.767	60.4755
120	1.02962	-0.243007	143.826	60.2253
121	1.02962	-0.235269	143.881	59.983
122	1.09861	-0.227545	143.933	59.7331
123	1.09861	-0.217267	143.98	59.4944
124	1.09861	-0.209575	144.024	59.2641
125	1.09861	-0.201894	144.065	59.0423
126	1.09861	-0.191671	144.102	58.8317
127	1.09861	-0.184017	144.136	58.6296
128	1.09861	-0.176374	144.167	58.4358
129	1.09861	-0.166199	144.194	58.2532
130	1.09861	-0.158579	144.219	58.079
131	1.09861	-0.148434	144.241	57.9159
132	1.09861	-0.140835	144.261	57.7612
133	1.1314	-0.133244	144.279	57.6105
134	1.1314	-0.123135	144.294	57.4711
135	1.25276	-0.115562	144.308	57.3264
136	1.38629	-0.107995	144.319	57.1767
137	1.38629	-0.0979139	144.329	57.0409
138	1.41099	-0.0903606	144.337	56.9134
139	1.43508	-0.0802981	144.343	56.7982
140	1.60944	-0.0727562	144.349	56.6811
141	1.60944	-0.0652187	144.353	56.5761
142	1.60944	-0.0551734	144.356	56.4873
143	1.60944	-0.0476439	144.358	56.4107
144	1.70475	-0.0401167	144.36	56.3423
145	1.79176	-0.0300838	144.361	56.2884
146	1.79176	-0.0225612	144.361	56.2479
147	1.79176	-0.0150408	144.362	56.221
148	1.79176	-0.00501359	144.362	56.212
149	1.94591	0.00501359	144.362	56.2218
150	2.0149	0.0150408	144.362	56.2521
151	2.19722	0.0225612	144.362	56.3016
152	2.70805	0.0300838	144.363	56.3831
153	2.70805	0.0401167	144.365	56.4917
154	2.70805	0.0476439	144.367	56.6208
155	2.70805	0.0551734	144.37	56.7702
156	2.70805	0.0652187	144.374	56.9468
157	2.70805	0.0727562	144.38	57.1438
158	2.70805	0.0802981	144.386	57.3613
159	2.70805	0.0903606	144.394	57.606
160	2.70805	0.0979139	144.404	57.8711
161	2.70805	0.107995	144.416	58.1636
162	2.70805	0.115562	144.429	58.4765
163	2.70805	0.123135	144.444	58.81
164	2.70805	0.133244	144.462	59.1708
165	2.70805	0.140835	144.482	59.5522
166	2.70805	0.148434	144.504	59.9542
167	2.70805	0.158579	144.529	60.3836
168	2.70805	0.166199	144.557	60.8337
169	2.70805	0.176374	144.588	61.3113
170	2.70805	0.184017	144.621	61.8096
171	2.70805	0.191671	144.658	62.3287
172	2.70805	0.201894	144.699	62.8754
173	2.70805	0.209575	144.743	63.443
174	2.70805	0.217267	144.79	64.0314
175	2.70805	0.227545	144.842	64.6476

176	2.70805	0.235269		144.897	65.2847
177	2.70805	0.243007		144.956	65.9428
178	2.70805	0.253347		145.02	66.6288
179	2.70805	0.26112	145.089	67.336	
180	2.70805	0.271509		145.162	68.0712
181	2.70805	0.279319		145.24	68.8276
182	2.70805	0.287147		145.323	69.6052
183	2.70805	0.297612		145.411	70.4112
184	2.70805	0.305481		145.505	71.2384
185	2.70805	0.31337	145.603	72.0871	
186	2.70805	0.323919		145.708	72.9642
187	2.70805	0.331854		145.818	73.8629
188	2.70805	0.33981	145.933	74.7831	
189	2.70805	0.350451		146.056	75.7322
190	2.70805	0.358459		146.185	76.7029
191	2.70805	0.369171		146.321	77.7026
192	2.70805	0.377233		146.463	78.7242
193	2.70805	0.385321		146.612	79.7677
194	2.70805	0.396142		146.769	80.8405
195	2.70805	0.40429	146.932	81.9353	
196	2.70805	0.412463		147.102	83.0523
197	2.70805	0.423405		147.282	84.1989
198	2.70805	0.431644		147.468	85.3678
199	2.70805	0.442676		147.664	86.5666
200	2.70805	0.450985		147.867	87.7879
201	2.70805	0.459327		148.078	89.0317
202	2.70805	0.470498		148.3	90.3059
203	2.70805	0.478914		148.529	91.6028
204	2.70805	0.487364		148.767	92.9226
205	2.70805	0.498687		149.015	94.2731
206	2.70805	0.507221		149.272	95.6466
207	2.70805	0.515791		149.539	97.0434
208	2.70805	0.52728	149.817	98.4713	
209	2.70805	0.53594	150.104	99.9227	
210	2.70805	0.547551		150.404	101.405
211	2.70805	0.556308		150.713	102.912
212	2.70805	0.565108		151.032	104.442
213	2.70805	0.576911		151.365	106.005
214	2.70805	0.585815		151.708	107.591
215	2.70805	0.594766		152.062	109.202
216	2.70805	0.606775		152.43	110.845
217	2.70805	0.615839		152.81	112.513
218	2.70805	0.628006		153.204	114.213
219	2.70805	0.637192		153.61	115.939
220	2.70805	0.646431		154.028	117.689
221	2.70805	0.658838		154.462	119.474
222	2.70805	0.668209		154.908	121.283
223	2.70805	0.677639		155.368	123.118
224	2.70805	0.690309		155.844	124.988
225	2.70805	0.699883		156.334	126.883
226	2.70805	0.709522		156.837	128.804
227	2.70805	0.722479		157.359	130.761
228	2.70805	0.732275		157.896	132.744
229	2.70805	0.745449		158.451	134.763
230	2.70805	0.755415		159.022	136.808
231	2.70805	0.765456		159.608	138.881
232	2.70805	0.778966		160.215	140.991
233	2.70805	0.789191		160.837	143.128
234	2.70805	0.7995	161.477	145.293	
235	2.70805	0.813379		162.138	147.496
236	2.70805	0.823893		162.817	149.727
237	2.70805	0.834498		163.513	151.987

238	2.70805	0.848786		164.234	154.285
239	2.70805	0.859618		164.973	156.613
240	2.70805	0.874218		165.737	158.98
241	2.70805	0.885291		166.521	161.378
242	2.70805	0.896473		167.325	163.806
243	2.70805	0.911562		168.155	166.274
244	2.70805	0.923014		169.007	168.774
245	2.70805	0.93459	169.881	171.305	
246	2.70805	0.950222		170.784	173.878
247	2.70805	0.9621	171.709	176.483	
248	2.70805	0.97815	172.666	179.132	
249	2.70805	0.990356		173.647	181.814
250	2.70805	1.00271	174.652	184.529	
251	2.70805	1.01943	175.692	187.29	
252	2.70805	1.03215	176.757	190.085	
253	2.70805	1.04505	177.849	192.915	
254	2.70805	1.06252	178.978	195.793	
255	2.70805	1.07584	180.136	198.706	
256	2.70805	1.08935	181.322	201.656	
257	2.70805	1.10768	182.549	204.656	
258	2.70805	1.12168	183.807	207.693	
259	2.70805	1.14069	185.108	210.782	
260	2.70805	1.15522	186.443	213.911	
261	2.70805	1.17	187.812	217.079	
262	2.70805	1.19012	189.228	220.302	
263	2.70805	1.20553	190.682	223.567	
264	2.70805	1.22123	192.173	226.874	
265	2.70805	1.24264	193.717	230.239	
266	2.70805	1.25908	195.302	233.649	
267	2.70805	1.27588	196.93	237.104	
268	2.70805	1.29884	198.617	240.621	
269	2.70805	1.31652	200.351	244.186	
270	2.70805	1.34075	202.148	247.817	
271	2.70805	1.35946	203.996	251.499	
272	2.70805	1.37866	205.897	255.232	
273	2.70805	1.40507	207.871	259.037	
274	2.70805	1.42554	209.903	262.898	
275	2.70805	1.44663	211.996	266.815	
276	2.70805	1.47579	214.174	270.812	
277	2.70805	1.49852	216.42	274.87	
278	2.70805	1.53007	218.761	279.013	
279	2.70805	1.55477	221.178	283.224	
280	2.70805	1.58047	223.676	287.504	
281	2.70805	1.61644	226.289	291.881	
282	2.70805	1.64485	228.994	296.335	
283	2.70805	1.67466	231.799	300.87	
284	2.70805	1.71688	234.747	305.52	
285	2.70805	1.75069	237.811	310.261	
286	2.70805	1.78661	241.003	315.099	
287	2.70805	1.83843	244.383	320.077	
288	2.70805	1.88079	247.921	325.171	
289	2.70805	1.94314	251.696	330.433	
290	2.70805	1.99539	255.678	335.837	
291	2.70805	2.05375	259.896	341.398	
292	2.70805	2.14441	264.494	347.205	
293	2.70805	2.22621	269.45	353.234	
294	2.70805	2.32634	274.862	359.534	
295	2.70805	2.51213	281.173	366.337	
296	2.89037	2.74777	288.723	374.279	

Data Set Standard Deviation = 1.42628

Numerator = 140085
Denominator = 173266
W Statistic = 0.808494 = 140085 / 173266

5% Critical value of 0.976 exceeds 0.808494
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.808494
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Nickel

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.897536
0.897536 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-1.60944	0.003367	-2.74777	80.7901	348.683
2	-1.60944	0.00673401	-2.51213	80.7901	337.176
3	-1.60944	0.010101	-2.32634	80.7901	328.103
4	-1.60944	0.013468	-2.22621	80.7901	323.213
5	-1.60944	0.016835	-2.14441	80.7901	319.219
6	-1.60944	0.020202	-2.05375	80.7901	314.791
7	-1.60944	0.023569	-1.99539	80.7901	311.942
8	-1.60944	0.026936	-1.94314	80.7901	309.39
9	-1.60944	0.030303	-1.88079	80.7901	306.345
10	-1.10866	0.03367	-1.83843	134.373	304.276
11	-0.967584	0.037037	-1.78661	149.469	301.746
12	-0.891598	0.040404	-1.75069	157.599	299.992
13	-0.891598	0.043771	-1.71688	157.599	298.341
14	-0.867501	0.047138	-1.67466	160.177	296.279
15	-0.820981	0.0505051	-1.64485	165.155	294.824
16	-0.798508	0.0538721	-1.61644	167.56	293.436
17	-0.776529	0.0572391	-1.58047	169.911	291.679
18	-0.71335	0.0606061	-1.55477	176.672	290.425
19	-0.693147	0.0639731	-1.53007	178.833	289.218
20	-0.673345	0.0673401	-1.49852	180.952	287.677
21	-0.653926	0.0707071	-1.47579	183.03	286.568
22	-0.634878	0.0740741	-1.44663	185.068	285.144
23	-0.616186	0.0774411	-1.42554	187.068	284.114
24	-0.597837	0.0808081	-1.40507	189.031	283.114
25	-0.597837	0.0841751	-1.37866	189.031	281.824
26	-0.597837	0.0875421	-1.35946	189.031	280.887
27	-0.597837	0.0909091	-1.34075	189.031	279.974
28	-0.510826	0.0942761	-1.31652	198.342	278.79
29	-0.510826	0.0976431	-1.29884	198.342	277.926
30	-0.494296	0.10101	-1.27588	200.11	276.805
31	-0.478036	0.104377	-1.25908	201.85	275.985
32	-0.462035	0.107744	-1.24264	203.562	275.182
33	-0.446287	0.111111	-1.22123	205.247	274.137
34	-0.446287	0.114478	-1.20553	205.247	273.37
35	-0.446287	0.117845	-1.19012	205.247	272.617
36	-0.430783	0.121212	-1.17	206.906	271.635
37	-0.430783	0.124579	-1.15522	206.906	270.913
38	-0.430783	0.127946	-1.14069	206.906	270.204
39	-0.415515	0.131313	-1.12168	208.54	269.275
40	-0.400478	0.13468	-1.10768	210.149	268.592
41	-0.371064	0.138047	-1.08935	213.296	267.697
42	-0.371064	0.141414	-1.07584	213.296	267.037
43	-0.356675	0.144781	-1.06252	214.836	266.386
44	-0.34249	0.148148	-1.04505	216.354	265.533
45	-0.34249	0.151515	-1.03215	216.354	264.904
46	-0.328504	0.154882	-1.01943	217.85	264.282
47	-0.328504	0.158249	-1.00271	217.85	263.466
48	-0.328504	0.161616	-0.990356	217.85	262.862

49	-0.314711	0.164983	-0.97815	219.326	262.266
50	-0.287682	0.16835	-0.9621	222.218	261.483
51	-0.274437	0.171717	-0.950222	223.635	260.903
52	-0.248461	0.175084	-0.93459	226.415	260.139
53	-0.235722	0.178451	-0.923014	227.778	259.574
54	-0.223144	0.181818	-0.911562	229.124	259.015
55	-0.174353	0.185185	-0.896473	234.344	258.278
56	-0.162519	0.188552	-0.885291	235.61	257.732
57	-0.162519	0.191919	-0.874218	235.61	257.191
58	-0.150823	0.195286	-0.859618	236.862	256.478
59	-0.139262	0.198653	-0.848786	238.099	255.949
60	-0.116534	0.20202	-0.834498	240.531	255.251
61	-0.105361	0.205387	-0.823893	241.726	254.733
62	-0.105361	0.208754	-0.813379	241.726	254.22
63	-0.0725707	0.212121	-0.7995	245.235	253.542
64	-0.0512933	0.215488	-0.789191	247.512	253.039
65	-0.0512933	0.218855	-0.778966	247.512	252.54
66	-0.0512933	0.222222	-0.765456	247.512	251.88
67	-0.0304592	0.225589	-0.755415	249.741	251.389
68	-0.0304592	0.228956	-0.745449	249.741	250.903
69	-0.0202027	0.232323	-0.732275	250.838	250.259
70	-0.0202027	0.23569	-0.722479	250.838	249.781
71	-0.0100503	0.239057	-0.709522	251.925	249.148
72	0	0.242424	-0.699883	253	248.678
73	0	0.245791	-0.690309	253	248.21
74	0	0.249158	-0.677639	253	247.591
75	0	0.252525	-0.668209	253	247.131
76	0	0.255892	-0.658838	253	246.673
77	0	0.259259	-0.646431	253	246.067
78	0	0.262626	-0.637192	253	245.616
79	0	0.265993	-0.628006	253	245.168
80	0	0.26936	-0.615839	253	244.573
81	0	0.272727	-0.606775	253	244.131
82	0	0.276094	-0.594766	253	243.544
83	0	0.279461	-0.585815	253	243.107
84	0	0.282828	-0.576911	253	242.672
85	0	0.286195	-0.565108	253	242.096
86	0	0.289562	-0.556308	253	241.666
87	0.0953102	0.292929	-0.547551	263.198	241.239
88	0.0953102	0.296296	-0.53594	263.198	240.672
89	0.0953102	0.299663	-0.52728	263.198	240.249
90	0.0953102	0.30303	-0.515791	263.198	239.688
91	0.0953102	0.306397	-0.507221	263.198	239.269
92	0.0953102	0.309764	-0.498687	263.198	238.853
93	0.0953102	0.313131	-0.487364	263.198	238.3
94	0.182322	0.316498	-0.478914	272.508	237.887
95	0.182322	0.319865	-0.470498	272.508	237.476
96	0.182322	0.323232	-0.459327	272.508	236.93
97	0.262364	0.326599	-0.450985	281.073	236.523
98	0.262364	0.329966	-0.442676	281.073	236.117
99	0.405465	0.333333	-0.431644	296.385	235.579
100	0.470004	0.3367	-0.423405	303.29	235.176
101	0.470004	0.340067	-0.412463	303.29	234.642
102	0.530628	0.343434	-0.40429	309.777	234.243
103	0.587787	0.346801	-0.396142	315.893	233.845
104	0.587787	0.350168	-0.385321	315.893	233.317
105	0.641854	0.353535	-0.377233	321.678	232.922
106	0.641854	0.356902	-0.369171	321.678	232.528
107	0.641854	0.360269	-0.358459	321.678	232.005
108	0.693147	0.363636	-0.350451	327.167	231.614
109	0.693147	0.367003	-0.33981	327.167	231.094
110	0.693147	0.37037	-0.331854	327.167	230.706

111	0.693147	0.373737	-0.323919	327.167	230.318
112	0.693147	0.377104	-0.31337	327.167	229.803
113	0.741937	0.380471	-0.305481	332.387	229.418
114	0.788457	0.383838	-0.297612	337.365	229.033
115	0.788457	0.387205	-0.287147	337.365	228.522
116	0.875469	0.390572	-0.279319	346.675	228.14
117	0.916291	0.393939	-0.271509	351.043	227.759
118	0.916291	0.397306	-0.26112	351.043	227.251
119	0.955511	0.400673	-0.253347	355.24	226.872
120	1.02962	0.40404	-0.243007	363.169	226.367
121	1.02962	0.407407	-0.235269	363.169	225.989
122	1.09861	0.410774	-0.227545	370.552	225.612
123	1.09861	0.414141	-0.217267	370.552	225.11
124	1.09861	0.417508	-0.209575	370.552	224.734
125	1.09861	0.420875	-0.201894	370.552	224.359
126	1.09861	0.424242	-0.191671	370.552	223.86
127	1.09861	0.427609	-0.184017	370.552	223.486
128	1.09861	0.430976	-0.176374	370.552	223.113
129	1.09861	0.434343	-0.166199	370.552	222.616
130	1.09861	0.43771	-0.158579	370.552	222.244
131	1.09861	0.441077	-0.148434	370.552	221.749
132	1.09861	0.444444	-0.140835	370.552	221.377
133	1.1314	0.447811	-0.133244	374.06	221.007
134	1.1314	0.451178	-0.123135	374.06	220.513
135	1.25276	0.454545	-0.115562	387.046	220.143
136	1.38629	0.457912	-0.107995	401.333	219.774
137	1.38629	0.461279	-0.0979139	401.333	219.281
138	1.41099	0.464646	-0.0903606	403.976	218.913
139	1.43508	0.468013	-0.0802981	406.554	218.421
140	1.60944	0.47138	-0.0727562	425.21	218.053
141	1.60944	0.474747	-0.0652187	425.21	217.685
142	1.60944	0.478114	-0.0551734	425.21	217.194
143	1.60944	0.481481	-0.0476439	425.21	216.827
144	1.70475	0.484848	-0.0401167	435.408	216.459
145	1.79176	0.488215	-0.0300838	444.718	215.969
146	1.79176	0.491582	-0.0225612	444.718	215.602
147	1.79176	0.494949	-0.0150408	444.718	215.234
148	1.79176	0.498316	-0.00501359	444.718	214.745
149	1.94591	0.501684	0.00501359	461.212	214.255
150	2.0149	0.505051	0.0150408	468.595	213.766
151	2.19722	0.508418	0.0225612	488.103	213.398
152	2.70805	0.511785	0.0300838	542.761	213.031
153	2.70805	0.515152	0.0401167	542.761	212.541
154	2.70805	0.518519	0.0476439	542.761	212.173
155	2.70805	0.521886	0.0551734	542.761	211.806
156	2.70805	0.525253	0.0652187	542.761	211.315
157	2.70805	0.52862	0.0727562	542.761	210.947
158	2.70805	0.531987	0.0802981	542.761	210.579
159	2.70805	0.535354	0.0903606	542.761	210.087
160	2.70805	0.538721	0.0979139	542.761	209.719
161	2.70805	0.542088	0.107995	542.761	209.226
162	2.70805	0.545455	0.115562	542.761	208.857
163	2.70805	0.548822	0.123135	542.761	208.487
164	2.70805	0.552189	0.133244	542.761	207.993
165	2.70805	0.555556	0.140835	542.761	207.623
166	2.70805	0.558923	0.148434	542.761	207.251
167	2.70805	0.56229	0.158579	542.761	206.756
168	2.70805	0.565657	0.166199	542.761	206.384
169	2.70805	0.569024	0.176374	542.761	205.887
170	2.70805	0.572391	0.184017	542.761	205.514
171	2.70805	0.575758	0.191671	542.761	205.14
172	2.70805	0.579125	0.201894	542.761	204.641

173	2.70805	0.582492	0.209575	542.761	204.266
174	2.70805	0.585859	0.217267	542.761	203.89
175	2.70805	0.589226	0.227545	542.761	203.388
176	2.70805	0.592593	0.235269	542.761	203.011
177	2.70805	0.59596	0.243007	542.761	202.633
178	2.70805	0.599327	0.253347	542.761	202.128
179	2.70805	0.602694	0.26112	542.761	201.749
180	2.70805	0.606061	0.271509	542.761	201.241
181	2.70805	0.609428	0.279319	542.761	200.86
182	2.70805	0.612795	0.287147	542.761	200.478
183	2.70805	0.616162	0.297612	542.761	199.967
184	2.70805	0.619529	0.305481	542.761	199.582
185	2.70805	0.622896	0.31337	542.761	199.197
186	2.70805	0.626263	0.323919	542.761	198.682
187	2.70805	0.62963	0.331854	542.761	198.294
188	2.70805	0.632997	0.33981	542.761	197.906
189	2.70805	0.636364	0.350451	542.761	197.386
190	2.70805	0.639731	0.358459	542.761	196.995
191	2.70805	0.643098	0.369171	542.761	196.472
192	2.70805	0.646465	0.377233	542.761	196.078
193	2.70805	0.649832	0.385321	542.761	195.683
194	2.70805	0.653199	0.396142	542.761	195.155
195	2.70805	0.656566	0.40429	542.761	194.757
196	2.70805	0.659933	0.412463	542.761	194.358
197	2.70805	0.6633	0.423405	542.761	193.824
198	2.70805	0.666667	0.431644	542.761	193.421
199	2.70805	0.670034	0.442676	542.761	192.883
200	2.70805	0.673401	0.450985	542.761	192.477
201	2.70805	0.676768	0.459327	542.761	192.07
202	2.70805	0.680135	0.470498	542.761	191.524
203	2.70805	0.683502	0.478914	542.761	191.113
204	2.70805	0.686869	0.487364	542.761	190.7
205	2.70805	0.690236	0.498687	542.761	190.147
206	2.70805	0.693603	0.507221	542.761	189.731
207	2.70805	0.69697	0.515791	542.761	189.312
208	2.70805	0.700337	0.52728	542.761	188.751
209	2.70805	0.703704	0.53594	542.761	188.328
210	2.70805	0.707071	0.547551	542.761	187.761
211	2.70805	0.710438	0.556308	542.761	187.334
212	2.70805	0.713805	0.565108	542.761	186.904
213	2.70805	0.717172	0.576911	542.761	186.328
214	2.70805	0.720539	0.585815	542.761	185.893
215	2.70805	0.723906	0.594766	542.761	185.456
216	2.70805	0.727273	0.606775	542.761	184.869
217	2.70805	0.73064	0.615839	542.761	184.427
218	2.70805	0.734007	0.628006	542.761	183.832
219	2.70805	0.737374	0.637192	542.761	183.384
220	2.70805	0.740741	0.646431	542.761	182.933
221	2.70805	0.744108	0.658838	542.761	182.327
222	2.70805	0.747475	0.668209	542.761	181.869
223	2.70805	0.750842	0.677639	542.761	181.409
224	2.70805	0.754209	0.690309	542.761	180.79
225	2.70805	0.757576	0.699883	542.761	180.322
226	2.70805	0.760943	0.709522	542.761	179.852
227	2.70805	0.76431	0.722479	542.761	179.219
228	2.70805	0.767677	0.732275	542.761	178.741
229	2.70805	0.771044	0.745449	542.761	178.097
230	2.70805	0.774411	0.755415	542.761	177.611
231	2.70805	0.777778	0.765456	542.761	177.12
232	2.70805	0.781145	0.778966	542.761	176.46
233	2.70805	0.784512	0.789191	542.761	175.961
234	2.70805	0.787879	0.7995	542.761	175.458

235	2.70805	0.791246	0.813379	542.761	174.78
236	2.70805	0.794613	0.823893	542.761	174.267
237	2.70805	0.79798	0.834498	542.761	173.749
238	2.70805	0.801347	0.848786	542.761	173.051
239	2.70805	0.804714	0.859618	542.761	172.522
240	2.70805	0.808081	0.874218	542.761	171.809
241	2.70805	0.811448	0.885291	542.761	171.268
242	2.70805	0.814815	0.896473	542.761	170.722
243	2.70805	0.818182	0.911562	542.761	169.985
244	2.70805	0.821549	0.923014	542.761	169.426
245	2.70805	0.824916	0.93459	542.761	168.861
246	2.70805	0.828283	0.950222	542.761	168.097
247	2.70805	0.83165	0.9621	542.761	167.517
248	2.70805	0.835017	0.97815	542.761	166.734
249	2.70805	0.838384	0.990356	542.761	166.138
250	2.70805	0.841751	1.00271	542.761	165.534
251	2.70805	0.845118	1.01943	542.761	164.718
252	2.70805	0.848485	1.03215	542.761	164.096
253	2.70805	0.851852	1.04505	542.761	163.467
254	2.70805	0.855219	1.06252	542.761	162.614
255	2.70805	0.858586	1.07584	542.761	161.963
256	2.70805	0.861953	1.08935	542.761	161.303
257	2.70805	0.86532	1.10768	542.761	160.408
258	2.70805	0.868687	1.12168	542.761	159.725
259	2.70805	0.872054	1.14069	542.761	158.796
260	2.70805	0.875421	1.15522	542.761	158.087
261	2.70805	0.878788	1.17	542.761	157.365
262	2.70805	0.882155	1.19012	542.761	156.383
263	2.70805	0.885522	1.20553	542.761	155.63
264	2.70805	0.888889	1.22123	542.761	154.863
265	2.70805	0.892256	1.24264	542.761	153.818
266	2.70805	0.895623	1.25908	542.761	153.015
267	2.70805	0.89899	1.27588	542.761	152.195
268	2.70805	0.902357	1.29884	542.761	151.074
269	2.70805	0.905724	1.31652	542.761	150.21
270	2.70805	0.909091	1.34075	542.761	149.026
271	2.70805	0.912458	1.35946	542.761	148.113
272	2.70805	0.915825	1.37866	542.761	147.176
273	2.70805	0.919192	1.40507	542.761	145.886
274	2.70805	0.922559	1.42554	542.761	144.886
275	2.70805	0.925926	1.44663	542.761	143.856
276	2.70805	0.929293	1.47579	542.761	142.432
277	2.70805	0.93266	1.49852	542.761	141.323
278	2.70805	0.936027	1.53007	542.761	139.782
279	2.70805	0.939394	1.55477	542.761	138.575
280	2.70805	0.942761	1.58047	542.761	137.321
281	2.70805	0.946128	1.61644	542.761	135.564
282	2.70805	0.949495	1.64485	542.761	134.176
283	2.70805	0.952862	1.67466	542.761	132.721
284	2.70805	0.956229	1.71688	542.761	130.659
285	2.70805	0.959596	1.75069	542.761	129.008
286	2.70805	0.962963	1.78661	542.761	127.254
287	2.70805	0.96633	1.83843	542.761	124.724
288	2.70805	0.969697	1.88079	542.761	122.655
289	2.70805	0.973064	1.94314	542.761	119.61
290	2.70805	0.976431	1.99539	542.761	117.058
291	2.70805	0.979798	2.05375	542.761	114.209
292	2.70805	0.983165	2.14441	542.761	109.781
293	2.70805	0.986532	2.22621	542.761	105.787
294	2.70805	0.989899	2.32634	542.761	100.897
295	2.70805	0.993266	2.51213	542.761	91.8241
296	2.89037	0.996633	2.74777	562.27	80.3175

Kruskal-Wallis Non-Parametric Test

Parameter: Nickel

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	ND<2.70805	77
	3/16/1999	ND<2.70805	77
	9/23/1999	ND<2.70805	77
	3/14/2000	ND<2.70805	77
	9/23/2003	ND<2.70805	77
	3/10/2004	ND<2.70805	77
	10/12/2004	ND<2.70805	77
	4/1/2005	ND<2.70805	77
	10/26/2005	ND<2.70805	77
	6/19/2006	ND<2.70805	77
	11/18/2006	0 J	216
	6/2/2007	1.79176	289
	11/15/2007	1.09861 J	266
	5/20/2008	1.60944 J	284
	11/20/2008	ND<2.70805	77
	6/11/2009	-0.235722	197
	11/16/2009	0.182322	238
	6/30/2010	-0.274437 J	195
	11/17/2010	0.0953102	231
	7/6/2011	0.182322	239
	11/22/2011	0.0953102	232
	5/16/2012	-0.478036 J	175
	11/16/2012	0.0953102	233
	11/16/2013	-0.867501 J	158

Rank Sum = 3800
Rank Mean = 158.333

Background Rank Sum = 3800
Background Rank Mean = 158.333

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-8	1/16/1998	ND<2.70805	77
	3/16/1999	1.79176 J	290
	9/23/1999	ND<2.70805	77
	3/14/2000	ND<2.70805	77
	9/23/2003	ND<2.70805	77
	3/10/2004	ND<2.70805	77
	10/12/2004	ND<2.70805	77
	4/1/2005	ND<2.70805	77
	10/26/2005	ND<2.70805	77
	6/19/2006	ND<2.70805	77
	11/18/2006	0 J	217
	6/2/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	5/20/2008	0 J	218
	11/20/2008	ND<2.70805	77
	6/11/2009	-0.494296	174

	11/16/2009	-0.446287	177
	6/30/2010	-0.371064 J	185
	11/17/2010	-0.430783 J	180
	7/6/2011	-0.0512933 J	208
	11/22/2011	0.262364	241
	5/16/2012	-0.597837 J	168
	11/16/2012	-0.446287 J	178
	11/16/2013	ND<-1.60944 U	77

Rank Sum = 3237
Rank Mean = 134.875

LMW-9	1/16/1998	ND<2.70805	77
	3/16/1999	1.79176 J	291
	9/23/1999	ND<2.70805	77
	3/14/2000	ND<2.70805	77
	9/23/2003	ND<2.70805	77
	3/10/2004	ND<2.70805	77
	10/12/2004	ND<2.70805	77
	4/1/2005	ND<2.70805	77
	10/26/2005	ND<2.70805	77
	6/19/2006	ND<2.70805	77
	11/18/2006	ND<2.70805	77
	6/2/2007	1.09861 J	267
	11/15/2007	ND<2.70805	77
	5/20/2008	0 J	219
	11/20/2008	2.19722 J	295
	6/11/2009	-1.10866 J	154
	11/16/2009	-0.776529 J	161
	6/30/2010	ND<-1.60944 U	77
	11/17/2010	-0.462035 J	176
	7/6/2011	-0.0202027 J	213
	11/22/2011	-0.597837 J	169
	5/16/2012	0.875469	260
	11/16/2012	1.25276	279
	11/16/2013	0.0953102	234

Rank Sum = 3642
Rank Mean = 151.75

LMW-10	3/14/2000	ND<2.70805	77
	9/23/2003	ND<2.70805	77
	3/10/2004	ND<2.70805	77
	10/12/2004	ND<2.70805	77
	4/1/2005	ND<2.70805	77
	10/26/2005	ND<2.70805	77
	6/19/2006	ND<2.70805	77
	11/18/2006	ND<2.70805	77
	6/2/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	5/20/2008	0 J	220
	11/20/2008	ND<2.70805	77
	6/11/2009	-0.967584 J	155
	11/16/2009	-0.693147 J	163
	6/30/2010	ND<-1.60944 U	77
	11/17/2010	ND<-1.60944 U	77
	7/6/2011	-0.356675 J	187
	11/22/2011	-0.116534 J	204
	5/16/2012	ND<-1.60944 U	77
	11/16/2012	-0.34249 J	188
	11/16/2013	-0.798508 J	160

Rank Sum = 2355
Rank Mean = 112.143

LMW-14R	6/2/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	5/20/2008	0.693147 J	252
	11/20/2008	1.09861 J	268
	6/11/2009	0.788457	258
	6/30/2010	-0.174353 J	199
	11/17/2010	0.641854	249
	7/6/2011	0.587787	247
	11/22/2011	0.470004	244
	5/16/2012	-0.430783 J	181
	11/16/2012	0.0953102	235
	11/16/2013	-0.139262 J	203

Rank Sum = 2490
Rank Mean = 207.5

LMW-15R	11/18/2006	0 J	221
	6/2/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	5/20/2008	ND<2.70805	77
	5/20/2008	0 J	222
	11/20/2008	ND<2.70805	77
	11/20/2008	ND<2.70805	77
	6/11/2009	1.09861	269
	6/30/2010	0	223
	11/17/2010	-0.0202027 J	214
	7/6/2011	-0.0725707 J	207
	11/22/2011	-0.105361 J	205
	5/16/2012	-0.510826 J	172
	11/16/2012	-0.248461 J	196
	11/16/2013	-0.150823 J	202

Rank Sum = 2593
Rank Mean = 162.063

LMW-16	11/18/2006	0 J	224
	6/2/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	5/20/2008	ND<2.70805	77
	11/20/2008	ND<2.70805	77
	6/11/2009	-0.328504	190
	11/16/2009	-0.415515	183
	6/30/2010	-0.0304592 J	211
	11/17/2010	ND<-1.60944 U	77
	7/6/2011	-0.430783 J	182
	11/22/2011	-0.105361 J	206
	5/16/2012	-0.597837 J	170
	11/16/2012	-0.0512933 J	209
	11/16/2013	-0.71335 J	162

Rank Sum = 2122
Rank Mean = 151.571

LMW-3	11/19/1996	ND<2.70805	77
	3/24/1997	ND<2.70805	77
	1/16/1998	ND<2.70805	77
	3/16/1999	ND<2.70805	77
	9/23/1999	ND<2.70805	77
	3/14/2000	ND<2.70805	77
	9/23/2003	ND<2.70805	77
	3/10/2004	ND<2.70805	77
	10/12/2004	ND<2.70805	77
	4/1/2005	ND<2.70805	77
	10/26/2005	ND<2.70805	77

	6/19/2006	ND<2.70805	77
	11/18/2006	ND<2.70805	77
	6/2/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	5/20/2008	0 J	225
	11/20/2008	ND<2.70805	77
	6/11/2009	-0.616186 J	167
	11/16/2009	0.0953102	236
	6/30/2010	0.262364	242
	11/17/2010	1.09861	270
	7/6/2011	-0.162519 J	200
	11/22/2011	1.09861	271
	5/16/2012	-0.673345 J	164
	11/16/2012	0	226
	11/16/2013	-0.891598 J	156

Rank Sum = 3389
Rank Mean = 130.346

LMW-3S	11/18/2006	0.693147 J	253
	6/2/2007	1.38629 J	280
	11/15/2007	1.60944 J	285
	5/20/2008	1.09861 J	272
	11/20/2008	1.09861 J	273
	6/11/2009	0.955511	263
	11/16/2009	1.02962	264
	6/30/2010	1.41099	282
	11/17/2010	1.1314	277
	7/6/2011	1.1314	278
	11/22/2011	-0.0512933 J	210
	5/16/2012	1.02962	265
	11/16/2012	1.09861	274
	11/16/2013	0.916291	261

Rank Sum = 3737
Rank Mean = 266.929

LMW-9S	11/18/2006	0 J	227
	6/2/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	5/20/2008	0 J	228
	11/20/2008	ND<2.70805	77
	6/11/2009	0.182322	240
	11/16/2009	-0.223144 J B	198
	11/16/2009	-0.0304592 J B	212
	11/16/2009	0.470004 J B	245
	6/30/2010	ND<-1.60944 U	77
	11/17/2010	-0.820981 J	159
	7/6/2011	-0.400478 J	184
	11/22/2011	-0.328504 J	191
	5/16/2012	ND<-1.60944 U	77
	11/16/2012	-0.34249 J	189
	11/16/2013	-0.891598 J	157

Rank Sum = 2615
Rank Mean = 163.438

LMW-9D	11/18/2006	0.693147 J	254
	6/2/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	5/20/2008	0 J	229
	11/20/2008	ND<2.70805	77
	6/11/2009	-0.597837 J	171
	11/16/2009	-0.371064	186
	6/30/2010	-0.634878 J	166

	11/17/2010	-0.510826 J	173
	7/6/2011	0.916291	262
	11/22/2011	-0.287682 J	194
	5/16/2012	ND<-1.60944 U	77
	11/16/2012	-0.314711 J	193
	11/16/2013	-0.653926 J	165

Rank Sum = 2301
Rank Mean = 164.357

LMW-6	1/16/1998	ND<2.70805	77
	3/16/1999	ND<2.70805	77
	9/23/1999	ND<2.70805	77
	3/14/2000	ND<2.70805	77
	9/23/2003	ND<2.70805	77
	3/10/2004	ND<2.70805	77
	10/12/2004	ND<2.70805	77
	4/1/2005	ND<2.70805	77
	10/26/2005	ND<2.70805	77
	6/19/2006	ND<2.70805	77
	11/18/2006	0 J	230
	6/2/2007	1.60944	286
	11/15/2007	ND<2.70805	77
	5/20/2008	0.693147 J	255
	11/20/2008	ND<2.70805	77
	6/11/2009	0.788457	259
	11/16/2009	0.587787 J	248
	6/30/2010	0.641854	250
	11/17/2010	0.641854	251
	7/6/2011	0.0953102	237
	11/22/2011	-0.0100503 J	215
	5/16/2012	-0.446287 J	179
	11/16/2012	-0.162519 J	201
	11/16/2013	-0.328504 J	192

Rank Sum = 3727
Rank Mean = 155.292

LMW-7	1/16/1998	ND<2.70805	77
	3/16/1999	ND<2.70805	77
	9/23/1999	ND<2.70805	77
	3/14/2000	ND<2.70805	77
	9/23/2003	ND<2.70805	77
	3/10/2004	ND<2.70805	77
	10/12/2004	ND<2.70805	77
	4/1/2005	2.89037 J	296
	10/26/2005	ND<2.70805	77
	6/19/2006	ND<2.70805	77
	11/18/2006	1.38629 J	281
	6/2/2007	1.94591	293
	11/15/2007	1.60944 J	287
	5/20/2008	0.693147 J	256
	11/20/2008	1.09861 J	275
	6/11/2009	1.70475	288
	11/17/2010	0.530628	246
	7/6/2011	2.0149	294
	11/22/2011	0.405465	243
	5/16/2012	1.43508	283
	11/16/2012	0.741937	257

Rank Sum = 3992
Rank Mean = 190.095

MW-5	1/16/1998	ND<2.70805	77
	3/16/1999	1.79176 J	292

	9/23/1999	ND<2.70805	77
	3/14/2000	ND<2.70805	77
	9/23/2003	ND<2.70805	77
	3/10/2004	ND<2.70805	77
	10/12/2004	ND<2.70805	77
	4/1/2005	ND<2.70805	77
	10/26/2005	ND<2.70805	77
	6/19/2006	ND<2.70805	77
	11/15/2007	1.09861 J	276
	5/20/2008	ND<2.70805	77
	11/20/2008	ND<2.70805	77

Rank Sum = 1415
Rank Mean = 108.846

LMW-11	3/14/2000	ND<2.70805	77
	9/23/2003	ND<2.70805	77
	3/10/2004	ND<2.70805	77
	10/12/2004	ND<2.70805	77
	4/1/2005	ND<2.70805	77
	10/26/2005	ND<2.70805	77
	6/19/2006	ND<2.70805	77
	6/2/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	5/20/2008	ND<2.70805	77
	11/20/2008	ND<2.70805	77

Rank Sum = 847
Rank Mean = 77

LMW-12	3/14/2000	ND<2.70805	77
	9/23/2003	ND<2.70805	77
	3/10/2004	ND<2.70805	77
	10/12/2004	ND<2.70805	77
	4/1/2005	ND<2.70805	77
	10/26/2005	ND<2.70805	77
	6/19/2006	ND<2.70805	77
	6/2/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	5/20/2008	ND<2.70805	77
	11/20/2008	ND<2.70805	77

Rank Sum = 847
Rank Mean = 77

LMW-13	3/14/2000	ND<2.70805	77
	9/23/2003	ND<2.70805	77
	3/10/2004	ND<2.70805	77
	10/12/2004	ND<2.70805	77
	4/1/2005	ND<2.70805	77
	10/26/2005	ND<2.70805	77
	6/19/2006	ND<2.70805	77
	6/2/2007	ND<2.70805	77
	11/15/2007	ND<2.70805	77
	5/20/2008	ND<2.70805	77
	11/20/2008	ND<2.70805	77

Rank Sum = 847
Rank Mean = 77

Calculation Results:

Kruskal-Wallis H Statistic = 70.7392
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 82.0733
95% Confidence comparison value is 26.2962 at 16 degrees of freedom

70.7392 > 26.2962 indicating a significant group difference at 5% significance level
82.0733 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 158.333

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-8	134.875	-23.458	57.48
LMW-9	151.75	-6.58333	57.48
LMW-10	112.143	-46.1905	59.4974
LMW-14R	207.5	49.1667	70.3983
LMW-15R	162.063	3.72917	64.2645
LMW-16	151.571	-6.7619	66.9621
LMW-3	130.346	-27.9872	56.3637
LMW-3S	266.929	108.595	66.9621
LMW-9S	163.438	5.10417	64.2645
LMW-9D	164.357	6.02381	66.9621
LMW-6	155.292	-3.04167	57.48
LMW-7	190.095	31.7619	59.4974
MW-5	108.846	-49.4872	68.5694
LMW-11	77	-81.333	72.5002
LMW-12	77	-81.333	72.5002
LMW-13	77	-81.333	72.5002

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 158.333

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-8	134.875	-23.458	67.8926
LMW-9	151.75	-6.58333	67.8926
LMW-10	112.143	-46.1905	70.2755
LMW-14R	207.5	49.1667	83.1511
LMW-15R	162.063	3.72917	75.9062
LMW-16	151.571	-6.7619	79.0925
LMW-3	130.346	-27.9872	66.5742
LMW-3S	266.929	108.595	79.0925
LMW-9S	163.438	5.10417	75.9062
LMW-9D	164.357	6.02381	79.0925
LMW-6	155.292	-3.04167	67.8926
LMW-7	190.095	31.7619	70.2755
MW-5	108.846	-49.4872	80.991
LMW-11	77	-81.333	85.6338
LMW-12	77	-81.333	85.6338
LMW-13	77	-81.333	85.6338

Mann-Kendall Trend Analysis
Parameter: Nickel
Location: LMW-3S
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
1.38629 J		0.693147 J	0.693147	1	0
1.60944 J		0.693147 J	0.916291	2	0
1.09861 J		0.693147 J	0.405465	3	0
1.09861 J		0.693147 J	0.405465	4	0
0.955511		0.693147 J	0.262364	5	0
1.02962		0.693147 J	0.336472	6	0
1.41099		0.693147 J	0.71784	7	0
1.1314	0.693147 J	0.438255	8	0
1.1314	0.693147 J	0.438255	9	0
-0.0512933 J		0.693147 J	-0.744449	1
1.02962		0.693147 J	0.336472	10	1
1.09861		0.693147 J	0.405465	11	1
0.916291		0.693147 J	0.223144	12	1
1.60944 J		1.38629 J	0.223144	13	1
1.09861 J		1.38629 J	-0.287682	13	2
1.09861 J		1.38629 J	-0.287682	13	3
0.955511		1.38629 J	-0.430783	13	4
1.02962		1.38629 J	-0.356675	13	5
1.41099		1.38629 J	0.0246926	14	5
1.1314	1.38629 J	-0.254892	14	6
1.1314	1.38629 J	-0.254892	14	7
-0.0512933 J		1.38629 J	-1.4375914	8
1.02962		1.38629 J	-0.356675	14	9
1.09861		1.38629 J	-0.287682	14	10
0.916291		1.38629 J	-0.470004	14	11
1.09861 J		1.60944 J	-0.510826	14	12
1.09861 J		1.60944 J	-0.510826	14	13
0.955511		1.60944 J	-0.653926	14	14
1.02962		1.60944 J	-0.579818	14	15
1.41099		1.60944 J	-0.198451	14	16
1.1314	1.60944 J	-0.478036	14	17
1.1314	1.60944 J	-0.478036	14	18
-0.0512933 J		1.60944 J	-1.6607314	19
1.02962		1.60944 J	-0.579818	14	20
1.09861		1.60944 J	-0.510826	14	21
0.916291		1.60944 J	-0.693147	14	22
1.09861 J		1.09861 J	0	14	22
0.955511		1.09861 J	-0.143101	14	23
1.02962		1.09861 J	-0.0689929	14	24
1.41099		1.09861 J	0.312375	15	24
1.1314	1.09861 J	0.0327898	16	24
1.1314	1.09861 J	0.0327898	17	24
-0.0512933 J		1.09861 J	-1.1499117	25
1.02962		1.09861 J	-0.0689929	17	26
1.09861		1.09861 J	0	17	26
0.916291		1.09861 J	-0.182322	17	27

0.955511	1.09861 J	-0.143101	17	28
1.02962	1.09861 J	-0.0689929	17	29
1.41099	1.09861 J	0.312375	18	29
1.1314	1.09861 J	0.0327898	19	29
1.1314	1.09861 J	0.0327898	20	29
-0.0512933 J	1.09861 J	-1.149912	0	30
1.02962	1.09861 J	-0.0689929	20	31
1.09861	1.09861 J	0	20	31
0.916291	1.09861 J	-0.182322	20	32
1.02962	0.955511	0.074108	21	32
1.41099	0.955511	0.455476	22	32
1.1314	0.955511	0.175891	23	32
1.1314	0.955511	0.175891	24	32
-0.0512933 J	0.955511	-1.0068	24	33
1.02962	0.955511	0.074108	25	33
1.09861	0.955511	0.143101	26	33
0.916291	0.955511	-0.0392207	26	34
1.41099	1.02962	0.381368	27	34
1.1314	1.02962	0.101783	28	34
1.1314	1.02962	0.101783	29	34
-0.0512933 J	1.02962	-1.080912	9	35
1.02962	1.02962	0	29	35
1.09861	1.02962	0.0689929	30	35
0.916291	1.02962	-0.113329	30	36
1.1314	1.41099	-0.279585	30	37
1.1314	1.41099	-0.279585	30	38
-0.0512933 J	1.41099	-1.462283	0	39
1.02962	1.41099	-0.381368	30	40
1.09861	1.41099	-0.312375	30	41
0.916291	1.41099	-0.494696	30	42
1.1314	1.1314	0	30	42
-0.0512933 J	1.1314	-1.1827	30	43
1.02962	1.1314	-0.101783	30	44
1.09861	1.1314	-0.0327898	30	45
0.916291	1.1314	-0.215111	30	46
-0.0512933 J	1.1314	-1.1827	30	47
1.02962	1.1314	-0.101783	30	48
1.09861	1.1314	-0.0327898	30	49
0.916291	1.1314	-0.215111	30	50
1.02962	-0.0512933 J	1.08091	31	50
1.09861	-0.0512933 J	1.14991	32	50
0.916291	-0.0512933 J	0.967584	33	50
1.09861	1.02962	0.0689929	34	50
0.916291	1.02962	-0.113329	34	51
0.916291	1.09861	-0.182322	34	52

S Statistic = 34 - 52 = -18

Tied Group Value Members

1	1.09861	3
2	1.02962	2
3	1.1314	2

Time Period	Observations
11/18/2006	1
6/2/2007	1
11/15/2007	1
5/20/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1
11/17/2010	1
7/6/2011	1
11/22/2011	1
5/16/2012	1
11/16/2012	1
11/16/2013	1

There are 0 time periods with multiple data

A = 102
B = 0
C = 6
D = 0
E = 10
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 328
Z-Score = -0.938668
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.938668| <= 1.97737 indicating no evidence of a trend

Shewhart-CUSUM Control Chart

Parameter: Nickel

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = 1.37847
Baseline Std Dev = 1.37173
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std	Mean
11/18/2006	0.693147	0	-0.499602	
11/18/2006	0.693147	0	-0.499602	
6/2/2007	1.38629	0	0.00570521	
6/2/2007	1.38629	0	0.00570521	
11/15/2007	1.60944	0	0.168378	
11/15/2007	1.60944	0	0.168378	
5/20/2008	1.09861	0	-0.204016	
5/20/2008	1.09861	0	-0.204016	
11/20/2008	1.09861	0	-0.204016	
11/20/2008	1.09861	0	-0.204016	
6/11/2009	0.955511	0	-0.308337	
6/11/2009	0.955511	0	-0.308337	
11/16/2009	1.02962	0	-0.254312	
11/16/2009	1.02962	0	-0.254312	
6/30/2010	1.41099	0	0.0237062	
6/30/2010	1.41099	0	0.0237062	
11/17/2010	1.1314	0	-0.180112	
11/17/2010	1.1314	0	-0.180112	
7/6/2011	1.1314	0	-0.180112	
7/6/2011	1.1314	0	-0.180112	
11/22/2011	-0.0512933	0	-1.0423	
11/22/2011	-0.0512933	0	-1.0423	
5/16/2012	1.02962	0	-0.254312	
5/16/2012	1.02962	0	-0.254312	
11/16/2012	1.09861	0	-0.204016	
11/16/2012	1.09861	0	-0.204016	
11/16/2013	0.916291	0	-0.33693	
11/16/2013	0.916291	0	-0.33693	

Concentrations (ppb)

Parameter: Nitrate

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 183
Total Non-Detect: 74
Percent Non-Detects: 40.4372%
Total Background Measurements: 13
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	13	8 (61.5385%)	11/18/2006	50	50
			6/2/2007	643000	643000
			11/15/2007	ND<10	ND<10
			5/20/2008	369	369
			11/20/2008	ND<10	ND<10
			11/16/2009	ND<360 U	ND<360 U
			6/30/2010	84 J	84 J
			11/17/2010	ND<0.072 U	ND<0.072 U
			7/6/2011	ND<0.075 U	ND<0.075 U
			11/22/2011	ND<75 U	ND<75 U
			5/16/2012	ND<0.36 U	ND<0.36 U
			11/16/2012	ND<360 U	ND<360 U
			11/16/2013	71	71

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-14R	11	5 (45.4545%)	6/2/2007	326	326
			11/15/2007	ND<10	ND<10
			5/20/2008	371	371
			11/20/2008	ND<10	ND<10
			6/30/2010	ND<36 U	ND<36 U
			11/17/2010	ND<0.072 U	ND<0.072 U
			7/6/2011	350	350
			11/22/2011	120 J	120 J
			5/16/2012	360	360
			11/16/2012	ND<360 U	ND<360 U
			11/16/2013	39 J	39 J
LMW-3S	13	3 (23.0769%)	11/18/2006	321	321
			6/2/2007	196	196
			11/15/2007	ND<10	ND<10
			5/20/2008	546	546
			11/20/2008	ND<10	ND<10
			11/16/2009	710 J M	710 J M
			6/30/2010	ND<36 U	ND<36 U
			11/17/2010	0.088 J	0.088 J
			7/6/2011	150 J	150 J
			11/22/2011	240 J	240 J
			5/16/2012	820 J	820 J
			11/16/2012	770 J	770 J
			11/16/2013	270	270
LMW-10	13	2 (15.3846%)	11/18/2006	551	551
			6/2/2007	1020	1020
			11/15/2007	ND<10	ND<10
			5/20/2008	406	406

			11/20/2008	ND<10	ND<10	
			11/16/2009	2400	2400	
			6/30/2010	370	370	
			11/17/2010	0.52	0.52	
			7/6/2011	580	580	
			11/22/2011	510	510	
			5/16/2012	1300	1300	
			11/16/2012	1300	1300	
			11/16/2013	670	670	
LMW-16	13	7 (53.8462%)	11/18/2006	52	52	
			6/2/2007	166	166	
			11/15/2007	ND<10	ND<10	
			5/20/2008	377	377	
			11/20/2008	ND<10	ND<10	
			11/16/2009	ND<360 U		ND<360 U
			6/30/2010	ND<36 U		ND<36 U
			11/17/2010	ND<0.072 U		ND<0.072 U
			7/6/2011	180 J	180 J	
			11/22/2011	240 J	240 J	
			5/16/2012	ND<0.36 U		ND<0.36 U
			11/16/2012	ND<360 U		ND<360 U
			11/16/2013	39 J	39 J	
LMW-3	13	2 (15.3846%)	11/18/2006	333	333	
			6/2/2007	209	209	
			11/15/2007	ND<10	ND<10	
			5/20/2008	515	515	
			11/20/2008	ND<10	ND<10	
			11/16/2009	870 J H	870 J H	
			6/30/2010	78 J M	78 J M	
			11/17/2010	0.19 J	0.19 J	
			7/6/2011	730	730	
			11/22/2011	200 J	200 J	
			5/16/2012	660 J	660 J	
			11/16/2012	730 J	730 J	
			11/16/2013	230	230	
LMW-15R		15	6 (40%)	11/18/2006	4780	4780
			6/2/2007	1400	1400	
			11/15/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			6/30/2010	2100	2100	
			11/17/2010	1.6	1.6	
			7/6/2011	68000 J	68000 J	
			11/22/2011	1800	1800	
			5/16/2012	1600	1600	
			11/16/2012	7400	7400	
			11/16/2013	2300	2300	
LMW-8	13	5 (38.4615%)	11/18/2006	216	216	
			6/2/2007	398	398	
			11/15/2007	ND<10	ND<10	
			5/20/2008	570	570	
			11/20/2008	ND<10	ND<10	
			11/16/2009	740 J	740 J	
			6/30/2010	45 J	45 J	
			11/17/2010	0.61	0.61	

			7/6/2011	260	260	
			11/22/2011	ND<75 U		ND<75 U
			5/16/2012	ND<0.36 U		ND<0.36 U
			11/16/2012	ND<360 U		ND<360 U
			11/16/2013	430	430	
LMW-9S	15	8 (53.3333%)	11/18/2006	109	109	
			6/2/2007	1000	1000	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			11/16/2009	770 J M H		770 J M H
			11/16/2009	7300 H	7300 H	
			11/16/2009	ND<360 U		ND<360 U
			6/30/2010	60 J	60 J	
			11/17/2010	0.21 J	0.21 J	
			7/6/2011	ND<0.075 U	ND<0.075 U	
			11/22/2011	2300 J	2300 J	
			5/16/2012	ND<0.075 U		ND<0.075 U
			11/16/2012	ND<360 U		ND<360 U
			11/16/2013	ND<25 U		ND<25 U
LMW-9D	13	4 (30.7692%)	11/18/2006	107	107	
			6/2/2007	461	461	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			11/16/2009	430 J M H		430 J M H
			6/30/2010	58 J	58 J	
			11/17/2010	0.097 J	0.097 J	
			7/6/2011	130 J	130 J	
			11/22/2011	330	330	
			5/16/2012	85 J	85 J	
			11/16/2012	ND<360 U		ND<360 U
			11/16/2013	110	110	
LMW-9	13	4 (30.7692%)	11/18/2006	99	99	
			6/2/2007	17200	17200	
			11/15/2007	ND<10	ND<10	
			5/20/2008	455	455	
			11/20/2008	ND<10	ND<10	
			11/16/2009	450 J M H		450 J M H
			6/30/2010	45 J	45 J	
			11/17/2010	0.094 J	0.094 J	
			7/6/2011	110 J	110 J	
			11/22/2011	98 J	98 J	
			5/16/2012	ND<360 U		ND<360 U
			11/16/2012	ND<360 U		ND<360 U
			11/16/2013	110	110	
LMW-6	13	3 (23.0769%)	11/18/2006	1150	1150	
			6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	1410	1410	
			11/20/2008	ND<10	ND<10	
			11/16/2009	5000	5000	
			6/30/2010	880	880	
			11/17/2010	1.4	1.4	
			7/6/2011	1700	1700	
			11/22/2011	1200	1200	
			5/16/2012	5500	5500	
			11/16/2012	5600	5600	

			11/16/2013	1800	1800	
LMW-7	10	2 (20%)	11/18/2006	119	119	
			6/2/2007 295	295		
			11/15/2007	ND<10	ND<10	
			5/20/2008	128	128	
			11/20/2008	ND<10	ND<10	
			11/17/2010	0.56 J	0.56 J	
			7/6/2011 86 J	86 J		
			11/22/2011	120 J	120 J	
			5/16/2012	360 J	360 J	
			11/16/2012	790 J	790 J	
MW-5	3	3 (100%)	11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
LMW-12	4	4 (100%)	6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
LMW-11	4	4 (100%)	6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
LMW-13	4	4 (100%)	6/2/2007	ND<10	ND<10	
			11/15/2007	ND<10	ND<10	
			5/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Nitrate

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 183

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.036	-2.57583	6.63492	-0.09273
2	0.036	-2.32634	12.0468	-0.176478
3	0.036	-2.14441	16.6453	-0.253677
4	0.0375	-2.03352	20.7805	-0.329934
5	0.0375	-1.92684	24.4932	-0.40219
6	0.0375	-1.85218	27.9237	-0.471647
7	0.088	-1.77438	31.0722	-0.627792
8	0.094	-1.71688	34.0199	-0.78918
9	0.097	-1.66456	36.7906	-0.950642
10	0.18	-1.60725	39.3739	-1.23995
11	0.18	-1.56322	41.8175	-1.52133
12	0.18	-1.5141	44.11	-1.79387
13	0.19	-1.47579	46.288	-2.07427
14	0.21	-1.4325	48.3401	-2.37509
15	0.52	-1.39838	50.2955	-3.10225
16	0.56	-1.36581	52.161	-3.8671
17	0.61	-1.32854	53.926	-4.67751
18	1.4	-1.29884	55.6129	-6.49588
19	1.6	-1.26464	57.2123	-8.5193
20	5	-1.23724	58.743	-14.7055
21	5	-1.20553	60.1963	-20.7331
22	5	-1.18	61.5887	-26.6331
23	5	-1.15035	62.912	-32.3849
24	5	-1.12639	64.1808	-38.0168
25	5	-1.10306	65.3975	-43.5321
26	5	-1.07584	66.5549	-48.9113
27	5	-1.05375	67.6653	-54.18
28	5	-1.02789	68.7219	-59.3195
29	5	-1.00687	69.7357	-64.3538
30	5	-0.982202	70.7004	-69.2648
31	5	-0.9621	71.626	-74.0753
32	5	-0.942375	72.5141	-78.7872
33	5	-0.919183	73.359	-83.3831
34	5	-0.900227	74.1694	-87.8843
35	5	-0.877897	74.9401	-92.2737
36	5	-0.859618	75.679	-96.5718
37	5	-0.838054	76.3814	-100.762
38	5	-0.820379	77.0544	-104.864
39	5	-0.802956	77.6991	-108.879
40	5	-0.782366	78.3112	-112.791
41	5	-0.765456	78.8972	-116.618
42	5	-0.745449	79.4528	-120.345
43	5	-0.729003	79.9843	-123.99
44	5	-0.709522	80.4877	-127.538
45	5	-0.693493	80.9686	-131.005
46	5	-0.674498	81.4236	-134.378
47	5	-0.658838	81.8577	-137.672
48	5	-0.643345	82.2715	-140.889
49	5	-0.624956	82.6621	-144.013
50	5	-0.609791	83.034	-147.062
51	5	-0.591776	83.3842	-150.021

52	5	-0.576911	83.717	-152.906
53	5	-0.559237	84.0297	-155.702
54	5	-0.544642	84.3264	-158.425
55	5	-0.530162	84.6074	-161.076
56	5	-0.5129384.8705	-163.641	
57	5	-0.498687	85.1192	-166.134
58	5	-0.481728	85.3513	-168.543
59	5	-0.467699	85.57	-170.881
60	5	-0.450985	85.7734	-173.136
61	5	-0.437153	85.9645	-175.322
62	5	-0.423405	86.1438	-177.439
63	5	-0.4070186.3094	-179.474	
64	5	-0.393433	86.4642	-181.441
65	5	-0.377233	86.6065	-183.327
66	5	-0.363809	86.7389	-185.146
67	5	-0.347787	86.8599	-186.885
68	12.5	-0.334503	86.9717	-191.067
69	18	-0.318639	87.0733	-196.802
70	18	-0.305481	87.1666	-202.301
71	18	-0.292375	87.2521	-207.563
72	37.5	-0.276714	87.3287	-217.94
73	37.5	-0.263715	87.3982	-227.83
74	39	-0.248174	87.4598	-237.508
75	39	-0.235269	87.5151	-246.684
76	45	-0.219834	87.5635	-256.576
77	45	-0.207012	87.6063	-265.892
78	50	-0.194225	87.644	-275.603
79	52	-0.1789287.6761	-284.907	
80	58	-0.166199	87.7037	-294.547
81	60	-0.150969	87.7265	-303.605
82	71	-0.138305	87.7456	-313.424
83	78	-0.123135	87.7608	-323.029
84	84	-0.110516	87.773	-332.312
85	85	-0.0979139	87.7826	-340.635
86	86	-0.0828129	87.7894	-347.757
87	98	-0.0702426	87.7944	-354.641
88	99	-0.0551734	87.7974	-360.103
89	107	-0.0426257	87.7992	-364.664
90	109	-0.0275759	87.8	-367.669
91	110	-0.0150408	87.8002	-369.324
92	110	0 87.8002	-369.324	
93	110	0.0150408	87.8004	-367.669
94	119	0.0275759	87.8012	-364.388
95	120	0.0426257	87.803	-359.273
96	120	0.0551734	87.806	-352.652
97	128	0.0702426	87.811	-343.661
98	130	0.0828129	87.8178	-332.895
99	150	0.0979139	87.8274	-318.208
100	166	0.110516	87.8396	-299.863
101	180	0.123135	87.8548	-277.698
102	180	0.138305	87.8739	-252.803
103	180	0.150969	87.8967	-225.629
104	180	0.166199	87.9243	-195.713
105	180	0.17892 87.9564	-163.507	
106	180	0.194225	87.9941	-128.547
107	180	0.207012	88.0369	-91.2848
108	180	0.219834	88.0853	-51.7147
109	180	0.235269	88.1406	-9.36619
110	180	0.248174	88.2022	35.3051
111	180	0.263715	88.2717	82.7738
112	180	0.276714	88.3483	132.582
113	196	0.292375	88.4338	189.888

114	200	0.305481		88.5271	250.984
115	209	0.318639		88.6287	317.58
116	216	0.334503		88.7405	389.832
117	230	0.347787		88.8615	469.823
118	240	0.363809		88.9939	557.138
119	240	0.377233		89.1362	647.674
120	260	0.393433		89.291	749.966
121	270	0.40701	89.4566	859.859	
122	295	0.423405		89.6359	984.763
123	321	0.437153		89.827	1125.09
124	326	0.450985		90.0304	1272.11
125	330	0.467699		90.2491	1426.45
126	333	0.481728		90.4812	1586.87
127	350	0.498687		90.7299	1761.41
128	360	0.51293	90.993	1946.06	
129	360	0.530162		91.274	2136.92
130	369	0.544642		91.5707	2337.89
131	370	0.559237		91.8834	2544.81
132	371	0.576911		92.2162	2758.84
133	377	0.591776		92.5664	2981.94
134	398	0.609791		92.9383	3224.64
135	406	0.624956		93.3289	3478.37
136	430	0.643345		93.7427	3755.01
137	430	0.658838		94.1768	4038.31
138	450	0.67449	94.6318	4341.83	
139	455	0.693493		95.1127	4657.37
140	461	0.709522		95.6161	4984.46
141	510	0.729003		96.1476	5356.25
142	515	0.745449		96.7032	5740.16
143	546	0.765456		97.2892	6158.1
144	551	0.782366		97.9013	6589.18
145	570	0.802956		98.546	7046.87
146	580	0.820379		99.219	7522.69
147	660	0.838054		99.9214	8075.8
148	670	0.859618		100.66	8651.75
149	710	0.877897		101.431	9275.05
150	730	0.900227		102.241	9932.22
151	730	0.919183		103.086	10603.2
152	740	0.942375		103.974	11300.6
153	770	0.9621	104.9	12041.4	
154	770	0.982202		105.865	12797.7
155	790	1.00687	106.879	13593.1	
156	820	1.02789	107.935	14436	
157	870	1.05375	109.045	15352.7	
158	880	1.07584	110.203	16299.5	
159	1000	1.10306	111.42	17402.5	
160	1020	1.12639	112.688	18551.5	
161	1150	1.15035	114.012	19874.4	
162	1200	1.18	115.404	21290.4	
163	1300	1.20553	116.857	22857.6	
164	1300	1.23724	118.388	24466	
165	1400	1.26464	119.987	26236.5	
166	1410	1.29884	121.674	28067.8	
167	1600	1.32854	123.439	30193.5	
168	1700	1.36581	125.305	32515.3	
169	1800	1.39838	127.26	35032.4	
170	1800	1.4325	129.312	37610.9	
171	2100	1.47579	131.49	40710.1	
172	2300	1.5141	133.783	44192.5	
173	2300	1.56322	136.227	47787.9	
174	2400	1.60725	138.81	51645.3	
175	4780	1.66456	141.581	59601.9	

176	5000	1.71688	144.528	68186.4
177	5500	1.77438	147.677	77945.5
178	5600	1.85218	151.107	88317.6
179	7300	1.92684	154.82	102384
180	7400	2.03352	158.955	117432
181	17200	2.14441	163.554	154315
182	68000	2.32634	168.965	312507
183	643000	2.57583	175.6	1.96877e+006

Data Set Standard Deviation = 47751.8
Numerator = 3.87605e+012
Denominator = 7.28747e+013
W Statistic = 0.0531878 = 3.87605e+012 / 7.28747e+013

5% Critical value of 0.976 exceeds 0.0531878
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0531878
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Nitrate

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.240792
0.240792 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.036	0.00543478	-2.5758339	340.287		
2	0.036	0.0108696	-2.3263439	328.103		
3	0.036	0.0163043	-2.1444139	319.219		
4	0.0375	0.0217391	-2.0335239	313.804		
5	0.0375	0.0271739	-1.9268439	308.594		
6	0.0375	0.0326087	-1.8521839	304.948		
7	0.088	0.0380435	-1.7743839.0001	301.149		
8	0.094	0.0434783	-1.7168839.0001	298.341		
9	0.097	0.048913	-1.6645639.0001	295.786		
10	0.18	0.0543478	-1.6072539.0001	292.987		
11	0.18	0.0597826	-1.5632239.0001	290.837		
12	0.18	0.0652174	-1.5141 39.0001	288.439		
13	0.19	0.0706522	-1.4757939.0001	286.568		
14	0.21	0.076087	-1.4325 39.0002	284.454		
15	0.52	0.0815217	-1.3983839.0004	282.787		
16	0.56	0.0869565	-1.3658139.0004	281.197		
17	0.61	0.0923913	-1.3285439.0005	279.377		
18	1.4	0.0978261	-1.2988439.0011	277.926		
19	1.6	0.103261	-1.2646439.0012	276.257		
20	5	0.108696	-1.2372439.0038	274.918		
21	5	0.11413	-1.2055339.0038	273.37		
22	5	0.119565	-1.18 39.0038	272.123		
23	5	0.125	-1.1503539.0038	270.675		
24	5	0.130435	-1.1263939.0038	269.505		
25	5	0.13587	-1.1030639.0038	268.366		
26	5	0.141304	-1.0758439.0038	267.037		
27	5	0.146739	-1.0537539.0038	265.958		
28	5	0.152174	-1.0278939.0038	264.695		
29	5	0.157609	-1.0068739.0038	263.669		
30	5	0.163043	-0.982202	39.0038	262.464	
31	5	0.168478	-0.9621 39.0038	261.483		
32	5	0.173913	-0.942375	39.0038	260.519	
33	5	0.179348	-0.919183	39.0038	259.387	
34	5	0.184783	-0.900227	39.0038	258.461	
35	5	0.190217	-0.877897	39.0038	257.371	
36	5	0.195652	-0.859618	39.0038	256.478	
37	5	0.201087	-0.838054	39.0038	255.425	
38	5	0.206522	-0.820379	39.0038	254.562	
39	5	0.211957	-0.802956	39.0038	253.711	
40	5	0.217391	-0.782366	39.0038	252.706	
41	5	0.222826	-0.765456	39.0038	251.88	
42	5	0.228261	-0.745449	39.0038	250.903	
43	5	0.233696	-0.729003	39.0038	250.1	
44	5	0.23913	-0.709522	39.0038	249.148	
45	5	0.244565	-0.693493	39.0038	248.366	
46	5	0.25	-0.6744939.0038	247.438		
47	5	0.255435	-0.658838	39.0038	246.673	
48	5	0.26087	-0.643345	39.0038	245.917	

49	5	0.266304	-0.624956	39.0038	245.019
50	5	0.271739	-0.609791	39.0038	244.278
51	5	0.277174	-0.591776	39.0038	243.398
52	5	0.282609	-0.576911	39.0038	242.672
53	5	0.288043	-0.559237	39.0038	241.809
54	5	0.293478	-0.544642	39.0038	241.097
55	5	0.298913	-0.530162	39.0038	240.39
56	5	0.304348	-0.512933	9.0038	239.548
57	5	0.309783	-0.498687	39.0038	238.853
58	5	0.315217	-0.481728	39.0038	238.024
59	5	0.320652	-0.467699	39.0038	237.339
60	5	0.326087	-0.450985	39.0038	236.523
61	5	0.331522	-0.437153	39.0038	235.848
62	5	0.336957	-0.423405	39.0038	235.176
63	5	0.342391	-0.407013	9.0038	234.376
64	5	0.347826	-0.393433	39.0038	233.713
65	5	0.353261	-0.377233	39.0038	232.922
66	5	0.358696	-0.363809	39.0038	232.266
67	5	0.36413	-0.347787	39.0038	231.484
68	12.5	0.369565	-0.334503	39.0096	230.835
69	18	0.375	-0.318639	39.0138	230.06
70	18	0.380435	-0.305481	39.0138	229.418
71	18	0.38587	-0.292375	39.0138	228.778
72	37.5	0.391304	-0.276714	39.0287	228.013
73	37.5	0.396739	-0.263715	39.0287	227.378
74	39	0.402174	-0.248174	39.0298	226.619
75	39	0.407609	-0.235269	39.0298	225.989
76	45	0.413043	-0.219834	39.0344	225.235
77	45	0.418478	-0.207012	39.0344	224.609
78	50	0.423913	-0.194225	39.0382	223.985
79	52	0.429348	-0.178923	9.0397	223.237
80	58	0.434783	-0.166199	39.0443	222.616
81	60	0.440217	-0.150969	39.0459	221.872
82	71	0.445652	-0.138305	39.0543	221.254
83	78	0.451087	-0.123135	39.0596	220.513
84	84	0.456522	-0.110516	39.0642	219.897
85	85	0.461957	-0.0979139	39.065	219.281
86	86	0.467391	-0.0828129	39.0657	218.544
87	98	0.472826	-0.0702426	39.0749	217.93
88	99	0.478261	-0.0551734	39.0757	217.194
89	107	0.483696	-0.0426257	39.0818	216.582
90	109	0.48913	-0.0275759	39.0833	215.847
91	110	0.494565	-0.0150408	39.0841	215.234
92	110	0.5	0	39.0841	214.5
93	110	0.505435	0.0150408	39.0841	213.766
94	119	0.51087	0.0275759	39.0909	213.153
95	120	0.516304	0.0426257	39.0917	212.418
96	120	0.521739	0.0551734	39.0917	211.806
97	128	0.527174	0.0702426	39.0978	211.07
98	130	0.532609	0.0828129	39.0994	210.456
99	150	0.538043	0.0979139	39.1146	209.719
100	166	0.543478	0.110516	39.1269	209.103
101	180	0.548913	0.123135	39.1376	208.487
102	180	0.554348	0.138305	39.1376	207.746
103	180	0.559783	0.150969	39.1376	207.128
104	180	0.565217	0.166199	39.1376	206.384
105	180	0.570652	0.17892	39.1376	205.763
106	180	0.576087	0.194225	39.1376	205.015
107	180	0.581522	0.207012	39.1376	204.391
108	180	0.586957	0.219834	39.1376	203.765
109	180	0.592391	0.235269	39.1376	203.011
110	180	0.597826	0.248174	39.1376	202.381

111	180	0.603261	0.263715	39.1376	201.622
112	180	0.608696	0.276714	39.1376	200.987
113	196	0.61413	0.292375	39.1498	200.222
114	200	0.619565	0.305481	39.1529	199.582
115	209	0.625	0.318639	39.1597	198.94
116	216	0.630435	0.334503	39.1651	198.165
117	230	0.63587	0.347787	39.1758	197.516
118	240	0.641304	0.363809	39.1834	196.734
119	240	0.646739	0.377233	39.1834	196.078
120	260	0.652174	0.393433	39.1987	195.287
121	270	0.657609	0.40701	39.2064	194.624
122	295	0.663043	0.423405	39.2255	193.824
123	321	0.668478	0.437153	39.2453	193.152
124	326	0.673913	0.450985	39.2492	192.477
125	330	0.679348	0.467699	39.2522	191.661
126	333	0.684783	0.481728	39.2545	190.976
127	350	0.690217	0.498687	39.2675	190.147
128	360	0.695652	0.51293	39.2751	189.452
129	360	0.701087	0.530162	39.2751	188.61
130	369	0.706522	0.544642	39.282	187.903
131	370	0.711957	0.559237	39.2828	187.191
132	371	0.717391	0.576911	39.2835	186.328
133	377	0.722826	0.591776	39.2881	185.602
134	398	0.728261	0.609791	39.3042	184.722
135	406	0.733696	0.624956	39.3103	183.981
136	430	0.73913	0.643345	39.3286	183.083
137	430	0.744565	0.658838	39.3286	182.327
138	450	0.75	0.67449	39.3439	181.562
139	455	0.755435	0.693493	39.3477	180.634
140	461	0.76087	0.709522	39.3523	179.852
141	510	0.766304	0.729003	39.3898	178.9
142	515	0.771739	0.745449	39.3936	178.097
143	546	0.777174	0.765456	39.4173	177.12
144	551	0.782609	0.782366	39.4211	176.294
145	570	0.788043	0.802956	39.4356	175.289
146	580	0.793478	0.820379	39.4433	174.438
147	660	0.798913	0.838054	39.5044	173.575
148	670	0.804348	0.859618	39.5121	172.522
149	710	0.809783	0.877897	39.5426	171.629
150	730	0.815217	0.900227	39.5579	170.539
151	730	0.820652	0.919183	39.5579	169.613
152	740	0.826087	0.942375	39.5656	168.481
153	770	0.831522	0.9621	39.5885	167.517
154	770	0.836957	0.982202	39.5885	166.536
155	790	0.842391	1.00687	39.6038	165.331
156	820	0.847826	1.02789	39.6267	164.305
157	870	0.853261	1.05375	39.6649	163.042
158	880	0.858696	1.07584	39.6726	161.963
159	1000	0.86413	1.10306	39.7643	160.634
160	1020	0.869565	1.12639	39.7796	159.495
161	1150	0.875	1.15035	39.8789	158.325
162	1200	0.880435	1.18	39.9171	156.877
163	1300	0.88587	1.20553	39.9936	155.63
164	1300	0.891304	1.23724	39.9936	154.082
165	1400	0.896739	1.26464	40.07	152.743
166	1410	0.902174	1.29884	40.0776	151.074
167	1600	0.907609	1.32854	40.2229	149.623
168	1700	0.913043	1.36581	40.2993	147.803
169	1800	0.918478	1.39838	40.3757	146.213
170	1800	0.923913	1.4325	40.3757	144.546
171	2100	0.929348	1.47579	40.605	142.432
172	2300	0.934783	1.5141	40.7579	140.561

173	2300	0.940217		1.56322	40.7579	138.163
174	2400	0.945652		1.60725	40.8343	136.013
175	4780	0.951087		1.66456	42.6533	133.214
176	5000	0.956522		1.71688	42.8214	130.659
177	5500	0.961957		1.77438	43.2036	127.851
178	5600	0.967391		1.85218	43.28	124.052
179	7300	0.972826		1.92684	44.5793	120.406
180	7400	0.978261		2.03352	44.6557	115.196
181	17200	0.983696		2.14441	52.1457	109.781
182	68000	0.98913	2.32634	90.9714	100.897	
183	643000	0.994565		2.57583	530.436	88.7134

Shapiro-Francia Test of Normality

Parameter: Nitrate

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 183

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.32424	-2.57583	6.63492	8.56268
2	-3.32424	-2.32634	12.0468	16.296
3	-3.32424	-2.14441	16.6453	23.4245
4	-3.28341	-2.03352	20.7805	30.1014
5	-3.28341	-1.92684	24.4932	36.428
6	-3.28341	-1.85218	27.9237	42.5095
7	-2.43042	-1.77438	31.0722	46.822
8	-2.36446	-1.71688	34.0199	50.8815
9	-2.33304	-1.66456	36.7906	54.765
10	-1.7148	-1.60725	39.3739	57.5211
11	-1.7148	-1.56322	41.8175	60.2017
12	-1.7148	-1.5141	44.11	62.7981
13	-1.66073	-1.47579	46.288	65.249
14	-1.56065	-1.4325	48.3401	67.4846
15	-0.653926		-1.39838	50.2955	68.399
16	-0.579818		-1.36581	52.161	69.1909
17	-0.494296		-1.32854	53.926	69.8476
18	0.336472		-1.29884	55.6129	69.4106
19	0.470004		-1.26464	57.2123	68.8162
20	1.60944	-1.23724	58.743	66.825
21	1.60944	-1.20553	60.1963	64.8847
22	1.60944	-1.18	61.5887	62.9856
23	1.60944	-1.15035	62.912	61.1342
24	1.60944	-1.12639	64.1808	59.3213
25	1.60944	-1.10306	65.3975	57.546
26	1.60944	-1.07584	66.5549	55.8145
27	1.60944	-1.05375	67.6653	54.1186
28	1.60944	-1.02789	68.7219	52.4643
29	1.60944	-1.00687	69.7357	50.8438
30	1.60944	-0.982202		70.7004	49.263
31	1.60944	-0.9621	71.626	47.7145
32	1.60944	-0.942375		72.5141	46.1979
33	1.60944	-0.919183		73.359	44.7185
34	1.60944	-0.900227		74.1694	43.2696
35	1.60944	-0.877897		74.9401	41.8567
36	1.60944	-0.859618		75.679	40.4732
37	1.60944	-0.838054		76.3814	39.1244
38	1.60944	-0.820379		77.0544	37.8041
39	1.60944	-0.802956		77.6991	36.5118
40	1.60944	-0.782366		78.3112	35.2526
41	1.60944	-0.765456		78.8972	34.0206
42	1.60944	-0.745449		79.4528	32.8209
43	1.60944	-0.729003		79.9843	31.6476
44	1.60944	-0.709522		80.4877	30.5057
45	1.60944	-0.693493		80.9686	29.3895
46	1.60944	-0.67449	81.4236	28.304
47	1.60944	-0.658838		81.8577	27.2436
48	1.60944	-0.643345		82.2715	26.2082
49	1.60944	-0.624956		82.6621	25.2024
50	1.60944	-0.609791		83.034	24.2209
51	1.60944	-0.591776		83.3842	23.2685

52	1.60944	-0.576911	83.717	22.34
53	1.60944	-0.559237	84.0297	21.44
54	1.60944	-0.544642	84.3264	20.5634
55	1.60944	-0.530162	84.6074	19.7101
56	1.60944	-0.5129384.8705	18.8846	
57	1.60944	-0.498687	85.1192	18.082
58	1.60944	-0.481728	85.3513	17.3067
59	1.60944	-0.467699	85.57	16.554
60	1.60944	-0.450985	85.7734	15.8281
61	1.60944	-0.437153	85.9645	15.1245
62	1.60944	-0.423405	86.1438	14.4431
63	1.60944	-0.4070186.3094	13.788	
64	1.60944	-0.393433	86.4642	13.1548
65	1.60944	-0.377233	86.6065	12.5477
66	1.60944	-0.363809	86.7389	11.9622
67	1.60944	-0.347787	86.8599	11.4024
68	2.52573	-0.334503	86.9717	10.5576
69	2.89037	-0.318639	87.0733	9.63659
70	2.89037	-0.305481	87.1666	8.75363
71	2.89037	-0.292375	87.2521	7.90856
72	3.62434	-0.276714	87.3287	6.90565
73	3.62434	-0.263715	87.3982	5.94986
74	3.66356	-0.248174	87.4598	5.04066
75	3.66356	-0.235269	87.5151	4.17874
76	3.80666	-0.219834	87.5635	3.3419
77	3.80666	-0.207012	87.6063	2.55388
78	3.91202	-0.194225	87.644	1.79407
79	3.95124	-0.1789287.6761	1.08711	
80	4.06044	-0.166199	87.7037	0.412267
81	4.09434	-0.150969	87.7265	-0.205854
82	4.26268	-0.138305	87.7456	-0.795402
83	4.35671	-0.123135	87.7608	-1.33187
84	4.43082	-0.110516	87.773	-1.82154
85	4.44265	-0.0979139	87.7826	-2.25654
86	4.45435	-0.0828129	87.7894	-2.62542
87	4.58497	-0.0702426	87.7944	-2.94748
88	4.59512	-0.0551734	87.7974	-3.20101
89	4.67283	-0.0426257	87.7992	-3.40019
90	4.69135	-0.0275759	87.8	-3.52956
91	4.70048	-0.0150408	87.8002	-3.60026
92	4.70048	0 87.8002	-3.60026	
93	4.70048	0.0150408	87.8004	-3.52956
94	4.77912	0.0275759	87.8012	-3.39777
95	4.78749	0.0426257	87.803	-3.1937
96	4.78749	0.0551734	87.806	-2.92956
97	4.85203	0.0702426	87.811	-2.58874
98	4.86753	0.0828129	87.8178	-2.18564
99	5.01064	0.0979139	87.8274	-1.69503
100	5.11199	0.110516	87.8396	-1.13007
101	5.19296	0.123135	87.8548	-0.490638
102	5.19296	0.138305	87.8739	0.227572
103	5.19296	0.150969	87.8967	1.01155
104	5.19296	0.166199	87.9243	1.87461
105	5.19296	0.17892 87.9564	2.80374	
106	5.19296	0.194225	87.9941	3.81234
107	5.19296	0.207012	88.0369	4.88735
108	5.19296	0.219834	88.0853	6.02893
109	5.19296	0.235269	88.1406	7.25068
110	5.19296	0.248174	88.2022	8.53943
111	5.19296	0.263715	88.2717	9.90889
112	5.19296	0.276714	88.3483	11.3459
113	5.27811	0.292375	88.4338	12.889

114	5.29832	0.305481		88.5271	14.5076
115	5.34233	0.318639		88.6287	16.2099
116	5.37528	0.334503		88.7405	18.0079
117	5.43808	0.347787		88.8615	19.8992
118	5.48064	0.363809		88.9939	21.8931
119	5.48064	0.377233		89.1362	23.9606
120	5.56068	0.393433		89.291	26.1483
121	5.59842	0.40701	89.4566	28.427	
122	5.68698	0.423405		89.6359	30.8348
123	5.77144	0.437153		89.827	33.3579
124	5.7869	0.450985		90.0304	35.9677
125	5.79909	0.467699		90.2491	38.6799
126	5.80814	0.481728		90.4812	41.4778
127	5.85793	0.498687		90.7299	44.3991
128	5.8861	0.51293	90.993	47.4183	
129	5.8861	0.530162		91.274	50.5389
130	5.9108	0.544642		91.5707	53.7581
131	5.9135	0.559237		91.8834	57.0652
132	5.9162	0.576911		92.2162	60.4783
133	5.93225	0.591776		92.5664	63.9889
134	5.98645	0.609791		92.9383	67.6393
135	6.00635	0.624956		93.3289	71.393
136	6.06379	0.643345		93.7427	75.2941
137	6.06379	0.658838		94.1768	79.2892
138	6.10925	0.67449	94.6318	83.4098	
139	6.1203	0.693493		95.1127	87.6542
140	6.1334	0.709522		95.6161	92.006
141	6.23441	0.729003		96.1476	96.5509
142	6.24417	0.745449		96.7032	101.206
143	6.30262	0.765456		97.2892	106.03
144	6.31173	0.782366		97.9013	110.968
145	6.34564	0.802956		98.546	116.063
146	6.36303	0.820379		99.219	121.283
147	6.49224	0.838054		99.9214	126.724
148	6.50728	0.859618		100.66	132.318
149	6.56526	0.877897		101.431	138.082
150	6.59304	0.900227		102.241	144.017
151	6.59304	0.919183		103.086	150.077
152	6.60665	0.942375		103.974	156.303
153	6.64639	0.9621	104.9	162.698	
154	6.64639	0.982202		105.865	169.226
155	6.67203	1.00687	106.879	175.943	
156	6.7093	1.02789	107.935	182.84	
157	6.76849	1.05375	109.045	189.972	
158	6.77992	1.07584	110.203	197.266	
159	6.90776	1.10306	111.42	204.886	
160	6.92756	1.12639	112.688	212.689	
161	7.04752	1.15035	114.012	220.796	
162	7.09008	1.18	115.404	229.163	
163	7.17012	1.20553	116.857	237.806	
164	7.17012	1.23724	118.388	246.677	
165	7.24423	1.26464	119.987	255.839	
166	7.25134	1.29884	121.674	265.257	
167	7.37776	1.32854	123.439	275.059	
168	7.43838	1.36581	125.305	285.218	
169	7.49554	1.39838	127.26	295.7	
170	7.49554	1.4325	129.312	306.437	
171	7.64969	1.47579	131.49	317.726	
172	7.74066	1.5141	133.783	329.447	
173	7.74066	1.56322	136.227	341.547	
174	7.78322	1.60725	138.81	354.057	
175	8.4722	1.66456	141.581	368.159	

176	8.51719	1.71688	144.528	382.782
177	8.6125	1.77438	147.677	398.064
178	8.63052	1.85218	151.107	414.049
179	8.89563	1.92684	154.82	431.19
180	8.90924	2.03352	158.955	449.307
181	9.75266	2.14441	163.554	470.22
182	11.1273	2.32634	168.965	496.106
183	13.3739	2.57583	175.6	530.555

Data Set Standard Deviation = 3.04396
Numerator = 281489
Denominator = 296126
W Statistic = 0.950572 = 281489 / 296126

5% Critical value of 0.976 exceeds 0.950572
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.950572
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Nitrate

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.975225
0.975225 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-3.32424	0.00543478	-2.57583	158.051	340.287
2	-3.32424	0.0108696	-2.32634	158.051	328.103
3	-3.32424	0.0163043	-2.14441	158.051	319.219
4	-3.28341	0.0217391	-2.03352	158.779	313.804
5	-3.28341	0.0271739	-1.92684	158.779	308.594
6	-3.28341	0.0326087	-1.85218	158.779	304.948
7	-2.43042	0.0380435	-1.77438	173.991	301.149
8	-2.36446	0.0434783	-1.71688	175.167	298.341
9	-2.33304	0.048913	-1.66456	175.727	295.786
10	-1.7148	0.0543478	-1.60725	186.753	292.987
11	-1.7148	0.0597826	-1.56322	186.753	290.837
12	-1.7148	0.0652174	-1.5141	186.753	288.439
13	-1.66073	0.0706522	-1.47579	187.717	286.568
14	-1.56065	0.076087	-1.4325	189.502	284.454
15	-0.653926	0.0815217	-1.39838	205.672	282.787
16	-0.579818	0.0869565	-1.36581	206.993	281.197
17	-0.494296	0.0923913	-1.32854	208.518	279.377
18	0.336472	0.0978261	-1.29884	223.334	277.926
19	0.470004	0.103261	-1.26464	225.715	276.257
20	1.60944	0.108696	-1.23724	246.035	274.918
21	1.60944	0.11413	-1.20553	246.035	273.37
22	1.60944	0.119565	-1.18	246.035	272.123
23	1.60944	0.125	-1.15035	246.035	270.675
24	1.60944	0.130435	-1.12639	246.035	269.505
25	1.60944	0.13587	-1.10306	246.035	268.366
26	1.60944	0.141304	-1.07584	246.035	267.037
27	1.60944	0.146739	-1.05375	246.035	265.958
28	1.60944	0.152174	-1.02789	246.035	264.695
29	1.60944	0.157609	-1.00687	246.035	263.669
30	1.60944	0.163043	-0.982202	246.035	262.464
31	1.60944	0.168478	-0.9621	246.035	261.483
32	1.60944	0.173913	-0.942375	246.035	260.519
33	1.60944	0.179348	-0.919183	246.035	259.387
34	1.60944	0.184783	-0.900227	246.035	258.461
35	1.60944	0.190217	-0.877897	246.035	257.371
36	1.60944	0.195652	-0.859618	246.035	256.478
37	1.60944	0.201087	-0.838054	246.035	255.425
38	1.60944	0.206522	-0.820379	246.035	254.562
39	1.60944	0.211957	-0.802956	246.035	253.711
40	1.60944	0.217391	-0.782366	246.035	252.706
41	1.60944	0.222826	-0.765456	246.035	251.88
42	1.60944	0.228261	-0.745449	246.035	250.903
43	1.60944	0.233696	-0.729003	246.035	250.1
44	1.60944	0.23913	-0.709522	246.035	249.148
45	1.60944	0.244565	-0.693493	246.035	248.366
46	1.60944	0.25	-0.67449	246.035	247.438
47	1.60944	0.255435	-0.658838	246.035	246.673
48	1.60944	0.26087	-0.643345	246.035	245.917

49	1.60944	0.266304	-0.624956	246.035	245.019
50	1.60944	0.271739	-0.609791	246.035	244.278
51	1.60944	0.277174	-0.591776	246.035	243.398
52	1.60944	0.282609	-0.576911	246.035	242.672
53	1.60944	0.288043	-0.559237	246.035	241.809
54	1.60944	0.293478	-0.544642	246.035	241.097
55	1.60944	0.298913	-0.530162	246.035	240.39
56	1.60944	0.304348	-0.51293	246.035	239.548
57	1.60944	0.309783	-0.498687	246.035	238.853
58	1.60944	0.315217	-0.481728	246.035	238.024
59	1.60944	0.320652	-0.467699	246.035	237.339
60	1.60944	0.326087	-0.450985	246.035	236.523
61	1.60944	0.331522	-0.437153	246.035	235.848
62	1.60944	0.336957	-0.423405	246.035	235.176
63	1.60944	0.342391	-0.40701	246.035	234.376
64	1.60944	0.347826	-0.393433	246.035	233.713
65	1.60944	0.353261	-0.377233	246.035	232.922
66	1.60944	0.358696	-0.363809	246.035	232.266
67	1.60944	0.36413	-0.347787	246.035	231.484
68	2.52573	0.369565	-0.334503	262.375	230.835
69	2.89037	0.375	-0.318639	268.878	230.06
70	2.89037	0.380435	-0.305481	268.878	229.418
71	2.89037	0.38587	-0.292375	268.878	228.778
72	3.62434	0.391304	-0.276714	281.967	228.013
73	3.62434	0.396739	-0.263715	281.967	227.378
74	3.66356	0.402174	-0.248174	282.667	226.619
75	3.66356	0.407609	-0.235269	282.667	225.989
76	3.80666	0.413043	-0.219834	285.219	225.235
77	3.80666	0.418478	-0.207012	285.219	224.609
78	3.91202	0.423913	-0.194225	287.098	223.985
79	3.95124	0.429348	-0.17892	287.797	223.237
80	4.06044	0.434783	-0.166199	289.745	222.616
81	4.09434	0.440217	-0.150969	290.349	221.872
82	4.26268	0.445652	-0.138305	293.351	221.254
83	4.35671	0.451087	-0.123135	295.028	220.513
84	4.43082	0.456522	-0.110516	296.35	219.897
85	4.44265	0.461957	-0.0979139	296.561	219.281
86	4.45435	0.467391	-0.0828129	296.769	218.544
87	4.58497	0.472826	-0.0702426	299.099	217.93
88	4.59512	0.478261	-0.0551734	299.28	217.194
89	4.67283	0.483696	-0.0426257	300.665	216.582
90	4.69135	0.48913	-0.0275759	300.996	215.847
91	4.70048	0.494565	-0.0150408	301.159	215.234
92	4.70048	0.5	0	301.159	214.5
93	4.70048	0.505435	0.0150408	301.159	213.766
94	4.77912	0.51087	0.0275759	302.561	213.153
95	4.78749	0.516304	0.0426257	302.71	212.418
96	4.78749	0.521739	0.0551734	302.71	211.806
97	4.85203	0.527174	0.0702426	303.861	211.07
98	4.86753	0.532609	0.0828129	304.138	210.456
99	5.01064	0.538043	0.0979139	306.69	209.719
100	5.11199	0.543478	0.110516	308.497	209.103
101	5.19296	0.548913	0.123135	309.941	208.487
102	5.19296	0.554348	0.138305	309.941	207.746
103	5.19296	0.559783	0.150969	309.941	207.128
104	5.19296	0.565217	0.166199	309.941	206.384
105	5.19296	0.570652	0.17892	309.941	205.763
106	5.19296	0.576087	0.194225	309.941	205.015
107	5.19296	0.581522	0.207012	309.941	204.391
108	5.19296	0.586957	0.219834	309.941	203.765
109	5.19296	0.592391	0.235269	309.941	203.011
110	5.19296	0.597826	0.248174	309.941	202.381

111	5.19296	0.603261	0.263715	309.941	201.622	
112	5.19296	0.608696	0.276714	309.941	200.987	
113	5.27811	0.61413	0.292375	311.46	200.222	
114	5.29832	0.619565	0.305481	311.82	199.582	
115	5.34233	0.625	0.318639	312.605	198.94	
116	5.37528	0.630435	0.334503	313.192	198.165	
117	5.43808	0.63587	0.347787	314.312	197.516	
118	5.48064	0.641304	0.363809	315.071	196.734	
119	5.48064	0.646739	0.377233	315.071	196.078	
120	5.56068	0.652174	0.393433	316.499	195.287	
121	5.59842	0.657609	0.40701	317.172	194.624	
122	5.68698	0.663043	0.423405	318.751	193.824	
123	5.77144	0.668478	0.437153	320.257	193.152	
124	5.7869	0.673913	0.450985	320.533	192.477	
125	5.79909	0.679348	0.467699	320.75	191.661	
126	5.80814	0.684783	0.481728	320.912	190.976	
127	5.85793	0.690217	0.498687	321.8	190.147	
128	5.8861	0.695652	0.51293	322.302	189.452	
129	5.8861	0.701087	0.530162	322.302	188.61	
130	5.9108	0.706522	0.544642	322.743	187.903	
131	5.9135	0.711957	0.559237	322.791	187.191	
132	5.9162	0.717391	0.576911	322.839	186.328	
133	5.93225	0.722826	0.591776	323.125	185.602	
134	5.98645	0.728261	0.609791	324.092	184.722	
135	6.00635	0.733696	0.624956	324.447	183.981	
136	6.06379	0.73913	0.643345	325.471	183.083	
137	6.06379	0.744565	0.658838	325.471	182.327	
138	6.10925	0.75	0.67449	326.282	181.562	
139	6.1203	0.755435	0.693493	326.479	180.634	
140	6.1334	0.76087	0.709522	326.712	179.852	
141	6.23441	0.766304	0.729003	328.514	178.9	
142	6.24417	0.771739	0.745449	328.688	178.097	
143	6.30262	0.777174	0.765456	329.73	177.12	
144	6.31173	0.782609	0.782366	329.893	176.294	
145	6.34564	0.788043	0.802956	330.497	175.289	
146	6.36303	0.793478	0.820379	330.807	174.438	
147	6.49224	0.798913	0.838054	333.112	173.575	
148	6.50728	0.804348	0.859618	333.38	172.522	
149	6.56526	0.809783	0.877897	334.414	171.629	
150	6.59304	0.815217	0.900227	334.909	170.539	
151	6.59304	0.820652	0.919183	334.909	169.613	
152	6.60665	0.826087	0.942375	335.152	168.481	
153	6.64639	0.831522	0.9621	335.861	167.517	
154	6.64639	0.836957	0.982202	335.861	166.536	
155	6.67203	0.842391	1.00687	336.318	165.331	
156	6.7093	0.847826	1.02789	336.983	164.305	
157	6.76849	0.853261	1.05375	338.038	163.042	
158	6.77992	0.858696	1.07584	338.242	161.963	
159	6.90776	0.86413	1.10306	340.522	160.634	
160	6.92756	0.869565	1.12639	340.875	159.495	
161	7.04752	0.875	1.15035	343.014	158.325	
162	7.09008	0.880435	1.18	343.773	156.877	
163	7.17012	0.88587	1.20553	345.2	155.63	
164	7.17012	0.891304	1.23724	345.2	154.082	
165	7.24423	0.896739	1.26464	346.522	152.743	
166	7.25134	0.902174	1.29884	346.649	151.074	
167	7.37776	0.907609	1.32854	348.903	149.623	
168	7.43838	0.913043	1.36581	349.985	147.803	
169	7.49554	0.918478	1.39838	351.004	146.213	
170	7.49554	0.923913	1.4325	351.004	144.546	
171	7.64969	0.929348	1.47579	353.753	142.432	
172	7.74066	0.934783	1.5141	355.375	140.561	

173	7.74066	0.940217		1.56322	355.375	138.163
174	7.78322	0.945652		1.60725	356.134	136.013
175	8.4722	0.951087		1.66456	368.421	133.214
176	8.51719	0.956522		1.71688	369.223	130.659
177	8.6125	0.961957		1.77438	370.923	127.851
178	8.63052	0.967391		1.85218	371.244	124.052
179	8.89563	0.972826		1.92684	375.972	120.406
180	8.90924	0.978261		2.03352	376.215	115.196
181	9.75266	0.983696		2.14441	391.256	109.781
182	11.1273	0.98913	2.32634	415.77	100.897	
183	13.3739	0.994565		2.57583	455.835	88.7134

Kruskal-Wallis Non-Parametric Test

Parameter: Nitrate

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	11/18/2006	3.91202	89
	6/2/2007	13.3739	183
	11/15/2007	ND<1.60944	37.5
	5/20/2008	5.9108	130
	11/20/2008	ND<1.60944	37.5
	11/16/2009	ND<5.19296 U	37.5
	6/30/2010	4.43082 J	95
	11/17/2010	ND<-3.32424 U	37.5
	7/6/2011	ND<-3.28341 U	37.5
	11/22/2011	ND<3.62434 U	37.5
	5/16/2012	ND<-1.7148 U	37.5
	11/16/2012	ND<5.19296 U	37.5
	11/16/2013	4.26268	93

Rank Sum = 890
Rank Mean = 68.4615

Background Rank Sum = 890
Background Rank Mean = 68.4615

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-14R	6/2/2007	5.7869	124
	11/15/2007	ND<1.60944	37.5
	5/20/2008	5.9162	132
	11/20/2008	ND<1.60944	37.5
	6/30/2010	ND<2.89037 U	37.5
	11/17/2010	ND<-3.32424 U	37.5
	7/6/2011	5.85793	127
	11/22/2011	4.78749 J	106
	5/16/2012	5.8861	128
	11/16/2012	ND<5.19296 U	37.5
	11/16/2013	3.66356 J	85

Rank Sum = 889.5
Rank Mean = 80.8636

LMW-3S	11/18/2006	5.77144	123
	6/2/2007	5.27811	113
	11/15/2007	ND<1.60944	37.5
	5/20/2008	6.30262	143
	11/20/2008	ND<1.60944	37.5
	11/16/2009	6.56526 J M	149
	6/30/2010	ND<2.89037 U	37.5
	11/17/2010	-2.43042 J	75
	7/6/2011	5.01064 J	110
	11/22/2011	5.48064 J	118
	5/16/2012	6.7093 J	156
	11/16/2012	6.64639 J	153
	11/16/2013	5.59842	121

Rank Sum = 1373.5
Rank Mean = 105.654

LMW-10	11/18/2006	6.31173	144
	6/2/2007	6.92756	160
	11/15/2007	ND<1.60944	37.5
	5/20/2008	6.00635	135
	11/20/2008	ND<1.60944	37.5
	11/16/2009	7.78322	174
	6/30/2010	5.9135	131
	11/17/2010	-0.653926	80
	7/6/2011	6.36303	146
	11/22/2011	6.23441	141
	5/16/2012	7.17012	163
	11/16/2012	7.17012	164
	11/16/2013	6.50728	148

Rank Sum = 1661
Rank Mean = 127.769

LMW-16	11/18/2006	3.95124	90
	6/2/2007	5.11199	111
	11/15/2007	ND<1.60944	37.5
	5/20/2008	5.93225	133
	11/20/2008	ND<1.60944	37.5
	11/16/2009	ND<5.19296 U	37.5
	6/30/2010	ND<2.89037 U	37.5
	11/17/2010	ND<-3.32424 U	37.5
	7/6/2011	5.19296 J	112
	11/22/2011	5.48064 J	119
	5/16/2012	ND<-1.7148 U	37.5
	11/16/2012	ND<5.19296 U	37.5
	11/16/2013	3.66356 J	86

Rank Sum = 913.5
Rank Mean = 70.2692

LMW-3	11/18/2006	5.80814	126
	6/2/2007	5.34233	115
	11/15/2007	ND<1.60944	37.5
	5/20/2008	6.24417	142
	11/20/2008	ND<1.60944	37.5
	11/16/2009	6.76849 J H	157
	6/30/2010	4.35671 J M	94
	11/17/2010	-1.66073 J	78
	7/6/2011	6.59304	150
	11/22/2011	5.29832 J	114
	5/16/2012	6.49224 J	147
	11/16/2012	6.59304 J	151
	11/16/2013	5.43808	117

Rank Sum = 1466
Rank Mean = 112.769

LMW-15R	11/18/2006	8.4722	175
	6/2/2007	7.24423	165
	11/15/2007	ND<1.60944	37.5
	11/15/2007	ND<1.60944	37.5
	5/20/2008	ND<1.60944	37.5
	5/20/2008	ND<1.60944	37.5
	11/20/2008	ND<1.60944	37.5
	11/20/2008	ND<1.60944	37.5
	6/30/2010	7.64969	171
	11/17/2010	0.470004	84
	7/6/2011	11.1273 J	182

	11/22/2011	7.49554	169
	5/16/2012	7.37776	167
	11/16/2012	8.90924	180
	11/16/2013	7.74066	172

Rank Sum = 1690
Rank Mean = 112.667

LMW-8	11/18/2006	5.37528	116
	6/2/2007	5.98645	134
	11/15/2007	ND<1.60944	37.5
	5/20/2008	6.34564	145
	11/20/2008	ND<1.60944	37.5
	11/16/2009	6.60665 J	152
	6/30/2010	3.80666 J	87
	11/17/2010	-0.494296	82
	7/6/2011	5.56068	120
	11/22/2011	ND<3.62434 U	37.5
	5/16/2012	ND<-1.7148 U	37.5
	11/16/2012	ND<5.19296 U	37.5
	11/16/2013	6.06379	136

Rank Sum = 1159.5
Rank Mean = 89.1923

LMW-9S	11/18/2006	4.69135	101
	6/2/2007	6.90776	159
	11/15/2007	ND<1.60944	37.5
	5/20/2008	ND<1.60944	37.5
	11/20/2008	ND<1.60944	37.5
	11/16/2009	6.64639 J M H	154
	11/16/2009	8.89563 H	179
	11/16/2009	ND<5.19296 U	37.5
	6/30/2010	4.09434 J	92
	11/17/2010	-1.56065 J	79
	7/6/2011	ND<-3.28341 U	37.5
	11/22/2011	7.74066 J	173
	5/16/2012	ND<-3.28341 U	37.5
	11/16/2012	ND<5.19296 U	37.5
	11/16/2013	ND<2.52573 U	37.5

Rank Sum = 1237
Rank Mean = 82.4667

LMW-9D	11/18/2006	4.67283	100
	6/2/2007	6.1334	140
	11/15/2007	ND<1.60944	37.5
	5/20/2008	ND<1.60944	37.5
	11/20/2008	ND<1.60944	37.5
	11/16/2009	6.06379 J M H	137
	6/30/2010	4.06044 J	91
	11/17/2010	-2.33304 J	77
	7/6/2011	4.86753 J	109
	11/22/2011	5.79909	125
	5/16/2012	4.44265 J	96
	11/16/2012	ND<5.19296 U	37.5
	11/16/2013	4.70048	102

Rank Sum = 1127
Rank Mean = 86.6923

LMW-9	11/18/2006	4.59512	99
	6/2/2007	9.75266	181
	11/15/2007	ND<1.60944	37.5
	5/20/2008	6.1203	139
	11/20/2008	ND<1.60944	37.5

	11/16/2009	6.10925 J M H	138
	6/30/2010	3.80666 J	88
	11/17/2010	-2.36446 J	76
	7/6/2011	4.70048 J	103
	11/22/2011	4.58497 J	98
	5/16/2012	ND<5.19296 U	37.5
	11/16/2012	ND<5.19296 U	37.5
	11/16/2013	4.70048	104

Rank Sum = 1176
Rank Mean = 90.4615

LMW-6	11/18/2006	7.04752	161
	6/2/2007	ND<1.60944	37.5
	11/15/2007	ND<1.60944	37.5
	5/20/2008	7.25134	166
	11/20/2008	ND<1.60944	37.5
	11/16/2009	8.51719	176
	6/30/2010	6.77992	158
	11/17/2010	0.336472	83
	7/6/2011	7.43838	168
	11/22/2011	7.09008	162
	5/16/2012	8.6125	177
	11/16/2012	8.63052	178
	11/16/2013	7.49554	170

Rank Sum = 1711.5
Rank Mean = 131.654

LMW-7	11/18/2006	4.77912	105
	6/2/2007	5.68698	122
	11/15/2007	ND<1.60944	37.5
	5/20/2008	4.85203	108
	11/20/2008	ND<1.60944	37.5
	11/17/2010	-0.579818 J	81
	7/6/2011	4.45435 J	97
	11/22/2011	4.78749 J	107
	5/16/2012	5.8861 J	129
	11/16/2012	6.67203 J	155

Rank Sum = 979
Rank Mean = 97.9

MW-5	11/15/2007	ND<1.60944	37.5
	5/20/2008	ND<1.60944	37.5
	11/20/2008	ND<1.60944	37.5

Rank Sum = 112.5
Rank Mean = 37.5

LMW-12	6/2/2007	ND<1.60944	37.5
	11/15/2007	ND<1.60944	37.5
	5/20/2008	ND<1.60944	37.5
	11/20/2008	ND<1.60944	37.5

Rank Sum = 150
Rank Mean = 37.5

LMW-11	6/2/2007	ND<1.60944	37.5
	11/15/2007	ND<1.60944	37.5
	5/20/2008	ND<1.60944	37.5
	11/20/2008	ND<1.60944	37.5

Rank Sum = 150
Rank Mean = 37.5

LMW-13	6/2/2007	ND<1.60944	37.5

11/15/2007	ND<1.60944	37.5
5/20/2008	ND<1.60944	37.5
11/20/2008	ND<1.60944	37.5

Rank Sum = 150
Rank Mean = 37.5

Calculation Results:

Kruskal-Wallis H Statistic = 40.2647
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 43.1151
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
40.2647 > 26.2962 indicating a significant group difference at 5% significance level
43.1151 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 68.4615

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-14R	80.8636	12.4021	50.4841
LMW-3S	105.654	37.1923	48.3349
LMW-10	127.769	59.3077	48.3349
LMW-16	70.2692	1.80769	48.3349
LMW-3	112.769	44.3077	48.3349
LMW-15R	112.667	44.2051	46.6959
LMW-8	89.1923	20.7308	48.3349
LMW-9S	82.4667	14.0051	46.6959
LMW-9D	86.6923	18.2308	48.3349
LMW-9	90.4615	22	48.3349
LMW-6	131.654	63.1923	48.3349
LMW-7	97.9	29.4385	51.8334
MW-5	37.5	-30.9615	78.9305
LMW-12	37.5	-30.9615	70.4596
LMW-11	37.5	-30.9615	70.4596
LMW-13	37.5	-30.9615	70.4596

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 68.4615

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-14R	80.8636	12.4021	59.6295
LMW-3S	105.654	37.1923	57.0909
LMW-10	127.769	59.3077	57.0909
LMW-16	70.2692	1.80769	57.0909
LMW-3	112.769	44.3077	57.0909
LMW-15R	112.667	44.2051	55.155
LMW-8	89.1923	20.7308	57.0909
LMW-9S	82.4667	14.0051	55.155
LMW-9D	86.6923	18.2308	57.0909
LMW-9	90.4615	22	57.0909
LMW-6	131.654	63.1923	57.0909
LMW-7	97.9	29.4385	61.2232
MW-5	37.5	-30.9615	93.229
LMW-12	37.5	-30.9615	83.2236
LMW-11	37.5	-30.9615	83.2236
LMW-13	37.5	-30.9615	83.2236

Mann-Kendall Trend Analysis
Parameter: Nitrate
Location: LMW-10
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
6.92756	6.31173	0.615823	1	0
ND<1.60944	6.31173	-4.7023	1	1
6.00635	6.31173	-0.305382	1	2
ND<1.60944	6.31173	-4.7023	1	3
7.78322	6.31173	1.47149	2	3
5.9135	6.31173	-0.398232	2	4
-0.653926	6.31173	-6.965662	5	
6.36303	6.31173	0.0512933	3	5
6.23441	6.31173	-0.0773241	3	6
7.17012	6.31173	0.858385	4	6
7.17012	6.31173	0.858385	5	6
6.50728	6.31173	0.195543	6	6
ND<1.60944	6.92756	-5.318126	7	
6.00635	6.92756	-0.921205	6	8
ND<1.60944	6.92756	-5.318126	9	
7.78322	6.92756	0.855666	7	9
5.9135	6.92756	-1.014057	10	
-0.653926	6.92756	-7.581487	11	
6.36303	6.92756	-0.564537	12	
6.23441	6.92756	-0.693147	7	13
7.17012	6.92756	0.242562	8	13
7.17012	6.92756	0.242562	9	13
6.50728	6.92756	-0.420289	14	
6.00635	ND<1.60944	4.39692	10	14
ND<1.60944	ND<1.60944	0	10	14
7.78322	ND<1.60944	6.17379	11	14
5.9135	ND<1.60944	4.30407	12	14
-0.653926	ND<1.60944	-2.263361	2	15
6.36303	ND<1.60944	4.75359	13	15
6.23441	ND<1.60944	4.62497	14	15
7.17012	ND<1.60944	5.56068	15	15
7.17012	ND<1.60944	5.56068	16	15
6.50728	ND<1.60944	4.89784	17	15
ND<1.60944	6.00635	-4.396921	7	16
7.78322	6.00635	1.77687	18	16
5.9135	6.00635	-0.092850	2	18	17
-0.653926	6.00635	-6.660281	8	18
6.36303	6.00635	0.356675	19	18
6.23441	6.00635	0.228058	20	18
7.17012	6.00635	1.16377	21	18
7.17012	6.00635	1.16377	22	18
6.50728	6.00635	0.500925	23	18
7.78322	ND<1.60944	6.17379	24	18
5.9135	ND<1.60944	4.30407	25	18
-0.653926	ND<1.60944	-2.263362	5	19
6.36303	ND<1.60944	4.75359	26	19

6.23441	ND<1.60944	4.62497	27	19	
7.17012	ND<1.60944	5.56068	28	19	
7.17012	ND<1.60944	5.56068	29	19	
6.50728	ND<1.60944	4.89784	30	19	
5.9135	7.78322	-1.8697	230	20	
-0.653926	7.78322	-8.4371	530	21	
6.36303	7.78322	-1.4202	30	22	
6.23441	7.78322	-1.5488	130	23	
7.17012	7.78322	-0.613104		30	24
7.17012	7.78322	-0.613104		30	25
6.50728	7.78322	-1.2759	530	26	
-0.653926	5.9135	-6.5674	330	27	
6.36303	5.9135	0.449525		31	27
6.23441	5.9135	0.320908		32	27
7.17012	5.9135	1.25662	33	27	
7.17012	5.9135	1.25662	34	27	
6.50728	5.9135	0.593775		35	27
6.36303	-0.653926	7.01695	36	27	
6.23441	-0.653926	6.88834	37	27	
7.17012	-0.653926	7.82405	38	27	
7.17012	-0.653926	7.82405	39	27	
6.50728	-0.653926	7.1612	40	27	
6.23441	6.36303	-0.128617		40	28
7.17012	6.36303	0.807091		41	28
7.17012	6.36303	0.807091		42	28
6.50728	6.36303	0.14425	43	28	
7.17012	6.23441	0.935709		44	28
7.17012	6.23441	0.935709		45	28
6.50728	6.23441	0.272867		46	28
7.17012	7.17012	0	46	28	
6.50728	7.17012	-0.662842		46	29
6.50728	7.17012	-0.662842		46	30

S Statistic = 46 - 30 = 16

Tied Group	Value	Members
1	1.60944	2
2	7.17012	2

Time Period		Observations
11/18/2006		1
6/2/2007	1	
11/15/2007		1
5/20/2008		1
11/20/2008		1
11/16/2009		1
6/30/2010		1
11/17/2010		1
7/6/2011	1	
11/22/2011		1
5/16/2012		1
11/16/2012		1

11/16/2013 1
There are 0 time periods with multiple data

A = 36
B = 0
C = 0
D = 0
E = 4
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 266.667
Z-Score = 0.918559
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|0.918559| <= 1.97737 indicating no evidence of a trend

Mann-Kendall Trend Analysis
Parameter: Nitrate
Location: LMW-6
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
ND<1.60944	7.04752	-5.438080	1	
ND<1.60944	7.04752	-5.438080	2	
7.25134	7.04752	0.203828	1	2
ND<1.60944	7.04752	-5.438081	3	
8.51719	7.04752	1.46968 2	3	
6.77992	7.04752	-0.267595	2	4
0.336472	7.04752	-6.711042	5	
7.43838	7.04752	0.390866	3	5
7.09008	7.04752	0.0425596	4	5
8.6125	7.04752	1.56499 5	5	
8.63052	7.04752	1.583 6	5	
7.49554	7.04752	0.448025	7	5
ND<1.60944	ND<1.60944	0 7	5	
7.25134	ND<1.60944	5.64191 8	5	
ND<1.60944	ND<1.60944	0 8	5	
8.51719	ND<1.60944	6.90776 9	5	
6.77992	ND<1.60944	5.17048 10	5	
0.336472	ND<1.60944	-1.2729710	6	
7.43838	ND<1.60944	5.82895 11	6	
7.09008	ND<1.60944	5.48064 12	6	
8.6125	ND<1.60944	7.00307 13	6	
8.63052	ND<1.60944	7.02108 14	6	
7.49554	ND<1.60944	5.8861 15	6	
7.25134	ND<1.60944	5.64191 16	6	
ND<1.60944	ND<1.60944	0 16	6	
8.51719	ND<1.60944	6.90776 17	6	
6.77992	ND<1.60944	5.17048 18	6	
0.336472	ND<1.60944	-1.2729718	7	
7.43838	ND<1.60944	5.82895 19	7	
7.09008	ND<1.60944	5.48064 20	7	
8.6125	ND<1.60944	7.00307 21	7	
8.63052	ND<1.60944	7.02108 22	7	
7.49554	ND<1.60944	5.8861 23	7	
ND<1.60944	7.25134	-5.6419123	8	
8.51719	7.25134	1.26585 24	8	
6.77992	7.25134	-0.471423	24	9
0.336472	7.25134	-6.9148724	10	
7.43838	7.25134	0.187039	25	10
7.09008	7.25134	-0.161268	25	11
8.6125	7.25134	1.36116 26	11	
8.63052	7.25134	1.37918 27	11	
7.49554	7.25134	0.244197	28	11
8.51719	ND<1.60944	6.90776 29	11	
6.77992	ND<1.60944	5.17048 30	11	
0.336472	ND<1.60944	-1.2729730	12	
7.43838	ND<1.60944	5.82895 31	12	

7.09008	ND<1.60944	5.48064	32	12		
8.6125	ND<1.60944	7.00307	33	12		
8.63052	ND<1.60944	7.02108	34	12		
7.49554	ND<1.60944	5.8861	35	12		
6.77992	8.51719	-1.7372	35	13		
0.336472	8.51719	-8.1807	35	14		
7.43838	8.51719	-1.0788	35	15		
7.09008	8.51719	-1.4271	35	16		
8.6125	8.51719	0.0953102	36	16		
8.63052	8.51719	0.113329	37	16		
7.49554	8.51719	-1.0216	37	17		
0.336472	6.77992	-6.4434	37	18		
7.43838	6.77992	0.658462	38	18		
7.09008	6.77992	0.310155	39	18		
8.6125	6.77992	1.83258	40	18		
8.63052	6.77992	1.8506	41	18		
7.49554	6.77992	0.71562	42	18		
7.43838	0.336472	7.10191	43	18		
7.09008	0.336472	6.7536	44	18		
8.6125	0.336472	8.27603	45	18		
8.63052	0.336472	8.29405	46	18		
7.49554	0.336472	7.15907	47	18		
7.09008	7.43838	-0.348307	47	19		
8.6125	7.43838	1.17412	48	19		
8.63052	7.43838	1.19214	49	19		
7.49554	7.43838	0.0571584	50	19		
8.6125	7.09008	1.52243	51	19		
8.63052	7.09008	1.54045	52	19		
7.49554	7.09008	0.405465	53	19		
8.63052	8.6125	0.0180185	54	19		
7.49554	8.6125	-1.1169654	20			
7.49554	8.63052	-1.1349854	21			

S Statistic = 54 - 21 = 33

Tied Group	Value	Members
1	1.60944	3

Time Period	Observations
11/18/2006	1
6/2/2007	1
11/15/2007	1
5/20/2008	1
11/20/2008	1
11/16/2009	1
6/30/2010	1
11/17/2010	1
7/6/2011	1
11/22/2011	1
5/16/2012	1
11/16/2012	1
11/16/2013	1

There are 0 time periods with multiple data

A = 66
B = 0
C = 6
D = 0
E = 6
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 265
Z-Score = 1.96574
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|1.96574| <= 1.97737 indicating no evidence of a trend

Shewhart-CUSUM Control Chart

Parameter: Nitrate

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = 3.13822
Baseline Std Dev = 4.43375
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	6.31173	0	0.715763
11/18/2006	6.31173	0	0.715763
6/2/2007	6.92756	0	0.854657
6/2/2007	6.92756	0	0.854657
11/15/2007	1.60944	0	-0.344807
11/15/2007	1.60944	0	-0.344807
5/20/2008	6.00635	0	0.646886
5/20/2008	6.00635	0	0.646886
11/20/2008	1.60944	0	-0.344807
11/20/2008	1.60944	0	-0.344807
11/16/2009	7.78322	0.0476468	1.04765
11/16/2009	7.78322	0.0476468	1.04765
6/30/2010	5.9135	0	0.625945
6/30/2010	5.9135	0	0.625945
11/17/2010	-0.653926	0	-0.855292
11/17/2010	-0.653926	0	-0.855292
7/6/2011	6.36303	0	0.727332
7/6/2011	6.36303	0	0.727332
11/22/2011	6.23441	0	0.698323
11/22/2011	6.23441	0	0.698323
5/16/2012	7.17012	0	0.909365
5/16/2012	7.17012	0	0.909365
11/16/2012	7.17012	0	0.909365
11/16/2012	7.17012	0	0.909365
11/16/2013	6.50728	0	0.759866
11/16/2013	6.50728	0	0.759866

Shewhart-CUSUM Control Chart

Parameter: Nitrate

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = 3.13822
Baseline Std Dev = 4.43375
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	7.04752	0	0.881713
11/18/2006	7.04752	0	0.881713
6/2/2007	1.60944	0	-0.344807
6/2/2007	1.60944	0	-0.344807
11/15/2007	1.60944	0	-0.344807
11/15/2007	1.60944	0	-0.344807
5/20/2008	7.25134	0	0.927685
5/20/2008	7.25134	0	0.927685
11/20/2008	1.60944	0	-0.344807
11/20/2008	1.60944	0	-0.344807
11/16/2009	8.51719	0.213188	1.21319
11/16/2009	8.51719	0.213188	1.21319
6/30/2010	6.77992	0.0345475	0.821359
6/30/2010	6.77992	0.0345475	0.821359
11/17/2010	0.336472	0	-0.631915
11/17/2010	0.336472	0	-0.631915
7/6/2011	7.43838	0	0.96987
7/6/2011	7.43838	0	0.96987
11/22/2011	7.09008	0	0.891312
11/22/2011	7.09008	0	0.891312
5/16/2012	8.6125	0.234685	1.23468
5/16/2012	8.6125	0.234685	1.23468
11/16/2012	8.63052	0.473434	1.23875
11/16/2012	8.63052	0.473434	1.23875
11/16/2013	7.49554	0.456196	0.982762
11/16/2013	7.49554	0.456196	0.982762

Concentrations (ppb)

Parameter: Selenium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 246
Percent Non-Detects: 83.1081%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	(100%)	1/16/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/14/2000	ND<2	ND<2
			9/23/2003	ND<2	ND<2
			3/10/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/26/2005	ND<2	ND<2
			6/19/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.21 U	ND<0.21 U
			11/16/2009	ND<0.21 U	ND<0.21 U
			6/30/2010	ND<0.21 U	ND<0.21 U
			11/17/2010	ND<0.21 U	ND<0.21 U
			7/6/2011	ND<0.21 U	ND<0.21 U
			11/22/2011	ND<0.21 U	ND<0.21 U
			5/16/2012	ND<0.21 U	ND<0.21 U
			11/16/2012	ND<0.21 U	ND<0.21 U
			11/16/2013	ND<0.21 U	ND<0.21 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-3S	14	(100%)	11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	ND<2	ND<2
			5/20/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.21 U	ND<0.21 U
			11/16/2009	ND<0.21 U	ND<0.21 U
			6/30/2010	ND<0.21 U	ND<0.21 U
			11/17/2010	ND<0.21 U	ND<0.21 U
			7/6/2011	ND<0.21 U	ND<0.21 U
			11/22/2011	ND<0.21 U	ND<0.21 U
			5/16/2012	ND<0.21 U	ND<0.21 U
			11/16/2012	ND<0.21 U	ND<0.21 U
			11/16/2013	ND<0.21 U	ND<0.21 U
LMW-9D	14	12 (85.7143%)	11/18/2006	ND<2	ND<2
			6/2/2007	ND<2	ND<2
			11/15/2007	4	4
			5/20/2008	ND<2	ND<2

			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.21 U		ND<0.21 U
			11/16/2009	ND<0.21 U		ND<0.21 U
			6/30/2010	ND<0.21 U		ND<0.21 U
			11/17/2010	ND<0.21 U		ND<0.21 U
			7/6/2011	0.49 J	0.49 J	
			11/22/2011	ND<0.21 U		ND<0.21 U
			5/16/2012	ND<0.21 U		ND<0.21 U
			11/16/2012	ND<0.21 U		ND<0.21 U
			11/16/2013	ND<0.21 U		ND<0.21 U
LMW-10	21	16 (76.1905%)	3/14/2000		ND<2	ND<2
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.21 U		ND<0.21 U
			11/16/2009	ND<0.21 U		ND<0.21 U
			6/30/2010	ND<0.21 U		ND<0.21 U
			11/17/2010	ND<0.21 U		ND<0.21 U
			7/6/2011	2.8	2.8	
			11/22/2011	3.1	3.1	
			5/16/2012	4.3	4.3	
			11/16/2012	5	5	
			11/16/2013	1.1	1.1	
LMW-14R	12	12 (100%)	6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.21 U		ND<0.21 U
			6/30/2010	ND<0.21 U		ND<0.21 U
			11/17/2010	ND<0.21 U		ND<0.21 U
			7/6/2011	ND<0.21 U	ND<0.21 U	
			11/22/2011	ND<0.21 U		ND<0.21 U
			5/16/2012	ND<0.21 U		ND<0.21 U
			11/16/2012	ND<0.21 U		ND<0.21 U
			11/16/2013	ND<0.21 U		ND<0.21 U
LMW-16	14	10 (71.4286%)	11/18/2006		ND<2	ND<2
			6/2/2007	ND<2	ND<2	
			11/15/2007	2	2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.21 U		ND<0.21 U
			11/16/2009	ND<0.21 U		ND<0.21 U
			6/30/2010	ND<0.21 U		ND<0.21 U
			11/17/2010	0.31 J	0.31 J	
			7/6/2011	ND<0.21 U	ND<0.21 U	
			11/22/2011	0.25 J	0.25 J	
			5/16/2012	ND<0.21 U		ND<0.21 U
			11/16/2012	0.21 J	0.21 J	
			11/16/2013	ND<0.21 U		ND<0.21 U
LMW-3	26	26 (100%)	11/19/1996		ND<2	ND<2

			3/24/1997	ND<2	ND<2	
			1/16/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/14/2000	ND<2	ND<2	
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.21 U	ND<0.21 U	
			11/16/2009	ND<0.21 U	ND<0.21 U	
			6/30/2010	ND<0.21 U	ND<0.21 U	
			11/17/2010	ND<0.21 U	ND<0.21 U	
			7/6/2011	ND<0.21 U	ND<0.21 U	
			11/22/2011	ND<0.21 U	ND<0.21 U	
			5/16/2012	ND<0.21 U	ND<0.21 U	
			11/16/2012	ND<0.21 U	ND<0.21 U	
			11/16/2013	ND<0.21 U	ND<0.21 U	
LMW-15R	16	13 (81.25%)	11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	0.24 J	0.24 J	
			6/30/2010	ND<0.21 U	ND<0.21 U	
			11/17/2010	ND<0.21 U	ND<0.21 U	
			7/6/2011	0.32 J	0.32 J	
			11/22/2011	ND<0.21 U	ND<0.21 U	
			5/16/2012	0.24 J	0.24 J	
			11/16/2012	ND<0.21 U	ND<0.21 U	
			11/16/2013	ND<0.21 U	ND<0.21 U	
LMW-6	24	8 (33.3333%)	1/16/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/14/2000	ND<2	ND<2	
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/26/2005	1 J	1 J	
			6/19/2006	2	2	
			11/18/2006	2	2	
			6/2/2007	2	2	
			11/15/2007	4	4	
			5/20/2008	2	2	
			11/20/2008	2	2	
			6/11/2009	3.2	3.2	
			11/16/2009	2.6	2.6	
			6/30/2010	3.2	3.2	
			11/17/2010	6	6	

			7/6/2011	5.6	5.6	
			11/22/2011	3	3	
			5/16/2012	3.2	3.2	
			11/16/2012	3.3	3.3	
			11/16/2013	1.4	1.4	
LMW-8	24	12 (50%)	1/16/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/14/2000	ND<2	ND<2	
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	3	3	
			10/26/2005	1 J	1 J	
			6/19/2006	1 J	1 J	
			11/18/2006	1 J	1 J	
			6/2/2007	1 J	1 J	
			11/15/2007	3	3	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	0.64	0.64	
			11/16/2009	0.59	0.59	
			6/30/2010	0.33 J	0.33 J	
			11/17/2010	0.66	0.66	
			7/6/2011	ND<0.21 U	ND<0.21 U	
			11/22/2011	0.22 J	0.22 J	
			5/16/2012	ND<0.21 U	ND<0.21 U	
			11/16/2012	ND<0.21 U	ND<0.21 U	
			11/16/2013	0.59	0.59	
LMW-9	24	23 (95.8333%)	1/16/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/14/2000	ND<2	ND<2	
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	0.28 J	0.28 J	
			11/16/2009	ND<0.21 U	ND<0.21 U	
			6/30/2010	ND<0.21 U	ND<0.21 U	
			11/17/2010	ND<0.21 U	ND<0.21 U	
			7/6/2011	ND<0.21 U	ND<0.21 U	
			11/22/2011	ND<0.21 U	ND<0.21 U	
			5/16/2012	ND<0.21 U	ND<0.21 U	
			11/16/2012	ND<0.21 U	ND<0.21 U	
			11/16/2013	ND<0.21 U	ND<0.21 U	
LMW-9S	16	11 (68.75%)	11/18/2006	4	4	
			6/2/2007	4	4	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.21 U	ND<0.21 U	

			11/16/2009	ND<0.21 U		ND<0.21 U
			11/16/2009	ND<0.21 U		ND<0.21 U
			11/16/2009	ND<0.21 U		ND<0.21 U
			6/30/2010	ND<0.21 U		ND<0.21 U
			11/17/2010	0.26 J	0.26 J	
			7/6/2011	0.38 J	0.38 J	
			11/22/2011	ND<0.21 U		ND<0.21 U
			5/16/2012	ND<0.21 U		ND<0.21 U
			11/16/2012	0.25 J	0.25 J	
			11/16/2013	ND<0.21 U		ND<0.21 U
LMW-7	21	19 (90.4762%)	1/16/1998	ND<2		ND<2
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/14/2000	ND<2	ND<2	
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.21 U		ND<0.21 U
			11/17/2010	ND<0.21 U		ND<0.21 U
			7/6/2011	0.3 J	0.3 J	
			11/22/2011	0.86	0.86	
			5/16/2012	ND<0.21 U		ND<0.21 U
			11/16/2012	ND<0.21 U		ND<0.21 U
LMW-11	11	11 (100%)	3/14/2000	ND<2		ND<2
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
LMW-12	11	11 (100%)	3/14/2000	ND<2		ND<2
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
LMW-13	11	11 (100%)	3/14/2000	ND<2		ND<2
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	

			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			6/2/2007	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
MW-5	13	13 (100%)	1/16/1998		ND<2	ND<2
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/14/2000	ND<2	ND<2	
			9/23/2003	ND<2	ND<2	
			3/10/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/26/2005	ND<2	ND<2	
			6/19/2006	ND<2	ND<2	
			11/15/2007	ND<2	ND<2	
			5/20/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Selenium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.105	-2.747777	55021	-0.288515
2	0.105	-2.512131	3.861	-0.552289
3	0.105	-2.326341	9.2729	-0.796555
4	0.105	-2.226212	4.2289	-1.03031
5	0.105	-2.144412	8.8274	-1.25547
6	0.105	-2.053753	3.0453	-1.47111
7	0.105	-1.995393	7.0269	-1.68063
8	0.105	-1.943144	0.8026	-1.88466
9	0.105	-1.880794	4.34	-2.08214
10	0.105	-1.838434	7.7198	-2.27518
11	0.105	-1.786615	0.9118	-2.46277
12	0.105	-1.750695	3.9767	-2.64659
13	0.105	-1.716885	6.9244	-2.82687
14	0.105	-1.674665	9.7289	-3.00271
15	0.105	-1.644856	2.4344	-3.17541
16	0.105	-1.616446	5.0473	-3.34514
17	0.105	-1.580476	7.5452	-3.51109
18	0.105	-1.554776	9.9625	-3.67434
19	0.105	-1.530077	2.3036	-3.835
20	0.105	-1.498527	4.5491	-3.99234
21	0.105	-1.475797	6.7271	-4.1473
22	0.105	-1.446637	8.8198	-4.2992
23	0.105	-1.425548	0.852	-4.44888
24	0.105	-1.405078	2.8262	-4.59641
25	0.105	-1.378668	4.7269	-4.74117
26	0.105	-1.359468	6.5751	-4.88391
27	0.105	-1.340758	8.3727	-5.02469
28	0.105	-1.316529	0.1059	-5.16293
29	0.105	-1.298849	1.7929	-5.29931
30	0.105	-1.275889	3.4208	-5.43327
31	0.105	-1.259089	5.006	-5.56548
32	0.105	-1.242649	6.5502	-5.69595
33	0.105	-1.221239	8.0416	-5.82418
34	0.105	-1.205539	9.4949	-5.95076
35	0.105	-1.190121	00.911	-6.07573
36	0.105	-1.17	102.28	-6.19858
37	0.105	-1.155221	03.615	-6.31987
38	0.105	-1.140691	04.916	-6.43965
39	0.105	-1.121681	06.174	-6.55742
40	0.105	-1.107681	07.401	-6.67373
41	0.105	-1.089351	08.588	-6.78811
42	0.105	-1.075841	09.745	-6.90107
43	0.105	-1.062521	10.874	-7.01264
44	0.105	-1.045051	11.966	-7.12237
45	0.105	-1.032151	13.032	-7.23074
46	0.105	-1.019431	14.071	-7.33778
47	0.105	-1.002711	15.076	-7.44307
48	0.105	-0.990356	116.057	-7.54706
49	0.105	-0.978151	17.014	-7.64976
50	0.105	-0.9621	117.939	-7.75078
51	0.105	-0.950222	118.842	-7.85056

52	0.105	-0.93459	119.716	-7.94869
53	0.105	-0.923014	120.568	-8.0456
54	0.105	-0.911562	121.399	-8.14132
55	0.105	-0.896473	122.202	-8.23545
56	0.105	-0.885291	122.986	-8.3284
57	0.105	-0.874218	123.75	-8.4202
58	0.105	-0.859618	124.489	-8.51046
59	0.105	-0.848786	125.21	-8.59958
60	0.105	-0.834498	125.906	-8.6872
61	0.105	-0.823893	126.585	-8.77371
62	0.105	-0.813379	127.247	-8.85911
63	0.105	-0.7995	127.886	-8.94306
64	0.105	-0.789191	128.509	-9.02593
65	0.105	-0.778966	129.115	-9.10772
66	0.105	-0.765456	129.701	-9.18809
67	0.105	-0.755415	130.272	-9.26741
68	0.105	-0.745449	130.828	-9.34568
69	0.105	-0.732275	131.364	-9.42257
70	0.105	-0.722479	131.886	-9.49843
71	0.105	-0.709522	132.389	-9.57293
72	0.105	-0.699883	132.879	-9.64642
73	0.105	-0.690309	133.356	-9.7189
74	0.105	-0.677639	133.815	-9.79005
75	0.105	-0.668209	134.261	-9.86022
76	0.105	-0.658838	134.695	-9.92939
77	0.105	-0.646431	135.113	-9.99727
78	0.105	-0.637192	135.519	-10.0642
79	0.105	-0.628006	135.914	-10.1301
80	0.105	-0.615839	136.293	-10.1948
81	0.105	-0.606775	136.661	-10.2585
82	0.21	-0.594766	137.015	-10.3834
83	0.22	-0.585815	137.358	-10.5123
84	0.24	-0.576911	137.691	-10.6507
85	0.24	-0.565108	138.01	-10.7864
86	0.25	-0.556308	138.32	-10.9254
87	0.25	-0.547551	138.619	-11.0623
88	0.26	-0.53594	138.907	-11.2017
89	0.28	-0.52728	139.185	-11.3493
90	0.3	-0.515791	139.451	-11.504
91	0.31	-0.507221	139.708	-11.6613
92	0.32	-0.498687	139.957	-11.8209
93	0.33	-0.487364	140.194	-11.9817
94	0.38	-0.478914	140.424	-12.1637
95	0.49	-0.470498	140.645	-12.3942
96	0.59	-0.459327	140.856	-12.6652
97	0.59	-0.450985	141.059	-12.9313
98	0.64	-0.442676	141.255	-13.2146
99	0.66	-0.431644	141.442	-13.4995
100	0.86	-0.423405	141.621	-13.8636
101	1	-0.412463	141.791	-14.2761
102	1	-0.40429	141.954	-14.6804
103	1	-0.396142	142.111	-15.0765
104	1	-0.385321	142.26	-15.4618
105	1	-0.377233	142.402	-15.8391
106	1	-0.369171	142.538	-16.2082
107	1	-0.358459	142.667	-16.5667
108	1	-0.350451	142.79	-16.9172
109	1	-0.33981	142.905	-17.257
110	1	-0.331854	143.015	-17.5888
111	1	-0.323919	143.12	-17.9127
112	1	-0.31337	143.218	-18.2261
113	1	-0.305481	143.312	-18.5316

114	1	-0.297612	143.4	-18.8292
115	1	-0.287147	143.483	-19.1163
116	1	-0.279319	143.561	-19.3957
117	1	-0.271509	143.635	-19.6672
118	1	-0.26112143.703	-19.9283	
119	1	-0.253347	143.767	-20.1816
120	1	-0.243007	143.826	-20.4247
121	1	-0.235269	143.881	-20.6599
122	1	-0.227545	143.933	-20.8875
123	1	-0.217267	143.98	-21.1047
124	1	-0.209575	144.024	-21.3143
125	1	-0.201894	144.065	-21.5162
126	1	-0.191671	144.102	-21.7079
127	1	-0.184017	144.136	-21.8919
128	1	-0.176374	144.167	-22.0683
129	1	-0.166199	144.194	-22.2345
130	1	-0.158579	144.219	-22.393
131	1	-0.148434	144.241	-22.5415
132	1	-0.140835	144.261	-22.6823
133	1	-0.133244	144.279	-22.8156
134	1	-0.123135	144.294	-22.9387
135	1	-0.115562	144.308	-23.0543
136	1	-0.107995	144.319	-23.1622
137	1	-0.0979139	144.329	-23.2602
138	1	-0.0903606	144.337	-23.3505
139	1	-0.0802981	144.343	-23.4308
140	1	-0.0727562	144.349	-23.5036
141	1	-0.0652187	144.353	-23.5688
142	1	-0.0551734	144.356	-23.624
143	1	-0.0476439	144.358	-23.6716
144	1	-0.0401167	144.36	-23.7117
145	1	-0.0300838	144.361	-23.7418
146	1	-0.0225612	144.361	-23.7644
147	1	-0.0150408	144.362	-23.7794
148	1	-0.00501359	144.362	-23.7844
149	1	0.00501359	144.362	-23.7794
150	1	0.0150408	144.362	-23.7644
151	1	0.0225612	144.362	-23.7418
152	1	0.0300838	144.363	-23.7117
153	1	0.0401167	144.365	-23.6716
154	1	0.0476439	144.367	-23.624
155	1	0.0551734	144.37	-23.5688
156	1	0.0652187	144.374	-23.5036
157	1	0.0727562	144.38	-23.4308
158	1	0.0802981	144.386	-23.3505
159	1	0.0903606	144.394	-23.2602
160	1	0.0979139	144.404	-23.1622
161	1	0.107995	144.416	-23.0543
162	1	0.115562	144.429	-22.9387
163	1	0.123135	144.444	-22.8156
164	1	0.133244	144.462	-22.6823
165	1	0.140835	144.482	-22.5415
166	1	0.148434	144.504	-22.393
167	1	0.158579	144.529	-22.2345
168	1	0.166199	144.557	-22.0683
169	1	0.176374	144.588	-21.8919
170	1	0.184017	144.621	-21.7079
171	1	0.191671	144.658	-21.5162
172	1	0.201894	144.699	-21.3143
173	1	0.209575	144.743	-21.1047
174	1	0.217267	144.79	-20.8875
175	1	0.227545	144.842	-20.6599

176	1	0.235269	144.897	-20.4247
177	1	0.243007	144.956	-20.1816
178	1	0.253347	145.02	-19.9283
179	1	0.26112	145.089	-19.6672
180	1	0.271509	145.162	-19.3957
181	1	0.279319	145.24	-19.1163
182	1	0.287147	145.323	-18.8292
183	1	0.297612	145.411	-18.5316
184	1	0.305481	145.505	-18.2261
185	1	0.31337	145.603	-17.9127
186	1	0.323919	145.708	-17.5888
187	1	0.331854	145.818	-17.257
188	1	0.33981	145.933	-16.9172
189	1	0.350451	146.056	-16.5667
190	1	0.358459	146.185	-16.2082
191	1	0.369171	146.321	-15.8391
192	1	0.377233	146.463	-15.4618
193	1	0.385321	146.612	-15.0765
194	1	0.396142	146.769	-14.6804
195	1	0.40429	146.932	-14.2761
196	1	0.412463	147.102	-13.8636
197	1	0.423405	147.282	-13.4402
198	1	0.431644	147.468	-13.0086
199	1	0.442676	147.664	-12.5659
200	1	0.450985	147.867	-12.1149
201	1	0.459327	148.078	-11.6556
202	1	0.470498	148.3	-11.1851
203	1	0.478914	148.529	-10.7062
204	1	0.487364	148.767	-10.2188
205	1	0.498687	149.015	-9.72013
206	1	0.507221	149.272	-9.21291
207	1	0.515791	149.539	-8.69712
208	1	0.52728	149.817	-8.16984
209	1	0.53594	150.104	-7.6339
210	1	0.547551	150.404	-7.08635
211	1	0.556308	150.713	-6.53004
212	1	0.565108	151.032	-5.96493
213	1	0.576911	151.365	-5.38802
214	1	0.585815	151.708	-4.8022
215	1	0.594766	152.062	-4.20744
216	1	0.606775	152.43	-3.60066
217	1	0.615839	152.81	-2.98482
218	1	0.628006	153.204	-2.35682
219	1	0.637192	153.61	-1.71962
220	1	0.646431	154.028	-1.07319
221	1	0.658838	154.462	-0.414356
222	1	0.668209	154.908	0.253854
223	1	0.677639	155.368	0.931493
224	1	0.690309	155.844	1.6218
225	1	0.699883	156.334	2.32169
226	1	0.709522	156.837	3.03121
227	1	0.722479	157.359	3.75369
228	1	0.732275	157.896	4.48596
229	1	0.745449	158.451	5.23141
230	1	0.755415	159.022	5.98682
231	1	0.765456	159.608	6.75228
232	1	0.778966	160.215	7.53125
233	1	0.789191	160.837	8.32044
234	1	0.7995	161.477	9.11994
235	1	0.813379	162.138	9.93332
236	1	0.823893	162.817	10.7572
237	1	0.834498	163.513	11.5917

238	1	0.848786		164.234	12.4405
239	1	0.859618		164.973	13.3001
240	1	0.874218		165.737	14.1743
241	1	0.885291		166.521	15.0596
242	1	0.896473		167.325	15.9561
243	1	0.911562		168.155	16.8677
244	1	0.923014		169.007	17.7907
245	1	0.93459	169.881	18.7253	
246	1	0.950222		170.784	19.6755
247	1	0.9621	171.709	20.6376	
248	1	0.97815	172.666	21.6157	
249	1	0.990356		173.647	22.6061
250	1	1.00271	174.652	23.6088	
251	1	1.01943	175.692	24.6282	
252	1	1.03215	176.757	25.6604	
253	1	1.04505	177.849	26.7054	
254	1	1.06252	178.978	27.7679	
255	1	1.07584	180.136	28.8438	
256	1	1.08935	181.322	29.9331	
257	1	1.10768	182.549	31.0408	
258	1	1.12168	183.807	32.1625	
259	1	1.14069	185.108	33.3032	
260	1	1.15522	186.443	34.4584	
261	1	1.17	187.812	35.6284	
262	1	1.19012	189.228	36.8185	
263	1	1.20553	190.682	38.0241	
264	1	1.22123	192.173	39.2453	
265	1	1.24264	193.717	40.4879	
266	1	1.25908	195.302	41.747	
267	1	1.27588	196.93	43.0229	
268	1	1.29884	198.617	44.3217	
269	1	1.31652	200.351	45.6382	
270	1	1.34075	202.148	46.979	
271	1.1	1.35946	203.996	48.4744	
272	1.4	1.37866	205.897	50.4045	
273	2	1.40507	207.871	53.2147	
274	2	1.42554	209.903	56.0658	
275	2	1.44663	211.996	58.959	
276	2	1.47579	214.174	61.9106	
277	2	1.49852	216.42	64.9076	
278	2	1.53007	218.761	67.9678	
279	2.6	1.55477	221.178	72.0102	
280	2.8	1.58047	223.676	76.4355	
281	3	1.61644	226.289	81.2848	
282	3	1.64485	228.994	86.2193	
283	3	1.67466	231.799	91.2433	
284	3.1	1.71688	234.747	96.5657	
285	3.2	1.75069	237.811	102.168	
286	3.2	1.78661	241.003	107.885	
287	3.2	1.83843	244.383	113.768	
288	3.3	1.88079	247.921	119.975	
289	4	1.94314	251.696	127.747	
290	4	1.99539	255.678	135.729	
291	4	2.05375	259.896	143.944	
292	4	2.14441	264.494	152.521	
293	4.3	2.22621	269.45	162.094	
294	5	2.32634	274.862	173.726	
295	5.6	2.51213	281.173	187.794	
296	6	2.74777	288.723	204.28	

Data Set Standard Deviation = 0.877446

Numerator = 41730.4
Denominator = 65575.9
W Statistic = 0.636369 = 41730.4 / 65575.9

5% Critical value of 0.976 exceeds 0.636369
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.636369
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Selenium

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.799675
0.799675 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.105	0.003367	-2.747774	8.3625	348.683	
2	0.105	0.00673401	-2.512134	8.3625	337.176	
3	0.105	0.010101	-2.326344	8.3625	328.103	
4	0.105	0.013468	-2.226214	8.3625	323.213	
5	0.105	0.016835	-2.144414	8.3625	319.219	
6	0.105	0.020202	-2.053754	8.3625	314.791	
7	0.105	0.023569	-1.995394	8.3625	311.942	
8	0.105	0.026936	-1.943144	8.3625	309.39	
9	0.105	0.030303	-1.880794	8.3625	306.345	
10	0.105	0.03367	-1.838434	8.3625	304.276	
11	0.105	0.037037	-1.786614	8.3625	301.746	
12	0.105	0.040404	-1.750694	8.3625	299.992	
13	0.105	0.043771	-1.716884	8.3625	298.341	
14	0.105	0.047138	-1.674664	8.3625	296.279	
15	0.105	0.0505051	-1.644854	8.3625	294.824	
16	0.105	0.0538721	-1.616444	8.3625	293.436	
17	0.105	0.0572391	-1.580474	8.3625	291.679	
18	0.105	0.0606061	-1.554774	8.3625	290.425	
19	0.105	0.0639731	-1.530074	8.3625	289.218	
20	0.105	0.0673401	-1.498524	8.3625	287.677	
21	0.105	0.0707071	-1.475794	8.3625	286.568	
22	0.105	0.0740741	-1.446634	8.3625	285.144	
23	0.105	0.0774411	-1.425544	8.3625	284.114	
24	0.105	0.0808081	-1.405074	8.3625	283.114	
25	0.105	0.0841751	-1.378664	8.3625	281.824	
26	0.105	0.0875421	-1.359464	8.3625	280.887	
27	0.105	0.0909091	-1.340754	8.3625	279.974	
28	0.105	0.0942761	-1.316524	8.3625	278.79	
29	0.105	0.0976431	-1.298844	8.3625	277.926	
30	0.105	0.10101	-1.275884	8.3625	276.805	
31	0.105	0.104377	-1.259084	8.3625	275.985	
32	0.105	0.107744	-1.242644	8.3625	275.182	
33	0.105	0.111111	-1.221234	8.3625	274.137	
34	0.105	0.114478	-1.205534	8.3625	273.37	
35	0.105	0.117845	-1.190124	8.3625	272.617	
36	0.105	0.121212	-1.17	48.3625	271.635	
37	0.105	0.124579	-1.155224	8.3625	270.913	
38	0.105	0.127946	-1.140694	8.3625	270.204	
39	0.105	0.131313	-1.121684	8.3625	269.275	
40	0.105	0.13468	-1.107684	8.3625	268.592	
41	0.105	0.138047	-1.089354	8.3625	267.697	
42	0.105	0.141414	-1.075844	8.3625	267.037	
43	0.105	0.144781	-1.062524	8.3625	266.386	
44	0.105	0.148148	-1.045054	8.3625	265.533	
45	0.105	0.151515	-1.032154	8.3625	264.904	
46	0.105	0.154882	-1.019434	8.3625	264.282	
47	0.105	0.158249	-1.002714	8.3625	263.466	
48	0.105	0.161616	-0.990356	48.3625	262.862	

49	0.105	0.164983	-0.978154	8.3625	262.266
50	0.105	0.16835	-0.9621	48.3625	261.483
51	0.105	0.171717	-0.950222	48.3625	260.903
52	0.105	0.175084	-0.934594	8.3625	260.139
53	0.105	0.178451	-0.923014	48.3625	259.574
54	0.105	0.181818	-0.911562	48.3625	259.015
55	0.105	0.185185	-0.896473	48.3625	258.278
56	0.105	0.188552	-0.885291	48.3625	257.732
57	0.105	0.191919	-0.874218	48.3625	257.191
58	0.105	0.195286	-0.859618	48.3625	256.478
59	0.105	0.198653	-0.848786	48.3625	255.949
60	0.105	0.20202	-0.834498	48.3625	255.251
61	0.105	0.205387	-0.823893	48.3625	254.733
62	0.105	0.208754	-0.813379	48.3625	254.22
63	0.105	0.212121	-0.7995	48.3625	253.542
64	0.105	0.215488	-0.789191	48.3625	253.039
65	0.105	0.218855	-0.778966	48.3625	252.54
66	0.105	0.222222	-0.765456	48.3625	251.88
67	0.105	0.225589	-0.755415	48.3625	251.389
68	0.105	0.228956	-0.745449	48.3625	250.903
69	0.105	0.232323	-0.732275	48.3625	250.259
70	0.105	0.23569	-0.722479	48.3625	249.781
71	0.105	0.239057	-0.709522	48.3625	249.148
72	0.105	0.242424	-0.699883	48.3625	248.678
73	0.105	0.245791	-0.690309	48.3625	248.21
74	0.105	0.249158	-0.677639	48.3625	247.591
75	0.105	0.252525	-0.668209	48.3625	247.131
76	0.105	0.255892	-0.658838	48.3625	246.673
77	0.105	0.259259	-0.646431	48.3625	246.067
78	0.105	0.262626	-0.637192	48.3625	245.616
79	0.105	0.265993	-0.628006	48.3625	245.168
80	0.105	0.26936	-0.615839	48.3625	244.573
81	0.105	0.272727	-0.606775	48.3625	244.131
82	0.21	0.276094	-0.594766	57.725	243.544
83	0.22	0.279461	-0.585815	58.6167	243.107
84	0.24	0.282828	-0.576911	60.4	242.672
85	0.24	0.286195	-0.565108	60.4	242.096
86	0.25	0.289562	-0.556308	61.2917	241.666
87	0.25	0.292929	-0.547551	61.2917	241.239
88	0.26	0.296296	-0.535946	2.1833	240.672
89	0.28	0.299663	-0.527286	3.9667	240.249
90	0.3	0.30303	-0.515791	65.75	239.688
91	0.31	0.306397	-0.507221	66.6417	239.269
92	0.32	0.309764	-0.498687	67.5333	238.853
93	0.33	0.313131	-0.487364	68.425	238.3
94	0.38	0.316498	-0.478914	72.8833	237.887
95	0.49	0.319865	-0.470498	82.6917	237.476
96	0.59	0.323232	-0.459327	91.6083	236.93
97	0.59	0.326599	-0.450985	91.6083	236.523
98	0.64	0.329966	-0.442676	96.0667	236.117
99	0.66	0.333333	-0.431644	97.85	235.579
100	0.86	0.3367	-0.423405	115.683	235.176
101	1	0.340067	-0.412463	128.167	234.642
102	1	0.343434	-0.40429	128.167	234.243
103	1	0.346801	-0.396142	128.167	233.845
104	1	0.350168	-0.385321	128.167	233.317
105	1	0.353535	-0.377233	128.167	232.922
106	1	0.356902	-0.369171	128.167	232.528
107	1	0.360269	-0.358459	128.167	232.005
108	1	0.363636	-0.350451	128.167	231.614
109	1	0.367003	-0.33981	128.167	231.094
110	1	0.37037	-0.331854	128.167	230.706

111	1	0.373737	-0.323919	128.167	230.318
112	1	0.377104	-0.31337	128.167	229.803
113	1	0.380471	-0.305481	128.167	229.418
114	1	0.383838	-0.297612	128.167	229.033
115	1	0.387205	-0.287147	128.167	228.522
116	1	0.390572	-0.279319	128.167	228.14
117	1	0.393939	-0.271509	128.167	227.759
118	1	0.397306	-0.26112	128.167	227.251
119	1	0.400673	-0.253347	128.167	226.872
120	1	0.40404	-0.243007	128.167	226.367
121	1	0.407407	-0.235269	128.167	225.989
122	1	0.410774	-0.227545	128.167	225.612
123	1	0.414141	-0.217267	128.167	225.11
124	1	0.417508	-0.209575	128.167	224.734
125	1	0.420875	-0.201894	128.167	224.359
126	1	0.424242	-0.191671	128.167	223.86
127	1	0.427609	-0.184017	128.167	223.486
128	1	0.430976	-0.176374	128.167	223.113
129	1	0.434343	-0.166199	128.167	222.616
130	1	0.43771	-0.158579	128.167	222.244
131	1	0.441077	-0.148434	128.167	221.749
132	1	0.444444	-0.140835	128.167	221.377
133	1	0.447811	-0.133244	128.167	221.007
134	1	0.451178	-0.123135	128.167	220.513
135	1	0.454545	-0.115562	128.167	220.143
136	1	0.457912	-0.107995	128.167	219.774
137	1	0.461279	-0.0979139	128.167	219.281
138	1	0.464646	-0.0903606	128.167	218.913
139	1	0.468013	-0.0802981	128.167	218.421
140	1	0.47138	-0.0727562	128.167	218.053
141	1	0.474747	-0.0652187	128.167	217.685
142	1	0.478114	-0.0551734	128.167	217.194
143	1	0.481481	-0.0476439	128.167	216.827
144	1	0.484848	-0.0401167	128.167	216.459
145	1	0.488215	-0.0300838	128.167	215.969
146	1	0.491582	-0.0225612	128.167	215.602
147	1	0.494949	-0.0150408	128.167	215.234
148	1	0.498316	-0.00501359	128.167	214.745
149	1	0.501684	0.00501359	128.167	214.255
150	1	0.505051	0.0150408	128.167	213.766
151	1	0.508418	0.0225612	128.167	213.398
152	1	0.511785	0.0300838	128.167	213.031
153	1	0.515152	0.0401167	128.167	212.541
154	1	0.518519	0.0476439	128.167	212.173
155	1	0.521886	0.0551734	128.167	211.806
156	1	0.525253	0.0652187	128.167	211.315
157	1	0.52862	0.0727562	128.167	210.947
158	1	0.531987	0.0802981	128.167	210.579
159	1	0.535354	0.0903606	128.167	210.087
160	1	0.538721	0.0979139	128.167	209.719
161	1	0.542088	0.107995	128.167	209.226
162	1	0.545455	0.115562	128.167	208.857
163	1	0.548822	0.123135	128.167	208.487
164	1	0.552189	0.133244	128.167	207.993
165	1	0.555556	0.140835	128.167	207.623
166	1	0.558923	0.148434	128.167	207.251
167	1	0.56229	0.158579	128.167	206.756
168	1	0.565657	0.166199	128.167	206.384
169	1	0.569024	0.176374	128.167	205.887
170	1	0.572391	0.184017	128.167	205.514
171	1	0.575758	0.191671	128.167	205.14
172	1	0.579125	0.201894	128.167	204.641

173	1	0.582492	0.209575	128.167	204.266
174	1	0.585859	0.217267	128.167	203.89
175	1	0.589226	0.227545	128.167	203.388
176	1	0.592593	0.235269	128.167	203.011
177	1	0.59596	0.243007	128.167	202.633
178	1	0.599327	0.253347	128.167	202.128
179	1	0.602694	0.26112	128.167	201.749
180	1	0.606061	0.271509	128.167	201.241
181	1	0.609428	0.279319	128.167	200.86
182	1	0.612795	0.287147	128.167	200.478
183	1	0.616162	0.297612	128.167	199.967
184	1	0.619529	0.305481	128.167	199.582
185	1	0.622896	0.31337	128.167	199.197
186	1	0.626263	0.323919	128.167	198.682
187	1	0.62963	0.331854	128.167	198.294
188	1	0.632997	0.33981	128.167	197.906
189	1	0.636364	0.350451	128.167	197.386
190	1	0.639731	0.358459	128.167	196.995
191	1	0.643098	0.369171	128.167	196.472
192	1	0.646465	0.377233	128.167	196.078
193	1	0.649832	0.385321	128.167	195.683
194	1	0.653199	0.396142	128.167	195.155
195	1	0.656566	0.40429	128.167	194.757
196	1	0.659933	0.412463	128.167	194.358
197	1	0.6633	0.423405	128.167	193.824
198	1	0.666667	0.431644	128.167	193.421
199	1	0.670034	0.442676	128.167	192.883
200	1	0.673401	0.450985	128.167	192.477
201	1	0.676768	0.459327	128.167	192.07
202	1	0.680135	0.470498	128.167	191.524
203	1	0.683502	0.478914	128.167	191.113
204	1	0.686869	0.487364	128.167	190.7
205	1	0.690236	0.498687	128.167	190.147
206	1	0.693603	0.507221	128.167	189.731
207	1	0.69697	0.515791	128.167	189.312
208	1	0.700337	0.52728	128.167	188.751
209	1	0.703704	0.53594	128.167	188.328
210	1	0.707071	0.547551	128.167	187.761
211	1	0.710438	0.556308	128.167	187.334
212	1	0.713805	0.565108	128.167	186.904
213	1	0.717172	0.576911	128.167	186.328
214	1	0.720539	0.585815	128.167	185.893
215	1	0.723906	0.594766	128.167	185.456
216	1	0.727273	0.606775	128.167	184.869
217	1	0.73064	0.615839	128.167	184.427
218	1	0.734007	0.628006	128.167	183.832
219	1	0.737374	0.637192	128.167	183.384
220	1	0.740741	0.646431	128.167	182.933
221	1	0.744108	0.658838	128.167	182.327
222	1	0.747475	0.668209	128.167	181.869
223	1	0.750842	0.677639	128.167	181.409
224	1	0.754209	0.690309	128.167	180.79
225	1	0.757576	0.699883	128.167	180.322
226	1	0.760943	0.709522	128.167	179.852
227	1	0.76431	0.722479	128.167	179.219
228	1	0.767677	0.732275	128.167	178.741
229	1	0.771044	0.745449	128.167	178.097
230	1	0.774411	0.755415	128.167	177.611
231	1	0.777778	0.765456	128.167	177.12
232	1	0.781145	0.778966	128.167	176.46
233	1	0.784512	0.789191	128.167	175.961
234	1	0.787879	0.7995	128.167	175.458

235	1	0.791246	0.813379	128.167	174.78
236	1	0.794613	0.823893	128.167	174.267
237	1	0.79798	0.834498	128.167	173.749
238	1	0.801347	0.848786	128.167	173.051
239	1	0.804714	0.859618	128.167	172.522
240	1	0.808081	0.874218	128.167	171.809
241	1	0.811448	0.885291	128.167	171.268
242	1	0.814815	0.896473	128.167	170.722
243	1	0.818182	0.911562	128.167	169.985
244	1	0.821549	0.923014	128.167	169.426
245	1	0.824916	0.93459	128.167	168.861
246	1	0.828283	0.950222	128.167	168.097
247	1	0.83165	0.9621	128.167	167.517
248	1	0.835017	0.97815	128.167	166.734
249	1	0.838384	0.990356	128.167	166.138
250	1	0.841751	1.00271	128.167	165.534
251	1	0.845118	1.01943	128.167	164.718
252	1	0.848485	1.03215	128.167	164.096
253	1	0.851852	1.04505	128.167	163.467
254	1	0.855219	1.06252	128.167	162.614
255	1	0.858586	1.07584	128.167	161.963
256	1	0.861953	1.08935	128.167	161.303
257	1	0.86532	1.10768	128.167	160.408
258	1	0.868687	1.12168	128.167	159.725
259	1	0.872054	1.14069	128.167	158.796
260	1	0.875421	1.15522	128.167	158.087
261	1	0.878788	1.17	128.167	157.365
262	1	0.882155	1.19012	128.167	156.383
263	1	0.885522	1.20553	128.167	155.63
264	1	0.888889	1.22123	128.167	154.863
265	1	0.892256	1.24264	128.167	153.818
266	1	0.895623	1.25908	128.167	153.015
267	1	0.89899	1.27588	128.167	152.195
268	1	0.902357	1.29884	128.167	151.074
269	1	0.905724	1.31652	128.167	150.21
270	1	0.909091	1.34075	128.167	149.026
271	1.1	0.912458	1.35946	137.083	148.113
272	1.4	0.915825	1.37866	163.833	147.176
273	2	0.919192	1.40507	217.333	145.886
274	2	0.922559	1.42554	217.333	144.886
275	2	0.925926	1.44663	217.333	143.856
276	2	0.929293	1.47579	217.333	142.432
277	2	0.93266	1.49852	217.333	141.323
278	2	0.936027	1.53007	217.333	139.782
279	2.6	0.939394	1.55477	270.833	138.575
280	2.8	0.942761	1.58047	288.667	137.321
281	3	0.946128	1.61644	306.5	135.564
282	3	0.949495	1.64485	306.5	134.176
283	3	0.952862	1.67466	306.5	132.721
284	3.1	0.956229	1.71688	315.417	130.659
285	3.2	0.959596	1.75069	324.333	129.008
286	3.2	0.962963	1.78661	324.333	127.254
287	3.2	0.96633	1.83843	324.333	124.724
288	3.3	0.969697	1.88079	333.25	122.655
289	4	0.973064	1.94314	395.667	119.61
290	4	0.976431	1.99539	395.667	117.058
291	4	0.979798	2.05375	395.667	114.209
292	4	0.983165	2.14441	395.667	109.781
293	4.3	0.986532	2.22621	422.417	105.787
294	5	0.989899	2.32634	484.833	100.897
295	5.6	0.993266	2.51213	538.333	91.8241
296	6	0.996633	2.74777	574	80.3175

Shapiro-Francia Test of Normality

Parameter: Selenium

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.25379	-2.74777	7.55021	6.1929
2	-2.25379	-2.51213	13.861	11.8547
3	-2.25379	-2.32634	19.2729	17.0978
4	-2.25379	-2.22621	24.2289	22.1152
5	-2.25379	-2.14441	28.8274	26.9483
6	-2.25379	-2.05375	33.0453	31.577
7	-2.25379	-1.99539	37.0269	36.0742
8	-2.25379	-1.94314	40.8026	40.4537
9	-2.25379	-1.88079	44.34	44.6926
10	-2.25379	-1.83843	47.7198	48.836
11	-2.25379	-1.78661	50.9118	52.8627
12	-2.25379	-1.75069	53.9767	56.8084
13	-2.25379	-1.71688	56.9244	60.6779
14	-2.25379	-1.67466	59.7289	64.4522
15	-2.25379	-1.64485	62.4344	68.1594
16	-2.25379	-1.61644	65.0473	71.8025
17	-2.25379	-1.58047	67.5452	75.3645
18	-2.25379	-1.55477	69.9625	78.8687
19	-2.25379	-1.53007	72.3036	82.3171
20	-2.25379	-1.49852	74.5491	85.6945
21	-2.25379	-1.47579	76.7271	89.0206
22	-2.25379	-1.44663	78.8198	92.281
23	-2.25379	-1.42554	80.852	95.4939
24	-2.25379	-1.40507	82.8262	98.6606
25	-2.25379	-1.37866	84.7269	101.768
26	-2.25379	-1.35946	86.5751	104.832
27	-2.25379	-1.34075	88.3727	107.854
28	-2.25379	-1.31652	90.1059	110.821
29	-2.25379	-1.29884	91.7929	113.748
30	-2.25379	-1.27588	93.4208	116.624
31	-2.25379	-1.25908	95.006	119.461
32	-2.25379	-1.24264	96.5502	122.262
33	-2.25379	-1.22123	98.0416	125.014
34	-2.25379	-1.20553	99.4949	127.731
35	-2.25379	-1.19012	100.911	130.414
36	-2.25379	-1.17	102.28	133.051
37	-2.25379	-1.15522	103.615	135.654
38	-2.25379	-1.14069	104.916	138.225
39	-2.25379	-1.12168	106.174	140.753
40	-2.25379	-1.10768	107.401	143.25
41	-2.25379	-1.08935	108.588	145.705
42	-2.25379	-1.07584	109.745	148.13
43	-2.25379	-1.06252	110.874	150.524
44	-2.25379	-1.04505	111.966	152.88
45	-2.25379	-1.03215	113.032	155.206
46	-2.25379	-1.01943	114.071	157.503
47	-2.25379	-1.00271	115.076	159.763
48	-2.25379	-0.990356	116.057	161.995
49	-2.25379	-0.97815	117.014	164.2
50	-2.25379	-0.9621	117.939	166.368
51	-2.25379	-0.950222	118.842	168.51

52	-2.25379	-0.93459	119.716	170.616
53	-2.25379	-0.923014	120.568	172.697
54	-2.25379	-0.911562	121.399	174.751
55	-2.25379	-0.896473	122.202	176.772
56	-2.25379	-0.885291	122.986	178.767
57	-2.25379	-0.874218	123.75	180.737
58	-2.25379	-0.859618	124.489	182.674
59	-2.25379	-0.848786	125.21	184.587
60	-2.25379	-0.834498	125.906	186.468
61	-2.25379	-0.823893	126.585	188.325
62	-2.25379	-0.813379	127.247	190.158
63	-2.25379	-0.7995	127.886	191.96
64	-2.25379	-0.789191	128.509	193.739
65	-2.25379	-0.778966	129.115	195.495
66	-2.25379	-0.765456	129.701	197.22
67	-2.25379	-0.755415	130.272	198.922
68	-2.25379	-0.745449	130.828	200.602
69	-2.25379	-0.732275	131.364	202.253
70	-2.25379	-0.722479	131.886	203.881
71	-2.25379	-0.709522	132.389	205.48
72	-2.25379	-0.699883	132.879	207.058
73	-2.25379	-0.690309	133.356	208.613
74	-2.25379	-0.677639	133.815	210.141
75	-2.25379	-0.668209	134.261	211.647
76	-2.25379	-0.658838	134.695	213.132
77	-2.25379	-0.646431	135.113	214.589
78	-2.25379	-0.637192	135.519	216.025
79	-2.25379	-0.628006	135.914	217.44
80	-2.25379	-0.615839	136.293	218.828
81	-2.25379	-0.606775	136.661	220.196
82	-1.56065	-0.594766	137.015	221.124
83	-1.51413	-0.585815	137.358	222.011
84	-1.42712	-0.576911	137.691	222.834
85	-1.42712	-0.565108	138.01	223.641
86	-1.38629	-0.556308	138.32	224.412
87	-1.38629	-0.547551	138.619	225.171
88	-1.34707	-0.53594	138.907	225.893
89	-1.27297	-0.52728	139.185	226.564
90	-1.20397	-0.515791	139.451	227.185
91	-1.17118	-0.507221	139.708	227.779
92	-1.13943	-0.498687	139.957	228.347
93	-1.10866	-0.487364	140.194	228.888
94	-0.967584	-0.478914	140.424	229.351
95	-0.71335	-0.470498	140.645	229.687
96	-0.527633	-0.459327	140.856	229.929
97	-0.527633	-0.450985	141.059	230.167
98	-0.446287	-0.442676	141.255	230.364
99	-0.415515	-0.431644	141.442	230.544
100	-0.150823	-0.423405	141.621	230.608
101	0	-0.412463	141.791	230.608
102	0	-0.40429	141.954	230.608
103	0	-0.396142	142.111	230.608
104	0	-0.385321	142.26	230.608
105	0	-0.377233	142.402	230.608
106	0	-0.369171	142.538	230.608
107	0	-0.358459	142.667	230.608
108	0	-0.350451	142.79	230.608
109	0	-0.33981	142.905	230.608
110	0	-0.331854	143.015	230.608
111	0	-0.323919	143.12	230.608
112	0	-0.31337	143.218	230.608
113	0	-0.305481	143.312	230.608

114	0	-0.297612	143.4	230.608
115	0	-0.287147	143.483	230.608
116	0	-0.279319	143.561	230.608
117	0	-0.271509	143.635	230.608
118	0	-0.26112143.703	230.608	
119	0	-0.253347	143.767	230.608
120	0	-0.243007	143.826	230.608
121	0	-0.235269	143.881	230.608
122	0	-0.227545	143.933	230.608
123	0	-0.217267	143.98	230.608
124	0	-0.209575	144.024	230.608
125	0	-0.201894	144.065	230.608
126	0	-0.191671	144.102	230.608
127	0	-0.184017	144.136	230.608
128	0	-0.176374	144.167	230.608
129	0	-0.166199	144.194	230.608
130	0	-0.158579	144.219	230.608
131	0	-0.148434	144.241	230.608
132	0	-0.140835	144.261	230.608
133	0	-0.133244	144.279	230.608
134	0	-0.123135	144.294	230.608
135	0	-0.115562	144.308	230.608
136	0	-0.107995	144.319	230.608
137	0	-0.0979139	144.329	230.608
138	0	-0.0903606	144.337	230.608
139	0	-0.0802981	144.343	230.608
140	0	-0.0727562	144.349	230.608
141	0	-0.0652187	144.353	230.608
142	0	-0.0551734	144.356	230.608
143	0	-0.0476439	144.358	230.608
144	0	-0.0401167	144.36	230.608
145	0	-0.0300838	144.361	230.608
146	0	-0.0225612	144.361	230.608
147	0	-0.0150408	144.362	230.608
148	0	-0.00501359	144.362	230.608
149	0	0.00501359	144.362	230.608
150	0	0.0150408	144.362	230.608
151	0	0.0225612	144.362	230.608
152	0	0.0300838	144.363	230.608
153	0	0.0401167	144.365	230.608
154	0	0.0476439	144.367	230.608
155	0	0.0551734	144.37	230.608
156	0	0.0652187	144.374	230.608
157	0	0.0727562	144.38	230.608
158	0	0.0802981	144.386	230.608
159	0	0.0903606	144.394	230.608
160	0	0.0979139	144.404	230.608
161	0	0.107995	144.416	230.608
162	0	0.115562	144.429	230.608
163	0	0.123135	144.444	230.608
164	0	0.133244	144.462	230.608
165	0	0.140835	144.482	230.608
166	0	0.148434	144.504	230.608
167	0	0.158579	144.529	230.608
168	0	0.166199	144.557	230.608
169	0	0.176374	144.588	230.608
170	0	0.184017	144.621	230.608
171	0	0.191671	144.658	230.608
172	0	0.201894	144.699	230.608
173	0	0.209575	144.743	230.608
174	0	0.217267	144.79	230.608
175	0	0.227545	144.842	230.608

176	0	0.235269	144.897	230.608
177	0	0.243007	144.956	230.608
178	0	0.253347	145.02	230.608
179	0	0.26112	145.089	230.608
180	0	0.271509	145.162	230.608
181	0	0.279319	145.24	230.608
182	0	0.287147	145.323	230.608
183	0	0.297612	145.411	230.608
184	0	0.305481	145.505	230.608
185	0	0.31337	145.603	230.608
186	0	0.323919	145.708	230.608
187	0	0.331854	145.818	230.608
188	0	0.33981	145.933	230.608
189	0	0.350451	146.056	230.608
190	0	0.358459	146.185	230.608
191	0	0.369171	146.321	230.608
192	0	0.377233	146.463	230.608
193	0	0.385321	146.612	230.608
194	0	0.396142	146.769	230.608
195	0	0.40429	146.932	230.608
196	0	0.412463	147.102	230.608
197	0	0.423405	147.282	230.608
198	0	0.431644	147.468	230.608
199	0	0.442676	147.664	230.608
200	0	0.450985	147.867	230.608
201	0	0.459327	148.078	230.608
202	0	0.470498	148.3	230.608
203	0	0.478914	148.529	230.608
204	0	0.487364	148.767	230.608
205	0	0.498687	149.015	230.608
206	0	0.507221	149.272	230.608
207	0	0.515791	149.539	230.608
208	0	0.52728	149.817	230.608
209	0	0.53594	150.104	230.608
210	0	0.547551	150.404	230.608
211	0	0.556308	150.713	230.608
212	0	0.565108	151.032	230.608
213	0	0.576911	151.365	230.608
214	0	0.585815	151.708	230.608
215	0	0.594766	152.062	230.608
216	0	0.606775	152.43	230.608
217	0	0.615839	152.81	230.608
218	0	0.628006	153.204	230.608
219	0	0.637192	153.61	230.608
220	0	0.646431	154.028	230.608
221	0	0.658838	154.462	230.608
222	0	0.668209	154.908	230.608
223	0	0.677639	155.368	230.608
224	0	0.690309	155.844	230.608
225	0	0.699883	156.334	230.608
226	0	0.709522	156.837	230.608
227	0	0.722479	157.359	230.608
228	0	0.732275	157.896	230.608
229	0	0.745449	158.451	230.608
230	0	0.755415	159.022	230.608
231	0	0.765456	159.608	230.608
232	0	0.778966	160.215	230.608
233	0	0.789191	160.837	230.608
234	0	0.7995	161.477	230.608
235	0	0.813379	162.138	230.608
236	0	0.823893	162.817	230.608
237	0	0.834498	163.513	230.608

238	0	0.848786		164.234	230.608
239	0	0.859618		164.973	230.608
240	0	0.874218		165.737	230.608
241	0	0.885291		166.521	230.608
242	0	0.896473		167.325	230.608
243	0	0.911562		168.155	230.608
244	0	0.923014		169.007	230.608
245	0	0.93459	169.881	230.608	
246	0	0.950222		170.784	230.608
247	0	0.9621	171.709	230.608	
248	0	0.97815	172.666	230.608	
249	0	0.990356		173.647	230.608
250	0	1.00271	174.652	230.608	
251	0	1.01943	175.692	230.608	
252	0	1.03215	176.757	230.608	
253	0	1.04505	177.849	230.608	
254	0	1.06252	178.978	230.608	
255	0	1.07584	180.136	230.608	
256	0	1.08935	181.322	230.608	
257	0	1.10768	182.549	230.608	
258	0	1.12168	183.807	230.608	
259	0	1.14069	185.108	230.608	
260	0	1.15522	186.443	230.608	
261	0	1.17	187.812	230.608	
262	0	1.19012	189.228	230.608	
263	0	1.20553	190.682	230.608	
264	0	1.22123	192.173	230.608	
265	0	1.24264	193.717	230.608	
266	0	1.25908	195.302	230.608	
267	0	1.27588	196.93	230.608	
268	0	1.29884	198.617	230.608	
269	0	1.31652	200.351	230.608	
270	0	1.34075	202.148	230.608	
271	0.0953102		1.35946	203.996	230.737
272	0.336472		1.37866	205.897	231.201
273	0.693147		1.40507	207.871	232.175
274	0.693147		1.42554	209.903	233.163
275	0.693147		1.44663	211.996	234.166
276	0.693147		1.47579	214.174	235.189
277	0.693147		1.49852	216.42	236.228
278	0.693147		1.53007	218.761	237.288
279	0.955511		1.55477	221.178	238.774
280	1.02962	1.58047	223.676	240.401	
281	1.09861	1.61644	226.289	242.177	
282	1.09861	1.64485	228.994	243.984	
283	1.09861	1.67466	231.799	245.824	
284	1.1314	1.71688	234.747	247.766	
285	1.16315	1.75069	237.811	249.802	
286	1.16315	1.78661	241.003	251.881	
287	1.16315	1.83843	244.383	254.019	
288	1.19392	1.88079	247.921	256.264	
289	1.38629	1.94314	251.696	258.958	
290	1.38629	1.99539	255.678	261.724	
291	1.38629	2.05375	259.896	264.571	
292	1.38629	2.14441	264.494	267.544	
293	1.45862	2.22621	269.45	270.791	
294	1.60944	2.32634	274.862	274.536	
295	1.72277	2.51213	281.173	278.863	
296	1.79176	2.74777	288.723	283.787	

Data Set Standard Deviation = 1.1145

Numerator = 80534.9
Denominator = 105794
W Statistic = 0.761241 = 80534.9 / 105794

5% Critical value of 0.976 exceeds 0.761241
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.761241
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Selenium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.871557
0.871557 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.253790	0.003367	-2.74777	118.844	348.683
2	-2.253790	0.00673401	-2.51213	118.844	337.176
3	-2.253790	0.010101	-2.32634	118.844	328.103
4	-2.253790	0.013468	-2.22621	118.844	323.213
5	-2.253790	0.016835	-2.14441	118.844	319.219
6	-2.253790	0.020202	-2.05375	118.844	314.791
7	-2.253790	0.023569	-1.99539	118.844	311.942
8	-2.253790	0.026936	-1.94314	118.844	309.39
9	-2.253790	0.030303	-1.88079	118.844	306.345
10	-2.253790	0.03367	-1.83843	118.844	304.276
11	-2.253790	0.037037	-1.78661	118.844	301.746
12	-2.253790	0.040404	-1.75069	118.844	299.992
13	-2.253790	0.043771	-1.71688	118.844	298.341
14	-2.253790	0.047138	-1.67466	118.844	296.279
15	-2.253790	0.0505051	-1.64485	118.844	294.824
16	-2.253790	0.0538721	-1.61644	118.844	293.436
17	-2.253790	0.0572391	-1.58047	118.844	291.679
18	-2.253790	0.0606061	-1.55477	118.844	290.425
19	-2.253790	0.0639731	-1.53007	118.844	289.218
20	-2.253790	0.0673401	-1.49852	118.844	287.677
21	-2.253790	0.0707071	-1.47579	118.844	286.568
22	-2.253790	0.0740741	-1.44663	118.844	285.144
23	-2.253790	0.0774411	-1.42554	118.844	284.114
24	-2.253790	0.0808081	-1.40507	118.844	283.114
25	-2.253790	0.0841751	-1.37866	118.844	281.824
26	-2.253790	0.0875421	-1.35946	118.844	280.887
27	-2.253790	0.0909091	-1.34075	118.844	279.974
28	-2.253790	0.0942761	-1.31652	118.844	278.79
29	-2.253790	0.0976431	-1.29884	118.844	277.926
30	-2.253790	0.10101	-1.27588	118.844	276.805
31	-2.253790	0.104377	-1.25908	118.844	275.985
32	-2.253790	0.107744	-1.24264	118.844	275.182
33	-2.253790	0.111111	-1.22123	118.844	274.137
34	-2.253790	0.114478	-1.20553	118.844	273.37
35	-2.253790	0.117845	-1.19012	118.844	272.617
36	-2.253790	0.121212	-1.17	118.844	271.635
37	-2.253790	0.124579	-1.15522	118.844	270.913
38	-2.253790	0.127946	-1.14069	118.844	270.204
39	-2.253790	0.131313	-1.12168	118.844	269.275
40	-2.253790	0.13468	-1.10768	118.844	268.592
41	-2.253790	0.138047	-1.08935	118.844	267.697
42	-2.253790	0.141414	-1.07584	118.844	267.037
43	-2.253790	0.144781	-1.06252	118.844	266.386
44	-2.253790	0.148148	-1.04505	118.844	265.533
45	-2.253790	0.151515	-1.03215	118.844	264.904
46	-2.253790	0.154882	-1.01943	118.844	264.282
47	-2.253790	0.158249	-1.00271	118.844	263.466
48	-2.253790	0.161616	-0.990356	118.844	262.862

49	-2.25379	0.164983	-0.97815	118.844	262.266
50	-2.25379	0.16835	-0.9621	118.844	261.483
51	-2.25379	0.171717	-0.950222	118.844	260.903
52	-2.25379	0.175084	-0.93459	118.844	260.139
53	-2.25379	0.178451	-0.923014	118.844	259.574
54	-2.25379	0.181818	-0.911562	118.844	259.015
55	-2.25379	0.185185	-0.896473	118.844	258.278
56	-2.25379	0.188552	-0.885291	118.844	257.732
57	-2.25379	0.191919	-0.874218	118.844	257.191
58	-2.25379	0.195286	-0.859618	118.844	256.478
59	-2.25379	0.198653	-0.848786	118.844	255.949
60	-2.25379	0.20202	-0.834498	118.844	255.251
61	-2.25379	0.205387	-0.823893	118.844	254.733
62	-2.25379	0.208754	-0.813379	118.844	254.22
63	-2.25379	0.212121	-0.7995	118.844	253.542
64	-2.25379	0.215488	-0.789191	118.844	253.039
65	-2.25379	0.218855	-0.778966	118.844	252.54
66	-2.25379	0.222222	-0.765456	118.844	251.88
67	-2.25379	0.225589	-0.755415	118.844	251.389
68	-2.25379	0.228956	-0.745449	118.844	250.903
69	-2.25379	0.232323	-0.732275	118.844	250.259
70	-2.25379	0.23569	-0.722479	118.844	249.781
71	-2.25379	0.239057	-0.709522	118.844	249.148
72	-2.25379	0.242424	-0.699883	118.844	248.678
73	-2.25379	0.245791	-0.690309	118.844	248.21
74	-2.25379	0.249158	-0.677639	118.844	247.591
75	-2.25379	0.252525	-0.668209	118.844	247.131
76	-2.25379	0.255892	-0.658838	118.844	246.673
77	-2.25379	0.259259	-0.646431	118.844	246.067
78	-2.25379	0.262626	-0.637192	118.844	245.616
79	-2.25379	0.265993	-0.628006	118.844	245.168
80	-2.25379	0.26936	-0.615839	118.844	244.573
81	-2.25379	0.272727	-0.606775	118.844	244.131
82	-1.56065	0.276094	-0.594766	193.011	243.544
83	-1.51413	0.279461	-0.585815	197.988	243.107
84	-1.42712	0.282828	-0.576911	207.299	242.672
85	-1.42712	0.286195	-0.565108	207.299	242.096
86	-1.38629	0.289562	-0.556308	211.667	241.666
87	-1.38629	0.292929	-0.547551	211.667	241.239
88	-1.34707	0.296296	-0.53594	215.863	240.672
89	-1.27297	0.299663	-0.52728	223.793	240.249
90	-1.20397	0.30303	-0.515791	231.175	239.688
91	-1.17118	0.306397	-0.507221	234.683	239.269
92	-1.13943	0.309764	-0.498687	238.081	238.853
93	-1.10866	0.313131	-0.487364	241.373	238.3
94	-0.967584	0.316498	-0.478914	256.469	237.887
95	-0.71335	0.319865	-0.470498	283.672	237.476
96	-0.527633	0.323232	-0.459327	303.543	236.93
97	-0.527633	0.326599	-0.450985	303.543	236.523
98	-0.446287	0.329966	-0.442676	312.247	236.117
99	-0.415515	0.333333	-0.431644	315.54	235.579
100	-0.150823	0.3367	-0.423405	343.862	235.176
101	0	0.340067	-0.412463	360	234.642
102	0	0.343434	-0.40429	360	234.243
103	0	0.346801	-0.396142	360	233.845
104	0	0.350168	-0.385321	360	233.317
105	0	0.353535	-0.377233	360	232.922
106	0	0.356902	-0.369171	360	232.528
107	0	0.360269	-0.358459	360	232.005
108	0	0.363636	-0.350451	360	231.614
109	0	0.367003	-0.33981	360	231.094
110	0	0.37037	-0.331854	360	230.706

111	0	0.373737	-0.323919	360	230.318
112	0	0.377104	-0.31337360	229.803	
113	0	0.380471	-0.305481	360	229.418
114	0	0.383838	-0.297612	360	229.033
115	0	0.387205	-0.287147	360	228.522
116	0	0.390572	-0.279319	360	228.14
117	0	0.393939	-0.271509	360	227.759
118	0	0.397306	-0.26112360	227.251	
119	0	0.400673	-0.253347	360	226.872
120	0	0.40404	-0.243007	360	226.367
121	0	0.407407	-0.235269	360	225.989
122	0	0.410774	-0.227545	360	225.612
123	0	0.414141	-0.217267	360	225.11
124	0	0.417508	-0.209575	360	224.734
125	0	0.420875	-0.201894	360	224.359
126	0	0.424242	-0.191671	360	223.86
127	0	0.427609	-0.184017	360	223.486
128	0	0.430976	-0.176374	360	223.113
129	0	0.434343	-0.166199	360	222.616
130	0	0.43771	-0.158579	360	222.244
131	0	0.441077	-0.148434	360	221.749
132	0	0.444444	-0.140835	360	221.377
133	0	0.447811	-0.133244	360	221.007
134	0	0.451178	-0.123135	360	220.513
135	0	0.454545	-0.115562	360	220.143
136	0	0.457912	-0.107995	360	219.774
137	0	0.461279	-0.0979139	360	219.281
138	0	0.464646	-0.0903606	360	218.913
139	0	0.468013	-0.0802981	360	218.421
140	0	0.47138	-0.0727562	360	218.053
141	0	0.474747	-0.0652187	360	217.685
142	0	0.478114	-0.0551734	360	217.194
143	0	0.481481	-0.0476439	360	216.827
144	0	0.484848	-0.0401167	360	216.459
145	0	0.488215	-0.0300838	360	215.969
146	0	0.491582	-0.0225612	360	215.602
147	0	0.494949	-0.0150408	360	215.234
148	0	0.498316	-0.00501359	360	214.745
149	0	0.501684	0.00501359	360	214.255
150	0	0.505051	0.0150408	360	213.766
151	0	0.508418	0.0225612	360	213.398
152	0	0.511785	0.0300838	360	213.031
153	0	0.515152	0.0401167	360	212.541
154	0	0.518519	0.0476439	360	212.173
155	0	0.521886	0.0551734	360	211.806
156	0	0.525253	0.0652187	360	211.315
157	0	0.52862	0.0727562	360	210.947
158	0	0.531987	0.0802981	360	210.579
159	0	0.535354	0.0903606	360	210.087
160	0	0.538721	0.0979139	360	209.719
161	0	0.542088	0.107995	360	209.226
162	0	0.545455	0.115562	360	208.857
163	0	0.548822	0.123135	360	208.487
164	0	0.552189	0.133244	360	207.993
165	0	0.555556	0.140835	360	207.623
166	0	0.558923	0.148434	360	207.251
167	0	0.56229	0.158579	360	206.756
168	0	0.565657	0.166199	360	206.384
169	0	0.569024	0.176374	360	205.887
170	0	0.572391	0.184017	360	205.514
171	0	0.575758	0.191671	360	205.14
172	0	0.579125	0.201894	360	204.641

173	0	0.582492	0.209575	360	204.266
174	0	0.585859	0.217267	360	203.89
175	0	0.589226	0.227545	360	203.388
176	0	0.592593	0.235269	360	203.011
177	0	0.59596	0.243007	360	202.633
178	0	0.599327	0.253347	360	202.128
179	0	0.602694	0.26112	360	201.749
180	0	0.606061	0.271509	360	201.241
181	0	0.609428	0.279319	360	200.86
182	0	0.612795	0.287147	360	200.478
183	0	0.616162	0.297612	360	199.967
184	0	0.619529	0.305481	360	199.582
185	0	0.622896	0.31337	360	199.197
186	0	0.626263	0.323919	360	198.682
187	0	0.62963	0.331854	360	198.294
188	0	0.632997	0.33981	360	197.906
189	0	0.636364	0.350451	360	197.386
190	0	0.639731	0.358459	360	196.995
191	0	0.643098	0.369171	360	196.472
192	0	0.646465	0.377233	360	196.078
193	0	0.649832	0.385321	360	195.683
194	0	0.653199	0.396142	360	195.155
195	0	0.656566	0.40429	360	194.757
196	0	0.659933	0.412463	360	194.358
197	0	0.6633	0.423405	360	193.824
198	0	0.666667	0.431644	360	193.421
199	0	0.670034	0.442676	360	192.883
200	0	0.673401	0.450985	360	192.477
201	0	0.676768	0.459327	360	192.07
202	0	0.680135	0.470498	360	191.524
203	0	0.683502	0.478914	360	191.113
204	0	0.686869	0.487364	360	190.7
205	0	0.690236	0.498687	360	190.147
206	0	0.693603	0.507221	360	189.731
207	0	0.69697	0.515791	360	189.312
208	0	0.700337	0.52728	360	188.751
209	0	0.703704	0.53594	360	188.328
210	0	0.707071	0.547551	360	187.761
211	0	0.710438	0.556308	360	187.334
212	0	0.713805	0.565108	360	186.904
213	0	0.717172	0.576911	360	186.328
214	0	0.720539	0.585815	360	185.893
215	0	0.723906	0.594766	360	185.456
216	0	0.727273	0.606775	360	184.869
217	0	0.73064	0.615839	360	184.427
218	0	0.734007	0.628006	360	183.832
219	0	0.737374	0.637192	360	183.384
220	0	0.740741	0.646431	360	182.933
221	0	0.744108	0.658838	360	182.327
222	0	0.747475	0.668209	360	181.869
223	0	0.750842	0.677639	360	181.409
224	0	0.754209	0.690309	360	180.79
225	0	0.757576	0.699883	360	180.322
226	0	0.760943	0.709522	360	179.852
227	0	0.76431	0.722479	360	179.219
228	0	0.767677	0.732275	360	178.741
229	0	0.771044	0.745449	360	178.097
230	0	0.774411	0.755415	360	177.611
231	0	0.777778	0.765456	360	177.12
232	0	0.781145	0.778966	360	176.46
233	0	0.784512	0.789191	360	175.961
234	0	0.787879	0.7995	360	175.458

235	0	0.791246	0.813379	360	174.78	
236	0	0.794613	0.823893	360	174.267	
237	0	0.79798	0.834498	360	173.749	
238	0	0.801347	0.848786	360	173.051	
239	0	0.804714	0.859618	360	172.522	
240	0	0.808081	0.874218	360	171.809	
241	0	0.811448	0.885291	360	171.268	
242	0	0.814815	0.896473	360	170.722	
243	0	0.818182	0.911562	360	169.985	
244	0	0.821549	0.923014	360	169.426	
245	0	0.824916	0.93459	360	168.861	
246	0	0.828283	0.950222	360	168.097	
247	0	0.83165	0.9621	360	167.517	
248	0	0.835017	0.97815	360	166.734	
249	0	0.838384	0.990356	360	166.138	
250	0	0.841751	1.00271	360	165.534	
251	0	0.845118	1.01943	360	164.718	
252	0	0.848485	1.03215	360	164.096	
253	0	0.851852	1.04505	360	163.467	
254	0	0.855219	1.06252	360	162.614	
255	0	0.858586	1.07584	360	161.963	
256	0	0.861953	1.08935	360	161.303	
257	0	0.86532	1.10768	360	160.408	
258	0	0.868687	1.12168	360	159.725	
259	0	0.872054	1.14069	360	158.796	
260	0	0.875421	1.15522	360	158.087	
261	0	0.878788	1.17	360	157.365	
262	0	0.882155	1.19012	360	156.383	
263	0	0.885522	1.20553	360	155.63	
264	0	0.888889	1.22123	360	154.863	
265	0	0.892256	1.24264	360	153.818	
266	0	0.895623	1.25908	360	153.015	
267	0	0.89899	1.27588	360	152.195	
268	0	0.902357	1.29884	360	151.074	
269	0	0.905724	1.31652	360	150.21	
270	0	0.909091	1.34075	360	149.026	
271	0.0953102	0.912458	1.35946	370.198	148.113	
272	0.336472	0.915825	1.37866	396.003	147.176	
273	0.693147	0.919192	1.40507	434.167	145.886	
274	0.693147	0.922559	1.42554	434.167	144.886	
275	0.693147	0.925926	1.44663	434.167	143.856	
276	0.693147	0.929293	1.47579	434.167	142.432	
277	0.693147	0.93266	1.49852	434.167	141.323	
278	0.693147	0.936027	1.53007	434.167	139.782	
279	0.955511	0.939394	1.55477	462.24	138.575	
280	1.02962	0.942761	1.58047	470.169	137.321	
281	1.09861	0.946128	1.61644	477.552	135.564	
282	1.09861	0.949495	1.64485	477.552	134.176	
283	1.09861	0.952862	1.67466	477.552	132.721	
284	1.1314	0.956229	1.71688	481.06	130.659	
285	1.16315	0.959596	1.75069	484.457	129.008	
286	1.16315	0.962963	1.78661	484.457	127.254	
287	1.16315	0.96633	1.83843	484.457	124.724	
288	1.19392	0.969697	1.88079	487.75	122.655	
289	1.38629	0.973064	1.94314	508.333	119.61	
290	1.38629	0.976431	1.99539	508.333	117.058	
291	1.38629	0.979798	2.05375	508.333	114.209	
292	1.38629	0.983165	2.14441	508.333	109.781	
293	1.45862	0.986532	2.22621	516.072	105.787	
294	1.60944	0.989899	2.32634	532.21	100.897	
295	1.72277	0.993266	2.51213	544.336	91.8241	
296	1.79176	0.996633	2.74777	551.718	80.3175	

Kruskal-Wallis Non-Parametric Test

Parameter: Selenium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	ND<0	123.5
	3/16/1999	ND<0	123.5
	9/23/1999	ND<0	123.5
	3/14/2000	ND<0	123.5
	9/23/2003	ND<0	123.5
	3/10/2004	ND<0	123.5
	10/12/2004	ND<0	123.5
	4/1/2005	ND<0	123.5
	10/26/2005	ND<0	123.5
	6/19/2006	ND<0	123.5
	11/18/2006	ND<0	123.5
	6/2/2007	ND<0	123.5
	11/15/2007	ND<0	123.5
	5/20/2008	ND<0	123.5
	11/20/2008	ND<0	123.5
	6/11/2009	ND<-2.25379 U	123.5
	11/16/2009	ND<-2.25379 U	123.5
	6/30/2010	ND<-2.25379 U	123.5
	11/17/2010	ND<-2.25379 U	123.5
	7/6/2011	ND<-2.25379 U	123.5
	11/22/2011	ND<-2.25379 U	123.5
	5/16/2012	ND<-2.25379 U	123.5
	11/16/2012	ND<-2.25379 U	123.5
	11/16/2013	ND<-2.25379 U	123.5

Rank Sum = 2964
Rank Mean = 123.5

Background Rank Sum = 2964
Background Rank Mean = 123.5

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-3S	11/18/2006	ND<0	123.5
	6/2/2007	ND<0	123.5
	11/15/2007	ND<0	123.5
	5/20/2008	ND<0	123.5
	11/20/2008	ND<0	123.5
	6/11/2009	ND<-2.25379 U	123.5
	11/16/2009	ND<-2.25379 U	123.5
	6/30/2010	ND<-2.25379 U	123.5
	11/17/2010	ND<-2.25379 U	123.5
	7/6/2011	ND<-2.25379 U	123.5
	11/22/2011	ND<-2.25379 U	123.5
	5/16/2012	ND<-2.25379 U	123.5
	11/16/2012	ND<-2.25379 U	123.5
	11/16/2013	ND<-2.25379 U	123.5

Rank Sum = 1729
Rank Mean = 123.5

LMW-9D	11/18/2006	ND<0	123.5	
	6/2/2007	ND<0	123.5	
	11/15/2007	1.38629		289
	5/20/2008	ND<0	123.5	
	11/20/2008	ND<0	123.5	
	6/11/2009	ND<-2.25379 U		123.5
	11/16/2009	ND<-2.25379 U		123.5
	6/30/2010	ND<-2.25379 U		123.5
	11/17/2010	ND<-2.25379 U		123.5
	7/6/2011	-0.71335 J	260	
	11/22/2011	ND<-2.25379 U		123.5
	5/16/2012	ND<-2.25379 U		123.5
	11/16/2012	ND<-2.25379 U		123.5
	11/16/2013	ND<-2.25379 U		123.5

Rank Sum = 2031
Rank Mean = 145.071

LMW-10	3/14/2000	ND<0	123.5	
	9/23/2003	ND<0	123.5	
	3/10/2004	ND<0	123.5	
	10/12/2004	ND<0	123.5	
	4/1/2005	ND<0	123.5	
	10/26/2005	ND<0	123.5	
	6/19/2006	ND<0	123.5	
	11/18/2006	ND<0	123.5	
	6/2/2007	ND<0	123.5	
	11/15/2007	ND<0	123.5	
	5/20/2008	ND<0	123.5	
	11/20/2008	ND<0	123.5	
	6/11/2009	ND<-2.25379 U		123.5
	11/16/2009	ND<-2.25379 U		123.5
	6/30/2010	ND<-2.25379 U		123.5
	11/17/2010	ND<-2.25379 U		123.5
	7/6/2011	1.02962	280	
	11/22/2011	1.1314	284	
	5/16/2012	1.45862		293
	11/16/2012	1.60944		294
	11/16/2013	0.0953102		271

Rank Sum = 3398
Rank Mean = 161.81

LMW-14R	6/2/2007	ND<0	123.5	
	11/15/2007	ND<0	123.5	
	5/20/2008	ND<0	123.5	
	11/20/2008	ND<0	123.5	
	6/11/2009	ND<-2.25379 U		123.5
	6/30/2010	ND<-2.25379 U		123.5
	11/17/2010	ND<-2.25379 U		123.5
	7/6/2011	ND<-2.25379 U	123.5	
	11/22/2011	ND<-2.25379 U		123.5
	5/16/2012	ND<-2.25379 U		123.5
	11/16/2012	ND<-2.25379 U		123.5
	11/16/2013	ND<-2.25379 U		123.5

Rank Sum = 1482
Rank Mean = 123.5

LMW-16	11/18/2006	ND<0	123.5	
	6/2/2007	ND<0	123.5	
	11/15/2007	0.693147		273
	5/20/2008	ND<0	123.5	
	11/20/2008	ND<0	123.5	

	6/11/2009	ND<-2.25379 U	123.5
	11/16/2009	ND<-2.25379 U	123.5
	6/30/2010	ND<-2.25379 U	123.5
	11/17/2010	-1.17118 J	256
	7/6/2011	ND<-2.25379 U	123.5
	11/22/2011	-1.38629 J	251
	5/16/2012	ND<-2.25379 U	123.5
	11/16/2012	-1.56065 J	247
	11/16/2013	ND<-2.25379 U	123.5

Rank Sum = 2262
Rank Mean = 161.571

LMW-3	11/19/1996	ND<0	123.5
	3/24/1997	ND<0	123.5
	1/16/1998	ND<0	123.5
	3/16/1999	ND<0	123.5
	9/23/1999	ND<0	123.5
	3/14/2000	ND<0	123.5
	9/23/2003	ND<0	123.5
	3/10/2004	ND<0	123.5
	10/12/2004	ND<0	123.5
	4/1/2005	ND<0	123.5
	10/26/2005	ND<0	123.5
	6/19/2006	ND<0	123.5
	11/18/2006	ND<0	123.5
	6/2/2007	ND<0	123.5
	11/15/2007	ND<0	123.5
	5/20/2008	ND<0	123.5
	11/20/2008	ND<0	123.5
	6/11/2009	ND<-2.25379 U	123.5
	11/16/2009	ND<-2.25379 U	123.5
	6/30/2010	ND<-2.25379 U	123.5
	11/17/2010	ND<-2.25379 U	123.5
	7/6/2011	ND<-2.25379 U	123.5
	11/22/2011	ND<-2.25379 U	123.5
	5/16/2012	ND<-2.25379 U	123.5
	11/16/2012	ND<-2.25379 U	123.5
	11/16/2013	ND<-2.25379 U	123.5

Rank Sum = 3211
Rank Mean = 123.5

LMW-15R	11/18/2006	ND<0	123.5
	6/2/2007	ND<0	123.5
	11/15/2007	ND<0	123.5
	11/15/2007	ND<0	123.5
	5/20/2008	ND<0	123.5
	5/20/2008	ND<0	123.5
	11/20/2008	ND<0	123.5
	11/20/2008	ND<0	123.5
	6/11/2009	-1.42712 J	249
	6/30/2010	ND<-2.25379 U	123.5
	11/17/2010	ND<-2.25379 U	123.5
	7/6/2011	-1.13943 J	257
	11/22/2011	ND<-2.25379 U	123.5
	5/16/2012	-1.42712 J	250
	11/16/2012	ND<-2.25379 U	123.5
	11/16/2013	ND<-2.25379 U	123.5

Rank Sum = 2361.5
Rank Mean = 147.594

LMW-6	1/16/1998	ND<0	123.5
	3/16/1999	ND<0	123.5

	9/23/1999	ND<0	123.5	
	3/14/2000	ND<0	123.5	
	9/23/2003	ND<0	123.5	
	3/10/2004	ND<0	123.5	
	10/12/2004	ND<0	123.5	
	4/1/2005	ND<0	123.5	
	10/26/2005	0 J	266	
	6/19/2006	0.693147		274
	11/18/2006	0.693147		275
	6/2/2007	0.693147	276	
	11/15/2007	1.38629		290
	5/20/2008	0.693147		277
	11/20/2008	0.693147		278
	6/11/2009	1.16315		285
	11/16/2009	0.955511		279
	6/30/2010	1.16315		286
	11/17/2010	1.79176		296
	7/6/2011	1.72277	295	
	11/22/2011	1.09861		281
	5/16/2012	1.16315		287
	11/16/2012	1.19392		288
	11/16/2013	0.336472		272

Rank Sum = 5493
Rank Mean = 228.875

LMW-8	1/16/1998	ND<0	123.5	
	3/16/1999	ND<0	123.5	
	9/23/1999	ND<0	123.5	
	3/14/2000	ND<0	123.5	
	9/23/2003	ND<0	123.5	
	3/10/2004	ND<0	123.5	
	10/12/2004	ND<0	123.5	
	4/1/2005	1.09861	282	
	10/26/2005	0 J	267	
	6/19/2006	0 J	268	
	11/18/2006	0 J	269	
	6/2/2007	0 J	270	
	11/15/2007	1.09861		283
	5/20/2008	ND<0	123.5	
	11/20/2008	ND<0	123.5	
	6/11/2009	-0.446287		263
	11/16/2009	-0.527633		261
	6/30/2010	-1.10866 J		258
	11/17/2010	-0.415515		264
	7/6/2011	ND<-2.25379 U	123.5	
	11/22/2011	-1.51413 J		248
	5/16/2012	ND<-2.25379 U		123.5
	11/16/2012	ND<-2.25379 U		123.5
	11/16/2013	-0.527633		262

Rank Sum = 4677
Rank Mean = 194.875

LMW-9	1/16/1998	ND<0	123.5	
	3/16/1999	ND<0	123.5	
	9/23/1999	ND<0	123.5	
	3/14/2000	ND<0	123.5	
	9/23/2003	ND<0	123.5	
	3/10/2004	ND<0	123.5	
	10/12/2004	ND<0	123.5	
	4/1/2005	ND<0	123.5	
	10/26/2005	ND<0	123.5	
	6/19/2006	ND<0	123.5	

	11/18/2006	ND<0	123.5	
	6/2/2007	ND<0	123.5	
	11/15/2007	ND<0	123.5	
	5/20/2008	ND<0	123.5	
	11/20/2008	ND<0	123.5	
	6/11/2009	-1.27297 J		254
	11/16/2009	ND<-2.25379 U		123.5
	6/30/2010	ND<-2.25379 U		123.5
	11/17/2010	ND<-2.25379 U		123.5
	7/6/2011	ND<-2.25379 U	123.5	
	11/22/2011	ND<-2.25379 U		123.5
	5/16/2012	ND<-2.25379 U		123.5
	11/16/2012	ND<-2.25379 U		123.5
	11/16/2013	ND<-2.25379 U		123.5

Rank Sum = 3094.5
Rank Mean = 128.938

LMW-9S	11/18/2006	1.38629		291
	6/2/2007	1.38629	292	
	11/15/2007	ND<0	123.5	
	5/20/2008	ND<0	123.5	
	11/20/2008	ND<0	123.5	
	6/11/2009	ND<-2.25379 U		123.5
	11/16/2009	ND<-2.25379 U		123.5
	11/16/2009	ND<-2.25379 U		123.5
	11/16/2009	ND<-2.25379 U		123.5
	6/30/2010	ND<-2.25379 U		123.5
	11/17/2010	-1.34707 J		253
	7/6/2011	-0.967584 J	259	
	11/22/2011	ND<-2.25379 U		123.5
	5/16/2012	ND<-2.25379 U		123.5
	11/16/2012	-1.38629 J		252
	11/16/2013	ND<-2.25379 U		123.5

Rank Sum = 2705.5
Rank Mean = 169.094

LMW-7	1/16/1998	ND<0	123.5	
	3/16/1999	ND<0	123.5	
	9/23/1999	ND<0	123.5	
	3/14/2000	ND<0	123.5	
	9/23/2003	ND<0	123.5	
	3/10/2004	ND<0	123.5	
	10/12/2004	ND<0	123.5	
	4/1/2005	ND<0	123.5	
	10/26/2005	ND<0	123.5	
	6/19/2006	ND<0	123.5	
	11/18/2006	ND<0	123.5	
	6/2/2007	ND<0	123.5	
	11/15/2007	ND<0	123.5	
	5/20/2008	ND<0	123.5	
	11/20/2008	ND<0	123.5	
	6/11/2009	ND<-2.25379 U		123.5
	11/17/2010	ND<-2.25379 U		123.5
	7/6/2011	-1.20397 J	255	
	11/22/2011	-0.150823		265
	5/16/2012	ND<-2.25379 U		123.5
	11/16/2012	ND<-2.25379 U		123.5

Rank Sum = 2866.5
Rank Mean = 136.5

LMW-11	3/14/2000	ND<0	123.5	
	9/23/2003	ND<0	123.5	

	3/10/2004	ND<0	123.5
	10/12/2004	ND<0	123.5
	4/1/2005	ND<0	123.5
	10/26/2005	ND<0	123.5
	6/19/2006	ND<0	123.5
	6/2/2007	ND<0	123.5
	11/15/2007	ND<0	123.5
	5/20/2008	ND<0	123.5
	11/20/2008	ND<0	123.5

Rank Sum = 1358.5
Rank Mean = 123.5

LMW-12	3/14/2000	ND<0	123.5
	9/23/2003	ND<0	123.5
	3/10/2004	ND<0	123.5
	10/12/2004	ND<0	123.5
	4/1/2005	ND<0	123.5
	10/26/2005	ND<0	123.5
	6/19/2006	ND<0	123.5
	6/2/2007	ND<0	123.5
	11/15/2007	ND<0	123.5
	5/20/2008	ND<0	123.5
	11/20/2008	ND<0	123.5

Rank Sum = 1358.5
Rank Mean = 123.5

LMW-13	3/14/2000	ND<0	123.5
	9/23/2003	ND<0	123.5
	3/10/2004	ND<0	123.5
	10/12/2004	ND<0	123.5
	4/1/2005	ND<0	123.5
	10/26/2005	ND<0	123.5
	6/19/2006	ND<0	123.5
	6/2/2007	ND<0	123.5
	11/15/2007	ND<0	123.5
	5/20/2008	ND<0	123.5
	11/20/2008	ND<0	123.5

Rank Sum = 1358.5
Rank Mean = 123.5

MW-5	1/16/1998	ND<0	123.5
	3/16/1999	ND<0	123.5
	9/23/1999	ND<0	123.5
	3/14/2000	ND<0	123.5
	9/23/2003	ND<0	123.5
	3/10/2004	ND<0	123.5
	10/12/2004	ND<0	123.5
	4/1/2005	ND<0	123.5
	10/26/2005	ND<0	123.5
	6/19/2006	ND<0	123.5
	11/15/2007	ND<0	123.5
	5/20/2008	ND<0	123.5
	11/20/2008	ND<0	123.5

Rank Sum = 1605.5
Rank Mean = 123.5

Calculation Results:

Kruskal-Wallis H Statistic = 42.0684
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 98.7569
95% Confidence comparison value is 26.2962 at 16 degrees of freedom

42.0684 > 26.2962 indicating a significant group difference at 5% significance level
98.7569 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 123.5

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-3S	123.5	0	66.9621
LMW-9D	145.071	21.5714	66.9621
LMW-10	161.81	38.3095	59.4974
LMW-14R	123.5	0	70.3983
LMW-16	161.571	38.0714	66.9621
LMW-3	123.5	0	56.3637
LMW-15R	147.594	24.0938	64.2645
LMW-6	228.875	105.375	57.48
LMW-8	194.875	71.375	57.48
LMW-9	128.938	5.4375	57.48
LMW-9S	169.094	45.5938	64.2645
LMW-7	136.5	13	59.4974
LMW-11	123.5	0	72.5002
LMW-12	123.5	0	72.5002
LMW-13	123.5	0	72.5002
MW-5	123.5	0	68.5694

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 123.5

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-3S	123.5	0	79.0925
LMW-9D	145.071	21.5714	79.0925
LMW-10	161.81	38.3095	70.2755
LMW-14R	123.5	0	83.1511
LMW-16	161.571	38.0714	79.0925
LMW-3	123.5	0	66.5742
LMW-15R	147.594	24.0938	75.9062
LMW-6	228.875	105.375	67.8926
LMW-8	194.875	71.375	67.8926
LMW-9	128.938	5.4375	67.8926
LMW-9S	169.094	45.5938	75.9062
LMW-7	136.5	13	70.2755
LMW-11	123.5	0	85.6338
LMW-12	123.5	0	85.6338
LMW-13	123.5	0	85.6338
MW-5	123.5	0	80.991

Mann-Kendall Trend Analysis
Parameter: Selenium
Location: LMW-6
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk		Positives	Negatives
ND<0	ND<0	0	0	0	
ND<0	ND<0	0	0	0	
ND<0	ND<0	0	0	0	
ND<0	ND<0	0	0	0	
ND<0	ND<0	0	0	0	
ND<0	ND<0	0	0	0	
ND<0	ND<0	0	0	0	
0 J	ND<0	0	0	0	
0.693147		ND<0	0.693147	1	0
0.693147		ND<0	0.693147	2	0
0.693147		ND<0	0.693147	3	0
1.38629		ND<0	1.38629	4	0
0.693147		ND<0	0.693147	5	0
0.693147		ND<0	0.693147	6	0
1.16315		ND<0	1.16315	7	0
0.955511		ND<0	0.955511	8	0
1.16315		ND<0	1.16315	9	0
1.79176		ND<0	1.79176	10	0
1.72277		ND<0	1.72277	11	0
1.09861		ND<0	1.09861	12	0
1.16315		ND<0	1.16315	13	0
1.19392		ND<0	1.19392	14	0
0.336472		ND<0	0.336472	15	0
ND<0	ND<0	0	15	0	
ND<0	ND<0	0	15	0	
ND<0	ND<0	0	15	0	
ND<0	ND<0	0	15	0	
ND<0	ND<0	0	15	0	
ND<0	ND<0	0	15	0	
0 J	ND<0	0	15	0	
0.693147		ND<0	0.693147	16	0
0.693147		ND<0	0.693147	17	0
0.693147		ND<0	0.693147	18	0
1.38629		ND<0	1.38629	19	0
0.693147		ND<0	0.693147	20	0
0.693147		ND<0	0.693147	21	0
1.16315		ND<0	1.16315	22	0
0.955511		ND<0	0.955511	23	0
1.16315		ND<0	1.16315	24	0
1.79176		ND<0	1.79176	25	0
1.72277		ND<0	1.72277	26	0
1.09861		ND<0	1.09861	27	0
1.16315		ND<0	1.16315	28	0
1.19392		ND<0	1.19392	29	0
0.336472		ND<0	0.336472	30	0
ND<0	ND<0	0	30	0	
ND<0	ND<0	0	30	0	
ND<0	ND<0	0	30	0	

ND<0	ND<0	0	30	0		
ND<0	ND<0	0	30	0		
0 J	ND<0	0	30	0		
0.693147		ND<0	0.693147		31	0
0.693147		ND<0	0.693147		32	0
0.693147		ND<0	0.693147		33	0
1.38629		ND<0	1.38629	34	0	
0.693147		ND<0	0.693147		35	0
0.693147		ND<0	0.693147		36	0
1.16315		ND<0	1.16315	37	0	
0.955511		ND<0	0.955511		38	0
1.16315		ND<0	1.16315	39	0	
1.79176		ND<0	1.79176	40	0	
1.72277		ND<0	1.72277	41	0	
1.09861		ND<0	1.09861	42	0	
1.16315		ND<0	1.16315	43	0	
1.19392		ND<0	1.19392	44	0	
0.336472		ND<0	0.336472		45	0
ND<0	ND<0	0	45	0		
ND<0	ND<0	0	45	0		
ND<0	ND<0	0	45	0		
ND<0	ND<0	0	45	0		
0 J	ND<0	0	45	0		
0.693147		ND<0	0.693147		46	0
0.693147		ND<0	0.693147		47	0
0.693147		ND<0	0.693147		48	0
1.38629		ND<0	1.38629	49	0	
0.693147		ND<0	0.693147		50	0
0.693147		ND<0	0.693147		51	0
1.16315		ND<0	1.16315	52	0	
0.955511		ND<0	0.955511		53	0
1.16315		ND<0	1.16315	54	0	
1.79176		ND<0	1.79176	55	0	
1.72277		ND<0	1.72277	56	0	
1.09861		ND<0	1.09861	57	0	
1.16315		ND<0	1.16315	58	0	
1.19392		ND<0	1.19392	59	0	
0.336472		ND<0	0.336472		60	0
ND<0	ND<0	0	60	0		
ND<0	ND<0	0	60	0		
ND<0	ND<0	0	60	0		
0 J	ND<0	0	60	0		
0.693147		ND<0	0.693147		61	0
0.693147		ND<0	0.693147		62	0
0.693147		ND<0	0.693147		63	0
1.38629		ND<0	1.38629	64	0	
0.693147		ND<0	0.693147		65	0
0.693147		ND<0	0.693147		66	0
1.16315		ND<0	1.16315	67	0	
0.955511		ND<0	0.955511		68	0
1.16315		ND<0	1.16315	69	0	
1.79176		ND<0	1.79176	70	0	
1.72277		ND<0	1.72277	71	0	
1.09861		ND<0	1.09861	72	0	
1.16315		ND<0	1.16315	73	0	
1.19392		ND<0	1.19392	74	0	
0.336472		ND<0	0.336472		75	0
ND<0	ND<0	0	75	0		
ND<0	ND<0	0	75	0		

0 J	ND<0	0	75	0		
0.693147		ND<0	0.693147		76	0
0.693147		ND<0	0.693147		77	0
0.693147		ND<0	0.693147		78	0
1.38629		ND<0	1.38629	79	0	
0.693147		ND<0	0.693147		80	0
0.693147		ND<0	0.693147		81	0
1.16315		ND<0	1.16315	82	0	
0.955511		ND<0	0.955511		83	0
1.16315		ND<0	1.16315	84	0	
1.79176		ND<0	1.79176	85	0	
1.72277		ND<0	1.72277	86	0	
1.09861		ND<0	1.09861	87	0	
1.16315		ND<0	1.16315	88	0	
1.19392		ND<0	1.19392	89	0	
0.336472		ND<0	0.336472		90	0
ND<0	ND<0	0	90	0		
0 J	ND<0	0	90	0		
0.693147		ND<0	0.693147		91	0
0.693147		ND<0	0.693147		92	0
0.693147		ND<0	0.693147		93	0
1.38629		ND<0	1.38629	94	0	
0.693147		ND<0	0.693147		95	0
0.693147		ND<0	0.693147		96	0
1.16315		ND<0	1.16315	97	0	
0.955511		ND<0	0.955511		98	0
1.16315		ND<0	1.16315	99	0	
1.79176		ND<0	1.79176	100	0	
1.72277		ND<0	1.72277	101	0	
1.09861		ND<0	1.09861	102	0	
1.16315		ND<0	1.16315	103	0	
1.19392		ND<0	1.19392	104	0	
0.336472		ND<0	0.336472		105	0
0 J	ND<0	0	105	0		
0.693147		ND<0	0.693147		106	0
0.693147		ND<0	0.693147		107	0
0.693147		ND<0	0.693147		108	0
1.38629		ND<0	1.38629	109	0	
0.693147		ND<0	0.693147		110	0
0.693147		ND<0	0.693147		111	0
1.16315		ND<0	1.16315	112	0	
0.955511		ND<0	0.955511		113	0
1.16315		ND<0	1.16315	114	0	
1.79176		ND<0	1.79176	115	0	
1.72277		ND<0	1.72277	116	0	
1.09861		ND<0	1.09861	117	0	
1.16315		ND<0	1.16315	118	0	
1.19392		ND<0	1.19392	119	0	
0.336472		ND<0	0.336472		120	0
0.693147		0 J	0.693147		121	0
0.693147		0 J	0.693147		122	0
0.693147		0 J	0.693147		123	0
1.38629		0 J	1.38629	124	0	
0.693147		0 J	0.693147		125	0
0.693147		0 J	0.693147		126	0
1.16315		0 J	1.16315	127	0	
0.955511		0 J	0.955511		128	0
1.16315		0 J	1.16315	129	0	
1.79176		0 J	1.79176	130	0	

1.72277	0 J	1.72277	131	0	
1.09861	0 J	1.09861	132	0	
1.16315	0 J	1.16315	133	0	
1.19392	0 J	1.19392	134	0	
0.336472	0 J	0.336472	135	0	
0.693147	0.693147	0	135	0	
0.693147	0.693147	0	135	0	
1.38629	0.693147	0.693147	136	0	
0.693147	0.693147	0	136	0	
0.693147	0.693147	0	136	0	
1.16315	0.693147	0.470004	137	0	
0.955511	0.693147	0.262364	138	0	
1.16315	0.693147	0.470004	139	0	
1.79176	0.693147	1.09861	140	0	
1.72277	0.693147	1.02962	141	0	
1.09861	0.693147	0.405465	142	0	
1.16315	0.693147	0.470004	143	0	
1.19392	0.693147	0.500775	144	0	
0.336472	0.693147	-0.356675	144	1	
0.693147	0.693147	0	144	1	
1.38629	0.693147	0.693147	145	1	
0.693147	0.693147	0	145	1	
0.693147	0.693147	0	145	1	
1.16315	0.693147	0.470004	146	1	
0.955511	0.693147	0.262364	147	1	
1.16315	0.693147	0.470004	148	1	
1.79176	0.693147	1.09861	149	1	
1.72277	0.693147	1.02962	150	1	
1.09861	0.693147	0.405465	151	1	
1.16315	0.693147	0.470004	152	1	
1.19392	0.693147	0.500775	153	1	
0.336472	0.693147	-0.356675	153	2	
1.38629	0.693147	0.693147	154	2	
0.693147	0.693147	0	154	2	
0.693147	0.693147	0	154	2	
1.16315	0.693147	0.470004	155	2	
0.955511	0.693147	0.262364	156	2	
1.16315	0.693147	0.470004	157	2	
1.79176	0.693147	1.09861	158	2	
1.72277	0.693147	1.02962	159	2	
1.09861	0.693147	0.405465	160	2	
1.16315	0.693147	0.470004	161	2	
1.19392	0.693147	0.500775	162	2	
0.336472	0.693147	-0.356675	162	3	
0.693147	1.38629	-0.693147	162	4	
0.693147	1.38629	-0.693147	162	5	
1.16315	1.38629	-0.223144	162	6	
0.955511	1.38629	-0.430783	162	7	
1.16315	1.38629	-0.223144	162	8	
1.79176	1.38629	0.405465	163	8	
1.72277	1.38629	0.336472	164	8	
1.09861	1.38629	-0.287682	164	9	
1.16315	1.38629	-0.223144	164	10	
1.19392	1.38629	-0.192372	164	11	
0.336472	1.38629	-1.04982	164	12	
0.693147	0.693147	0	164	12	
1.16315	0.693147	0.470004	165	12	

0.955511	0.693147	0.262364	166	12
1.16315	0.693147	0.470004	167	12
1.79176	0.693147	1.09861 168	12	
1.72277	0.693147	1.02962 169	12	
1.09861	0.693147	0.405465	170	12
1.16315	0.693147	0.470004	171	12
1.19392	0.693147	0.500775	172	12
0.336472	0.693147	-0.356675	172	13
1.16315	0.693147	0.470004	173	13
0.955511	0.693147	0.262364	174	13
1.16315	0.693147	0.470004	175	13
1.79176	0.693147	1.09861 176	13	
1.72277	0.693147	1.02962 177	13	
1.09861	0.693147	0.405465	178	13
1.16315	0.693147	0.470004	179	13
1.19392	0.693147	0.500775	180	13
0.336472	0.693147	-0.356675	180	14
0.955511	1.16315	-0.207639	180	15
1.16315	1.16315	0 180	15	
1.79176	1.16315	0.628609	181	15
1.72277	1.16315	0.559616	182	15
1.09861	1.16315	-0.0645385	182	16
1.16315	1.16315	0 182	16	
1.19392	1.16315	0.0307717	183	16
0.336472	1.16315	-0.826679	183	17
1.16315	0.955511	0.207639	184	17
1.79176	0.955511	0.836248	185	17
1.72277	0.955511	0.767255	186	17
1.09861	0.955511	0.143101	187	17
1.16315	0.955511	0.207639	188	17
1.19392	0.955511	0.238411	189	17
0.336472	0.955511	-0.619039	189	18
1.79176	1.16315	0.628609	190	18
1.72277	1.16315	0.559616	191	18
1.09861	1.16315	-0.0645385	191	19
1.16315	1.16315	0 191	19	
1.19392	1.16315	0.0307717	192	19
0.336472	1.16315	-0.826679	192	20
1.72277	1.79176	-0.0689929	192	21
1.09861	1.79176	-0.693147	192	22
1.16315	1.79176	-0.628609	192	23
1.19392	1.79176	-0.597837	192	24
0.336472	1.79176	-1.45529192	25	
1.09861	1.72277	-0.624154	192	26
1.16315	1.72277	-0.559616	192	27
1.19392	1.72277	-0.528844	192	28
0.336472	1.72277	-1.38629192	29	
1.16315	1.09861	0.0645385	193	29
1.19392	1.09861	0.0953102	194	29
0.336472	1.09861	-0.76214194	30	
1.19392	1.16315	0.0307717	195	30
0.336472	1.16315	-0.826679	195	31

0.336472	1.19392	-0.85745195	32

S Statistic = 195 - 32 = 163

Tied Group	Value	Members
1	0	9
2	0.693147	5
3	1.16315	3

Time Period	Observations
1/16/1998	1
3/16/1999	1
9/23/1999	1
3/14/2000	1
9/23/2003	1
3/10/2004	1
10/12/2004	1
4/1/2005	1
10/26/2005	1
6/19/2006	1
11/18/2006	1
6/2/2007	1
11/15/2007	1
5/20/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1
11/17/2010	1
7/6/2011	1
11/22/2011	1
5/16/2012	1
11/16/2012	1
11/16/2013	1

There are 0 time periods with multiple data

A = 2022
B = 0
C = 570
D = 0
E = 98
F = 0
a = 29256
b = 109296
c = 1104
Group Variance = 1513
Z-Score = 4.16481
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|4.16481| > 1.97737 indicating a trend

Mann-Kendall Trend Analysis
Parameter: Selenium
Location: LMW-8
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk		Positives	Negatives
ND<0	ND<0	0	0	0	
ND<0	ND<0	0	0	0	
ND<0	ND<0	0	0	0	
ND<0	ND<0	0	0	0	
ND<0	ND<0	0	0	0	
ND<0	ND<0	0	0	0	
1.09861		ND<0	1.09861	1	0
0 J	ND<0	0	1	0	
0 J	ND<0	0	1	0	
0 J	ND<0	0	1	0	
0 J	ND<0	0	1	0	
1.09861		ND<0	1.09861	2	0
ND<0	ND<0	0	2	0	
ND<0	ND<0	0	2	0	
-0.446287		ND<0	-0.446287	2	1
-0.527633		ND<0	-0.527633	2	2
-1.10866 J		ND<0	-1.108662	3	
-0.415515		ND<0	-0.415515	2	4
ND<-2.25379 U		ND<0	-2.253792	5	
-1.51413 J		ND<0	-1.514132	6	
ND<-2.25379 U		ND<0	-2.253792	7	
ND<-2.25379 U		ND<0	-2.253792	8	
-0.527633		ND<0	-0.527633	2	9
ND<0	ND<0	0	2	9	
ND<0	ND<0	0	2	9	
ND<0	ND<0	0	2	9	
ND<0	ND<0	0	2	9	
ND<0	ND<0	0	2	9	
1.09861		ND<0	1.09861	3	9
0 J	ND<0	0	3	9	
0 J	ND<0	0	3	9	
0 J	ND<0	0	3	9	
0 J	ND<0	0	3	9	
1.09861		ND<0	1.09861	4	9
ND<0	ND<0	0	4	9	
ND<0	ND<0	0	4	9	
-0.446287		ND<0	-0.446287	4	10
-0.527633		ND<0	-0.527633	4	11
-1.10866 J		ND<0	-1.108664	12	
-0.415515		ND<0	-0.415515	4	13
ND<-2.25379 U		ND<0	-2.253794	14	
-1.51413 J		ND<0	-1.514134	15	
ND<-2.25379 U		ND<0	-2.253794	16	
ND<-2.25379 U		ND<0	-2.253794	17	
-0.527633		ND<0	-0.527633	4	18
ND<0	ND<0	0	4	18	
ND<0	ND<0	0	4	18	
ND<0	ND<0	0	4	18	

ND<0	ND<0	0	4	18		
1.09861		ND<0	1.09861	5	18	
0 J	ND<0	0	5	18		
0 J	ND<0	0	5	18		
0 J	ND<0	0	5	18		
0 J	ND<0	0	5	18		
1.09861		ND<0	1.09861	6	18	
ND<0	ND<0	0	6	18		
ND<0	ND<0	0	6	18		
-0.446287		ND<0	-0.446287		6	19
-0.527633		ND<0	-0.527633		6	20
-1.10866 J		ND<0	-1.108666		21	
-0.415515		ND<0	-0.415515		6	22
ND<-2.25379 U		ND<0	-2.253796		23	
-1.51413 J		ND<0	-1.514136		24	
ND<-2.25379 U		ND<0	-2.253796		25	
ND<-2.25379 U		ND<0	-2.253796		26	
-0.527633		ND<0	-0.527633		6	27
ND<0	ND<0	0	6	27		
ND<0	ND<0	0	6	27		
ND<0	ND<0	0	6	27		
1.09861		ND<0	1.09861	7	27	
0 J	ND<0	0	7	27		
0 J	ND<0	0	7	27		
0 J	ND<0	0	7	27		
0 J	ND<0	0	7	27		
1.09861		ND<0	1.09861	8	27	
ND<0	ND<0	0	8	27		
ND<0	ND<0	0	8	27		
-0.446287		ND<0	-0.446287		8	28
-0.527633		ND<0	-0.527633		8	29
-1.10866 J		ND<0	-1.108668		30	
-0.415515		ND<0	-0.415515		8	31
ND<-2.25379 U		ND<0	-2.253798		32	
-1.51413 J		ND<0	-1.514138		33	
ND<-2.25379 U		ND<0	-2.253798		34	
ND<-2.25379 U		ND<0	-2.253798		35	
-0.527633		ND<0	-0.527633		8	36
ND<0	ND<0	0	8	36		
ND<0	ND<0	0	8	36		
1.09861		ND<0	1.09861	9	36	
0 J	ND<0	0	9	36		
0 J	ND<0	0	9	36		
0 J	ND<0	0	9	36		
0 J	ND<0	0	9	36		
1.09861		ND<0	1.09861	10	36	
ND<0	ND<0	0	10	36		
ND<0	ND<0	0	10	36		
-0.446287		ND<0	-0.446287		10	37
-0.527633		ND<0	-0.527633		10	38
-1.10866 J		ND<0	-1.108610		39	
-0.415515		ND<0	-0.415515		10	40
ND<-2.25379 U		ND<0	-2.253710		41	
-1.51413 J		ND<0	-1.514110		42	
ND<-2.25379 U		ND<0	-2.253710		43	
ND<-2.25379 U		ND<0	-2.253710		44	
-0.527633		ND<0	-0.527633		10	45
ND<0	ND<0	0	10	45		
1.09861		ND<0	1.09861	11	45	

0 J	ND<0	0	11	45		
0 J	ND<0	0	11	45		
0 J	ND<0	0	11	45		
0 J	ND<0	0	11	45		
1.09861		ND<0	1.09861	12	45	
ND<0	ND<0	0	12	45		
ND<0	ND<0	0	12	45		
-0.446287		ND<0	-0.446287		12	46
-0.527633		ND<0	-0.527633		12	47
-1.10866 J		ND<0	-1.1086	12	48	
-0.415515		ND<0	-0.415515		12	49
ND<-2.25379 U		ND<0	-2.2537	12	50	
-1.51413 J		ND<0	-1.5141	312	51	
ND<-2.25379 U		ND<0	-2.2537	12	52	
ND<-2.25379 U		ND<0	-2.2537	12	53	
-0.527633		ND<0	-0.527633		12	54
1.09861		ND<0	1.09861	13	54	
0 J	ND<0	0	13	54		
0 J	ND<0	0	13	54		
0 J	ND<0	0	13	54		
0 J	ND<0	0	13	54		
1.09861		ND<0	1.09861	14	54	
ND<0	ND<0	0	14	54		
ND<0	ND<0	0	14	54		
-0.446287		ND<0	-0.446287		14	55
-0.527633		ND<0	-0.527633		14	56
-1.10866 J		ND<0	-1.1086	14	57	
-0.415515		ND<0	-0.415515		14	58
ND<-2.25379 U		ND<0	-2.2537	14	59	
-1.51413 J		ND<0	-1.5141	314	60	
ND<-2.25379 U		ND<0	-2.2537	14	61	
ND<-2.25379 U		ND<0	-2.2537	14	62	
-0.527633		ND<0	-0.527633		14	63
0 J	1.09861		-1.0986	14	64	
0 J	1.09861		-1.0986	14	65	
0 J	1.09861		-1.0986	14	66	
0 J	1.09861		-1.0986	14	67	
1.09861		1.09861		0	14	67
ND<0	1.09861		-1.0986	14	68	
ND<0	1.09861		-1.0986	14	69	
-0.446287		1.09861		-1.5449	14	70
-0.527633		1.09861		-1.6262	514	71
-1.10866 J		1.09861		-2.2072	714	72
-0.415515		1.09861		-1.5141	314	73
ND<-2.25379 U		1.09861		-3.3524	114	74
-1.51413 J		1.09861		-2.6127	414	75
ND<-2.25379 U		1.09861		-3.3524	114	76
ND<-2.25379 U		1.09861		-3.3524	114	77
-0.527633		1.09861		-1.6262	514	78
0 J	0 J	0	14	78		
0 J	0 J	0	14	78		
0 J	0 J	0	14	78		
1.09861		0 J	1.09861	15	78	
ND<0	0 J	0	15	78		
ND<0	0 J	0	15	78		
-0.446287		0 J	-0.446287		15	79
-0.527633		0 J	-0.527633		15	80
-1.10866 J		0 J	-1.1086	15	81	
-0.415515		0 J	-0.415515		15	82

ND<-2.25379 U	0 J	-2.2537	915	83	
-1.51413 J	0 J	-1.5141	315	84	
ND<-2.25379 U	0 J	-2.2537	915	85	
ND<-2.25379 U	0 J	-2.2537	915	86	
-0.527633	0 J	-0.527633		15	87

0 J	0 J	0	15	87	
0 J	0 J	0	15	87	
1.09861		0 J	1.09861	16	87
ND<0	0 J	0	16	87	
ND<0	0 J	0	16	87	
-0.446287		0 J	-0.446287	16	88
-0.527633		0 J	-0.527633	16	89
-1.10866 J		0 J	-1.1086	16	90
-0.415515		0 J	-0.415515	16	91
ND<-2.25379 U		0 J	-2.2537	916	92
-1.51413 J		0 J	-1.5141	316	93
ND<-2.25379 U		0 J	-2.2537	916	94
ND<-2.25379 U		0 J	-2.2537	916	95
-0.527633		0 J	-0.527633	16	96

0 J	0 J	0	16	96	
1.09861		0 J	1.09861	17	96
ND<0	0 J	0	17	96	
ND<0	0 J	0	17	96	
-0.446287		0 J	-0.446287	17	97
-0.527633		0 J	-0.527633	17	98
-1.10866 J		0 J	-1.1086	617	99
-0.415515		0 J	-0.415515	17	100
ND<-2.25379 U		0 J	-2.2537	917	101
-1.51413 J		0 J	-1.5141	317	102
ND<-2.25379 U		0 J	-2.2537	917	103
ND<-2.25379 U		0 J	-2.2537	917	104
-0.527633		0 J	-0.527633	17	105

1.09861		0 J	1.09861	18	105
ND<0	0 J	0	18	105	
ND<0	0 J	0	18	105	
-0.446287		0 J	-0.446287	18	106
-0.527633		0 J	-0.527633	18	107
-1.10866 J		0 J	-1.1086	618	108
-0.415515		0 J	-0.415515	18	109
ND<-2.25379 U		0 J	-2.2537	918	110
-1.51413 J		0 J	-1.5141	318	111
ND<-2.25379 U		0 J	-2.2537	918	112
ND<-2.25379 U		0 J	-2.2537	918	113
-0.527633		0 J	-0.527633	18	114

ND<0	1.09861		-1.0986	118	115
ND<0	1.09861		-1.0986	118	116
-0.446287		1.09861	-1.5449	18	117
-0.527633		1.09861	-1.6262	518	118
-1.10866 J		1.09861	-2.2072	718	119
-0.415515		1.09861	-1.5141	318	120
ND<-2.25379 U		1.09861	-3.3524	118	121
-1.51413 J		1.09861	-2.6127	418	122
ND<-2.25379 U		1.09861	-3.3524	118	123
ND<-2.25379 U		1.09861	-3.3524	118	124
-0.527633		1.09861	-1.6262	518	125

ND<0	ND<0	0	18	125	
-0.446287		ND<0	-0.446287	18	126

-0.527633	ND<0	-0.527633	18	127	
-1.10866 J	ND<0	-1.1086618	128		
-0.415515	ND<0	-0.415515	18	129	
ND<-2.25379 U	ND<0	-2.2537918	130		
-1.51413 J	ND<0	-1.5141318	131		
ND<-2.25379 U	ND<0	-2.2537918	132		
ND<-2.25379 U	ND<0	-2.2537918	133		
-0.527633	ND<0	-0.527633	18	134	
-0.446287	ND<0	-0.446287	18	135	
-0.527633	ND<0	-0.527633	18	136	
-1.10866 J	ND<0	-1.1086618	137		
-0.415515	ND<0	-0.415515	18	138	
ND<-2.25379 U	ND<0	-2.2537918	139		
-1.51413 J	ND<0	-1.5141318	140		
ND<-2.25379 U	ND<0	-2.2537918	141		
ND<-2.25379 U	ND<0	-2.2537918	142		
-0.527633	ND<0	-0.527633	18	143	
-0.527633	-0.446287	-0.0813456	18	144	
-1.10866 J	-0.446287	-0.662376	18	145	
-0.415515	-0.446287	0.0307717	19	145	
ND<-2.25379 U	-0.446287	-1.8075119	146		
-1.51413 J	-0.446287	-1.0678419	147		
ND<-2.25379 U	-0.446287	-1.8075119	148		
ND<-2.25379 U	-0.446287	-1.8075119	149		
-0.527633	-0.446287	-0.0813456	19	150	
-1.10866 J	-0.527633	-0.5810319	151		
-0.415515	-0.527633	0.112117	20	151	
ND<-2.25379 U	-0.527633	-1.7261620	152		
-1.51413 J	-0.527633	-0.986495	20	153	
ND<-2.25379 U	-0.527633	-1.7261620	154		
ND<-2.25379 U	-0.527633	-1.7261620	155		
-0.527633	-0.527633	0	20	155	
-0.415515	-1.10866 J	0.693147	21	155	
ND<-2.25379 U	-1.10866 J	-1.1451321	156		
-1.51413 J	-1.10866 J	-0.405465	21	157	
ND<-2.25379 U	-1.10866 J	-1.1451321	158		
ND<-2.25379 U	-1.10866 J	-1.1451321	159		
-0.527633	-1.10866 J	0.58103	22	159	
ND<-2.25379 U	-0.415515	-1.8382822	160		
-1.51413 J	-0.415515	-1.0986122	161		
ND<-2.25379 U	-0.415515	-1.8382822	162		
ND<-2.25379 U	-0.415515	-1.8382822	163		
-0.527633	-0.415515	-0.112117	22	164	
-1.51413 J	ND<-2.25379 U	0.739667	23	164	
ND<-2.25379 U	ND<-2.25379 U	0	23	164	
ND<-2.25379 U	ND<-2.25379 U	0	23	164	
-0.527633	ND<-2.25379 U	1.72616	24	164	
ND<-2.25379 U	-1.51413 J	-0.739667	24	165	
ND<-2.25379 U	-1.51413 J	-0.739667	24	166	
-0.527633	-1.51413 J	0.986495	25	166	
ND<-2.25379 U	ND<-2.25379 U	0	25	166	
-0.527633	ND<-2.25379 U	1.72616	26	166	

-0.527633 ND<-2.25379 U 1.72616 27 166

S Statistic = 27 - 166 = -139

Tied Group	Value	Members
1	0	13
2	1.09861	2
3	-0.527633	2
4	-2.25379	3

Time Period	Observations
1/16/1998	1
3/16/1999	1
9/23/1999	1
3/14/2000	1
9/23/2003	1
3/10/2004	1
10/12/2004	1
4/1/2005	1
10/26/2005	1
6/19/2006	1
11/18/2006	1
6/2/2007	1
11/15/2007	1
5/20/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1
11/17/2010	1
7/6/2011	1
11/22/2011	1
5/16/2012	1
11/16/2012	1
11/16/2013	1

There are 0 time periods with multiple data

A = 4938
B = 0
C = 1722
D = 0
E = 166
F = 0
a = 29256
b = 109296
c = 1104
Group Variance = 1351
Z-Score = -3.75449
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.75449| > 1.97737 indicating a trend

Shewhart-CUSUM Control Chart

Parameter: Selenium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -0.845173
Baseline Std Dev = 1.11458
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean	
1/16/1998	0	0	0.758288	
1/16/1998	0	0	0.758288	
3/16/1999	0	0	0.758288	
3/16/1999	0	0	0.758288	
9/23/1999	0	0	0.758288	
9/23/1999	0	0	0.758288	
3/14/2000	0	0	0.758288	
3/14/2000	0	0	0.758288	
9/23/2003	0	0	0.758288	
9/23/2003	0	0	0.758288	
3/10/2004	0	0	0.758288	
3/10/2004	0	0	0.758288	
10/12/2004	0	0	0.758288	
10/12/2004	0	0	0.758288	
4/1/2005	0	0	0.758288	
4/1/2005	0	0	0.758288	
10/26/2005	0	0	0.758288	
10/26/2005	0	0	0.758288	
6/19/2006	0.693147		0.380178	1.38018
6/19/2006	0.693147		0.380178	1.38018
11/18/2006	0.693147		0.760356	1.38018
11/18/2006	0.693147		0.760356	1.38018
6/2/2007	0.693147	1.14053	1.38018	
6/2/2007	0.693147	1.14053	1.38018	
11/15/2007	1.38629	2.1426	2.00207	
11/15/2007	1.38629	2.1426	2.00207	
5/20/2008	0.693147		2.52278	1.38018
5/20/2008	0.693147		2.52278	1.38018
11/20/2008	0.693147		2.90296	1.38018
11/20/2008	0.693147		2.90296	1.38018
6/11/2009	1.16315	3.70482	1.80186	
6/11/2009	1.16315	3.70482	1.80186	
11/16/2009	0.955511		4.32039	1.61557
11/16/2009	0.955511		4.32039	1.61557
6/30/2010	1.16315	5.12226	1.80186	
6/30/2010	1.16315	5.12226	1.80186	
11/17/2010	1.79176	6.48811	2.36585	
11/17/2010	1.79176	6.48811	2.36585	
7/6/2011	1.72277	7.79206	2.30395	
7/6/2011	1.72277	7.79206	2.30395	
11/22/2011	1.09861	8.53602	1.74396	
11/22/2011	1.09861	8.53602	1.74396	
5/16/2012	1.16315	9.33788	1.80186	
5/16/2012	1.16315	9.33788	1.80186	
11/16/2012	1.19392	10.1674	1.82947	
11/16/2012	1.19392	10.1674	1.82947	
11/16/2013	0.336472		10.2275	1.06017
11/16/2013	0.336472		10.2275	1.06017

Shewhart-CUSUM Control Chart

Parameter: Selenium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -0.845173
Baseline Std Dev = 1.11458
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
1/16/1998	0	0	0.758288
1/16/1998	0	0	0.758288
3/16/1999	0	0	0.758288
3/16/1999	0	0	0.758288
9/23/1999	0	0	0.758288
9/23/1999	0	0	0.758288
3/14/2000	0	0	0.758288
3/14/2000	0	0	0.758288
9/23/2003	0	0	0.758288
9/23/2003	0	0	0.758288
3/10/2004	0	0	0.758288
3/10/2004	0	0	0.758288
10/12/2004	0	0	0.758288
10/12/2004	0	0	0.758288
4/1/2005	1.09861	0.74396	1.74396
4/1/2005	1.09861	0.74396	1.74396
10/26/2005	0	0.502248	0.758288
10/26/2005	0	0.502248	0.758288
6/19/2006	0	0.260535	0.758288
6/19/2006	0	0.260535	0.758288
11/18/2006	0	0.0188228	0.758288
11/18/2006	0	0.0188228	0.758288
6/2/2007	0	0	0.758288
6/2/2007	0	0	0.758288
11/15/2007	1.09861	0.74396	1.74396
11/15/2007	1.09861	0.74396	1.74396
5/20/2008	0	0.502248	0.758288
5/20/2008	0	0.502248	0.758288
11/20/2008	0	0.260535	0.758288
11/20/2008	0	0.260535	0.758288
6/11/2009	-0.446287	0	0.35788
6/11/2009	-0.446287	0	0.35788
11/16/2009	-0.527633	0	0.284897
11/16/2009	-0.527633	0	0.284897
6/30/2010	-1.108660	-0.236402	
6/30/2010	-1.108660	-0.236402	
11/17/2010	-0.415515	0	0.385488
11/17/2010	-0.415515	0	0.385488
7/6/2011	-2.253790	-1.26381	
7/6/2011	-2.253790	-1.26381	
11/22/2011	-1.514130	-0.600185	
11/22/2011	-1.514130	-0.600185	
5/16/2012	-2.253790	-1.26381	
5/16/2012	-2.253790	-1.26381	
11/16/2012	-2.253790	-1.26381	
11/16/2012	-2.253790	-1.26381	
11/16/2013	-0.527633	0	0.284897
11/16/2013	-0.527633	0	0.284897

Concentrations (ppb)

Parameter: Tetrachloroethylene

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 284
Percent Non-Detects: 95.9459%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	24 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.15 U	ND<0.15 U
			11/16/2009	ND<0.15 U	ND<0.15 U
			6/30/2010	ND<0.15 U	ND<0.15 U
			11/17/2010	ND<0.15 U	ND<0.15 U
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	ND<0.15 U	ND<0.15 U
			5/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2013	ND<0.15 U	ND<0.15 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-16	14	14 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.15 U	ND<0.15 U
			11/16/2009	ND<0.15 U	ND<0.15 U
			6/30/2010	ND<0.15 U	ND<0.15 U
			11/17/2010	ND<0.15 U	ND<0.15 U
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	ND<0.15 U	ND<0.15 U
			5/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2013	ND<0.15 U	ND<0.15 U
LMW-6	24	22 (91.6667%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1

		9/23/2003	ND<1	ND<1	
		3/10/2004	ND<1	ND<1	
		10/12/2004	ND<1	ND<1	
		4/1/2005	ND<1	ND<1	
		10/26/2005	ND<1	ND<1	
		6/19/2006	ND<1	ND<1	
		11/18/2006	ND<1	ND<1	
		6/2/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.15 U	ND<0.15 U	
		11/16/2009	ND<0.15 U	ND<0.15 U	
		6/30/2010	ND<0.15 U	ND<0.15 U	
		11/17/2010	0.22 J	0.22 J	
		7/6/2011	ND<0.15 U	ND<0.15 U	
		11/22/2011	ND<0.15 U	ND<0.15 U	
		5/16/2012	0.16 J	0.16 J	
		11/16/2012	ND<0.15 U	ND<0.15 U	
		11/16/2013	ND<0.15 U	ND<0.15 U	
LMW-15R	16	16 (100%)	11/18/2006	ND<1	ND<1
		6/2/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.15 U	ND<0.15 U	
		6/30/2010	ND<0.15 U	ND<0.15 U	
		11/17/2010	ND<0.15 U	ND<0.15 U	
		7/6/2011	ND<0.15 U	ND<0.15 U	
		11/22/2011	ND<0.15 U	ND<0.15 U	
		5/16/2012	ND<0.15 U	ND<0.15 U	
		11/16/2012	ND<0.15 U	ND<0.15 U	
		11/16/2013	ND<0.15 U	ND<0.15 U	
LMW-14R	12	12 (100%)	6/2/2007	ND<1	ND<1
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.15 U	ND<0.15 U	
		6/30/2010	ND<0.15 U	ND<0.15 U	
		11/17/2010	ND<0.15 U	ND<0.15 U	
		7/6/2011	ND<0.15 U	ND<0.15 U	
		11/22/2011	ND<0.15 U	ND<0.15 U	
		5/16/2012	ND<0.15 U	ND<0.15 U	
		11/16/2012	ND<0.15 U	ND<0.15 U	
		11/16/2013	ND<0.15 U	ND<0.15 U	
LMW-3	26	26 (100%)	11/19/1996	ND<1	ND<1
		3/24/1997	ND<1	ND<1	
		1/16/1998	ND<1	ND<1	
		3/16/1999	ND<1	ND<1	
		9/23/1999	ND<1	ND<1	
		3/14/2000	ND<1	ND<1	
		9/23/2003	ND<1	ND<1	
		3/10/2004	ND<1	ND<1	
		10/12/2004	ND<1	ND<1	
		4/1/2005	ND<1	ND<1	
		10/26/2005	ND<1	ND<1	

		6/19/2006	ND<1	ND<1	
		11/18/2006	ND<1	ND<1	
		6/2/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.15 U		ND<0.15 U
		11/16/2009	ND<0.15 U		ND<0.15 U
		6/30/2010	ND<0.15 U		ND<0.15 U
		11/17/2010	ND<0.15 U		ND<0.15 U
		7/6/2011	ND<0.15 U	ND<0.15 U	
		11/22/2011	ND<0.15 U		ND<0.15 U
		5/16/2012	ND<0.15 U		ND<0.15 U
		11/16/2012	ND<0.15 U		ND<0.15 U
		11/16/2013	ND<0.15 U		ND<0.15 U
LMW-3S	14	14 (100%)	11/18/2006	ND<1	ND<1
		6/2/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.15 U		ND<0.15 U
		11/16/2009	ND<0.15 U		ND<0.15 U
		6/30/2010	ND<0.15 U		ND<0.15 U
		11/17/2010	ND<0.15 U		ND<0.15 U
		7/6/2011	ND<0.15 U	ND<0.15 U	
		11/22/2011	ND<0.15 U		ND<0.15 U
		5/16/2012	ND<0.15 U		ND<0.15 U
		11/16/2012	ND<0.15 U		ND<0.15 U
		11/16/2013	ND<0.15 U		ND<0.15 U
LMW-9S	16	16 (100%)	11/18/2006	ND<1	ND<1
		6/2/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.15 U		ND<0.15 U
		11/16/2009	ND<0.15 U		ND<0.15 U
		11/16/2009	ND<0.15 U		ND<0.15 U
		11/16/2009	ND<0.15 U		ND<0.15 U
		6/30/2010	ND<0.15 U		ND<0.15 U
		11/17/2010	ND<0.15 U		ND<0.15 U
		7/6/2011	ND<0.15 U	ND<0.15 U	
		11/22/2011	ND<0.15 U		ND<0.15 U
		5/16/2012	ND<0.15 U		ND<0.15 U
		11/16/2012	ND<0.15 U		ND<0.15 U
		11/16/2013	ND<0.15 U		ND<0.15 U
LMW-9D	14	14 (100%)	11/18/2006	ND<1	ND<1
		6/2/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.15 U		ND<0.15 U
		11/16/2009	ND<0.15 U		ND<0.15 U
		6/30/2010	ND<0.15 U		ND<0.15 U
		11/17/2010	ND<0.15 U		ND<0.15 U
		7/6/2011	ND<0.15 U	ND<0.15 U	
		11/22/2011	ND<0.15 U		ND<0.15 U
		5/16/2012	ND<0.15 U		ND<0.15 U
		11/16/2012	ND<0.15 U		ND<0.15 U
		11/16/2013	ND<0.15 U		ND<0.15 U

LMW-9	24	24 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.15 U	ND<0.15 U
			11/16/2009	ND<0.15 U	ND<0.15 U
			6/30/2010	ND<0.15 U	ND<0.15 U
			11/17/2010	ND<0.15 U	ND<0.15 U
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	ND<0.15 U	ND<0.15 U
			5/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2013	ND<0.15 U	ND<0.15 U
LMW-10	21	16 (76.1905%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.15 U	ND<0.15 U
			11/16/2009	0.24 J	0.24 J
			6/30/2010	ND<0.15 U	ND<0.15 U
			11/17/2010	0.27 J	0.27 J
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	0.35 J	0.35 J
			5/16/2012	0.28 J	0.28 J
			11/16/2012	0.29 J	0.29 J
			11/16/2013	ND<0.15 U	ND<0.15 U
LMW-8	24	19 (79.1667%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<0 J	ND<0 J
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<0 J	ND<0 J
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<0 J	ND<0 J
			5/20/2008	ND<1	ND<1

			11/20/2008	ND<0 J	ND<0 J
			6/11/2009	0.31 J	0.31 J
			11/16/2009	0.26 J	0.26 J
			6/30/2010	0.25 J	0.25 J
			11/17/2010	0.19 J	0.19 J
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	ND<0.15 U	ND<0.15 U
			5/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2013	2	2
LMW-7	21	21 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.15 U	ND<0.15 U
			11/17/2010	ND<0.15 U	ND<0.15 U
			7/6/2011	ND<0.15 U	ND<0.15 U
			11/22/2011	ND<0.15 U	ND<0.15 U
			5/16/2012	ND<0.15 U	ND<0.15 U
			11/16/2012	ND<0.15 U	ND<0.15 U
LMW-13	11	11 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
LMW-11	11	11 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
MW-5	13	13 (100%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1

			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
LMW-12	11	11 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Tetrachloroethylene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.747777.55021	0	
2	0	-2.5121313.861	0	
3	0	-2.3263419.2729	0	
4	0	-2.2262124.2289	0	
5	0.075	-2.1444128.8274	-0.16083	
6	0.075	-2.0537533.0453	-0.314862	
7	0.075	-1.9953937.0269	-0.464516	
8	0.075	-1.9431440.8026	-0.610251	
9	0.075	-1.8807944.34	-0.751311	
10	0.075	-1.8384347.7198	-0.889193	
11	0.075	-1.7866150.9118	-1.02319	
12	0.075	-1.7506953.9767	-1.15449	
13	0.075	-1.7168856.9244	-1.28326	
14	0.075	-1.6746659.7289	-1.40886	
15	0.075	-1.6448562.4344	-1.53222	
16	0.075	-1.6164465.0473	-1.65345	
17	0.075	-1.5804767.5452	-1.77199	
18	0.075	-1.5547769.9625	-1.8886	
19	0.075	-1.5300772.3036	-2.00335	
20	0.075	-1.4985274.5491	-2.11574	
21	0.075	-1.4757976.7271	-2.22642	
22	0.075	-1.4466378.8198	-2.33492	
23	0.075	-1.4255480.852	-2.44184	
24	0.075	-1.4050782.8262	-2.54722	
25	0.075	-1.3786684.7269	-2.65062	
26	0.075	-1.3594686.5751	-2.75258	
27	0.075	-1.3407588.3727	-2.85313	
28	0.075	-1.3165290.1059	-2.95187	
29	0.075	-1.2988491.7929	-3.04928	
30	0.075	-1.2758893.4208	-3.14498	
31	0.075	-1.2590895.006	-3.23941	
32	0.075	-1.2426496.5502	-3.3326	
33	0.075	-1.2212398.0416	-3.4242	
34	0.075	-1.2055399.4949	-3.51461	
35	0.075	-1.19012100.911	-3.60387	
36	0.075	-1.17 102.28	-3.69162	
37	0.075	-1.15522103.615	-3.77826	
38	0.075	-1.14069104.916	-3.86381	
39	0.075	-1.12168106.174	-3.94794	
40	0.075	-1.10768107.401	-4.03102	
41	0.075	-1.08935108.588	-4.11272	
42	0.075	-1.07584109.745	-4.1934	
43	0.075	-1.06252110.874	-4.27309	
44	0.075	-1.04505111.966	-4.35147	
45	0.075	-1.03215113.032	-4.42888	
46	0.075	-1.01943114.071	-4.50534	
47	0.075	-1.00271115.076	-4.58054	
48	0.075	-0.990356	116.057	-4.65482
49	0.075	-0.97815117.014	-4.72818	
50	0.075	-0.9621 117.939	-4.80034	
51	0.075	-0.950222	118.842	-4.87161

52	0.075	-0.93459	119.716	-4.9417
53	0.075	-0.923014	120.568	-5.01093
54	0.075	-0.911562	121.399	-5.07929
55	0.075	-0.896473	122.202	-5.14653
56	0.075	-0.885291	122.986	-5.21293
57	0.075	-0.874218	123.75	-5.27849
58	0.075	-0.859618	124.489	-5.34296
59	0.075	-0.848786	125.21	-5.40662
60	0.075	-0.834498	125.906	-5.46921
61	0.075	-0.823893	126.585	-5.531
62	0.075	-0.813379	127.247	-5.59201
63	0.075	-0.7995	127.886	-5.65197
64	0.075	-0.789191	128.509	-5.71116
65	0.075	-0.778966	129.115	-5.76958
66	0.075	-0.765456	129.701	-5.82699
67	0.075	-0.755415	130.272	-5.88364
68	0.075	-0.745449	130.828	-5.93955
69	0.075	-0.732275	131.364	-5.99447
70	0.075	-0.722479	131.886	-6.04866
71	0.075	-0.709522	132.389	-6.10187
72	0.075	-0.699883	132.879	-6.15437
73	0.075	-0.690309	133.356	-6.20614
74	0.075	-0.677639	133.815	-6.25696
75	0.075	-0.668209	134.261	-6.30708
76	0.075	-0.658838	134.695	-6.35649
77	0.075	-0.646431	135.113	-6.40497
78	0.075	-0.637192	135.519	-6.45276
79	0.075	-0.628006	135.914	-6.49986
80	0.075	-0.615839	136.293	-6.54605
81	0.075	-0.606775	136.661	-6.59156
82	0.075	-0.594766	137.015	-6.63617
83	0.075	-0.585815	137.358	-6.6801
84	0.075	-0.576911	137.691	-6.72337
85	0.075	-0.565108	138.01	-6.76575
86	0.075	-0.556308	138.32	-6.80748
87	0.075	-0.547551	138.619	-6.84854
88	0.075	-0.53594	138.907	-6.88874
89	0.075	-0.52728	139.185	-6.92828
90	0.075	-0.515791	139.451	-6.96697
91	0.075	-0.507221	139.708	-7.00501
92	0.075	-0.498687	139.957	-7.04241
93	0.075	-0.487364	140.194	-7.07896
94	0.075	-0.478914	140.424	-7.11488
95	0.075	-0.470498	140.645	-7.15017
96	0.075	-0.459327	140.856	-7.18462
97	0.075	-0.450985	141.059	-7.21844
98	0.075	-0.442676	141.255	-7.25164
99	0.075	-0.431644	141.442	-7.28402
100	0.075	-0.423405	141.621	-7.31577
101	0.075	-0.412463	141.791	-7.34671
102	0.075	-0.40429	141.954	-7.37703
103	0.075	-0.396142	142.111	-7.40674
104	0.075	-0.385321	142.26	-7.43564
105	0.075	-0.377233	142.402	-7.46393
106	0.075	-0.369171	142.538	-7.49162
107	0.16	-0.358459	142.667	-7.54897
108	0.19	-0.350451	142.79	-7.61556
109	0.22	-0.33981	142.905	-7.69032
110	0.24	-0.331854	143.015	-7.76996
111	0.25	-0.323919	143.12	-7.85094
112	0.26	-0.31337	143.218	-7.93242
113	0.27	-0.305481	143.312	-8.0149

114	0.28	-0.297612	143.4	-8.09823
115	0.29	-0.287147	143.483	-8.1815
116	0.31	-0.279319	143.561	-8.26809
117	0.35	-0.271509	143.635	-8.36312
118	0.5	-0.26112143.703	-8.49368	
119	0.5	-0.253347	143.767	-8.62035
120	0.5	-0.243007	143.826	-8.74186
121	0.5	-0.235269	143.881	-8.85949
122	0.5	-0.227545	143.933	-8.97326
123	0.5	-0.217267	143.98	-9.0819
124	0.5	-0.209575	144.024	-9.18668
125	0.5	-0.201894	144.065	-9.28763
126	0.5	-0.191671	144.102	-9.38347
127	0.5	-0.184017	144.136	-9.47547
128	0.5	-0.176374	144.167	-9.56366
129	0.5	-0.166199	144.194	-9.64676
130	0.5	-0.158579	144.219	-9.72605
131	0.5	-0.148434	144.241	-9.80027
132	0.5	-0.140835	144.261	-9.87069
133	0.5	-0.133244	144.279	-9.93731
134	0.5	-0.123135	144.294	-9.99888
135	0.5	-0.115562	144.308	-10.0567
136	0.5	-0.107995	144.319	-10.1107
137	0.5	-0.0979139	144.329	-10.1596
138	0.5	-0.0903606	144.337	-10.2048
139	0.5	-0.0802981	144.343	-10.2449
140	0.5	-0.0727562	144.349	-10.2813
141	0.5	-0.0652187	144.353	-10.3139
142	0.5	-0.0551734	144.356	-10.3415
143	0.5	-0.0476439	144.358	-10.3653
144	0.5	-0.0401167	144.36	-10.3854
145	0.5	-0.0300838	144.361	-10.4004
146	0.5	-0.0225612	144.361	-10.4117
147	0.5	-0.0150408	144.362	-10.4192
148	0.5	-0.00501359	144.362	-10.4217
149	0.5	0.00501359	144.362	-10.4192
150	0.5	0.0150408	144.362	-10.4117
151	0.5	0.0225612	144.362	-10.4004
152	0.5	0.0300838	144.363	-10.3854
153	0.5	0.0401167	144.365	-10.3653
154	0.5	0.0476439	144.367	-10.3415
155	0.5	0.0551734	144.37	-10.3139
156	0.5	0.0652187	144.374	-10.2813
157	0.5	0.0727562	144.38	-10.2449
158	0.5	0.0802981	144.386	-10.2048
159	0.5	0.0903606	144.394	-10.1596
160	0.5	0.0979139	144.404	-10.1107
161	0.5	0.107995	144.416	-10.0567
162	0.5	0.115562	144.429	-9.99888
163	0.5	0.123135	144.444	-9.93731
164	0.5	0.133244	144.462	-9.87069
165	0.5	0.140835	144.482	-9.80027
166	0.5	0.148434	144.504	-9.72605
167	0.5	0.158579	144.529	-9.64676
168	0.5	0.166199	144.557	-9.56366
169	0.5	0.176374	144.588	-9.47547
170	0.5	0.184017	144.621	-9.38347
171	0.5	0.191671	144.658	-9.28763
172	0.5	0.201894	144.699	-9.18668
173	0.5	0.209575	144.743	-9.0819
174	0.5	0.217267	144.79	-8.97326
175	0.5	0.227545	144.842	-8.85949

176	0.5	0.235269	144.897	-8.74186
177	0.5	0.243007	144.956	-8.62035
178	0.5	0.253347	145.02	-8.49368
179	0.5	0.26112	145.089	-8.36312
180	0.5	0.271509	145.162	-8.22736
181	0.5	0.279319	145.24	-8.0877
182	0.5	0.287147	145.323	-7.94413
183	0.5	0.297612	145.411	-7.79532
184	0.5	0.305481	145.505	-7.64258
185	0.5	0.31337	145.603	-7.4859
186	0.5	0.323919	145.708	-7.32394
187	0.5	0.331854	145.818	-7.15801
188	0.5	0.33981	145.933	-6.98811
189	0.5	0.350451	146.056	-6.81288
190	0.5	0.358459	146.185	-6.63365
191	0.5	0.369171	146.321	-6.44907
192	0.5	0.377233	146.463	-6.26045
193	0.5	0.385321	146.612	-6.06779
194	0.5	0.396142	146.769	-5.86972
195	0.5	0.40429	146.932	-5.66757
196	0.5	0.412463	147.102	-5.46134
197	0.5	0.423405	147.282	-5.24964
198	0.5	0.431644	147.468	-5.03382
199	0.5	0.442676	147.664	-4.81248
200	0.5	0.450985	147.867	-4.58699
201	0.5	0.459327	148.078	-4.35732
202	0.5	0.470498	148.3	-4.12208
203	0.5	0.478914	148.529	-3.88262
204	0.5	0.487364	148.767	-3.63894
205	0.5	0.498687	149.015	-3.38959
206	0.5	0.507221	149.272	-3.13598
207	0.5	0.515791	149.539	-2.87809
208	0.5	0.52728	149.817	-2.61445
209	0.5	0.53594	150.104	-2.34648
210	0.5	0.547551	150.404	-2.0727
211	0.5	0.556308	150.713	-1.79455
212	0.5	0.565108	151.032	-1.51199
213	0.5	0.576911	151.365	-1.22354
214	0.5	0.585815	151.708	-0.930631
215	0.5	0.594766	152.062	-0.633248
216	0.5	0.606775	152.43	-0.32986
217	0.5	0.615839	152.81	-0.0219406
218	0.5	0.628006	153.204	0.292062
219	0.5	0.637192	153.61	0.610658
220	0.5	0.646431	154.028	0.933874
221	0.5	0.658838	154.462	1.26329
222	0.5	0.668209	154.908	1.5974
223	0.5	0.677639	155.368	1.93622
224	0.5	0.690309	155.844	2.28137
225	0.5	0.699883	156.334	2.63131
226	0.5	0.709522	156.837	2.98607
227	0.5	0.722479	157.359	3.34731
228	0.5	0.732275	157.896	3.71345
229	0.5	0.745449	158.451	4.08618
230	0.5	0.755415	159.022	4.46388
231	0.5	0.765456	159.608	4.84661
232	0.5	0.778966	160.215	5.23609
233	0.5	0.789191	160.837	5.63069
234	0.5	0.7995	161.477	6.03044
235	0.5	0.813379	162.138	6.43713
236	0.5	0.823893	162.817	6.84908
237	0.5	0.834498	163.513	7.26633

238	0.5	0.848786		164.234	7.69072
239	0.5	0.859618		164.973	8.12053
240	0.5	0.874218		165.737	8.55764
241	0.5	0.885291		166.521	9.00028
242	0.5	0.896473		167.325	9.44852
243	0.5	0.911562		168.155	9.9043
244	0.5	0.923014		169.007	10.3658
245	0.5	0.93459	169.881	10.8331	
246	0.5	0.950222		170.784	11.3082
247	0.5	0.9621	171.709	11.7893	
248	0.5	0.97815	172.666	12.2783	
249	0.5	0.990356		173.647	12.7735
250	0.5	1.00271	174.652	13.2749	
251	0.5	1.01943	175.692	13.7846	
252	0.5	1.03215	176.757	14.3007	
253	0.5	1.04505	177.849	14.8232	
254	0.5	1.06252	178.978	15.3544	
255	0.5	1.07584	180.136	15.8924	
256	0.5	1.08935	181.322	16.437	
257	0.5	1.10768	182.549	16.9909	
258	0.5	1.12168	183.807	17.5517	
259	0.5	1.14069	185.108	18.1221	
260	0.5	1.15522	186.443	18.6997	
261	0.5	1.17	187.812	19.2847	
262	0.5	1.19012	189.228	19.8797	
263	0.5	1.20553	190.682	20.4825	
264	0.5	1.22123	192.173	21.0931	
265	0.5	1.24264	193.717	21.7144	
266	0.5	1.25908	195.302	22.344	
267	0.5	1.27588	196.93	22.9819	
268	0.5	1.29884	198.617	23.6313	
269	0.5	1.31652	200.351	24.2896	
270	0.5	1.34075	202.148	24.96	
271	0.5	1.35946	203.996	25.6397	
272	0.5	1.37866	205.897	26.329	
273	0.5	1.40507	207.871	27.0316	
274	0.5	1.42554	209.903	27.7443	
275	0.5	1.44663	211.996	28.4677	
276	0.5	1.47579	214.174	29.2055	
277	0.5	1.49852	216.42	29.9548	
278	0.5	1.53007	218.761	30.7198	
279	0.5	1.55477	221.178	31.4972	
280	0.5	1.58047	223.676	32.2875	
281	0.5	1.61644	226.289	33.0957	
282	0.5	1.64485	228.994	33.9181	
283	0.5	1.67466	231.799	34.7554	
284	0.5	1.71688	234.747	35.6139	
285	0.5	1.75069	237.811	36.4892	
286	0.5	1.78661	241.003	37.3825	
287	0.5	1.83843	244.383	38.3017	
288	0.5	1.88079	247.921	39.2421	
289	0.5	1.94314	251.696	40.2137	
290	0.5	1.99539	255.678	41.2114	
291	0.5	2.05375	259.896	42.2383	
292	0.5	2.14441	264.494	43.3105	
293	0.5	2.22621	269.45	44.4236	
294	0.5	2.32634	274.862	45.5867	
295	0.5	2.51213	281.173	46.8428	
296	2	2.74777	288.723	52.3383	

Data Set Standard Deviation = 0.225803

Numerator = 2739.3
Denominator = 4342.75
W Statistic = 0.630776 = 2739.3 / 4342.75

5% Critical value of 0.976 exceeds 0.630776
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.630776
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Tetrachloroethylene

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.794864
0.794864 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.003367		-2.7477739	348.683	
2	0	0.00673401		-2.5121339	337.176	
3	0	0.010101		-2.3263439	328.103	
4	0	0.013468		-2.2262139	323.213	
5	0.075	0.016835		-2.1444159.0625	319.219	
6	0.075	0.020202		-2.0537559.0625	314.791	
7	0.075	0.023569		-1.9953959.0625	311.942	
8	0.075	0.026936		-1.9431459.0625	309.39	
9	0.075	0.030303		-1.8807959.0625	306.345	
10	0.075	0.03367	-1.8384359.0625		304.276	
11	0.075	0.037037		-1.7866159.0625	301.746	
12	0.075	0.040404		-1.7506959.0625	299.992	
13	0.075	0.043771		-1.7168859.0625	298.341	
14	0.075	0.047138		-1.6746659.0625	296.279	
15	0.075	0.0505051		-1.6448559.0625	294.824	
16	0.075	0.0538721		-1.6164459.0625	293.436	
17	0.075	0.0572391		-1.5804759.0625	291.679	
18	0.075	0.0606061		-1.5547759.0625	290.425	
19	0.075	0.0639731		-1.5300759.0625	289.218	
20	0.075	0.0673401		-1.4985259.0625	287.677	
21	0.075	0.0707071		-1.4757959.0625	286.568	
22	0.075	0.0740741		-1.4466359.0625	285.144	
23	0.075	0.0774411		-1.4255459.0625	284.114	
24	0.075	0.0808081		-1.4050759.0625	283.114	
25	0.075	0.0841751		-1.3786659.0625	281.824	
26	0.075	0.0875421		-1.3594659.0625	280.887	
27	0.075	0.0909091		-1.3407559.0625	279.974	
28	0.075	0.0942761		-1.3165259.0625	278.79	
29	0.075	0.0976431		-1.2988459.0625	277.926	
30	0.075	0.10101	-1.2758859.0625		276.805	
31	0.075	0.104377		-1.2590859.0625	275.985	
32	0.075	0.107744		-1.2426459.0625	275.182	
33	0.075	0.111111		-1.2212359.0625	274.137	
34	0.075	0.114478		-1.2055359.0625	273.37	
35	0.075	0.117845		-1.1901259.0625	272.617	
36	0.075	0.121212		-1.17 59.0625	271.635	
37	0.075	0.124579		-1.1552259.0625	270.913	
38	0.075	0.127946		-1.1406959.0625	270.204	
39	0.075	0.131313		-1.1216859.0625	269.275	
40	0.075	0.13468	-1.1076859.0625		268.592	
41	0.075	0.138047		-1.0893559.0625	267.697	
42	0.075	0.141414		-1.0758459.0625	267.037	
43	0.075	0.144781		-1.0625259.0625	266.386	
44	0.075	0.148148		-1.0450559.0625	265.533	
45	0.075	0.151515		-1.0321559.0625	264.904	
46	0.075	0.154882		-1.0194359.0625	264.282	
47	0.075	0.158249		-1.0027159.0625	263.466	
48	0.075	0.161616		-0.990356	59.0625	262.862

49	0.075	0.164983	-0.978155	9.0625	262.266
50	0.075	0.16835	-0.9621	59.0625	261.483
51	0.075	0.171717	-0.950222	59.0625	260.903
52	0.075	0.175084	-0.934595	9.0625	260.139
53	0.075	0.178451	-0.923014	59.0625	259.574
54	0.075	0.181818	-0.911562	59.0625	259.015
55	0.075	0.185185	-0.896473	59.0625	258.278
56	0.075	0.188552	-0.885291	59.0625	257.732
57	0.075	0.191919	-0.874218	59.0625	257.191
58	0.075	0.195286	-0.859618	59.0625	256.478
59	0.075	0.198653	-0.848786	59.0625	255.949
60	0.075	0.20202	-0.834498	59.0625	255.251
61	0.075	0.205387	-0.823893	59.0625	254.733
62	0.075	0.208754	-0.813379	59.0625	254.22
63	0.075	0.212121	-0.7995	59.0625	253.542
64	0.075	0.215488	-0.789191	59.0625	253.039
65	0.075	0.218855	-0.778966	59.0625	252.54
66	0.075	0.222222	-0.765456	59.0625	251.88
67	0.075	0.225589	-0.755415	59.0625	251.389
68	0.075	0.228956	-0.745449	59.0625	250.903
69	0.075	0.232323	-0.732275	59.0625	250.259
70	0.075	0.23569	-0.722479	59.0625	249.781
71	0.075	0.239057	-0.709522	59.0625	249.148
72	0.075	0.242424	-0.699883	59.0625	248.678
73	0.075	0.245791	-0.690309	59.0625	248.21
74	0.075	0.249158	-0.677639	59.0625	247.591
75	0.075	0.252525	-0.668209	59.0625	247.131
76	0.075	0.255892	-0.658838	59.0625	246.673
77	0.075	0.259259	-0.646431	59.0625	246.067
78	0.075	0.262626	-0.637192	59.0625	245.616
79	0.075	0.265993	-0.628006	59.0625	245.168
80	0.075	0.26936	-0.615839	59.0625	244.573
81	0.075	0.272727	-0.606775	59.0625	244.131
82	0.075	0.276094	-0.594766	59.0625	243.544
83	0.075	0.279461	-0.585815	59.0625	243.107
84	0.075	0.282828	-0.576911	59.0625	242.672
85	0.075	0.286195	-0.565108	59.0625	242.096
86	0.075	0.289562	-0.556308	59.0625	241.666
87	0.075	0.292929	-0.547551	59.0625	241.239
88	0.075	0.296296	-0.535945	9.0625	240.672
89	0.075	0.299663	-0.527285	9.0625	240.249
90	0.075	0.30303	-0.515791	59.0625	239.688
91	0.075	0.306397	-0.507221	59.0625	239.269
92	0.075	0.309764	-0.498687	59.0625	238.853
93	0.075	0.313131	-0.487364	59.0625	238.3
94	0.075	0.316498	-0.478914	59.0625	237.887
95	0.075	0.319865	-0.470498	59.0625	237.476
96	0.075	0.323232	-0.459327	59.0625	236.93
97	0.075	0.326599	-0.450985	59.0625	236.523
98	0.075	0.329966	-0.442676	59.0625	236.117
99	0.075	0.333333	-0.431644	59.0625	235.579
100	0.075	0.3367	-0.423405	59.0625	235.176
101	0.075	0.340067	-0.412463	59.0625	234.642
102	0.075	0.343434	-0.404295	9.0625	234.243
103	0.075	0.346801	-0.396142	59.0625	233.845
104	0.075	0.350168	-0.385321	59.0625	233.317
105	0.075	0.353535	-0.377233	59.0625	232.922
106	0.075	0.356902	-0.369171	59.0625	232.528
107	0.16	0.360269	-0.358459	81.8	232.005
108	0.19	0.363636	-0.350451	89.825	231.614
109	0.22	0.367003	-0.339819	7.85	231.094
110	0.24	0.37037	-0.331854	103.2	230.706

111	0.25	0.373737	-0.323919	105.875	230.318
112	0.26	0.377104	-0.31337	108.55	229.803
113	0.27	0.380471	-0.305481	111.225	229.418
114	0.28	0.383838	-0.297612	113.9	229.033
115	0.29	0.387205	-0.287147	116.575	228.522
116	0.31	0.390572	-0.279319	121.925	228.14
117	0.35	0.393939	-0.271509	132.625	227.759
118	0.5	0.397306	-0.26112	172.75	227.251
119	0.5	0.400673	-0.253347	172.75	226.872
120	0.5	0.40404	-0.243007	172.75	226.367
121	0.5	0.407407	-0.235269	172.75	225.989
122	0.5	0.410774	-0.227545	172.75	225.612
123	0.5	0.414141	-0.217267	172.75	225.11
124	0.5	0.417508	-0.209575	172.75	224.734
125	0.5	0.420875	-0.201894	172.75	224.359
126	0.5	0.424242	-0.191671	172.75	223.86
127	0.5	0.427609	-0.184017	172.75	223.486
128	0.5	0.430976	-0.176374	172.75	223.113
129	0.5	0.434343	-0.166199	172.75	222.616
130	0.5	0.43771	-0.158579	172.75	222.244
131	0.5	0.441077	-0.148434	172.75	221.749
132	0.5	0.444444	-0.140835	172.75	221.377
133	0.5	0.447811	-0.133244	172.75	221.007
134	0.5	0.451178	-0.123135	172.75	220.513
135	0.5	0.454545	-0.115562	172.75	220.143
136	0.5	0.457912	-0.107995	172.75	219.774
137	0.5	0.461279	-0.0979139	172.75	219.281
138	0.5	0.464646	-0.0903606	172.75	218.913
139	0.5	0.468013	-0.0802981	172.75	218.421
140	0.5	0.47138	-0.0727562	172.75	218.053
141	0.5	0.474747	-0.0652187	172.75	217.685
142	0.5	0.478114	-0.0551734	172.75	217.194
143	0.5	0.481481	-0.0476439	172.75	216.827
144	0.5	0.484848	-0.0401167	172.75	216.459
145	0.5	0.488215	-0.0300838	172.75	215.969
146	0.5	0.491582	-0.0225612	172.75	215.602
147	0.5	0.494949	-0.0150408	172.75	215.234
148	0.5	0.498316	-0.00501359	172.75	214.745
149	0.5	0.501684	0.00501359	172.75	214.255
150	0.5	0.505051	0.0150408	172.75	213.766
151	0.5	0.508418	0.0225612	172.75	213.398
152	0.5	0.511785	0.0300838	172.75	213.031
153	0.5	0.515152	0.0401167	172.75	212.541
154	0.5	0.518519	0.0476439	172.75	212.173
155	0.5	0.521886	0.0551734	172.75	211.806
156	0.5	0.525253	0.0652187	172.75	211.315
157	0.5	0.52862	0.0727562	172.75	210.947
158	0.5	0.531987	0.0802981	172.75	210.579
159	0.5	0.535354	0.0903606	172.75	210.087
160	0.5	0.538721	0.0979139	172.75	209.719
161	0.5	0.542088	0.107995	172.75	209.226
162	0.5	0.545455	0.115562	172.75	208.857
163	0.5	0.548822	0.123135	172.75	208.487
164	0.5	0.552189	0.133244	172.75	207.993
165	0.5	0.555556	0.140835	172.75	207.623
166	0.5	0.558923	0.148434	172.75	207.251
167	0.5	0.56229	0.158579	172.75	206.756
168	0.5	0.565657	0.166199	172.75	206.384
169	0.5	0.569024	0.176374	172.75	205.887
170	0.5	0.572391	0.184017	172.75	205.514
171	0.5	0.575758	0.191671	172.75	205.14
172	0.5	0.579125	0.201894	172.75	204.641

173	0.5	0.582492	0.209575	172.75	204.266
174	0.5	0.585859	0.217267	172.75	203.89
175	0.5	0.589226	0.227545	172.75	203.388
176	0.5	0.592593	0.235269	172.75	203.011
177	0.5	0.59596	0.243007	172.75	202.633
178	0.5	0.599327	0.253347	172.75	202.128
179	0.5	0.602694	0.26112	172.75	201.749
180	0.5	0.606061	0.271509	172.75	201.241
181	0.5	0.609428	0.279319	172.75	200.86
182	0.5	0.612795	0.287147	172.75	200.478
183	0.5	0.616162	0.297612	172.75	199.967
184	0.5	0.619529	0.305481	172.75	199.582
185	0.5	0.622896	0.31337	172.75	199.197
186	0.5	0.626263	0.323919	172.75	198.682
187	0.5	0.62963	0.331854	172.75	198.294
188	0.5	0.632997	0.33981	172.75	197.906
189	0.5	0.636364	0.350451	172.75	197.386
190	0.5	0.639731	0.358459	172.75	196.995
191	0.5	0.643098	0.369171	172.75	196.472
192	0.5	0.646465	0.377233	172.75	196.078
193	0.5	0.649832	0.385321	172.75	195.683
194	0.5	0.653199	0.396142	172.75	195.155
195	0.5	0.656566	0.40429	172.75	194.757
196	0.5	0.659933	0.412463	172.75	194.358
197	0.5	0.6633	0.423405	172.75	193.824
198	0.5	0.666667	0.431644	172.75	193.421
199	0.5	0.670034	0.442676	172.75	192.883
200	0.5	0.673401	0.450985	172.75	192.477
201	0.5	0.676768	0.459327	172.75	192.07
202	0.5	0.680135	0.470498	172.75	191.524
203	0.5	0.683502	0.478914	172.75	191.113
204	0.5	0.686869	0.487364	172.75	190.7
205	0.5	0.690236	0.498687	172.75	190.147
206	0.5	0.693603	0.507221	172.75	189.731
207	0.5	0.69697	0.515791	172.75	189.312
208	0.5	0.700337	0.52728	172.75	188.751
209	0.5	0.703704	0.53594	172.75	188.328
210	0.5	0.707071	0.547551	172.75	187.761
211	0.5	0.710438	0.556308	172.75	187.334
212	0.5	0.713805	0.565108	172.75	186.904
213	0.5	0.717172	0.576911	172.75	186.328
214	0.5	0.720539	0.585815	172.75	185.893
215	0.5	0.723906	0.594766	172.75	185.456
216	0.5	0.727273	0.606775	172.75	184.869
217	0.5	0.73064	0.615839	172.75	184.427
218	0.5	0.734007	0.628006	172.75	183.832
219	0.5	0.737374	0.637192	172.75	183.384
220	0.5	0.740741	0.646431	172.75	182.933
221	0.5	0.744108	0.658838	172.75	182.327
222	0.5	0.747475	0.668209	172.75	181.869
223	0.5	0.750842	0.677639	172.75	181.409
224	0.5	0.754209	0.690309	172.75	180.79
225	0.5	0.757576	0.699883	172.75	180.322
226	0.5	0.760943	0.709522	172.75	179.852
227	0.5	0.76431	0.722479	172.75	179.219
228	0.5	0.767677	0.732275	172.75	178.741
229	0.5	0.771044	0.745449	172.75	178.097
230	0.5	0.774411	0.755415	172.75	177.611
231	0.5	0.777778	0.765456	172.75	177.12
232	0.5	0.781145	0.778966	172.75	176.46
233	0.5	0.784512	0.789191	172.75	175.961
234	0.5	0.787879	0.7995	172.75	175.458

235	0.5	0.791246	0.813379	172.75	174.78
236	0.5	0.794613	0.823893	172.75	174.267
237	0.5	0.79798	0.834498	172.75	173.749
238	0.5	0.801347	0.848786	172.75	173.051
239	0.5	0.804714	0.859618	172.75	172.522
240	0.5	0.808081	0.874218	172.75	171.809
241	0.5	0.811448	0.885291	172.75	171.268
242	0.5	0.814815	0.896473	172.75	170.722
243	0.5	0.818182	0.911562	172.75	169.985
244	0.5	0.821549	0.923014	172.75	169.426
245	0.5	0.824916	0.93459	172.75	168.861
246	0.5	0.828283	0.950222	172.75	168.097
247	0.5	0.83165	0.9621	172.75	167.517
248	0.5	0.835017	0.97815	172.75	166.734
249	0.5	0.838384	0.990356	172.75	166.138
250	0.5	0.841751	1.00271	172.75	165.534
251	0.5	0.845118	1.01943	172.75	164.718
252	0.5	0.848485	1.03215	172.75	164.096
253	0.5	0.851852	1.04505	172.75	163.467
254	0.5	0.855219	1.06252	172.75	162.614
255	0.5	0.858586	1.07584	172.75	161.963
256	0.5	0.861953	1.08935	172.75	161.303
257	0.5	0.86532	1.10768	172.75	160.408
258	0.5	0.868687	1.12168	172.75	159.725
259	0.5	0.872054	1.14069	172.75	158.796
260	0.5	0.875421	1.15522	172.75	158.087
261	0.5	0.878788	1.17	172.75	157.365
262	0.5	0.882155	1.19012	172.75	156.383
263	0.5	0.885522	1.20553	172.75	155.63
264	0.5	0.888889	1.22123	172.75	154.863
265	0.5	0.892256	1.24264	172.75	153.818
266	0.5	0.895623	1.25908	172.75	153.015
267	0.5	0.89899	1.27588	172.75	152.195
268	0.5	0.902357	1.29884	172.75	151.074
269	0.5	0.905724	1.31652	172.75	150.21
270	0.5	0.909091	1.34075	172.75	149.026
271	0.5	0.912458	1.35946	172.75	148.113
272	0.5	0.915825	1.37866	172.75	147.176
273	0.5	0.919192	1.40507	172.75	145.886
274	0.5	0.922559	1.42554	172.75	144.886
275	0.5	0.925926	1.44663	172.75	143.856
276	0.5	0.929293	1.47579	172.75	142.432
277	0.5	0.93266	1.49852	172.75	141.323
278	0.5	0.936027	1.53007	172.75	139.782
279	0.5	0.939394	1.55477	172.75	138.575
280	0.5	0.942761	1.58047	172.75	137.321
281	0.5	0.946128	1.61644	172.75	135.564
282	0.5	0.949495	1.64485	172.75	134.176
283	0.5	0.952862	1.67466	172.75	132.721
284	0.5	0.956229	1.71688	172.75	130.659
285	0.5	0.959596	1.75069	172.75	129.008
286	0.5	0.962963	1.78661	172.75	127.254
287	0.5	0.96633	1.83843	172.75	124.724
288	0.5	0.969697	1.88079	172.75	122.655
289	0.5	0.973064	1.94314	172.75	119.61
290	0.5	0.976431	1.99539	172.75	117.058
291	0.5	0.979798	2.05375	172.75	114.209
292	0.5	0.983165	2.14441	172.75	109.781
293	0.5	0.986532	2.22621	172.75	105.787
294	0.5	0.989899	2.32634	172.75	100.897
295	0.5	0.993266	2.51213	172.75	91.8241
296	2	0.996633	2.74777	574	80.3175

Shapiro-Francia Test of Normality

Parameter: Tetrachloroethylene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.59027	-2.74777	7.55021	7.11745
2	-2.59027	-2.51213	13.861	13.6245
3	-2.59027	-2.32634	19.2729	19.6504
4	-2.59027	-2.22621	24.2289	25.4169
5	-2.59027	-2.14441	28.8274	30.9714
6	-2.59027	-2.05375	33.0453	36.2912
7	-2.59027	-1.99539	37.0269	41.4598
8	-2.59027	-1.94314	40.8026	46.493
9	-2.59027	-1.88079	44.34	51.3648
10	-2.59027	-1.83843	47.7198	56.1268
11	-2.59027	-1.78661	50.9118	60.7546
12	-2.59027	-1.75069	53.9767	65.2894
13	-2.59027	-1.71688	56.9244	69.7365
14	-2.59027	-1.67466	59.7289	74.0744
15	-2.59027	-1.64485	62.4344	78.335
16	-2.59027	-1.61644	65.0473	82.522
17	-2.59027	-1.58047	67.5452	86.6158
18	-2.59027	-1.55477	69.9625	90.6431
19	-2.59027	-1.53007	72.3036	94.6064
20	-2.59027	-1.49852	74.5491	98.4879
21	-2.59027	-1.47579	76.7271	102.311
22	-2.59027	-1.44663	78.8198	106.058
23	-2.59027	-1.42554	80.852	109.75
24	-2.59027	-1.40507	82.8262	113.39
25	-2.59027	-1.37866	84.7269	116.961
26	-2.59027	-1.35946	86.5751	120.482
27	-2.59027	-1.34075	88.3727	123.955
28	-2.59027	-1.31652	90.1059	127.365
29	-2.59027	-1.29884	91.7929	130.73
30	-2.59027	-1.27588	93.4208	134.035
31	-2.59027	-1.25908	95.006	137.296
32	-2.59027	-1.24264	96.5502	140.515
33	-2.59027	-1.22123	98.0416	143.678
34	-2.59027	-1.20553	99.4949	146.801
35	-2.59027	-1.19012	100.911	149.883
36	-2.59027	-1.17	102.28	152.914
37	-2.59027	-1.15522	103.615	155.906
38	-2.59027	-1.14069	104.916	158.861
39	-2.59027	-1.12168	106.174	161.766
40	-2.59027	-1.10768	107.401	164.636
41	-2.59027	-1.08935	108.588	167.457
42	-2.59027	-1.07584	109.745	170.244
43	-2.59027	-1.06252	110.874	172.996
44	-2.59027	-1.04505	111.966	175.703
45	-2.59027	-1.03215	113.032	178.377
46	-2.59027	-1.01943	114.071	181.017
47	-2.59027	-1.00271	115.076	183.615
48	-2.59027	-0.990356	116.057	186.18
49	-2.59027	-0.97815	117.014	188.714
50	-2.59027	-0.9621	117.939	191.206
51	-2.59027	-0.950222	118.842	193.667

52	-2.59027	-0.93459	119.716	196.088
53	-2.59027	-0.923014	120.568	198.479
54	-2.59027	-0.911562	121.399	200.84
55	-2.59027	-0.896473	122.202	203.162
56	-2.59027	-0.885291	122.986	205.455
57	-2.59027	-0.874218	123.75	207.72
58	-2.59027	-0.859618	124.489	209.946
59	-2.59027	-0.848786	125.21	212.145
60	-2.59027	-0.834498	125.906	214.306
61	-2.59027	-0.823893	126.585	216.44
62	-2.59027	-0.813379	127.247	218.547
63	-2.59027	-0.7995	127.886	220.618
64	-2.59027	-0.789191	128.509	222.662
65	-2.59027	-0.778966	129.115	224.68
66	-2.59027	-0.765456	129.701	226.663
67	-2.59027	-0.755415	130.272	228.62
68	-2.59027	-0.745449	130.828	230.551
69	-2.59027	-0.732275	131.364	232.447
70	-2.59027	-0.722479	131.886	234.319
71	-2.59027	-0.709522	132.389	236.157
72	-2.59027	-0.699883	132.879	237.97
73	-2.59027	-0.690309	133.356	239.758
74	-2.59027	-0.677639	133.815	241.513
75	-2.59027	-0.668209	134.261	243.244
76	-2.59027	-0.658838	134.695	244.95
77	-2.59027	-0.646431	135.113	246.625
78	-2.59027	-0.637192	135.519	248.275
79	-2.59027	-0.628006	135.914	249.902
80	-2.59027	-0.615839	136.293	251.497
81	-2.59027	-0.606775	136.661	253.069
82	-2.59027	-0.594766	137.015	254.609
83	-2.59027	-0.585815	137.358	256.127
84	-2.59027	-0.576911	137.691	257.621
85	-2.59027	-0.565108	138.01	259.085
86	-2.59027	-0.556308	138.32	260.526
87	-2.59027	-0.547551	138.619	261.944
88	-2.59027	-0.53594	138.907	263.332
89	-2.59027	-0.52728	139.185	264.698
90	-2.59027	-0.515791	139.451	266.034
91	-2.59027	-0.507221	139.708	267.348
92	-2.59027	-0.498687	139.957	268.64
93	-2.59027	-0.487364	140.194	269.902
94	-2.59027	-0.478914	140.424	271.143
95	-2.59027	-0.470498	140.645	272.362
96	-2.59027	-0.459327	140.856	273.551
97	-2.59027	-0.450985	141.059	274.719
98	-2.59027	-0.442676	141.255	275.866
99	-2.59027	-0.431644	141.442	276.984
100	-2.59027	-0.423405	141.621	278.081
101	-2.59027	-0.412463	141.791	279.149
102	-2.59027	-0.40429	141.954	280.197
103	-1.83258	-0.396142	142.111	280.923
104	-1.66073	-0.385321	142.26	281.562
105	-1.51413	-0.377233	142.402	282.134
106	-1.42712	-0.369171	142.538	282.66
107	-1.38629	-0.358459	142.667	283.157
108	-1.34707	-0.350451	142.79	283.629
109	-1.30933	-0.33981	142.905	284.074
110	-1.27297	-0.331854	143.015	284.497
111	-1.23787	-0.323919	143.12	284.898
112	-1.17118	-0.31337	143.218	285.265
113	-1.04982	-0.305481	143.312	285.586

114	-0.693147	-0.297612	143.4	285.792
115	-0.693147	-0.287147	143.483	285.991
116	-0.693147	-0.279319	143.561	286.184
117	-0.693147	-0.271509	143.635	286.373
118	-0.693147	-0.26112143.703	286.554	
119	-0.693147	-0.253347	143.767	286.729
120	-0.693147	-0.243007	143.826	286.898
121	-0.693147	-0.235269	143.881	287.061
122	-0.693147	-0.227545	143.933	287.218
123	-0.693147	-0.217267	143.98	287.369
124	-0.693147	-0.209575	144.024	287.514
125	-0.693147	-0.201894	144.065	287.654
126	-0.693147	-0.191671	144.102	287.787
127	-0.693147	-0.184017	144.136	287.915
128	-0.693147	-0.176374	144.167	288.037
129	-0.693147	-0.166199	144.194	288.152
130	-0.693147	-0.158579	144.219	288.262
131	-0.693147	-0.148434	144.241	288.365
132	-0.693147	-0.140835	144.261	288.463
133	-0.693147	-0.133244	144.279	288.555
134	-0.693147	-0.123135	144.294	288.64
135	-0.693147	-0.115562	144.308	288.72
136	-0.693147	-0.107995	144.319	288.795
137	-0.693147	-0.0979139	144.329	288.863
138	-0.693147	-0.0903606	144.337	288.926
139	-0.693147	-0.0802981	144.343	288.981
140	-0.693147	-0.0727562	144.349	289.032
141	-0.693147	-0.0652187	144.353	289.077
142	-0.693147	-0.0551734	144.356	289.115
143	-0.693147	-0.0476439	144.358	289.148
144	-0.693147	-0.0401167	144.36	289.176
145	-0.693147	-0.0300838	144.361	289.197
146	-0.693147	-0.0225612	144.361	289.213
147	-0.693147	-0.0150408	144.362	289.223
148	-0.693147	-0.00501359	144.362	289.227
149	-0.693147	0.00501359	144.362	289.223
150	-0.693147	0.0150408	144.362	289.213
151	-0.693147	0.0225612	144.362	289.197
152	-0.693147	0.0300838	144.363	289.176
153	-0.693147	0.0401167	144.365	289.148
154	-0.693147	0.0476439	144.367	289.115
155	-0.693147	0.0551734	144.37	289.077
156	-0.693147	0.0652187	144.374	289.032
157	-0.693147	0.0727562	144.38	288.981
158	-0.693147	0.0802981	144.386	288.926
159	-0.693147	0.0903606	144.394	288.863
160	-0.693147	0.0979139	144.404	288.795
161	-0.693147	0.107995	144.416	288.72
162	-0.693147	0.115562	144.429	288.64
163	-0.693147	0.123135	144.444	288.555
164	-0.693147	0.133244	144.462	288.463
165	-0.693147	0.140835	144.482	288.365
166	-0.693147	0.148434	144.504	288.262
167	-0.693147	0.158579	144.529	288.152
168	-0.693147	0.166199	144.557	288.037
169	-0.693147	0.176374	144.588	287.915
170	-0.693147	0.184017	144.621	287.787
171	-0.693147	0.191671	144.658	287.654
172	-0.693147	0.201894	144.699	287.514
173	-0.693147	0.209575	144.743	287.369
174	-0.693147	0.217267	144.79	287.218
175	-0.693147	0.227545	144.842	287.061

176	-0.693147	0.235269	144.897	286.898
177	-0.693147	0.243007	144.956	286.729
178	-0.693147	0.253347	145.02	286.554
179	-0.693147	0.26112	145.089	286.373
180	-0.693147	0.271509	145.162	286.184
181	-0.693147	0.279319	145.24	285.991
182	-0.693147	0.287147	145.323	285.792
183	-0.693147	0.297612	145.411	285.586
184	-0.693147	0.305481	145.505	285.374
185	-0.693147	0.31337	145.603	285.157
186	-0.693147	0.323919	145.708	284.932
187	-0.693147	0.331854	145.818	284.702
188	-0.693147	0.33981	145.933	284.466
189	-0.693147	0.350451	146.056	284.224
190	-0.693147	0.358459	146.185	283.975
191	-0.693147	0.369171	146.321	283.719
192	-0.693147	0.377233	146.463	283.458
193	-0.693147	0.385321	146.612	283.191
194	-0.693147	0.396142	146.769	282.916
195	-0.693147	0.40429	146.932	282.636
196	-0.693147	0.412463	147.102	282.35
197	-0.693147	0.423405	147.282	282.056
198	-0.693147	0.431644	147.468	281.757
199	-0.693147	0.442676	147.664	281.45
200	-0.693147	0.450985	147.867	281.138
201	-0.693147	0.459327	148.078	280.819
202	-0.693147	0.470498	148.3	280.493
203	-0.693147	0.478914	148.529	280.161
204	-0.693147	0.487364	148.767	279.824
205	-0.693147	0.498687	149.015	279.478
206	-0.693147	0.507221	149.272	279.126
207	-0.693147	0.515791	149.539	278.769
208	-0.693147	0.52728	149.817	278.403
209	-0.693147	0.53594	150.104	278.032
210	-0.693147	0.547551	150.404	277.652
211	-0.693147	0.556308	150.713	277.267
212	-0.693147	0.565108	151.032	276.875
213	-0.693147	0.576911	151.365	276.475
214	-0.693147	0.585815	151.708	276.069
215	-0.693147	0.594766	152.062	275.657
216	-0.693147	0.606775	152.43	275.236
217	-0.693147	0.615839	152.81	274.809
218	-0.693147	0.628006	153.204	274.374
219	-0.693147	0.637192	153.61	273.932
220	-0.693147	0.646431	154.028	273.484
221	-0.693147	0.658838	154.462	273.028
222	-0.693147	0.668209	154.908	272.564
223	-0.693147	0.677639	155.368	272.095
224	-0.693147	0.690309	155.844	271.616
225	-0.693147	0.699883	156.334	271.131
226	-0.693147	0.709522	156.837	270.639
227	-0.693147	0.722479	157.359	270.139
228	-0.693147	0.732275	157.896	269.631
229	-0.693147	0.745449	158.451	269.114
230	-0.693147	0.755415	159.022	268.591
231	-0.693147	0.765456	159.608	268.06
232	-0.693147	0.778966	160.215	267.52
233	-0.693147	0.789191	160.837	266.973
234	-0.693147	0.7995	161.477	266.419
235	-0.693147	0.813379	162.138	265.855
236	-0.693147	0.823893	162.817	265.284
237	-0.693147	0.834498	163.513	264.706

238	-0.693147		0.848786	164.234	264.117
239	-0.693147		0.859618	164.973	263.521
240	-0.693147		0.874218	165.737	262.915
241	-0.693147		0.885291	166.521	262.302
242	-0.693147		0.896473	167.325	261.68
243	-0.693147		0.911562	168.155	261.049
244	-0.693147		0.923014	169.007	260.409
245	-0.693147		0.93459	169.881	259.761
246	-0.693147		0.950222	170.784	259.102
247	-0.693147		0.9621	171.709	258.436
248	-0.693147		0.97815	172.666	257.758
249	-0.693147		0.990356	173.647	257.071
250	-0.693147		1.00271	174.652	256.376
251	-0.693147		1.01943	175.692	255.669
252	-0.693147		1.03215	176.757	254.954
253	-0.693147		1.04505	177.849	254.23
254	-0.693147		1.06252	178.978	253.493
255	-0.693147		1.07584	180.136	252.747
256	-0.693147		1.08935	181.322	251.992
257	-0.693147		1.10768	182.549	251.225
258	-0.693147		1.12168	183.807	250.447
259	-0.693147		1.14069	185.108	249.656
260	-0.693147		1.15522	186.443	248.856
261	-0.693147		1.17	187.812	248.045
262	-0.693147		1.19012	189.228	247.22
263	-0.693147		1.20553	190.682	246.384
264	-0.693147		1.22123	192.173	245.538
265	-0.693147		1.24264	193.717	244.676
266	-0.693147		1.25908	195.302	243.804
267	-0.693147		1.27588	196.93	242.919
268	-0.693147		1.29884	198.617	242.019
269	-0.693147		1.31652	200.351	241.106
270	-0.693147		1.34075	202.148	240.177
271	-0.693147		1.35946	203.996	239.235
272	-0.693147		1.37866	205.897	238.279
273	-0.693147		1.40507	207.871	237.305
274	-0.693147		1.42554	209.903	236.317
275	-0.693147		1.44663	211.996	235.314
276	-0.693147		1.47579	214.174	234.291
277	-0.693147		1.49852	216.42	233.253
278	-0.693147		1.53007	218.761	232.192
279	-0.693147		1.55477	221.178	231.114
280	-0.693147		1.58047	223.676	230.019
281	-0.693147		1.61644	226.289	228.899
282	-0.693147		1.64485	228.994	227.758
283	-0.693147		1.67466	231.799	226.598
284	-0.693147		1.71688	234.747	225.408
285	-0.693147		1.75069	237.811	224.194
286	-0.693147		1.78661	241.003	222.956
287	-0.693147		1.83843	244.383	221.681
288	-0.693147		1.88079	247.921	220.378
289	-0.693147		1.94314	251.696	219.031
290	-0.693147		1.99539	255.678	217.648
291	-0.693147		2.05375	259.896	216.224
292	0	2.14441	264.494	216.224	
293	0	2.22621	269.45	216.224	
294	0	2.32634	274.862	216.224	
295	0	2.51213	281.173	216.224	
296	0.693147		2.74777	288.723	218.129

Data Set Standard Deviation = 0.912532

Numerator = 47580.2
Denominator = 70925.2
W Statistic = 0.670851 = 47580.2 / 70925.2

5% Critical value of 0.976 exceeds 0.670851
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.670851
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Tetrachloroethylene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.817753
0.817753 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.590270	0.003367	-2.747	77	93.8018	348.683
2	-2.590270	0.00673401	-2.512	13	93.8018	337.176
3	-2.590270	0.010101	-2.326	34	93.8018	328.103
4	-2.590270	0.013468	-2.226	21	93.8018	323.213
5	-2.590270	0.016835	-2.144	41	93.8018	319.219
6	-2.590270	0.020202	-2.053	75	93.8018	314.791
7	-2.590270	0.023569	-1.995	39	93.8018	311.942
8	-2.590270	0.026936	-1.943	14	93.8018	309.39
9	-2.590270	0.030303	-1.880	79	93.8018	306.345
10	-2.590270	0.03367	-1.838	43	93.8018	304.276
11	-2.590270	0.037037	-1.786	61	93.8018	301.746
12	-2.590270	0.040404	-1.750	69	93.8018	299.992
13	-2.590270	0.043771	-1.716	88	93.8018	298.341
14	-2.590270	0.047138	-1.674	66	93.8018	296.279
15	-2.590270	0.0505051	-1.644	85	93.8018	294.824
16	-2.590270	0.0538721	-1.616	44	93.8018	293.436
17	-2.590270	0.0572391	-1.580	47	93.8018	291.679
18	-2.590270	0.0606061	-1.554	77	93.8018	290.425
19	-2.590270	0.0639731	-1.530	07	93.8018	289.218
20	-2.590270	0.0673401	-1.498	52	93.8018	287.677
21	-2.590270	0.0707071	-1.475	79	93.8018	286.568
22	-2.590270	0.0740741	-1.446	63	93.8018	285.144
23	-2.590270	0.0774411	-1.425	54	93.8018	284.114
24	-2.590270	0.0808081	-1.405	07	93.8018	283.114
25	-2.590270	0.0841751	-1.378	66	93.8018	281.824
26	-2.590270	0.0875421	-1.359	46	93.8018	280.887
27	-2.590270	0.0909091	-1.340	75	93.8018	279.974
28	-2.590270	0.0942761	-1.316	52	93.8018	278.79
29	-2.590270	0.0976431	-1.298	84	93.8018	277.926
30	-2.590270	0.10101	-1.275	88	93.8018	276.805
31	-2.590270	0.104377	-1.259	08	93.8018	275.985
32	-2.590270	0.107744	-1.242	64	93.8018	275.182
33	-2.590270	0.111111	-1.221	23	93.8018	274.137
34	-2.590270	0.114478	-1.205	53	93.8018	273.37
35	-2.590270	0.117845	-1.190	12	93.8018	272.617
36	-2.590270	0.121212	-1.17	93.8018	271.635
37	-2.590270	0.124579	-1.155	22	93.8018	270.913
38	-2.590270	0.127946	-1.140	69	93.8018	270.204
39	-2.590270	0.131313	-1.121	68	93.8018	269.275
40	-2.590270	0.13468	-1.107	68	93.8018	268.592
41	-2.590270	0.138047	-1.089	35	93.8018	267.697
42	-2.590270	0.141414	-1.075	84	93.8018	267.037
43	-2.590270	0.144781	-1.062	52	93.8018	266.386
44	-2.590270	0.148148	-1.045	05	93.8018	265.533
45	-2.590270	0.151515	-1.032	15	93.8018	264.904
46	-2.590270	0.154882	-1.019	43	93.8018	264.282
47	-2.590270	0.158249	-1.002	71	93.8018	263.466
48	-2.590270	0.161616	-0.990356	93.8018	262.862

49	-2.590270.164983	-0.9781593.8018	262.266	
50	-2.590270.16835	-0.9621	93.8018	261.483
51	-2.590270.171717	-0.950222	93.8018	260.903
52	-2.590270.175084	-0.9345993.8018	260.139	
53	-2.590270.178451	-0.923014	93.8018	259.574
54	-2.590270.181818	-0.911562	93.8018	259.015
55	-2.590270.185185	-0.896473	93.8018	258.278
56	-2.590270.188552	-0.885291	93.8018	257.732
57	-2.590270.191919	-0.874218	93.8018	257.191
58	-2.590270.195286	-0.859618	93.8018	256.478
59	-2.590270.198653	-0.848786	93.8018	255.949
60	-2.590270.20202	-0.834498	93.8018	255.251
61	-2.590270.205387	-0.823893	93.8018	254.733
62	-2.590270.208754	-0.813379	93.8018	254.22
63	-2.590270.212121	-0.7995	93.8018	253.542
64	-2.590270.215488	-0.789191	93.8018	253.039
65	-2.590270.218855	-0.778966	93.8018	252.54
66	-2.590270.222222	-0.765456	93.8018	251.88
67	-2.590270.225589	-0.755415	93.8018	251.389
68	-2.590270.228956	-0.745449	93.8018	250.903
69	-2.590270.232323	-0.732275	93.8018	250.259
70	-2.590270.23569	-0.722479	93.8018	249.781
71	-2.590270.239057	-0.709522	93.8018	249.148
72	-2.590270.242424	-0.699883	93.8018	248.678
73	-2.590270.245791	-0.690309	93.8018	248.21
74	-2.590270.249158	-0.677639	93.8018	247.591
75	-2.590270.252525	-0.668209	93.8018	247.131
76	-2.590270.255892	-0.658838	93.8018	246.673
77	-2.590270.259259	-0.646431	93.8018	246.067
78	-2.590270.262626	-0.637192	93.8018	245.616
79	-2.590270.265993	-0.628006	93.8018	245.168
80	-2.590270.26936	-0.615839	93.8018	244.573
81	-2.590270.272727	-0.606775	93.8018	244.131
82	-2.590270.276094	-0.594766	93.8018	243.544
83	-2.590270.279461	-0.585815	93.8018	243.107
84	-2.590270.282828	-0.576911	93.8018	242.672
85	-2.590270.286195	-0.565108	93.8018	242.096
86	-2.590270.289562	-0.556308	93.8018	241.666
87	-2.590270.292929	-0.547551	93.8018	241.239
88	-2.590270.296296	-0.5359493.8018	240.672	
89	-2.590270.299663	-0.5272893.8018	240.249	
90	-2.590270.30303	-0.515791	93.8018	239.688
91	-2.590270.306397	-0.507221	93.8018	239.269
92	-2.590270.309764	-0.498687	93.8018	238.853
93	-2.590270.313131	-0.487364	93.8018	238.3
94	-2.590270.316498	-0.478914	93.8018	237.887
95	-2.590270.319865	-0.470498	93.8018	237.476
96	-2.590270.323232	-0.459327	93.8018	236.93
97	-2.590270.326599	-0.450985	93.8018	236.523
98	-2.590270.329966	-0.442676	93.8018	236.117
99	-2.590270.333333	-0.431644	93.8018	235.579
100	-2.590270.3367	-0.423405	93.8018	235.176
101	-2.590270.340067	-0.412463	93.8018	234.642
102	-2.590270.343434	-0.4042993.8018	234.243	
103	-1.832580.346801	-0.396142	195.142	233.845
104	-1.660730.350168	-0.385321	218.127	233.317
105	-1.514130.353535	-0.377233	237.735	232.922
106	-1.427120.356902	-0.369171	249.373	232.528
107	-1.386290.360269	-0.358459	254.833	232.005
108	-1.347070.363636	-0.350451	260.079	231.614
109	-1.309330.367003	-0.33981265.127	231.094	
110	-1.272970.37037	-0.331854	269.991	230.706

111	-1.237870.373737	-0.323919	274.684	230.318	
112	-1.171180.377104	-0.31337283.604	229.803		
113	-1.049820.380471	-0.305481	299.836	229.418	
114	-0.693147	0.383838	-0.297612	347.542	229.033
115	-0.693147	0.387205	-0.287147	347.542	228.522
116	-0.693147	0.390572	-0.279319	347.542	228.14
117	-0.693147	0.393939	-0.271509	347.542	227.759
118	-0.693147	0.397306	-0.26112347.542	227.251	
119	-0.693147	0.400673	-0.253347	347.542	226.872
120	-0.693147	0.40404 -0.243007	347.542	226.367	
121	-0.693147	0.407407	-0.235269	347.542	225.989
122	-0.693147	0.410774	-0.227545	347.542	225.612
123	-0.693147	0.414141	-0.217267	347.542	225.11
124	-0.693147	0.417508	-0.209575	347.542	224.734
125	-0.693147	0.420875	-0.201894	347.542	224.359
126	-0.693147	0.424242	-0.191671	347.542	223.86
127	-0.693147	0.427609	-0.184017	347.542	223.486
128	-0.693147	0.430976	-0.176374	347.542	223.113
129	-0.693147	0.434343	-0.166199	347.542	222.616
130	-0.693147	0.43771 -0.158579	347.542	222.244	
131	-0.693147	0.441077	-0.148434	347.542	221.749
132	-0.693147	0.444444	-0.140835	347.542	221.377
133	-0.693147	0.447811	-0.133244	347.542	221.007
134	-0.693147	0.451178	-0.123135	347.542	220.513
135	-0.693147	0.454545	-0.115562	347.542	220.143
136	-0.693147	0.457912	-0.107995	347.542	219.774
137	-0.693147	0.461279	-0.0979139	347.542	219.281
138	-0.693147	0.464646	-0.0903606	347.542	218.913
139	-0.693147	0.468013	-0.0802981	347.542	218.421
140	-0.693147	0.47138 -0.0727562	347.542	218.053	
141	-0.693147	0.474747	-0.0652187	347.542	217.685
142	-0.693147	0.478114	-0.0551734	347.542	217.194
143	-0.693147	0.481481	-0.0476439	347.542	216.827
144	-0.693147	0.484848	-0.0401167	347.542	216.459
145	-0.693147	0.488215	-0.0300838	347.542	215.969
146	-0.693147	0.491582	-0.0225612	347.542	215.602
147	-0.693147	0.494949	-0.0150408	347.542	215.234
148	-0.693147	0.498316	-0.00501359	347.542	214.745
149	-0.693147	0.501684	0.00501359	347.542	214.255
150	-0.693147	0.505051	0.0150408	347.542	213.766
151	-0.693147	0.508418	0.0225612	347.542	213.398
152	-0.693147	0.511785	0.0300838	347.542	213.031
153	-0.693147	0.515152	0.0401167	347.542	212.541
154	-0.693147	0.518519	0.0476439	347.542	212.173
155	-0.693147	0.521886	0.0551734	347.542	211.806
156	-0.693147	0.525253	0.0652187	347.542	211.315
157	-0.693147	0.52862 0.0727562	347.542	210.947	
158	-0.693147	0.531987	0.0802981	347.542	210.579
159	-0.693147	0.535354	0.0903606	347.542	210.087
160	-0.693147	0.538721	0.0979139	347.542	209.719
161	-0.693147	0.542088	0.107995	347.542	209.226
162	-0.693147	0.545455	0.115562	347.542	208.857
163	-0.693147	0.548822	0.123135	347.542	208.487
164	-0.693147	0.552189	0.133244	347.542	207.993
165	-0.693147	0.555556	0.140835	347.542	207.623
166	-0.693147	0.558923	0.148434	347.542	207.251
167	-0.693147	0.56229 0.158579	347.542	206.756	
168	-0.693147	0.565657	0.166199	347.542	206.384
169	-0.693147	0.569024	0.176374	347.542	205.887
170	-0.693147	0.572391	0.184017	347.542	205.514
171	-0.693147	0.575758	0.191671	347.542	205.14
172	-0.693147	0.579125	0.201894	347.542	204.641

173	-0.693147	0.582492	0.209575	347.542	204.266
174	-0.693147	0.585859	0.217267	347.542	203.89
175	-0.693147	0.589226	0.227545	347.542	203.388
176	-0.693147	0.592593	0.235269	347.542	203.011
177	-0.693147	0.59596	0.243007	347.542	202.633
178	-0.693147	0.599327	0.253347	347.542	202.128
179	-0.693147	0.602694	0.26112	347.542	201.749
180	-0.693147	0.606061	0.271509	347.542	201.241
181	-0.693147	0.609428	0.279319	347.542	200.86
182	-0.693147	0.612795	0.287147	347.542	200.478
183	-0.693147	0.616162	0.297612	347.542	199.967
184	-0.693147	0.619529	0.305481	347.542	199.582
185	-0.693147	0.622896	0.31337	347.542	199.197
186	-0.693147	0.626263	0.323919	347.542	198.682
187	-0.693147	0.62963	0.331854	347.542	198.294
188	-0.693147	0.632997	0.33981	347.542	197.906
189	-0.693147	0.636364	0.350451	347.542	197.386
190	-0.693147	0.639731	0.358459	347.542	196.995
191	-0.693147	0.643098	0.369171	347.542	196.472
192	-0.693147	0.646465	0.377233	347.542	196.078
193	-0.693147	0.649832	0.385321	347.542	195.683
194	-0.693147	0.653199	0.396142	347.542	195.155
195	-0.693147	0.656566	0.40429	347.542	194.757
196	-0.693147	0.659933	0.412463	347.542	194.358
197	-0.693147	0.6633	0.423405	347.542	193.824
198	-0.693147	0.666667	0.431644	347.542	193.421
199	-0.693147	0.670034	0.442676	347.542	192.883
200	-0.693147	0.673401	0.450985	347.542	192.477
201	-0.693147	0.676768	0.459327	347.542	192.07
202	-0.693147	0.680135	0.470498	347.542	191.524
203	-0.693147	0.683502	0.478914	347.542	191.113
204	-0.693147	0.686869	0.487364	347.542	190.7
205	-0.693147	0.690236	0.498687	347.542	190.147
206	-0.693147	0.693603	0.507221	347.542	189.731
207	-0.693147	0.69697	0.515791	347.542	189.312
208	-0.693147	0.700337	0.52728	347.542	188.751
209	-0.693147	0.703704	0.53594	347.542	188.328
210	-0.693147	0.707071	0.547551	347.542	187.761
211	-0.693147	0.710438	0.556308	347.542	187.334
212	-0.693147	0.713805	0.565108	347.542	186.904
213	-0.693147	0.717172	0.576911	347.542	186.328
214	-0.693147	0.720539	0.585815	347.542	185.893
215	-0.693147	0.723906	0.594766	347.542	185.456
216	-0.693147	0.727273	0.606775	347.542	184.869
217	-0.693147	0.73064	0.615839	347.542	184.427
218	-0.693147	0.734007	0.628006	347.542	183.832
219	-0.693147	0.737374	0.637192	347.542	183.384
220	-0.693147	0.740741	0.646431	347.542	182.933
221	-0.693147	0.744108	0.658838	347.542	182.327
222	-0.693147	0.747475	0.668209	347.542	181.869
223	-0.693147	0.750842	0.677639	347.542	181.409
224	-0.693147	0.754209	0.690309	347.542	180.79
225	-0.693147	0.757576	0.699883	347.542	180.322
226	-0.693147	0.760943	0.709522	347.542	179.852
227	-0.693147	0.76431	0.722479	347.542	179.219
228	-0.693147	0.767677	0.732275	347.542	178.741
229	-0.693147	0.771044	0.745449	347.542	178.097
230	-0.693147	0.774411	0.755415	347.542	177.611
231	-0.693147	0.777778	0.765456	347.542	177.12
232	-0.693147	0.781145	0.778966	347.542	176.46
233	-0.693147	0.784512	0.789191	347.542	175.961
234	-0.693147	0.787879	0.7995	347.542	175.458

235	-0.693147	0.791246	0.813379	347.542	174.78
236	-0.693147	0.794613	0.823893	347.542	174.267
237	-0.693147	0.79798	0.834498	347.542	173.749
238	-0.693147	0.801347	0.848786	347.542	173.051
239	-0.693147	0.804714	0.859618	347.542	172.522
240	-0.693147	0.808081	0.874218	347.542	171.809
241	-0.693147	0.811448	0.885291	347.542	171.268
242	-0.693147	0.814815	0.896473	347.542	170.722
243	-0.693147	0.818182	0.911562	347.542	169.985
244	-0.693147	0.821549	0.923014	347.542	169.426
245	-0.693147	0.824916	0.93459	347.542	168.861
246	-0.693147	0.828283	0.950222	347.542	168.097
247	-0.693147	0.83165	0.9621	347.542	167.517
248	-0.693147	0.835017	0.97815	347.542	166.734
249	-0.693147	0.838384	0.990356	347.542	166.138
250	-0.693147	0.841751	1.00271	347.542	165.534
251	-0.693147	0.845118	1.01943	347.542	164.718
252	-0.693147	0.848485	1.03215	347.542	164.096
253	-0.693147	0.851852	1.04505	347.542	163.467
254	-0.693147	0.855219	1.06252	347.542	162.614
255	-0.693147	0.858586	1.07584	347.542	161.963
256	-0.693147	0.861953	1.08935	347.542	161.303
257	-0.693147	0.86532	1.10768	347.542	160.408
258	-0.693147	0.868687	1.12168	347.542	159.725
259	-0.693147	0.872054	1.14069	347.542	158.796
260	-0.693147	0.875421	1.15522	347.542	158.087
261	-0.693147	0.878788	1.17	347.542	157.365
262	-0.693147	0.882155	1.19012	347.542	156.383
263	-0.693147	0.885522	1.20553	347.542	155.63
264	-0.693147	0.888889	1.22123	347.542	154.863
265	-0.693147	0.892256	1.24264	347.542	153.818
266	-0.693147	0.895623	1.25908	347.542	153.015
267	-0.693147	0.89899	1.27588	347.542	152.195
268	-0.693147	0.902357	1.29884	347.542	151.074
269	-0.693147	0.905724	1.31652	347.542	150.21
270	-0.693147	0.909091	1.34075	347.542	149.026
271	-0.693147	0.912458	1.35946	347.542	148.113
272	-0.693147	0.915825	1.37866	347.542	147.176
273	-0.693147	0.919192	1.40507	347.542	145.886
274	-0.693147	0.922559	1.42554	347.542	144.886
275	-0.693147	0.925926	1.44663	347.542	143.856
276	-0.693147	0.929293	1.47579	347.542	142.432
277	-0.693147	0.93266	1.49852	347.542	141.323
278	-0.693147	0.936027	1.53007	347.542	139.782
279	-0.693147	0.939394	1.55477	347.542	138.575
280	-0.693147	0.942761	1.58047	347.542	137.321
281	-0.693147	0.946128	1.61644	347.542	135.564
282	-0.693147	0.949495	1.64485	347.542	134.176
283	-0.693147	0.952862	1.67466	347.542	132.721
284	-0.693147	0.956229	1.71688	347.542	130.659
285	-0.693147	0.959596	1.75069	347.542	129.008
286	-0.693147	0.962963	1.78661	347.542	127.254
287	-0.693147	0.96633	1.83843	347.542	124.724
288	-0.693147	0.969697	1.88079	347.542	122.655
289	-0.693147	0.973064	1.94314	347.542	119.61
290	-0.693147	0.976431	1.99539	347.542	117.058
291	-0.693147	0.979798	2.05375	347.542	114.209
292	0	0.983165	2.14441	440.25	109.781
293	0	0.986532	2.22621	440.25	105.787
294	0	0.989899	2.32634	440.25	100.897
295	0	0.993266	2.51213	440.25	91.8241
296	0.693147	0.996633	2.74777	532.958	80.3175

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Tetrachloroethylene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 95.9459%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 24
Maximum Background Value = 0
Confidence Level = 75%
False Positive Rate = 25%

Location	Date	Count	Mean	Significant
LMW-16	11/16/2013	1	-2.59027	FALSE
LMW-6	11/16/2013	1	-2.59027	FALSE
LMW-15R	11/16/2013	1	-2.59027	FALSE
LMW-14R	11/16/2013	1	-2.59027	FALSE
LMW-3	11/16/2013	1	-2.59027	FALSE
LMW-3S	11/16/2013	1	-2.59027	FALSE
LMW-9S	11/16/2013	1	-2.59027	FALSE
LMW-9D	11/16/2013	1	-2.59027	FALSE
LMW-9	11/16/2013	1	-2.59027	FALSE
LMW-10	11/16/2013	1	-2.59027	FALSE
LMW-8	11/16/2013	1	0.693147	TRUE
LMW-7	11/16/2012	1	-2.59027	FALSE
LMW-13	11/20/2008	1	-0.693147	FALSE
LMW-11	11/20/2008	1	-0.693147	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE
LMW-12	11/20/2008	1	-0.693147	FALSE

Mann-Kendall Trend Analysis

Parameter: Tetrachloroethylene

Location: LMW-8

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives	
ND<-0.693147	ND<-0.693147	0	0	0	
ND<-0.693147	ND<-0.693147	0	0	0	
ND<-0.693147	ND<-0.693147	0	0	0	
ND<-0.693147	ND<-0.693147	0	0	0	
ND<-0.693147	ND<-0.693147	0	0	0	
ND<-0.693147	ND<-0.693147	0	0	0	
ND<-0.693147	ND<-0.693147	0	0	0	
ND<0 J	ND<-0.693147	0.693147	1	0	
ND<-0.693147	ND<-0.693147	0	1	0	
ND<0 J	ND<-0.693147	0.693147	2	0	
ND<-0.693147	ND<-0.693147	0	2	0	
ND<0 J	ND<-0.693147	0.693147	3	0	
ND<-0.693147	ND<-0.693147	0	3	0	
ND<0 J	ND<-0.693147	0.693147	4	0	
-1.17118 J	ND<-0.693147	-0.478036	4		1
-1.34707 J	ND<-0.693147	-0.653926	4		2
-1.38629 J	ND<-0.693147	-0.693147	4		3
-1.66073 J	ND<-0.693147	-0.967584	4		4
ND<-2.59027 U	ND<-0.693147	-1.897124	5		
ND<-2.59027 U	ND<-0.693147	-1.897124	6		
ND<-2.59027 U	ND<-0.693147	-1.897124	7		
ND<-2.59027 U	ND<-0.693147	-1.897124	8		
0.693147	ND<-0.693147	1.38629	5	8	
ND<-0.693147	ND<-0.693147	0	5	8	
ND<-0.693147	ND<-0.693147	0	5	8	
ND<-0.693147	ND<-0.693147	0	5	8	
ND<-0.693147	ND<-0.693147	0	5	8	
ND<-0.693147	ND<-0.693147	0	5	8	
ND<-0.693147	ND<-0.693147	0	5	8	
ND<0 J	ND<-0.693147	0.693147	6	8	
ND<-0.693147	ND<-0.693147	0	6	8	
ND<0 J	ND<-0.693147	0.693147	7	8	
ND<-0.693147	ND<-0.693147	0	7	8	
ND<0 J	ND<-0.693147	0.693147	8	8	
ND<-0.693147	ND<-0.693147	0	8	8	
ND<0 J	ND<-0.693147	0.693147	9	8	
-1.17118 J	ND<-0.693147	-0.478036	9		9
-1.34707 J	ND<-0.693147	-0.653926	9		10
-1.38629 J	ND<-0.693147	-0.693147	9		11
-1.66073 J	ND<-0.693147	-0.967584	9		12
ND<-2.59027 U	ND<-0.693147	-1.897129	13		
ND<-2.59027 U	ND<-0.693147	-1.897129	14		
ND<-2.59027 U	ND<-0.693147	-1.897129	15		
ND<-2.59027 U	ND<-0.693147	-1.897129	16		
0.693147	ND<-0.693147	1.38629	10	16	
ND<-0.693147	ND<-0.693147	0	10	16	
ND<-0.693147	ND<-0.693147	0	10	16	
ND<-0.693147	ND<-0.693147	0	10	16	

ND<-0.693147	ND<-0.693147	0	10	16	
ND<-0.693147	ND<-0.693147	0	10	16	
ND<0 J	ND<-0.693147	0.693147	11	16	
ND<-0.693147	ND<-0.693147	0	11	16	
ND<0 J	ND<-0.693147	0.693147	12	16	
ND<-0.693147	ND<-0.693147	0	12	16	
ND<0 J	ND<-0.693147	0.693147	13	16	
ND<-0.693147	ND<-0.693147	0	13	16	
ND<0 J	ND<-0.693147	0.693147	14	16	
-1.17118 J	ND<-0.693147	-0.478036	14		17
-1.34707 J	ND<-0.693147	-0.653926	14		18
-1.38629 J	ND<-0.693147	-0.693147	14		19
-1.66073 J	ND<-0.693147	-0.967584	14		20
ND<-2.59027 U	ND<-0.693147	-1.8971214	21		
ND<-2.59027 U	ND<-0.693147	-1.8971214	22		
ND<-2.59027 U	ND<-0.693147	-1.8971214	23		
ND<-2.59027 U	ND<-0.693147	-1.8971214	24		
0.693147	ND<-0.693147	1.38629	15	24	
ND<-0.693147	ND<-0.693147	0	15	24	
ND<-0.693147	ND<-0.693147	0	15	24	
ND<-0.693147	ND<-0.693147	0	15	24	
ND<-0.693147	ND<-0.693147	0	15	24	
ND<0 J	ND<-0.693147	0.693147	16	24	
ND<-0.693147	ND<-0.693147	0	16	24	
ND<0 J	ND<-0.693147	0.693147	17	24	
ND<-0.693147	ND<-0.693147	0	17	24	
ND<0 J	ND<-0.693147	0.693147	18	24	
ND<-0.693147	ND<-0.693147	0	18	24	
ND<0 J	ND<-0.693147	0.693147	19	24	
-1.17118 J	ND<-0.693147	-0.478036	19		25
-1.34707 J	ND<-0.693147	-0.653926	19		26
-1.38629 J	ND<-0.693147	-0.693147	19		27
-1.66073 J	ND<-0.693147	-0.967584	19		28
ND<-2.59027 U	ND<-0.693147	-1.8971219	29		
ND<-2.59027 U	ND<-0.693147	-1.8971219	30		
ND<-2.59027 U	ND<-0.693147	-1.8971219	31		
ND<-2.59027 U	ND<-0.693147	-1.8971219	32		
0.693147	ND<-0.693147	1.38629	20	32	
ND<-0.693147	ND<-0.693147	0	20	32	
ND<-0.693147	ND<-0.693147	0	20	32	
ND<-0.693147	ND<-0.693147	0	20	32	
ND<0 J	ND<-0.693147	0.693147	21	32	
ND<-0.693147	ND<-0.693147	0	21	32	
ND<0 J	ND<-0.693147	0.693147	22	32	
ND<-0.693147	ND<-0.693147	0	22	32	
ND<0 J	ND<-0.693147	0.693147	23	32	
ND<-0.693147	ND<-0.693147	0	23	32	
ND<0 J	ND<-0.693147	0.693147	24	32	
-1.17118 J	ND<-0.693147	-0.478036	24		33
-1.34707 J	ND<-0.693147	-0.653926	24		34
-1.38629 J	ND<-0.693147	-0.693147	24		35
-1.66073 J	ND<-0.693147	-0.967584	24		36
ND<-2.59027 U	ND<-0.693147	-1.8971224	37		
ND<-2.59027 U	ND<-0.693147	-1.8971224	38		
ND<-2.59027 U	ND<-0.693147	-1.8971224	39		
ND<-2.59027 U	ND<-0.693147	-1.8971224	40		
0.693147	ND<-0.693147	1.38629	25	40	
ND<-0.693147	ND<-0.693147	0	25	40	
ND<-0.693147	ND<-0.693147	0	25	40	

ND<0 J	ND<-0.693147	0.693147	26	40	
ND<-0.693147	ND<-0.693147	0	26	40	
ND<0 J	ND<-0.693147	0.693147	27	40	
ND<-0.693147	ND<-0.693147	0	27	40	
ND<0 J	ND<-0.693147	0.693147	28	40	
ND<-0.693147	ND<-0.693147	0	28	40	
ND<0 J	ND<-0.693147	0.693147	29	40	
-1.17118 J	ND<-0.693147	-0.478036	29	41	
-1.34707 J	ND<-0.693147	-0.653926	29	42	
-1.38629 J	ND<-0.693147	-0.693147	29	43	
-1.66073 J	ND<-0.693147	-0.967584	29	44	
ND<-2.59027 U	ND<-0.693147	-1.8971229	45		
ND<-2.59027 U	ND<-0.693147	-1.8971229	46		
ND<-2.59027 U	ND<-0.693147	-1.8971229	47		
ND<-2.59027 U	ND<-0.693147	-1.8971229	48		
0.693147	ND<-0.693147	1.38629	30	48	
ND<-0.693147	ND<-0.693147	0	30	48	
ND<0 J	ND<-0.693147	0.693147	31	48	
ND<-0.693147	ND<-0.693147	0	31	48	
ND<0 J	ND<-0.693147	0.693147	32	48	
ND<-0.693147	ND<-0.693147	0	32	48	
ND<0 J	ND<-0.693147	0.693147	33	48	
ND<-0.693147	ND<-0.693147	0	33	48	
ND<0 J	ND<-0.693147	0.693147	34	48	
-1.17118 J	ND<-0.693147	-0.478036	34	49	
-1.34707 J	ND<-0.693147	-0.653926	34	50	
-1.38629 J	ND<-0.693147	-0.693147	34	51	
-1.66073 J	ND<-0.693147	-0.967584	34	52	
ND<-2.59027 U	ND<-0.693147	-1.8971234	53		
ND<-2.59027 U	ND<-0.693147	-1.8971234	54		
ND<-2.59027 U	ND<-0.693147	-1.8971234	55		
ND<-2.59027 U	ND<-0.693147	-1.8971234	56		
0.693147	ND<-0.693147	1.38629	35	56	
ND<0 J	ND<-0.693147	0.693147	36	56	
ND<-0.693147	ND<-0.693147	0	36	56	
ND<0 J	ND<-0.693147	0.693147	37	56	
ND<-0.693147	ND<-0.693147	0	37	56	
ND<0 J	ND<-0.693147	0.693147	38	56	
ND<-0.693147	ND<-0.693147	0	38	56	
ND<0 J	ND<-0.693147	0.693147	39	56	
-1.17118 J	ND<-0.693147	-0.478036	39	57	
-1.34707 J	ND<-0.693147	-0.653926	39	58	
-1.38629 J	ND<-0.693147	-0.693147	39	59	
-1.66073 J	ND<-0.693147	-0.967584	39	60	
ND<-2.59027 U	ND<-0.693147	-1.8971239	61		
ND<-2.59027 U	ND<-0.693147	-1.8971239	62		
ND<-2.59027 U	ND<-0.693147	-1.8971239	63		
ND<-2.59027 U	ND<-0.693147	-1.8971239	64		
0.693147	ND<-0.693147	1.38629	40	64	
ND<-0.693147	ND<0 J	-0.693147	40	65	
ND<0 J	ND<0 J	0	40	65	
ND<-0.693147	ND<0 J	-0.693147	40	66	
ND<0 J	ND<0 J	0	40	66	
ND<-0.693147	ND<0 J	-0.693147	40	67	
ND<0 J	ND<0 J	0	40	67	
-1.17118 J	ND<0 J	-1.171184	0	68	
-1.34707 J	ND<0 J	-1.347074	0	69	
-1.38629 J	ND<0 J	-1.386294	0	70	
-1.66073 J	ND<0 J	-1.660734	0	71	

ND<-2.59027 U	ND<0 J	-2.5902740	72		
ND<-2.59027 U	ND<0 J	-2.5902740	73		
ND<-2.59027 U	ND<0 J	-2.5902740	74		
ND<-2.59027 U	ND<0 J	-2.5902740	75		
0.693147	ND<0 J	0.693147	41	75	
ND<0 J	ND<-0.693147	0.693147	42	75	
ND<-0.693147	ND<-0.693147	0	42	75	
ND<0 J	ND<-0.693147	0.693147	43	75	
ND<-0.693147	ND<-0.693147	0	43	75	
ND<0 J	ND<-0.693147	0.693147	44	75	
-1.17118 J	ND<-0.693147	-0.478036	44	76	
-1.34707 J	ND<-0.693147	-0.653926	44	77	
-1.38629 J	ND<-0.693147	-0.693147	44	78	
-1.66073 J	ND<-0.693147	-0.967584	44	79	
ND<-2.59027 U	ND<-0.693147	-1.8971244	80		
ND<-2.59027 U	ND<-0.693147	-1.8971244	81		
ND<-2.59027 U	ND<-0.693147	-1.8971244	82		
ND<-2.59027 U	ND<-0.693147	-1.8971244	83		
0.693147	ND<-0.693147	1.38629	45	83	
ND<-0.693147	ND<0 J	-0.693147	45	84	
ND<0 J	ND<0 J	0	45	84	
ND<-0.693147	ND<0 J	-0.693147	45	85	
ND<0 J	ND<0 J	0	45	85	
-1.17118 J	ND<0 J	-1.1711845	86		
-1.34707 J	ND<0 J	-1.3470745	87		
-1.38629 J	ND<0 J	-1.3862945	88		
-1.66073 J	ND<0 J	-1.6607345	89		
ND<-2.59027 U	ND<0 J	-2.5902745	90		
ND<-2.59027 U	ND<0 J	-2.5902745	91		
ND<-2.59027 U	ND<0 J	-2.5902745	92		
ND<-2.59027 U	ND<0 J	-2.5902745	93		
0.693147	ND<0 J	0.693147	46	93	
ND<0 J	ND<-0.693147	0.693147	47	93	
ND<-0.693147	ND<-0.693147	0	47	93	
ND<0 J	ND<-0.693147	0.693147	48	93	
-1.17118 J	ND<-0.693147	-0.478036	48	94	
-1.34707 J	ND<-0.693147	-0.653926	48	95	
-1.38629 J	ND<-0.693147	-0.693147	48	96	
-1.66073 J	ND<-0.693147	-0.967584	48	97	
ND<-2.59027 U	ND<-0.693147	-1.8971248	98		
ND<-2.59027 U	ND<-0.693147	-1.8971248	99		
ND<-2.59027 U	ND<-0.693147	-1.8971248	100		
ND<-2.59027 U	ND<-0.693147	-1.8971248	101		
0.693147	ND<-0.693147	1.38629	49	101	
ND<-0.693147	ND<0 J	-0.693147	49	102	
ND<0 J	ND<0 J	0	49	102	
-1.17118 J	ND<0 J	-1.1711849	103		
-1.34707 J	ND<0 J	-1.3470749	104		
-1.38629 J	ND<0 J	-1.3862949	105		
-1.66073 J	ND<0 J	-1.6607349	106		
ND<-2.59027 U	ND<0 J	-2.5902749	107		
ND<-2.59027 U	ND<0 J	-2.5902749	108		
ND<-2.59027 U	ND<0 J	-2.5902749	109		
ND<-2.59027 U	ND<0 J	-2.5902749	110		
0.693147	ND<0 J	0.693147	50	110	
ND<0 J	ND<-0.693147	0.693147	51	110	
-1.17118 J	ND<-0.693147	-0.478036	51	111	

-1.34707 J	ND<-0.693147	-0.653926	51	112
-1.38629 J	ND<-0.693147	-0.693147	51	113
-1.66073 J	ND<-0.693147	-0.967584	51	114
ND<-2.59027 U	ND<-0.693147	-1.8971251	115	
ND<-2.59027 U	ND<-0.693147	-1.8971251	116	
ND<-2.59027 U	ND<-0.693147	-1.8971251	117	
ND<-2.59027 U	ND<-0.693147	-1.8971251	118	
0.693147	ND<-0.693147	1.38629 52	118	

-1.17118 J	ND<0 J	-1.1711852	119	
-1.34707 J	ND<0 J	-1.3470752	120	
-1.38629 J	ND<0 J	-1.3862952	121	
-1.66073 J	ND<0 J	-1.6607352	122	
ND<-2.59027 U	ND<0 J	-2.5902752	123	
ND<-2.59027 U	ND<0 J	-2.5902752	124	
ND<-2.59027 U	ND<0 J	-2.5902752	125	
ND<-2.59027 U	ND<0 J	-2.5902752	126	
0.693147	ND<0 J	0.693147	53	126

-1.34707 J	-1.17118 J	-0.175891	53	127
-1.38629 J	-1.17118 J	-0.215111	53	128
-1.66073 J	-1.17118 J	-0.489548	53	129
ND<-2.59027 U	-1.17118 J	-1.4190853	130	
ND<-2.59027 U	-1.17118 J	-1.4190853	131	
ND<-2.59027 U	-1.17118 J	-1.4190853	132	
ND<-2.59027 U	-1.17118 J	-1.4190853	133	
0.693147	-1.17118 J	1.86433 54	133	

-1.38629 J	-1.34707 J	-0.0392207	54	134
-1.66073 J	-1.34707 J	-0.313658	54	135
ND<-2.59027 U	-1.34707 J	-1.2431954	136	
ND<-2.59027 U	-1.34707 J	-1.2431954	137	
ND<-2.59027 U	-1.34707 J	-1.2431954	138	
ND<-2.59027 U	-1.34707 J	-1.2431954	139	
0.693147	-1.34707 J	2.04022 55	139	

-1.66073 J	-1.38629 J	-0.274437	55	140
ND<-2.59027 U	-1.38629 J	-1.2039755	141	
ND<-2.59027 U	-1.38629 J	-1.2039755	142	
ND<-2.59027 U	-1.38629 J	-1.2039755	143	
ND<-2.59027 U	-1.38629 J	-1.2039755	144	
0.693147	-1.38629 J	2.07944 56	144	

ND<-2.59027 U	-1.66073 J	-0.929536	56	145
ND<-2.59027 U	-1.66073 J	-0.929536	56	146
ND<-2.59027 U	-1.66073 J	-0.929536	56	147
ND<-2.59027 U	-1.66073 J	-0.929536	56	148
0.693147	-1.66073 J	2.35388 57	148	

ND<-2.59027 U	ND<-2.59027 U	0	57	148
ND<-2.59027 U	ND<-2.59027 U	0	57	148
ND<-2.59027 U	ND<-2.59027 U	0	57	148
0.693147	ND<-2.59027 U	3.28341	58	148

ND<-2.59027 U	ND<-2.59027 U	0	58	148
ND<-2.59027 U	ND<-2.59027 U	0	58	148
0.693147	ND<-2.59027 U	3.28341	59	148

ND<-2.59027 U	ND<-2.59027 U	0	59	148
0.693147	ND<-2.59027 U	3.28341	60	148

0.693147	ND<-2.59027	U	3.28341	61	148

S Statistic = 61 - 148 = -87

Tied Group	Value	Members
1	-0.693147	11
2	0	4
3	-2.59027	4

Time Period	Observations
1/16/1998	1
3/16/1999	1
9/23/1999	1
3/14/2000	1
9/23/2003	1
3/10/2004	1
10/12/2004	1
4/1/2005	1
10/26/2005	1
6/19/2006	1
11/18/2006	1
6/2/2007	1
11/15/2007	1
5/20/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1
11/17/2010	1
7/6/2011	1
11/22/2011	1
5/16/2012	1
11/16/2012	1
11/16/2013	1

There are 0 time periods with multiple data

A = 3282
B = 0
C = 1038
D = 0
E = 134
F = 0
a = 29256
b = 109296
c = 1104
Group Variance = 1443
Z-Score = -2.26394
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.26394| > 1.97737 indicating a trend

Shewhart-CUSUM Control Chart

Parameter: Tetrachloroethylene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -1.40457
Baseline Std Dev = 0.938193
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std	Mean
1/16/1998	-0.693147	0	0.758288	
1/16/1998	-0.693147	0	0.758288	
3/16/1999	-0.693147	0	0.758288	
3/16/1999	-0.693147	0	0.758288	
9/23/1999	-0.693147	0	0.758288	
9/23/1999	-0.693147	0	0.758288	
3/14/2000	-0.693147	0	0.758288	
3/14/2000	-0.693147	0	0.758288	
9/23/2003	-0.693147	0	0.758288	
9/23/2003	-0.693147	0	0.758288	
3/10/2004	-0.693147	0	0.758288	
3/10/2004	-0.693147	0	0.758288	
10/12/2004	-0.693147	0	0.758288	
10/12/2004	-0.693147	0	0.758288	
4/1/2005	-0.693147	0	0.758288	
4/1/2005	-0.693147	0	0.758288	
10/26/2005	0	0.497098	1.4971	
10/26/2005	0	0.497098	1.4971	
6/19/2006	-0.693147	0.255386	0.758288	
6/19/2006	-0.693147	0.255386	0.758288	
11/18/2006	0	0.752485	1.4971	
11/18/2006	0	0.752485	1.4971	
6/2/2007	-0.693147	0.510772	0.758288	
6/2/2007	-0.693147	0.510772	0.758288	
11/15/2007	0	1.00787	1.4971	
11/15/2007	0	1.00787	1.4971	
5/20/2008	-0.693147	0.766158	0.758288	
5/20/2008	-0.693147	0.766158	0.758288	
11/20/2008	0	1.26326	1.4971	
11/20/2008	0	1.26326	1.4971	
6/11/2009	-1.171180	0.512016	0.248759	
6/11/2009	-1.171180	0.512016	0.248759	
11/16/2009	-1.347070	0.0612811		
11/16/2009	-1.347070	0.0612811		
6/30/2010	-1.386290	0.0194766		
6/30/2010	-1.386290	0.0194766		
11/17/2010	-1.660730	-0.27304		
11/17/2010	-1.660730	-0.27304		
7/6/2011	-2.590270	-1.26381		
7/6/2011	-2.590270	-1.26381		
11/22/2011	-2.590270	-1.26381		
11/22/2011	-2.590270	-1.26381		
5/16/2012	-2.590270	-1.26381		
5/16/2012	-2.590270	-1.26381		
11/16/2012	-2.590270	-1.26381		
11/16/2012	-2.590270	-1.26381		
11/16/2013	0.693147	1.23591	2.23591	
11/16/2013	0.693147	1.23591	2.23591	

Concentrations (ppb)

Parameter: Thallium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 286
Percent Non-Detects: 96.6216%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	23 (95.8333%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.1 U	ND<0.1 U
			11/16/2009	ND<0.1 U	ND<0.1 U
			6/30/2010	ND<0.1 U	ND<0.1 U
			11/17/2010	ND<0.1 U	ND<0.1 U
			7/6/2011	ND<0.1 U	ND<0.1 U
			11/22/2011	ND<0.1 U	ND<0.1 U
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	0.12 J	0.12 J

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-3S	14	14 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.1 U	ND<0.1 U
			11/16/2009	ND<0.1 U	ND<0.1 U
			6/30/2010	ND<0.1 U	ND<0.1 U
			11/17/2010	ND<0.1 U	ND<0.1 U
			7/6/2011	ND<0.1 U	ND<0.1 U
			11/22/2011	ND<0.1 U	ND<0.1 U
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<0.1 U	ND<0.1 U
LMW-10	21	20 (95.2381%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1

			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.1 U	ND<0.1 U
			11/16/2009	ND<0.1 U	ND<0.1 U
			6/30/2010	ND<0.1 U	ND<0.1 U
			11/17/2010	ND<0.1 U	ND<0.1 U
			7/6/2011	ND<0.1 U	ND<0.1 U
			11/22/2011	ND<0.1 U	ND<0.1 U
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	0.15 J	0.15 J
LMW-14R	12	11 (91.6667%)	6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.1 U	ND<0.1 U
			6/30/2010	ND<0.1 U	ND<0.1 U
			11/17/2010	ND<0.1 U	ND<0.1 U
			7/6/2011	ND<0.1 U	ND<0.1 U
			11/22/2011	ND<0.1 U	ND<0.1 U
			5/16/2012	0.11 J	0.11 J
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<0.1 U	ND<0.1 U
LMW-15R	16	16 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.1 U	ND<0.1 U
			6/30/2010	ND<0.1 U	ND<0.1 U
			11/17/2010	ND<0.1 U	ND<0.1 U
			7/6/2011	ND<0.1 U	ND<0.1 U
			11/22/2011	ND<0.1 U	ND<0.1 U
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<0.1 U	ND<0.1 U
LMW-3	26	26 (100%)	11/19/1996	ND<1	ND<1
			3/24/1997	ND<1	ND<1
			1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1

			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.1 U	ND<0.1 U
			11/16/2009	ND<0.1 U	ND<0.1 U
			6/30/2010	ND<0.1 U	ND<0.1 U
			11/17/2010	ND<0.1 U	ND<0.1 U
			7/6/2011	ND<0.1 U	ND<0.1 U
			11/22/2011	ND<0.1 U	ND<0.1 U
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<0.1 U	ND<0.1 U
LMW-6	24	23 (95.8333%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.1 U	ND<0.1 U
			11/16/2009	ND<0.1 U	ND<0.1 U
			6/30/2010	ND<0.1 U	ND<0.1 U
			11/17/2010	0.18 J	0.18 J
			7/6/2011	ND<0.1 U	ND<0.1 U
			11/22/2011	ND<0.1 U	ND<0.1 U
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<0.1 U	ND<0.1 U
LMW-8	24	22 (91.6667%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.1 U	ND<0.1 U
			11/16/2009	ND<0.1 U	ND<0.1 U
			6/30/2010	ND<0.1 U	ND<0.1 U
			11/17/2010	ND<0.1 U	ND<0.1 U
			7/6/2011	0.11 J	0.11 J
			11/22/2011	ND<0.1 U	ND<0.1 U
			5/16/2012	0.11 J	0.11 J
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<0.1 U	ND<0.1 U

LMW-9S	16	15 (93.75%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.1 U	ND<0.1 U
			11/16/2009	0.17 J	0.17 J
			11/16/2009	ND<0.1 U	ND<0.1 U
			11/16/2009	ND<0.1 U	ND<0.1 U
			6/30/2010	ND<0.1 U	ND<0.1 U
			11/17/2010	ND<0.1 U	ND<0.1 U
			7/6/2011	ND<0.1 U	ND<0.1 U
			11/22/2011	ND<0.1 U	ND<0.1 U
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<0.1 U	ND<0.1 U
LMW-16	14	14 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.1 U	ND<0.1 U
			11/16/2009	ND<0.1 U	ND<0.1 U
			6/30/2010	ND<0.1 U	ND<0.1 U
			11/17/2010	ND<0.1 U	ND<0.1 U
			7/6/2011	ND<0.1 U	ND<0.1 U
			11/22/2011	ND<0.1 U	ND<0.1 U
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<0.1 U	ND<0.1 U
LMW-9D	14	13 (92.8571%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.1 U	ND<0.1 U
			11/16/2009	ND<0.1 U	ND<0.1 U
			6/30/2010	ND<0.1 U	ND<0.1 U
			11/17/2010	0.13 J	0.13 J
			7/6/2011	ND<0.1 U	ND<0.1 U
			11/22/2011	ND<0.1 U	ND<0.1 U
			5/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2012	ND<0.1 U	ND<0.1 U
			11/16/2013	ND<0.1 U	ND<0.1 U
LMW-9	24	22 (91.6667%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1

			11/20/2008	ND<1	ND<1	
			6/11/2009	0.13 J	0.13 J	
			11/16/2009	ND<0.1 U		ND<0.1 U
			6/30/2010	ND<0.1 U		ND<0.1 U
			11/17/2010	ND<0.1 U		ND<0.1 U
			7/6/2011	ND<0.1 U		ND<0.1 U
			11/22/2011	ND<0.1 U		ND<0.1 U
			5/16/2012	0.13 J	0.13 J	
			11/16/2012	ND<0.1 U		ND<0.1 U
			11/16/2013	ND<0.1 U		ND<0.1 U
LMW-7	21	21 (100%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.1 U		ND<0.1 U
			11/17/2010	ND<0.1 U		ND<0.1 U
			7/6/2011	ND<0.1 U		ND<0.1 U
			11/22/2011	ND<0.1 U		ND<0.1 U
			5/16/2012	ND<0.1 U		ND<0.1 U
			11/16/2012	ND<0.1 U		ND<0.1 U
LMW-11	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
MW-5	13	13 (100%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
LMW-13	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	

			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
LMW-12	11	11 (100%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Thallium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.05	-2.74777	7.55021	-0.137388
2	0.05	-2.51213	13.861	-0.262995
3	0.05	-2.32634	19.2729	-0.379312
4	0.05	-2.22621	24.2289	-0.490622
5	0.05	-2.14441	28.8274	-0.597843
6	0.05	-2.05375	33.0453	-0.70053
7	0.05	-1.99539	37.0269	-0.8003
8	0.05	-1.94314	40.8026	-0.897457
9	0.05	-1.88079	44.34	-0.991496
10	0.05	-1.83843	47.7198	-1.08342
11	0.05	-1.78661	50.9118	-1.17275
12	0.05	-1.75069	53.9767	-1.26028
13	0.05	-1.71688	56.9244	-1.34613
14	0.05	-1.67466	59.7289	-1.42986
15	0.05	-1.64485	62.4344	-1.5121
16	0.05	-1.61644	65.0473	-1.59292
17	0.05	-1.58047	67.5452	-1.67195
18	0.05	-1.55477	69.9625	-1.74969
19	0.05	-1.53007	72.3036	-1.82619
20	0.05	-1.49852	74.5491	-1.90111
21	0.05	-1.47579	76.7271	-1.9749
22	0.05	-1.44663	78.8198	-2.04724
23	0.05	-1.42554	80.852	-2.11851
24	0.05	-1.40507	82.8262	-2.18877
25	0.05	-1.37866	84.7269	-2.2577
26	0.05	-1.35946	86.5751	-2.32567
27	0.05	-1.34075	88.3727	-2.39271
28	0.05	-1.31652	90.1059	-2.45854
29	0.05	-1.29884	91.7929	-2.52348
30	0.05	-1.27588	93.4208	-2.58727
31	0.05	-1.25908	95.006	-2.65023
32	0.05	-1.24264	96.5502	-2.71236
33	0.05	-1.22123	98.0416	-2.77342
34	0.05	-1.20553	99.4949	-2.8337
35	0.05	-1.19012	100.911	-2.8932
36	0.05	-1.17	102.28	-2.9517
37	0.05	-1.15522	103.615	-3.00946
38	0.05	-1.14069	104.916	-3.0665
39	0.05	-1.12168	106.174	-3.12258
40	0.05	-1.10768	107.401	-3.17797
41	0.05	-1.08935	108.588	-3.23243
42	0.05	-1.07584	109.745	-3.28623
43	0.05	-1.06252	110.874	-3.33935
44	0.05	-1.04505	111.966	-3.3916
45	0.05	-1.03215	113.032	-3.44321
46	0.05	-1.01943	114.071	-3.49418
47	0.05	-1.00271	115.076	-3.54432
48	0.05	-0.990356	116.057	-3.59384
49	0.05	-0.97815	117.014	-3.64274
50	0.05	-0.9621	117.939	-3.69085
51	0.05	-0.950222	118.842	-3.73836

52	0.05	-0.93459	119.716	-3.78509
53	0.05	-0.923014	120.568	-3.83124
54	0.05	-0.911562	121.399	-3.87682
55	0.05	-0.896473	122.202	-3.92164
56	0.05	-0.885291	122.986	-3.96591
57	0.05	-0.874218	123.75	-4.00962
58	0.05	-0.859618	124.489	-4.0526
59	0.05	-0.848786	125.21	-4.09504
60	0.05	-0.834498	125.906	-4.13676
61	0.05	-0.823893	126.585	-4.17796
62	0.05	-0.813379	127.247	-4.21863
63	0.05	-0.7995	127.886	-4.2586
64	0.05	-0.789191	128.509	-4.29806
65	0.05	-0.778966	129.115	-4.33701
66	0.05	-0.765456	129.701	-4.37528
67	0.05	-0.755415	130.272	-4.41305
68	0.05	-0.745449	130.828	-4.45032
69	0.05	-0.732275	131.364	-4.48694
70	0.05	-0.722479	131.886	-4.52306
71	0.05	-0.709522	132.389	-4.55854
72	0.05	-0.699883	132.879	-4.59353
73	0.05	-0.690309	133.356	-4.62805
74	0.05	-0.677639	133.815	-4.66193
75	0.05	-0.668209	134.261	-4.69534
76	0.05	-0.658838	134.695	-4.72828
77	0.05	-0.646431	135.113	-4.7606
78	0.05	-0.637192	135.519	-4.79246
79	0.05	-0.628006	135.914	-4.82386
80	0.05	-0.615839	136.293	-4.85466
81	0.05	-0.606775	136.661	-4.88499
82	0.05	-0.594766	137.015	-4.91473
83	0.05	-0.585815	137.358	-4.94402
84	0.05	-0.576911	137.691	-4.97287
85	0.05	-0.565108	138.01	-5.00112
86	0.05	-0.556308	138.32	-5.02894
87	0.05	-0.547551	138.619	-5.05632
88	0.05	-0.53594	138.907	-5.08311
89	0.05	-0.52728	139.185	-5.10948
90	0.05	-0.515791	139.451	-5.13527
91	0.05	-0.507221	139.708	-5.16063
92	0.05	-0.498687	139.957	-5.18556
93	0.05	-0.487364	140.194	-5.20993
94	0.05	-0.478914	140.424	-5.23388
95	0.05	-0.470498	140.645	-5.2574
96	0.05	-0.459327	140.856	-5.28037
97	0.05	-0.450985	141.059	-5.30292
98	0.05	-0.442676	141.255	-5.32505
99	0.05	-0.431644	141.442	-5.34663
100	0.05	-0.423405	141.621	-5.3678
101	0.05	-0.412463	141.791	-5.38843
102	0.05	-0.40429	141.954	-5.40864
103	0.05	-0.396142	142.111	-5.42845
104	0.05	-0.385321	142.26	-5.44771
105	0.11	-0.377233	142.402	-5.48921
106	0.11	-0.369171	142.538	-5.52982
107	0.11	-0.358459	142.667	-5.56925
108	0.12	-0.350451	142.79	-5.6113
109	0.13	-0.33981	142.905	-5.65548
110	0.13	-0.331854	143.015	-5.69862
111	0.13	-0.323919	143.12	-5.74073
112	0.15	-0.31337	143.218	-5.78774
113	0.17	-0.305481	143.312	-5.83967

114	0.18	-0.297612	143.4	-5.89324
115	0.5	-0.287147	143.483	-6.03681
116	0.5	-0.279319	143.561	-6.17647
117	0.5	-0.271509	143.635	-6.31222
118	0.5	-0.26112143.703	-6.44279	
119	0.5	-0.253347	143.767	-6.56946
120	0.5	-0.243007	143.826	-6.69096
121	0.5	-0.235269	143.881	-6.8086
122	0.5	-0.227545	143.933	-6.92237
123	0.5	-0.217267	143.98	-7.031
124	0.5	-0.209575	144.024	-7.13579
125	0.5	-0.201894	144.065	-7.23674
126	0.5	-0.191671	144.102	-7.33257
127	0.5	-0.184017	144.136	-7.42458
128	0.5	-0.176374	144.167	-7.51277
129	0.5	-0.166199	144.194	-7.59587
130	0.5	-0.158579	144.219	-7.67516
131	0.5	-0.148434	144.241	-7.74937
132	0.5	-0.140835	144.261	-7.81979
133	0.5	-0.133244	144.279	-7.88641
134	0.5	-0.123135	144.294	-7.94798
135	0.5	-0.115562	144.308	-8.00576
136	0.5	-0.107995	144.319	-8.05976
137	0.5	-0.0979139	144.329	-8.10872
138	0.5	-0.0903606	144.337	-8.1539
139	0.5	-0.0802981	144.343	-8.19405
140	0.5	-0.0727562	144.349	-8.23042
141	0.5	-0.0652187	144.353	-8.26303
142	0.5	-0.0551734	144.356	-8.29062
143	0.5	-0.0476439	144.358	-8.31444
144	0.5	-0.0401167	144.36	-8.3345
145	0.5	-0.0300838	144.361	-8.34954
146	0.5	-0.0225612	144.361	-8.36082
147	0.5	-0.0150408	144.362	-8.36834
148	0.5	-0.00501359	144.362	-8.37085
149	0.5	0.00501359	144.362	-8.36834
150	0.5	0.0150408	144.362	-8.36082
151	0.5	0.0225612	144.362	-8.34954
152	0.5	0.0300838	144.363	-8.3345
153	0.5	0.0401167	144.365	-8.31444
154	0.5	0.0476439	144.367	-8.29062
155	0.5	0.0551734	144.37	-8.26303
156	0.5	0.0652187	144.374	-8.23042
157	0.5	0.0727562	144.38	-8.19405
158	0.5	0.0802981	144.386	-8.1539
159	0.5	0.0903606	144.394	-8.10872
160	0.5	0.0979139	144.404	-8.05976
161	0.5	0.107995	144.416	-8.00576
162	0.5	0.115562	144.429	-7.94798
163	0.5	0.123135	144.444	-7.88641
164	0.5	0.133244	144.462	-7.81979
165	0.5	0.140835	144.482	-7.74937
166	0.5	0.148434	144.504	-7.67516
167	0.5	0.158579	144.529	-7.59587
168	0.5	0.166199	144.557	-7.51277
169	0.5	0.176374	144.588	-7.42458
170	0.5	0.184017	144.621	-7.33257
171	0.5	0.191671	144.658	-7.23674
172	0.5	0.201894	144.699	-7.13579
173	0.5	0.209575	144.743	-7.031
174	0.5	0.217267	144.79	-6.92237
175	0.5	0.227545	144.842	-6.8086

176	0.5	0.235269	144.897	-6.69096
177	0.5	0.243007	144.956	-6.56946
178	0.5	0.253347	145.02	-6.44279
179	0.5	0.26112	145.089	-6.31222
180	0.5	0.271509	145.162	-6.17647
181	0.5	0.279319	145.24	-6.03681
182	0.5	0.287147	145.323	-5.89324
183	0.5	0.297612	145.411	-5.74443
184	0.5	0.305481	145.505	-5.59169
185	0.5	0.31337	145.603	-5.43501
186	0.5	0.323919	145.708	-5.27305
187	0.5	0.331854	145.818	-5.10712
188	0.5	0.33981	145.933	-4.93721
189	0.5	0.350451	146.056	-4.76199
190	0.5	0.358459	146.185	-4.58276
191	0.5	0.369171	146.321	-4.39817
192	0.5	0.377233	146.463	-4.20956
193	0.5	0.385321	146.612	-4.0169
194	0.5	0.396142	146.769	-3.81883
195	0.5	0.40429	146.932	-3.61668
196	0.5	0.412463	147.102	-3.41045
197	0.5	0.423405	147.282	-3.19875
198	0.5	0.431644	147.468	-2.98293
199	0.5	0.442676	147.664	-2.76159
200	0.5	0.450985	147.867	-2.53609
201	0.5	0.459327	148.078	-2.30643
202	0.5	0.470498	148.3	-2.07118
203	0.5	0.478914	148.529	-1.83173
204	0.5	0.487364	148.767	-1.58804
205	0.5	0.498687	149.015	-1.3387
206	0.5	0.507221	149.272	-1.08509
207	0.5	0.515791	149.539	-0.827194
208	0.5	0.52728	149.817	-0.563554
209	0.5	0.53594	150.104	-0.295584
210	0.5	0.547551	150.404	-0.0218082
211	0.5	0.556308	150.713	0.256346
212	0.5	0.565108	151.032	0.5389
213	0.5	0.576911	151.365	0.827355
214	0.5	0.585815	151.708	1.12026
215	0.5	0.594766	152.062	1.41765
216	0.5	0.606775	152.43	1.72103
217	0.5	0.615839	152.81	2.02895
218	0.5	0.628006	153.204	2.34296
219	0.5	0.637192	153.61	2.66155
220	0.5	0.646431	154.028	2.98477
221	0.5	0.658838	154.462	3.31419
222	0.5	0.668209	154.908	3.64829
223	0.5	0.677639	155.368	3.98711
224	0.5	0.690309	155.844	4.33227
225	0.5	0.699883	156.334	4.68221
226	0.5	0.709522	156.837	5.03697
227	0.5	0.722479	157.359	5.39821
228	0.5	0.732275	157.896	5.76434
229	0.5	0.745449	158.451	6.13707
230	0.5	0.755415	159.022	6.51478
231	0.5	0.765456	159.608	6.8975
232	0.5	0.778966	160.215	7.28699
233	0.5	0.789191	160.837	7.68158
234	0.5	0.7995	161.477	8.08133
235	0.5	0.813379	162.138	8.48802
236	0.5	0.823893	162.817	8.89997
237	0.5	0.834498	163.513	9.31722

238	0.5	0.848786		164.234	9.74161
239	0.5	0.859618		164.973	10.1714
240	0.5	0.874218		165.737	10.6085
241	0.5	0.885291		166.521	11.0512
242	0.5	0.896473		167.325	11.4994
243	0.5	0.911562		168.155	11.9552
244	0.5	0.923014		169.007	12.4167
245	0.5	0.93459	169.881	12.884	
246	0.5	0.950222		170.784	13.3591
247	0.5	0.9621	171.709	13.8402	
248	0.5	0.97815	172.666	14.3292	
249	0.5	0.990356		173.647	14.8244
250	0.5	1.00271	174.652	15.3258	
251	0.5	1.01943	175.692	15.8355	
252	0.5	1.03215	176.757	16.3516	
253	0.5	1.04505	177.849	16.8741	
254	0.5	1.06252	178.978	17.4053	
255	0.5	1.07584	180.136	17.9433	
256	0.5	1.08935	181.322	18.4879	
257	0.5	1.10768	182.549	19.0418	
258	0.5	1.12168	183.807	19.6026	
259	0.5	1.14069	185.108	20.173	
260	0.5	1.15522	186.443	20.7506	
261	0.5	1.17	187.812	21.3356	
262	0.5	1.19012	189.228	21.9306	
263	0.5	1.20553	190.682	22.5334	
264	0.5	1.22123	192.173	23.144	
265	0.5	1.24264	193.717	23.7653	
266	0.5	1.25908	195.302	24.3949	
267	0.5	1.27588	196.93	25.0328	
268	0.5	1.29884	198.617	25.6822	
269	0.5	1.31652	200.351	26.3405	
270	0.5	1.34075	202.148	27.0109	
271	0.5	1.35946	203.996	27.6906	
272	0.5	1.37866	205.897	28.3799	
273	0.5	1.40507	207.871	29.0825	
274	0.5	1.42554	209.903	29.7952	
275	0.5	1.44663	211.996	30.5185	
276	0.5	1.47579	214.174	31.2564	
277	0.5	1.49852	216.42	32.0057	
278	0.5	1.53007	218.761	32.7707	
279	0.5	1.55477	221.178	33.5481	
280	0.5	1.58047	223.676	34.3384	
281	0.5	1.61644	226.289	35.1466	
282	0.5	1.64485	228.994	35.969	
283	0.5	1.67466	231.799	36.8063	
284	0.5	1.71688	234.747	37.6648	
285	0.5	1.75069	237.811	38.5401	
286	0.5	1.78661	241.003	39.4334	
287	0.5	1.83843	244.383	40.3526	
288	0.5	1.88079	247.921	41.293	
289	0.5	1.94314	251.696	42.2646	
290	0.5	1.99539	255.678	43.2623	
291	0.5	2.05375	259.896	44.2892	
292	0.5	2.14441	264.494	45.3614	
293	0.5	2.22621	269.45	46.4745	
294	0.5	2.32634	274.862	47.6376	
295	0.5	2.51213	281.173	48.8937	
296	0.5	2.74777	288.723	50.2676	

Data Set Standard Deviation = 0.216311

Numerator = 2526.83
Denominator = 3985.29
W Statistic = 0.63404 = 2526.83 / 3985.29

5% Critical value of 0.976 exceeds 0.63404
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.63404
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Thallium

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.794123
0.794123 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.05	0.003367	-2.747	792.5	348.683	
2	0.05	0.00673401	-2.512	1392.5	337.176	
3	0.05	0.010101	-2.326	3492.5	328.103	
4	0.05	0.013468	-2.226	2192.5	323.213	
5	0.05	0.016835	-2.144	4192.5	319.219	
6	0.05	0.020202	-2.053	7592.5	314.791	
7	0.05	0.023569	-1.995	3992.5	311.942	
8	0.05	0.026936	-1.943	1492.5	309.39	
9	0.05	0.030303	-1.880	7992.5	306.345	
10	0.05	0.03367	-1.838	4392.5	304.276	
11	0.05	0.037037	-1.786	6192.5	301.746	
12	0.05	0.040404	-1.750	6992.5	299.992	
13	0.05	0.043771	-1.716	8892.5	298.341	
14	0.05	0.047138	-1.674	6692.5	296.279	
15	0.05	0.0505051	-1.644	8592.5	294.824	
16	0.05	0.0538721	-1.616	4492.5	293.436	
17	0.05	0.0572391	-1.580	4792.5	291.679	
18	0.05	0.0606061	-1.554	7792.5	290.425	
19	0.05	0.0639731	-1.530	0792.5	289.218	
20	0.05	0.0673401	-1.498	5292.5	287.677	
21	0.05	0.0707071	-1.475	7992.5	286.568	
22	0.05	0.0740741	-1.446	6392.5	285.144	
23	0.05	0.0774411	-1.425	5492.5	284.114	
24	0.05	0.0808081	-1.405	0792.5	283.114	
25	0.05	0.0841751	-1.378	6692.5	281.824	
26	0.05	0.0875421	-1.359	4692.5	280.887	
27	0.05	0.0909091	-1.340	7592.5	279.974	
28	0.05	0.0942761	-1.316	5292.5	278.79	
29	0.05	0.0976431	-1.298	8492.5	277.926	
30	0.05	0.10101	-1.275	8892.5	276.805	
31	0.05	0.104377	-1.259	0892.5	275.985	
32	0.05	0.107744	-1.242	6492.5	275.182	
33	0.05	0.111111	-1.221	2392.5	274.137	
34	0.05	0.114478	-1.205	5392.5	273.37	
35	0.05	0.117845	-1.190	1292.5	272.617	
36	0.05	0.121212	-1.17	92.5	271.635	
37	0.05	0.124579	-1.155	2292.5	270.913	
38	0.05	0.127946	-1.140	6992.5	270.204	
39	0.05	0.131313	-1.121	6892.5	269.275	
40	0.05	0.13468	-1.107	6892.5	268.592	
41	0.05	0.138047	-1.089	3592.5	267.697	
42	0.05	0.141414	-1.075	8492.5	267.037	
43	0.05	0.144781	-1.062	5292.5	266.386	
44	0.05	0.148148	-1.045	0592.5	265.533	
45	0.05	0.151515	-1.032	1592.5	264.904	
46	0.05	0.154882	-1.019	4392.5	264.282	
47	0.05	0.158249	-1.002	7192.5	263.466	
48	0.05	0.161616	-0.990356		92.5	262.862

49	0.05	0.164983	-0.978159	2.5	262.266
50	0.05	0.16835	-0.9621	92.5	261.483
51	0.05	0.171717	-0.950222	92.5	260.903
52	0.05	0.175084	-0.934599	2.5	260.139
53	0.05	0.178451	-0.923014	92.5	259.574
54	0.05	0.181818	-0.911562	92.5	259.015
55	0.05	0.185185	-0.896473	92.5	258.278
56	0.05	0.188552	-0.885291	92.5	257.732
57	0.05	0.191919	-0.874218	92.5	257.191
58	0.05	0.195286	-0.859618	92.5	256.478
59	0.05	0.198653	-0.848786	92.5	255.949
60	0.05	0.20202	-0.834498	92.5	255.251
61	0.05	0.205387	-0.823893	92.5	254.733
62	0.05	0.208754	-0.813379	92.5	254.22
63	0.05	0.212121	-0.7995	92.5	253.542
64	0.05	0.215488	-0.789191	92.5	253.039
65	0.05	0.218855	-0.778966	92.5	252.54
66	0.05	0.222222	-0.765456	92.5	251.88
67	0.05	0.225589	-0.755415	92.5	251.389
68	0.05	0.228956	-0.745449	92.5	250.903
69	0.05	0.232323	-0.732275	92.5	250.259
70	0.05	0.23569	-0.722479	92.5	249.781
71	0.05	0.239057	-0.709522	92.5	249.148
72	0.05	0.242424	-0.699883	92.5	248.678
73	0.05	0.245791	-0.690309	92.5	248.21
74	0.05	0.249158	-0.677639	92.5	247.591
75	0.05	0.252525	-0.668209	92.5	247.131
76	0.05	0.255892	-0.658838	92.5	246.673
77	0.05	0.259259	-0.646431	92.5	246.067
78	0.05	0.262626	-0.637192	92.5	245.616
79	0.05	0.265993	-0.628006	92.5	245.168
80	0.05	0.26936	-0.615839	92.5	244.573
81	0.05	0.272727	-0.606775	92.5	244.131
82	0.05	0.276094	-0.594766	92.5	243.544
83	0.05	0.279461	-0.585815	92.5	243.107
84	0.05	0.282828	-0.576911	92.5	242.672
85	0.05	0.286195	-0.565108	92.5	242.096
86	0.05	0.289562	-0.556308	92.5	241.666
87	0.05	0.292929	-0.547551	92.5	241.239
88	0.05	0.296296	-0.535949	2.5	240.672
89	0.05	0.299663	-0.527289	2.5	240.249
90	0.05	0.30303	-0.515791	92.5	239.688
91	0.05	0.306397	-0.507221	92.5	239.269
92	0.05	0.309764	-0.498687	92.5	238.853
93	0.05	0.313131	-0.487364	92.5	238.3
94	0.05	0.316498	-0.478914	92.5	237.887
95	0.05	0.319865	-0.470498	92.5	237.476
96	0.05	0.323232	-0.459327	92.5	236.93
97	0.05	0.326599	-0.450985	92.5	236.523
98	0.05	0.329966	-0.442676	92.5	236.117
99	0.05	0.333333	-0.431644	92.5	235.579
100	0.05	0.3367	-0.423405	92.5	235.176
101	0.05	0.340067	-0.412463	92.5	234.642
102	0.05	0.343434	-0.404299	2.5	234.243
103	0.05	0.346801	-0.396142	92.5	233.845
104	0.05	0.350168	-0.385321	92.5	233.317
105	0.11	0.353535	-0.377233	156.7	232.922
106	0.11	0.356902	-0.369171	156.7	232.528
107	0.11	0.360269	-0.358459	156.7	232.005
108	0.12	0.363636	-0.350451	167.4	231.614
109	0.13	0.367003	-0.339811	78.1	231.094
110	0.13	0.37037	-0.331854	178.1	230.706

111	0.13	0.373737	-0.323919	178.1	230.318
112	0.15	0.377104	-0.31337199.5	229.803	
113	0.17	0.380471	-0.305481	220.9	229.418
114	0.18	0.383838	-0.297612	231.6	229.033
115	0.5	0.387205	-0.287147	574	228.522
116	0.5	0.390572	-0.279319	574	228.14
117	0.5	0.393939	-0.271509	574	227.759
118	0.5	0.397306	-0.26112574	227.251	
119	0.5	0.400673	-0.253347	574	226.872
120	0.5	0.40404	-0.243007	574	226.367
121	0.5	0.407407	-0.235269	574	225.989
122	0.5	0.410774	-0.227545	574	225.612
123	0.5	0.414141	-0.217267	574	225.11
124	0.5	0.417508	-0.209575	574	224.734
125	0.5	0.420875	-0.201894	574	224.359
126	0.5	0.424242	-0.191671	574	223.86
127	0.5	0.427609	-0.184017	574	223.486
128	0.5	0.430976	-0.176374	574	223.113
129	0.5	0.434343	-0.166199	574	222.616
130	0.5	0.43771	-0.158579	574	222.244
131	0.5	0.441077	-0.148434	574	221.749
132	0.5	0.444444	-0.140835	574	221.377
133	0.5	0.447811	-0.133244	574	221.007
134	0.5	0.451178	-0.123135	574	220.513
135	0.5	0.454545	-0.115562	574	220.143
136	0.5	0.457912	-0.107995	574	219.774
137	0.5	0.461279	-0.0979139	574	219.281
138	0.5	0.464646	-0.0903606	574	218.913
139	0.5	0.468013	-0.0802981	574	218.421
140	0.5	0.47138	-0.0727562	574	218.053
141	0.5	0.474747	-0.0652187	574	217.685
142	0.5	0.478114	-0.0551734	574	217.194
143	0.5	0.481481	-0.0476439	574	216.827
144	0.5	0.484848	-0.0401167	574	216.459
145	0.5	0.488215	-0.0300838	574	215.969
146	0.5	0.491582	-0.0225612	574	215.602
147	0.5	0.494949	-0.0150408	574	215.234
148	0.5	0.498316	-0.00501359	574	214.745
149	0.5	0.501684	0.00501359	574	214.255
150	0.5	0.505051	0.0150408	574	213.766
151	0.5	0.508418	0.0225612	574	213.398
152	0.5	0.511785	0.0300838	574	213.031
153	0.5	0.515152	0.0401167	574	212.541
154	0.5	0.518519	0.0476439	574	212.173
155	0.5	0.521886	0.0551734	574	211.806
156	0.5	0.525253	0.0652187	574	211.315
157	0.5	0.52862	0.0727562	574	210.947
158	0.5	0.531987	0.0802981	574	210.579
159	0.5	0.535354	0.0903606	574	210.087
160	0.5	0.538721	0.0979139	574	209.719
161	0.5	0.542088	0.107995	574	209.226
162	0.5	0.545455	0.115562	574	208.857
163	0.5	0.548822	0.123135	574	208.487
164	0.5	0.552189	0.133244	574	207.993
165	0.5	0.555556	0.140835	574	207.623
166	0.5	0.558923	0.148434	574	207.251
167	0.5	0.56229	0.158579	574	206.756
168	0.5	0.565657	0.166199	574	206.384
169	0.5	0.569024	0.176374	574	205.887
170	0.5	0.572391	0.184017	574	205.514
171	0.5	0.575758	0.191671	574	205.14
172	0.5	0.579125	0.201894	574	204.641

173	0.5	0.582492	0.209575	574	204.266
174	0.5	0.585859	0.217267	574	203.89
175	0.5	0.589226	0.227545	574	203.388
176	0.5	0.592593	0.235269	574	203.011
177	0.5	0.59596	0.243007	574	202.633
178	0.5	0.599327	0.253347	574	202.128
179	0.5	0.602694	0.26112	574	201.749
180	0.5	0.606061	0.271509	574	201.241
181	0.5	0.609428	0.279319	574	200.86
182	0.5	0.612795	0.287147	574	200.478
183	0.5	0.616162	0.297612	574	199.967
184	0.5	0.619529	0.305481	574	199.582
185	0.5	0.622896	0.31337	574	199.197
186	0.5	0.626263	0.323919	574	198.682
187	0.5	0.62963	0.331854	574	198.294
188	0.5	0.632997	0.33981	574	197.906
189	0.5	0.636364	0.350451	574	197.386
190	0.5	0.639731	0.358459	574	196.995
191	0.5	0.643098	0.369171	574	196.472
192	0.5	0.646465	0.377233	574	196.078
193	0.5	0.649832	0.385321	574	195.683
194	0.5	0.653199	0.396142	574	195.155
195	0.5	0.656566	0.40429	574	194.757
196	0.5	0.659933	0.412463	574	194.358
197	0.5	0.6633	0.423405	574	193.824
198	0.5	0.666667	0.431644	574	193.421
199	0.5	0.670034	0.442676	574	192.883
200	0.5	0.673401	0.450985	574	192.477
201	0.5	0.676768	0.459327	574	192.07
202	0.5	0.680135	0.470498	574	191.524
203	0.5	0.683502	0.478914	574	191.113
204	0.5	0.686869	0.487364	574	190.7
205	0.5	0.690236	0.498687	574	190.147
206	0.5	0.693603	0.507221	574	189.731
207	0.5	0.69697	0.515791	574	189.312
208	0.5	0.700337	0.52728	574	188.751
209	0.5	0.703704	0.53594	574	188.328
210	0.5	0.707071	0.547551	574	187.761
211	0.5	0.710438	0.556308	574	187.334
212	0.5	0.713805	0.565108	574	186.904
213	0.5	0.717172	0.576911	574	186.328
214	0.5	0.720539	0.585815	574	185.893
215	0.5	0.723906	0.594766	574	185.456
216	0.5	0.727273	0.606775	574	184.869
217	0.5	0.73064	0.615839	574	184.427
218	0.5	0.734007	0.628006	574	183.832
219	0.5	0.737374	0.637192	574	183.384
220	0.5	0.740741	0.646431	574	182.933
221	0.5	0.744108	0.658838	574	182.327
222	0.5	0.747475	0.668209	574	181.869
223	0.5	0.750842	0.677639	574	181.409
224	0.5	0.754209	0.690309	574	180.79
225	0.5	0.757576	0.699883	574	180.322
226	0.5	0.760943	0.709522	574	179.852
227	0.5	0.76431	0.722479	574	179.219
228	0.5	0.767677	0.732275	574	178.741
229	0.5	0.771044	0.745449	574	178.097
230	0.5	0.774411	0.755415	574	177.611
231	0.5	0.777778	0.765456	574	177.12
232	0.5	0.781145	0.778966	574	176.46
233	0.5	0.784512	0.789191	574	175.961
234	0.5	0.787879	0.7995	574	175.458

235	0.5	0.791246	0.813379	574	174.78
236	0.5	0.794613	0.823893	574	174.267
237	0.5	0.79798	0.834498	574	173.749
238	0.5	0.801347	0.848786	574	173.051
239	0.5	0.804714	0.859618	574	172.522
240	0.5	0.808081	0.874218	574	171.809
241	0.5	0.811448	0.885291	574	171.268
242	0.5	0.814815	0.896473	574	170.722
243	0.5	0.818182	0.911562	574	169.985
244	0.5	0.821549	0.923014	574	169.426
245	0.5	0.824916	0.93459	574	168.861
246	0.5	0.828283	0.950222	574	168.097
247	0.5	0.83165	0.9621	574	167.517
248	0.5	0.835017	0.97815	574	166.734
249	0.5	0.838384	0.990356	574	166.138
250	0.5	0.841751	1.00271	574	165.534
251	0.5	0.845118	1.01943	574	164.718
252	0.5	0.848485	1.03215	574	164.096
253	0.5	0.851852	1.04505	574	163.467
254	0.5	0.855219	1.06252	574	162.614
255	0.5	0.858586	1.07584	574	161.963
256	0.5	0.861953	1.08935	574	161.303
257	0.5	0.86532	1.10768	574	160.408
258	0.5	0.868687	1.12168	574	159.725
259	0.5	0.872054	1.14069	574	158.796
260	0.5	0.875421	1.15522	574	158.087
261	0.5	0.878788	1.17	574	157.365
262	0.5	0.882155	1.19012	574	156.383
263	0.5	0.885522	1.20553	574	155.63
264	0.5	0.888889	1.22123	574	154.863
265	0.5	0.892256	1.24264	574	153.818
266	0.5	0.895623	1.25908	574	153.015
267	0.5	0.89899	1.27588	574	152.195
268	0.5	0.902357	1.29884	574	151.074
269	0.5	0.905724	1.31652	574	150.21
270	0.5	0.909091	1.34075	574	149.026
271	0.5	0.912458	1.35946	574	148.113
272	0.5	0.915825	1.37866	574	147.176
273	0.5	0.919192	1.40507	574	145.886
274	0.5	0.922559	1.42554	574	144.886
275	0.5	0.925926	1.44663	574	143.856
276	0.5	0.929293	1.47579	574	142.432
277	0.5	0.93266	1.49852	574	141.323
278	0.5	0.936027	1.53007	574	139.782
279	0.5	0.939394	1.55477	574	138.575
280	0.5	0.942761	1.58047	574	137.321
281	0.5	0.946128	1.61644	574	135.564
282	0.5	0.949495	1.64485	574	134.176
283	0.5	0.952862	1.67466	574	132.721
284	0.5	0.956229	1.71688	574	130.659
285	0.5	0.959596	1.75069	574	129.008
286	0.5	0.962963	1.78661	574	127.254
287	0.5	0.96633	1.83843	574	124.724
288	0.5	0.969697	1.88079	574	122.655
289	0.5	0.973064	1.94314	574	119.61
290	0.5	0.976431	1.99539	574	117.058
291	0.5	0.979798	2.05375	574	114.209
292	0.5	0.983165	2.14441	574	109.781
293	0.5	0.986532	2.22621	574	105.787
294	0.5	0.989899	2.32634	574	100.897
295	0.5	0.993266	2.51213	574	91.8241
296	0.5	0.996633	2.74777	574	80.3175

Shapiro-Francia Test of Normality

Parameter: Thallium

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.99573	-2.74777	7.55021	8.23157
2	-2.99573	-2.51213	13.861	15.7572
3	-2.99573	-2.32634	19.2729	22.7263
4	-2.99573	-2.22621	24.2289	29.3955
5	-2.99573	-2.14441	28.8274	35.8195
6	-2.99573	-2.05375	33.0453	41.972
7	-2.99573	-1.99539	37.0269	47.9497
8	-2.99573	-1.94314	40.8026	53.7708
9	-2.99573	-1.88079	44.34	59.4051
10	-2.99573	-1.83843	47.7198	64.9126
11	-2.99573	-1.78661	50.9118	70.2648
12	-2.99573	-1.75069	53.9767	75.5094
13	-2.99573	-1.71688	56.9244	80.6527
14	-2.99573	-1.67466	59.7289	85.6695
15	-2.99573	-1.64485	62.4344	90.5971
16	-2.99573	-1.61644	65.0473	95.4395
17	-2.99573	-1.58047	67.5452	100.174
18	-2.99573	-1.55477	69.9625	104.832
19	-2.99573	-1.53007	72.3036	109.415
20	-2.99573	-1.49852	74.5491	113.905
21	-2.99573	-1.47579	76.7271	118.326
22	-2.99573	-1.44663	78.8198	122.659
23	-2.99573	-1.42554	80.852	126.93
24	-2.99573	-1.40507	82.8262	131.139
25	-2.99573	-1.37866	84.7269	135.269
26	-2.99573	-1.35946	86.5751	139.342
27	-2.99573	-1.34075	88.3727	143.358
28	-2.99573	-1.31652	90.1059	147.302
29	-2.99573	-1.29884	91.7929	151.193
30	-2.99573	-1.27588	93.4208	155.016
31	-2.99573	-1.25908	95.006	158.787
32	-2.99573	-1.24264	96.5502	162.51
33	-2.99573	-1.22123	98.0416	166.168
34	-2.99573	-1.20553	99.4949	169.78
35	-2.99573	-1.19012	100.911	173.345
36	-2.99573	-1.17	102.28	176.85
37	-2.99573	-1.15522	103.615	180.311
38	-2.99573	-1.14069	104.916	183.728
39	-2.99573	-1.12168	106.174	187.088
40	-2.99573	-1.10768	107.401	190.407
41	-2.99573	-1.08935	108.588	193.67
42	-2.99573	-1.07584	109.745	196.893
43	-2.99573	-1.06252	110.874	200.076
44	-2.99573	-1.04505	111.966	203.207
45	-2.99573	-1.03215	113.032	206.299
46	-2.99573	-1.01943	114.071	209.353
47	-2.99573	-1.00271	115.076	212.357
48	-2.99573	-0.99035	6	116.057	215.323
49	-2.99573	-0.97815	117.014	218.254
50	-2.99573	-0.9621	117.939	221.136
51	-2.99573	-0.95022	2	118.842	223.982

52	-2.99573	-0.93459	119.716	226.782
53	-2.99573	-0.923014	120.568	229.547
54	-2.99573	-0.911562	121.399	232.278
55	-2.99573	-0.896473	122.202	234.964
56	-2.99573	-0.885291	122.986	237.616
57	-2.99573	-0.874218	123.75	240.235
58	-2.99573	-0.859618	124.489	242.81
59	-2.99573	-0.848786	125.21	245.353
60	-2.99573	-0.834498	125.906	247.853
61	-2.99573	-0.823893	126.585	250.321
62	-2.99573	-0.813379	127.247	252.757
63	-2.99573	-0.7995	127.886	255.153
64	-2.99573	-0.789191	128.509	257.517
65	-2.99573	-0.778966	129.115	259.85
66	-2.99573	-0.765456	129.701	262.143
67	-2.99573	-0.755415	130.272	264.406
68	-2.99573	-0.745449	130.828	266.64
69	-2.99573	-0.732275	131.364	268.833
70	-2.99573	-0.722479	131.886	270.998
71	-2.99573	-0.709522	132.389	273.123
72	-2.99573	-0.699883	132.879	275.22
73	-2.99573	-0.690309	133.356	277.288
74	-2.99573	-0.677639	133.815	279.318
75	-2.99573	-0.668209	134.261	281.32
76	-2.99573	-0.658838	134.695	283.293
77	-2.99573	-0.646431	135.113	285.23
78	-2.99573	-0.637192	135.519	287.139
79	-2.99573	-0.628006	135.914	289.02
80	-2.99573	-0.615839	136.293	290.865
81	-2.99573	-0.606775	136.661	292.683
82	-2.99573	-0.594766	137.015	294.464
83	-2.99573	-0.585815	137.358	296.219
84	-2.99573	-0.576911	137.691	297.948
85	-2.99573	-0.565108	138.01	299.641
86	-2.99573	-0.556308	138.32	301.307
87	-2.99573	-0.547551	138.619	302.947
88	-2.99573	-0.53594	138.907	304.553
89	-2.99573	-0.52728	139.185	306.133
90	-2.99573	-0.515791	139.451	307.678
91	-2.99573	-0.507221	139.708	309.197
92	-2.99573	-0.498687	139.957	310.691
93	-2.99573	-0.487364	140.194	312.151
94	-2.99573	-0.478914	140.424	313.586
95	-2.99573	-0.470498	140.645	314.995
96	-2.99573	-0.459327	140.856	316.371
97	-2.99573	-0.450985	141.059	317.722
98	-2.99573	-0.442676	141.255	319.049
99	-2.99573	-0.431644	141.442	320.342
100	-2.99573	-0.423405	141.621	321.61
101	-2.99573	-0.412463	141.791	322.846
102	-2.99573	-0.40429	141.954	324.057
103	-2.99573	-0.396142	142.111	325.244
104	-2.99573	-0.385321	142.26	326.398
105	-2.20727	-0.377233	142.402	327.231
106	-2.20727	-0.369171	142.538	328.045
107	-2.20727	-0.358459	142.667	328.837
108	-2.12026	-0.350451	142.79	329.58
109	-2.04022	-0.33981	142.905	330.273
110	-2.04022	-0.331854	143.015	330.95
111	-2.04022	-0.323919	143.12	331.611
112	-1.89712	-0.31337	143.218	332.205
113	-1.77196	-0.305481	143.312	332.747

114	-1.7148	-0.297612	143.4	333.257
115	-0.693147	-0.287147	143.483	333.456
116	-0.693147	-0.279319	143.561	333.65
117	-0.693147	-0.271509	143.635	333.838
118	-0.693147	-0.26112	143.703	334.019
119	-0.693147	-0.253347	143.767	334.194
120	-0.693147	-0.243007	143.826	334.363
121	-0.693147	-0.235269	143.881	334.526
122	-0.693147	-0.227545	143.933	334.684
123	-0.693147	-0.217267	143.98	334.834
124	-0.693147	-0.209575	144.024	334.98
125	-0.693147	-0.201894	144.065	335.12
126	-0.693147	-0.191671	144.102	335.252
127	-0.693147	-0.184017	144.136	335.38
128	-0.693147	-0.176374	144.167	335.502
129	-0.693147	-0.166199	144.194	335.617
130	-0.693147	-0.158579	144.219	335.727
131	-0.693147	-0.148434	144.241	335.83
132	-0.693147	-0.140835	144.261	335.928
133	-0.693147	-0.133244	144.279	336.02
134	-0.693147	-0.123135	144.294	336.106
135	-0.693147	-0.115562	144.308	336.186
136	-0.693147	-0.107995	144.319	336.26
137	-0.693147	-0.0979139	144.329	336.328
138	-0.693147	-0.0903606	144.337	336.391
139	-0.693147	-0.0802981	144.343	336.447
140	-0.693147	-0.0727562	144.349	336.497
141	-0.693147	-0.0652187	144.353	336.542
142	-0.693147	-0.0551734	144.356	336.581
143	-0.693147	-0.0476439	144.358	336.614
144	-0.693147	-0.0401167	144.36	336.641
145	-0.693147	-0.0300838	144.361	336.662
146	-0.693147	-0.0225612	144.361	336.678
147	-0.693147	-0.0150408	144.362	336.688
148	-0.693147	-0.00501359	144.362	336.692
149	-0.693147	0.00501359	144.362	336.688
150	-0.693147	0.0150408	144.362	336.678
151	-0.693147	0.0225612	144.362	336.662
152	-0.693147	0.0300838	144.363	336.641
153	-0.693147	0.0401167	144.365	336.614
154	-0.693147	0.0476439	144.367	336.581
155	-0.693147	0.0551734	144.37	336.542
156	-0.693147	0.0652187	144.374	336.497
157	-0.693147	0.0727562	144.38	336.447
158	-0.693147	0.0802981	144.386	336.391
159	-0.693147	0.0903606	144.394	336.328
160	-0.693147	0.0979139	144.404	336.26
161	-0.693147	0.107995	144.416	336.186
162	-0.693147	0.115562	144.429	336.106
163	-0.693147	0.123135	144.444	336.02
164	-0.693147	0.133244	144.462	335.928
165	-0.693147	0.140835	144.482	335.83
166	-0.693147	0.148434	144.504	335.727
167	-0.693147	0.158579	144.529	335.617
168	-0.693147	0.166199	144.557	335.502
169	-0.693147	0.176374	144.588	335.38
170	-0.693147	0.184017	144.621	335.252
171	-0.693147	0.191671	144.658	335.12
172	-0.693147	0.201894	144.699	334.98
173	-0.693147	0.209575	144.743	334.834
174	-0.693147	0.217267	144.79	334.684
175	-0.693147	0.227545	144.842	334.526

176	-0.693147	0.235269	144.897	334.363
177	-0.693147	0.243007	144.956	334.194
178	-0.693147	0.253347	145.02	334.019
179	-0.693147	0.26112	145.089	333.838
180	-0.693147	0.271509	145.162	333.65
181	-0.693147	0.279319	145.24	333.456
182	-0.693147	0.287147	145.323	333.257
183	-0.693147	0.297612	145.411	333.051
184	-0.693147	0.305481	145.505	332.839
185	-0.693147	0.31337	145.603	332.622
186	-0.693147	0.323919	145.708	332.397
187	-0.693147	0.331854	145.818	332.167
188	-0.693147	0.33981	145.933	331.932
189	-0.693147	0.350451	146.056	331.689
190	-0.693147	0.358459	146.185	331.44
191	-0.693147	0.369171	146.321	331.184
192	-0.693147	0.377233	146.463	330.923
193	-0.693147	0.385321	146.612	330.656
194	-0.693147	0.396142	146.769	330.381
195	-0.693147	0.40429	146.932	330.101
196	-0.693147	0.412463	147.102	329.815
197	-0.693147	0.423405	147.282	329.522
198	-0.693147	0.431644	147.468	329.222
199	-0.693147	0.442676	147.664	328.916
200	-0.693147	0.450985	147.867	328.603
201	-0.693147	0.459327	148.078	328.285
202	-0.693147	0.470498	148.3	327.959
203	-0.693147	0.478914	148.529	327.627
204	-0.693147	0.487364	148.767	327.289
205	-0.693147	0.498687	149.015	326.943
206	-0.693147	0.507221	149.272	326.592
207	-0.693147	0.515791	149.539	326.234
208	-0.693147	0.52728	149.817	325.869
209	-0.693147	0.53594	150.104	325.497
210	-0.693147	0.547551	150.404	325.118
211	-0.693147	0.556308	150.713	324.732
212	-0.693147	0.565108	151.032	324.34
213	-0.693147	0.576911	151.365	323.94
214	-0.693147	0.585815	151.708	323.534
215	-0.693147	0.594766	152.062	323.122
216	-0.693147	0.606775	152.43	322.701
217	-0.693147	0.615839	152.81	322.275
218	-0.693147	0.628006	153.204	321.839
219	-0.693147	0.637192	153.61	321.398
220	-0.693147	0.646431	154.028	320.95
221	-0.693147	0.658838	154.462	320.493
222	-0.693147	0.668209	154.908	320.03
223	-0.693147	0.677639	155.368	319.56
224	-0.693147	0.690309	155.844	319.081
225	-0.693147	0.699883	156.334	318.596
226	-0.693147	0.709522	156.837	318.105
227	-0.693147	0.722479	157.359	317.604
228	-0.693147	0.732275	157.896	317.096
229	-0.693147	0.745449	158.451	316.579
230	-0.693147	0.755415	159.022	316.056
231	-0.693147	0.765456	159.608	315.525
232	-0.693147	0.778966	160.215	314.985
233	-0.693147	0.789191	160.837	314.438
234	-0.693147	0.7995	161.477	313.884
235	-0.693147	0.813379	162.138	313.32
236	-0.693147	0.823893	162.817	312.749
237	-0.693147	0.834498	163.513	312.171

238	-0.693147	0.848786		164.234	311.583
239	-0.693147	0.859618		164.973	310.987
240	-0.693147	0.874218		165.737	310.381
241	-0.693147	0.885291		166.521	309.767
242	-0.693147	0.896473		167.325	309.146
243	-0.693147	0.911562		168.155	308.514
244	-0.693147	0.923014		169.007	307.874
245	-0.693147	0.93459	169.881	307.226	
246	-0.693147	0.950222		170.784	306.568
247	-0.693147	0.9621	171.709	305.901	
248	-0.693147	0.97815	172.666	305.223	
249	-0.693147	0.990356		173.647	304.536
250	-0.693147	1.00271	174.652	303.841	
251	-0.693147	1.01943	175.692	303.135	
252	-0.693147	1.03215	176.757	302.419	
253	-0.693147	1.04505	177.849	301.695	
254	-0.693147	1.06252	178.978	300.958	
255	-0.693147	1.07584	180.136	300.213	
256	-0.693147	1.08935	181.322	299.458	
257	-0.693147	1.10768	182.549	298.69	
258	-0.693147	1.12168	183.807	297.912	
259	-0.693147	1.14069	185.108	297.122	
260	-0.693147	1.15522	186.443	296.321	
261	-0.693147	1.17	187.812	295.51	
262	-0.693147	1.19012	189.228	294.685	
263	-0.693147	1.20553	190.682	293.849	
264	-0.693147	1.22123	192.173	293.003	
265	-0.693147	1.24264	193.717	292.142	
266	-0.693147	1.25908	195.302	291.269	
267	-0.693147	1.27588	196.93	290.384	
268	-0.693147	1.29884	198.617	289.484	
269	-0.693147	1.31652	200.351	288.572	
270	-0.693147	1.34075	202.148	287.642	
271	-0.693147	1.35946	203.996	286.7	
272	-0.693147	1.37866	205.897	285.744	
273	-0.693147	1.40507	207.871	284.77	
274	-0.693147	1.42554	209.903	283.782	
275	-0.693147	1.44663	211.996	282.78	
276	-0.693147	1.47579	214.174	281.757	
277	-0.693147	1.49852	216.42	280.718	
278	-0.693147	1.53007	218.761	279.657	
279	-0.693147	1.55477	221.178	278.58	
280	-0.693147	1.58047	223.676	277.484	
281	-0.693147	1.61644	226.289	276.364	
282	-0.693147	1.64485	228.994	275.224	
283	-0.693147	1.67466	231.799	274.063	
284	-0.693147	1.71688	234.747	272.873	
285	-0.693147	1.75069	237.811	271.659	
286	-0.693147	1.78661	241.003	270.421	
287	-0.693147	1.83843	244.383	269.147	
288	-0.693147	1.88079	247.921	267.843	
289	-0.693147	1.94314	251.696	266.496	
290	-0.693147	1.99539	255.678	265.113	
291	-0.693147	2.05375	259.896	263.689	
292	-0.693147	2.14441	264.494	262.203	
293	-0.693147	2.22621	269.45	260.66	
294	-0.693147	2.32634	274.862	259.047	
295	-0.693147	2.51213	281.173	257.306	
296	-0.693147	2.74777	288.723	255.402	

Data Set Standard Deviation = 1.09473

Numerator = 65230
Denominator = 102074
W Statistic = 0.639047 = 65230 / 102074

5% Critical value of 0.976 exceeds 0.639047
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.639047
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Thallium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.797274
0.797274 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.995730	.003367	-2.747	739.7611	348.683
2	-2.995730	.00673401	-2.512	1339.7611	337.176
3	-2.995730	.010101	-2.326	3439.7611	328.103
4	-2.995730	.013468	-2.226	2139.7611	323.213
5	-2.995730	.016835	-2.144	4139.7611	319.219
6	-2.995730	.020202	-2.053	7539.7611	314.791
7	-2.995730	.023569	-1.995	3939.7611	311.942
8	-2.995730	.026936	-1.943	1439.7611	309.39
9	-2.995730	.030303	-1.880	7939.7611	306.345
10	-2.995730	.03367	-1.838	4339.7611	304.276
11	-2.995730	.037037	-1.786	6139.7611	301.746
12	-2.995730	.040404	-1.750	6939.7611	299.992
13	-2.995730	.043771	-1.716	8839.7611	298.341
14	-2.995730	.047138	-1.674	6639.7611	296.279
15	-2.995730	.0505051	-1.644	8539.7611	294.824
16	-2.995730	.0538721	-1.616	4439.7611	293.436
17	-2.995730	.0572391	-1.580	4739.7611	291.679
18	-2.995730	.0606061	-1.554	7739.7611	290.425
19	-2.995730	.0639731	-1.530	0739.7611	289.218
20	-2.995730	.0673401	-1.498	5239.7611	287.677
21	-2.995730	.0707071	-1.475	7939.7611	286.568
22	-2.995730	.0740741	-1.446	6339.7611	285.144
23	-2.995730	.0774411	-1.425	5439.7611	284.114
24	-2.995730	.0808081	-1.405	0739.7611	283.114
25	-2.995730	.0841751	-1.378	6639.7611	281.824
26	-2.995730	.0875421	-1.359	4639.7611	280.887
27	-2.995730	.0909091	-1.340	7539.7611	279.974
28	-2.995730	.0942761	-1.316	5239.7611	278.79
29	-2.995730	.0976431	-1.298	8439.7611	277.926
30	-2.995730	.10101	-1.275	8839.7611	276.805
31	-2.995730	.104377	-1.259	0839.7611	275.985
32	-2.995730	.107744	-1.242	6439.7611	275.182
33	-2.995730	.111111	-1.221	2339.7611	274.137
34	-2.995730	.114478	-1.205	5339.7611	273.37
35	-2.995730	.117845	-1.190	1239.7611	272.617
36	-2.995730	.121212	-1.17	39.7611	271.635
37	-2.995730	.124579	-1.155	2239.7611	270.913
38	-2.995730	.127946	-1.140	6939.7611	270.204
39	-2.995730	.131313	-1.121	6839.7611	269.275
40	-2.995730	.13468	-1.107	6839.7611	268.592
41	-2.995730	.138047	-1.089	3539.7611	267.697
42	-2.995730	.141414	-1.075	8439.7611	267.037
43	-2.995730	.144781	-1.062	5239.7611	266.386
44	-2.995730	.148148	-1.045	0539.7611	265.533
45	-2.995730	.151515	-1.032	1539.7611	264.904
46	-2.995730	.154882	-1.019	4339.7611	264.282
47	-2.995730	.158249	-1.002	7139.7611	263.466
48	-2.995730	.161616	-0.990356	39.7611	262.862

49	-2.995730.164983	-0.9781539.7611	262.266	
50	-2.995730.16835	-0.9621	39.7611	261.483
51	-2.995730.171717	-0.950222	39.7611	260.903
52	-2.995730.175084	-0.9345939.7611	260.139	
53	-2.995730.178451	-0.923014	39.7611	259.574
54	-2.995730.181818	-0.911562	39.7611	259.015
55	-2.995730.185185	-0.896473	39.7611	258.278
56	-2.995730.188552	-0.885291	39.7611	257.732
57	-2.995730.191919	-0.874218	39.7611	257.191
58	-2.995730.195286	-0.859618	39.7611	256.478
59	-2.995730.198653	-0.848786	39.7611	255.949
60	-2.995730.20202	-0.834498	39.7611	255.251
61	-2.995730.205387	-0.823893	39.7611	254.733
62	-2.995730.208754	-0.813379	39.7611	254.22
63	-2.995730.212121	-0.7995	39.7611	253.542
64	-2.995730.215488	-0.789191	39.7611	253.039
65	-2.995730.218855	-0.778966	39.7611	252.54
66	-2.995730.222222	-0.765456	39.7611	251.88
67	-2.995730.225589	-0.755415	39.7611	251.389
68	-2.995730.228956	-0.745449	39.7611	250.903
69	-2.995730.232323	-0.732275	39.7611	250.259
70	-2.995730.23569	-0.722479	39.7611	249.781
71	-2.995730.239057	-0.709522	39.7611	249.148
72	-2.995730.242424	-0.699883	39.7611	248.678
73	-2.995730.245791	-0.690309	39.7611	248.21
74	-2.995730.249158	-0.677639	39.7611	247.591
75	-2.995730.252525	-0.668209	39.7611	247.131
76	-2.995730.255892	-0.658838	39.7611	246.673
77	-2.995730.259259	-0.646431	39.7611	246.067
78	-2.995730.262626	-0.637192	39.7611	245.616
79	-2.995730.265993	-0.628006	39.7611	245.168
80	-2.995730.26936	-0.615839	39.7611	244.573
81	-2.995730.272727	-0.606775	39.7611	244.131
82	-2.995730.276094	-0.594766	39.7611	243.544
83	-2.995730.279461	-0.585815	39.7611	243.107
84	-2.995730.282828	-0.576911	39.7611	242.672
85	-2.995730.286195	-0.565108	39.7611	242.096
86	-2.995730.289562	-0.556308	39.7611	241.666
87	-2.995730.292929	-0.547551	39.7611	241.239
88	-2.995730.296296	-0.5359439.7611	240.672	
89	-2.995730.299663	-0.5272839.7611	240.249	
90	-2.995730.30303	-0.515791	39.7611	239.688
91	-2.995730.306397	-0.507221	39.7611	239.269
92	-2.995730.309764	-0.498687	39.7611	238.853
93	-2.995730.313131	-0.487364	39.7611	238.3
94	-2.995730.316498	-0.478914	39.7611	237.887
95	-2.995730.319865	-0.470498	39.7611	237.476
96	-2.995730.323232	-0.459327	39.7611	236.93
97	-2.995730.326599	-0.450985	39.7611	236.523
98	-2.995730.329966	-0.442676	39.7611	236.117
99	-2.995730.333333	-0.431644	39.7611	235.579
100	-2.995730.3367	-0.423405	39.7611	235.176
101	-2.995730.340067	-0.412463	39.7611	234.642
102	-2.995730.343434	-0.4042939.7611	234.243	
103	-2.995730.346801	-0.396142	39.7611	233.845
104	-2.995730.350168	-0.385321	39.7611	233.317
105	-2.207270.353535	-0.377233	180.369	232.922
106	-2.207270.356902	-0.369171	180.369	232.528
107	-2.207270.360269	-0.358459	180.369	232.005
108	-2.120260.363636	-0.350451	195.886	231.614
109	-2.040220.367003	-0.33981210.161	231.094	
110	-2.040220.37037	-0.331854	210.161	230.706

111	-2.040220.373737	-0.323919	210.161	230.318	
112	-1.897120.377104	-0.31337235.68	229.803		
113	-1.771960.380471	-0.305481	258.001	229.418	
114	-1.7148 0.383838	-0.297612	268.194	229.033	
115	-0.693147	0.387205	-0.287147	450.389	228.522
116	-0.693147	0.390572	-0.279319	450.389	228.14
117	-0.693147	0.393939	-0.271509	450.389	227.759
118	-0.693147	0.397306	-0.26112450.389	227.251	
119	-0.693147	0.400673	-0.253347	450.389	226.872
120	-0.693147	0.40404 -0.243007	450.389	226.367	
121	-0.693147	0.407407	-0.235269	450.389	225.989
122	-0.693147	0.410774	-0.227545	450.389	225.612
123	-0.693147	0.414141	-0.217267	450.389	225.11
124	-0.693147	0.417508	-0.209575	450.389	224.734
125	-0.693147	0.420875	-0.201894	450.389	224.359
126	-0.693147	0.424242	-0.191671	450.389	223.86
127	-0.693147	0.427609	-0.184017	450.389	223.486
128	-0.693147	0.430976	-0.176374	450.389	223.113
129	-0.693147	0.434343	-0.166199	450.389	222.616
130	-0.693147	0.43771 -0.158579	450.389	222.244	
131	-0.693147	0.441077	-0.148434	450.389	221.749
132	-0.693147	0.444444	-0.140835	450.389	221.377
133	-0.693147	0.447811	-0.133244	450.389	221.007
134	-0.693147	0.451178	-0.123135	450.389	220.513
135	-0.693147	0.454545	-0.115562	450.389	220.143
136	-0.693147	0.457912	-0.107995	450.389	219.774
137	-0.693147	0.461279	-0.0979139	450.389	219.281
138	-0.693147	0.464646	-0.0903606	450.389	218.913
139	-0.693147	0.468013	-0.0802981	450.389	218.421
140	-0.693147	0.47138 -0.0727562	450.389	218.053	
141	-0.693147	0.474747	-0.0652187	450.389	217.685
142	-0.693147	0.478114	-0.0551734	450.389	217.194
143	-0.693147	0.481481	-0.0476439	450.389	216.827
144	-0.693147	0.484848	-0.0401167	450.389	216.459
145	-0.693147	0.488215	-0.0300838	450.389	215.969
146	-0.693147	0.491582	-0.0225612	450.389	215.602
147	-0.693147	0.494949	-0.0150408	450.389	215.234
148	-0.693147	0.498316	-0.00501359	450.389	214.745
149	-0.693147	0.501684	0.00501359	450.389	214.255
150	-0.693147	0.505051	0.0150408	450.389	213.766
151	-0.693147	0.508418	0.0225612	450.389	213.398
152	-0.693147	0.511785	0.0300838	450.389	213.031
153	-0.693147	0.515152	0.0401167	450.389	212.541
154	-0.693147	0.518519	0.0476439	450.389	212.173
155	-0.693147	0.521886	0.0551734	450.389	211.806
156	-0.693147	0.525253	0.0652187	450.389	211.315
157	-0.693147	0.52862 0.0727562	450.389	210.947	
158	-0.693147	0.531987	0.0802981	450.389	210.579
159	-0.693147	0.535354	0.0903606	450.389	210.087
160	-0.693147	0.538721	0.0979139	450.389	209.719
161	-0.693147	0.542088	0.107995	450.389	209.226
162	-0.693147	0.545455	0.115562	450.389	208.857
163	-0.693147	0.548822	0.123135	450.389	208.487
164	-0.693147	0.552189	0.133244	450.389	207.993
165	-0.693147	0.555556	0.140835	450.389	207.623
166	-0.693147	0.558923	0.148434	450.389	207.251
167	-0.693147	0.56229 0.158579	450.389	206.756	
168	-0.693147	0.565657	0.166199	450.389	206.384
169	-0.693147	0.569024	0.176374	450.389	205.887
170	-0.693147	0.572391	0.184017	450.389	205.514
171	-0.693147	0.575758	0.191671	450.389	205.14
172	-0.693147	0.579125	0.201894	450.389	204.641

173	-0.693147	0.582492	0.209575	450.389	204.266
174	-0.693147	0.585859	0.217267	450.389	203.89
175	-0.693147	0.589226	0.227545	450.389	203.388
176	-0.693147	0.592593	0.235269	450.389	203.011
177	-0.693147	0.59596	0.243007	450.389	202.633
178	-0.693147	0.599327	0.253347	450.389	202.128
179	-0.693147	0.602694	0.26112	450.389	201.749
180	-0.693147	0.606061	0.271509	450.389	201.241
181	-0.693147	0.609428	0.279319	450.389	200.86
182	-0.693147	0.612795	0.287147	450.389	200.478
183	-0.693147	0.616162	0.297612	450.389	199.967
184	-0.693147	0.619529	0.305481	450.389	199.582
185	-0.693147	0.622896	0.31337	450.389	199.197
186	-0.693147	0.626263	0.323919	450.389	198.682
187	-0.693147	0.62963	0.331854	450.389	198.294
188	-0.693147	0.632997	0.33981	450.389	197.906
189	-0.693147	0.636364	0.350451	450.389	197.386
190	-0.693147	0.639731	0.358459	450.389	196.995
191	-0.693147	0.643098	0.369171	450.389	196.472
192	-0.693147	0.646465	0.377233	450.389	196.078
193	-0.693147	0.649832	0.385321	450.389	195.683
194	-0.693147	0.653199	0.396142	450.389	195.155
195	-0.693147	0.656566	0.40429	450.389	194.757
196	-0.693147	0.659933	0.412463	450.389	194.358
197	-0.693147	0.6633	0.423405	450.389	193.824
198	-0.693147	0.666667	0.431644	450.389	193.421
199	-0.693147	0.670034	0.442676	450.389	192.883
200	-0.693147	0.673401	0.450985	450.389	192.477
201	-0.693147	0.676768	0.459327	450.389	192.07
202	-0.693147	0.680135	0.470498	450.389	191.524
203	-0.693147	0.683502	0.478914	450.389	191.113
204	-0.693147	0.686869	0.487364	450.389	190.7
205	-0.693147	0.690236	0.498687	450.389	190.147
206	-0.693147	0.693603	0.507221	450.389	189.731
207	-0.693147	0.69697	0.515791	450.389	189.312
208	-0.693147	0.700337	0.52728	450.389	188.751
209	-0.693147	0.703704	0.53594	450.389	188.328
210	-0.693147	0.707071	0.547551	450.389	187.761
211	-0.693147	0.710438	0.556308	450.389	187.334
212	-0.693147	0.713805	0.565108	450.389	186.904
213	-0.693147	0.717172	0.576911	450.389	186.328
214	-0.693147	0.720539	0.585815	450.389	185.893
215	-0.693147	0.723906	0.594766	450.389	185.456
216	-0.693147	0.727273	0.606775	450.389	184.869
217	-0.693147	0.73064	0.615839	450.389	184.427
218	-0.693147	0.734007	0.628006	450.389	183.832
219	-0.693147	0.737374	0.637192	450.389	183.384
220	-0.693147	0.740741	0.646431	450.389	182.933
221	-0.693147	0.744108	0.658838	450.389	182.327
222	-0.693147	0.747475	0.668209	450.389	181.869
223	-0.693147	0.750842	0.677639	450.389	181.409
224	-0.693147	0.754209	0.690309	450.389	180.79
225	-0.693147	0.757576	0.699883	450.389	180.322
226	-0.693147	0.760943	0.709522	450.389	179.852
227	-0.693147	0.76431	0.722479	450.389	179.219
228	-0.693147	0.767677	0.732275	450.389	178.741
229	-0.693147	0.771044	0.745449	450.389	178.097
230	-0.693147	0.774411	0.755415	450.389	177.611
231	-0.693147	0.777778	0.765456	450.389	177.12
232	-0.693147	0.781145	0.778966	450.389	176.46
233	-0.693147	0.784512	0.789191	450.389	175.961
234	-0.693147	0.787879	0.7995	450.389	175.458

235	-0.693147	0.791246	0.813379	450.389	174.78
236	-0.693147	0.794613	0.823893	450.389	174.267
237	-0.693147	0.79798	0.834498	450.389	173.749
238	-0.693147	0.801347	0.848786	450.389	173.051
239	-0.693147	0.804714	0.859618	450.389	172.522
240	-0.693147	0.808081	0.874218	450.389	171.809
241	-0.693147	0.811448	0.885291	450.389	171.268
242	-0.693147	0.814815	0.896473	450.389	170.722
243	-0.693147	0.818182	0.911562	450.389	169.985
244	-0.693147	0.821549	0.923014	450.389	169.426
245	-0.693147	0.824916	0.93459	450.389	168.861
246	-0.693147	0.828283	0.950222	450.389	168.097
247	-0.693147	0.83165	0.9621	450.389	167.517
248	-0.693147	0.835017	0.97815	450.389	166.734
249	-0.693147	0.838384	0.990356	450.389	166.138
250	-0.693147	0.841751	1.00271	450.389	165.534
251	-0.693147	0.845118	1.01943	450.389	164.718
252	-0.693147	0.848485	1.03215	450.389	164.096
253	-0.693147	0.851852	1.04505	450.389	163.467
254	-0.693147	0.855219	1.06252	450.389	162.614
255	-0.693147	0.858586	1.07584	450.389	161.963
256	-0.693147	0.861953	1.08935	450.389	161.303
257	-0.693147	0.86532	1.10768	450.389	160.408
258	-0.693147	0.868687	1.12168	450.389	159.725
259	-0.693147	0.872054	1.14069	450.389	158.796
260	-0.693147	0.875421	1.15522	450.389	158.087
261	-0.693147	0.878788	1.17	450.389	157.365
262	-0.693147	0.882155	1.19012	450.389	156.383
263	-0.693147	0.885522	1.20553	450.389	155.63
264	-0.693147	0.888889	1.22123	450.389	154.863
265	-0.693147	0.892256	1.24264	450.389	153.818
266	-0.693147	0.895623	1.25908	450.389	153.015
267	-0.693147	0.89899	1.27588	450.389	152.195
268	-0.693147	0.902357	1.29884	450.389	151.074
269	-0.693147	0.905724	1.31652	450.389	150.21
270	-0.693147	0.909091	1.34075	450.389	149.026
271	-0.693147	0.912458	1.35946	450.389	148.113
272	-0.693147	0.915825	1.37866	450.389	147.176
273	-0.693147	0.919192	1.40507	450.389	145.886
274	-0.693147	0.922559	1.42554	450.389	144.886
275	-0.693147	0.925926	1.44663	450.389	143.856
276	-0.693147	0.929293	1.47579	450.389	142.432
277	-0.693147	0.93266	1.49852	450.389	141.323
278	-0.693147	0.936027	1.53007	450.389	139.782
279	-0.693147	0.939394	1.55477	450.389	138.575
280	-0.693147	0.942761	1.58047	450.389	137.321
281	-0.693147	0.946128	1.61644	450.389	135.564
282	-0.693147	0.949495	1.64485	450.389	134.176
283	-0.693147	0.952862	1.67466	450.389	132.721
284	-0.693147	0.956229	1.71688	450.389	130.659
285	-0.693147	0.959596	1.75069	450.389	129.008
286	-0.693147	0.962963	1.78661	450.389	127.254
287	-0.693147	0.96633	1.83843	450.389	124.724
288	-0.693147	0.969697	1.88079	450.389	122.655
289	-0.693147	0.973064	1.94314	450.389	119.61
290	-0.693147	0.976431	1.99539	450.389	117.058
291	-0.693147	0.979798	2.05375	450.389	114.209
292	-0.693147	0.983165	2.14441	450.389	109.781
293	-0.693147	0.986532	2.22621	450.389	105.787
294	-0.693147	0.989899	2.32634	450.389	100.897
295	-0.693147	0.993266	2.51213	450.389	91.8241
296	-0.693147	0.996633	2.74777	450.389	80.3175

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Thallium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 96.6216%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 24
Maximum Background Value = 0
Confidence Level = 75%
False Positive Rate = 25%

Location	Date	Count	Mean	Significant
LMW-3S	11/16/2013	1	-2.99573	FALSE
LMW-10	11/16/2013	1	-1.89712	FALSE
LMW-14R	11/16/2013	1	-2.99573	FALSE
LMW-15R	11/16/2013	1	-2.99573	FALSE
LMW-3	11/16/2013	1	-2.99573	FALSE
LMW-6	11/16/2013	1	-2.99573	FALSE
LMW-8	11/16/2013	1	-2.99573	FALSE
LMW-9S	11/16/2013	1	-2.99573	FALSE
LMW-16	11/16/2013	1	-2.99573	FALSE
LMW-9D	11/16/2013	1	-2.99573	FALSE
LMW-9	11/16/2013	1	-2.99573	FALSE
LMW-7	11/16/2012	1	-2.99573	FALSE
LMW-11	11/20/2008	1	-0.693147	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE
LMW-13	11/20/2008	1	-0.693147	FALSE
LMW-12	11/20/2008	1	-0.693147	FALSE

Concentrations (ppb)

Parameter: Trichloroethylene

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 274
Percent Non-Detects: 92.5676%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	23 (95.8333%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.13 U	ND<0.13 U
			11/16/2009	ND<0.13 U	ND<0.13 U
			6/30/2010	ND<0.13 U	ND<0.13 U
			11/17/2010	ND<0.13 U	ND<0.13 U
			7/6/2011	ND<0.13 U	ND<0.13 U
			11/22/2011	ND<0.13 U	ND<0.13 U
			5/16/2012	ND<0.13 U	ND<0.13 U
			11/16/2012	0.16 J	0.16 J
			11/16/2013	ND<0.13 U	ND<0.13 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-3	26	26 (100%)	11/19/1996	ND<1	ND<1
			3/24/1997	ND<1	ND<1
			1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.13 U	ND<0.13 U
			11/16/2009	ND<0.13 U	ND<0.13 U

			6/30/2010	ND<0.13 U	ND<0.13 U	
			11/17/2010	ND<0.13 U	ND<0.13 U	
			7/6/2011	ND<0.13 U	ND<0.13 U	
			11/22/2011	ND<0.13 U	ND<0.13 U	
			5/16/2012	ND<0.13 U	ND<0.13 U	
			11/16/2012	ND<0.13 U	ND<0.13 U	
			11/16/2013	ND<0.13 U	ND<0.13 U	
LMW-9	24	22 (91.6667%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.13 U	ND<0.13 U	
			11/16/2009	ND<0.13 U	ND<0.13 U	
			6/30/2010	ND<0.13 U	ND<0.13 U	
			11/17/2010	ND<0.13 U	ND<0.13 U	
			7/6/2011	0.16 J	0.16 J	
			11/22/2011	0.14 J	0.14 J	
			5/16/2012	ND<0.13 U	ND<0.13 U	
			11/16/2012	ND<0.13 U	ND<0.13 U	
			11/16/2013	ND<0.13 U	ND<0.13 U	
LMW-15R	16	16 (100%)	11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.13 U	ND<0.13 U	
			6/30/2010	ND<0.13 U	ND<0.13 U	
			11/17/2010	ND<0.13 U	ND<0.13 U	
			7/6/2011	ND<0.13 U	ND<0.13 U	
			11/22/2011	ND<0.13 U	ND<0.13 U	
			5/16/2012	ND<0.13 U	ND<0.13 U	
			11/16/2012	ND<0.13 U	ND<0.13 U	
			11/16/2013	ND<0.13 U	ND<0.13 U	
LMW-6	24	24 (100%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	

			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.13 U	ND<0.13 U
			11/16/2009	ND<0.13 U	ND<0.13 U
			6/30/2010	ND<0.13 U	ND<0.13 U
			11/17/2010	ND<0.13 U	ND<0.13 U
			7/6/2011	ND<0.13 U	ND<0.13 U
			11/22/2011	ND<0.13 U	ND<0.13 U
			5/16/2012	ND<0.13 U	ND<0.13 U
			11/16/2012	ND<0.13 U	ND<0.13 U
			11/16/2013	ND<0.13 U	ND<0.13 U
LMW-9D	14	13 (92.8571%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.13 U	ND<0.13 U
			11/16/2009	ND<0.13 U	ND<0.13 U
			6/30/2010	ND<0.13 U	ND<0.13 U
			11/17/2010	ND<0.13 U	ND<0.13 U
			7/6/2011	0.13 J	0.13 J
			11/22/2011	ND<0.13 U	ND<0.13 U
			5/16/2012	ND<0.13 U	ND<0.13 U
			11/16/2012	ND<0.13 U	ND<0.13 U
			11/16/2013	ND<0.13 U	ND<0.13 U
LMW-9S	16	16 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.13 U	ND<0.13 U
			11/16/2009	ND<0.13 U	ND<0.13 U
			11/16/2009	ND<0.13 U	ND<0.13 U
			11/16/2009	ND<0.13 U	ND<0.13 U
			6/30/2010	ND<0.13 U	ND<0.13 U
			11/17/2010	ND<0.13 U	ND<0.13 U
			7/6/2011	ND<0.13 U	ND<0.13 U
			11/22/2011	ND<0.13 U	ND<0.13 U
			5/16/2012	ND<0.13 U	ND<0.13 U
			11/16/2012	ND<0.13 U	ND<0.13 U
			11/16/2013	ND<0.13 U	ND<0.13 U
LMW-8	24	16 (66.6667%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<0 J	ND<0 J
			6/19/2006	ND<0 J	ND<0 J
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	0.41 J	0.41 J
			11/16/2009	0.19 J	0.19 J

			6/30/2010	0.29 J	0.29 J
			11/17/2010	0.14 J	0.14 J
			7/6/2011	ND<0.13 U	ND<0.13 U
			11/22/2011	0.23 J	0.23 J
			5/16/2012	0.23 J	0.23 J
			11/16/2012	0.19 J	0.19 J
			11/16/2013	0.92 J	0.92 J
LMW-16	14	14 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.13 U	ND<0.13 U
			11/16/2009	ND<0.13 U	ND<0.13 U
			6/30/2010	ND<0.13 U	ND<0.13 U
			11/17/2010	ND<0.13 U	ND<0.13 U
			7/6/2011	ND<0.13 U	ND<0.13 U
			11/22/2011	ND<0.13 U	ND<0.13 U
			5/16/2012	ND<0.13 U	ND<0.13 U
			11/16/2012	ND<0.13 U	ND<0.13 U
			11/16/2013	ND<0.13 U	ND<0.13 U
LMW-3S	14	14 (100%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.13 U	ND<0.13 U
			11/16/2009	ND<0.13 U	ND<0.13 U
			6/30/2010	ND<0.13 U	ND<0.13 U
			11/17/2010	ND<0.13 U	ND<0.13 U
			7/6/2011	ND<0.13 U	ND<0.13 U
			11/22/2011	ND<0.13 U	ND<0.13 U
			5/16/2012	ND<0.13 U	ND<0.13 U
			11/16/2012	ND<0.13 U	ND<0.13 U
			11/16/2013	ND<0.13 U	ND<0.13 U
LMW-10	21	12 (57.1429%)	3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<0 J	ND<0 J
			10/26/2005	ND<0 J	ND<0 J
			6/19/2006	ND<0 J	ND<0 J
			11/18/2006	ND<0 J	ND<0 J
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<0 J	ND<0 J
			6/11/2009	0.88 J	0.88 J
			11/16/2009	1.7	1.7
			6/30/2010	1.1	1.1
			11/17/2010	0.97 J	0.97 J
			7/6/2011	1.4	1.4
			11/22/2011	1.9	1.9
			5/16/2012	1.4	1.4
			11/16/2012	1.6	1.6
			11/16/2013	1.8	1.8
LMW-14R	12	12 (100%)	6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1

			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.13 U	ND<0.13 U	
			6/30/2010	ND<0.13 U	ND<0.13 U	
			11/17/2010	ND<0.13 U	ND<0.13 U	
			7/6/2011	ND<0.13 U	ND<0.13 U	
			11/22/2011	ND<0.13 U	ND<0.13 U	
			5/16/2012	ND<0.13 U	ND<0.13 U	
			11/16/2012	ND<0.13 U	ND<0.13 U	
			11/16/2013	ND<0.13 U	ND<0.13 U	
LMW-7	21	20 (95.2381%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.13 U	ND<0.13 U	
			11/17/2010	ND<0.13 U	ND<0.13 U	
			7/6/2011	ND<0.13 U	ND<0.13 U	
			11/22/2011	ND<0.13 U	ND<0.13 U	
			5/16/2012	ND<0.13 U	ND<0.13 U	
			11/16/2012	0.22 J	0.22 J	
LMW-12	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
LMW-13	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
LMW-11	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	

			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
MW-5	13	13 (100%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/15/2007	ND<0 J	ND<0 J	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Trichloroethylene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.747777.55021	0	
2	0	-2.5121313.861	0	
3	0	-2.3263419.2729	0	
4	0	-2.2262124.2289	0	
5	0	-2.1444128.8274	0	
6	0	-2.0537533.0453	0	
7	0	-1.9953937.0269	0	
8	0	-1.9431440.8026	0	
9	0.065	-1.8807944.34	-0.122251	
10	0.065	-1.8384347.7198	-0.241749	
11	0.065	-1.7866150.9118	-0.357879	
12	0.065	-1.7506953.9767	-0.471673	
13	0.065	-1.7168856.9244	-0.583271	
14	0.065	-1.6746659.7289	-0.692124	
15	0.065	-1.6448562.4344	-0.799039	
16	0.065	-1.6164465.0473	-0.904108	
17	0.065	-1.5804767.5452	-1.00684	
18	0.065	-1.5547769.9625	-1.1079	
19	0.065	-1.5300772.3036	-1.20735	
20	0.065	-1.4985274.5491	-1.30476	
21	0.065	-1.4757976.7271	-1.40068	
22	0.065	-1.4466378.8198	-1.49471	
23	0.065	-1.4255480.852	-1.58737	
24	0.065	-1.4050782.8262	-1.6787	
25	0.065	-1.3786684.7269	-1.76832	
26	0.065	-1.3594686.5751	-1.85668	
27	0.065	-1.3407588.3727	-1.94383	
28	0.065	-1.3165290.1059	-2.0294	
29	0.065	-1.2988491.7929	-2.11383	
30	0.065	-1.2758893.4208	-2.19676	
31	0.065	-1.2590895.006	-2.2786	
32	0.065	-1.2426496.5502	-2.35937	
33	0.065	-1.2212398.0416	-2.43875	
34	0.065	-1.2055399.4949	-2.51711	
35	0.065	-1.19012100.911	-2.59447	
36	0.065	-1.17 102.28	-2.67052	
37	0.065	-1.15522103.615	-2.74561	
38	0.065	-1.14069104.916	-2.81975	
39	0.065	-1.12168106.174	-2.89266	
40	0.065	-1.10768107.401	-2.96466	
41	0.065	-1.08935108.588	-3.03547	
42	0.065	-1.07584109.745	-3.1054	
43	0.065	-1.06252110.874	-3.17446	
44	0.065	-1.04505111.966	-3.24239	
45	0.065	-1.03215113.032	-3.30948	
46	0.065	-1.01943114.071	-3.37574	
47	0.065	-1.00271115.076	-3.44092	
48	0.065	-0.990356	116.057	-3.50529
49	0.065	-0.97815117.014	-3.56887	
50	0.065	-0.9621 117.939	-3.63141	
51	0.065	-0.950222	118.842	-3.69317

52	0.065	-0.93459	119.716	-3.75392
53	0.065	-0.923014	120.568	-3.81392
54	0.065	-0.911562	121.399	-3.87317
55	0.065	-0.896473	122.202	-3.93144
56	0.065	-0.885291	122.986	-3.98898
57	0.065	-0.874218	123.75	-4.04581
58	0.065	-0.859618	124.489	-4.10168
59	0.065	-0.848786	125.21	-4.15685
60	0.065	-0.834498	125.906	-4.2111
61	0.065	-0.823893	126.585	-4.26465
62	0.065	-0.813379	127.247	-4.31752
63	0.065	-0.7995	127.886	-4.36949
64	0.065	-0.789191	128.509	-4.42078
65	0.065	-0.778966	129.115	-4.47142
66	0.065	-0.765456	129.701	-4.52117
67	0.065	-0.755415	130.272	-4.57027
68	0.065	-0.745449	130.828	-4.61873
69	0.065	-0.732275	131.364	-4.66633
70	0.065	-0.722479	131.886	-4.71329
71	0.065	-0.709522	132.389	-4.75941
72	0.065	-0.699883	132.879	-4.8049
73	0.065	-0.690309	133.356	-4.84977
74	0.065	-0.677639	133.815	-4.89382
75	0.065	-0.668209	134.261	-4.93725
76	0.065	-0.658838	134.695	-4.98007
77	0.065	-0.646431	135.113	-5.02209
78	0.065	-0.637192	135.519	-5.06351
79	0.065	-0.628006	135.914	-5.10433
80	0.065	-0.615839	136.293	-5.14436
81	0.065	-0.606775	136.661	-5.1838
82	0.065	-0.594766	137.015	-5.22246
83	0.065	-0.585815	137.358	-5.26054
84	0.065	-0.576911	137.691	-5.29804
85	0.065	-0.565108	138.01	-5.33477
86	0.065	-0.556308	138.32	-5.37093
87	0.065	-0.547551	138.619	-5.40652
88	0.065	-0.53594	138.907	-5.44136
89	0.065	-0.52728	139.185	-5.47563
90	0.065	-0.515791	139.451	-5.50915
91	0.065	-0.507221	139.708	-5.54212
92	0.065	-0.498687	139.957	-5.57454
93	0.065	-0.487364	140.194	-5.60622
94	0.065	-0.478914	140.424	-5.63735
95	0.065	-0.470498	140.645	-5.66793
96	0.065	-0.459327	140.856	-5.69779
97	0.065	-0.450985	141.059	-5.7271
98	0.065	-0.442676	141.255	-5.75587
99	0.065	-0.431644	141.442	-5.78393
100	0.065	-0.423405	141.621	-5.81145
101	0.13	-0.412463	141.791	-5.86507
102	0.14	-0.40429	141.954	-5.92167
103	0.14	-0.396142	142.111	-5.97713
104	0.16	-0.385321	142.26	-6.03878
105	0.16	-0.377233	142.402	-6.09914
106	0.19	-0.369171	142.538	-6.16928
107	0.19	-0.358459	142.667	-6.23739
108	0.22	-0.350451	142.79	-6.31449
109	0.23	-0.33981	142.905	-6.39265
110	0.23	-0.331854	143.015	-6.46897
111	0.29	-0.323919	143.12	-6.56291
112	0.41	-0.31337	143.218	-6.69139
113	0.5	-0.305481	143.312	-6.84413

114	0.5	-0.297612	143.4	-6.99294
115	0.5	-0.287147	143.483	-7.13651
116	0.5	-0.279319	143.561	-7.27617
117	0.5	-0.271509	143.635	-7.41192
118	0.5	-0.26112143.703	-7.54249	
119	0.5	-0.253347	143.767	-7.66916
120	0.5	-0.243007	143.826	-7.79066
121	0.5	-0.235269	143.881	-7.9083
122	0.5	-0.227545	143.933	-8.02207
123	0.5	-0.217267	143.98	-8.1307
124	0.5	-0.209575	144.024	-8.23549
125	0.5	-0.201894	144.065	-8.33644
126	0.5	-0.191671	144.102	-8.43227
127	0.5	-0.184017	144.136	-8.52428
128	0.5	-0.176374	144.167	-8.61247
129	0.5	-0.166199	144.194	-8.69557
130	0.5	-0.158579	144.219	-8.77486
131	0.5	-0.148434	144.241	-8.84907
132	0.5	-0.140835	144.261	-8.91949
133	0.5	-0.133244	144.279	-8.98611
134	0.5	-0.123135	144.294	-9.04768
135	0.5	-0.115562	144.308	-9.10546
136	0.5	-0.107995	144.319	-9.15946
137	0.5	-0.0979139	144.329	-9.20842
138	0.5	-0.0903606	144.337	-9.2536
139	0.5	-0.0802981	144.343	-9.29375
140	0.5	-0.0727562	144.349	-9.33012
141	0.5	-0.0652187	144.353	-9.36273
142	0.5	-0.0551734	144.356	-9.39032
143	0.5	-0.0476439	144.358	-9.41414
144	0.5	-0.0401167	144.36	-9.4342
145	0.5	-0.0300838	144.361	-9.44924
146	0.5	-0.0225612	144.361	-9.46052
147	0.5	-0.0150408	144.362	-9.46804
148	0.5	-0.00501359	144.362	-9.47055
149	0.5	0.00501359	144.362	-9.46804
150	0.5	0.0150408	144.362	-9.46052
151	0.5	0.0225612	144.362	-9.44924
152	0.5	0.0300838	144.363	-9.4342
153	0.5	0.0401167	144.365	-9.41414
154	0.5	0.0476439	144.367	-9.39032
155	0.5	0.0551734	144.37	-9.36273
156	0.5	0.0652187	144.374	-9.33012
157	0.5	0.0727562	144.38	-9.29375
158	0.5	0.0802981	144.386	-9.2536
159	0.5	0.0903606	144.394	-9.20842
160	0.5	0.0979139	144.404	-9.15946
161	0.5	0.107995	144.416	-9.10546
162	0.5	0.115562	144.429	-9.04768
163	0.5	0.123135	144.444	-8.98611
164	0.5	0.133244	144.462	-8.91949
165	0.5	0.140835	144.482	-8.84907
166	0.5	0.148434	144.504	-8.77486
167	0.5	0.158579	144.529	-8.69557
168	0.5	0.166199	144.557	-8.61247
169	0.5	0.176374	144.588	-8.52428
170	0.5	0.184017	144.621	-8.43227
171	0.5	0.191671	144.658	-8.33644
172	0.5	0.201894	144.699	-8.23549
173	0.5	0.209575	144.743	-8.1307
174	0.5	0.217267	144.79	-8.02207
175	0.5	0.227545	144.842	-7.9083

176	0.5	0.235269	144.897	-7.79066
177	0.5	0.243007	144.956	-7.66916
178	0.5	0.253347	145.02	-7.54249
179	0.5	0.26112	145.089	-7.41192
180	0.5	0.271509	145.162	-7.27617
181	0.5	0.279319	145.24	-7.13651
182	0.5	0.287147	145.323	-6.99294
183	0.5	0.297612	145.411	-6.84413
184	0.5	0.305481	145.505	-6.69139
185	0.5	0.31337	145.603	-6.53471
186	0.5	0.323919	145.708	-6.37275
187	0.5	0.331854	145.818	-6.20682
188	0.5	0.33981	145.933	-6.03691
189	0.5	0.350451	146.056	-5.86169
190	0.5	0.358459	146.185	-5.68246
191	0.5	0.369171	146.321	-5.49787
192	0.5	0.377233	146.463	-5.30926
193	0.5	0.385321	146.612	-5.1166
194	0.5	0.396142	146.769	-4.91853
195	0.5	0.40429	146.932	-4.71638
196	0.5	0.412463	147.102	-4.51015
197	0.5	0.423405	147.282	-4.29845
198	0.5	0.431644	147.468	-4.08263
199	0.5	0.442676	147.664	-3.86129
200	0.5	0.450985	147.867	-3.63579
201	0.5	0.459327	148.078	-3.40613
202	0.5	0.470498	148.3	-3.17088
203	0.5	0.478914	148.529	-2.93143
204	0.5	0.487364	148.767	-2.68774
205	0.5	0.498687	149.015	-2.4384
206	0.5	0.507221	149.272	-2.18479
207	0.5	0.515791	149.539	-1.92689
208	0.5	0.52728	149.817	-1.66325
209	0.5	0.53594	150.104	-1.39528
210	0.5	0.547551	150.404	-1.12151
211	0.5	0.556308	150.713	-0.843354
212	0.5	0.565108	151.032	-0.5608
213	0.5	0.576911	151.365	-0.272345
214	0.5	0.585815	151.708	0.0205625
215	0.5	0.594766	152.062	0.317946
216	0.5	0.606775	152.43	0.621333
217	0.5	0.615839	152.81	0.929253
218	0.5	0.628006	153.204	1.24326
219	0.5	0.637192	153.61	1.56185
220	0.5	0.646431	154.028	1.88507
221	0.5	0.658838	154.462	2.21449
222	0.5	0.668209	154.908	2.54859
223	0.5	0.677639	155.368	2.88741
224	0.5	0.690309	155.844	3.23257
225	0.5	0.699883	156.334	3.58251
226	0.5	0.709522	156.837	3.93727
227	0.5	0.722479	157.359	4.29851
228	0.5	0.732275	157.896	4.66464
229	0.5	0.745449	158.451	5.03737
230	0.5	0.755415	159.022	5.41508
231	0.5	0.765456	159.608	5.7978
232	0.5	0.778966	160.215	6.18729
233	0.5	0.789191	160.837	6.58188
234	0.5	0.7995	161.477	6.98163
235	0.5	0.813379	162.138	7.38832
236	0.5	0.823893	162.817	7.80027
237	0.5	0.834498	163.513	8.21752

238	0.5	0.848786		164.234	8.64191
239	0.5	0.859618		164.973	9.07172
240	0.5	0.874218		165.737	9.50883
241	0.5	0.885291		166.521	9.95147
242	0.5	0.896473		167.325	10.3997
243	0.5	0.911562		168.155	10.8555
244	0.5	0.923014		169.007	11.317
245	0.5	0.93459	169.881	11.7843	
246	0.5	0.950222		170.784	12.2594
247	0.5	0.9621	171.709	12.7405	
248	0.5	0.97815	172.666	13.2295	
249	0.5	0.990356		173.647	13.7247
250	0.5	1.00271	174.652	14.2261	
251	0.5	1.01943	175.692	14.7358	
252	0.5	1.03215	176.757	15.2519	
253	0.5	1.04505	177.849	15.7744	
254	0.5	1.06252	178.978	16.3056	
255	0.5	1.07584	180.136	16.8436	
256	0.5	1.08935	181.322	17.3882	
257	0.5	1.10768	182.549	17.9421	
258	0.5	1.12168	183.807	18.5029	
259	0.5	1.14069	185.108	19.0733	
260	0.5	1.15522	186.443	19.6509	
261	0.5	1.17	187.812	20.2359	
262	0.5	1.19012	189.228	20.8309	
263	0.5	1.20553	190.682	21.4337	
264	0.5	1.22123	192.173	22.0443	
265	0.5	1.24264	193.717	22.6656	
266	0.5	1.25908	195.302	23.2952	
267	0.5	1.27588	196.93	23.9331	
268	0.5	1.29884	198.617	24.5825	
269	0.5	1.31652	200.351	25.2408	
270	0.5	1.34075	202.148	25.9112	
271	0.5	1.35946	203.996	26.5909	
272	0.5	1.37866	205.897	27.2802	
273	0.5	1.40507	207.871	27.9828	
274	0.5	1.42554	209.903	28.6955	
275	0.5	1.44663	211.996	29.4188	
276	0.5	1.47579	214.174	30.1567	
277	0.5	1.49852	216.42	30.906	
278	0.5	1.53007	218.761	31.671	
279	0.5	1.55477	221.178	32.4484	
280	0.5	1.58047	223.676	33.2387	
281	0.5	1.61644	226.289	34.0469	
282	0.5	1.64485	228.994	34.8693	
283	0.5	1.67466	231.799	35.7066	
284	0.5	1.71688	234.747	36.5651	
285	0.5	1.75069	237.811	37.4404	
286	0.5	1.78661	241.003	38.3337	
287	0.88	1.83843	244.383	39.9515	
288	0.92	1.88079	247.921	41.6819	
289	0.97	1.94314	251.696	43.5667	
290	1.1	1.99539	255.678	45.7616	
291	1.4	2.05375	259.896	48.6369	
292	1.4	2.14441	264.494	51.6391	
293	1.6	2.22621	269.45	55.201	
294	1.7	2.32634	274.862	59.1558	
295	1.8	2.51213	281.173	63.6776	
296	1.9	2.74777	288.723	68.8984	

Data Set Standard Deviation = 0.286561

Numerator = 4746.98
Denominator = 6994.21
W Statistic = 0.678702 = 4746.98 / 6994.21

5% Critical value of 0.976 exceeds 0.678702
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.678702
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Trichloroethylene

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.825346
0.825346 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.003367		-2.7477739	348.683	
2	0	0.00673401		-2.5121339	337.176	
3	0	0.010101		-2.3263439	328.103	
4	0	0.013468		-2.2262139	323.213	
5	0	0.016835		-2.1444139	319.219	
6	0	0.020202		-2.0537539	314.791	
7	0	0.023569		-1.9953939	311.942	
8	0	0.026936		-1.9431439	309.39	
9	0.065	0.030303		-1.8807956.3875	306.345	
10	0.065	0.03367	-1.8384356.3875	304.276		
11	0.065	0.037037		-1.7866156.3875	301.746	
12	0.065	0.040404		-1.7506956.3875	299.992	
13	0.065	0.043771		-1.7168856.3875	298.341	
14	0.065	0.047138		-1.6746656.3875	296.279	
15	0.065	0.0505051		-1.6448556.3875	294.824	
16	0.065	0.0538721		-1.6164456.3875	293.436	
17	0.065	0.0572391		-1.5804756.3875	291.679	
18	0.065	0.0606061		-1.5547756.3875	290.425	
19	0.065	0.0639731		-1.5300756.3875	289.218	
20	0.065	0.0673401		-1.4985256.3875	287.677	
21	0.065	0.0707071		-1.4757956.3875	286.568	
22	0.065	0.0740741		-1.4466356.3875	285.144	
23	0.065	0.0774411		-1.4255456.3875	284.114	
24	0.065	0.0808081		-1.4050756.3875	283.114	
25	0.065	0.0841751		-1.3786656.3875	281.824	
26	0.065	0.0875421		-1.3594656.3875	280.887	
27	0.065	0.0909091		-1.3407556.3875	279.974	
28	0.065	0.0942761		-1.3165256.3875	278.79	
29	0.065	0.0976431		-1.2988456.3875	277.926	
30	0.065	0.10101	-1.2758856.3875	276.805		
31	0.065	0.104377		-1.2590856.3875	275.985	
32	0.065	0.107744		-1.2426456.3875	275.182	
33	0.065	0.111111		-1.2212356.3875	274.137	
34	0.065	0.114478		-1.2055356.3875	273.37	
35	0.065	0.117845		-1.1901256.3875	272.617	
36	0.065	0.121212		-1.17 56.3875	271.635	
37	0.065	0.124579		-1.1552256.3875	270.913	
38	0.065	0.127946		-1.1406956.3875	270.204	
39	0.065	0.131313		-1.1216856.3875	269.275	
40	0.065	0.13468	-1.1076856.3875	268.592		
41	0.065	0.138047		-1.0893556.3875	267.697	
42	0.065	0.141414		-1.0758456.3875	267.037	
43	0.065	0.144781		-1.0625256.3875	266.386	
44	0.065	0.148148		-1.0450556.3875	265.533	
45	0.065	0.151515		-1.0321556.3875	264.904	
46	0.065	0.154882		-1.0194356.3875	264.282	
47	0.065	0.158249		-1.0027156.3875	263.466	
48	0.065	0.161616		-0.990356	56.3875	262.862

49	0.065	0.164983	-0.978156	56.3875	262.266
50	0.065	0.16835	-0.9621	56.3875	261.483
51	0.065	0.171717	-0.950222	56.3875	260.903
52	0.065	0.175084	-0.934595	56.3875	260.139
53	0.065	0.178451	-0.923014	56.3875	259.574
54	0.065	0.181818	-0.911562	56.3875	259.015
55	0.065	0.185185	-0.896473	56.3875	258.278
56	0.065	0.188552	-0.885291	56.3875	257.732
57	0.065	0.191919	-0.874218	56.3875	257.191
58	0.065	0.195286	-0.859618	56.3875	256.478
59	0.065	0.198653	-0.848786	56.3875	255.949
60	0.065	0.20202	-0.834498	56.3875	255.251
61	0.065	0.205387	-0.823893	56.3875	254.733
62	0.065	0.208754	-0.813379	56.3875	254.22
63	0.065	0.212121	-0.7995	56.3875	253.542
64	0.065	0.215488	-0.789191	56.3875	253.039
65	0.065	0.218855	-0.778966	56.3875	252.54
66	0.065	0.222222	-0.765456	56.3875	251.88
67	0.065	0.225589	-0.755415	56.3875	251.389
68	0.065	0.228956	-0.745449	56.3875	250.903
69	0.065	0.232323	-0.732275	56.3875	250.259
70	0.065	0.23569	-0.722479	56.3875	249.781
71	0.065	0.239057	-0.709522	56.3875	249.148
72	0.065	0.242424	-0.699883	56.3875	248.678
73	0.065	0.245791	-0.690309	56.3875	248.21
74	0.065	0.249158	-0.677639	56.3875	247.591
75	0.065	0.252525	-0.668209	56.3875	247.131
76	0.065	0.255892	-0.658838	56.3875	246.673
77	0.065	0.259259	-0.646431	56.3875	246.067
78	0.065	0.262626	-0.637192	56.3875	245.616
79	0.065	0.265993	-0.628006	56.3875	245.168
80	0.065	0.26936	-0.615839	56.3875	244.573
81	0.065	0.272727	-0.606775	56.3875	244.131
82	0.065	0.276094	-0.594766	56.3875	243.544
83	0.065	0.279461	-0.585815	56.3875	243.107
84	0.065	0.282828	-0.576911	56.3875	242.672
85	0.065	0.286195	-0.565108	56.3875	242.096
86	0.065	0.289562	-0.556308	56.3875	241.666
87	0.065	0.292929	-0.547551	56.3875	241.239
88	0.065	0.296296	-0.535945	56.3875	240.672
89	0.065	0.299663	-0.527285	56.3875	240.249
90	0.065	0.30303	-0.515791	56.3875	239.688
91	0.065	0.306397	-0.507221	56.3875	239.269
92	0.065	0.309764	-0.498687	56.3875	238.853
93	0.065	0.313131	-0.487364	56.3875	238.3
94	0.065	0.316498	-0.478914	56.3875	237.887
95	0.065	0.319865	-0.470498	56.3875	237.476
96	0.065	0.323232	-0.459327	56.3875	236.93
97	0.065	0.326599	-0.450985	56.3875	236.523
98	0.065	0.329966	-0.442676	56.3875	236.117
99	0.065	0.333333	-0.431644	56.3875	235.579
100	0.065	0.3367	-0.423405	56.3875	235.176
101	0.13	0.340067	-0.412463	73.775	234.642
102	0.14	0.343434	-0.404297	76.45	234.243
103	0.14	0.346801	-0.396142	76.45	233.845
104	0.16	0.350168	-0.385321	81.8	233.317
105	0.16	0.353535	-0.377233	81.8	232.922
106	0.19	0.356902	-0.369171	89.825	232.528
107	0.19	0.360269	-0.358459	89.825	232.005
108	0.22	0.363636	-0.350451	97.85	231.614
109	0.23	0.367003	-0.339811	100.525	231.094
110	0.23	0.37037	-0.331854	100.525	230.706

111	0.29	0.373737	-0.323919	116.575	230.318
112	0.41	0.377104	-0.31337	148.675	229.803
113	0.5	0.380471	-0.305481	172.75	229.418
114	0.5	0.383838	-0.297612	172.75	229.033
115	0.5	0.387205	-0.287147	172.75	228.522
116	0.5	0.390572	-0.279319	172.75	228.14
117	0.5	0.393939	-0.271509	172.75	227.759
118	0.5	0.397306	-0.26112	172.75	227.251
119	0.5	0.400673	-0.253347	172.75	226.872
120	0.5	0.40404	-0.243007	172.75	226.367
121	0.5	0.407407	-0.235269	172.75	225.989
122	0.5	0.410774	-0.227545	172.75	225.612
123	0.5	0.414141	-0.217267	172.75	225.11
124	0.5	0.417508	-0.209575	172.75	224.734
125	0.5	0.420875	-0.201894	172.75	224.359
126	0.5	0.424242	-0.191671	172.75	223.86
127	0.5	0.427609	-0.184017	172.75	223.486
128	0.5	0.430976	-0.176374	172.75	223.113
129	0.5	0.434343	-0.166199	172.75	222.616
130	0.5	0.43771	-0.158579	172.75	222.244
131	0.5	0.441077	-0.148434	172.75	221.749
132	0.5	0.444444	-0.140835	172.75	221.377
133	0.5	0.447811	-0.133244	172.75	221.007
134	0.5	0.451178	-0.123135	172.75	220.513
135	0.5	0.454545	-0.115562	172.75	220.143
136	0.5	0.457912	-0.107995	172.75	219.774
137	0.5	0.461279	-0.0979139	172.75	219.281
138	0.5	0.464646	-0.0903606	172.75	218.913
139	0.5	0.468013	-0.0802981	172.75	218.421
140	0.5	0.47138	-0.0727562	172.75	218.053
141	0.5	0.474747	-0.0652187	172.75	217.685
142	0.5	0.478114	-0.0551734	172.75	217.194
143	0.5	0.481481	-0.0476439	172.75	216.827
144	0.5	0.484848	-0.0401167	172.75	216.459
145	0.5	0.488215	-0.0300838	172.75	215.969
146	0.5	0.491582	-0.0225612	172.75	215.602
147	0.5	0.494949	-0.0150408	172.75	215.234
148	0.5	0.498316	-0.00501359	172.75	214.745
149	0.5	0.501684	0.00501359	172.75	214.255
150	0.5	0.505051	0.0150408	172.75	213.766
151	0.5	0.508418	0.0225612	172.75	213.398
152	0.5	0.511785	0.0300838	172.75	213.031
153	0.5	0.515152	0.0401167	172.75	212.541
154	0.5	0.518519	0.0476439	172.75	212.173
155	0.5	0.521886	0.0551734	172.75	211.806
156	0.5	0.525253	0.0652187	172.75	211.315
157	0.5	0.52862	0.0727562	172.75	210.947
158	0.5	0.531987	0.0802981	172.75	210.579
159	0.5	0.535354	0.0903606	172.75	210.087
160	0.5	0.538721	0.0979139	172.75	209.719
161	0.5	0.542088	0.107995	172.75	209.226
162	0.5	0.545455	0.115562	172.75	208.857
163	0.5	0.548822	0.123135	172.75	208.487
164	0.5	0.552189	0.133244	172.75	207.993
165	0.5	0.555556	0.140835	172.75	207.623
166	0.5	0.558923	0.148434	172.75	207.251
167	0.5	0.56229	0.158579	172.75	206.756
168	0.5	0.565657	0.166199	172.75	206.384
169	0.5	0.569024	0.176374	172.75	205.887
170	0.5	0.572391	0.184017	172.75	205.514
171	0.5	0.575758	0.191671	172.75	205.14
172	0.5	0.579125	0.201894	172.75	204.641

173	0.5	0.582492	0.209575	172.75	204.266
174	0.5	0.585859	0.217267	172.75	203.89
175	0.5	0.589226	0.227545	172.75	203.388
176	0.5	0.592593	0.235269	172.75	203.011
177	0.5	0.59596	0.243007	172.75	202.633
178	0.5	0.599327	0.253347	172.75	202.128
179	0.5	0.602694	0.26112	172.75	201.749
180	0.5	0.606061	0.271509	172.75	201.241
181	0.5	0.609428	0.279319	172.75	200.86
182	0.5	0.612795	0.287147	172.75	200.478
183	0.5	0.616162	0.297612	172.75	199.967
184	0.5	0.619529	0.305481	172.75	199.582
185	0.5	0.622896	0.31337	172.75	199.197
186	0.5	0.626263	0.323919	172.75	198.682
187	0.5	0.62963	0.331854	172.75	198.294
188	0.5	0.632997	0.33981	172.75	197.906
189	0.5	0.636364	0.350451	172.75	197.386
190	0.5	0.639731	0.358459	172.75	196.995
191	0.5	0.643098	0.369171	172.75	196.472
192	0.5	0.646465	0.377233	172.75	196.078
193	0.5	0.649832	0.385321	172.75	195.683
194	0.5	0.653199	0.396142	172.75	195.155
195	0.5	0.656566	0.40429	172.75	194.757
196	0.5	0.659933	0.412463	172.75	194.358
197	0.5	0.6633	0.423405	172.75	193.824
198	0.5	0.666667	0.431644	172.75	193.421
199	0.5	0.670034	0.442676	172.75	192.883
200	0.5	0.673401	0.450985	172.75	192.477
201	0.5	0.676768	0.459327	172.75	192.07
202	0.5	0.680135	0.470498	172.75	191.524
203	0.5	0.683502	0.478914	172.75	191.113
204	0.5	0.686869	0.487364	172.75	190.7
205	0.5	0.690236	0.498687	172.75	190.147
206	0.5	0.693603	0.507221	172.75	189.731
207	0.5	0.69697	0.515791	172.75	189.312
208	0.5	0.700337	0.52728	172.75	188.751
209	0.5	0.703704	0.53594	172.75	188.328
210	0.5	0.707071	0.547551	172.75	187.761
211	0.5	0.710438	0.556308	172.75	187.334
212	0.5	0.713805	0.565108	172.75	186.904
213	0.5	0.717172	0.576911	172.75	186.328
214	0.5	0.720539	0.585815	172.75	185.893
215	0.5	0.723906	0.594766	172.75	185.456
216	0.5	0.727273	0.606775	172.75	184.869
217	0.5	0.73064	0.615839	172.75	184.427
218	0.5	0.734007	0.628006	172.75	183.832
219	0.5	0.737374	0.637192	172.75	183.384
220	0.5	0.740741	0.646431	172.75	182.933
221	0.5	0.744108	0.658838	172.75	182.327
222	0.5	0.747475	0.668209	172.75	181.869
223	0.5	0.750842	0.677639	172.75	181.409
224	0.5	0.754209	0.690309	172.75	180.79
225	0.5	0.757576	0.699883	172.75	180.322
226	0.5	0.760943	0.709522	172.75	179.852
227	0.5	0.76431	0.722479	172.75	179.219
228	0.5	0.767677	0.732275	172.75	178.741
229	0.5	0.771044	0.745449	172.75	178.097
230	0.5	0.774411	0.755415	172.75	177.611
231	0.5	0.777778	0.765456	172.75	177.12
232	0.5	0.781145	0.778966	172.75	176.46
233	0.5	0.784512	0.789191	172.75	175.961
234	0.5	0.787879	0.7995	172.75	175.458

235	0.5	0.791246	0.813379	172.75	174.78
236	0.5	0.794613	0.823893	172.75	174.267
237	0.5	0.79798	0.834498	172.75	173.749
238	0.5	0.801347	0.848786	172.75	173.051
239	0.5	0.804714	0.859618	172.75	172.522
240	0.5	0.808081	0.874218	172.75	171.809
241	0.5	0.811448	0.885291	172.75	171.268
242	0.5	0.814815	0.896473	172.75	170.722
243	0.5	0.818182	0.911562	172.75	169.985
244	0.5	0.821549	0.923014	172.75	169.426
245	0.5	0.824916	0.93459	172.75	168.861
246	0.5	0.828283	0.950222	172.75	168.097
247	0.5	0.83165	0.9621	172.75	167.517
248	0.5	0.835017	0.97815	172.75	166.734
249	0.5	0.838384	0.990356	172.75	166.138
250	0.5	0.841751	1.00271	172.75	165.534
251	0.5	0.845118	1.01943	172.75	164.718
252	0.5	0.848485	1.03215	172.75	164.096
253	0.5	0.851852	1.04505	172.75	163.467
254	0.5	0.855219	1.06252	172.75	162.614
255	0.5	0.858586	1.07584	172.75	161.963
256	0.5	0.861953	1.08935	172.75	161.303
257	0.5	0.86532	1.10768	172.75	160.408
258	0.5	0.868687	1.12168	172.75	159.725
259	0.5	0.872054	1.14069	172.75	158.796
260	0.5	0.875421	1.15522	172.75	158.087
261	0.5	0.878788	1.17	172.75	157.365
262	0.5	0.882155	1.19012	172.75	156.383
263	0.5	0.885522	1.20553	172.75	155.63
264	0.5	0.888889	1.22123	172.75	154.863
265	0.5	0.892256	1.24264	172.75	153.818
266	0.5	0.895623	1.25908	172.75	153.015
267	0.5	0.89899	1.27588	172.75	152.195
268	0.5	0.902357	1.29884	172.75	151.074
269	0.5	0.905724	1.31652	172.75	150.21
270	0.5	0.909091	1.34075	172.75	149.026
271	0.5	0.912458	1.35946	172.75	148.113
272	0.5	0.915825	1.37866	172.75	147.176
273	0.5	0.919192	1.40507	172.75	145.886
274	0.5	0.922559	1.42554	172.75	144.886
275	0.5	0.925926	1.44663	172.75	143.856
276	0.5	0.929293	1.47579	172.75	142.432
277	0.5	0.93266	1.49852	172.75	141.323
278	0.5	0.936027	1.53007	172.75	139.782
279	0.5	0.939394	1.55477	172.75	138.575
280	0.5	0.942761	1.58047	172.75	137.321
281	0.5	0.946128	1.61644	172.75	135.564
282	0.5	0.949495	1.64485	172.75	134.176
283	0.5	0.952862	1.67466	172.75	132.721
284	0.5	0.956229	1.71688	172.75	130.659
285	0.5	0.959596	1.75069	172.75	129.008
286	0.5	0.962963	1.78661	172.75	127.254
287	0.88	0.96633	1.83843	274.4	124.724
288	0.92	0.969697	1.88079	285.1	122.655
289	0.97	0.973064	1.94314	298.475	119.61
290	1.1	0.976431	1.99539	333.25	117.058
291	1.4	0.979798	2.05375	413.5	114.209
292	1.4	0.983165	2.14441	413.5	109.781
293	1.6	0.986532	2.22621	467	105.787
294	1.7	0.989899	2.32634	493.75	100.897
295	1.8	0.993266	2.51213	520.5	91.8241
296	1.9	0.996633	2.74777	547.25	80.3175

Shapiro-Francia Test of Normality

Parameter: Trichloroethylene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.73337	-2.74777	7.55021	7.51065
2	-2.73337	-2.51213	13.861	14.3772
3	-2.73337	-2.32634	19.2729	20.736
4	-2.73337	-2.22621	24.2289	26.821
5	-2.73337	-2.14441	28.8274	32.6825
6	-2.73337	-2.05375	33.0453	38.2961
7	-2.73337	-1.99539	37.0269	43.7503
8	-2.73337	-1.94314	40.8026	49.0616
9	-2.73337	-1.88079	44.34	54.2025
10	-2.73337	-1.83843	47.7198	59.2276
11	-2.73337	-1.78661	50.9118	64.111
12	-2.73337	-1.75069	53.9767	68.8963
13	-2.73337	-1.71688	56.9244	73.5892
14	-2.73337	-1.67466	59.7289	78.1666
15	-2.73337	-1.64485	62.4344	82.6626
16	-2.73337	-1.61644	65.0473	87.081
17	-2.73337	-1.58047	67.5452	91.4009
18	-2.73337	-1.55477	69.9625	95.6507
19	-2.73337	-1.53007	72.3036	99.8329
20	-2.73337	-1.49852	74.5491	103.929
21	-2.73337	-1.47579	76.7271	107.963
22	-2.73337	-1.44663	78.8198	111.917
23	-2.73337	-1.42554	80.852	115.814
24	-2.73337	-1.40507	82.8262	119.654
25	-2.73337	-1.37866	84.7269	123.422
26	-2.73337	-1.35946	86.5751	127.138
27	-2.73337	-1.34075	88.3727	130.803
28	-2.73337	-1.31652	90.1059	134.402
29	-2.73337	-1.29884	91.7929	137.952
30	-2.73337	-1.27588	93.4208	141.439
31	-2.73337	-1.25908	95.006	144.881
32	-2.73337	-1.24264	96.5502	148.277
33	-2.73337	-1.22123	98.0416	151.616
34	-2.73337	-1.20553	99.4949	154.911
35	-2.73337	-1.19012	100.911	158.164
36	-2.73337	-1.17	102.28	161.362
37	-2.73337	-1.15522	103.615	164.519
38	-2.73337	-1.14069	104.916	167.637
39	-2.73337	-1.12168	106.174	170.703
40	-2.73337	-1.10768	107.401	173.731
41	-2.73337	-1.08935	108.588	176.709
42	-2.73337	-1.07584	109.745	179.649
43	-2.73337	-1.06252	110.874	182.554
44	-2.73337	-1.04505	111.966	185.41
45	-2.73337	-1.03215	113.032	188.231
46	-2.73337	-1.01943	114.071	191.018
47	-2.73337	-1.00271	115.076	193.759
48	-2.73337	-0.990356	116.057	196.466
49	-2.73337	-0.97815	117.014	199.139
50	-2.73337	-0.9621	117.939	201.769
51	-2.73337	-0.950222	118.842	204.366

52	-2.73337	-0.93459	119.716	206.921
53	-2.73337	-0.923014	120.568	209.444
54	-2.73337	-0.911562	121.399	211.935
55	-2.73337	-0.896473	122.202	214.386
56	-2.73337	-0.885291	122.986	216.806
57	-2.73337	-0.874218	123.75	219.195
58	-2.73337	-0.859618	124.489	221.545
59	-2.73337	-0.848786	125.21	223.865
60	-2.73337	-0.834498	125.906	226.146
61	-2.73337	-0.823893	126.585	228.398
62	-2.73337	-0.813379	127.247	230.621
63	-2.73337	-0.7995	127.886	232.806
64	-2.73337	-0.789191	128.509	234.964
65	-2.73337	-0.778966	129.115	237.093
66	-2.73337	-0.765456	129.701	239.185
67	-2.73337	-0.755415	130.272	241.25
68	-2.73337	-0.745449	130.828	243.288
69	-2.73337	-0.732275	131.364	245.289
70	-2.73337	-0.722479	131.886	247.264
71	-2.73337	-0.709522	132.389	249.203
72	-2.73337	-0.699883	132.879	251.116
73	-2.73337	-0.690309	133.356	253.003
74	-2.73337	-0.677639	133.815	254.855
75	-2.73337	-0.668209	134.261	256.682
76	-2.73337	-0.658838	134.695	258.483
77	-2.73337	-0.646431	135.113	260.25
78	-2.73337	-0.637192	135.519	261.991
79	-2.73337	-0.628006	135.914	263.708
80	-2.73337	-0.615839	136.293	265.391
81	-2.73337	-0.606775	136.661	267.05
82	-2.73337	-0.594766	137.015	268.675
83	-2.73337	-0.585815	137.358	270.277
84	-2.73337	-0.576911	137.691	271.854
85	-2.73337	-0.565108	138.01	273.398
86	-2.73337	-0.556308	138.32	274.919
87	-2.73337	-0.547551	138.619	276.416
88	-2.73337	-0.53594	138.907	277.88
89	-2.73337	-0.52728	139.185	279.322
90	-2.73337	-0.515791	139.451	280.732
91	-2.73337	-0.507221	139.708	282.118
92	-2.73337	-0.498687	139.957	283.481
93	-2.04022	-0.487364	140.194	284.475
94	-1.96611	-0.478914	140.424	285.417
95	-1.96611	-0.470498	140.645	286.342
96	-1.83258	-0.459327	140.856	287.184
97	-1.83258	-0.450985	141.059	288.01
98	-1.66073	-0.442676	141.255	288.745
99	-1.66073	-0.431644	141.442	289.462
100	-1.51413	-0.423405	141.621	290.103
101	-1.46968	-0.412463	141.791	290.71
102	-1.46968	-0.40429	141.954	291.304
103	-1.23787	-0.396142	142.111	291.794
104	-0.891598	-0.385321	142.26	292.138
105	-0.693147	-0.377233	142.402	292.399
106	-0.693147	-0.369171	142.538	292.655
107	-0.693147	-0.358459	142.667	292.903
108	-0.693147	-0.350451	142.79	293.146
109	-0.693147	-0.33981	142.905	293.382
110	-0.693147	-0.331854	143.015	293.612
111	-0.693147	-0.323919	143.12	293.836
112	-0.693147	-0.31337	143.218	294.054
113	-0.693147	-0.305481	143.312	294.265

114	-0.693147	-0.297612	143.4	294.472
115	-0.693147	-0.287147	143.483	294.671
116	-0.693147	-0.279319	143.561	294.864
117	-0.693147	-0.271509	143.635	295.053
118	-0.693147	-0.26112143.703	295.234	
119	-0.693147	-0.253347	143.767	295.409
120	-0.693147	-0.243007	143.826	295.578
121	-0.693147	-0.235269	143.881	295.741
122	-0.693147	-0.227545	143.933	295.898
123	-0.693147	-0.217267	143.98	296.049
124	-0.693147	-0.209575	144.024	296.194
125	-0.693147	-0.201894	144.065	296.334
126	-0.693147	-0.191671	144.102	296.467
127	-0.693147	-0.184017	144.136	296.595
128	-0.693147	-0.176374	144.167	296.717
129	-0.693147	-0.166199	144.194	296.832
130	-0.693147	-0.158579	144.219	296.942
131	-0.693147	-0.148434	144.241	297.045
132	-0.693147	-0.140835	144.261	297.143
133	-0.693147	-0.133244	144.279	297.235
134	-0.693147	-0.123135	144.294	297.32
135	-0.693147	-0.115562	144.308	297.4
136	-0.693147	-0.107995	144.319	297.475
137	-0.693147	-0.0979139	144.329	297.543
138	-0.693147	-0.0903606	144.337	297.606
139	-0.693147	-0.0802981	144.343	297.661
140	-0.693147	-0.0727562	144.349	297.712
141	-0.693147	-0.0652187	144.353	297.757
142	-0.693147	-0.0551734	144.356	297.795
143	-0.693147	-0.0476439	144.358	297.828
144	-0.693147	-0.0401167	144.36	297.856
145	-0.693147	-0.0300838	144.361	297.877
146	-0.693147	-0.0225612	144.361	297.893
147	-0.693147	-0.0150408	144.362	297.903
148	-0.693147	-0.00501359	144.362	297.906
149	-0.693147	0.00501359	144.362	297.903
150	-0.693147	0.0150408	144.362	297.893
151	-0.693147	0.0225612	144.362	297.877
152	-0.693147	0.0300838	144.363	297.856
153	-0.693147	0.0401167	144.365	297.828
154	-0.693147	0.0476439	144.367	297.795
155	-0.693147	0.0551734	144.37	297.757
156	-0.693147	0.0652187	144.374	297.712
157	-0.693147	0.0727562	144.38	297.661
158	-0.693147	0.0802981	144.386	297.606
159	-0.693147	0.0903606	144.394	297.543
160	-0.693147	0.0979139	144.404	297.475
161	-0.693147	0.107995	144.416	297.4
162	-0.693147	0.115562	144.429	297.32
163	-0.693147	0.123135	144.444	297.235
164	-0.693147	0.133244	144.462	297.143
165	-0.693147	0.140835	144.482	297.045
166	-0.693147	0.148434	144.504	296.942
167	-0.693147	0.158579	144.529	296.832
168	-0.693147	0.166199	144.557	296.717
169	-0.693147	0.176374	144.588	296.595
170	-0.693147	0.184017	144.621	296.467
171	-0.693147	0.191671	144.658	296.334
172	-0.693147	0.201894	144.699	296.194
173	-0.693147	0.209575	144.743	296.049
174	-0.693147	0.217267	144.79	295.898
175	-0.693147	0.227545	144.842	295.741

176	-0.693147	0.235269	144.897	295.578
177	-0.693147	0.243007	144.956	295.409
178	-0.693147	0.253347	145.02	295.234
179	-0.693147	0.26112	145.089	295.053
180	-0.693147	0.271509	145.162	294.864
181	-0.693147	0.279319	145.24	294.671
182	-0.693147	0.287147	145.323	294.472
183	-0.693147	0.297612	145.411	294.265
184	-0.693147	0.305481	145.505	294.054
185	-0.693147	0.31337	145.603	293.836
186	-0.693147	0.323919	145.708	293.612
187	-0.693147	0.331854	145.818	293.382
188	-0.693147	0.33981	145.933	293.146
189	-0.693147	0.350451	146.056	292.903
190	-0.693147	0.358459	146.185	292.655
191	-0.693147	0.369171	146.321	292.399
192	-0.693147	0.377233	146.463	292.138
193	-0.693147	0.385321	146.612	291.871
194	-0.693147	0.396142	146.769	291.596
195	-0.693147	0.40429	146.932	291.316
196	-0.693147	0.412463	147.102	291.03
197	-0.693147	0.423405	147.282	290.736
198	-0.693147	0.431644	147.468	290.437
199	-0.693147	0.442676	147.664	290.13
200	-0.693147	0.450985	147.867	289.818
201	-0.693147	0.459327	148.078	289.499
202	-0.693147	0.470498	148.3	289.173
203	-0.693147	0.478914	148.529	288.841
204	-0.693147	0.487364	148.767	288.503
205	-0.693147	0.498687	149.015	288.158
206	-0.693147	0.507221	149.272	287.806
207	-0.693147	0.515791	149.539	287.449
208	-0.693147	0.52728	149.817	287.083
209	-0.693147	0.53594	150.104	286.712
210	-0.693147	0.547551	150.404	286.332
211	-0.693147	0.556308	150.713	285.947
212	-0.693147	0.565108	151.032	285.555
213	-0.693147	0.576911	151.365	285.155
214	-0.693147	0.585815	151.708	284.749
215	-0.693147	0.594766	152.062	284.337
216	-0.693147	0.606775	152.43	283.916
217	-0.693147	0.615839	152.81	283.489
218	-0.693147	0.628006	153.204	283.054
219	-0.693147	0.637192	153.61	282.612
220	-0.693147	0.646431	154.028	282.164
221	-0.693147	0.658838	154.462	281.708
222	-0.693147	0.668209	154.908	281.244
223	-0.693147	0.677639	155.368	280.775
224	-0.693147	0.690309	155.844	280.296
225	-0.693147	0.699883	156.334	279.811
226	-0.693147	0.709522	156.837	279.319
227	-0.693147	0.722479	157.359	278.818
228	-0.693147	0.732275	157.896	278.311
229	-0.693147	0.745449	158.451	277.794
230	-0.693147	0.755415	159.022	277.271
231	-0.693147	0.765456	159.608	276.74
232	-0.693147	0.778966	160.215	276.2
233	-0.693147	0.789191	160.837	275.653
234	-0.693147	0.7995	161.477	275.099
235	-0.693147	0.813379	162.138	274.535
236	-0.693147	0.823893	162.817	273.964
237	-0.693147	0.834498	163.513	273.386

238	-0.693147		0.848786	164.234	272.797
239	-0.693147		0.859618	164.973	272.201
240	-0.693147		0.874218	165.737	271.595
241	-0.693147		0.885291	166.521	270.982
242	-0.693147		0.896473	167.325	270.36
243	-0.693147		0.911562	168.155	269.729
244	-0.693147		0.923014	169.007	269.089
245	-0.693147		0.93459	169.881	268.441
246	-0.693147		0.950222	170.784	267.782
247	-0.693147		0.9621	171.709	267.115
248	-0.693147		0.97815	172.666	266.437
249	-0.693147		0.990356	173.647	265.751
250	-0.693147		1.00271	174.652	265.056
251	-0.693147		1.01943	175.692	264.349
252	-0.693147		1.03215	176.757	263.634
253	-0.693147		1.04505	177.849	262.91
254	-0.693147		1.06252	178.978	262.173
255	-0.693147		1.07584	180.136	261.427
256	-0.693147		1.08935	181.322	260.672
257	-0.693147		1.10768	182.549	259.904
258	-0.693147		1.12168	183.807	259.127
259	-0.693147		1.14069	185.108	258.336
260	-0.693147		1.15522	186.443	257.536
261	-0.693147		1.17	187.812	256.725
262	-0.693147		1.19012	189.228	255.9
263	-0.693147		1.20553	190.682	255.064
264	-0.693147		1.22123	192.173	254.218
265	-0.693147		1.24264	193.717	253.356
266	-0.693147		1.25908	195.302	252.484
267	-0.693147		1.27588	196.93	251.599
268	-0.693147		1.29884	198.617	250.699
269	-0.693147		1.31652	200.351	249.786
270	-0.693147		1.34075	202.148	248.857
271	-0.693147		1.35946	203.996	247.915
272	-0.693147		1.37866	205.897	246.959
273	-0.693147		1.40507	207.871	245.985
274	-0.693147		1.42554	209.903	244.997
275	-0.693147		1.44663	211.996	243.994
276	-0.693147		1.47579	214.174	242.971
277	-0.693147		1.49852	216.42	241.933
278	-0.693147		1.53007	218.761	240.872
279	-0.127833		1.55477	221.178	240.673
280	-0.0833816		1.58047	223.676	240.542
281	-0.0304592		1.61644	226.289	240.492
282	0	1.64485	228.994	240.492	
283	0	1.67466	231.799	240.492	
284	0	1.71688	234.747	240.492	
285	0	1.75069	237.811	240.492	
286	0	1.78661	241.003	240.492	
287	0	1.83843	244.383	240.492	
288	0	1.88079	247.921	240.492	
289	0	1.94314	251.696	240.492	
290	0.0953102		1.99539	255.678	240.683
291	0.336472		2.05375	259.896	241.374
292	0.336472		2.14441	264.494	242.095
293	0.470004		2.22621	269.45	243.141
294	0.530628		2.32634	274.862	244.376
295	0.587787		2.51213	281.173	245.852
296	0.641854		2.74777	288.723	247.616

Data Set Standard Deviation = 0.999467

Numerator = 61313.7
Denominator = 85082.6
W Statistic = 0.720637 = 61313.7 / 85082.6

5% Critical value of 0.976 exceeds 0.720637
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.720637
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Trichloroethylene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.847766
0.847766 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.733370	0.003367	-2.747774	74.662	348.683
2	-2.733370	0.00673401	-2.512137	74.662	337.176
3	-2.733370	0.010101	-2.326347	74.662	328.103
4	-2.733370	0.013468	-2.226217	74.662	323.213
5	-2.733370	0.016835	-2.144417	74.662	319.219
6	-2.733370	0.020202	-2.053757	74.662	314.791
7	-2.733370	0.023569	-1.995397	74.662	311.942
8	-2.733370	0.026936	-1.943147	74.662	309.39
9	-2.733370	0.030303	-1.880797	74.662	306.345
10	-2.733370	0.03367	-1.838437	74.662	304.276
11	-2.733370	0.037037	-1.786617	74.662	301.746
12	-2.733370	0.040404	-1.750697	74.662	299.992
13	-2.733370	0.043771	-1.716887	74.662	298.341
14	-2.733370	0.047138	-1.674667	74.662	296.279
15	-2.733370	0.0505051	-1.644857	74.662	294.824
16	-2.733370	0.0538721	-1.616447	74.662	293.436
17	-2.733370	0.0572391	-1.580477	74.662	291.679
18	-2.733370	0.0606061	-1.554777	74.662	290.425
19	-2.733370	0.0639731	-1.530077	74.662	289.218
20	-2.733370	0.0673401	-1.498527	74.662	287.677
21	-2.733370	0.0707071	-1.475797	74.662	286.568
22	-2.733370	0.0740741	-1.446637	74.662	285.144
23	-2.733370	0.0774411	-1.425547	74.662	284.114
24	-2.733370	0.0808081	-1.405077	74.662	283.114
25	-2.733370	0.0841751	-1.378667	74.662	281.824
26	-2.733370	0.0875421	-1.359467	74.662	280.887
27	-2.733370	0.0909091	-1.340757	74.662	279.974
28	-2.733370	0.0942761	-1.316527	74.662	278.79
29	-2.733370	0.0976431	-1.298847	74.662	277.926
30	-2.733370	0.10101	-1.275887	74.662	276.805
31	-2.733370	0.104377	-1.259087	74.662	275.985
32	-2.733370	0.107744	-1.242647	74.662	275.182
33	-2.733370	0.111111	-1.221237	74.662	274.137
34	-2.733370	0.114478	-1.205537	74.662	273.37
35	-2.733370	0.117845	-1.190127	74.662	272.617
36	-2.733370	0.121212	-1.17	74.662	271.635
37	-2.733370	0.124579	-1.155227	74.662	270.913
38	-2.733370	0.127946	-1.140697	74.662	270.204
39	-2.733370	0.131313	-1.121687	74.662	269.275
40	-2.733370	0.13468	-1.107687	74.662	268.592
41	-2.733370	0.138047	-1.089357	74.662	267.697
42	-2.733370	0.141414	-1.075847	74.662	267.037
43	-2.733370	0.144781	-1.062527	74.662	266.386
44	-2.733370	0.148148	-1.045057	74.662	265.533
45	-2.733370	0.151515	-1.032157	74.662	264.904
46	-2.733370	0.154882	-1.019437	74.662	264.282
47	-2.733370	0.158249	-1.002717	74.662	263.466
48	-2.733370	0.161616	-0.990356	74.662	262.862

49	-2.733370.164983	-0.9781574.662	262.266		
50	-2.733370.16835 -0.9621	74.662	261.483		
51	-2.733370.171717	-0.950222	74.662	260.903	
52	-2.733370.175084	-0.9345974.662	260.139		
53	-2.733370.178451	-0.923014	74.662	259.574	
54	-2.733370.181818	-0.911562	74.662	259.015	
55	-2.733370.185185	-0.896473	74.662	258.278	
56	-2.733370.188552	-0.885291	74.662	257.732	
57	-2.733370.191919	-0.874218	74.662	257.191	
58	-2.733370.195286	-0.859618	74.662	256.478	
59	-2.733370.198653	-0.848786	74.662	255.949	
60	-2.733370.20202 -0.834498	74.662	255.251		
61	-2.733370.205387	-0.823893	74.662	254.733	
62	-2.733370.208754	-0.813379	74.662	254.22	
63	-2.733370.212121	-0.7995 74.662	253.542		
64	-2.733370.215488	-0.789191	74.662	253.039	
65	-2.733370.218855	-0.778966	74.662	252.54	
66	-2.733370.222222	-0.765456	74.662	251.88	
67	-2.733370.225589	-0.755415	74.662	251.389	
68	-2.733370.228956	-0.745449	74.662	250.903	
69	-2.733370.232323	-0.732275	74.662	250.259	
70	-2.733370.23569 -0.722479	74.662	249.781		
71	-2.733370.239057	-0.709522	74.662	249.148	
72	-2.733370.242424	-0.699883	74.662	248.678	
73	-2.733370.245791	-0.690309	74.662	248.21	
74	-2.733370.249158	-0.677639	74.662	247.591	
75	-2.733370.252525	-0.668209	74.662	247.131	
76	-2.733370.255892	-0.658838	74.662	246.673	
77	-2.733370.259259	-0.646431	74.662	246.067	
78	-2.733370.262626	-0.637192	74.662	245.616	
79	-2.733370.265993	-0.628006	74.662	245.168	
80	-2.733370.26936 -0.615839	74.662	244.573		
81	-2.733370.272727	-0.606775	74.662	244.131	
82	-2.733370.276094	-0.594766	74.662	243.544	
83	-2.733370.279461	-0.585815	74.662	243.107	
84	-2.733370.282828	-0.576911	74.662	242.672	
85	-2.733370.286195	-0.565108	74.662	242.096	
86	-2.733370.289562	-0.556308	74.662	241.666	
87	-2.733370.292929	-0.547551	74.662	241.239	
88	-2.733370.296296	-0.5359474.662	240.672		
89	-2.733370.299663	-0.5272874.662	240.249		
90	-2.733370.30303 -0.515791	74.662	239.688		
91	-2.733370.306397	-0.507221	74.662	239.269	
92	-2.733370.309764	-0.498687	74.662	238.853	
93	-2.040220.313131	-0.487364	167.37	238.3	
94	-1.966110.316498	-0.478914	177.282	237.887	
95	-1.966110.319865	-0.470498	177.282	237.476	
96	-1.832580.323232	-0.459327	195.142	236.93	
97	-1.832580.326599	-0.450985	195.142	236.523	
98	-1.660730.329966	-0.442676	218.127	236.117	
99	-1.660730.333333	-0.431644	218.127	235.579	
100	-1.514130.3367 -0.423405	237.735	235.176		
101	-1.469680.340067	-0.412463	243.681	234.642	
102	-1.469680.343434	-0.40429243.681	234.243		
103	-1.237870.346801	-0.396142	274.684	233.845	
104	-0.891598	0.350168	-0.385321	320.999	233.317
105	-0.693147	0.353535	-0.377233	347.542	232.922
106	-0.693147	0.356902	-0.369171	347.542	232.528
107	-0.693147	0.360269	-0.358459	347.542	232.005
108	-0.693147	0.363636	-0.350451	347.542	231.614
109	-0.693147	0.367003	-0.33981347.542	231.094	
110	-0.693147	0.37037 -0.331854	347.542	230.706	

111	-0.693147	0.373737	-0.323919	347.542	230.318
112	-0.693147	0.377104	-0.31337	347.542	229.803
113	-0.693147	0.380471	-0.305481	347.542	229.418
114	-0.693147	0.383838	-0.297612	347.542	229.033
115	-0.693147	0.387205	-0.287147	347.542	228.522
116	-0.693147	0.390572	-0.279319	347.542	228.14
117	-0.693147	0.393939	-0.271509	347.542	227.759
118	-0.693147	0.397306	-0.26112	347.542	227.251
119	-0.693147	0.400673	-0.253347	347.542	226.872
120	-0.693147	0.40404	-0.243007	347.542	226.367
121	-0.693147	0.407407	-0.235269	347.542	225.989
122	-0.693147	0.410774	-0.227545	347.542	225.612
123	-0.693147	0.414141	-0.217267	347.542	225.11
124	-0.693147	0.417508	-0.209575	347.542	224.734
125	-0.693147	0.420875	-0.201894	347.542	224.359
126	-0.693147	0.424242	-0.191671	347.542	223.86
127	-0.693147	0.427609	-0.184017	347.542	223.486
128	-0.693147	0.430976	-0.176374	347.542	223.113
129	-0.693147	0.434343	-0.166199	347.542	222.616
130	-0.693147	0.43771	-0.158579	347.542	222.244
131	-0.693147	0.441077	-0.148434	347.542	221.749
132	-0.693147	0.444444	-0.140835	347.542	221.377
133	-0.693147	0.447811	-0.133244	347.542	221.007
134	-0.693147	0.451178	-0.123135	347.542	220.513
135	-0.693147	0.454545	-0.115562	347.542	220.143
136	-0.693147	0.457912	-0.107995	347.542	219.774
137	-0.693147	0.461279	-0.0979139	347.542	219.281
138	-0.693147	0.464646	-0.0903606	347.542	218.913
139	-0.693147	0.468013	-0.0802981	347.542	218.421
140	-0.693147	0.47138	-0.0727562	347.542	218.053
141	-0.693147	0.474747	-0.0652187	347.542	217.685
142	-0.693147	0.478114	-0.0551734	347.542	217.194
143	-0.693147	0.481481	-0.0476439	347.542	216.827
144	-0.693147	0.484848	-0.0401167	347.542	216.459
145	-0.693147	0.488215	-0.0300838	347.542	215.969
146	-0.693147	0.491582	-0.0225612	347.542	215.602
147	-0.693147	0.494949	-0.0150408	347.542	215.234
148	-0.693147	0.498316	-0.00501359	347.542	214.745
149	-0.693147	0.501684	0.00501359	347.542	214.255
150	-0.693147	0.505051	0.0150408	347.542	213.766
151	-0.693147	0.508418	0.0225612	347.542	213.398
152	-0.693147	0.511785	0.0300838	347.542	213.031
153	-0.693147	0.515152	0.0401167	347.542	212.541
154	-0.693147	0.518519	0.0476439	347.542	212.173
155	-0.693147	0.521886	0.0551734	347.542	211.806
156	-0.693147	0.525253	0.0652187	347.542	211.315
157	-0.693147	0.52862	0.0727562	347.542	210.947
158	-0.693147	0.531987	0.0802981	347.542	210.579
159	-0.693147	0.535354	0.0903606	347.542	210.087
160	-0.693147	0.538721	0.0979139	347.542	209.719
161	-0.693147	0.542088	0.107995	347.542	209.226
162	-0.693147	0.545455	0.115562	347.542	208.857
163	-0.693147	0.548822	0.123135	347.542	208.487
164	-0.693147	0.552189	0.133244	347.542	207.993
165	-0.693147	0.555556	0.140835	347.542	207.623
166	-0.693147	0.558923	0.148434	347.542	207.251
167	-0.693147	0.56229	0.158579	347.542	206.756
168	-0.693147	0.565657	0.166199	347.542	206.384
169	-0.693147	0.569024	0.176374	347.542	205.887
170	-0.693147	0.572391	0.184017	347.542	205.514
171	-0.693147	0.575758	0.191671	347.542	205.14
172	-0.693147	0.579125	0.201894	347.542	204.641

173	-0.693147	0.582492	0.209575	347.542	204.266
174	-0.693147	0.585859	0.217267	347.542	203.89
175	-0.693147	0.589226	0.227545	347.542	203.388
176	-0.693147	0.592593	0.235269	347.542	203.011
177	-0.693147	0.59596	0.243007	347.542	202.633
178	-0.693147	0.599327	0.253347	347.542	202.128
179	-0.693147	0.602694	0.26112	347.542	201.749
180	-0.693147	0.606061	0.271509	347.542	201.241
181	-0.693147	0.609428	0.279319	347.542	200.86
182	-0.693147	0.612795	0.287147	347.542	200.478
183	-0.693147	0.616162	0.297612	347.542	199.967
184	-0.693147	0.619529	0.305481	347.542	199.582
185	-0.693147	0.622896	0.31337	347.542	199.197
186	-0.693147	0.626263	0.323919	347.542	198.682
187	-0.693147	0.62963	0.331854	347.542	198.294
188	-0.693147	0.632997	0.33981	347.542	197.906
189	-0.693147	0.636364	0.350451	347.542	197.386
190	-0.693147	0.639731	0.358459	347.542	196.995
191	-0.693147	0.643098	0.369171	347.542	196.472
192	-0.693147	0.646465	0.377233	347.542	196.078
193	-0.693147	0.649832	0.385321	347.542	195.683
194	-0.693147	0.653199	0.396142	347.542	195.155
195	-0.693147	0.656566	0.40429	347.542	194.757
196	-0.693147	0.659933	0.412463	347.542	194.358
197	-0.693147	0.6633	0.423405	347.542	193.824
198	-0.693147	0.666667	0.431644	347.542	193.421
199	-0.693147	0.670034	0.442676	347.542	192.883
200	-0.693147	0.673401	0.450985	347.542	192.477
201	-0.693147	0.676768	0.459327	347.542	192.07
202	-0.693147	0.680135	0.470498	347.542	191.524
203	-0.693147	0.683502	0.478914	347.542	191.113
204	-0.693147	0.686869	0.487364	347.542	190.7
205	-0.693147	0.690236	0.498687	347.542	190.147
206	-0.693147	0.693603	0.507221	347.542	189.731
207	-0.693147	0.69697	0.515791	347.542	189.312
208	-0.693147	0.700337	0.52728	347.542	188.751
209	-0.693147	0.703704	0.53594	347.542	188.328
210	-0.693147	0.707071	0.547551	347.542	187.761
211	-0.693147	0.710438	0.556308	347.542	187.334
212	-0.693147	0.713805	0.565108	347.542	186.904
213	-0.693147	0.717172	0.576911	347.542	186.328
214	-0.693147	0.720539	0.585815	347.542	185.893
215	-0.693147	0.723906	0.594766	347.542	185.456
216	-0.693147	0.727273	0.606775	347.542	184.869
217	-0.693147	0.73064	0.615839	347.542	184.427
218	-0.693147	0.734007	0.628006	347.542	183.832
219	-0.693147	0.737374	0.637192	347.542	183.384
220	-0.693147	0.740741	0.646431	347.542	182.933
221	-0.693147	0.744108	0.658838	347.542	182.327
222	-0.693147	0.747475	0.668209	347.542	181.869
223	-0.693147	0.750842	0.677639	347.542	181.409
224	-0.693147	0.754209	0.690309	347.542	180.79
225	-0.693147	0.757576	0.699883	347.542	180.322
226	-0.693147	0.760943	0.709522	347.542	179.852
227	-0.693147	0.76431	0.722479	347.542	179.219
228	-0.693147	0.767677	0.732275	347.542	178.741
229	-0.693147	0.771044	0.745449	347.542	178.097
230	-0.693147	0.774411	0.755415	347.542	177.611
231	-0.693147	0.777778	0.765456	347.542	177.12
232	-0.693147	0.781145	0.778966	347.542	176.46
233	-0.693147	0.784512	0.789191	347.542	175.961
234	-0.693147	0.787879	0.7995	347.542	175.458

235	-0.693147	0.791246	0.813379	347.542	174.78
236	-0.693147	0.794613	0.823893	347.542	174.267
237	-0.693147	0.79798	0.834498	347.542	173.749
238	-0.693147	0.801347	0.848786	347.542	173.051
239	-0.693147	0.804714	0.859618	347.542	172.522
240	-0.693147	0.808081	0.874218	347.542	171.809
241	-0.693147	0.811448	0.885291	347.542	171.268
242	-0.693147	0.814815	0.896473	347.542	170.722
243	-0.693147	0.818182	0.911562	347.542	169.985
244	-0.693147	0.821549	0.923014	347.542	169.426
245	-0.693147	0.824916	0.93459	347.542	168.861
246	-0.693147	0.828283	0.950222	347.542	168.097
247	-0.693147	0.83165	0.9621	347.542	167.517
248	-0.693147	0.835017	0.97815	347.542	166.734
249	-0.693147	0.838384	0.990356	347.542	166.138
250	-0.693147	0.841751	1.00271	347.542	165.534
251	-0.693147	0.845118	1.01943	347.542	164.718
252	-0.693147	0.848485	1.03215	347.542	164.096
253	-0.693147	0.851852	1.04505	347.542	163.467
254	-0.693147	0.855219	1.06252	347.542	162.614
255	-0.693147	0.858586	1.07584	347.542	161.963
256	-0.693147	0.861953	1.08935	347.542	161.303
257	-0.693147	0.86532	1.10768	347.542	160.408
258	-0.693147	0.868687	1.12168	347.542	159.725
259	-0.693147	0.872054	1.14069	347.542	158.796
260	-0.693147	0.875421	1.15522	347.542	158.087
261	-0.693147	0.878788	1.17	347.542	157.365
262	-0.693147	0.882155	1.19012	347.542	156.383
263	-0.693147	0.885522	1.20553	347.542	155.63
264	-0.693147	0.888889	1.22123	347.542	154.863
265	-0.693147	0.892256	1.24264	347.542	153.818
266	-0.693147	0.895623	1.25908	347.542	153.015
267	-0.693147	0.89899	1.27588	347.542	152.195
268	-0.693147	0.902357	1.29884	347.542	151.074
269	-0.693147	0.905724	1.31652	347.542	150.21
270	-0.693147	0.909091	1.34075	347.542	149.026
271	-0.693147	0.912458	1.35946	347.542	148.113
272	-0.693147	0.915825	1.37866	347.542	147.176
273	-0.693147	0.919192	1.40507	347.542	145.886
274	-0.693147	0.922559	1.42554	347.542	144.886
275	-0.693147	0.925926	1.44663	347.542	143.856
276	-0.693147	0.929293	1.47579	347.542	142.432
277	-0.693147	0.93266	1.49852	347.542	141.323
278	-0.693147	0.936027	1.53007	347.542	139.782
279	-0.127833	0.939394	1.55477	423.152	138.575
280	-0.0833816	0.942761	1.58047	429.098	137.321
281	-0.0304592	0.946128	1.61644	436.176	135.564
282	0	0.949495	1.64485	440.25	134.176
283	0	0.952862	1.67466	440.25	132.721
284	0	0.956229	1.71688	440.25	130.659
285	0	0.959596	1.75069	440.25	129.008
286	0	0.962963	1.78661	440.25	127.254
287	0	0.96633	1.83843	440.25	124.724
288	0	0.969697	1.88079	440.25	122.655
289	0	0.973064	1.94314	440.25	119.61
290	0.0953102	0.976431	1.99539	452.998	117.058
291	0.336472	0.979798	2.05375	485.253	114.209
292	0.336472	0.983165	2.14441	485.253	109.781
293	0.470004	0.986532	2.22621	503.113	105.787
294	0.530628	0.989899	2.32634	511.222	100.897
295	0.587787	0.993266	2.51213	518.866	91.8241
296	0.641854	0.996633	2.74777	526.098	80.3175

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Trichloroethylene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 92.5676%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 24
Maximum Background Value = 0
Confidence Level = 75%
False Positive Rate = 25%

Location	Date	Count	Mean	Significant
LMW-3	11/16/2013	1	-2.73337	FALSE
LMW-9	11/16/2013	1	-2.73337	FALSE
LMW-15R	11/16/2013	1	-2.73337	FALSE
LMW-6	11/16/2013	1	-2.73337	FALSE
LMW-9D	11/16/2013	1	-2.73337	FALSE
LMW-9S	11/16/2013	1	-2.73337	FALSE
LMW-8	11/16/2013	1	-0.0833816	FALSE
LMW-16	11/16/2013	1	-2.73337	FALSE
LMW-3S	11/16/2013	1	-2.73337	FALSE
LMW-10	11/16/2013	1	0.587787	TRUE
LMW-14R	11/16/2013	1	-2.73337	FALSE
LMW-7	11/16/2012	1	-1.51413	FALSE
LMW-12	11/20/2008	1	-0.693147	FALSE
LMW-13	11/20/2008	1	-0.693147	FALSE
LMW-11	11/20/2008	1	-0.693147	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE

Mann-Kendall Trend Analysis
Parameter: Trichloroethylene
Location: LMW-10
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
ND<-0.693147	ND<-0.693147	0	0	0
ND<-0.693147	ND<-0.693147	0	0	0
ND<-0.693147	ND<-0.693147	0	0	0
ND<0 J	ND<-0.693147	0.693147	1	0
ND<0 J	ND<-0.693147	0.693147	2	0
ND<0 J	ND<-0.693147	0.693147	3	0
ND<0 J	ND<-0.693147	0.693147	4	0
ND<-0.693147	ND<-0.693147	0	4	0
ND<-0.693147	ND<-0.693147	0	4	0
ND<-0.693147	ND<-0.693147	0	4	0
ND<0 J	ND<-0.693147	0.693147	5	0
-0.127833 J	ND<-0.693147	0.565314	6	0
0.530628	ND<-0.693147	1.22378	7	0
0.0953102	ND<-0.693147	0.788457	8	0
-0.0304592 J	ND<-0.693147	0.662688	9	0
0.336472	ND<-0.693147	1.02962	10	0
0.641854	ND<-0.693147	1.335	11	0
0.336472	ND<-0.693147	1.02962	12	0
0.470004	ND<-0.693147	1.16315	13	0
0.587787	ND<-0.693147	1.28093	14	0
ND<-0.693147	ND<-0.693147	0	14	0
ND<-0.693147	ND<-0.693147	0	14	0
ND<0 J	ND<-0.693147	0.693147	15	0
ND<0 J	ND<-0.693147	0.693147	16	0
ND<0 J	ND<-0.693147	0.693147	17	0
ND<0 J	ND<-0.693147	0.693147	18	0
ND<-0.693147	ND<-0.693147	0	18	0
ND<-0.693147	ND<-0.693147	0	18	0
ND<-0.693147	ND<-0.693147	0	18	0
ND<0 J	ND<-0.693147	0.693147	19	0
-0.127833 J	ND<-0.693147	0.565314	20	0
0.530628	ND<-0.693147	1.22378	21	0
0.0953102	ND<-0.693147	0.788457	22	0
-0.0304592 J	ND<-0.693147	0.662688	23	0
0.336472	ND<-0.693147	1.02962	24	0
0.641854	ND<-0.693147	1.335	25	0
0.336472	ND<-0.693147	1.02962	26	0
0.470004	ND<-0.693147	1.16315	27	0
0.587787	ND<-0.693147	1.28093	28	0
ND<-0.693147	ND<-0.693147	0	28	0
ND<0 J	ND<-0.693147	0.693147	29	0
ND<0 J	ND<-0.693147	0.693147	30	0
ND<0 J	ND<-0.693147	0.693147	31	0
ND<0 J	ND<-0.693147	0.693147	32	0
ND<-0.693147	ND<-0.693147	0	32	0
ND<-0.693147	ND<-0.693147	0	32	0
ND<-0.693147	ND<-0.693147	0	32	0
ND<0 J	ND<-0.693147	0.693147	33	0

-0.127833 J	ND<-0.693147	0.565314	34	0
0.530628	ND<-0.693147	1.22378	35	0
0.0953102	ND<-0.693147	0.788457	36	0
-0.0304592 J	ND<-0.693147	0.662688	37	0
0.336472	ND<-0.693147	1.02962	38	0
0.641854	ND<-0.693147	1.335	39	0
0.336472	ND<-0.693147	1.02962	40	0
0.470004	ND<-0.693147	1.16315	41	0
0.587787	ND<-0.693147	1.28093	42	0
ND<0 J	ND<-0.693147	0.693147	43	0
ND<0 J	ND<-0.693147	0.693147	44	0
ND<0 J	ND<-0.693147	0.693147	45	0
ND<0 J	ND<-0.693147	0.693147	46	0
ND<-0.693147	ND<-0.693147	0	46	0
ND<-0.693147	ND<-0.693147	0	46	0
ND<-0.693147	ND<-0.693147	0	46	0
ND<0 J	ND<-0.693147	0.693147	47	0
-0.127833 J	ND<-0.693147	0.565314	48	0
0.530628	ND<-0.693147	1.22378	49	0
0.0953102	ND<-0.693147	0.788457	50	0
-0.0304592 J	ND<-0.693147	0.662688	51	0
0.336472	ND<-0.693147	1.02962	52	0
0.641854	ND<-0.693147	1.335	53	0
0.336472	ND<-0.693147	1.02962	54	0
0.470004	ND<-0.693147	1.16315	55	0
0.587787	ND<-0.693147	1.28093	56	0
ND<0 J	ND<0 J	0	56	0
ND<0 J	ND<0 J	0	56	0
ND<0 J	ND<0 J	0	56	0
ND<-0.693147	ND<0 J	-0.693147	56	1
ND<-0.693147	ND<0 J	-0.693147	56	2
ND<-0.693147	ND<0 J	-0.693147	56	3
ND<0 J	ND<0 J	0	56	3
-0.127833 J	ND<0 J	-0.127833	56	4
0.530628	ND<0 J	0.530628	57	4
0.0953102	ND<0 J	0.0953102	58	4
-0.0304592 J	ND<0 J	-0.0304592	58	5
0.336472	ND<0 J	0.336472	59	5
0.641854	ND<0 J	0.641854	60	5
0.336472	ND<0 J	0.336472	61	5
0.470004	ND<0 J	0.470004	62	5
0.587787	ND<0 J	0.587787	63	5
ND<0 J	ND<0 J	0	63	5
ND<0 J	ND<0 J	0	63	5
ND<-0.693147	ND<0 J	-0.693147	63	6
ND<-0.693147	ND<0 J	-0.693147	63	7
ND<-0.693147	ND<0 J	-0.693147	63	8
ND<0 J	ND<0 J	0	63	8
-0.127833 J	ND<0 J	-0.127833	63	9
0.530628	ND<0 J	0.530628	64	9
0.0953102	ND<0 J	0.0953102	65	9
-0.0304592 J	ND<0 J	-0.0304592	65	10
0.336472	ND<0 J	0.336472	66	10
0.641854	ND<0 J	0.641854	67	10
0.336472	ND<0 J	0.336472	68	10
0.470004	ND<0 J	0.470004	69	10
0.587787	ND<0 J	0.587787	70	10
ND<0 J	ND<0 J	0	70	10

ND<-0.693147	ND<0 J	-0.693147	70	11	
ND<-0.693147	ND<0 J	-0.693147	70	12	
ND<-0.693147	ND<0 J	-0.693147	70	13	
ND<0 J	ND<0 J	0	70	13	
-0.127833 J	ND<0 J	-0.127833	70	14	
0.530628	ND<0 J	0.530628	71	14	
0.0953102	ND<0 J	0.0953102	72	14	
-0.0304592 J	ND<0 J	-0.0304592	72	15	
0.336472	ND<0 J	0.336472	73	15	
0.641854	ND<0 J	0.641854	74	15	
0.336472	ND<0 J	0.336472	75	15	
0.470004	ND<0 J	0.470004	76	15	
0.587787	ND<0 J	0.587787	77	15	
ND<-0.693147	ND<0 J	-0.693147	77	16	
ND<-0.693147	ND<0 J	-0.693147	77	17	
ND<-0.693147	ND<0 J	-0.693147	77	18	
ND<0 J	ND<0 J	0	77	18	
-0.127833 J	ND<0 J	-0.127833	77	19	
0.530628	ND<0 J	0.530628	78	19	
0.0953102	ND<0 J	0.0953102	79	19	
-0.0304592 J	ND<0 J	-0.0304592	79	20	
0.336472	ND<0 J	0.336472	80	20	
0.641854	ND<0 J	0.641854	81	20	
0.336472	ND<0 J	0.336472	82	20	
0.470004	ND<0 J	0.470004	83	20	
0.587787	ND<0 J	0.587787	84	20	
ND<-0.693147	ND<-0.693147	0	84	20	
ND<-0.693147	ND<-0.693147	0	84	20	
ND<0 J	ND<-0.693147	0.693147	85	20	
-0.127833 J	ND<-0.693147	0.565314	86	20	
0.530628	ND<-0.693147	1.22378	87	20	
0.0953102	ND<-0.693147	0.788457	88	20	
-0.0304592 J	ND<-0.693147	0.662688	89	20	
0.336472	ND<-0.693147	1.02962	90	20	
0.641854	ND<-0.693147	1.335	91	20	
0.336472	ND<-0.693147	1.02962	92	20	
0.470004	ND<-0.693147	1.16315	93	20	
0.587787	ND<-0.693147	1.28093	94	20	
ND<-0.693147	ND<-0.693147	0	94	20	
ND<0 J	ND<-0.693147	0.693147	95	20	
-0.127833 J	ND<-0.693147	0.565314	96	20	
0.530628	ND<-0.693147	1.22378	97	20	
0.0953102	ND<-0.693147	0.788457	98	20	
-0.0304592 J	ND<-0.693147	0.662688	99	20	
0.336472	ND<-0.693147	1.02962	100	20	
0.641854	ND<-0.693147	1.335	101	20	
0.336472	ND<-0.693147	1.02962	102	20	
0.470004	ND<-0.693147	1.16315	103	20	
0.587787	ND<-0.693147	1.28093	104	20	
ND<0 J	ND<-0.693147	0.693147	105	20	
-0.127833 J	ND<-0.693147	0.565314	106	20	
0.530628	ND<-0.693147	1.22378	107	20	
0.0953102	ND<-0.693147	0.788457	108	20	
-0.0304592 J	ND<-0.693147	0.662688	109	20	
0.336472	ND<-0.693147	1.02962	110	20	
0.641854	ND<-0.693147	1.335	111	20	
0.336472	ND<-0.693147	1.02962	112	20	
0.470004	ND<-0.693147	1.16315	113	20	

0.587787	ND<-0.693147	1.28093	114	20

-0.127833 J	ND<0 J	-0.127833	114	21
0.530628	ND<0 J	0.530628	115	21
0.0953102	ND<0 J	0.0953102	116	21
-0.0304592 J	ND<0 J	-0.0304592	116	22
0.336472	ND<0 J	0.336472	117	22
0.641854	ND<0 J	0.641854	118	22
0.336472	ND<0 J	0.336472	119	22
0.470004	ND<0 J	0.470004	120	22
0.587787	ND<0 J	0.587787	121	22

0.530628	-0.127833 J	0.658462	122	22
0.0953102	-0.127833 J	0.223144	123	22
-0.0304592 J	-0.127833 J	0.0973742	124	22
0.336472	-0.127833 J	0.464306	125	22
0.641854	-0.127833 J	0.769687	126	22
0.336472	-0.127833 J	0.464306	127	22
0.470004	-0.127833 J	0.597837	128	22
0.587787	-0.127833 J	0.71562	129	22

0.0953102	0.530628	-0.435318	129	23
-0.0304592 J	0.530628	-0.561087	129	24
0.336472	0.530628	-0.194156	129	25
0.641854	0.530628	0.111226	130	25
0.336472	0.530628	-0.194156	130	26
0.470004	0.530628	-0.0606246	130	27
0.587787	0.530628	0.0571584	131	27

-0.0304592 J	0.0953102	-0.125769	131	28
0.336472	0.0953102	0.241162	132	28
0.641854	0.0953102	0.546544	133	28
0.336472	0.0953102	0.241162	134	28
0.470004	0.0953102	0.374693	135	28
0.587787	0.0953102	0.492476	136	28

0.336472	-0.0304592 J	0.366931	137	28
0.641854	-0.0304592 J	0.672313	138	28
0.336472	-0.0304592 J	0.366931	139	28
0.470004	-0.0304592 J	0.500463	140	28
0.587787	-0.0304592 J	0.618246	141	28

0.641854	0.336472	0.305382	142	28
0.336472	0.336472	0	142	28
0.470004	0.336472	0.133531	143	28
0.587787	0.336472	0.251314	144	28

0.336472	0.641854	-0.305382	144	29
0.470004	0.641854	-0.17185	144	30
0.587787	0.641854	-0.0540672	144	31

0.470004	0.336472	0.133531	145	31
0.587787	0.336472	0.251314	146	31

0.587787	0.470004	0.117783	147	31

S Statistic = 147 - 31 = 116

Tied Group Value Members

1	-0.693147	7
2	0	5
3	0.336472	2

Time Period	Observations
3/14/2000	1
9/23/2003	1
3/10/2004	1
10/12/2004	1
4/1/2005	1
10/26/2005	1
6/19/2006	1
11/18/2006	1
6/2/2007	1
11/15/2007	1
5/20/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1
11/17/2010	1
7/6/2011	1
11/22/2011	1
5/16/2012	1
11/16/2012	1
11/16/2013	1

There are 0 time periods with multiple data

A = 1116
B = 0
C = 270
D = 0
E = 64
F = 0
a = 19740
b = 71820
c = 840
Group Variance = 1034.67
Z-Score = 3.57518
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|3.57518| > 1.97737 indicating a trend

Shewhart-CUSUM Control Chart

Parameter: Trichloroethylene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -1.4207
Baseline Std Dev = 0.97567
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std	Mean
3/14/2000	-0.693147		0	0.745693
3/14/2000	-0.693147		0	0.745693
9/23/2003	-0.693147		0	0.745693
9/23/2003	-0.693147		0	0.745693
3/10/2004	-0.693147		0	0.745693
3/10/2004	-0.693147		0	0.745693
10/12/2004	-0.693147		0	0.745693
10/12/2004	-0.693147		0	0.745693
4/1/2005	0	0.456125	1.45613	
4/1/2005	0	0.456125	1.45613	
10/26/2005	0	0.91225	1.45613	
10/26/2005	0	0.91225	1.45613	
6/19/2006	0	1.36838	1.45613	
6/19/2006	0	1.36838	1.45613	
11/18/2006	0	1.8245	1.45613	
11/18/2006	0	1.8245	1.45613	
6/2/2007	-0.693147	1.57019	0.745693	
6/2/2007	-0.693147	1.57019	0.745693	
11/15/2007	-0.693147		1.31589	0.745693
11/15/2007	-0.693147		1.31589	0.745693
5/20/2008	-0.693147		1.06158	0.745693
5/20/2008	-0.693147		1.06158	0.745693
11/20/2008	0	1.5177	1.45613	
11/20/2008	0	1.5177	1.45613	
6/11/2009	-0.127833		1.84281	1.3251
6/11/2009	-0.127833		1.84281	1.3251
11/16/2009	0.530628		2.84279	1.99999
11/16/2009	0.530628		2.84279	1.99999
6/30/2010	0.0953102		3.39661	1.55381
6/30/2010	0.0953102		3.39661	1.55381
11/17/2010	-0.0304592		3.82151	1.42491
11/17/2010	-0.0304592		3.82151	1.42491
7/6/2011	0.336472	4.6225	1.80099	
7/6/2011	0.336472	4.6225	1.80099	
11/22/2011	0.641854		5.73649	2.11398
11/22/2011	0.641854		5.73649	2.11398
5/16/2012	0.336472		6.53747	1.80099
5/16/2012	0.336472		6.53747	1.80099
11/16/2012	0.470004		7.47532	1.93785
11/16/2012	0.470004		7.47532	1.93785
11/16/2013	0.587787		8.53389	2.05857
11/16/2013	0.587787		8.53389	2.05857

Concentrations (ppb)

Parameter: Trichlorofluoromethane

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 308
Total Non-Detect: 234
Percent Non-Detects: 75.974%
Total Background Measurements: 25
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	25	10 (40%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	2	2
			10/26/2005	ND<0 J	ND<0 J
			6/19/2006	2	2
			11/18/2006	2	2
			6/2/2007	3	3
			11/15/2007	ND<1	ND<1
			5/20/2008	3	3
			11/20/2008	2	2
			6/11/2009	0.82 J	0.82 J
			11/16/2009	2.4	2.4
			11/16/2009	16 B	16 B
			6/30/2010	2	2
			11/17/2010	1.7	1.7
			7/6/2011	0.31 J	0.31 J
			11/22/2011	1.2	1.2
			5/16/2012	1.3	1.3
			11/16/2012	1	1
			11/16/2013	ND<0.25 U	ND<0.25 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-9	25	24 (96%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	7 J	7 J

			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-8	25	24 (96%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/26/2005	ND<1	ND<1
			6/19/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	19	19
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-6	25	12 (48%)	1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<0 J	ND<0 J
			10/26/2005	1	1
			6/19/2006	1	1
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<0 J	ND<0 J
			5/20/2008	1	1
			11/20/2008	ND<0 J	ND<0 J
			6/11/2009	0.95 J	0.95 J
			11/16/2009	41	41
			11/16/2009	1.1	1.1
			6/30/2010	0.72 J	0.72 J
			11/17/2010	0.48 J	0.48 J
			7/6/2011	0.7 J	0.7 J
			11/22/2011	0.35 J	0.35 J
			5/16/2012	0.67 J	0.67 J
			11/16/2012	0.41 J	0.41 J
			11/16/2013	0.58 J	0.58 J
LMW-3S	15	4 (26.6667%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1

		11/15/2007	1	1	
		5/20/2008	ND<0 J	ND<0 J	
		11/20/2008	ND<0 J	ND<0 J	
		6/11/2009	1.1	1.1	
		11/16/2009	13	13	
		11/16/2009	0.97 J	0.97 J	
		6/30/2010	1.4	1.4	
		11/17/2010	1.1	1.1	
		7/6/2011	0.36 J	0.36 J	
		11/22/2011	0.8 J	0.8 J	
		5/16/2012	1.2	1.2	
		11/16/2012	1.7	1.7	
		11/16/2013	0.56 J	0.56 J	
LMW-14R	12	12 (100%)	6/2/2007	ND<1	ND<1
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.25 U		ND<0.25 U
		6/30/2010	ND<0.25 U		ND<0.25 U
		11/17/2010	ND<0.25 U		ND<0.25 U
		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U		ND<0.25 U
		5/16/2012	ND<0.25 U		ND<0.25 U
		11/16/2012	ND<0.25 U		ND<0.25 U
		11/16/2013	ND<0.25 U		ND<0.25 U
LMW-9D15	14 (93.3333%)	11/18/2006		ND<1	ND<1
		6/2/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.25 U		ND<0.25 U
		11/16/2009	25	25	
		11/16/2009	ND<0.25 U		ND<0.25 U
		6/30/2010	ND<0.25 U		ND<0.25 U
		11/17/2010	ND<0.25 U		ND<0.25 U
		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U		ND<0.25 U
		5/16/2012	ND<0.25 U		ND<0.25 U
		11/16/2012	ND<0.25 U		ND<0.25 U
		11/16/2013	ND<0.25 U		ND<0.25 U
LMW-10 22	7 (31.8182%)	3/14/2000		ND<1	ND<1
		9/23/2003	ND<1	ND<1	
		3/10/2004	ND<1	ND<1	
		10/12/2004	ND<1	ND<1	
		4/1/2005	ND<1	ND<1	
		10/26/2005	ND<0 J	ND<0 J	
		6/19/2006	2	2	
		11/18/2006	7	7	
		6/2/2007	3	3	
		11/15/2007	ND<1	ND<1	
		5/20/2008	10	10	
		11/20/2008	3	3	
		6/11/2009	6.6	6.6	
		11/16/2009	13	13	
		11/16/2009	21	21	
		6/30/2010	5.8	5.8	
		11/17/2010	7.3	7.3	
		7/6/2011	3.7	3.7	
		11/22/2011	14	14	

			5/16/2012	14	14
			11/16/2012	13	13
			11/16/2013	2.5	2.5
LMW-9S	19	16 (84.2105%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	9.1 J B	9.1 J B
			11/16/2009	26 B	26 B
			11/16/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	15 B	15 B
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U
			7/6/2011	ND<0.25 U	ND<0.25 U
			11/22/2011	ND<0.25 U	ND<0.25 U
			5/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2012	ND<0.25 U	ND<0.25 U
			11/16/2013	ND<0.25 U	ND<0.25 U
LMW-3	27	17 (62.963%)	11/19/1996	ND<1	ND<1
			3/24/1997	ND<1	ND<1
			1/16/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/14/2000	ND<1	ND<1
			9/23/2003	ND<1	ND<1
			3/10/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<0 J	ND<0 J
			10/26/2005	ND<0 J	ND<0 J
			6/19/2006	ND<0 J	ND<0 J
			11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<0 J	ND<0 J
			5/20/2008	ND<0 J	ND<0 J
			11/20/2008	ND<0 J	ND<0 J
			6/11/2009	0.84 J	0.84 J
			11/16/2009	0.68 J	0.68 J
			11/16/2009	32 B	32 B
			6/30/2010	0.58 J	0.58 J
			11/17/2010	0.52 J	0.52 J
			7/6/2011	0.51 J	0.51 J
			11/22/2011	0.89 J	0.89 J
			5/16/2012	0.71 J	0.71 J
			11/16/2012	1.1	1.1
			11/16/2013	0.81 J	0.81 J
LMW-16	15	14 (93.3333%)	11/18/2006	ND<1	ND<1
			6/2/2007	ND<1	ND<1
			11/15/2007	ND<1	ND<1
			5/20/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	9.3 J B	9.3 J B
			11/16/2009	ND<0.25 U	ND<0.25 U
			6/30/2010	ND<0.25 U	ND<0.25 U
			11/17/2010	ND<0.25 U	ND<0.25 U

		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U	ND<0.25 U	
		5/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2013	ND<0.25 U	ND<0.25 U	
LMW-15R	16	16 (100%)	11/18/2006	ND<1	ND<1
		6/2/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.25 U	ND<0.25 U	
		6/30/2010	ND<0.25 U	ND<0.25 U	
		11/17/2010	ND<0.25 U	ND<0.25 U	
		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U	ND<0.25 U	
		5/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2013	ND<0.25 U	ND<0.25 U	
LMW-7	21	19 (90.4762%)	1/16/1998	ND<1	ND<1
		3/16/1999	ND<1	ND<1	
		9/23/1999	ND<1	ND<1	
		3/14/2000	ND<1	ND<1	
		9/23/2003	ND<1	ND<1	
		3/10/2004	ND<1	ND<1	
		10/12/2004	ND<1	ND<1	
		4/1/2005	ND<1	ND<1	
		10/26/2005	ND<1	ND<1	
		6/19/2006	ND<1	ND<1	
		11/18/2006	ND<1	ND<1	
		6/2/2007	2	2	
		11/15/2007	4	4	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
		6/11/2009	ND<0.25 U	ND<0.25 U	
		11/17/2010	ND<0.25 U	ND<0.25 U	
		7/6/2011	ND<0.25 U	ND<0.25 U	
		11/22/2011	ND<0.25 U	ND<0.25 U	
		5/16/2012	ND<0.25 U	ND<0.25 U	
		11/16/2012	ND<0.25 U	ND<0.25 U	
LMW-11	11	11 (100%)	3/14/2000	ND<1	ND<1
		9/23/2003	ND<1	ND<1	
		3/10/2004	ND<1	ND<1	
		10/12/2004	ND<1	ND<1	
		4/1/2005	ND<1	ND<1	
		10/26/2005	ND<1	ND<1	
		6/19/2006	ND<1	ND<1	
		6/2/2007	ND<1	ND<1	
		11/15/2007	ND<1	ND<1	
		5/20/2008	ND<1	ND<1	
		11/20/2008	ND<1	ND<1	
LMW-12	11	11 (100%)	3/14/2000	ND<1	ND<1
		9/23/2003	ND<1	ND<1	
		3/10/2004	ND<1	ND<1	
		10/12/2004	ND<1	ND<1	
		4/1/2005	ND<1	ND<1	

			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
LMW-13	11	11 (100%)	3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			6/2/2007	ND<1	ND<1	
			11/15/2007	ND<1	ND<1	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
MW-5	13	12 (92.3077%)	1/16/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/14/2000	ND<1	ND<1	
			9/23/2003	ND<1	ND<1	
			3/10/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/26/2005	ND<1	ND<1	
			6/19/2006	ND<1	ND<1	
			11/15/2007	7	7	
			5/20/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Trichlorofluoromethane

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 308

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.74777	7.55021	0
2	0	-2.51213	13.861	0
3	0	-2.36561	19.4572	0
4	0	-2.25713	24.5518	0
5	0	-2.14441	29.1503	0
6	0	-2.07485	33.4553	0
7	0	-2.01409	37.5118	0
8	0	-1.95996	41.3533	0
9	0	-1.8957	44.947	0
10	0	-1.85218	48.3775	0
11	0	-1.81191	51.6605	0
12	0	-1.77438	54.809	0
13	0	-1.72793	57.7947	0
14	0.125	-1.6954	60.6691	-0.211925
15	0.125	-1.66456	63.4398	-0.419995
16	0.125	-1.63524	66.1138	-0.624399
17	0.125	-1.59819	68.6681	-0.824173
18	0.125	-1.57179	71.1386	-1.02065
19	0.125	-1.54643	73.53	-1.21395
20	0.125	-1.52203	75.8466	-1.40421
21	0.125	-1.49852	78.0922	-1.59152
22	0.125	-1.46838	80.2483	-1.77507
23	0.125	-1.44663	82.3411	-1.9559
24	0.125	-1.42554	84.3732	-2.13409
25	0.125	-1.40507	86.3475	-2.30972
26	0.125	-1.37866	88.2482	-2.48206
27	0.125	-1.35946	90.0963	-2.65199
28	0.125	-1.34075	91.8939	-2.81958
29	0.125	-1.32251	93.643	-2.9849
30	0.125	-1.29884	95.3299	-3.14725
31	0.125	-1.28155	96.9723	-3.30744
32	0.125	-1.26464	98.5716	-3.46552
33	0.125	-1.24809	100.129	-3.62154
34	0.125	-1.22653	101.634	-3.77485
35	0.125	-1.21073	103.1	-3.92619
36	0.125	-1.19522	104.528	-4.0756
37	0.125	-1.18	105.921	-4.2231
38	0.125	-1.16505	107.278	-4.36873
39	0.125	-1.1455	108.59	-4.51191
40	0.125	-1.13113	109.87	-4.65331
41	0.125	-1.11699	111.117	-4.79293
42	0.125	-1.10306	112.334	-4.93081
43	0.125	-1.08482	113.511	-5.06641
44	0.125	-1.07138	114.659	-5.20034
45	0.125	-1.05812	115.778	-5.3326
46	0.125	-1.04505	116.87	-5.46323
47	0.125	-1.02789	117.927	-5.59172
48	0.125	-1.01522	118.958	-5.71862
49	0.125	-1.00271	119.963	-5.84396
50	0.125	-0.990356	120.944	-5.96776
51	0.125	-0.974114	121.893	-6.08952

52	0.125	-0.9621	122.818	-6.20978
53	0.125	-0.950222	123.721	-6.32856
54	0.125	-0.938476	124.602	-6.44587
55	0.125	-0.926859	125.461	-6.56173
56	0.125	-0.911562	126.292	-6.67567
57	0.125	-0.900227	127.102	-6.7882
58	0.125	-0.889006	127.893	-6.89933
59	0.125	-0.877897	128.663	-7.00906
60	0.125	-0.863249	129.409	-7.11697
61	0.125	-0.852385	130.135	-7.22352
62	0.125	-0.841621	130.844	-7.32872
63	0.125	-0.830953	131.534	-7.43259
64	0.125	-0.816874	132.201	-7.5347
65	0.125	-0.806422	132.852	-7.6355
66	0.125	-0.796056	133.485	-7.73501
67	0.125	-0.785774	134.103	-7.83323
68	0.125	-0.772193	134.699	-7.92975
69	0.125	-0.7621	135.28	-8.02502
70	0.125	-0.752084	135.845	-8.11903
71	0.125	-0.742143	136.396	-8.2118
72	0.125	-0.729003	136.928	-8.30292
73	0.125	-0.719228	137.445	-8.39282
74	0.125	-0.709522	137.948	-8.48152
75	0.125	-0.699883	138.438	-8.569
76	0.125	-0.690309	138.915	-8.65529
77	0.125	-0.677639	139.374	-8.73999
78	0.125	-0.668209	139.82	-8.82352
79	0.125	-0.658838	140.255	-8.90587
80	0.125	-0.649522	140.676	-8.98707
81	0.125	-0.637192	141.082	-9.06671
82	0.125	-0.628006	141.477	-9.14521
83	0.125	-0.618872	141.86	-9.22257
84	0.31	-0.609791	142.232	-9.41161
85	0.35	-0.597761	142.589	-9.62083
86	0.36	-0.588793	142.936	-9.83279
87	0.41	-0.579873	143.272	-10.0705
88	0.48	-0.570999	143.598	-10.3446
89	0.5	-0.559237	143.911	-10.6242
90	0.5	-0.550465	144.214	-10.8995
91	0.5	-0.541736	144.507	-11.1703
92	0.5	-0.533048	144.791	-11.4369
93	0.5	-0.524401	145.066	-11.6991
94	0.5	-0.51293	145.329	-11.9555
95	0.5	-0.504372	145.584	-12.2077
96	0.5	-0.49585	145.83	-12.4556
97	0.5	-0.487364	146.067	-12.6993
98	0.5	-0.476105	146.294	-12.9374
99	0.5	-0.467699	146.513	-13.1712
100	0.5	-0.459327	146.724	-13.4009
101	0.5	-0.450985	146.927	-13.6264
102	0.5	-0.439913	147.121	-13.8463
103	0.5	-0.431644	147.307	-14.0622
104	0.5	-0.423405	147.486	-14.2739
105	0.5	-0.415193	147.659	-14.4815
106	0.5	-0.40429	147.822	-14.6836
107	0.5	-0.396142	147.979	-14.8817
108	0.5	-0.388022	148.129	-15.0757
109	0.5	-0.379927	148.274	-15.2656
110	0.5	-0.371856	148.412	-15.4516
111	0.5	-0.361133	148.542	-15.6321
112	0.5	-0.353118	148.667	-15.8087
113	0.5	-0.345126	148.786	-15.9813

114	0.5	-0.337155	148.9	-16.1498
115	0.5	-0.326561	149.007	-16.3131
116	0.5	-0.318639	149.108	-16.4724
117	0.5	-0.310738	149.205	-16.6278
118	0.5	-0.302855	149.296	-16.7792
119	0.5	-0.292375	149.382	-16.9254
120	0.5	-0.284535	149.463	-17.0677
121	0.5	-0.276714	149.539	-17.206
122	0.5	-0.268908	149.612	-17.3405
123	0.5	-0.258527	149.679	-17.4698
124	0.5	-0.250759	149.741	-17.5951
125	0.5	-0.243007	149.801	-17.7166
126	0.5	-0.235269	149.856	-17.8343
127	0.5	-0.224974	149.906	-17.9468
128	0.5	-0.217267	149.954	-18.0554
129	0.5	-0.209575	149.998	-18.1602
130	0.5	-0.201894	150.038	-18.2611
131	0.5	-0.194225	150.076	-18.3583
132	0.5	-0.184017	150.11	-18.4503
133	0.5	-0.176374	150.141	-18.5384
134	0.5	-0.168741	150.17	-18.6228
135	0.5	-0.161119	150.195	-18.7034
136	0.5	-0.150969	150.218	-18.7789
137	0.5	-0.143367	150.239	-18.8505
138	0.5	-0.135774	150.257	-18.9184
139	0.5	-0.128189	150.274	-18.9825
140	0.5	-0.118085	150.288	-19.0416
141	0.5	-0.110516	150.3	-19.0968
142	0.5	-0.102953	150.31	-19.1483
143	0.5	-0.0953969	150.32	-19.196
144	0.5	-0.0853288	150.327	-19.2387
145	0.5	-0.0777834	150.333	-19.2776
146	0.5	-0.0702426	150.338	-19.3127
147	0.5	-0.0627062	150.342	-19.344
148	0.5	-0.0551734	150.345	-19.3716
149	0.5	-0.0451348	150.347	-19.3942
150	0.5	-0.0376076	150.348	-19.413
151	0.5	-0.0300838	150.349	-19.428
152	0.5	-0.0225612	150.35	-19.4393
153	0.5	-0.0125328	150.35	-19.4456
154	0.5	-0.00501359	150.35	-19.4481
155	0.5	0.00501359	150.35	-19.4456
156	0.5	0.0125328	150.35	-19.4393
157	0.5	0.0225612	150.351	-19.428
158	0.5	0.0300838	150.351	-19.413
159	0.5	0.0376076	150.353	-19.3942
160	0.5	0.0451348	150.355	-19.3716
161	0.5	0.0551734	150.358	-19.344
162	0.5	0.0627062	150.362	-19.3127
163	0.5	0.0702426	150.367	-19.2776
164	0.5	0.0777834	150.373	-19.2387
165	0.5	0.0853288	150.38	-19.196
166	0.5	0.0953969	150.389	-19.1483
167	0.5	0.102953	150.4	-19.0968
168	0.5	0.110516	150.412	-19.0416
169	0.5	0.118085	150.426	-18.9825
170	0.5	0.128189	150.442	-18.9184
171	0.5	0.135774	150.461	-18.8505
172	0.5	0.143367	150.481	-18.7789
173	0.5	0.150969	150.504	-18.7034
174	0.5	0.161119	150.53	-18.6228
175	0.5	0.168741	150.559	-18.5384

176	0.5	0.176374	150.59	-18.4503
177	0.5	0.184017	150.624	-18.3583
178	0.5	0.194225	150.661	-18.2611
179	0.5	0.201894	150.702	-18.1602
180	0.5	0.209575	150.746	-18.0554
181	0.5	0.217267	150.793	-17.9468
182	0.5	0.224974	150.844	-17.8343
183	0.5	0.235269	150.899	-17.7166
184	0.5	0.243007	150.958	-17.5951
185	0.5	0.250759	151.021	-17.4698
186	0.5	0.258527	151.088	-17.3405
187	0.5	0.268908	151.16	-17.206
188	0.5	0.276714	151.237	-17.0677
189	0.5	0.284535	151.318	-16.9254
190	0.5	0.292375	151.403	-16.7792
191	0.5	0.302855	151.495	-16.6278
192	0.5	0.310738	151.592	-16.4724
193	0.5	0.318639	151.693	-16.3131
194	0.5	0.326561	151.8	-16.1498
195	0.5	0.337155	151.913	-15.9813
196	0.5	0.345126	152.033	-15.8087
197	0.5	0.353118	152.157	-15.6321
198	0.5	0.361133	152.288	-15.4516
199	0.5	0.371856	152.426	-15.2656
200	0.5	0.379927	152.57	-15.0757
201	0.5	0.388022	152.721	-14.8817
202	0.5	0.396142	152.878	-14.6836
203	0.5	0.40429	153.041	-14.4815
204	0.5	0.415193	153.214	-14.2739
205	0.5	0.423405	153.393	-14.0622
206	0.5	0.431644	153.579	-13.8463
207	0.5	0.439913	153.773	-13.6264
208	0.5	0.450985	153.976	-13.4009
209	0.5	0.459327	154.187	-13.1712
210	0.5	0.467699	154.406	-12.9374
211	0.5	0.476105	154.632	-12.6993
212	0.5	0.487364	154.87	-12.4556
213	0.5	0.49585	155.116	-12.2077
214	0.5	0.504372	155.37	-11.9555
215	0.5	0.51293	155.633	-11.6991
216	0.5	0.524401	155.908	-11.4369
217	0.5	0.533048	156.192	-11.1703
218	0.5	0.541736	156.486	-10.8995
219	0.5	0.550465	156.789	-10.6242
220	0.5	0.559237	157.102	-10.3446
221	0.5	0.570999	157.428	-10.0591
222	0.5	0.579873	157.764	-9.76918
223	0.5	0.588793	158.111	-9.47479
224	0.5	0.597761	158.468	-9.17591
225	0.5	0.609791	158.84	-8.87101
226	0.5	0.618872	159.223	-8.56157
227	0.5	0.628006	159.617	-8.24757
228	0.5	0.637192	160.023	-7.92897
229	0.5	0.649522	160.445	-7.60421
230	0.5	0.658838	160.879	-7.27479
231	0.5	0.668209	161.326	-6.94069
232	0.5	0.677639	161.785	-6.60187
233	0.5	0.690309	162.261	-6.25672
234	0.5	0.699883	162.751	-5.90677
235	0.5	0.709522	163.255	-5.55201
236	0.5	0.719228	163.772	-5.1924
237	0.5	0.729003	164.303	-4.8279

238	0.5	0.742143		164.854	-4.45683
239	0.5	0.752084		165.42	-4.08078
240	0.51	0.7621	166.001	-3.69211	
241	0.52	0.772193		166.597	-3.29057
242	0.56	0.785774		167.214	-2.85054
243	0.58	0.796056		167.848	-2.38883
244	0.58	0.806422		168.498	-1.9211
245	0.67	0.816874		169.166	-1.3738
246	0.68	0.830953		169.856	-0.808749
247	0.7	0.841621		170.564	-0.219614
248	0.71	0.852385		171.291	0.38558
249	0.72	0.863249		172.036	1.00712
250	0.8	0.877897		172.807	1.70944
251	0.81	0.889006		173.597	2.42953
252	0.82	0.900227		174.408	3.16772
253	0.84	0.911562		175.239	3.93343
254	0.89	0.926859		176.098	4.75833
255	0.95	0.938476		176.978	5.64989
256	0.97	0.950222		177.881	6.5716
257	1	0.9621	178.807	7.5337	
258	1	0.974114		179.756	8.50782
259	1	0.990356		180.737	9.49817
260	1	1.00271	181.742	10.5009	
261	1	1.01522	182.773	11.5161	
262	1.1	1.02789	183.829	12.6468	
263	1.1	1.04505	184.921	13.7963	
264	1.1	1.05812	186.041	14.9603	
265	1.1	1.07138	187.189	16.1388	
266	1.2	1.08482	188.366	17.4406	
267	1.2	1.10306	189.583	18.7643	
268	1.3	1.11699	190.83	20.2163	
269	1.4	1.13113	192.11	21.7999	
270	1.7	1.1455	193.422	23.7473	
271	1.7	1.16505	194.779	25.7279	
272	2	1.18	196.172	28.0879	
273	2	1.19522	197.6	30.4783	
274	2	1.21073	199.066	32.8998	
275	2	1.22653	200.57	35.3528	
276	2	1.24809	202.128	37.849	
277	2	1.26464	203.727	40.3783	
278	2	1.28155	205.37	42.9414	
279	2.4	1.29884	207.057	46.0586	
280	2.5	1.32251	208.806	49.3648	
281	3	1.34075	210.603	53.3871	
282	3	1.35946	212.452	57.4655	
283	3	1.37866	214.352	61.6015	
284	3	1.40507	216.326	65.8167	
285	3.7	1.42554	218.359	71.0912	
286	4	1.44663	220.451	76.8777	
287	5.8	1.46838	222.608	85.3944	
288	6.6	1.49852	224.853	95.2846	
289	7	1.52203	227.17	105.939	
290	7	1.54643	229.561	116.764	
291	7	1.57179	232.032	127.766	
292	7.3	1.59819	234.586	139.433	
293	9.1	1.63524	237.26	154.314	
294	9.3	1.66456	240.031	169.794	
295	10	1.6954	242.905	186.748	
296	13	1.72793	245.891	209.211	
297	13	1.77438	249.039	232.278	
298	13	1.81191	252.322	255.833	
299	14	1.85218	255.753	281.764	

300	14	1.8957	259.346	308.303
301	15	1.95996	263.188	337.703
302	16	2.01409	267.244	369.928
303	19	2.07485	271.549	409.35
304	21	2.14441	276.148	454.383
305	25	2.25713	281.243	510.811
306	26	2.36561	286.839	572.317
307	32	2.51213	293.149	652.705
308	41	2.74777	300.7	765.364

Data Set Standard Deviation = 4.47373
Numerator = 585782
Denominator = 1.84762e+006
W Statistic = 0.317047 = 585782 / 1.84762e+006

5% Critical value of 0.976 exceeds 0.317047
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.317047
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Trichlorofluoromethane

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.567325
0.567325 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.00323625	-2.747773	9	348.683	
2	0	0.00647249	-2.512133	9	337.176	
3	0	0.00970874	-2.365613	9	330.021	
4	0	0.012945	-2.257133	9	324.723	
5	0	0.0161812	-2.144413	9	319.219	
6	0	0.0194175	-2.074853	9	315.822	
7	0	0.0226537	-2.014093	9	312.855	
8	0	0.02589	-1.959963	9	310.211	
9	0	0.0291262	-1.8957	39	307.073	
10	0	0.0323625	-1.852183	9	304.948	
11	0	0.0355987	-1.811913	9	302.982	
12	0	0.038835	-1.774383	9	301.149	
13	0	0.0420712	-1.727933	9	298.881	
14	0.125	0.0453074	-1.6954	40.3375	297.292	
15	0.125	0.0485437	-1.664564	0.3375	295.786	
16	0.125	0.0517799	-1.635244	0.3375	294.354	
17	0.125	0.0550162	-1.598194	0.3375	292.545	
18	0.125	0.0582524	-1.571794	0.3375	291.256	
19	0.125	0.0614887	-1.546434	0.3375	290.017	
20	0.125	0.0647249	-1.522034	0.3375	288.826	
21	0.125	0.0679612	-1.498524	0.3375	287.677	
22	0.125	0.0711974	-1.468384	0.3375	286.206	
23	0.125	0.0744337	-1.446634	0.3375	285.144	
24	0.125	0.0776699	-1.425544	0.3375	284.114	
25	0.125	0.0809061	-1.405074	0.3375	283.114	
26	0.125	0.0841424	-1.378664	0.3375	281.824	
27	0.125	0.0873786	-1.359464	0.3375	280.887	
28	0.125	0.0906149	-1.340754	0.3375	279.974	
29	0.125	0.0938511	-1.322514	0.3375	279.082	
30	0.125	0.0970874	-1.298844	0.3375	277.926	
31	0.125	0.100324	-1.281554	0.3375	277.082	
32	0.125	0.10356	-1.264644	0.3375	276.257	
33	0.125	0.106796	-1.248094	0.3375	275.448	
34	0.125	0.110032	-1.226534	0.3375	274.395	
35	0.125	0.113269	-1.210734	0.3375	273.624	
36	0.125	0.116505	-1.195224	0.3375	272.867	
37	0.125	0.119741	-1.18	40.3375	272.123	
38	0.125	0.122977	-1.165054	0.3375	271.393	
39	0.125	0.126214	-1.1455	40.3375	270.439	
40	0.125	0.12945	-1.131134	0.3375	269.737	
41	0.125	0.132686	-1.116994	0.3375	269.046	
42	0.125	0.135922	-1.103064	0.3375	268.366	
43	0.125	0.139159	-1.084824	0.3375	267.476	
44	0.125	0.142395	-1.071384	0.3375	266.819	
45	0.125	0.145631	-1.058124	0.3375	266.172	
46	0.125	0.148867	-1.045054	0.3375	265.533	
47	0.125	0.152104	-1.027894	0.3375	264.695	
48	0.125	0.15534	-1.015224	0.3375	264.077	

49	0.125	0.158576	-1.002714	0.3375	263.466
50	0.125	0.161812	-0.990356	40.3375	262.862
51	0.125	0.165049	-0.974114	40.3375	262.069
52	0.125	0.168285	-0.9621	40.3375	261.483
53	0.125	0.171521	-0.950222	40.3375	260.903
54	0.125	0.174757	-0.938476	40.3375	260.329
55	0.125	0.177994	-0.926859	40.3375	259.762
56	0.125	0.18123	-0.911562	40.3375	259.015
57	0.125	0.184466	-0.900227	40.3375	258.461
58	0.125	0.187702	-0.889006	40.3375	257.913
59	0.125	0.190939	-0.877897	40.3375	257.371
60	0.125	0.194175	-0.863249	40.3375	256.655
61	0.125	0.197411	-0.852385	40.3375	256.125
62	0.125	0.200647	-0.841621	40.3375	255.599
63	0.125	0.203883	-0.830953	40.3375	255.078
64	0.125	0.20712	-0.816874	40.3375	254.391
65	0.125	0.210356	-0.806422	40.3375	253.88
66	0.125	0.213592	-0.796056	40.3375	253.374
67	0.125	0.216828	-0.785774	40.3375	252.872
68	0.125	0.220065	-0.772193	40.3375	252.209
69	0.125	0.223301	-0.7621	40.3375	251.716
70	0.125	0.226537	-0.752084	40.3375	251.227
71	0.125	0.229773	-0.742143	40.3375	250.741
72	0.125	0.23301	-0.729003	40.3375	250.1
73	0.125	0.236246	-0.719228	40.3375	249.622
74	0.125	0.239482	-0.709522	40.3375	249.148
75	0.125	0.242718	-0.699883	40.3375	248.678
76	0.125	0.245955	-0.690309	40.3375	248.21
77	0.125	0.249191	-0.677639	40.3375	247.591
78	0.125	0.252427	-0.668209	40.3375	247.131
79	0.125	0.255663	-0.658838	40.3375	246.673
80	0.125	0.2589	-0.649522	40.3375	246.218
81	0.125	0.262136	-0.637192	40.3375	245.616
82	0.125	0.265372	-0.628006	40.3375	245.168
83	0.125	0.268608	-0.618872	40.3375	244.722
84	0.31	0.271845	-0.609791	42.317	244.278
85	0.35	0.275081	-0.597761	42.745	243.691
86	0.36	0.278317	-0.588793	42.852	243.253
87	0.41	0.281553	-0.579873	43.387	242.817
88	0.48	0.28479	-0.570999	44.136	242.384
89	0.5	0.288026	-0.559237	44.35	241.809
90	0.5	0.291262	-0.550465	44.35	241.381
91	0.5	0.294498	-0.541736	44.35	240.955
92	0.5	0.297735	-0.533048	44.35	240.531
93	0.5	0.300971	-0.524401	44.35	240.108
94	0.5	0.304207	-0.512934	44.35	239.548
95	0.5	0.307443	-0.504372	44.35	239.13
96	0.5	0.31068	-0.495854	44.35	238.714
97	0.5	0.313916	-0.487364	44.35	238.3
98	0.5	0.317152	-0.476105	44.35	237.75
99	0.5	0.320388	-0.467699	44.35	237.339
100	0.5	0.323625	-0.459327	44.35	236.93
101	0.5	0.326861	-0.450985	44.35	236.523
102	0.5	0.330097	-0.439913	44.35	235.982
103	0.5	0.333333	-0.431644	44.35	235.579
104	0.5	0.33657	-0.423405	44.35	235.176
105	0.5	0.339806	-0.415193	44.35	234.775
106	0.5	0.343042	-0.404294	44.35	234.243
107	0.5	0.346278	-0.396142	44.35	233.845
108	0.5	0.349515	-0.388022	44.35	233.448
109	0.5	0.352751	-0.379927	44.35	233.053
110	0.5	0.355987	-0.371856	44.35	232.659

111	0.5	0.359223	-0.361133	44.35	232.135
112	0.5	0.36246	-0.353118	44.35	231.744
113	0.5	0.365696	-0.345126	44.35	231.354
114	0.5	0.368932	-0.337155	44.35	230.964
115	0.5	0.372168	-0.326561	44.35	230.447
116	0.5	0.375405	-0.318639	44.35	230.06
117	0.5	0.378641	-0.310738	44.35	229.674
118	0.5	0.381877	-0.302855	44.35	229.289
119	0.5	0.385113	-0.292375	44.35	228.778
120	0.5	0.38835	-0.284535	44.35	228.395
121	0.5	0.391586	-0.276714	44.35	228.013
122	0.5	0.394822	-0.268908	44.35	227.632
123	0.5	0.398058	-0.258527	44.35	227.125
124	0.5	0.401294	-0.250759	44.35	226.745
125	0.5	0.404531	-0.243007	44.35	226.367
126	0.5	0.407767	-0.235269	44.35	225.989
127	0.5	0.411003	-0.224974	44.35	225.486
128	0.5	0.414239	-0.217267	44.35	225.11
129	0.5	0.417476	-0.209575	44.35	224.734
130	0.5	0.420712	-0.201894	44.35	224.359
131	0.5	0.423948	-0.194225	44.35	223.985
132	0.5	0.427184	-0.184017	44.35	223.486
133	0.5	0.430421	-0.176374	44.35	223.113
134	0.5	0.433657	-0.168741	44.35	222.74
135	0.5	0.436893	-0.161119	44.35	222.368
136	0.5	0.440129	-0.150969	44.35	221.872
137	0.5	0.443366	-0.143367	44.35	221.501
138	0.5	0.446602	-0.135774	44.35	221.13
139	0.5	0.449838	-0.128189	44.35	220.76
140	0.5	0.453074	-0.118085	44.35	220.267
141	0.5	0.456311	-0.110516	44.35	219.897
142	0.5	0.459547	-0.102953	44.35	219.528
143	0.5	0.462783	-0.0953969	44.35	219.159
144	0.5	0.466019	-0.0853288	44.35	218.667
145	0.5	0.469256	-0.0777834	44.35	218.298
146	0.5	0.472492	-0.0702426	44.35	217.93
147	0.5	0.475728	-0.0627062	44.35	217.562
148	0.5	0.478964	-0.0551734	44.35	217.194
149	0.5	0.482201	-0.0451348	44.35	216.704
150	0.5	0.485437	-0.0376076	44.35	216.337
151	0.5	0.488673	-0.0300838	44.35	215.969
152	0.5	0.491909	-0.0225612	44.35	215.602
153	0.5	0.495146	-0.0125328	44.35	215.112
154	0.5	0.498382	-0.00501359	44.35	214.745
155	0.5	0.501618	0.00501359	44.35	214.255
156	0.5	0.504854	0.0125328	44.35	213.888
157	0.5	0.508091	0.0225612	44.35	213.398
158	0.5	0.511327	0.0300838	44.35	213.031
159	0.5	0.514563	0.0376076	44.35	212.663
160	0.5	0.517799	0.0451348	44.35	212.296
161	0.5	0.521036	0.0551734	44.35	211.806
162	0.5	0.524272	0.0627062	44.35	211.438
163	0.5	0.527508	0.0702426	44.35	211.07
164	0.5	0.530744	0.0777834	44.35	210.702
165	0.5	0.533981	0.0853288	44.35	210.333
166	0.5	0.537217	0.0953969	44.35	209.841
167	0.5	0.540453	0.102953	44.35	209.472
168	0.5	0.543689	0.110516	44.35	209.103
169	0.5	0.546926	0.118085	44.35	208.733
170	0.5	0.550162	0.128189	44.35	208.24
171	0.5	0.553398	0.135774	44.35	207.87
172	0.5	0.556634	0.143367	44.35	207.499

173	0.5	0.559871	0.150969	44.35	207.128
174	0.5	0.563107	0.161119	44.35	206.632
175	0.5	0.566343	0.168741	44.35	206.26
176	0.5	0.569579	0.176374	44.35	205.887
177	0.5	0.572816	0.184017	44.35	205.514
178	0.5	0.576052	0.194225	44.35	205.015
179	0.5	0.579288	0.201894	44.35	204.641
180	0.5	0.582524	0.209575	44.35	204.266
181	0.5	0.585761	0.217267	44.35	203.89
182	0.5	0.588997	0.224974	44.35	203.514
183	0.5	0.592233	0.235269	44.35	203.011
184	0.5	0.595469	0.243007	44.35	202.633
185	0.5	0.598706	0.250759	44.35	202.255
186	0.5	0.601942	0.258527	44.35	201.875
187	0.5	0.605178	0.268908	44.35	201.368
188	0.5	0.608414	0.276714	44.35	200.987
189	0.5	0.61165	0.284535	44.35	200.605
190	0.5	0.614887	0.292375	44.35	200.222
191	0.5	0.618123	0.302855	44.35	199.711
192	0.5	0.621359	0.310738	44.35	199.326
193	0.5	0.624595	0.318639	44.35	198.94
194	0.5	0.627832	0.326561	44.35	198.553
195	0.5	0.631068	0.337155	44.35	198.036
196	0.5	0.634304	0.345126	44.35	197.646
197	0.5	0.63754	0.353118	44.35	197.256
198	0.5	0.640777	0.361133	44.35	196.865
199	0.5	0.644013	0.371856	44.35	196.341
200	0.5	0.647249	0.379927	44.35	195.947
201	0.5	0.650485	0.388022	44.35	195.552
202	0.5	0.653722	0.396142	44.35	195.155
203	0.5	0.656958	0.40429	44.35	194.757
204	0.5	0.660194	0.415193	44.35	194.225
205	0.5	0.66343	0.423405	44.35	193.824
206	0.5	0.666667	0.431644	44.35	193.421
207	0.5	0.669903	0.439913	44.35	193.018
208	0.5	0.673139	0.450985	44.35	192.477
209	0.5	0.676375	0.459327	44.35	192.07
210	0.5	0.679612	0.467699	44.35	191.661
211	0.5	0.682848	0.476105	44.35	191.25
212	0.5	0.686084	0.487364	44.35	190.7
213	0.5	0.68932	0.49585	44.35	190.286
214	0.5	0.692557	0.504372	44.35	189.87
215	0.5	0.695793	0.51293	44.35	189.452
216	0.5	0.699029	0.524401	44.35	188.892
217	0.5	0.702265	0.533048	44.35	188.469
218	0.5	0.705502	0.541736	44.35	188.045
219	0.5	0.708738	0.550465	44.35	187.619
220	0.5	0.711974	0.559237	44.35	187.191
221	0.5	0.71521	0.570999	44.35	186.616
222	0.5	0.718447	0.579873	44.35	186.183
223	0.5	0.721683	0.588793	44.35	185.747
224	0.5	0.724919	0.597761	44.35	185.309
225	0.5	0.728155	0.609791	44.35	184.722
226	0.5	0.731392	0.618872	44.35	184.278
227	0.5	0.734628	0.628006	44.35	183.832
228	0.5	0.737864	0.637192	44.35	183.384
229	0.5	0.7411	0.649522	44.35	182.782
230	0.5	0.744337	0.658838	44.35	182.327
231	0.5	0.747573	0.668209	44.35	181.869
232	0.5	0.750809	0.677639	44.35	181.409
233	0.5	0.754045	0.690309	44.35	180.79
234	0.5	0.757282	0.699883	44.35	180.322

235	0.5	0.760518	0.709522	44.35	179.852
236	0.5	0.763754	0.719228	44.35	179.378
237	0.5	0.76699	0.729003	44.35	178.9
238	0.5	0.770227	0.742143	44.35	178.259
239	0.5	0.773463	0.752084	44.35	177.773
240	0.51	0.776699	0.7621	44.457	177.284
241	0.52	0.779935	0.772193	44.564	176.791
242	0.56	0.783172	0.785774	44.992	176.128
243	0.58	0.786408	0.796056	45.206	175.626
244	0.58	0.789644	0.806422	45.206	175.12
245	0.67	0.79288	0.816874	46.169	174.609
246	0.68	0.796117	0.830953	46.276	173.922
247	0.7	0.799353	0.841621	46.49	173.401
248	0.71	0.802589	0.852385	46.597	172.875
249	0.72	0.805825	0.863249	46.704	172.345
250	0.8	0.809061	0.877897	47.56	171.629
251	0.81	0.812298	0.889006	47.667	171.087
252	0.82	0.815534	0.900227	47.774	170.539
253	0.84	0.81877	0.911562	47.988	169.985
254	0.89	0.822006	0.926859	48.523	169.238
255	0.95	0.825243	0.938476	49.165	168.671
256	0.97	0.828479	0.950222	49.379	168.097
257	1	0.831715	0.9621	49.7	167.517
258	1	0.834951	0.974114	49.7	166.931
259	1	0.838188	0.990356	49.7	166.138
260	1	0.841424	1.00271	49.7	165.534
261	1	0.84466	1.01522	49.7	164.923
262	1.1	0.847896	1.02789	50.77	164.305
263	1.1	0.851133	1.04505	50.77	163.467
264	1.1	0.854369	1.05812	50.77	162.828
265	1.1	0.857605	1.07138	50.77	162.181
266	1.2	0.860841	1.08482	51.84	161.524
267	1.2	0.864078	1.10306	51.84	160.634
268	1.3	0.867314	1.11699	52.91	159.954
269	1.4	0.87055	1.13113	53.98	159.263
270	1.7	0.873786	1.1455	57.19	158.561
271	1.7	0.877023	1.16505	57.19	157.607
272	2	0.880259	1.18	60.4	156.877
273	2	0.883495	1.19522	60.4	156.133
274	2	0.886731	1.21073	60.4	155.376
275	2	0.889968	1.22653	60.4	154.605
276	2	0.893204	1.24809	60.4	153.552
277	2	0.89644	1.26464	60.4	152.743
278	2	0.899676	1.28155	60.4	151.918
279	2.4	0.902913	1.29884	64.68	151.074
280	2.5	0.906149	1.32251	65.75	149.918
281	3	0.909385	1.34075	71.1	149.026
282	3	0.912621	1.35946	71.1	148.113
283	3	0.915858	1.37866	71.1	147.176
284	3	0.919094	1.40507	71.1	145.886
285	3.7	0.92233	1.42554	78.59	144.886
286	4	0.925566	1.44663	81.8	143.856
287	5.8	0.928803	1.46838	101.06	142.794
288	6.6	0.932039	1.49852	109.62	141.323
289	7	0.935275	1.52203	113.9	140.174
290	7	0.938511	1.54643	113.9	138.983
291	7	0.941748	1.57179	113.9	137.744
292	7.3	0.944984	1.59819	117.11	136.455
293	9.1	0.94822	1.63524	136.37	134.646
294	9.3	0.951456	1.66456	138.51	133.214
295	10	0.954693	1.6954	146	131.708
296	13	0.957929	1.72793	178.1	130.119

297	13	0.961165	1.77438	178.1	127.851
298	13	0.964401	1.81191	178.1	126.018
299	14	0.967638	1.85218	188.8	124.052
300	14	0.970874	1.8957	188.8	121.927
301	15	0.97411	1.95996	199.5	118.789
302	16	0.977346	2.01409	210.2	116.145
303	19	0.980583	2.07485	242.3	113.178
304	21	0.983819	2.14441	263.7	109.781
305	25	0.987055	2.25713	306.5	104.277
306	26	0.990291	2.36561	317.2	98.9792
307	32	0.993528	2.51213	381.4	91.8241
308	41	0.996764	2.74777	477.7	80.3175

Shapiro-Francia Test of Normality

Parameter: Trichlorofluoromethane

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 308

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.07944	-2.74777	7.55021	5.71382
2	-2.07944	-2.51213	13.861	10.9377
3	-2.07944	-2.36561	19.4572	15.8568
4	-2.07944	-2.25713	24.5518	20.5504
5	-2.07944	-2.14441	29.1503	25.0095
6	-2.07944	-2.07485	33.4553	29.3241
7	-2.07944	-2.01409	37.5118	33.5123
8	-2.07944	-1.95996	41.3533	37.5879
9	-2.07944	-1.8957	44.947	41.5299
10	-2.07944	-1.85218	48.3775	45.3814
11	-2.07944	-1.81191	51.6605	49.1491
12	-2.07944	-1.77438	54.809	52.8389
13	-2.07944	-1.72793	57.7947	56.432
14	-2.07944	-1.6954	60.6691	59.9575
15	-2.07944	-1.66456	63.4398	63.4188
16	-2.07944	-1.63524	66.1138	66.8192
17	-2.07944	-1.59819	68.6681	70.1425
18	-2.07944	-1.57179	71.1386	73.411
19	-2.07944	-1.54643	73.53	76.6267
20	-2.07944	-1.52203	75.8466	79.7917
21	-2.07944	-1.49852	78.0922	82.9078
22	-2.07944	-1.46838	80.2483	85.9612
23	-2.07944	-1.44663	82.3411	88.9694
24	-2.07944	-1.42554	84.3732	91.9337
25	-2.07944	-1.40507	86.3475	94.8555
26	-2.07944	-1.37866	88.2482	97.7223
27	-2.07944	-1.35946	90.0963	100.549
28	-2.07944	-1.34075	91.8939	103.337
29	-2.07944	-1.32251	93.643	106.087
30	-2.07944	-1.29884	95.3299	108.788
31	-2.07944	-1.28155	96.9723	111.453
32	-2.07944	-1.26464	98.5716	114.083
33	-2.07944	-1.24809	100.129	116.678
34	-2.07944	-1.22653	101.634	119.229
35	-2.07944	-1.21073	103.1	121.746
36	-2.07944	-1.19522	104.528	124.232
37	-2.07944	-1.18	105.921	126.685
38	-2.07944	-1.16505	107.278	129.108
39	-2.07944	-1.1455	108.59	131.49
40	-2.07944	-1.13113	109.87	133.842
41	-2.07944	-1.11699	111.117	136.165
42	-2.07944	-1.10306	112.334	138.459
43	-2.07944	-1.08482	113.511	140.714
44	-2.07944	-1.07138	114.659	142.942
45	-2.07944	-1.05812	115.778	145.143
46	-2.07944	-1.04505	116.87	147.316
47	-2.07944	-1.02789	117.927	149.453
48	-2.07944	-1.01522	118.958	151.564
49	-2.07944	-1.00271	119.963	153.649
50	-2.07944	-0.990356	120.944	155.709
51	-2.07944	-0.974114	121.893	157.734

52	-2.07944	-0.9621	122.818	159.735
53	-2.07944	-0.950222	123.721	161.711
54	-2.07944	-0.938476	124.602	163.662
55	-2.07944	-0.926859	125.461	165.59
56	-2.07944	-0.911562	126.292	167.485
57	-2.07944	-0.900227	127.102	169.357
58	-2.07944	-0.889006	127.893	171.206
59	-2.07944	-0.877897	128.663	173.031
60	-2.07944	-0.863249	129.409	174.827
61	-2.07944	-0.852385	130.135	176.599
62	-2.07944	-0.841621	130.844	178.349
63	-2.07944	-0.830953	131.534	180.077
64	-2.07944	-0.816874	132.201	181.776
65	-2.07944	-0.806422	132.852	183.453
66	-2.07944	-0.796056	133.485	185.108
67	-2.07944	-0.785774	134.103	186.742
68	-2.07944	-0.772193	134.699	188.348
69	-2.07944	-0.7621	135.28	189.932
70	-2.07944	-0.752084	135.845	191.496
71	-1.17118	-0.742143	136.396	192.366
72	-1.04982	-0.729003	136.928	193.131
73	-1.02165	-0.719228	137.445	193.866
74	-0.891598	-0.709522	137.948	194.498
75	-0.733969	-0.699883	138.438	195.012
76	-0.693147	-0.690309	138.915	195.49
77	-0.693147	-0.677639	139.374	195.96
78	-0.693147	-0.668209	139.82	196.423
79	-0.693147	-0.658838	140.255	196.88
80	-0.693147	-0.649522	140.676	197.33
81	-0.693147	-0.637192	141.082	197.772
82	-0.693147	-0.628006	141.477	198.207
83	-0.693147	-0.618872	141.86	198.636
84	-0.693147	-0.609791	142.232	199.059
85	-0.693147	-0.597761	142.589	199.473
86	-0.693147	-0.588793	142.936	199.881
87	-0.693147	-0.579873	143.272	200.283
88	-0.693147	-0.570999	143.598	200.679
89	-0.693147	-0.559237	143.911	201.067
90	-0.693147	-0.550465	144.214	201.448
91	-0.693147	-0.541736	144.507	201.824
92	-0.693147	-0.533048	144.791	202.193
93	-0.693147	-0.524401	145.066	202.557
94	-0.693147	-0.51293	145.329	202.912
95	-0.693147	-0.504372	145.584	203.262
96	-0.693147	-0.49585	145.83	203.605
97	-0.693147	-0.487364	146.067	203.943
98	-0.693147	-0.476105	146.294	204.273
99	-0.693147	-0.467699	146.513	204.597
100	-0.693147	-0.459327	146.724	204.916
101	-0.693147	-0.450985	146.927	205.228
102	-0.693147	-0.439913	147.121	205.533
103	-0.693147	-0.431644	147.307	205.833
104	-0.693147	-0.423405	147.486	206.126
105	-0.693147	-0.415193	147.659	206.414
106	-0.693147	-0.40429	147.822	206.694
107	-0.693147	-0.396142	147.979	206.969
108	-0.693147	-0.388022	148.129	207.238
109	-0.693147	-0.379927	148.274	207.501
110	-0.693147	-0.371856	148.412	207.759
111	-0.693147	-0.361133	148.542	208.009
112	-0.693147	-0.353118	148.667	208.254
113	-0.693147	-0.345126	148.786	208.493

114	-0.693147	-0.337155	148.9	208.727
115	-0.693147	-0.326561	149.007	208.953
116	-0.693147	-0.318639	149.108	209.174
117	-0.693147	-0.310738	149.205	209.389
118	-0.693147	-0.302855	149.296	209.599
119	-0.693147	-0.292375	149.382	209.802
120	-0.693147	-0.284535	149.463	209.999
121	-0.693147	-0.276714	149.539	210.191
122	-0.693147	-0.268908	149.612	210.377
123	-0.693147	-0.258527	149.679	210.557
124	-0.693147	-0.250759	149.741	210.73
125	-0.693147	-0.243007	149.801	210.899
126	-0.693147	-0.235269	149.856	211.062
127	-0.693147	-0.224974	149.906	211.218
128	-0.693147	-0.217267	149.954	211.368
129	-0.693147	-0.209575	149.998	211.514
130	-0.693147	-0.201894	150.038	211.654
131	-0.693147	-0.194225	150.076	211.788
132	-0.693147	-0.184017	150.11	211.916
133	-0.693147	-0.176374	150.141	212.038
134	-0.693147	-0.168741	150.17	212.155
135	-0.693147	-0.161119	150.195	212.267
136	-0.693147	-0.150969	150.218	212.371
137	-0.693147	-0.143367	150.239	212.471
138	-0.693147	-0.135774	150.257	212.565
139	-0.693147	-0.128189	150.274	212.654
140	-0.693147	-0.118085	150.288	212.736
141	-0.693147	-0.110516	150.3	212.812
142	-0.693147	-0.102953	150.31	212.883
143	-0.693147	-0.0953969	150.32	212.95
144	-0.693147	-0.0853288	150.327	213.009
145	-0.693147	-0.0777834	150.333	213.063
146	-0.693147	-0.0702426	150.338	213.111
147	-0.693147	-0.0627062	150.342	213.155
148	-0.693147	-0.0551734	150.345	213.193
149	-0.693147	-0.0451348	150.347	213.224
150	-0.693147	-0.0376076	150.348	213.25
151	-0.693147	-0.0300838	150.349	213.271
152	-0.693147	-0.0225612	150.35	213.287
153	-0.693147	-0.0125328	150.35	213.296
154	-0.693147	-0.00501359	150.35	213.299
155	-0.693147	0.00501359	150.35	213.296
156	-0.693147	0.0125328	150.35	213.287
157	-0.693147	0.0225612	150.351	213.271
158	-0.693147	0.0300838	150.351	213.25
159	-0.693147	0.0376076	150.353	213.224
160	-0.693147	0.0451348	150.355	213.193
161	-0.693147	0.0551734	150.358	213.155
162	-0.693147	0.0627062	150.362	213.111
163	-0.693147	0.0702426	150.367	213.063
164	-0.693147	0.0777834	150.373	213.009
165	-0.693147	0.0853288	150.38	212.95
166	-0.693147	0.0953969	150.389	212.883
167	-0.693147	0.102953	150.4	212.812
168	-0.693147	0.110516	150.412	212.736
169	-0.693147	0.118085	150.426	212.654
170	-0.693147	0.128189	150.442	212.565
171	-0.693147	0.135774	150.461	212.471
172	-0.693147	0.143367	150.481	212.371
173	-0.693147	0.150969	150.504	212.267
174	-0.693147	0.161119	150.53	212.155
175	-0.693147	0.168741	150.559	212.038

176	-0.693147	0.176374	150.59	211.916
177	-0.693147	0.184017	150.624	211.788
178	-0.693147	0.194225	150.661	211.654
179	-0.693147	0.201894	150.702	211.514
180	-0.693147	0.209575	150.746	211.368
181	-0.693147	0.217267	150.793	211.218
182	-0.693147	0.224974	150.844	211.062
183	-0.693147	0.235269	150.899	210.899
184	-0.693147	0.243007	150.958	210.73
185	-0.693147	0.250759	151.021	210.557
186	-0.693147	0.258527	151.088	210.377
187	-0.693147	0.268908	151.16	210.191
188	-0.693147	0.276714	151.237	209.999
189	-0.693147	0.284535	151.318	209.802
190	-0.693147	0.292375	151.403	209.599
191	-0.693147	0.302855	151.495	209.389
192	-0.693147	0.310738	151.592	209.174
193	-0.693147	0.318639	151.693	208.953
194	-0.693147	0.326561	151.8	208.727
195	-0.693147	0.337155	151.913	208.493
196	-0.693147	0.345126	152.033	208.254
197	-0.693147	0.353118	152.157	208.009
198	-0.693147	0.361133	152.288	207.759
199	-0.693147	0.371856	152.426	207.501
200	-0.693147	0.379927	152.57	207.238
201	-0.693147	0.388022	152.721	206.969
202	-0.693147	0.396142	152.878	206.694
203	-0.693147	0.40429	153.041	206.414
204	-0.693147	0.415193	153.214	206.126
205	-0.693147	0.423405	153.393	205.833
206	-0.693147	0.431644	153.579	205.533
207	-0.693147	0.439913	153.773	205.228
208	-0.693147	0.450985	153.976	204.916
209	-0.693147	0.459327	154.187	204.597
210	-0.693147	0.467699	154.406	204.273
211	-0.693147	0.476105	154.632	203.943
212	-0.693147	0.487364	154.87	203.605
213	-0.693147	0.49585	155.116	203.262
214	-0.693147	0.504372	155.37	202.912
215	-0.693147	0.51293	155.633	202.557
216	-0.693147	0.524401	155.908	202.193
217	-0.693147	0.533048	156.192	201.824
218	-0.693147	0.541736	156.486	201.448
219	-0.693147	0.550465	156.789	201.067
220	-0.693147	0.559237	157.102	200.679
221	-0.693147	0.570999	157.428	200.283
222	-0.693147	0.579873	157.764	199.881
223	-0.693147	0.588793	158.111	199.473
224	-0.693147	0.597761	158.468	199.059
225	-0.693147	0.609791	158.84	198.636
226	-0.693147	0.618872	159.223	198.207
227	-0.673345	0.628006	159.617	197.784
228	-0.653926	0.637192	160.023	197.368
229	-0.579818	0.649522	160.445	196.991
230	-0.544727	0.658838	160.879	196.632
231	-0.544727	0.668209	161.326	196.268
232	-0.400478	0.677639	161.785	195.997
233	-0.385662	0.690309	162.261	195.731
234	-0.356675	0.699883	162.751	195.481
235	-0.342490	0.709522	163.255	195.238
236	-0.328504	0.719228	163.772	195.002
237	-0.223144	0.729003	164.303	194.839

238	-0.210721		0.742143	164.854	194.683
239	-0.198451		0.752084	165.42	194.533
240	-0.174353		0.7621	166.001	194.4
241	-0.116534		0.772193	166.597	194.31
242	-0.0512933		0.785774	167.214	194.27
243	-0.0304592		0.796056	167.848	194.246
244	0	0.806422		168.498	194.246
245	0	0.816874		169.166	194.246
246	0	0.830953		169.856	194.246
247	0	0.841621		170.564	194.246
248	0	0.852385		171.291	194.246
249	0	0.863249		172.036	194.246
250	0	0.877897		172.807	194.246
251	0	0.889006		173.597	194.246
252	0	0.900227		174.408	194.246
253	0	0.911562		175.239	194.246
254	0	0.926859		176.098	194.246
255	0	0.938476		176.978	194.246
256	0	0.950222		177.881	194.246
257	0	0.9621	178.807	194.246	
258	0	0.974114		179.756	194.246
259	0	0.990356		180.737	194.246
260	0	1.00271	181.742	194.246	
261	0	1.01522	182.773	194.246	
262	0.0953102		1.02789	183.829	194.344
263	0.0953102		1.04505	184.921	194.443
264	0.0953102		1.05812	186.041	194.544
265	0.0953102		1.07138	187.189	194.646
266	0.182322		1.08482	188.366	194.844
267	0.182322		1.10306	189.583	195.045
268	0.262364		1.11699	190.83	195.338
269	0.336472		1.13113	192.11	195.719
270	0.530628		1.1455	193.422	196.327
271	0.530628		1.16505	194.779	196.945
272	0.693147		1.18	196.172	197.763
273	0.693147		1.19522	197.6	198.591
274	0.693147		1.21073	199.066	199.431
275	0.693147		1.22653	200.57	200.281
276	0.693147		1.24809	202.128	201.146
277	0.693147		1.26464	203.727	202.022
278	0.693147		1.28155	205.37	202.911
279	0.875469		1.29884	207.057	204.048
280	0.916291		1.32251	208.806	205.26
281	1.09861	1.34075	210.603	206.733	
282	1.09861	1.35946	212.452	208.226	
283	1.09861	1.37866	214.352	209.741	
284	1.09861	1.40507	216.326	211.284	
285	1.30833	1.42554	218.359	213.149	
286	1.38629	1.44663	220.451	215.155	
287	1.75786	1.46838	222.608	217.736	
288	1.88707	1.49852	224.853	220.564	
289	1.94591	1.52203	227.17	223.526	
290	1.94591	1.54643	229.561	226.535	
291	1.94591	1.57179	232.032	229.593	
292	1.98787	1.59819	234.586	232.77	
293	2.20827	1.63524	237.26	236.382	
294	2.23001	1.66456	240.031	240.094	
295	2.30259	1.6954	242.905	243.997	
296	2.56495	1.72793	245.891	248.429	
297	2.56495	1.77438	249.039	252.981	
298	2.56495	1.81191	252.322	257.628	
299	2.63906	1.85218	255.753	262.516	

300	2.63906	1.8957	259.346	267.519
301	2.70805	1.95996	263.188	272.827
302	2.77259	2.01409	267.244	278.411
303	2.94444	2.07485	271.549	284.52
304	3.04452	2.14441	276.148	291.049
305	3.21888	2.25713	281.243	298.314
306	3.2581	2.36561	286.839	306.022
307	3.46574	2.51213	293.149	314.728
308	3.71357	2.74777	300.7	324.932

Data Set Standard Deviation = 1.18654
Numerator = 105581
Denominator = 129968
W Statistic = 0.81236 = 105581 / 129968

5% Critical value of 0.976 exceeds 0.81236
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.81236
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Trichlorofluoromethane

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.901563
0.901563 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.079440	0.00323625	-2.74777	109.357	348.683
2	-2.079440	0.00647249	-2.51213	109.357	337.176
3	-2.079440	0.00970874	-2.36561	109.357	330.021
4	-2.079440	0.012945	-2.25713	109.357	324.723
5	-2.079440	0.0161812	-2.14441	109.357	319.219
6	-2.079440	0.0194175	-2.07485	109.357	315.822
7	-2.079440	0.0226537	-2.01409	109.357	312.855
8	-2.079440	0.02589	-1.95996	109.357	310.211
9	-2.079440	0.0291262	-1.8957	109.357	307.073
10	-2.079440	0.0323625	-1.85218	109.357	304.948
11	-2.079440	0.0355987	-1.81191	109.357	302.982
12	-2.079440	0.038835	-1.77438	109.357	301.149
13	-2.079440	0.0420712	-1.72793	109.357	298.881
14	-2.079440	0.0453074	-1.6954	109.357	297.292
15	-2.079440	0.0485437	-1.66456	109.357	295.786
16	-2.079440	0.0517799	-1.63524	109.357	294.354
17	-2.079440	0.0550162	-1.59819	109.357	292.545
18	-2.079440	0.0582524	-1.57179	109.357	291.256
19	-2.079440	0.0614887	-1.54643	109.357	290.017
20	-2.079440	0.0647249	-1.52203	109.357	288.826
21	-2.079440	0.0679612	-1.49852	109.357	287.677
22	-2.079440	0.0711974	-1.46838	109.357	286.206
23	-2.079440	0.0744337	-1.44663	109.357	285.144
24	-2.079440	0.0776699	-1.42554	109.357	284.114
25	-2.079440	0.0809061	-1.40507	109.357	283.114
26	-2.079440	0.0841424	-1.37866	109.357	281.824
27	-2.079440	0.0873786	-1.35946	109.357	280.887
28	-2.079440	0.0906149	-1.34075	109.357	279.974
29	-2.079440	0.0938511	-1.32251	109.357	279.082
30	-2.079440	0.0970874	-1.29884	109.357	277.926
31	-2.079440	0.100324	-1.28155	109.357	277.082
32	-2.079440	0.10356	-1.26464	109.357	276.257
33	-2.079440	0.106796	-1.24809	109.357	275.448
34	-2.079440	0.110032	-1.22653	109.357	274.395
35	-2.079440	0.113269	-1.21073	109.357	273.624
36	-2.079440	0.116505	-1.19522	109.357	272.867
37	-2.079440	0.119741	-1.18	109.357	272.123
38	-2.079440	0.122977	-1.16505	109.357	271.393
39	-2.079440	0.126214	-1.1455	109.357	270.439
40	-2.079440	0.12945	-1.13113	109.357	269.737
41	-2.079440	0.132686	-1.11699	109.357	269.046
42	-2.079440	0.135922	-1.10306	109.357	268.366
43	-2.079440	0.139159	-1.08482	109.357	267.476
44	-2.079440	0.142395	-1.07138	109.357	266.819
45	-2.079440	0.145631	-1.05812	109.357	266.172
46	-2.079440	0.148867	-1.04505	109.357	265.533
47	-2.079440	0.152104	-1.02789	109.357	264.695
48	-2.079440	0.15534	-1.01522	109.357	264.077

49	-2.079440.158576	-1.00271109.357	263.466		
50	-2.079440.161812	-0.990356	109.357	262.862	
51	-2.079440.165049	-0.974114	109.357	262.069	
52	-2.079440.168285	-0.9621 109.357	261.483		
53	-2.079440.171521	-0.950222	109.357	260.903	
54	-2.079440.174757	-0.938476	109.357	260.329	
55	-2.079440.177994	-0.926859	109.357	259.762	
56	-2.079440.18123 -0.911562	109.357	259.015		
57	-2.079440.184466	-0.900227	109.357	258.461	
58	-2.079440.187702	-0.889006	109.357	257.913	
59	-2.079440.190939	-0.877897	109.357	257.371	
60	-2.079440.194175	-0.863249	109.357	256.655	
61	-2.079440.197411	-0.852385	109.357	256.125	
62	-2.079440.200647	-0.841621	109.357	255.599	
63	-2.079440.203883	-0.830953	109.357	255.078	
64	-2.079440.20712 -0.816874	109.357	254.391		
65	-2.079440.210356	-0.806422	109.357	253.88	
66	-2.079440.213592	-0.796056	109.357	253.374	
67	-2.079440.216828	-0.785774	109.357	252.872	
68	-2.079440.220065	-0.772193	109.357	252.209	
69	-2.079440.223301	-0.7621 109.357	251.716		
70	-2.079440.226537	-0.752084	109.357	251.227	
71	-1.171180.229773	-0.742143	178.774	250.741	
72	-1.049820.23301 -0.729003	188.049	250.1		
73	-1.021650.236246	-0.719228	190.202	249.622	
74	-0.891598	0.239482	-0.709522	200.142	249.148
75	-0.733969	0.242718	-0.699883	212.189	248.678
76	-0.693147	0.245955	-0.690309	215.309	248.21
77	-0.693147	0.249191	-0.677639	215.309	247.591
78	-0.693147	0.252427	-0.668209	215.309	247.131
79	-0.693147	0.255663	-0.658838	215.309	246.673
80	-0.693147	0.2589 -0.649522	215.309	246.218	
81	-0.693147	0.262136	-0.637192	215.309	245.616
82	-0.693147	0.265372	-0.628006	215.309	245.168
83	-0.693147	0.268608	-0.618872	215.309	244.722
84	-0.693147	0.271845	-0.609791	215.309	244.278
85	-0.693147	0.275081	-0.597761	215.309	243.691
86	-0.693147	0.278317	-0.588793	215.309	243.253
87	-0.693147	0.281553	-0.579873	215.309	242.817
88	-0.693147	0.28479 -0.570999	215.309	242.384	
89	-0.693147	0.288026	-0.559237	215.309	241.809
90	-0.693147	0.291262	-0.550465	215.309	241.381
91	-0.693147	0.294498	-0.541736	215.309	240.955
92	-0.693147	0.297735	-0.533048	215.309	240.531
93	-0.693147	0.300971	-0.524401	215.309	240.108
94	-0.693147	0.304207	-0.51293215.309	239.548	
95	-0.693147	0.307443	-0.504372	215.309	239.13
96	-0.693147	0.31068 -0.49585215.309	238.714		
97	-0.693147	0.313916	-0.487364	215.309	238.3
98	-0.693147	0.317152	-0.476105	215.309	237.75
99	-0.693147	0.320388	-0.467699	215.309	237.339
100	-0.693147	0.323625	-0.459327	215.309	236.93
101	-0.693147	0.326861	-0.450985	215.309	236.523
102	-0.693147	0.330097	-0.439913	215.309	235.982
103	-0.693147	0.333333	-0.431644	215.309	235.579
104	-0.693147	0.33657 -0.423405	215.309	235.176	
105	-0.693147	0.339806	-0.415193	215.309	234.775
106	-0.693147	0.343042	-0.40429215.309	234.243	
107	-0.693147	0.346278	-0.396142	215.309	233.845
108	-0.693147	0.349515	-0.388022	215.309	233.448
109	-0.693147	0.352751	-0.379927	215.309	233.053
110	-0.693147	0.355987	-0.371856	215.309	232.659

111	-0.693147	0.359223	-0.361133	215.309	232.135
112	-0.693147	0.36246	-0.353118	215.309	231.744
113	-0.693147	0.365696	-0.345126	215.309	231.354
114	-0.693147	0.368932	-0.337155	215.309	230.964
115	-0.693147	0.372168	-0.326561	215.309	230.447
116	-0.693147	0.375405	-0.318639	215.309	230.06
117	-0.693147	0.378641	-0.310738	215.309	229.674
118	-0.693147	0.381877	-0.302855	215.309	229.289
119	-0.693147	0.385113	-0.292375	215.309	228.778
120	-0.693147	0.38835	-0.284535	215.309	228.395
121	-0.693147	0.391586	-0.276714	215.309	228.013
122	-0.693147	0.394822	-0.268908	215.309	227.632
123	-0.693147	0.398058	-0.258527	215.309	227.125
124	-0.693147	0.401294	-0.250759	215.309	226.745
125	-0.693147	0.404531	-0.243007	215.309	226.367
126	-0.693147	0.407767	-0.235269	215.309	225.989
127	-0.693147	0.411003	-0.224974	215.309	225.486
128	-0.693147	0.414239	-0.217267	215.309	225.11
129	-0.693147	0.417476	-0.209575	215.309	224.734
130	-0.693147	0.420712	-0.201894	215.309	224.359
131	-0.693147	0.423948	-0.194225	215.309	223.985
132	-0.693147	0.427184	-0.184017	215.309	223.486
133	-0.693147	0.430421	-0.176374	215.309	223.113
134	-0.693147	0.433657	-0.168741	215.309	222.74
135	-0.693147	0.436893	-0.161119	215.309	222.368
136	-0.693147	0.440129	-0.150969	215.309	221.872
137	-0.693147	0.443366	-0.143367	215.309	221.501
138	-0.693147	0.446602	-0.135774	215.309	221.13
139	-0.693147	0.449838	-0.128189	215.309	220.76
140	-0.693147	0.453074	-0.118085	215.309	220.267
141	-0.693147	0.456311	-0.110516	215.309	219.897
142	-0.693147	0.459547	-0.102953	215.309	219.528
143	-0.693147	0.462783	-0.0953969	215.309	219.159
144	-0.693147	0.466019	-0.0853288	215.309	218.667
145	-0.693147	0.469256	-0.0777834	215.309	218.298
146	-0.693147	0.472492	-0.0702426	215.309	217.93
147	-0.693147	0.475728	-0.0627062	215.309	217.562
148	-0.693147	0.478964	-0.0551734	215.309	217.194
149	-0.693147	0.482201	-0.0451348	215.309	216.704
150	-0.693147	0.485437	-0.0376076	215.309	216.337
151	-0.693147	0.488673	-0.0300838	215.309	215.969
152	-0.693147	0.491909	-0.0225612	215.309	215.602
153	-0.693147	0.495146	-0.0125328	215.309	215.112
154	-0.693147	0.498382	-0.00501359	215.309	214.745
155	-0.693147	0.501618	0.00501359	215.309	214.255
156	-0.693147	0.504854	0.0125328	215.309	213.888
157	-0.693147	0.508091	0.0225612	215.309	213.398
158	-0.693147	0.511327	0.0300838	215.309	213.031
159	-0.693147	0.514563	0.0376076	215.309	212.663
160	-0.693147	0.517799	0.0451348	215.309	212.296
161	-0.693147	0.521036	0.0551734	215.309	211.806
162	-0.693147	0.524272	0.0627062	215.309	211.438
163	-0.693147	0.527508	0.0702426	215.309	211.07
164	-0.693147	0.530744	0.0777834	215.309	210.702
165	-0.693147	0.533981	0.0853288	215.309	210.333
166	-0.693147	0.537217	0.0953969	215.309	209.841
167	-0.693147	0.540453	0.102953	215.309	209.472
168	-0.693147	0.543689	0.110516	215.309	209.103
169	-0.693147	0.546926	0.118085	215.309	208.733
170	-0.693147	0.550162	0.128189	215.309	208.24
171	-0.693147	0.553398	0.135774	215.309	207.87
172	-0.693147	0.556634	0.143367	215.309	207.499

173	-0.693147	0.559871	0.150969	215.309	207.128
174	-0.693147	0.563107	0.161119	215.309	206.632
175	-0.693147	0.566343	0.168741	215.309	206.26
176	-0.693147	0.569579	0.176374	215.309	205.887
177	-0.693147	0.572816	0.184017	215.309	205.514
178	-0.693147	0.576052	0.194225	215.309	205.015
179	-0.693147	0.579288	0.201894	215.309	204.641
180	-0.693147	0.582524	0.209575	215.309	204.266
181	-0.693147	0.585761	0.217267	215.309	203.89
182	-0.693147	0.588997	0.224974	215.309	203.514
183	-0.693147	0.592233	0.235269	215.309	203.011
184	-0.693147	0.595469	0.243007	215.309	202.633
185	-0.693147	0.598706	0.250759	215.309	202.255
186	-0.693147	0.601942	0.258527	215.309	201.875
187	-0.693147	0.605178	0.268908	215.309	201.368
188	-0.693147	0.608414	0.276714	215.309	200.987
189	-0.693147	0.61165	0.284535	215.309	200.605
190	-0.693147	0.614887	0.292375	215.309	200.222
191	-0.693147	0.618123	0.302855	215.309	199.711
192	-0.693147	0.621359	0.310738	215.309	199.326
193	-0.693147	0.624595	0.318639	215.309	198.94
194	-0.693147	0.627832	0.326561	215.309	198.553
195	-0.693147	0.631068	0.337155	215.309	198.036
196	-0.693147	0.634304	0.345126	215.309	197.646
197	-0.693147	0.63754	0.353118	215.309	197.256
198	-0.693147	0.640777	0.361133	215.309	196.865
199	-0.693147	0.644013	0.371856	215.309	196.341
200	-0.693147	0.647249	0.379927	215.309	195.947
201	-0.693147	0.650485	0.388022	215.309	195.552
202	-0.693147	0.653722	0.396142	215.309	195.155
203	-0.693147	0.656958	0.40429	215.309	194.757
204	-0.693147	0.660194	0.415193	215.309	194.225
205	-0.693147	0.66343	0.423405	215.309	193.824
206	-0.693147	0.666667	0.431644	215.309	193.421
207	-0.693147	0.669903	0.439913	215.309	193.018
208	-0.693147	0.673139	0.450985	215.309	192.477
209	-0.693147	0.676375	0.459327	215.309	192.07
210	-0.693147	0.679612	0.467699	215.309	191.661
211	-0.693147	0.682848	0.476105	215.309	191.25
212	-0.693147	0.686084	0.487364	215.309	190.7
213	-0.693147	0.68932	0.49585	215.309	190.286
214	-0.693147	0.692557	0.504372	215.309	189.87
215	-0.693147	0.695793	0.51293	215.309	189.452
216	-0.693147	0.699029	0.524401	215.309	188.892
217	-0.693147	0.702265	0.533048	215.309	188.469
218	-0.693147	0.705502	0.541736	215.309	188.045
219	-0.693147	0.708738	0.550465	215.309	187.619
220	-0.693147	0.711974	0.559237	215.309	187.191
221	-0.693147	0.71521	0.570999	215.309	186.616
222	-0.693147	0.718447	0.579873	215.309	186.183
223	-0.693147	0.721683	0.588793	215.309	185.747
224	-0.693147	0.724919	0.597761	215.309	185.309
225	-0.693147	0.728155	0.609791	215.309	184.722
226	-0.693147	0.731392	0.618872	215.309	184.278
227	-0.673345	0.734628	0.628006	216.823	183.832
228	-0.653926	0.737864	0.637192	218.307	183.384
229	-0.579818	0.7411	0.649522	223.971	182.782
230	-0.544727	0.744337	0.658838	226.653	182.327
231	-0.544727	0.747573	0.668209	226.653	181.869
232	-0.400478	0.750809	0.677639	237.678	181.409
233	-0.385662	0.754045	0.690309	238.81	180.79
234	-0.356675	0.757282	0.699883	241.026	180.322

235	-0.342490	0.760518	0.709522	242.11	179.852	
236	-0.328504	0.763754	0.719228	243.179	179.378	
237	-0.223144	0.76699	0.729003	251.231	178.9	
238	-0.210721	0.770227	0.742143	252.181	178.259	
239	-0.198451	0.773463	0.752084	253.118	177.773	
240	-0.174353	0.776699	0.7621	254.96	177.284	
241	-0.116534	0.779935	0.772193	259.379	176.791	
242	-0.0512933	0.783172	0.785774	264.365	176.128	
243	-0.0304592	0.786408	0.796056	265.958	175.626	
244	0	0.789644	0.806422	268.286	175.12	
245	0	0.79288	0.816874	268.286	174.609	
246	0	0.796117	0.830953	268.286	173.922	
247	0	0.799353	0.841621	268.286	173.401	
248	0	0.802589	0.852385	268.286	172.875	
249	0	0.805825	0.863249	268.286	172.345	
250	0	0.809061	0.877897	268.286	171.629	
251	0	0.812298	0.889006	268.286	171.087	
252	0	0.815534	0.900227	268.286	170.539	
253	0	0.81877	0.911562	268.286	169.985	
254	0	0.822006	0.926859	268.286	169.238	
255	0	0.825243	0.938476	268.286	168.671	
256	0	0.828479	0.950222	268.286	168.097	
257	0	0.831715	0.9621	268.286	167.517	
258	0	0.834951	0.974114	268.286	166.931	
259	0	0.838188	0.990356	268.286	166.138	
260	0	0.841424	1.00271	268.286	165.534	
261	0	0.84466	1.01522	268.286	164.923	
262	0.0953102	0.847896	1.02789	275.57	164.305	
263	0.0953102	0.851133	1.04505	275.57	163.467	
264	0.0953102	0.854369	1.05812	275.57	162.828	
265	0.0953102	0.857605	1.07138	275.57	162.181	
266	0.182322	0.860841	1.08482	282.22	161.524	
267	0.182322	0.864078	1.10306	282.22	160.634	
268	0.262364	0.867314	1.11699	288.338	159.954	
269	0.336472	0.87055	1.13113	294.002	159.263	
270	0.530628	0.873786	1.1455	308.841	158.561	
271	0.530628	0.877023	1.16505	308.841	157.607	
272	0.693147	0.880259	1.18	321.262	156.877	
273	0.693147	0.883495	1.19522	321.262	156.133	
274	0.693147	0.886731	1.21073	321.262	155.376	
275	0.693147	0.889968	1.22653	321.262	154.605	
276	0.693147	0.893204	1.24809	321.262	153.552	
277	0.693147	0.89644	1.26464	321.262	152.743	
278	0.693147	0.899676	1.28155	321.262	151.918	
279	0.875469	0.902913	1.29884	335.197	151.074	
280	0.916291	0.906149	1.32251	338.317	149.918	
281	1.09861	0.909385	1.34075	352.251	149.026	
282	1.09861	0.912621	1.35946	352.251	148.113	
283	1.09861	0.915858	1.37866	352.251	147.176	
284	1.09861	0.919094	1.40507	352.251	145.886	
285	1.30833	0.92233	1.42554	368.28	144.886	
286	1.38629	0.925566	1.44663	374.238	143.856	
287	1.75786	0.928803	1.46838	402.636	142.794	
288	1.88707	0.932039	1.49852	412.512	141.323	
289	1.94591	0.935275	1.52203	417.009	140.174	
290	1.94591	0.938511	1.54643	417.009	138.983	
291	1.94591	0.941748	1.57179	417.009	137.744	
292	1.98787	0.944984	1.59819	420.216	136.455	
293	2.20827	0.94822	1.63524	437.061	134.646	
294	2.23001	0.951456	1.66456	438.723	133.214	
295	2.30259	0.954693	1.6954	444.269	131.708	
296	2.56495	0.957929	1.72793	464.321	130.119	

297	2.56495	0.961165	1.77438	464.321	127.851
298	2.56495	0.964401	1.81191	464.321	126.018
299	2.63906	0.967638	1.85218	469.985	124.052
300	2.63906	0.970874	1.8957	469.985	121.927
301	2.70805	0.97411	1.95996	475.258	118.789
302	2.77259	0.977346	2.01409	480.191	116.145
303	2.94444	0.980583	2.07485	493.325	113.178
304	3.04452	0.983819	2.14441	500.974	109.781
305	3.21888	0.987055	2.25713	514.3	104.277
306	3.2581	0.990291	2.36561	517.297	98.9792
307	3.46574	0.993528	2.51213	533.167	91.8241
308	3.71357	0.996764	2.74777	552.109	80.3175

Kruskal-Wallis Non-Parametric Test

Parameter: Trichlorofluoromethane

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	ND<-0.693147	117.5
	3/16/1999	ND<-0.693147	117.5
	9/23/1999	ND<-0.693147	117.5
	3/14/2000	ND<-0.693147	117.5
	9/23/2003	ND<-0.693147	117.5
	3/10/2004	ND<-0.693147	117.5
	10/12/2004	ND<-0.693147	117.5
	4/1/2005	0.693147	272
	10/26/2005	ND<0 J	117.5
	6/19/2006	0.693147	273
	11/18/2006	0.693147	274
	6/2/2007	1.09861	281
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	1.09861	282
	11/20/2008	0.693147	275
	6/11/2009	-0.198451 J	252
	11/16/2009	0.875469	279
	11/16/2009	2.77259 B	302
	6/30/2010	0.693147	276
	11/17/2010	0.530628	270
	7/6/2011	-1.17118 J	235
	11/22/2011	0.182322	266
	5/16/2012	0.262364	268
	11/16/2012	0	257
	11/16/2013	ND<-2.07944 U	117.5

Rank Sum = 5237
Rank Mean = 209.48

Background Rank Sum = 5237
Background Rank Mean = 209.48

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-9	1/16/1998	ND<-0.693147	117.5
	3/16/1999	ND<-0.693147	117.5
	9/23/1999	ND<-0.693147	117.5
	3/14/2000	ND<-0.693147	117.5
	9/23/2003	ND<-0.693147	117.5
	3/10/2004	ND<-0.693147	117.5
	10/12/2004	ND<-0.693147	117.5
	4/1/2005	ND<-0.693147	117.5
	10/26/2005	ND<-0.693147	117.5
	6/19/2006	ND<-0.693147	117.5
	11/18/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	ND<-0.693147	117.5
	11/20/2008	ND<-0.693147	117.5

	6/11/2009	ND<-2.07944 U	117.5
	11/16/2009	ND<-2.07944 U	117.5
	11/16/2009	1.94591 J	289
	6/30/2010	ND<-2.07944 U	117.5
	11/17/2010	ND<-2.07944 U	117.5
	7/6/2011	ND<-2.07944 U	117.5
	11/22/2011	ND<-2.07944 U	117.5
	5/16/2012	ND<-2.07944 U	117.5
	11/16/2012	ND<-2.07944 U	117.5
	11/16/2013	ND<-2.07944 U	117.5

Rank Sum = 3109
Rank Mean = 124.36

LMW-8	1/16/1998	ND<-0.693147	117.5
	3/16/1999	ND<-0.693147	117.5
	9/23/1999	ND<-0.693147	117.5
	3/14/2000	ND<-0.693147	117.5
	9/23/2003	ND<-0.693147	117.5
	3/10/2004	ND<-0.693147	117.5
	10/12/2004	ND<-0.693147	117.5
	4/1/2005	ND<-0.693147	117.5
	10/26/2005	ND<-0.693147	117.5
	6/19/2006	ND<-0.693147	117.5
	11/18/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	ND<-0.693147	117.5
	11/20/2008	ND<-0.693147	117.5
	6/11/2009	ND<-2.07944 U	117.5
	11/16/2009	ND<-2.07944 U	117.5
	11/16/2009	2.94444	303
	6/30/2010	ND<-2.07944 U	117.5
	11/17/2010	ND<-2.07944 U	117.5
	7/6/2011	ND<-2.07944 U	117.5
	11/22/2011	ND<-2.07944 U	117.5
	5/16/2012	ND<-2.07944 U	117.5
	11/16/2012	ND<-2.07944 U	117.5
	11/16/2013	ND<-2.07944 U	117.5

Rank Sum = 3123
Rank Mean = 124.92

LMW-6	1/16/1998	ND<-0.693147	117.5
	3/16/1999	ND<-0.693147	117.5
	9/23/1999	ND<-0.693147	117.5
	3/14/2000	ND<-0.693147	117.5
	9/23/2003	ND<-0.693147	117.5
	3/10/2004	ND<-0.693147	117.5
	10/12/2004	ND<-0.693147	117.5
	4/1/2005	ND<0 J	117.5
	10/26/2005	0	258
	6/19/2006	0	259
	11/18/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<0 J	117.5
	5/20/2008	0	260
	11/20/2008	ND<0 J	117.5
	6/11/2009	-0.0512933 J	255
	11/16/2009	3.71357	308
	11/16/2009	0.0953102	262
	6/30/2010	-0.328504 J	249
	11/17/2010	-0.733969 J	239
	7/6/2011	-0.356675 J	247

	11/22/2011	-1.04982 J	236
	5/16/2012	-0.400478 J	245
	11/16/2012	-0.891598 J	238
	11/16/2013	-0.544727 J	243

Rank Sum = 4709
Rank Mean = 188.36

LMW-3S	11/18/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	0	261
	5/20/2008	ND<0 J	117.5
	11/20/2008	ND<0 J	117.5
	6/11/2009	0.0953102	263
	11/16/2009	2.56495	296
	11/16/2009	-0.0304592 J	256
	6/30/2010	0.336472	269
	11/17/2010	0.0953102	264
	7/6/2011	-1.02165 J	237
	11/22/2011	-0.223144 J	250
	5/16/2012	0.182322	267
	11/16/2012	0.530628	271
	11/16/2013	-0.579818 J	242

Rank Sum = 3346
Rank Mean = 223.067

LMW-14R	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	ND<-0.693147	117.5
	11/20/2008	ND<-0.693147	117.5
	6/11/2009	ND<-2.07944 U	117.5
	6/30/2010	ND<-2.07944 U	117.5
	11/17/2010	ND<-2.07944 U	117.5
	7/6/2011	ND<-2.07944 U	117.5
	11/22/2011	ND<-2.07944 U	117.5
	5/16/2012	ND<-2.07944 U	117.5
	11/16/2012	ND<-2.07944 U	117.5
	11/16/2013	ND<-2.07944 U	117.5

Rank Sum = 1410
Rank Mean = 117.5

LMW-9D	11/18/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	ND<-0.693147	117.5
	11/20/2008	ND<-0.693147	117.5
	6/11/2009	ND<-2.07944 U	117.5
	11/16/2009	3.21888	305
	11/16/2009	ND<-2.07944 U	117.5
	6/30/2010	ND<-2.07944 U	117.5
	11/17/2010	ND<-2.07944 U	117.5
	7/6/2011	ND<-2.07944 U	117.5
	11/22/2011	ND<-2.07944 U	117.5
	5/16/2012	ND<-2.07944 U	117.5
	11/16/2012	ND<-2.07944 U	117.5
	11/16/2013	ND<-2.07944 U	117.5

Rank Sum = 1950
Rank Mean = 130

LMW-10	3/14/2000	ND<-0.693147	117.5
	9/23/2003	ND<-0.693147	117.5
	3/10/2004	ND<-0.693147	117.5
	10/12/2004	ND<-0.693147	117.5

	4/1/2005	ND<-0.693147	117.5
	10/26/2005	ND<0 J	117.5
	6/19/2006	0.693147	277
	11/18/2006	1.94591	290
	6/2/2007	1.09861	283
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	2.30259	295
	11/20/2008	1.09861	284
	6/11/2009	1.88707	288
	11/16/2009	2.56495	297
	11/16/2009	3.04452	304
	6/30/2010	1.75786	287
	11/17/2010	1.98787	292
	7/6/2011	1.30833	285
	11/22/2011	2.63906	299
	5/16/2012	2.63906	300
	11/16/2012	2.56495	298
	11/16/2013	0.916291	280

Rank Sum = 5181.5
Rank Mean = 235.523

LMW-9S	11/18/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	ND<-0.693147	117.5
	11/20/2008	ND<-0.693147	117.5
	6/11/2009	ND<-2.07944 U	117.5
	11/16/2009	2.20827 J B	293
	11/16/2009	3.2581 B	306
	11/16/2009	ND<-2.07944 U	117.5
	11/16/2009	ND<-2.07944 U	117.5
	11/16/2009	ND<-2.07944 U	117.5
	11/16/2009	2.70805 B	301
	6/30/2010	ND<-2.07944 U	117.5
	11/17/2010	ND<-2.07944 U	117.5
	7/6/2011	ND<-2.07944 U	117.5
	11/22/2011	ND<-2.07944 U	117.5
	5/16/2012	ND<-2.07944 U	117.5
	11/16/2012	ND<-2.07944 U	117.5
	11/16/2013	ND<-2.07944 U	117.5

Rank Sum = 2780
Rank Mean = 146.316

LMW-3	11/19/1996	ND<-0.693147	117.5
	3/24/1997	ND<-0.693147	117.5
	1/16/1998	ND<-0.693147	117.5
	3/16/1999	ND<-0.693147	117.5
	9/23/1999	ND<-0.693147	117.5
	3/14/2000	ND<-0.693147	117.5
	9/23/2003	ND<-0.693147	117.5
	3/10/2004	ND<-0.693147	117.5
	10/12/2004	ND<-0.693147	117.5
	4/1/2005	ND<0 J	117.5
	10/26/2005	ND<0 J	117.5
	6/19/2006	ND<0 J	117.5
	11/18/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<0 J	117.5
	5/20/2008	ND<0 J	117.5
	11/20/2008	ND<0 J	117.5
	6/11/2009	-0.174353 J	253
	11/16/2009	-0.385662 J	246

	11/16/2009	3.46574 B	307
	6/30/2010	-0.544727 J	244
	11/17/2010	-0.653926 J	241
	7/6/2011	-0.673345 J	240
	11/22/2011	-0.116534 J	254
	5/16/2012	-0.34249 J	248
	11/16/2012	0.0953102	265
	11/16/2013	-0.210721 J	251

Rank Sum = 4546.5
Rank Mean = 168.389

LMW-16	11/18/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	ND<-0.693147	117.5
	11/20/2008	ND<-0.693147	117.5
	6/11/2009	ND<-2.07944 U	117.5
	11/16/2009	2.23001 J B	294
	11/16/2009	ND<-2.07944 U	117.5
	6/30/2010	ND<-2.07944 U	117.5
	11/17/2010	ND<-2.07944 U	117.5
	7/6/2011	ND<-2.07944 U	117.5
	11/22/2011	ND<-2.07944 U	117.5
	5/16/2012	ND<-2.07944 U	117.5
	11/16/2012	ND<-2.07944 U	117.5
	11/16/2013	ND<-2.07944 U	117.5

Rank Sum = 1939
Rank Mean = 129.267

LMW-15R	11/18/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<-0.693147	117.5
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	ND<-0.693147	117.5
	5/20/2008	ND<-0.693147	117.5
	11/20/2008	ND<-0.693147	117.5
	11/20/2008	ND<-0.693147	117.5
	6/11/2009	ND<-2.07944 U	117.5
	6/30/2010	ND<-2.07944 U	117.5
	11/17/2010	ND<-2.07944 U	117.5
	7/6/2011	ND<-2.07944 U	117.5
	11/22/2011	ND<-2.07944 U	117.5
	5/16/2012	ND<-2.07944 U	117.5
	11/16/2012	ND<-2.07944 U	117.5
	11/16/2013	ND<-2.07944 U	117.5

Rank Sum = 1880
Rank Mean = 117.5

LMW-7	1/16/1998	ND<-0.693147	117.5
	3/16/1999	ND<-0.693147	117.5
	9/23/1999	ND<-0.693147	117.5
	3/14/2000	ND<-0.693147	117.5
	9/23/2003	ND<-0.693147	117.5
	3/10/2004	ND<-0.693147	117.5
	10/12/2004	ND<-0.693147	117.5
	4/1/2005	ND<-0.693147	117.5
	10/26/2005	ND<-0.693147	117.5
	6/19/2006	ND<-0.693147	117.5
	11/18/2006	ND<-0.693147	117.5
	6/2/2007	0.693147	278
	11/15/2007	1.38629	286
	5/20/2008	ND<-0.693147	117.5

	11/20/2008	ND<-0.693147	117.5
	6/11/2009	ND<-2.07944 U	117.5
	11/17/2010	ND<-2.07944 U	117.5
	7/6/2011	ND<-2.07944 U	117.5
	11/22/2011	ND<-2.07944 U	117.5
	5/16/2012	ND<-2.07944 U	117.5
	11/16/2012	ND<-2.07944 U	117.5

Rank Sum = 2796.5
Rank Mean = 133.167

LMW-11	3/14/2000	ND<-0.693147	117.5
	9/23/2003	ND<-0.693147	117.5
	3/10/2004	ND<-0.693147	117.5
	10/12/2004	ND<-0.693147	117.5
	4/1/2005	ND<-0.693147	117.5
	10/26/2005	ND<-0.693147	117.5
	6/19/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	ND<-0.693147	117.5
	11/20/2008	ND<-0.693147	117.5

Rank Sum = 1292.5
Rank Mean = 117.5

LMW-12	3/14/2000	ND<-0.693147	117.5
	9/23/2003	ND<-0.693147	117.5
	3/10/2004	ND<-0.693147	117.5
	10/12/2004	ND<-0.693147	117.5
	4/1/2005	ND<-0.693147	117.5
	10/26/2005	ND<-0.693147	117.5
	6/19/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	ND<-0.693147	117.5
	11/20/2008	ND<-0.693147	117.5

Rank Sum = 1292.5
Rank Mean = 117.5

LMW-13	3/14/2000	ND<-0.693147	117.5
	9/23/2003	ND<-0.693147	117.5
	3/10/2004	ND<-0.693147	117.5
	10/12/2004	ND<-0.693147	117.5
	4/1/2005	ND<-0.693147	117.5
	10/26/2005	ND<-0.693147	117.5
	6/19/2006	ND<-0.693147	117.5
	6/2/2007	ND<-0.693147	117.5
	11/15/2007	ND<-0.693147	117.5
	5/20/2008	ND<-0.693147	117.5
	11/20/2008	ND<-0.693147	117.5

Rank Sum = 1292.5
Rank Mean = 117.5

MW-5	1/16/1998	ND<-0.693147	117.5
	3/16/1999	ND<-0.693147	117.5
	9/23/1999	ND<-0.693147	117.5
	3/14/2000	ND<-0.693147	117.5
	9/23/2003	ND<-0.693147	117.5
	3/10/2004	ND<-0.693147	117.5
	10/12/2004	ND<-0.693147	117.5
	4/1/2005	ND<-0.693147	117.5
	10/26/2005	ND<-0.693147	117.5
	6/19/2006	ND<-0.693147	117.5

11/15/2007	1.94591	291
5/20/2008	ND<-0.693147	117.5
11/20/2008	ND<-0.693147	117.5

Rank Sum = 1701
Rank Mean = 130.846

Calculation Results:

Kruskal-Wallis H Statistic = 61.674
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 109.842
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
61.674 > 26.2962 indicating a significant group difference at 5% significance level
109.842 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 209.48

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-9	124.36	-85.12	58.598
LMW-8	124.92	-84.56	58.598
LMW-6	188.36	-21.12	58.598
LMW-3S	223.067	13.5867	67.6631
LMW-14R	117.5	-91.98	72.7575
LMW-9D	130	-79.48	67.6631
LMW-10	235.523	26.0427	60.5627
LMW-9S	146.316	-63.164	63.0546
LMW-3	168.389	-41.091	57.5026
LMW-16	129.267	-80.213	67.6631
LMW-15R	117.5	-91.98	66.3284
LMW-7	133.167	-76.313	61.3249
LMW-11	117.5	-91.98	74.9588
LMW-12	117.5	-91.98	74.9588
LMW-13	117.5	-91.98	74.9588
MW-5	130.846	-78.633	70.8415

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 209.48

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-9	124.36	-85.12	69.2132
LMW-8	124.92	-84.56	69.2132
LMW-6	188.36	-21.12	69.2132
LMW-3S	223.067	13.5867	79.9205
LMW-14R	117.5	-91.98	85.9377
LMW-9D	130	-79.48	79.9205
LMW-10	235.523	26.0427	71.5338
LMW-9S	146.316	-63.164	74.4772
LMW-3	168.389	-41.091	67.9193
LMW-16	129.267	-80.213	79.9205
LMW-15R	117.5	-91.98	78.344
LMW-7	133.167	-76.313	72.4341
LMW-11	117.5	-91.98	88.5378
LMW-12	117.5	-91.98	88.5378
LMW-13	117.5	-91.98	88.5378
MW-5	130.846	-78.633	83.6746

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Trichlorofluoromethane

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 75.974%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 25
Maximum Background Value = 2.77259
Confidence Level = 75.8%
False Positive Rate = 24.2%

Location	Date	Count	Mean	Significant
LMW-9	11/16/2013	1	-2.07944	FALSE
LMW-8	11/16/2013	1	-2.07944	FALSE
LMW-6	11/16/2013	1	-0.544727	FALSE
LMW-3S	11/16/2013	1	-0.579818	FALSE
LMW-14R	11/16/2013	1	-2.07944	FALSE
LMW-9D	11/16/2013	1	-2.07944	FALSE
LMW-10	11/16/2013	1	0.916291	FALSE
LMW-9S	11/16/2013	1	-2.07944	FALSE
LMW-3	11/16/2013	1	-0.210721	FALSE
LMW-16	11/16/2013	1	-2.07944	FALSE
LMW-15R	11/16/2013	1	-2.07944	FALSE
LMW-7	11/16/2012	1	-2.07944	FALSE
LMW-11	11/20/2008	1	-0.693147	FALSE
LMW-12	11/20/2008	1	-0.693147	FALSE
LMW-13	11/20/2008	1	-0.693147	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE

Concentrations (ppb)

Parameter: Vanadium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 250
Percent Non-Detects: 84.4595%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	24	23 (95.8333%)	1/16/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/14/2000	ND<20	ND<20
			9/23/2003	ND<20	ND<20
			3/10/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/26/2005	ND<20	ND<20
			6/19/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			6/2/2007	15	15
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	ND<1.4 U	ND<1.4 U
			11/16/2009	ND<1.4 U	ND<1.4 U
			6/30/2010	ND<1.4 U	ND<1.4 U
			11/17/2010	ND<1.4 U	ND<1.4 U
			7/6/2011	ND<1.4 U	ND<1.4 U
			11/22/2011	ND<1.4 U	ND<1.4 U
			5/16/2012	ND<1.4 U	ND<1.4 U
			11/16/2012	ND<1.4 U	ND<1.4 U
			11/16/2013	ND<1.4 U	ND<1.4 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-6	24	23 (95.8333%)	1/16/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/14/2000	ND<20	ND<20
			9/23/2003	ND<20	ND<20
			3/10/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/26/2005	ND<20	ND<20
			6/19/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			6/2/2007	3	3
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	ND<1.4 U	ND<1.4 U
			11/16/2009	ND<1.4 U	ND<1.4 U
			6/30/2010	ND<1.4 U	ND<1.4 U
			11/17/2010	ND<1.4 U	ND<1.4 U

			7/6/2011	ND<1.4 U	ND<1.4 U	
			11/22/2011	ND<1.4 U	ND<1.4 U	
			5/16/2012	ND<1.4 U	ND<1.4 U	
			11/16/2012	ND<1.4 U	ND<1.4 U	
			11/16/2013	ND<1.4 U	ND<1.4 U	
LMW-9	24	17 (70.8333%)	1/16/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	8 J	8 J	
			10/26/2005	11 J	11 J	
			6/19/2006	30	30	
			11/18/2006	ND<20	ND<20	
			6/2/2007	7	7	
			11/15/2007	ND<20	ND<20	
			5/20/2008	2 J	2 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	2.6 J	2.6 J	
			11/16/2009	ND<1.4 U	ND<1.4 U	
			6/30/2010	ND<1.4 U	ND<1.4 U	
			11/17/2010	5	5	
			7/6/2011	ND<1.4 U	ND<1.4 U	
			11/22/2011	ND<1.4 U	ND<1.4 U	
			5/16/2012	ND<1.4 U	ND<1.4 U	
			11/16/2012	ND<1.4 U	ND<1.4 U	
			11/16/2013	ND<1.4 U	ND<1.4 U	
LMW-14R	12	11 (91.6667%)	6/2/2007	2 J	2 J	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	ND<1.4 U	ND<1.4 U	
			6/30/2010	ND<1.4 U	ND<1.4 U	
			11/17/2010	ND<1.4 U	ND<1.4 U	
			7/6/2011	ND<1.4 U	ND<1.4 U	
			11/22/2011	ND<1.4 U	ND<1.4 U	
			5/16/2012	ND<1.4 U	ND<1.4 U	
			11/16/2012	ND<1.4 U	ND<1.4 U	
			11/16/2013	ND<1.4 U	ND<1.4 U	
LMW-16	14	11 (78.5714%)	11/18/2006	ND<20	ND<20	
			6/2/2007	41	41	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	ND<1.4 U	ND<1.4 U	
			11/16/2009	ND<1.4 U	ND<1.4 U	
			6/30/2010	ND<1.4 U	ND<1.4 U	
			11/17/2010	ND<1.4 U	ND<1.4 U	
			7/6/2011	2.7 J	2.7 J	
			11/22/2011	ND<1.4 U	ND<1.4 U	
			5/16/2012	ND<1.4 U	ND<1.4 U	
			11/16/2012	1.5 J	1.5 J	
			11/16/2013	ND<1.4 U	ND<1.4 U	
LMW-3S	14	10 (71.4286%)	11/18/2006	ND<20	ND<20	
			6/2/2007	9	9	
			11/15/2007	ND<20	ND<20	

			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	2.1 J	2.1 J	
			11/16/2009	ND<1.4 U		ND<1.4 U
			6/30/2010	ND<1.4 U		ND<1.4 U
			11/17/2010	4.6 J	4.6 J	
			7/6/2011	3.2 J	3.2 J	
			11/22/2011	ND<1.4 U		ND<1.4 U
			5/16/2012	ND<1.4 U		ND<1.4 U
			11/16/2012	ND<1.4 U		ND<1.4 U
			11/16/2013	ND<1.4 U		ND<1.4 U
LMW-8	24	23 (95.8333%)	1/16/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	7 J	7 J	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	ND<1.4 U		ND<1.4 U
			11/16/2009	ND<1.4 U		ND<1.4 U
			6/30/2010	ND<1.4 U		ND<1.4 U
			11/17/2010	ND<1.4 U		ND<1.4 U
			7/6/2011	ND<1.4 U	ND<1.4 U	
			11/22/2011	ND<1.4 U		ND<1.4 U
			5/16/2012	ND<1.4 U		ND<1.4 U
			11/16/2012	ND<1.4 U		ND<1.4 U
			11/16/2013	ND<1.4 U		ND<1.4 U
LMW-15R		16	15 (93.75%)	11/18/2006	ND<20	ND<20
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	7.5	7.5	
			6/30/2010	ND<1.4 U		ND<1.4 U
			11/17/2010	ND<1.4 U		ND<1.4 U
			7/6/2011	ND<1.4 U	ND<1.4 U	
			11/22/2011	ND<1.4 U		ND<1.4 U
			5/16/2012	ND<1.4 U		ND<1.4 U
			11/16/2012	ND<1.4 U		ND<1.4 U
			11/16/2013	ND<1.4 U		ND<1.4 U
LMW-3	26	25 (96.1538%)	11/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			1/16/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	

			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/26/2005	ND<20	ND<20
			6/19/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			6/2/2007	ND<20	ND<20
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	ND<1.4 U	ND<1.4 U
			11/16/2009	ND<1.4 U	ND<1.4 U
			6/30/2010	ND<1.4 U	ND<1.4 U
			11/17/2010	1.8 J	1.8 J
			7/6/2011	ND<1.4 U	ND<1.4 U
			11/22/2011	ND<1.4 U	ND<1.4 U
			5/16/2012	ND<1.4 U	ND<1.4 U
			11/16/2012	ND<1.4 U	ND<1.4 U
			11/16/2013	ND<1.4 U	ND<1.4 U
LMW-9S	16	14 (87.5%)	11/18/2006	ND<20	ND<20
			6/2/2007	5	5
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	ND<1.4 U	ND<1.4 U
			11/16/2009	ND<1.4 U	ND<1.4 U
			11/16/2009	ND<1.4 U	ND<1.4 U
			11/16/2009	ND<1.4 U	ND<1.4 U
			6/30/2010	ND<1.4 U	ND<1.4 U
			11/17/2010	6.2	6.2
			7/6/2011	ND<1.4 U	ND<1.4 U
			11/22/2011	ND<1.4 U	ND<1.4 U
			5/16/2012	ND<1.4 U	ND<1.4 U
			11/16/2012	ND<1.4 U	ND<1.4 U
			11/16/2013	ND<1.4 U	ND<1.4 U
LMW-9D	14	1 (7.14286%)	11/18/2006	10 J	10 J
			6/2/2007	5	5
			11/15/2007	ND<20	ND<20
			5/20/2008	5 J	5 J
			11/20/2008	5 J	5 J
			6/11/2009	2.5 J	2.5 J
			11/16/2009	2.3 J	2.3 J
			6/30/2010	1.8 J	1.8 J
			11/17/2010	2.3 J	2.3 J
			7/6/2011	2.6 J	2.6 J
			11/22/2011	2 J	2 J
			5/16/2012	2.4 J	2.4 J
			11/16/2012	3.9 J	3.9 J
			11/16/2013	2 J	2 J
LMW-10	21	19 (90.4762%)	3/14/2000	ND<20	ND<20
			9/23/2003	ND<20	ND<20
			3/10/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/26/2005	ND<20	ND<20
			6/19/2006	8 J	8 J
			11/18/2006	ND<20	ND<20
			6/2/2007	3 J	3 J
			11/15/2007	ND<20	ND<20
			5/20/2008	ND<20	ND<20

			11/20/2008	ND<20	ND<20	
			6/11/2009	ND<1.4 U		ND<1.4 U
			11/16/2009	ND<1.4 U		ND<1.4 U
			6/30/2010	ND<1.4 U		ND<1.4 U
			11/17/2010	ND<1.4 U		ND<1.4 U
			7/6/2011	ND<1.4 U	ND<1.4 U	
			11/22/2011	ND<1.4 U		ND<1.4 U
			5/16/2012	ND<1.4 U		ND<1.4 U
			11/16/2012	ND<1.4 U		ND<1.4 U
			11/16/2013	ND<1.4 U		ND<1.4 U
LMW-7	21	12 (57.1429%)	1/16/1998	ND<20	ND<20	
			3/16/1999	7 J	7 J	
			9/23/1999	49	49	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	12 J	12 J	
			10/26/2005	18 J	18 J	
			6/19/2006	8 J	8 J	
			11/18/2006	3 J	3 J	
			6/2/2007	14	14	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	2.9 J	2.9 J	
			11/17/2010	ND<1.4 U		ND<1.4 U
			7/6/2011	7	7	
			11/22/2011	ND<1.4 U		ND<1.4 U
			5/16/2012	ND<1.4 U		ND<1.4 U
			11/16/2012	ND<1.4 U		ND<1.4 U
LMW-11	11	11 (100%)	3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
LMW-12	11	11 (100%)	3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
LMW-13	11	11 (100%)	3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	

			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			6/2/2007	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
MW-5	13	13 (100%)	1/16/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	ND<20	ND<20	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<20	ND<20	
			6/19/2006	ND<20	ND<20	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Vanadium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.7	-2.74777	7.55021	-1.92344
2	0.7	-2.51213	13.861	-3.68193
3	0.7	-2.32634	19.2729	-5.31037
4	0.7	-2.22621	24.2289	-6.86871
5	0.7	-2.14441	28.8274	-8.3698
6	0.7	-2.05375	33.0453	-9.80742
7	0.7	-1.99539	37.0269	-11.2042
8	0.7	-1.94314	40.8026	-12.5644
9	0.7	-1.88079	44.34	-13.8809
10	0.7	-1.83843	47.7198	-15.1678
11	0.7	-1.78661	50.9118	-16.4185
12	0.7	-1.75069	53.9767	-17.644
13	0.7	-1.71688	56.9244	-18.8458
14	0.7	-1.67466	59.7289	-20.018
15	0.7	-1.64485	62.4344	-21.1694
16	0.7	-1.61644	65.0473	-22.3009
17	0.7	-1.58047	67.5452	-23.4073
18	0.7	-1.55477	69.9625	-24.4956
19	0.7	-1.53007	72.3036	-25.5666
20	0.7	-1.49852	74.5491	-26.6156
21	0.7	-1.47579	76.7271	-27.6487
22	0.7	-1.44663	78.8198	-28.6613
23	0.7	-1.42554	80.852	-29.6592
24	0.7	-1.40507	82.8262	-30.6427
25	0.7	-1.37866	84.7269	-31.6078
26	0.7	-1.35946	86.5751	-32.5594
27	0.7	-1.34075	88.3727	-33.498
28	0.7	-1.31652	90.1059	-34.4195
29	0.7	-1.29884	91.7929	-35.3287
30	0.7	-1.27588	93.4208	-36.2218
31	0.7	-1.25908	95.006	-37.1032
32	0.7	-1.24264	96.5502	-37.973
33	0.7	-1.22123	98.0416	-38.8279
34	0.7	-1.20553	99.4949	-39.6718
35	0.7	-1.19012	100.911	-40.5048
36	0.7	-1.17	102.28	-41.3238
37	0.7	-1.15522	103.615	-42.1325
38	0.7	-1.14069	104.916	-42.931
39	0.7	-1.12168	106.174	-43.7161
40	0.7	-1.10768	107.401	-44.4915
41	0.7	-1.08935	108.588	-45.2541
42	0.7	-1.07584	109.745	-46.0072
43	0.7	-1.06252	110.874	-46.7509
44	0.7	-1.04505	111.966	-47.4825
45	0.7	-1.03215	113.032	-48.205
46	0.7	-1.01943	114.071	-48.9186
47	0.7	-1.00271	115.076	-49.6205
48	0.7	-0.990356	116.057	-50.3137
49	0.7	-0.97815	117.014	-50.9984
50	0.7	-0.9621	117.939	-51.6719
51	0.7	-0.950222	118.842	-52.337

52	0.7	-0.93459	119.716	-52.9912
53	0.7	-0.923014	120.568	-53.6374
54	0.7	-0.911562	121.399	-54.2755
55	0.7	-0.896473	122.202	-54.903
56	0.7	-0.885291	122.986	-55.5227
57	0.7	-0.874218	123.75	-56.1346
58	0.7	-0.859618	124.489	-56.7364
59	0.7	-0.848786	125.21	-57.3305
60	0.7	-0.834498	125.906	-57.9147
61	0.7	-0.823893	126.585	-58.4914
62	0.7	-0.813379	127.247	-59.0608
63	0.7	-0.7995	127.886	-59.6204
64	0.7	-0.789191	128.509	-60.1728
65	0.7	-0.778966	129.115	-60.7181
66	0.7	-0.765456	129.701	-61.2539
67	0.7	-0.755415	130.272	-61.7827
68	0.7	-0.745449	130.828	-62.3045
69	0.7	-0.732275	131.364	-62.8171
70	0.7	-0.722479	131.886	-63.3229
71	0.7	-0.709522	132.389	-63.8195
72	0.7	-0.699883	132.879	-64.3095
73	0.7	-0.690309	133.356	-64.7927
74	0.7	-0.677639	133.815	-65.267
75	0.7	-0.668209	134.261	-65.7348
76	0.7	-0.658838	134.695	-66.196
77	0.7	-0.646431	135.113	-66.6485
78	0.7	-0.637192	135.519	-67.0945
79	0.7	-0.628006	135.914	-67.5341
80	0.7	-0.615839	136.293	-67.9652
81	0.7	-0.606775	136.661	-68.3899
82	0.7	-0.594766	137.015	-68.8063
83	0.7	-0.585815	137.358	-69.2163
84	0.7	-0.576911	137.691	-69.6202
85	0.7	-0.565108	138.01	-70.0157
86	0.7	-0.556308	138.32	-70.4052
87	0.7	-0.547551	138.619	-70.7884
88	0.7	-0.53594	138.907	-71.1636
89	0.7	-0.52728	139.185	-71.5327
90	0.7	-0.515791	139.451	-71.8938
91	0.7	-0.507221	139.708	-72.2488
92	0.7	-0.498687	139.957	-72.5979
93	0.7	-0.487364	140.194	-72.939
94	1.5	-0.478914	140.424	-73.6574
95	1.8	-0.470498	140.645	-74.5043
96	1.8	-0.459327	140.856	-75.3311
97	2	-0.450985	141.059	-76.2331
98	2	-0.442676	141.255	-77.1184
99	2	-0.431644	141.442	-77.9817
100	2	-0.423405	141.621	-78.8285
101	2.1	-0.412463	141.791	-79.6947
102	2.3	-0.40429	141.954	-80.6246
103	2.3	-0.396142	142.111	-81.5357
104	2.4	-0.385321	142.26	-82.4605
105	2.5	-0.377233	142.402	-83.4035
106	2.6	-0.369171	142.538	-84.3634
107	2.6	-0.358459	142.667	-85.2954
108	2.7	-0.350451	142.79	-86.2416
109	2.9	-0.33981	142.905	-87.227
110	3	-0.331854	143.015	-88.2226
111	3	-0.323919	143.12	-89.1944
112	3	-0.31337	143.218	-90.1345
113	3.2	-0.305481	143.312	-91.112

114	3.9	-0.297612	143.4	-92.2727
115	4.6	-0.287147	143.483	-93.5936
116	5	-0.279319	143.561	-94.9902
117	5	-0.271509	143.635	-96.3477
118	5	-0.26112143.703	-97.6533	
119	5	-0.253347	143.767	-98.92
120	5	-0.243007	143.826	-100.135
121	6.2	-0.235269	143.881	-101.594
122	7	-0.227545	143.933	-103.187
123	7	-0.217267	143.98	-104.707
124	7	-0.209575	144.024	-106.174
125	7	-0.201894	144.065	-107.588
126	7.5	-0.191671	144.102	-109.025
127	8	-0.184017	144.136	-110.497
128	8	-0.176374	144.167	-111.908
129	8	-0.166199	144.194	-113.238
130	9	-0.158579	144.219	-114.665
131	10	-0.148434	144.241	-116.15
132	10	-0.140835	144.261	-117.558
133	10	-0.133244	144.279	-118.89
134	10	-0.123135	144.294	-120.122
135	10	-0.115562	144.308	-121.277
136	10	-0.107995	144.319	-122.357
137	10	-0.0979139	144.329	-123.336
138	10	-0.0903606	144.337	-124.24
139	10	-0.0802981	144.343	-125.043
140	10	-0.0727562	144.349	-125.771
141	10	-0.0652187	144.353	-126.423
142	10	-0.0551734	144.356	-126.974
143	10	-0.0476439	144.358	-127.451
144	10	-0.0401167	144.36	-127.852
145	10	-0.0300838	144.361	-128.153
146	10	-0.0225612	144.361	-128.379
147	10	-0.0150408	144.362	-128.529
148	10	-0.00501359	144.362	-128.579
149	10	0.00501359	144.362	-128.529
150	10	0.0150408	144.362	-128.379
151	10	0.0225612	144.362	-128.153
152	10	0.0300838	144.363	-127.852
153	10	0.0401167	144.365	-127.451
154	10	0.0476439	144.367	-126.974
155	10	0.0551734	144.37	-126.423
156	10	0.0652187	144.374	-125.771
157	10	0.0727562	144.38	-125.043
158	10	0.0802981	144.386	-124.24
159	10	0.0903606	144.394	-123.336
160	10	0.0979139	144.404	-122.357
161	10	0.107995	144.416	-121.277
162	10	0.115562	144.429	-120.122
163	10	0.123135	144.444	-118.89
164	10	0.133244	144.462	-117.558
165	10	0.140835	144.482	-116.15
166	10	0.148434	144.504	-114.665
167	10	0.158579	144.529	-113.079
168	10	0.166199	144.557	-111.417
169	10	0.176374	144.588	-109.654
170	10	0.184017	144.621	-107.813
171	10	0.191671	144.658	-105.897
172	10	0.201894	144.699	-103.878
173	10	0.209575	144.743	-101.782
174	10	0.217267	144.79	-99.6094
175	10	0.227545	144.842	-97.334

176	10	0.235269	144.897	-94.9813
177	10	0.243007	144.956	-92.5512
178	10	0.253347	145.02	-90.0177
179	10	0.26112	145.089	-87.4065
180	10	0.271509	145.162	-84.6914
181	10	0.279319	145.24	-81.8983
182	10	0.287147	145.323	-79.0268
183	10	0.297612	145.411	-76.0507
184	10	0.305481	145.505	-72.9959
185	10	0.31337	145.603	-69.8622
186	10	0.323919	145.708	-66.623
187	10	0.331854	145.818	-63.3044
188	10	0.33981	145.933	-59.9063
189	10	0.350451	146.056	-56.4018
190	10	0.358459	146.185	-52.8172
191	10	0.369171	146.321	-49.1255
192	10	0.377233	146.463	-45.3532
193	10	0.385321	146.612	-41.5
194	10	0.396142	146.769	-37.5386
195	10	0.40429	146.932	-33.4957
196	10	0.412463	147.102	-29.371
197	10	0.423405	147.282	-25.137
198	10	0.431644	147.468	-20.8205
199	10	0.442676	147.664	-16.3938
200	10	0.450985	147.867	-11.8839
201	10	0.459327	148.078	-7.29066
202	10	0.470498	148.3	-2.58569
203	10	0.478914	148.529	2.20345
204	10	0.487364	148.767	7.07709
205	10	0.498687	149.015	12.064
206	10	0.507221	149.272	17.1362
207	10	0.515791	149.539	22.2941
208	10	0.52728	149.817	27.5669
209	10	0.53594	150.104	32.9263
210	10	0.547551	150.404	38.4018
211	10	0.556308	150.713	43.9649
212	10	0.565108	151.032	49.616
213	10	0.576911	151.365	55.3851
214	10	0.585815	151.708	61.2432
215	10	0.594766	152.062	67.1909
216	10	0.606775	152.43	73.2586
217	10	0.615839	152.81	79.417
218	10	0.628006	153.204	85.6971
219	10	0.637192	153.61	92.069
220	10	0.646431	154.028	98.5333
221	10	0.658838	154.462	105.122
222	10	0.668209	154.908	111.804
223	10	0.677639	155.368	118.58
224	10	0.690309	155.844	125.483
225	10	0.699883	156.334	132.482
226	10	0.709522	156.837	139.577
227	10	0.722479	157.359	146.802
228	10	0.732275	157.896	154.125
229	10	0.745449	158.451	161.579
230	10	0.755415	159.022	169.133
231	10	0.765456	159.608	176.788
232	10	0.778966	160.215	184.578
233	10	0.789191	160.837	192.47
234	10	0.7995	161.477	200.465
235	10	0.813379	162.138	208.598
236	10	0.823893	162.817	216.837
237	10	0.834498	163.513	225.182

238	10	0.848786		164.234	233.67
239	10	0.859618		164.973	242.266
240	10	0.874218		165.737	251.009
241	10	0.885291		166.521	259.861
242	10	0.896473		167.325	268.826
243	10	0.911562		168.155	277.942
244	10	0.923014		169.007	287.172
245	10	0.93459	169.881	296.518	
246	10	0.950222		170.784	306.02
247	10	0.9621	171.709	315.641	
248	10	0.97815	172.666	325.423	
249	10	0.990356		173.647	335.326
250	10	1.00271	174.652	345.353	
251	10	1.01943	175.692	355.548	
252	10	1.03215	176.757	365.869	
253	10	1.04505	177.849	376.32	
254	10	1.06252	178.978	386.945	
255	10	1.07584	180.136	397.703	
256	10	1.08935	181.322	408.597	
257	10	1.10768	182.549	419.673	
258	10	1.12168	183.807	430.89	
259	10	1.14069	185.108	442.297	
260	10	1.15522	186.443	453.849	
261	10	1.17	187.812	465.549	
262	10	1.19012	189.228	477.45	
263	10	1.20553	190.682	489.506	
264	10	1.22123	192.173	501.718	
265	10	1.24264	193.717	514.144	
266	10	1.25908	195.302	526.735	
267	10	1.27588	196.93	539.494	
268	10	1.29884	198.617	552.482	
269	10	1.31652	200.351	565.648	
270	10	1.34075	202.148	579.055	
271	10	1.35946	203.996	592.65	
272	10	1.37866	205.897	606.436	
273	10	1.40507	207.871	620.487	
274	10	1.42554	209.903	634.743	
275	10	1.44663	211.996	649.209	
276	10	1.47579	214.174	663.967	
277	10	1.49852	216.42	678.952	
278	10	1.53007	218.761	694.253	
279	10	1.55477	221.178	709.8	
280	10	1.58047	223.676	725.605	
281	10	1.61644	226.289	741.769	
282	10	1.64485	228.994	758.218	
283	10	1.67466	231.799	774.964	
284	10	1.71688	234.747	792.133	
285	10	1.75069	237.811	809.64	
286	10	1.78661	241.003	827.506	
287	10	1.83843	244.383	845.891	
288	10	1.88079	247.921	864.698	
289	11	1.94314	251.696	886.073	
290	12	1.99539	255.678	910.018	
291	14	2.05375	259.896	938.77	
292	15	2.14441	264.494	970.936	
293	18	2.22621	269.45	1011.01	
294	30	2.32634	274.862	1080.8	
295	41	2.51213	281.173	1183.8	
296	49	2.74777	288.723	1318.44	

Data Set Standard Deviation = 5.61132

Numerator = 1.73827e+006
Denominator = 2.68185e+006
W Statistic = 0.648162 = 1.73827e+006 / 2.68185e+006

5% Critical value of 0.976 exceeds 0.648162
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.648162
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Vanadium

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.806941
0.806941 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.7	0.003367	-2.747	7	46.49	348.683
2	0.7	0.00673401	-2.512	1	34	6.49	337.176
3	0.7	0.010101	-2.326	3	44	6.49	328.103
4	0.7	0.013468	-2.226	2	14	6.49	323.213
5	0.7	0.016835	-2.144	4	14	6.49	319.219
6	0.7	0.020202	-2.053	7	54	6.49	314.791
7	0.7	0.023569	-1.995	3	94	6.49	311.942
8	0.7	0.026936	-1.943	1	44	6.49	309.39
9	0.7	0.030303	-1.880	7	94	6.49	306.345
10	0.7	0.03367	-1.838	4	34	6.49	304.276
11	0.7	0.037037	-1.786	6	14	6.49	301.746
12	0.7	0.040404	-1.750	6	94	6.49	299.992
13	0.7	0.043771	-1.716	8	84	6.49	298.341
14	0.7	0.047138	-1.674	6	64	6.49	296.279
15	0.7	0.0505051	-1.644	8	54	6.49	294.824
16	0.7	0.0538721	-1.616	4	44	6.49	293.436
17	0.7	0.0572391	-1.580	4	74	6.49	291.679
18	0.7	0.0606061	-1.554	7	74	6.49	290.425
19	0.7	0.0639731	-1.530	0	74	6.49	289.218
20	0.7	0.0673401	-1.498	5	24	6.49	287.677
21	0.7	0.0707071	-1.475	7	94	6.49	286.568
22	0.7	0.0740741	-1.446	6	34	6.49	285.144
23	0.7	0.0774411	-1.425	5	44	6.49	284.114
24	0.7	0.0808081	-1.405	0	74	6.49	283.114
25	0.7	0.0841751	-1.378	6	64	6.49	281.824
26	0.7	0.0875421	-1.359	4	64	6.49	280.887
27	0.7	0.0909091	-1.340	7	54	6.49	279.974
28	0.7	0.0942761	-1.316	5	24	6.49	278.79
29	0.7	0.0976431	-1.298	8	44	6.49	277.926
30	0.7	0.10101	-1.275	8	84	6.49	276.805
31	0.7	0.104377	-1.259	0	84	6.49	275.985
32	0.7	0.107744	-1.242	6	44	6.49	275.182
33	0.7	0.111111	-1.221	2	34	6.49	274.137
34	0.7	0.114478	-1.205	5	34	6.49	273.37
35	0.7	0.117845	-1.190	1	24	6.49	272.617
36	0.7	0.121212	-1.17		46.49	271.635
37	0.7	0.124579	-1.155	2	24	6.49	270.913
38	0.7	0.127946	-1.140	6	94	6.49	270.204
39	0.7	0.131313	-1.121	6	84	6.49	269.275
40	0.7	0.13468	-1.107	6	84	6.49	268.592
41	0.7	0.138047	-1.089	3	54	6.49	267.697
42	0.7	0.141414	-1.075	8	44	6.49	267.037
43	0.7	0.144781	-1.062	5	24	6.49	266.386
44	0.7	0.148148	-1.045	0	54	6.49	265.533
45	0.7	0.151515	-1.032	1	54	6.49	264.904
46	0.7	0.154882	-1.019	4	34	6.49	264.282
47	0.7	0.158249	-1.002	7	14	6.49	263.466
48	0.7	0.161616	-0.990356		46.49	262.862

49	0.7	0.164983	-0.978154	6.49	262.266
50	0.7	0.16835	-0.9621	46.49	261.483
51	0.7	0.171717	-0.950222	46.49	260.903
52	0.7	0.175084	-0.934594	6.49	260.139
53	0.7	0.178451	-0.923014	46.49	259.574
54	0.7	0.181818	-0.911562	46.49	259.015
55	0.7	0.185185	-0.896473	46.49	258.278
56	0.7	0.188552	-0.885291	46.49	257.732
57	0.7	0.191919	-0.874218	46.49	257.191
58	0.7	0.195286	-0.859618	46.49	256.478
59	0.7	0.198653	-0.848786	46.49	255.949
60	0.7	0.20202	-0.834498	46.49	255.251
61	0.7	0.205387	-0.823893	46.49	254.733
62	0.7	0.208754	-0.813379	46.49	254.22
63	0.7	0.212121	-0.7995	46.49	253.542
64	0.7	0.215488	-0.789191	46.49	253.039
65	0.7	0.218855	-0.778966	46.49	252.54
66	0.7	0.222222	-0.765456	46.49	251.88
67	0.7	0.225589	-0.755415	46.49	251.389
68	0.7	0.228956	-0.745449	46.49	250.903
69	0.7	0.232323	-0.732275	46.49	250.259
70	0.7	0.23569	-0.722479	46.49	249.781
71	0.7	0.239057	-0.709522	46.49	249.148
72	0.7	0.242424	-0.699883	46.49	248.678
73	0.7	0.245791	-0.690309	46.49	248.21
74	0.7	0.249158	-0.677639	46.49	247.591
75	0.7	0.252525	-0.668209	46.49	247.131
76	0.7	0.255892	-0.658838	46.49	246.673
77	0.7	0.259259	-0.646431	46.49	246.067
78	0.7	0.262626	-0.637192	46.49	245.616
79	0.7	0.265993	-0.628006	46.49	245.168
80	0.7	0.26936	-0.615839	46.49	244.573
81	0.7	0.272727	-0.606775	46.49	244.131
82	0.7	0.276094	-0.594766	46.49	243.544
83	0.7	0.279461	-0.585815	46.49	243.107
84	0.7	0.282828	-0.576911	46.49	242.672
85	0.7	0.286195	-0.565108	46.49	242.096
86	0.7	0.289562	-0.556308	46.49	241.666
87	0.7	0.292929	-0.547551	46.49	241.239
88	0.7	0.296296	-0.535944	6.49	240.672
89	0.7	0.299663	-0.527284	6.49	240.249
90	0.7	0.30303	-0.515791	46.49	239.688
91	0.7	0.306397	-0.507221	46.49	239.269
92	0.7	0.309764	-0.498687	46.49	238.853
93	0.7	0.313131	-0.487364	46.49	238.3
94	1.5	0.316498	-0.478914	55.05	237.887
95	1.8	0.319865	-0.470498	58.26	237.476
96	1.8	0.323232	-0.459327	58.26	236.93
97	2	0.326599	-0.450985	60.4	236.523
98	2	0.329966	-0.442676	60.4	236.117
99	2	0.333333	-0.431644	60.4	235.579
100	2	0.3367	-0.423405	60.4	235.176
101	2.1	0.340067	-0.412463	61.47	234.642
102	2.3	0.343434	-0.404296	3.61	234.243
103	2.3	0.346801	-0.396142	63.61	233.845
104	2.4	0.350168	-0.385321	64.68	233.317
105	2.5	0.353535	-0.377233	65.75	232.922
106	2.6	0.356902	-0.369171	66.82	232.528
107	2.6	0.360269	-0.358459	66.82	232.005
108	2.7	0.363636	-0.350451	67.89	231.614
109	2.9	0.367003	-0.339817	0.03	231.094
110	3	0.37037	-0.331854	71.1	230.706

111	3	0.373737	-0.323919	71.1	230.318
112	3	0.377104	-0.3133771.1	229.803	
113	3.2	0.380471	-0.305481	73.24	229.418
114	3.9	0.383838	-0.297612	80.73	229.033
115	4.6	0.387205	-0.287147	88.22	228.522
116	5	0.390572	-0.279319	92.5	228.14
117	5	0.393939	-0.271509	92.5	227.759
118	5	0.397306	-0.2611292.5	227.251	
119	5	0.400673	-0.253347	92.5	226.872
120	5	0.40404 -0.243007	92.5	226.367	
121	6.2	0.407407	-0.235269	105.34	225.989
122	7	0.410774	-0.227545	113.9	225.612
123	7	0.414141	-0.217267	113.9	225.11
124	7	0.417508	-0.209575	113.9	224.734
125	7	0.420875	-0.201894	113.9	224.359
126	7.5	0.424242	-0.191671	119.25	223.86
127	8	0.427609	-0.184017	124.6	223.486
128	8	0.430976	-0.176374	124.6	223.113
129	8	0.434343	-0.166199	124.6	222.616
130	9	0.43771 -0.158579	135.3	222.244	
131	10	0.441077	-0.148434	146	221.749
132	10	0.444444	-0.140835	146	221.377
133	10	0.447811	-0.133244	146	221.007
134	10	0.451178	-0.123135	146	220.513
135	10	0.454545	-0.115562	146	220.143
136	10	0.457912	-0.107995	146	219.774
137	10	0.461279	-0.0979139	146	219.281
138	10	0.464646	-0.0903606	146	218.913
139	10	0.468013	-0.0802981	146	218.421
140	10	0.47138 -0.0727562	146	218.053	
141	10	0.474747	-0.0652187	146	217.685
142	10	0.478114	-0.0551734	146	217.194
143	10	0.481481	-0.0476439	146	216.827
144	10	0.484848	-0.0401167	146	216.459
145	10	0.488215	-0.0300838	146	215.969
146	10	0.491582	-0.0225612	146	215.602
147	10	0.494949	-0.0150408	146	215.234
148	10	0.498316	-0.00501359	146	214.745
149	10	0.501684	0.00501359	146	214.255
150	10	0.505051	0.0150408	146	213.766
151	10	0.508418	0.0225612	146	213.398
152	10	0.511785	0.0300838	146	213.031
153	10	0.515152	0.0401167	146	212.541
154	10	0.518519	0.0476439	146	212.173
155	10	0.521886	0.0551734	146	211.806
156	10	0.525253	0.0652187	146	211.315
157	10	0.52862 0.0727562	146	210.947	
158	10	0.531987	0.0802981	146	210.579
159	10	0.535354	0.0903606	146	210.087
160	10	0.538721	0.0979139	146	209.719
161	10	0.542088	0.107995	146	209.226
162	10	0.545455	0.115562	146	208.857
163	10	0.548822	0.123135	146	208.487
164	10	0.552189	0.133244	146	207.993
165	10	0.555556	0.140835	146	207.623
166	10	0.558923	0.148434	146	207.251
167	10	0.56229 0.158579	146	206.756	
168	10	0.565657	0.166199	146	206.384
169	10	0.569024	0.176374	146	205.887
170	10	0.572391	0.184017	146	205.514
171	10	0.575758	0.191671	146	205.14
172	10	0.579125	0.201894	146	204.641

173	10	0.582492	0.209575	146	204.266
174	10	0.585859	0.217267	146	203.89
175	10	0.589226	0.227545	146	203.388
176	10	0.592593	0.235269	146	203.011
177	10	0.59596	0.243007	146	202.633
178	10	0.599327	0.253347	146	202.128
179	10	0.602694	0.26112	146	201.749
180	10	0.606061	0.271509	146	201.241
181	10	0.609428	0.279319	146	200.86
182	10	0.612795	0.287147	146	200.478
183	10	0.616162	0.297612	146	199.967
184	10	0.619529	0.305481	146	199.582
185	10	0.622896	0.31337	146	199.197
186	10	0.626263	0.323919	146	198.682
187	10	0.62963	0.331854	146	198.294
188	10	0.632997	0.33981	146	197.906
189	10	0.636364	0.350451	146	197.386
190	10	0.639731	0.358459	146	196.995
191	10	0.643098	0.369171	146	196.472
192	10	0.646465	0.377233	146	196.078
193	10	0.649832	0.385321	146	195.683
194	10	0.653199	0.396142	146	195.155
195	10	0.656566	0.40429	146	194.757
196	10	0.659933	0.412463	146	194.358
197	10	0.6633	0.423405	146	193.824
198	10	0.666667	0.431644	146	193.421
199	10	0.670034	0.442676	146	192.883
200	10	0.673401	0.450985	146	192.477
201	10	0.676768	0.459327	146	192.07
202	10	0.680135	0.470498	146	191.524
203	10	0.683502	0.478914	146	191.113
204	10	0.686869	0.487364	146	190.7
205	10	0.690236	0.498687	146	190.147
206	10	0.693603	0.507221	146	189.731
207	10	0.69697	0.515791	146	189.312
208	10	0.700337	0.52728	146	188.751
209	10	0.703704	0.53594	146	188.328
210	10	0.707071	0.547551	146	187.761
211	10	0.710438	0.556308	146	187.334
212	10	0.713805	0.565108	146	186.904
213	10	0.717172	0.576911	146	186.328
214	10	0.720539	0.585815	146	185.893
215	10	0.723906	0.594766	146	185.456
216	10	0.727273	0.606775	146	184.869
217	10	0.73064	0.615839	146	184.427
218	10	0.734007	0.628006	146	183.832
219	10	0.737374	0.637192	146	183.384
220	10	0.740741	0.646431	146	182.933
221	10	0.744108	0.658838	146	182.327
222	10	0.747475	0.668209	146	181.869
223	10	0.750842	0.677639	146	181.409
224	10	0.754209	0.690309	146	180.79
225	10	0.757576	0.699883	146	180.322
226	10	0.760943	0.709522	146	179.852
227	10	0.76431	0.722479	146	179.219
228	10	0.767677	0.732275	146	178.741
229	10	0.771044	0.745449	146	178.097
230	10	0.774411	0.755415	146	177.611
231	10	0.777778	0.765456	146	177.12
232	10	0.781145	0.778966	146	176.46
233	10	0.784512	0.789191	146	175.961
234	10	0.787879	0.7995	146	175.458

235	10	0.791246	0.813379	146	174.78
236	10	0.794613	0.823893	146	174.267
237	10	0.79798	0.834498	146	173.749
238	10	0.801347	0.848786	146	173.051
239	10	0.804714	0.859618	146	172.522
240	10	0.808081	0.874218	146	171.809
241	10	0.811448	0.885291	146	171.268
242	10	0.814815	0.896473	146	170.722
243	10	0.818182	0.911562	146	169.985
244	10	0.821549	0.923014	146	169.426
245	10	0.824916	0.93459	146	168.861
246	10	0.828283	0.950222	146	168.097
247	10	0.83165	0.9621	146	167.517
248	10	0.835017	0.97815	146	166.734
249	10	0.838384	0.990356	146	166.138
250	10	0.841751	1.00271	146	165.534
251	10	0.845118	1.01943	146	164.718
252	10	0.848485	1.03215	146	164.096
253	10	0.851852	1.04505	146	163.467
254	10	0.855219	1.06252	146	162.614
255	10	0.858586	1.07584	146	161.963
256	10	0.861953	1.08935	146	161.303
257	10	0.86532	1.10768	146	160.408
258	10	0.868687	1.12168	146	159.725
259	10	0.872054	1.14069	146	158.796
260	10	0.875421	1.15522	146	158.087
261	10	0.878788	1.17	146	157.365
262	10	0.882155	1.19012	146	156.383
263	10	0.885522	1.20553	146	155.63
264	10	0.888889	1.22123	146	154.863
265	10	0.892256	1.24264	146	153.818
266	10	0.895623	1.25908	146	153.015
267	10	0.89899	1.27588	146	152.195
268	10	0.902357	1.29884	146	151.074
269	10	0.905724	1.31652	146	150.21
270	10	0.909091	1.34075	146	149.026
271	10	0.912458	1.35946	146	148.113
272	10	0.915825	1.37866	146	147.176
273	10	0.919192	1.40507	146	145.886
274	10	0.922559	1.42554	146	144.886
275	10	0.925926	1.44663	146	143.856
276	10	0.929293	1.47579	146	142.432
277	10	0.93266	1.49852	146	141.323
278	10	0.936027	1.53007	146	139.782
279	10	0.939394	1.55477	146	138.575
280	10	0.942761	1.58047	146	137.321
281	10	0.946128	1.61644	146	135.564
282	10	0.949495	1.64485	146	134.176
283	10	0.952862	1.67466	146	132.721
284	10	0.956229	1.71688	146	130.659
285	10	0.959596	1.75069	146	129.008
286	10	0.962963	1.78661	146	127.254
287	10	0.96633	1.83843	146	124.724
288	10	0.969697	1.88079	146	122.655
289	11	0.973064	1.94314	156.7	119.61
290	12	0.976431	1.99539	167.4	117.058
291	14	0.979798	2.05375	188.8	114.209
292	15	0.983165	2.14441	199.5	109.781
293	18	0.986532	2.22621	231.6	105.787
294	30	0.989899	2.32634	360	100.897
295	41	0.993266	2.51213	477.7	91.8241
296	49	0.996633	2.74777	563.3	80.3175

Shapiro-Francia Test of Normality

Parameter: Vanadium

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 296

i	x(i)	m(i)	sum(m^2)	sum(mx)	
1	-0.356675		-2.747777.55021	0.980059	
2	-0.356675		-2.5121313.861	1.87607	
3	-0.356675		-2.3263419.2729	2.70582	
4	-0.356675		-2.2262124.2289	3.49985	
5	-0.356675		-2.1444128.8274	4.26471	
6	-0.356675		-2.0537533.0453	4.99723	
7	-0.356675		-1.9953937.0269	5.70894	
8	-0.356675		-1.9431440.8026	6.40201	
9	-0.356675		-1.8807944.34	7.07284	
10	-0.356675		-1.8384347.7198	7.72856	
11	-0.356675		-1.7866150.9118	8.3658	
12	-0.356675		-1.7506953.9767	8.99022	
13	-0.356675		-1.7168856.9244	9.60259	
14	-0.356675		-1.6746659.7289	10.1999	
15	-0.356675		-1.6448562.4344	10.7866	
16	-0.356675		-1.6164465.0473	11.3631	
17	-0.356675		-1.5804767.5452	11.9268	
18	-0.356675		-1.5547769.9625	12.4814	
19	-0.356675		-1.5300772.3036	13.0271	
20	-0.356675		-1.4985274.5491	13.5616	
21	-0.356675		-1.4757976.7271	14.088	
22	-0.356675		-1.4466378.8198	14.604	
23	-0.356675		-1.4255480.852	15.1124	
24	-0.356675		-1.4050782.8262	15.6136	
25	-0.356675		-1.3786684.7269	16.1053	
26	-0.356675		-1.3594686.5751	16.5902	
27	-0.356675		-1.3407588.3727	17.0684	
28	-0.356675		-1.3165290.1059	17.538	
29	-0.356675		-1.2988491.7929	18.0012	
30	-0.356675		-1.2758893.4208	18.4563	
31	-0.356675		-1.2590895.006	18.9054	
32	-0.356675		-1.2426496.5502	19.3486	
33	-0.356675		-1.2212398.0416	19.7842	
34	-0.356675		-1.2055399.4949	20.2142	
35	-0.356675		-1.19012100.911	20.6387	
36	-0.356675		-1.17 102.28	21.056	
37	-0.356675		-1.15522103.615	21.468	
38	-0.356675		-1.14069104.916	21.8749	
39	-0.356675		-1.12168106.174	22.2749	
40	-0.356675		-1.10768107.401	22.67	
41	-0.356675		-1.08935108.588	23.0586	
42	-0.356675		-1.07584109.745	23.4423	
43	-0.356675		-1.06252110.874	23.8213	
44	-0.356675		-1.04505111.966	24.194	
45	-0.356675		-1.03215113.032	24.5621	
46	-0.356675		-1.01943114.071	24.9257	
47	-0.356675		-1.00271115.076	25.2834	
48	-0.356675		-0.990356	116.057	25.6366
49	-0.356675		-0.97815117.014	25.9855	
50	-0.356675		-0.9621 117.939	26.3287	
51	-0.356675		-0.950222	118.842	26.6676

52	-0.356675	-0.93459	119.716	27.0009
53	-0.356675	-0.923014	120.568	27.3301
54	-0.356675	-0.911562	121.399	27.6553
55	-0.356675	-0.896473	122.202	27.975
56	-0.356675	-0.885291	122.986	28.2908
57	-0.356675	-0.874218	123.75	28.6026
58	-0.356675	-0.859618	124.489	28.9092
59	-0.356675	-0.848786	125.21	29.2119
60	-0.356675	-0.834498	125.906	29.5096
61	-0.356675	-0.823893	126.585	29.8035
62	-0.356675	-0.813379	127.247	30.0936
63	-0.356675	-0.7995	127.886	30.3787
64	-0.356675	-0.789191	128.509	30.6602
65	-0.356675	-0.778966	129.115	30.938
66	-0.356675	-0.765456	129.701	31.2111
67	-0.356675	-0.755415	130.272	31.4805
68	-0.356675	-0.745449	130.828	31.7464
69	-0.356675	-0.732275	131.364	32.0076
70	-0.356675	-0.722479	131.886	32.2653
71	-0.356675	-0.709522	132.389	32.5183
72	-0.356675	-0.699883	132.879	32.768
73	-0.356675	-0.690309	133.356	33.0142
74	-0.356675	-0.677639	133.815	33.2559
75	-0.356675	-0.668209	134.261	33.4942
76	-0.356675	-0.658838	134.695	33.7292
77	-0.356675	-0.646431	135.113	33.9598
78	-0.356675	-0.637192	135.519	34.187
79	-0.356675	-0.628006	135.914	34.411
80	-0.356675	-0.615839	136.293	34.6307
81	-0.356675	-0.606775	136.661	34.8471
82	-0.356675	-0.594766	137.015	35.0592
83	-0.356675	-0.585815	137.358	35.2682
84	-0.356675	-0.576911	137.691	35.474
85	-0.356675	-0.565108	138.01	35.6755
86	-0.356675	-0.556308	138.32	35.8739
87	-0.356675	-0.547551	138.619	36.0692
88	-0.356675	-0.53594	138.907	36.2604
89	-0.356675	-0.52728	139.185	36.4485
90	-0.356675	-0.515791	139.451	36.6324
91	-0.356675	-0.507221	139.708	36.8133
92	-0.356675	-0.498687	139.957	36.9912
93	-0.356675	-0.487364	140.194	37.165
94	0.405465	-0.478914	140.424	36.9709
95	0.587787	-0.470498	140.645	36.6943
96	0.587787	-0.459327	140.856	36.4243
97	0.693147	-0.450985	141.059	36.1117
98	0.693147	-0.442676	141.255	35.8049
99	0.693147	-0.431644	141.442	35.5057
100	0.693147	-0.423405	141.621	35.2122
101	0.741937	-0.412463	141.791	34.9062
102	0.832909	-0.40429	141.954	34.5694
103	0.832909	-0.396142	142.111	34.2395
104	0.875469	-0.385321	142.26	33.9022
105	0.916291	-0.377233	142.402	33.5565
106	0.955511	-0.369171	142.538	33.2038
107	0.955511	-0.358459	142.667	32.8612
108	0.993252	-0.350451	142.79	32.5132
109	1.06471	-0.33981	142.905	32.1514
110	1.09861	-0.331854	143.015	31.7868
111	1.09861	-0.323919	143.12	31.4309
112	1.09861	-0.31337	143.218	31.0867
113	1.16315	-0.305481	143.312	30.7313

114	1.36098	-0.297612	143.4	30.3263
115	1.52606	-0.287147	143.483	29.8881
116	1.60944	-0.279319	143.561	29.4385
117	1.60944	-0.271509	143.635	29.0016
118	1.60944	-0.26112	143.703	28.5813
119	1.60944	-0.253347	143.767	28.1736
120	1.60944	-0.243007	143.826	27.7825
121	1.82455	-0.235269	143.881	27.3532
122	1.94591	-0.227545	143.933	26.9104
123	1.94591	-0.217267	143.98	26.4876
124	1.94591	-0.209575	144.024	26.0798
125	1.94591	-0.201894	144.065	25.6869
126	2.0149	-0.191671	144.102	25.3007
127	2.07944	-0.184017	144.136	24.9181
128	2.07944	-0.176374	144.167	24.5513
129	2.07944	-0.166199	144.194	24.2057
130	2.19722	-0.158579	144.219	23.8573
131	2.30259	-0.148434	144.241	23.5155
132	2.30259	-0.140835	144.261	23.1912
133	2.30259	-0.133244	144.279	22.8844
134	2.30259	-0.123135	144.294	22.6009
135	2.30259	-0.115562	144.308	22.3348
136	2.30259	-0.107995	144.319	22.0861
137	2.30259	-0.0979139	144.329	21.8607
138	2.30259	-0.0903606	144.337	21.6526
139	2.30259	-0.0802981	144.343	21.4677
140	2.30259	-0.0727562	144.349	21.3002
141	2.30259	-0.0652187	144.353	21.15
142	2.30259	-0.0551734	144.356	21.023
143	2.30259	-0.0476439	144.358	20.9133
144	2.30259	-0.0401167	144.36	20.8209
145	2.30259	-0.0300838	144.361	20.7516
146	2.30259	-0.0225612	144.361	20.6997
147	2.30259	-0.0150408	144.362	20.6651
148	2.30259	-0.00501359	144.362	20.6535
149	2.30259	0.00501359	144.362	20.6651
150	2.30259	0.0150408	144.362	20.6997
151	2.30259	0.0225612	144.362	20.7516
152	2.30259	0.0300838	144.363	20.8209
153	2.30259	0.0401167	144.365	20.9133
154	2.30259	0.0476439	144.367	21.023
155	2.30259	0.0551734	144.37	21.15
156	2.30259	0.0652187	144.374	21.3002
157	2.30259	0.0727562	144.38	21.4677
158	2.30259	0.0802981	144.386	21.6526
159	2.30259	0.0903606	144.394	21.8607
160	2.30259	0.0979139	144.404	22.0861
161	2.30259	0.107995	144.416	22.3348
162	2.30259	0.115562	144.429	22.6009
163	2.30259	0.123135	144.444	22.8844
164	2.30259	0.133244	144.462	23.1912
165	2.30259	0.140835	144.482	23.5155
166	2.30259	0.148434	144.504	23.8573
167	2.30259	0.158579	144.529	24.2224
168	2.30259	0.166199	144.557	24.6051
169	2.30259	0.176374	144.588	25.0112
170	2.30259	0.184017	144.621	25.435
171	2.30259	0.191671	144.658	25.8763
172	2.30259	0.201894	144.699	26.3412
173	2.30259	0.209575	144.743	26.8237
174	2.30259	0.217267	144.79	27.324
175	2.30259	0.227545	144.842	27.848

176	2.30259	0.235269	144.897	28.3897
177	2.30259	0.243007	144.956	28.9492
178	2.30259	0.253347	145.02	29.5326
179	2.30259	0.26112	145.089	30.1338
180	2.30259	0.271509	145.162	30.759
181	2.30259	0.279319	145.24	31.4022
182	2.30259	0.287147	145.323	32.0633
183	2.30259	0.297612	145.411	32.7486
184	2.30259	0.305481	145.505	33.452
185	2.30259	0.31337	145.603	34.1736
186	2.30259	0.323919	145.708	34.9194
187	2.30259	0.331854	145.818	35.6836
188	2.30259	0.33981	145.933	36.466
189	2.30259	0.350451	146.056	37.2729
190	2.30259	0.358459	146.185	38.0983
191	2.30259	0.369171	146.321	38.9484
192	2.30259	0.377233	146.463	39.817
193	2.30259	0.385321	146.612	40.7042
194	2.30259	0.396142	146.769	41.6164
195	2.30259	0.40429	146.932	42.5473
196	2.30259	0.412463	147.102	43.497
197	2.30259	0.423405	147.282	44.4719
198	2.30259	0.431644	147.468	45.4658
199	2.30259	0.442676	147.664	46.4851
200	2.30259	0.450985	147.867	47.5236
201	2.30259	0.459327	148.078	48.5812
202	2.30259	0.470498	148.3	49.6646
203	2.30259	0.478914	148.529	50.7673
204	2.30259	0.487364	148.767	51.8895
205	2.30259	0.498687	149.015	53.0378
206	2.30259	0.507221	149.272	54.2057
207	2.30259	0.515791	149.539	55.3933
208	2.30259	0.52728	149.817	56.6074
209	2.30259	0.53594	150.104	57.8415
210	2.30259	0.547551	150.404	59.1023
211	2.30259	0.556308	150.713	60.3832
212	2.30259	0.565108	151.032	61.6844
213	2.30259	0.576911	151.365	63.0128
214	2.30259	0.585815	151.708	64.3617
215	2.30259	0.594766	152.062	65.7312
216	2.30259	0.606775	152.43	67.1284
217	2.30259	0.615839	152.81	68.5464
218	2.30259	0.628006	153.204	69.9924
219	2.30259	0.637192	153.61	71.4596
220	2.30259	0.646431	154.028	72.9481
221	2.30259	0.658838	154.462	74.4651
222	2.30259	0.668209	154.908	76.0037
223	2.30259	0.677639	155.368	77.564
224	2.30259	0.690309	155.844	79.1535
225	2.30259	0.699883	156.334	80.7651
226	2.30259	0.709522	156.837	82.3988
227	2.30259	0.722479	157.359	84.0624
228	2.30259	0.732275	157.896	85.7485
229	2.30259	0.745449	158.451	87.465
230	2.30259	0.755415	159.022	89.2044
231	2.30259	0.765456	159.608	90.9669
232	2.30259	0.778966	160.215	92.7605
233	2.30259	0.789191	160.837	94.5777
234	2.30259	0.7995	161.477	96.4186
235	2.30259	0.813379	162.138	98.2915
236	2.30259	0.823893	162.817	100.189
237	2.30259	0.834498	163.513	102.11

238	2.30259	0.848786		164.234	104.064
239	2.30259	0.859618		164.973	106.044
240	2.30259	0.874218		165.737	108.057
241	2.30259	0.885291		166.521	110.095
242	2.30259	0.896473		167.325	112.159
243	2.30259	0.911562		168.155	114.258
244	2.30259	0.923014		169.007	116.384
245	2.30259	0.93459	169.881	118.536	
246	2.30259	0.950222		170.784	120.724
247	2.30259	0.9621	171.709	122.939	
248	2.30259	0.97815	172.666	125.191	
249	2.30259	0.990356		173.647	127.472
250	2.30259	1.00271	174.652	129.78	
251	2.30259	1.01943	175.692	132.128	
252	2.30259	1.03215	176.757	134.504	
253	2.30259	1.04505	177.849	136.911	
254	2.30259	1.06252	178.978	139.357	
255	2.30259	1.07584	180.136	141.834	
256	2.30259	1.08935	181.322	144.343	
257	2.30259	1.10768	182.549	146.893	
258	2.30259	1.12168	183.807	149.476	
259	2.30259	1.14069	185.108	152.103	
260	2.30259	1.15522	186.443	154.763	
261	2.30259	1.17	187.812	157.457	
262	2.30259	1.19012	189.228	160.197	
263	2.30259	1.20553	190.682	162.973	
264	2.30259	1.22123	192.173	165.785	
265	2.30259	1.24264	193.717	168.646	
266	2.30259	1.25908	195.302	171.545	
267	2.30259	1.27588	196.93	174.483	
268	2.30259	1.29884	198.617	177.474	
269	2.30259	1.31652	200.351	180.505	
270	2.30259	1.34075	202.148	183.592	
271	2.30259	1.35946	203.996	186.723	
272	2.30259	1.37866	205.897	189.897	
273	2.30259	1.40507	207.871	193.132	
274	2.30259	1.42554	209.903	196.415	
275	2.30259	1.44663	211.996	199.746	
276	2.30259	1.47579	214.174	203.144	
277	2.30259	1.49852	216.42	206.594	
278	2.30259	1.53007	218.761	210.118	
279	2.30259	1.55477	221.178	213.698	
280	2.30259	1.58047	223.676	217.337	
281	2.30259	1.61644	226.289	221.059	
282	2.30259	1.64485	228.994	224.846	
283	2.30259	1.67466	231.799	228.702	
284	2.30259	1.71688	234.747	232.655	
285	2.30259	1.75069	237.811	236.686	
286	2.30259	1.78661	241.003	240.8	
287	2.30259	1.83843	244.383	245.033	
288	2.30259	1.88079	247.921	249.364	
289	2.3979	1.94314	251.696	254.024	
290	2.48491	1.99539	255.678	258.982	
291	2.63906	2.05375	259.896	264.402	
292	2.70805	2.14441	264.494	270.209	
293	2.89037	2.22621	269.45	276.644	
294	3.4012	2.32634	274.862	284.556	
295	3.71357	2.51213	281.173	293.885	
296	3.89182	2.74777	288.723	304.579	

Data Set Standard Deviation = 1.23419

Numerator = 92768.2
Denominator = 129739
W Statistic = 0.715037 = 92768.2 / 129739

5% Critical value of 0.976 exceeds 0.715037
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.715037
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Vanadium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.844202
0.844202 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-0.356675	0.003367	-2.74777	107.836	348.683
2	-0.356675	0.00673401	-2.51213	107.836	337.176
3	-0.356675	0.010101	-2.32634	107.836	328.103
4	-0.356675	0.013468	-2.22621	107.836	323.213
5	-0.356675	0.016835	-2.14441	107.836	319.219
6	-0.356675	0.020202	-2.05375	107.836	314.791
7	-0.356675	0.023569	-1.99539	107.836	311.942
8	-0.356675	0.026936	-1.94314	107.836	309.39
9	-0.356675	0.030303	-1.88079	107.836	306.345
10	-0.356675	0.03367	-1.83843	107.836	304.276
11	-0.356675	0.037037	-1.78661	107.836	301.746
12	-0.356675	0.040404	-1.75069	107.836	299.992
13	-0.356675	0.043771	-1.71688	107.836	298.341
14	-0.356675	0.047138	-1.67466	107.836	296.279
15	-0.356675	0.0505051	-1.64485	107.836	294.824
16	-0.356675	0.0538721	-1.61644	107.836	293.436
17	-0.356675	0.0572391	-1.58047	107.836	291.679
18	-0.356675	0.0606061	-1.55477	107.836	290.425
19	-0.356675	0.0639731	-1.53007	107.836	289.218
20	-0.356675	0.0673401	-1.49852	107.836	287.677
21	-0.356675	0.0707071	-1.47579	107.836	286.568
22	-0.356675	0.0740741	-1.44663	107.836	285.144
23	-0.356675	0.0774411	-1.42554	107.836	284.114
24	-0.356675	0.0808081	-1.40507	107.836	283.114
25	-0.356675	0.0841751	-1.37866	107.836	281.824
26	-0.356675	0.0875421	-1.35946	107.836	280.887
27	-0.356675	0.0909091	-1.34075	107.836	279.974
28	-0.356675	0.0942761	-1.31652	107.836	278.79
29	-0.356675	0.0976431	-1.29884	107.836	277.926
30	-0.356675	0.10101	-1.27588	107.836	276.805
31	-0.356675	0.104377	-1.25908	107.836	275.985
32	-0.356675	0.107744	-1.24264	107.836	275.182
33	-0.356675	0.111111	-1.22123	107.836	274.137
34	-0.356675	0.114478	-1.20553	107.836	273.37
35	-0.356675	0.117845	-1.19012	107.836	272.617
36	-0.356675	0.121212	-1.17	107.836	271.635
37	-0.356675	0.124579	-1.15522	107.836	270.913
38	-0.356675	0.127946	-1.14069	107.836	270.204
39	-0.356675	0.131313	-1.12168	107.836	269.275
40	-0.356675	0.13468	-1.10768	107.836	268.592
41	-0.356675	0.138047	-1.08935	107.836	267.697
42	-0.356675	0.141414	-1.07584	107.836	267.037
43	-0.356675	0.144781	-1.06252	107.836	266.386
44	-0.356675	0.148148	-1.04505	107.836	265.533
45	-0.356675	0.151515	-1.03215	107.836	264.904
46	-0.356675	0.154882	-1.01943	107.836	264.282
47	-0.356675	0.158249	-1.00271	107.836	263.466
48	-0.356675	0.161616	-0.990356	107.836	262.862

49	-0.356675	0.164983	-0.97815	107.836	262.266
50	-0.356675	0.16835	-0.9621	107.836	261.483
51	-0.356675	0.171717	-0.950222	107.836	260.903
52	-0.356675	0.175084	-0.93459	107.836	260.139
53	-0.356675	0.178451	-0.923014	107.836	259.574
54	-0.356675	0.181818	-0.911562	107.836	259.015
55	-0.356675	0.185185	-0.896473	107.836	258.278
56	-0.356675	0.188552	-0.885291	107.836	257.732
57	-0.356675	0.191919	-0.874218	107.836	257.191
58	-0.356675	0.195286	-0.859618	107.836	256.478
59	-0.356675	0.198653	-0.848786	107.836	255.949
60	-0.356675	0.20202	-0.834498	107.836	255.251
61	-0.356675	0.205387	-0.823893	107.836	254.733
62	-0.356675	0.208754	-0.813379	107.836	254.22
63	-0.356675	0.212121	-0.7995	107.836	253.542
64	-0.356675	0.215488	-0.789191	107.836	253.039
65	-0.356675	0.218855	-0.778966	107.836	252.54
66	-0.356675	0.222222	-0.765456	107.836	251.88
67	-0.356675	0.225589	-0.755415	107.836	251.389
68	-0.356675	0.228956	-0.745449	107.836	250.903
69	-0.356675	0.232323	-0.732275	107.836	250.259
70	-0.356675	0.23569	-0.722479	107.836	249.781
71	-0.356675	0.239057	-0.709522	107.836	249.148
72	-0.356675	0.242424	-0.699883	107.836	248.678
73	-0.356675	0.245791	-0.690309	107.836	248.21
74	-0.356675	0.249158	-0.677639	107.836	247.591
75	-0.356675	0.252525	-0.668209	107.836	247.131
76	-0.356675	0.255892	-0.658838	107.836	246.673
77	-0.356675	0.259259	-0.646431	107.836	246.067
78	-0.356675	0.262626	-0.637192	107.836	245.616
79	-0.356675	0.265993	-0.628006	107.836	245.168
80	-0.356675	0.26936	-0.615839	107.836	244.573
81	-0.356675	0.272727	-0.606775	107.836	244.131
82	-0.356675	0.276094	-0.594766	107.836	243.544
83	-0.356675	0.279461	-0.585815	107.836	243.107
84	-0.356675	0.282828	-0.576911	107.836	242.672
85	-0.356675	0.286195	-0.565108	107.836	242.096
86	-0.356675	0.289562	-0.556308	107.836	241.666
87	-0.356675	0.292929	-0.547551	107.836	241.239
88	-0.356675	0.296296	-0.53594	107.836	240.672
89	-0.356675	0.299663	-0.52728	107.836	240.249
90	-0.356675	0.30303	-0.515791	107.836	239.688
91	-0.356675	0.306397	-0.507221	107.836	239.269
92	-0.356675	0.309764	-0.498687	107.836	238.853
93	-0.356675	0.313131	-0.487364	107.836	238.3
94	0.405465	0.316498	-0.478914	189.385	237.887
95	0.587787	0.319865	-0.470498	208.893	237.476
96	0.587787	0.323232	-0.459327	208.893	236.93
97	0.693147	0.326599	-0.450985	220.167	236.523
98	0.693147	0.329966	-0.442676	220.167	236.117
99	0.693147	0.333333	-0.431644	220.167	235.579
100	0.693147	0.3367	-0.423405	220.167	235.176
101	0.741937	0.340067	-0.412463	225.387	234.642
102	0.832909	0.343434	-0.40429	235.121	234.243
103	0.832909	0.346801	-0.396142	235.121	233.845
104	0.875469	0.350168	-0.385321	239.675	233.317
105	0.916291	0.353535	-0.377233	244.043	232.922
106	0.955511	0.356902	-0.369171	248.24	232.528
107	0.955511	0.360269	-0.358459	248.24	232.005
108	0.993252	0.363636	-0.350451	252.278	231.614
109	1.06471	0.367003	-0.33981	259.924	231.094
110	1.09861	0.37037	-0.331854	263.552	230.706

111	1.09861	0.373737	-0.323919	263.552	230.318
112	1.09861	0.377104	-0.31337	263.552	229.803
113	1.16315	0.380471	-0.305481	270.457	229.418
114	1.36098	0.383838	-0.297612	291.624	229.033
115	1.52606	0.387205	-0.287147	309.288	228.522
116	1.60944	0.390572	-0.279319	318.21	228.14
117	1.60944	0.393939	-0.271509	318.21	227.759
118	1.60944	0.397306	-0.26112	318.21	227.251
119	1.60944	0.400673	-0.253347	318.21	226.872
120	1.60944	0.40404	-0.243007	318.21	226.367
121	1.82455	0.407407	-0.235269	341.227	225.989
122	1.94591	0.410774	-0.227545	354.212	225.612
123	1.94591	0.414141	-0.217267	354.212	225.11
124	1.94591	0.417508	-0.209575	354.212	224.734
125	1.94591	0.420875	-0.201894	354.212	224.359
126	2.0149	0.424242	-0.191671	361.595	223.86
127	2.07944	0.427609	-0.184017	368.5	223.486
128	2.07944	0.430976	-0.176374	368.5	223.113
129	2.07944	0.434343	-0.166199	368.5	222.616
130	2.19722	0.43771	-0.158579	381.103	222.244
131	2.30259	0.441077	-0.148434	392.377	221.749
132	2.30259	0.444444	-0.140835	392.377	221.377
133	2.30259	0.447811	-0.133244	392.377	221.007
134	2.30259	0.451178	-0.123135	392.377	220.513
135	2.30259	0.454545	-0.115562	392.377	220.143
136	2.30259	0.457912	-0.107995	392.377	219.774
137	2.30259	0.461279	-0.0979139	392.377	219.281
138	2.30259	0.464646	-0.0903606	392.377	218.913
139	2.30259	0.468013	-0.0802981	392.377	218.421
140	2.30259	0.47138	-0.0727562	392.377	218.053
141	2.30259	0.474747	-0.0652187	392.377	217.685
142	2.30259	0.478114	-0.0551734	392.377	217.194
143	2.30259	0.481481	-0.0476439	392.377	216.827
144	2.30259	0.484848	-0.0401167	392.377	216.459
145	2.30259	0.488215	-0.0300838	392.377	215.969
146	2.30259	0.491582	-0.0225612	392.377	215.602
147	2.30259	0.494949	-0.0150408	392.377	215.234
148	2.30259	0.498316	-0.00501359	392.377	214.745
149	2.30259	0.501684	0.00501359	392.377	214.255
150	2.30259	0.505051	0.0150408	392.377	213.766
151	2.30259	0.508418	0.0225612	392.377	213.398
152	2.30259	0.511785	0.0300838	392.377	213.031
153	2.30259	0.515152	0.0401167	392.377	212.541
154	2.30259	0.518519	0.0476439	392.377	212.173
155	2.30259	0.521886	0.0551734	392.377	211.806
156	2.30259	0.525253	0.0652187	392.377	211.315
157	2.30259	0.52862	0.0727562	392.377	210.947
158	2.30259	0.531987	0.0802981	392.377	210.579
159	2.30259	0.535354	0.0903606	392.377	210.087
160	2.30259	0.538721	0.0979139	392.377	209.719
161	2.30259	0.542088	0.107995	392.377	209.226
162	2.30259	0.545455	0.115562	392.377	208.857
163	2.30259	0.548822	0.123135	392.377	208.487
164	2.30259	0.552189	0.133244	392.377	207.993
165	2.30259	0.555556	0.140835	392.377	207.623
166	2.30259	0.558923	0.148434	392.377	207.251
167	2.30259	0.56229	0.158579	392.377	206.756
168	2.30259	0.565657	0.166199	392.377	206.384
169	2.30259	0.569024	0.176374	392.377	205.887
170	2.30259	0.572391	0.184017	392.377	205.514
171	2.30259	0.575758	0.191671	392.377	205.14
172	2.30259	0.579125	0.201894	392.377	204.641

173	2.30259	0.582492	0.209575	392.377	204.266
174	2.30259	0.585859	0.217267	392.377	203.89
175	2.30259	0.589226	0.227545	392.377	203.388
176	2.30259	0.592593	0.235269	392.377	203.011
177	2.30259	0.59596	0.243007	392.377	202.633
178	2.30259	0.599327	0.253347	392.377	202.128
179	2.30259	0.602694	0.26112	392.377	201.749
180	2.30259	0.606061	0.271509	392.377	201.241
181	2.30259	0.609428	0.279319	392.377	200.86
182	2.30259	0.612795	0.287147	392.377	200.478
183	2.30259	0.616162	0.297612	392.377	199.967
184	2.30259	0.619529	0.305481	392.377	199.582
185	2.30259	0.622896	0.31337	392.377	199.197
186	2.30259	0.626263	0.323919	392.377	198.682
187	2.30259	0.62963	0.331854	392.377	198.294
188	2.30259	0.632997	0.33981	392.377	197.906
189	2.30259	0.636364	0.350451	392.377	197.386
190	2.30259	0.639731	0.358459	392.377	196.995
191	2.30259	0.643098	0.369171	392.377	196.472
192	2.30259	0.646465	0.377233	392.377	196.078
193	2.30259	0.649832	0.385321	392.377	195.683
194	2.30259	0.653199	0.396142	392.377	195.155
195	2.30259	0.656566	0.40429	392.377	194.757
196	2.30259	0.659933	0.412463	392.377	194.358
197	2.30259	0.6633	0.423405	392.377	193.824
198	2.30259	0.666667	0.431644	392.377	193.421
199	2.30259	0.670034	0.442676	392.377	192.883
200	2.30259	0.673401	0.450985	392.377	192.477
201	2.30259	0.676768	0.459327	392.377	192.07
202	2.30259	0.680135	0.470498	392.377	191.524
203	2.30259	0.683502	0.478914	392.377	191.113
204	2.30259	0.686869	0.487364	392.377	190.7
205	2.30259	0.690236	0.498687	392.377	190.147
206	2.30259	0.693603	0.507221	392.377	189.731
207	2.30259	0.69697	0.515791	392.377	189.312
208	2.30259	0.700337	0.52728	392.377	188.751
209	2.30259	0.703704	0.53594	392.377	188.328
210	2.30259	0.707071	0.547551	392.377	187.761
211	2.30259	0.710438	0.556308	392.377	187.334
212	2.30259	0.713805	0.565108	392.377	186.904
213	2.30259	0.717172	0.576911	392.377	186.328
214	2.30259	0.720539	0.585815	392.377	185.893
215	2.30259	0.723906	0.594766	392.377	185.456
216	2.30259	0.727273	0.606775	392.377	184.869
217	2.30259	0.73064	0.615839	392.377	184.427
218	2.30259	0.734007	0.628006	392.377	183.832
219	2.30259	0.737374	0.637192	392.377	183.384
220	2.30259	0.740741	0.646431	392.377	182.933
221	2.30259	0.744108	0.658838	392.377	182.327
222	2.30259	0.747475	0.668209	392.377	181.869
223	2.30259	0.750842	0.677639	392.377	181.409
224	2.30259	0.754209	0.690309	392.377	180.79
225	2.30259	0.757576	0.699883	392.377	180.322
226	2.30259	0.760943	0.709522	392.377	179.852
227	2.30259	0.76431	0.722479	392.377	179.219
228	2.30259	0.767677	0.732275	392.377	178.741
229	2.30259	0.771044	0.745449	392.377	178.097
230	2.30259	0.774411	0.755415	392.377	177.611
231	2.30259	0.777778	0.765456	392.377	177.12
232	2.30259	0.781145	0.778966	392.377	176.46
233	2.30259	0.784512	0.789191	392.377	175.961
234	2.30259	0.787879	0.7995	392.377	175.458

235	2.30259	0.791246	0.813379	392.377	174.78
236	2.30259	0.794613	0.823893	392.377	174.267
237	2.30259	0.79798	0.834498	392.377	173.749
238	2.30259	0.801347	0.848786	392.377	173.051
239	2.30259	0.804714	0.859618	392.377	172.522
240	2.30259	0.808081	0.874218	392.377	171.809
241	2.30259	0.811448	0.885291	392.377	171.268
242	2.30259	0.814815	0.896473	392.377	170.722
243	2.30259	0.818182	0.911562	392.377	169.985
244	2.30259	0.821549	0.923014	392.377	169.426
245	2.30259	0.824916	0.93459	392.377	168.861
246	2.30259	0.828283	0.950222	392.377	168.097
247	2.30259	0.83165	0.9621	392.377	167.517
248	2.30259	0.835017	0.97815	392.377	166.734
249	2.30259	0.838384	0.990356	392.377	166.138
250	2.30259	0.841751	1.00271	392.377	165.534
251	2.30259	0.845118	1.01943	392.377	164.718
252	2.30259	0.848485	1.03215	392.377	164.096
253	2.30259	0.851852	1.04505	392.377	163.467
254	2.30259	0.855219	1.06252	392.377	162.614
255	2.30259	0.858586	1.07584	392.377	161.963
256	2.30259	0.861953	1.08935	392.377	161.303
257	2.30259	0.86532	1.10768	392.377	160.408
258	2.30259	0.868687	1.12168	392.377	159.725
259	2.30259	0.872054	1.14069	392.377	158.796
260	2.30259	0.875421	1.15522	392.377	158.087
261	2.30259	0.878788	1.17	392.377	157.365
262	2.30259	0.882155	1.19012	392.377	156.383
263	2.30259	0.885522	1.20553	392.377	155.63
264	2.30259	0.888889	1.22123	392.377	154.863
265	2.30259	0.892256	1.24264	392.377	153.818
266	2.30259	0.895623	1.25908	392.377	153.015
267	2.30259	0.89899	1.27588	392.377	152.195
268	2.30259	0.902357	1.29884	392.377	151.074
269	2.30259	0.905724	1.31652	392.377	150.21
270	2.30259	0.909091	1.34075	392.377	149.026
271	2.30259	0.912458	1.35946	392.377	148.113
272	2.30259	0.915825	1.37866	392.377	147.176
273	2.30259	0.919192	1.40507	392.377	145.886
274	2.30259	0.922559	1.42554	392.377	144.886
275	2.30259	0.925926	1.44663	392.377	143.856
276	2.30259	0.929293	1.47579	392.377	142.432
277	2.30259	0.93266	1.49852	392.377	141.323
278	2.30259	0.936027	1.53007	392.377	139.782
279	2.30259	0.939394	1.55477	392.377	138.575
280	2.30259	0.942761	1.58047	392.377	137.321
281	2.30259	0.946128	1.61644	392.377	135.564
282	2.30259	0.949495	1.64485	392.377	134.176
283	2.30259	0.952862	1.67466	392.377	132.721
284	2.30259	0.956229	1.71688	392.377	130.659
285	2.30259	0.959596	1.75069	392.377	129.008
286	2.30259	0.962963	1.78661	392.377	127.254
287	2.30259	0.96633	1.83843	392.377	124.724
288	2.30259	0.969697	1.88079	392.377	122.655
289	2.3979	0.973064	1.94314	402.575	119.61
290	2.48491	0.976431	1.99539	411.885	117.058
291	2.63906	0.979798	2.05375	428.379	114.209
292	2.70805	0.983165	2.14441	435.761	109.781
293	2.89037	0.986532	2.22621	455.27	105.787
294	3.4012	0.989899	2.32634	509.928	100.897
295	3.71357	0.993266	2.51213	543.352	91.8241
296	3.89182	0.996633	2.74777	562.425	80.3175

Kruskal-Wallis Non-Parametric Test

Parameter: Vanadium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	ND<2.30259	125.5
	3/16/1999	ND<2.30259	125.5
	9/23/1999	ND<2.30259	125.5
	3/14/2000	ND<2.30259	125.5
	9/23/2003	ND<2.30259	125.5
	3/10/2004	ND<2.30259	125.5
	10/12/2004	ND<2.30259	125.5
	4/1/2005	ND<2.30259	125.5
	10/26/2005	ND<2.30259	125.5
	6/19/2006	ND<2.30259	125.5
	11/18/2006	ND<2.30259	125.5
	6/2/2007	2.70805	292
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5
	6/11/2009	ND<-0.356675 U	125.5
	11/16/2009	ND<-0.356675 U	125.5
	6/30/2010	ND<-0.356675 U	125.5
	11/17/2010	ND<-0.356675 U	125.5
	7/6/2011	ND<-0.356675 U	125.5
	11/22/2011	ND<-0.356675 U	125.5
	5/16/2012	ND<-0.356675 U	125.5
	11/16/2012	ND<-0.356675 U	125.5
	11/16/2013	ND<-0.356675 U	125.5

Rank Sum = 3178.5
Rank Mean = 132.438

Background Rank Sum = 3178.5
Background Rank Mean = 132.438

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-6	1/16/1998	ND<2.30259	125.5
	3/16/1999	ND<2.30259	125.5
	9/23/1999	ND<2.30259	125.5
	3/14/2000	ND<2.30259	125.5
	9/23/2003	ND<2.30259	125.5
	3/10/2004	ND<2.30259	125.5
	10/12/2004	ND<2.30259	125.5
	4/1/2005	ND<2.30259	125.5
	10/26/2005	ND<2.30259	125.5
	6/19/2006	ND<2.30259	125.5
	11/18/2006	ND<2.30259	125.5
	6/2/2007	1.09861	267
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5
	6/11/2009	ND<-0.356675 U	125.5

	11/16/2009	ND<-0.356675 U	125.5
	6/30/2010	ND<-0.356675 U	125.5
	11/17/2010	ND<-0.356675 U	125.5
	7/6/2011	ND<-0.356675 U	125.5
	11/22/2011	ND<-0.356675 U	125.5
	5/16/2012	ND<-0.356675 U	125.5
	11/16/2012	ND<-0.356675 U	125.5
	11/16/2013	ND<-0.356675 U	125.5

Rank Sum = 3153.5
Rank Mean = 131.396

LMW-9	1/16/1998	ND<2.30259	125.5
	3/16/1999	ND<2.30259	125.5
	9/23/1999	ND<2.30259	125.5
	3/14/2000	ND<2.30259	125.5
	9/23/2003	ND<2.30259	125.5
	3/10/2004	ND<2.30259	125.5
	10/12/2004	ND<2.30259	125.5
	4/1/2005	2.07944 J	284
	10/26/2005	2.3979 J	289
	6/19/2006	3.4012	294
	11/18/2006	ND<2.30259	125.5
	6/2/2007	1.94591	279
	11/15/2007	ND<2.30259	125.5
	5/20/2008	0.693147 J	254
	11/20/2008	ND<2.30259	125.5
	6/11/2009	0.955511 J	263
	11/16/2009	ND<-0.356675 U	125.5
	6/30/2010	ND<-0.356675 U	125.5
	11/17/2010	1.60944	273
	7/6/2011	ND<-0.356675 U	125.5
	11/22/2011	ND<-0.356675 U	125.5
	5/16/2012	ND<-0.356675 U	125.5
	11/16/2012	ND<-0.356675 U	125.5
	11/16/2013	ND<-0.356675 U	125.5

Rank Sum = 4069.5
Rank Mean = 169.563

LMW-14R	6/2/2007	0.693147 J	255
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5
	6/11/2009	ND<-0.356675 U	125.5
	6/30/2010	ND<-0.356675 U	125.5
	11/17/2010	ND<-0.356675 U	125.5
	7/6/2011	ND<-0.356675 U	125.5
	11/22/2011	ND<-0.356675 U	125.5
	5/16/2012	ND<-0.356675 U	125.5
	11/16/2012	ND<-0.356675 U	125.5
	11/16/2013	ND<-0.356675 U	125.5

Rank Sum = 1635.5
Rank Mean = 136.292

LMW-16	11/18/2006	ND<2.30259	125.5
	6/2/2007	3.71357	295
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5
	6/11/2009	ND<-0.356675 U	125.5
	11/16/2009	ND<-0.356675 U	125.5
	6/30/2010	ND<-0.356675 U	125.5
	11/17/2010	ND<-0.356675 U	125.5

	7/6/2011	0.993252 J	265	
	11/22/2011	ND<-0.356675 U	125.5	
	5/16/2012	ND<-0.356675 U	125.5	
	11/16/2012	0.405465 J	251	
	11/16/2013	ND<-0.356675 U	125.5	

Rank Sum = 2191.5
Rank Mean = 156.536

LMW-3S	11/18/2006	ND<2.30259	125.5	
	6/2/2007	2.19722	287	
	11/15/2007	ND<2.30259	125.5	
	5/20/2008	ND<2.30259	125.5	
	11/20/2008	ND<2.30259	125.5	
	6/11/2009	0.741937 J	258	
	11/16/2009	ND<-0.356675 U	125.5	
	6/30/2010	ND<-0.356675 U	125.5	
	11/17/2010	1.52606 J	272	
	7/6/2011	1.16315 J	270	
	11/22/2011	ND<-0.356675 U	125.5	
	5/16/2012	ND<-0.356675 U	125.5	
	11/16/2012	ND<-0.356675 U	125.5	
	11/16/2013	ND<-0.356675 U	125.5	

Rank Sum = 2342
Rank Mean = 167.286

LMW-8	1/16/1998	ND<2.30259	125.5	
	3/16/1999	ND<2.30259	125.5	
	9/23/1999	1.94591 J	280	
	3/14/2000	ND<2.30259	125.5	
	9/23/2003	ND<2.30259	125.5	
	3/10/2004	ND<2.30259	125.5	
	10/12/2004	ND<2.30259	125.5	
	4/1/2005	ND<2.30259	125.5	
	10/26/2005	ND<2.30259	125.5	
	6/19/2006	ND<2.30259	125.5	
	11/18/2006	ND<2.30259	125.5	
	6/2/2007	ND<2.30259	125.5	
	11/15/2007	ND<2.30259	125.5	
	5/20/2008	ND<2.30259	125.5	
	11/20/2008	ND<2.30259	125.5	
	6/11/2009	ND<-0.356675 U	125.5	
	11/16/2009	ND<-0.356675 U	125.5	
	6/30/2010	ND<-0.356675 U	125.5	
	11/17/2010	ND<-0.356675 U	125.5	
	7/6/2011	ND<-0.356675 U	125.5	
	11/22/2011	ND<-0.356675 U	125.5	
	5/16/2012	ND<-0.356675 U	125.5	
	11/16/2012	ND<-0.356675 U	125.5	
	11/16/2013	ND<-0.356675 U	125.5	

Rank Sum = 3166.5
Rank Mean = 131.938

LMW-15R	11/18/2006	ND<2.30259	125.5	
	6/2/2007	ND<2.30259	125.5	
	11/15/2007	ND<2.30259	125.5	
	11/15/2007	ND<2.30259	125.5	
	5/20/2008	ND<2.30259	125.5	
	5/20/2008	ND<2.30259	125.5	
	11/20/2008	ND<2.30259	125.5	
	11/20/2008	ND<2.30259	125.5	
	6/11/2009	2.0149	283	
	6/30/2010	ND<-0.356675 U	125.5	

	11/17/2010	ND<-0.356675 U	125.5
	7/6/2011	ND<-0.356675 U	125.5
	11/22/2011	ND<-0.356675 U	125.5
	5/16/2012	ND<-0.356675 U	125.5
	11/16/2012	ND<-0.356675 U	125.5
	11/16/2013	ND<-0.356675 U	125.5

Rank Sum = 2165.5
Rank Mean = 135.344

LMW-3	11/19/1996	ND<2.30259	125.5
	3/24/1997	ND<2.30259	125.5
	1/16/1998	ND<2.30259	125.5
	3/16/1999	ND<2.30259	125.5
	9/23/1999	ND<2.30259	125.5
	3/14/2000	ND<2.30259	125.5
	9/23/2003	ND<2.30259	125.5
	3/10/2004	ND<2.30259	125.5
	10/12/2004	ND<2.30259	125.5
	4/1/2005	ND<2.30259	125.5
	10/26/2005	ND<2.30259	125.5
	6/19/2006	ND<2.30259	125.5
	11/18/2006	ND<2.30259	125.5
	6/2/2007	ND<2.30259	125.5
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5
	6/11/2009	ND<-0.356675 U	125.5
	11/16/2009	ND<-0.356675 U	125.5
	6/30/2010	ND<-0.356675 U	125.5
	11/17/2010	0.587787 J	252
	7/6/2011	ND<-0.356675 U	125.5
	11/22/2011	ND<-0.356675 U	125.5
	5/16/2012	ND<-0.356675 U	125.5
	11/16/2012	ND<-0.356675 U	125.5
	11/16/2013	ND<-0.356675 U	125.5

Rank Sum = 3389.5
Rank Mean = 130.365

LMW-9S	11/18/2006	ND<2.30259	125.5
	6/2/2007	1.60944	274
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5
	6/11/2009	ND<-0.356675 U	125.5
	11/16/2009	ND<-0.356675 U	125.5
	11/16/2009	ND<-0.356675 U	125.5
	11/16/2009	ND<-0.356675 U	125.5
	6/30/2010	ND<-0.356675 U	125.5
	11/17/2010	1.82455	278
	7/6/2011	ND<-0.356675 U	125.5
	11/22/2011	ND<-0.356675 U	125.5
	5/16/2012	ND<-0.356675 U	125.5
	11/16/2012	ND<-0.356675 U	125.5
	11/16/2013	ND<-0.356675 U	125.5

Rank Sum = 2309
Rank Mean = 144.313

LMW-9D	11/18/2006	2.30259 J	288
	6/2/2007	1.60944	275
	11/15/2007	ND<2.30259	125.5
	5/20/2008	1.60944 J	276
	11/20/2008	1.60944 J	277

	6/11/2009	0.916291 J	262
	11/16/2009	0.832909 J	259
	6/30/2010	0.587787 J	253
	11/17/2010	0.832909 J	260
	7/6/2011	0.955511 J	264
	11/22/2011	0.693147 J	256
	5/16/2012	0.875469 J	261
	11/16/2012	1.36098 J	271
	11/16/2013	0.693147 J	257

Rank Sum = 3584.5
Rank Mean = 256.036

LMW-10	3/14/2000	ND<2.30259	125.5
	9/23/2003	ND<2.30259	125.5
	3/10/2004	ND<2.30259	125.5
	10/12/2004	ND<2.30259	125.5
	4/1/2005	ND<2.30259	125.5
	10/26/2005	ND<2.30259	125.5
	6/19/2006	2.07944 J	285
	11/18/2006	ND<2.30259	125.5
	6/2/2007	1.09861 J	268
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5
	6/11/2009	ND<-0.356675 U	125.5
	11/16/2009	ND<-0.356675 U	125.5
	6/30/2010	ND<-0.356675 U	125.5
	11/17/2010	ND<-0.356675 U	125.5
	7/6/2011	ND<-0.356675 U	125.5
	11/22/2011	ND<-0.356675 U	125.5
	5/16/2012	ND<-0.356675 U	125.5
	11/16/2012	ND<-0.356675 U	125.5
	11/16/2013	ND<-0.356675 U	125.5

Rank Sum = 2937.5
Rank Mean = 139.881

LMW-7	1/16/1998	ND<2.30259	125.5
	3/16/1999	1.94591 J	281
	9/23/1999	3.89182	296
	3/14/2000	ND<2.30259	125.5
	9/23/2003	ND<2.30259	125.5
	3/10/2004	ND<2.30259	125.5
	10/12/2004	ND<2.30259	125.5
	4/1/2005	2.48491 J	290
	10/26/2005	2.89037 J	293
	6/19/2006	2.07944 J	286
	11/18/2006	1.09861 J	269
	6/2/2007	2.63906	291
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5
	6/11/2009	1.06471 J	266
	11/17/2010	ND<-0.356675 U	125.5
	7/6/2011	1.94591	282
	11/22/2011	ND<-0.356675 U	125.5
	5/16/2012	ND<-0.356675 U	125.5
	11/16/2012	ND<-0.356675 U	125.5

Rank Sum = 4060
Rank Mean = 193.333

LMW-11	3/14/2000	ND<2.30259	125.5
	9/23/2003	ND<2.30259	125.5

	3/10/2004	ND<2.30259	125.5
	10/12/2004	ND<2.30259	125.5
	4/1/2005	ND<2.30259	125.5
	10/26/2005	ND<2.30259	125.5
	6/19/2006	ND<2.30259	125.5
	6/2/2007	ND<2.30259	125.5
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5

Rank Sum = 1380.5
Rank Mean = 125.5

LMW-12	3/14/2000	ND<2.30259	125.5
	9/23/2003	ND<2.30259	125.5
	3/10/2004	ND<2.30259	125.5
	10/12/2004	ND<2.30259	125.5
	4/1/2005	ND<2.30259	125.5
	10/26/2005	ND<2.30259	125.5
	6/19/2006	ND<2.30259	125.5
	6/2/2007	ND<2.30259	125.5
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5

Rank Sum = 1380.5
Rank Mean = 125.5

LMW-13	3/14/2000	ND<2.30259	125.5
	9/23/2003	ND<2.30259	125.5
	3/10/2004	ND<2.30259	125.5
	10/12/2004	ND<2.30259	125.5
	4/1/2005	ND<2.30259	125.5
	10/26/2005	ND<2.30259	125.5
	6/19/2006	ND<2.30259	125.5
	6/2/2007	ND<2.30259	125.5
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5

Rank Sum = 1380.5
Rank Mean = 125.5

MW-5	1/16/1998	ND<2.30259	125.5
	3/16/1999	ND<2.30259	125.5
	9/23/1999	ND<2.30259	125.5
	3/14/2000	ND<2.30259	125.5
	9/23/2003	ND<2.30259	125.5
	3/10/2004	ND<2.30259	125.5
	10/12/2004	ND<2.30259	125.5
	4/1/2005	ND<2.30259	125.5
	10/26/2005	ND<2.30259	125.5
	6/19/2006	ND<2.30259	125.5
	11/15/2007	ND<2.30259	125.5
	5/20/2008	ND<2.30259	125.5
	11/20/2008	ND<2.30259	125.5

Rank Sum = 1631.5
Rank Mean = 125.5

Calculation Results:

Kruskal-Wallis H Statistic = 38.176
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 96.0355
95% Confidence comparison value is 26.2962 at 16 degrees of freedom

38.176 > 26.2962 indicating a significant group difference at 5% significance level
96.0355 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 132.438

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-6	131.396	-1.04167	57.48
LMW-9	169.563	37.125	57.48
LMW-14R	136.292	3.85417	70.3983
LMW-16	156.536	24.0982	66.9621
LMW-3S	167.286	34.8482	66.9621
LMW-8	131.938	-0.5	57.48
LMW-15R	135.344	2.90625	64.2645
LMW-3	130.365	-2.07212	56.3637
LMW-9S	144.313	11.875	64.2645
LMW-9D	256.036	123.598	66.9621
LMW-10	139.881	7.44345	59.4974
LMW-7	193.333	60.8958	59.4974
LMW-11	125.5	-6.9375	72.5002
LMW-12	125.5	-6.9375	72.5002
LMW-13	125.5	-6.9375	72.5002
MW-5	125.5	-6.9375	68.5694

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777
Mean background rank is 132.438

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-6	131.396	-1.04167	67.8926
LMW-9	169.563	37.125	67.8926
LMW-14R	136.292	3.85417	83.1511
LMW-16	156.536	24.0982	79.0925
LMW-3S	167.286	34.8482	79.0925
LMW-8	131.938	-0.5	67.8926
LMW-15R	135.344	2.90625	75.9062
LMW-3	130.365	-2.07212	66.5742
LMW-9S	144.313	11.875	75.9062
LMW-9D	256.036	123.598	79.0925
LMW-10	139.881	7.44345	70.2755
LMW-7	193.333	60.8958	70.2755
LMW-11	125.5	-6.9375	85.6338
LMW-12	125.5	-6.9375	85.6338
LMW-13	125.5	-6.9375	85.6338
MW-5	125.5	-6.9375	80.991

Mann-Kendall Trend Analysis
Parameter: Vanadium
Location: LMW-9D
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
1.60944		2.30259 J	-0.693147	0 1
ND<2.30259		2.30259 J	0 0	1
1.60944 J		2.30259 J	-0.693147	0 2
1.60944 J		2.30259 J	-0.693147	0 3
0.916291 J		2.30259 J	-1.386290	4
0.832909 J		2.30259 J	-1.469680	5
0.587787 J		2.30259 J	-1.7148 0	6
0.832909 J		2.30259 J	-1.469680	7
0.955511 J		2.30259 J	-1.347070	8
0.693147 J		2.30259 J	-1.609440	9
0.875469 J		2.30259 J	-1.427120	10
1.36098 J		2.30259 J	-0.941609	0 11
0.693147 J		2.30259 J	-1.609440	12
ND<2.30259		1.60944	0.693147	1 12
1.60944 J		1.60944	0 1	12
1.60944 J		1.60944	0 1	12
0.916291 J		1.60944	-0.693147	1 13
0.832909 J		1.60944	-0.776529	1 14
0.587787 J		1.60944	-1.021651	15
0.832909 J		1.60944	-0.776529	1 16
0.955511 J		1.60944	-0.653926	1 17
0.693147 J		1.60944	-0.916291	1 18
0.875469 J		1.60944	-0.733969	1 19
1.36098 J		1.60944	-0.248461	1 20
0.693147 J		1.60944	-0.916291	1 21
1.60944 J		ND<2.30259	-0.693147	1 22
1.60944 J		ND<2.30259	-0.693147	1 23
0.916291 J		ND<2.30259	-1.386291	24
0.832909 J		ND<2.30259	-1.469681	25
0.587787 J		ND<2.30259	-1.7148 1	26
0.832909 J		ND<2.30259	-1.469681	27
0.955511 J		ND<2.30259	-1.347071	28
0.693147 J		ND<2.30259	-1.609441	29
0.875469 J		ND<2.30259	-1.427121	30
1.36098 J		ND<2.30259	-0.941609	1 31
0.693147 J		ND<2.30259	-1.609441	32
1.60944 J		1.60944 J	0 1	32
0.916291 J		1.60944 J	-0.693147	1 33
0.832909 J		1.60944 J	-0.776529	1 34
0.587787 J		1.60944 J	-1.021651	35
0.832909 J		1.60944 J	-0.776529	1 36
0.955511 J		1.60944 J	-0.653926	1 37
0.693147 J		1.60944 J	-0.916291	1 38
0.875469 J		1.60944 J	-0.733969	1 39
1.36098 J		1.60944 J	-0.248461	1 40
0.693147 J		1.60944 J	-0.916291	1 41

0.916291 J	1.60944 J	-0.693147	1	42
0.832909 J	1.60944 J	-0.776529	1	43
0.587787 J	1.60944 J	-1.021651	44	
0.832909 J	1.60944 J	-0.776529	1	45
0.955511 J	1.60944 J	-0.653926	1	46
0.693147 J	1.60944 J	-0.916291	1	47
0.875469 J	1.60944 J	-0.733969	1	48
1.36098 J	1.60944 J	-0.248461	1	49
0.693147 J	1.60944 J	-0.916291	1	50
0.832909 J	0.916291 J	-0.0833816	1	51
0.587787 J	0.916291 J	-0.328504	1	52
0.832909 J	0.916291 J	-0.0833816	1	53
0.955511 J	0.916291 J	0.0392207	2	53
0.693147 J	0.916291 J	-0.223144	2	54
0.875469 J	0.916291 J	-0.040822	2	55
1.36098 J	0.916291 J	0.444686	3	55
0.693147 J	0.916291 J	-0.223144	3	56
0.587787 J	0.832909 J	-0.245122	3	57
0.832909 J	0.832909 J	0 3	57	
0.955511 J	0.832909 J	0.122602	4	57
0.693147 J	0.832909 J	-0.139762	4	58
0.875469 J	0.832909 J	0.0425596	5	58
1.36098 J	0.832909 J	0.528067	6	58
0.693147 J	0.832909 J	-0.139762	6	59
0.832909 J	0.587787 J	0.245122	7	59
0.955511 J	0.587787 J	0.367725	8	59
0.693147 J	0.587787 J	0.105361	9	59
0.875469 J	0.587787 J	0.287682	10	59
1.36098 J	0.587787 J	0.77319 11	59	
0.693147 J	0.587787 J	0.105361	12	59
0.955511 J	0.832909 J	0.122602	13	59
0.693147 J	0.832909 J	-0.139762	13	60
0.875469 J	0.832909 J	0.0425596	14	60
1.36098 J	0.832909 J	0.528067	15	60
0.693147 J	0.832909 J	-0.139762	15	61
0.693147 J	0.955511 J	-0.262364	15	62
0.875469 J	0.955511 J	-0.0800427	15	63
1.36098 J	0.955511 J	0.405465	16	63
0.693147 J	0.955511 J	-0.262364	16	64
0.875469 J	0.693147 J	0.182322	17	64
1.36098 J	0.693147 J	0.667829	18	64
0.693147 J	0.693147 J	0 18	64	
1.36098 J	0.875469 J	0.485508	19	64
0.693147 J	0.875469 J	-0.182322	19	65
0.693147 J	1.36098 J	-0.667829	19	66

S Statistic = 19 - 66 = -47

Tied Group Value Members

1	2.30259	2
2	1.60944	3
3	0.832909	2

4	0.693147	2

Time Period	Observations
11/18/2006	1
6/2/2007	1
11/15/2007	1
5/20/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1
11/17/2010	1
7/6/2011	1
11/22/2011	1
5/16/2012	1
11/16/2012	1
11/16/2013	1

There are 0 time periods with multiple data

A = 120
B = 0
C = 6
D = 0
E = 12
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 327
Z-Score = -2.54381
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.54381| > 1.97737 indicating a trend

Mann-Kendall Trend Analysis
Parameter: Vanadium
Location: LMW-7
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
1.94591 J	ND<2.30259	-0.356675	0	1
3.89182	ND<2.30259	1.58924 1	1	
ND<2.30259	ND<2.30259	0 1	1	
ND<2.30259	ND<2.30259	0 1	1	
ND<2.30259	ND<2.30259	0 1	1	
ND<2.30259	ND<2.30259	0 1	1	
2.48491 J	ND<2.30259	0.182322	2	1
2.89037 J	ND<2.30259	0.587787	3	1
2.07944 J	ND<2.30259	-0.223144	3	2
1.09861 J	ND<2.30259	-1.203973	3	
2.63906	ND<2.30259	0.336472	4	3
ND<2.30259	ND<2.30259	0 4	3	
ND<2.30259	ND<2.30259	0 4	3	
ND<2.30259	ND<2.30259	0 4	3	
1.06471 J	ND<2.30259	-1.237874	4	
ND<-0.356675 U	ND<2.30259	-2.659264	5	
1.94591	ND<2.30259	-0.356675	4	6
ND<-0.356675 U	ND<2.30259	-2.659264	7	
ND<-0.356675 U	ND<2.30259	-2.659264	8	
ND<-0.356675 U	ND<2.30259	-2.659264	9	
3.89182	1.94591 J	1.94591 5	9	
ND<2.30259	1.94591 J	0.356675	6	9
ND<2.30259	1.94591 J	0.356675	7	9
ND<2.30259	1.94591 J	0.356675	8	9
ND<2.30259	1.94591 J	0.356675	9	9
2.48491 J	1.94591 J	0.538997	10	9
2.89037 J	1.94591 J	0.944462	11	9
2.07944 J	1.94591 J	0.133531	12	9
1.09861 J	1.94591 J	-0.847298	12	10
2.63906	1.94591 J	0.693147	13	10
ND<2.30259	1.94591 J	0.356675	14	10
ND<2.30259	1.94591 J	0.356675	15	10
ND<2.30259	1.94591 J	0.356675	16	10
1.06471 J	1.94591 J	-0.881199	16	11
ND<-0.356675 U	1.94591 J	-2.3025916	12	
1.94591	1.94591 J	0 16	12	
ND<-0.356675 U	1.94591 J	-2.3025916	13	
ND<-0.356675 U	1.94591 J	-2.3025916	14	
ND<-0.356675 U	1.94591 J	-2.3025916	15	
ND<2.30259	3.89182	-1.5892416	16	
ND<2.30259	3.89182	-1.5892416	17	
ND<2.30259	3.89182	-1.5892416	18	
ND<2.30259	3.89182	-1.5892416	19	
2.48491 J	3.89182	-1.4069116	20	
2.89037 J	3.89182	-1.0014516	21	
2.07944 J	3.89182	-1.8123816	22	
1.09861 J	3.89182	-2.7932116	23	
2.63906	3.89182	-1.2527616	24	

ND<2.30259	3.89182	-1.5892416	25	
ND<2.30259	3.89182	-1.5892416	26	
ND<2.30259	3.89182	-1.5892416	27	
1.06471 J	3.89182	-2.8271116	28	
ND<-0.356675 U	3.89182	-4.2485 16	29	
1.94591	3.89182	-1.9459116	30	
ND<-0.356675 U	3.89182	-4.2485 16	31	
ND<-0.356675 U	3.89182	-4.2485 16	32	
ND<-0.356675 U	3.89182	-4.2485 16	33	
ND<2.30259	ND<2.30259	0 16	33	
ND<2.30259	ND<2.30259	0 16	33	
ND<2.30259	ND<2.30259	0 16	33	
2.48491 J	ND<2.30259	0.182322	17	33
2.89037 J	ND<2.30259	0.587787	18	33
2.07944 J	ND<2.30259	-0.223144	18	34
1.09861 J	ND<2.30259	-1.2039718	35	
2.63906	ND<2.30259	0.336472	19	35
ND<2.30259	ND<2.30259	0 19	35	
ND<2.30259	ND<2.30259	0 19	35	
ND<2.30259	ND<2.30259	0 19	35	
1.06471 J	ND<2.30259	-1.2378719	36	
ND<-0.356675 U	ND<2.30259	-2.6592619	37	
1.94591	ND<2.30259	-0.356675	19	38
ND<-0.356675 U	ND<2.30259	-2.6592619	39	
ND<-0.356675 U	ND<2.30259	-2.6592619	40	
ND<-0.356675 U	ND<2.30259	-2.6592619	41	
ND<2.30259	ND<2.30259	0 19	41	
ND<2.30259	ND<2.30259	0 19	41	
2.48491 J	ND<2.30259	0.182322	20	41
2.89037 J	ND<2.30259	0.587787	21	41
2.07944 J	ND<2.30259	-0.223144	21	42
1.09861 J	ND<2.30259	-1.2039721	43	
2.63906	ND<2.30259	0.336472	22	43
ND<2.30259	ND<2.30259	0 22	43	
ND<2.30259	ND<2.30259	0 22	43	
ND<2.30259	ND<2.30259	0 22	43	
1.06471 J	ND<2.30259	-1.2378722	44	
ND<-0.356675 U	ND<2.30259	-2.6592622	45	
1.94591	ND<2.30259	-0.356675	22	46
ND<-0.356675 U	ND<2.30259	-2.6592622	47	
ND<-0.356675 U	ND<2.30259	-2.6592622	48	
ND<-0.356675 U	ND<2.30259	-2.6592622	49	
ND<2.30259	ND<2.30259	0 22	49	
2.48491 J	ND<2.30259	0.182322	23	49
2.89037 J	ND<2.30259	0.587787	24	49
2.07944 J	ND<2.30259	-0.223144	24	50
1.09861 J	ND<2.30259	-1.2039724	51	
2.63906	ND<2.30259	0.336472	25	51
ND<2.30259	ND<2.30259	0 25	51	
ND<2.30259	ND<2.30259	0 25	51	
ND<2.30259	ND<2.30259	0 25	51	
1.06471 J	ND<2.30259	-1.2378725	52	
ND<-0.356675 U	ND<2.30259	-2.6592625	53	
1.94591	ND<2.30259	-0.356675	25	54
ND<-0.356675 U	ND<2.30259	-2.6592625	55	
ND<-0.356675 U	ND<2.30259	-2.6592625	56	
ND<-0.356675 U	ND<2.30259	-2.6592625	57	
2.48491 J	ND<2.30259	0.182322	26	57

2.89037 J	ND<2.30259	0.587787	27	57
2.07944 J	ND<2.30259	-0.223144	27	58
1.09861 J	ND<2.30259	-1.2039727	59	
2.63906	ND<2.30259	0.336472	28	59
ND<2.30259	ND<2.30259	0 28	59	
ND<2.30259	ND<2.30259	0 28	59	
ND<2.30259	ND<2.30259	0 28	59	
1.06471 J	ND<2.30259	-1.2378728	60	
ND<-0.356675 U	ND<2.30259	-2.6592628	61	
1.94591	ND<2.30259	-0.356675	28	62
ND<-0.356675 U	ND<2.30259	-2.6592628	63	
ND<-0.356675 U	ND<2.30259	-2.6592628	64	
ND<-0.356675 U	ND<2.30259	-2.6592628	65	
2.89037 J	2.48491 J	0.405465	29	65
2.07944 J	2.48491 J	-0.405465	29	66
1.09861 J	2.48491 J	-1.3862929	67	
2.63906	2.48491 J	0.154151	30	67
ND<2.30259	2.48491 J	-0.182322	30	68
ND<2.30259	2.48491 J	-0.182322	30	69
ND<2.30259	2.48491 J	-0.182322	30	70
1.06471 J	2.48491 J	-1.4202 30	71	
ND<-0.356675 U	2.48491 J	-2.8415830	72	
1.94591	2.48491 J	-0.538997	30	73
ND<-0.356675 U	2.48491 J	-2.8415830	74	
ND<-0.356675 U	2.48491 J	-2.8415830	75	
ND<-0.356675 U	2.48491 J	-2.8415830	76	
2.07944 J	2.89037 J	-0.8109330	77	
1.09861 J	2.89037 J	-1.7917630	78	
2.63906	2.89037 J	-0.251314	30	79
ND<2.30259	2.89037 J	-0.587787	30	80
ND<2.30259	2.89037 J	-0.587787	30	81
ND<2.30259	2.89037 J	-0.587787	30	82
1.06471 J	2.89037 J	-1.8256630	83	
ND<-0.356675 U	2.89037 J	-3.2470530	84	
1.94591	2.89037 J	-0.944462	30	85
ND<-0.356675 U	2.89037 J	-3.2470530	86	
ND<-0.356675 U	2.89037 J	-3.2470530	87	
ND<-0.356675 U	2.89037 J	-3.2470530	88	
1.09861 J	2.07944 J	-0.980829	30	89
2.63906	2.07944 J	0.559616	31	89
ND<2.30259	2.07944 J	0.223144	32	89
ND<2.30259	2.07944 J	0.223144	33	89
ND<2.30259	2.07944 J	0.223144	34	89
1.06471 J	2.07944 J	-1.0147334	90	
ND<-0.356675 U	2.07944 J	-2.4361234	91	
1.94591	2.07944 J	-0.133531	34	92
ND<-0.356675 U	2.07944 J	-2.4361234	93	
ND<-0.356675 U	2.07944 J	-2.4361234	94	
ND<-0.356675 U	2.07944 J	-2.4361234	95	
2.63906	1.09861 J	1.54045 35	95	
ND<2.30259	1.09861 J	1.20397 36	95	
ND<2.30259	1.09861 J	1.20397 37	95	
ND<2.30259	1.09861 J	1.20397 38	95	
1.06471 J	1.09861 J	-0.0339016	38	96
ND<-0.356675 U	1.09861 J	-1.4552938	97	
1.94591	1.09861 J	0.847298	39	97
ND<-0.356675 U	1.09861 J	-1.4552939	98	
ND<-0.356675 U	1.09861 J	-1.4552939	99	

ND<-0.356675 U	1.09861 J	-1.4552939	100	
ND<2.30259	2.63906	-0.336472	39	101
ND<2.30259	2.63906	-0.336472	39	102
ND<2.30259	2.63906	-0.336472	39	103
1.06471 J	2.63906	-1.5743539	104	
ND<-0.356675 U	2.63906	-2.9957339	105	
1.94591	2.63906	-0.693147	39	106
ND<-0.356675 U	2.63906	-2.9957339	107	
ND<-0.356675 U	2.63906	-2.9957339	108	
ND<-0.356675 U	2.63906	-2.9957339	109	
ND<2.30259	ND<2.30259	0 39	109	
ND<2.30259	ND<2.30259	0 39	109	
1.06471 J	ND<2.30259	-1.2378739	110	
ND<-0.356675 U	ND<2.30259	-2.6592639	111	
1.94591	ND<2.30259	-0.356675	39	112
ND<-0.356675 U	ND<2.30259	-2.6592639	113	
ND<-0.356675 U	ND<2.30259	-2.6592639	114	
ND<-0.356675 U	ND<2.30259	-2.6592639	115	
ND<2.30259	ND<2.30259	0 39	115	
1.06471 J	ND<2.30259	-1.2378739	116	
ND<-0.356675 U	ND<2.30259	-2.6592639	117	
1.94591	ND<2.30259	-0.356675	39	118
ND<-0.356675 U	ND<2.30259	-2.6592639	119	
ND<-0.356675 U	ND<2.30259	-2.6592639	120	
ND<-0.356675 U	ND<2.30259	-2.6592639	121	
1.06471 J	ND<2.30259	-1.2378739	122	
ND<-0.356675 U	ND<2.30259	-2.6592639	123	
1.94591	ND<2.30259	-0.356675	39	124
ND<-0.356675 U	ND<2.30259	-2.6592639	125	
ND<-0.356675 U	ND<2.30259	-2.6592639	126	
ND<-0.356675 U	ND<2.30259	-2.6592639	127	
ND<-0.356675 U	1.06471 J	-1.4213939	128	
1.94591	1.06471 J	0.881199	40	128
ND<-0.356675 U	1.06471 J	-1.4213940	129	
ND<-0.356675 U	1.06471 J	-1.4213940	130	
ND<-0.356675 U	1.06471 J	-1.4213940	131	
1.94591	ND<-0.356675 U	2.30259 41	131	
ND<-0.356675 U	ND<-0.356675 U	0 41	131	
ND<-0.356675 U	ND<-0.356675 U	0 41	131	
ND<-0.356675 U	ND<-0.356675 U	0 41	131	
ND<-0.356675 U	1.94591	-2.3025941	132	
ND<-0.356675 U	1.94591	-2.3025941	133	
ND<-0.356675 U	1.94591	-2.3025941	134	
ND<-0.356675 U	ND<-0.356675 U	0 41	134	
ND<-0.356675 U	ND<-0.356675 U	0 41	134	
ND<-0.356675 U	ND<-0.356675 U	0 41	134	

S Statistic = 41 - 134 = -93

Tied Group Value Members

1	2.30259	8
2	1.94591	2
3	-0.356675	4

Time Period	Observations
1/16/1998	1
3/16/1999	1
9/23/1999	1
3/14/2000	1
9/23/2003	1
3/10/2004	1
10/12/2004	1
4/1/2005	1
10/26/2005	1
6/19/2006	1
11/18/2006	1
6/2/2007	1
11/15/2007	1
5/20/2008	1
11/20/2008	1
6/11/2009	1
11/17/2010	1
7/6/2011	1
11/22/2011	1
5/16/2012	1
11/16/2012	1

There are 0 time periods with multiple data

A = 1350
B = 0
C = 360
D = 0
E = 70
F = 0
a = 19740
b = 71820
c = 840
Group Variance = 1021.67
Z-Score = -2.87828
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.87828| > 1.97737 indicating a trend

Shewhart-CUSUM Control Chart

Parameter: Vanadium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = 1.32226
Baseline Std Dev = 1.33097
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	2.30259	0	0.736549
11/18/2006	2.30259	0	0.736549
6/2/2007	1.60944	0	0.215767
6/2/2007	1.60944	0	0.215767
11/15/2007	2.30259	0	0.736549
11/15/2007	2.30259	0	0.736549
5/20/2008	1.60944	0	0.215767
5/20/2008	1.60944	0	0.215767
11/20/2008	1.60944	0	0.215767
11/20/2008	1.60944	0	0.215767
6/11/2009	0.916291	0	-0.305014
6/11/2009	0.916291	0	-0.305014
11/16/2009	0.832909	0	-0.367661
11/16/2009	0.832909	0	-0.367661
6/30/2010	0.587787	0	-0.551829
6/30/2010	0.587787	0	-0.551829
11/17/2010	0.832909	0	-0.367661
11/17/2010	0.832909	0	-0.367661
7/6/2011	0.955511	0	-0.275547
7/6/2011	0.955511	0	-0.275547
11/22/2011	0.693147	0	-0.472669
11/22/2011	0.693147	0	-0.472669
5/16/2012	0.875469	0	-0.335685
5/16/2012	0.875469	0	-0.335685
11/16/2012	1.36098	0	0.0290912
11/16/2012	1.36098	0	0.0290912
11/16/2013	0.693147	0	-0.472669
11/16/2013	0.693147	0	-0.472669

Shewhart-CUSUM Control Chart

Parameter: Vanadium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = 1.32226
Baseline Std Dev = 1.33097
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std	Mean
1/16/1998	2.30259	0	0.736549	
1/16/1998	2.30259	0	0.736549	
3/16/1999	1.94591	0	0.468569	
3/16/1999	1.94591	0	0.468569	
9/23/1999	3.89182	0.930588	1.93059	
9/23/1999	3.89182	0.930588	1.93059	
3/14/2000	2.30259	0.667137	0.736549	
3/14/2000	2.30259	0.667137	0.736549	
9/23/2003	2.30259	0.403686	0.736549	
9/23/2003	2.30259	0.403686	0.736549	
3/10/2004	2.30259	0.140236	0.736549	
3/10/2004	2.30259	0.140236	0.736549	
10/12/2004	2.30259	0	0.736549	
10/12/2004	2.30259	0	0.736549	
4/1/2005	2.48491	0	0.873533	
4/1/2005	2.48491	0	0.873533	
10/26/2005	2.89037	0.17817	1.17817	
10/26/2005	2.89037	0.17817	1.17817	
6/19/2006	2.07944	0	0.568895	
6/19/2006	2.07944	0	0.568895	
11/18/2006	1.09861	0	-0.168031	
11/18/2006	1.09861	0	-0.168031	
6/2/2007	2.63906	0	0.989351	
6/2/2007	2.63906	0	0.989351	
11/15/2007	2.30259	0	0.736549	
11/15/2007	2.30259	0	0.736549	
5/20/2008	2.30259	0	0.736549	
5/20/2008	2.30259	0	0.736549	
11/20/2008	2.30259	0	0.736549	
11/20/2008	2.30259	0	0.736549	
6/11/2009	1.06471	0	-0.193502	
6/11/2009	1.06471	0	-0.193502	
11/17/2010	-0.356675	0	-1.26143	
11/17/2010	-0.356675	0	-1.26143	
7/6/2011	1.94591	0	0.468569	
7/6/2011	1.94591	0	0.468569	
11/22/2011	-0.356675	0	-1.26143	
11/22/2011	-0.356675	0	-1.26143	
5/16/2012	-0.356675	0	-1.26143	
5/16/2012	-0.356675	0	-1.26143	
11/16/2012	-0.356675	0	-1.26143	
11/16/2012	-0.356675	0	-1.26143	

Concentrations (ppb)

Parameter: Zinc

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 158
Percent Non-Detects: 55.6338%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4R	23	12 (52.1739%)	1/16/1998	ND<60	ND<60
			3/16/1999	50 J	50 J
			9/23/1999	ND<60	ND<60
			3/14/2000	ND<60	ND<60
			9/23/2003	ND<60	ND<60
			3/10/2004	ND<60	ND<60
			10/12/2004	ND<60	ND<60
			4/1/2005	ND<60	ND<60
			10/26/2005	ND<60	ND<60
			6/19/2006	ND<60	ND<60
			11/18/2006	11 J	11 J
			6/2/2007	47	47
			11/15/2007	ND<60	ND<60
			5/20/2008	15 J	15 J
			11/20/2008	ND<60	ND<60
			6/11/2009	6.7 J	6.7 J
			6/30/2010	6.9 J	6.9 J
			11/17/2010	7.3 J	7.3 J
			7/6/2011	20	20
			11/22/2011	11	11
			5/16/2012	6 J	6 J
			11/16/2012	11	11
			11/16/2013	ND<2.6 U	ND<2.6 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-9S	13	8 (61.5385%)	11/18/2006	ND<60	ND<60
			6/2/2007	ND<60	ND<60
			11/15/2007	ND<60	ND<60
			5/20/2008	32 J	32 J
			11/20/2008	ND<60	ND<60
			6/11/2009	5.2 J	5.2 J
			6/30/2010	3.5 J	3.5 J
			11/17/2010	3.6 J	3.6 J
			7/6/2011	ND<2.6 U	ND<2.6 U
			11/22/2011	6.3 J	6.3 J
			5/16/2012	ND<2.6 U	ND<2.6 U
			11/16/2012	ND<2.6 U	ND<2.6 U
			11/16/2013	ND<2.6 U	ND<2.6 U
LMW-15R	16	9 (56.25%)	11/18/2006	14 J	14 J
			6/2/2007	ND<60	ND<60
			11/15/2007	ND<60	ND<60
			11/15/2007	ND<60	ND<60
			5/20/2008	39 J	39 J
			5/20/2008	ND<60	ND<60

			11/20/2008	ND<60	ND<60	
			11/20/2008	ND<60	ND<60	
			6/11/2009	6.5 J	6.5 J	
			6/30/2010	6.6 J	6.6 J	
			11/17/2010	8.3 J	8.3 J	
			7/6/2011	8.6 J	8.6 J	
			11/22/2011	8.5 J	8.5 J	
			5/16/2012	ND<2.6 U		ND<2.6 U
			11/16/2012	ND<2.6 U		ND<2.6 U
			11/16/2013	ND<2.6 U		ND<2.6 U
LMW-16	13	5 (38.4615%)	11/18/2006	ND<60	ND<60	
			6/2/2007	16 J	16 J	
			11/15/2007	69	69	
			5/20/2008	15 J	15 J	
			11/20/2008	ND<60	ND<60	
			6/11/2009	ND<2.6 U		ND<2.6 U
			6/30/2010	7.9 J	7.9 J	
			11/17/2010	5.4 J	5.4 J	
			7/6/2011	5.1 J	5.1 J	
			11/22/2011	12	12	
			5/16/2012	3.8 J	3.8 J	
			11/16/2012	ND<2.6 U		ND<2.6 U
			11/16/2013	ND<2.6 U		ND<2.6 U
LMW-3	25	14 (56%)	11/19/1996	ND<60	ND<60	
			3/24/1997	ND<60	ND<60	
			1/16/1998	ND<60	ND<60	
			3/16/1999	20 J	20 J	
			9/23/1999	ND<60	ND<60	
			3/14/2000	ND<60	ND<60	
			9/23/2003	ND<60	ND<60	
			3/10/2004	ND<60	ND<60	
			10/12/2004	ND<60	ND<60	
			4/1/2005	ND<60	ND<60	
			10/26/2005	ND<60	ND<60	
			6/19/2006	ND<60	ND<60	
			11/18/2006	6 J	6 J	
			6/2/2007	ND<60	ND<60	
			11/15/2007	66	66	
			5/20/2008	12 J	12 J	
			11/20/2008	ND<60	ND<60	
			6/11/2009	7.3 J B	7.3 J B	
			6/30/2010	8.5 J	8.5 J	
			11/17/2010	11	11	
			7/6/2011	7.6 J	7.6 J	
			11/22/2011	14	14	
			5/16/2012	4 J	4 J	
			11/16/2012	3 J	3 J	
			11/16/2013	ND<2.6 U		ND<2.6 U
LMW-3S	13	1 (7.69231%)	11/18/2006	10 J	10 J	
			6/2/2007	16 J	16 J	
			11/15/2007	48 J	48 J	
			5/20/2008	15 J	15 J	
			11/20/2008	ND<60	ND<60	
			6/11/2009	18 B	18 B	
			6/30/2010	14 Q	14 Q	
			11/17/2010	11	11	
			7/6/2011	7.6 J	7.6 J	
			11/22/2011	5.5 J	5.5 J	
			5/16/2012	11	11	

			11/16/2012	12	12	
			11/16/2013	8.4 J	8.4 J	
LMW-10	20	15 (75%)	3/14/2000	ND<60	ND<60	
			9/23/2003	ND<60	ND<60	
			3/10/2004	ND<60	ND<60	
			10/12/2004	ND<60	ND<60	
			4/1/2005	ND<60	ND<60	
			10/26/2005	ND<60	ND<60	
			6/19/2006	ND<60	ND<60	
			11/18/2006	ND<60	ND<60	
			6/2/2007	ND<60	ND<60	
			11/15/2007	ND<60	ND<60	
			5/20/2008	40 J	40 J	
			11/20/2008	ND<60	ND<60	
			6/11/2009	ND<2.6 U		ND<2.6 U
			6/30/2010	3.6 J	3.6 J	
			11/17/2010	5.3 J	5.3 J	
			7/6/2011	4.2 J	4.2 J	
			11/22/2011	5.5 J	5.5 J	
			5/16/2012	ND<2.6 U		ND<2.6 U
			11/16/2012	ND<2.6 U		ND<2.6 U
			11/16/2013	ND<2.6 U		ND<2.6 U
LMW-6	23	9 (39.1304%)	1/16/1998	ND<60	ND<60	
			3/16/1999	30 J	30 J	
			9/23/1999	53 J	53 J	
			3/14/2000	ND<60	ND<60	
			9/23/2003	ND<60	ND<60	
			3/10/2004	ND<60	ND<60	
			10/12/2004	ND<60	ND<60	
			4/1/2005	ND<60	ND<60	
			10/26/2005	ND<60	ND<60	
			6/19/2006	20 J	20 J	
			11/18/2006	7 J	7 J	
			6/2/2007	17 J	17 J	
			11/15/2007	27 J	27 J	
			5/20/2008	10 J	10 J	
			11/20/2008	ND<60	ND<60	
			6/11/2009	8.2 J B	8.2 J B	
			6/30/2010	11	11	
			11/17/2010	8.6 J	8.6 J	
			7/6/2011	8.7 J	8.7 J	
			11/22/2011	4.9 J	4.9 J	
			5/16/2012	2.9 J	2.9 J	
			11/16/2012	3.4 J	3.4 J	
			11/16/2013	ND<2.6 U		ND<2.6 U
LMW-9D	13	3 (23.0769%)	11/18/2006	7 J	7 J	
			6/2/2007	ND<60	ND<60	
			11/15/2007	ND<60	ND<60	
			5/20/2008	18 J	18 J	
			11/20/2008	ND<60	ND<60	
			6/11/2009	3.5 J	3.5 J	
			6/30/2010	5.6 J	5.6 J	
			11/17/2010	5.1 J	5.1 J	
			7/6/2011	13	13	
			11/22/2011	14	14	
			5/16/2012	2.7 J	2.7 J	
			11/16/2012	5.3 J	5.3 J	
			11/16/2013	4 J	4 J	

LMW-14R		12	3 (25%)	6/2/2007	15 J	15 J
				11/15/2007	ND<60	ND<60
				5/20/2008	18 J	18 J
				11/20/2008	ND<60	ND<60
				6/11/2009	6.3 J	6.3 J
				6/30/2010	4.9 J	4.9 J
				11/17/2010	4.5 J	4.5 J
				7/6/2011	10	10
				11/22/2011	10	10
				5/16/2012	6.7 J	6.7 J
				11/16/2012	ND<2.6 U	ND<2.6 U
				11/16/2013	2.6 J	2.6 J
LMW-8	23	16 (69.5652%)		1/16/1998	ND<60	ND<60
				3/16/1999	90	90
				9/23/1999	ND<60	ND<60
				3/14/2000	ND<60	ND<60
				9/23/2003	ND<60	ND<60
				3/10/2004	ND<60	ND<60
				10/12/2004	ND<60	ND<60
				4/1/2005	ND<60	ND<60
				10/26/2005	ND<60	ND<60
				6/19/2006	ND<60	ND<60
				11/18/2006	ND<60	ND<60
				6/2/2007	ND<60	ND<60
				11/15/2007	ND<60	ND<60
				5/20/2008	5 J	5 J
				11/20/2008	ND<60	ND<60
				6/11/2009	8.2 J	8.2 J
				6/30/2010	4.5 J	4.5 J
				11/17/2010	3.2 J	3.2 J
				7/6/2011	11 J	11 J
				11/22/2011	24	24
				5/16/2012	ND<2.6 U	ND<2.6 U
				11/16/2012	ND<2.6 U	ND<2.6 U
				11/16/2013	ND<2.6 U	ND<2.6 U
LMW-9	23	12 (52.1739%)		1/16/1998	ND<60	ND<60
				3/16/1999	90	90
				9/23/1999	ND<60	ND<60
				3/14/2000	ND<60	ND<60
				9/23/2003	ND<60	ND<60
				3/10/2004	ND<60	ND<60
				10/12/2004	ND<60	ND<60
				4/1/2005	ND<60	ND<60
				10/26/2005	ND<60	ND<60
				6/19/2006	20 J	20 J
				11/18/2006	ND<60	ND<60
				6/2/2007	17 J	17 J
				11/15/2007	ND<60	ND<60
				5/20/2008	7 J	7 J
				11/20/2008	ND<60	ND<60
				6/11/2009	ND<2.6 U	ND<2.6 U
				6/30/2010	4.4 J	4.4 J
				11/17/2010	4.5 J	4.5 J
				7/6/2011	3.7 J	3.7 J
				11/22/2011	6.6 J	6.6 J
				5/16/2012	7.4 J	7.4 J
				11/16/2012	12 J	12 J
				11/16/2013	4.8 J	4.8 J
LMW-7	21	7 (33.3333%)		1/16/1998	ND<60	ND<60

			3/16/1999	20 J	20 J	
			9/23/1999	40 J	40 J	
			3/14/2000	ND<60	ND<60	
			9/23/2003	ND<60	ND<60	
			3/10/2004	ND<60	ND<60	
			10/12/2004	ND<60	ND<60	
			4/1/2005	27 J	27 J	
			10/26/2005	31 J	31 J	
			6/19/2006	40 J	40 J	
			11/18/2006	21 J	21 J	
			6/2/2007	51	51	
			11/15/2007	ND<60	ND<60	
			5/20/2008	10 J	10 J	
			11/20/2008	ND<60	ND<60	
			6/11/2009	29 B	29 B	
			11/17/2010	9.5 J	9.5 J	
			7/6/2011	59	59	
			11/22/2011	15	15	
			5/16/2012	11	11	
			11/16/2012	6.4 J	6.4 J	
LMW-11	11	11 (100%)	3/14/2000	ND<60	ND<60	ND<60
			9/23/2003	ND<60	ND<60	
			3/10/2004	ND<60	ND<60	
			10/12/2004	ND<60	ND<60	
			4/1/2005	ND<60	ND<60	
			10/26/2005	ND<60	ND<60	
			6/19/2006	ND<60	ND<60	
			6/2/2007	ND<60	ND<60	
			11/15/2007	ND<60	ND<60	
			5/20/2008	ND<60	ND<60	
			11/20/2008	ND<60	ND<60	
LMW-13	11	11 (100%)	3/14/2000	ND<60	ND<60	ND<60
			9/23/2003	ND<60	ND<60	
			3/10/2004	ND<60	ND<60	
			10/12/2004	ND<60	ND<60	
			4/1/2005	ND<60	ND<60	
			10/26/2005	ND<60	ND<60	
			6/19/2006	ND<60	ND<60	
			6/2/2007	ND<60	ND<60	
			11/15/2007	ND<60	ND<60	
			5/20/2008	ND<60	ND<60	
			11/20/2008	ND<60	ND<60	
LMW-12	11	11 (100%)	3/14/2000	ND<60	ND<60	ND<60
			9/23/2003	ND<60	ND<60	
			3/10/2004	ND<60	ND<60	
			10/12/2004	ND<60	ND<60	
			4/1/2005	ND<60	ND<60	
			10/26/2005	ND<60	ND<60	
			6/19/2006	ND<60	ND<60	
			6/2/2007	ND<60	ND<60	
			11/15/2007	ND<60	ND<60	
			5/20/2008	ND<60	ND<60	
			11/20/2008	ND<60	ND<60	
MW-5	13	11 (84.6154%)	1/16/1998	ND<60	ND<60	ND<60
			3/16/1999	40 J	40 J	
			9/23/1999	36 J	36 J	
			3/14/2000	ND<60	ND<60	
			9/23/2003	ND<60	ND<60	

3/10/2004	ND<60	ND<60
10/12/2004	ND<60	ND<60
4/1/2005	ND<60	ND<60
10/26/2005	ND<60	ND<60
6/19/2006	ND<60	ND<60
11/15/2007	ND<60	ND<60
5/20/2008	ND<60	ND<60
11/20/2008	ND<60	ND<60

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Zinc

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1.3	-2.74777	7.55021	-3.5721
2	1.3	-2.45727	13.5884	-6.76655
3	1.3	-2.32634	19.0003	-9.79079
4	1.3	-2.19728	23.8283	-12.6473
5	1.3	-2.12007	28.323	-15.4034
6	1.3	-2.03352	32.4582	-18.0469
7	1.3	-1.97737	36.3682	-20.6175
8	1.3	-1.91103	40.0203	-23.1018
9	1.3	-1.86629	43.5033	-25.528
10	1.3	-1.81191	46.7863	-27.8835
11	1.3	-1.77438	49.9348	-30.1902
12	1.3	-1.72793	52.9205	-32.4365
13	1.3	-1.6954	55.7949	-34.6405
14	1.3	-1.65463	58.5327	-36.7915
15	1.3	-1.62576	61.1758	-38.905
16	1.3	-1.58927	63.7015	-40.9711
17	1.3	-1.56322	66.1452	-43.0033
18	1.3	-1.53007	68.4863	-44.9924
19	1.3	-1.50626	70.7551	-46.9505
20	1.3	-1.47579	72.9331	-48.869
21	1.3	-1.4538	75.0466	-50.759
22	1.3	-1.42554	77.0788	-52.6122
23	2.6	-1.40507	79.053	-56.2654
24	2.7	-1.37866	80.9537	-59.9878
25	2.9	-1.35946	82.8019	-63.9302
26	3	-1.33462	84.5831	-67.9341
27	3.2	-1.31652	86.3163	-72.1469
28	3.4	-1.29303	87.9883	-76.5432
29	3.5	-1.27588	89.6161	-81.0088
30	3.5	-1.25357	91.1875	-85.3963
31	3.6	-1.23724	92.7183	-89.8503
32	3.6	-1.21596	94.1969	-94.2278
33	3.7	-1.20036	95.6377	-98.6691
34	3.8	-1.18	97.0301	-103.153
35	4	-1.16505	98.3875	-107.813
36	4	-1.1455	99.6996	-112.395
37	4.2	-1.13113	100.979	-117.146
38	4.4	-1.11232	102.216	-122.04
39	4.5	-1.09847	103.423	-126.983
40	4.5	-1.08032	104.59	-131.845
41	4.5	-1.06694	105.728	-136.646
42	4.8	-1.04939	106.83	-141.683
43	4.9	-1.03643	107.904	-146.762
44	4.9	-1.01943	108.943	-151.757
45	5	-1.00687	109.957	-156.791
46	5.1	-0.990356	110.938	-161.842
47	5.1	-0.97815	111.894	-166.831
48	5.2	-0.9621	112.82	-171.833
49	5.3	-0.950222	113.723	-176.87
50	5.3	-0.93459	114.596	-181.823
51	5.4	-0.923014	115.448	-186.807

52	5.5	-0.907769	116.272	-191.8
53	5.5	-0.896473	117.076	-196.731
54	5.6	-0.881587	117.853	-201.667
55	6	-0.87055	118.611	-206.891
56	6	-0.855996	119.344	-212.027
57	6.3	-0.841621	120.052	-217.329
58	6.3	-0.830953	120.743	-222.564
59	6.4	-0.816874	121.41	-227.792
60	6.5	-0.806422	122.06	-233.034
61	6.6	-0.792618	122.689	-238.265
62	6.6	-0.782366	123.301	-243.429
63	6.7	-0.768821	123.892	-248.58
64	6.7	-0.758753	124.467	-253.663
65	6.9	-0.745449	125.023	-258.807
66	7	-0.735557	125.564	-263.956
67	7	-0.722479	126.086	-269.013
68	7	-0.712751	126.594	-274.002
69	7.3	-0.699883	127.084	-279.112
70	7.3	-0.690309	127.561	-284.151
71	7.4	-0.677639	128.02	-289.165
72	7.6	-0.668209	128.466	-294.244
73	7.6	-0.655726	128.896	-299.227
74	7.9	-0.646431	129.314	-304.334
75	8.2	-0.634124	129.716	-309.534
76	8.2	-0.624956	130.107	-314.659
77	8.3	-0.612813	130.482	-319.745
78	8.4	-0.603765	130.847	-324.817
79	8.5	-0.591776	131.197	-329.847
80	8.5	-0.582841	131.537	-334.801
81	8.6	-0.570999	131.863	-339.711
82	8.6	-0.56217	132.179	-344.546
83	8.7	-0.550465	132.482	-349.335
84	9.5	-0.541736	132.775	-354.482
85	10	-0.530162	133.056	-359.783
86	10	-0.521527	133.328	-364.998
87	10	-0.510074	133.589	-370.099
88	10	-0.501527	133.84	-375.114
89	10	-0.490189	134.08	-380.016
90	11	-0.481728	134.312	-385.315
91	11	-0.470498	134.534	-390.491
92	11	-0.462114	134.747	-395.574
93	11	-0.450985	134.951	-400.535
94	11	-0.442676	135.147	-405.404
95	11	-0.431644	135.333	-410.152
96	11	-0.423405	135.512	-414.81
97	11	-0.412463	135.682	-419.347
98	11	-0.40429	135.846	-423.794
99	12	-0.393433	136.001	-428.515
100	12	-0.385321	136.149	-433.139
101	12	-0.374544	136.289	-437.634
102	12	-0.36649	136.424	-442.032
103	13	-0.355788	136.55	-446.657
104	14	-0.347787	136.671	-451.526
105	14	-0.337155	136.785	-456.246
106	14	-0.329206	136.893	-460.855
107	14	-0.318639	136.995	-465.316
108	15	-0.310738	137.091	-469.977
109	15	-0.300232	137.182	-474.48
110	15	-0.292375	137.267	-478.866
111	15	-0.281926	137.346	-483.095
112	15	-0.27411	137.422	-487.207
113	16	-0.263715	137.491	-491.426

114	16	-0.253347	137.555	-495.48
115	17	-0.24559	137.616	-499.655
116	17	-0.235269	137.671	-503.654
117	18	-0.227545	137.723	-507.75
118	18	-0.217267	137.77	-511.661
119	18	-0.209575	137.814	-515.433
120	20	-0.199336	137.854	-519.42
121	20	-0.191671	137.89	-523.253
122	20	-0.181468	137.923	-526.883
123	20	-0.173829	137.954	-530.359
124	20	-0.163659	137.98	-533.632
125	21	-0.156042	138.005	-536.909
126	24	-0.1459	138.026	-540.411
127	27	-0.138305	138.045	-544.145
128	27	-0.128189	138.062	-547.606
129	29	-0.12061	138.076	-551.104
130	30	-0.110516	138.088	-554.419
131	30	-0.102953	138.099	-557.508
132	30	-0.0928787	138.108	-560.294
133	30	-0.0853288	138.115	-562.854
134	30	-0.0752698	138.12	-565.112
135	30	-0.0677301	138.125	-567.144
136	30	-0.0576847	138.128	-568.875
137	30	-0.0501541	138.131	-570.379
138	30	-0.0401167	138.132	-571.583
139	30	-0.0325917	138.134	-572.561
140	30	-0.0225612	138.134	-573.237
141	30	-0.0150408	138.134	-573.689
142	30	-0.00501359	138.134	-573.839
143	30	0.00501359	138.134	-573.689
144	30	0.0150408	138.135	-573.237
145	30	0.0225612	138.135	-572.561
146	30	0.0325917	138.136	-571.583
147	30	0.0401167	138.138	-570.379
148	30	0.0501541	138.14	-568.875
149	30	0.0576847	138.144	-567.144
150	30	0.0677301	138.148	-565.112
151	30	0.0752698	138.154	-562.854
152	30	0.0853288	138.161	-560.294
153	30	0.0928787	138.17	-557.508
154	30	0.102953	138.18	-554.419
155	30	0.110516	138.193	-551.104
156	30	0.12061	138.207	-547.486
157	30	0.128189	138.224	-543.64
158	30	0.138305	138.243	-539.491
159	30	0.1459	138.264	-535.114
160	30	0.156042	138.288	-530.433
161	30	0.163659	138.315	-525.523
162	30	0.173829	138.345	-520.308
163	30	0.181468	138.378	-514.864
164	30	0.191671	138.415	-509.114
165	30	0.199336	138.455	-503.134
166	30	0.209575	138.499	-496.846
167	30	0.217267	138.546	-490.328
168	30	0.227545	138.598	-483.502
169	30	0.235269	138.653	-476.444
170	30	0.24559	138.713	-469.076
171	30	0.253347	138.777	-461.476
172	30	0.263715	138.847	-453.564
173	30	0.27411	138.922	-445.341
174	30	0.281926	139.002	-436.883
175	30	0.292375	139.087	-428.112

176	30	0.300232	139.177	-419.105
177	30	0.310738	139.274	-409.783
178	30	0.318639	139.375	-400.224
179	30	0.329206	139.484	-390.348
180	30	0.337155	139.597	-380.233
181	30	0.347787	139.718	-369.799
182	30	0.355788	139.845	-359.126
183	30	0.36649	139.979	-348.131
184	30	0.374544	140.12	-336.895
185	30	0.385321	140.268	-325.335
186	30	0.393433	140.423	-313.532
187	30	0.40429	140.586	-301.403
188	30	0.412463	140.756	-289.03
189	30	0.423405	140.936	-276.327
190	30	0.431644	141.122	-263.378
191	30	0.442676	141.318	-250.098
192	30	0.450985	141.521	-236.568
193	30	0.462114	141.735	-222.705
194	30	0.470498	141.956	-208.59
195	30	0.481728	142.188	-194.138
196	30	0.490189	142.429	-179.432
197	30	0.501527	142.68	-164.387
198	30	0.510074	142.94	-149.084
199	30	0.521527	143.212	-133.438
200	30	0.530162	143.493	-117.534
201	30	0.541736	143.787	-101.282
202	30	0.550465	144.09	-84.7676
203	30	0.56217	144.406	-67.9025
204	30	0.570999	144.732	-50.7725
205	30	0.582841	145.072	-33.2873
206	30	0.591776	145.422	-15.534
207	30	0.603765	145.786	2.5789
208	30	0.612813	146.162	20.9633
209	30	0.624956	146.552	39.712
210	30	0.634124	146.955	58.7357
211	30	0.646431	147.372	78.1286
212	30	0.655726	147.802	97.8004
213	30	0.668209	148.249	117.847
214	30	0.677639	148.708	138.176
215	30	0.690309	149.185	158.885
216	30	0.699883	149.674	179.882
217	30	0.712751	150.182	201.264
218	30	0.722479	150.704	222.939
219	30	0.735557	151.245	245.005
220	30	0.745449	151.801	267.369
221	30	0.758753	152.377	290.131
222	30	0.768821	152.968	313.196
223	30	0.782366	153.58	336.667
224	30	0.792618	154.208	360.445
225	30	0.806422	154.859	384.638
226	30	0.816874	155.526	409.144
227	30	0.830953	156.216	434.073
228	30	0.841621	156.925	459.322
229	30	0.855996	157.657	485.001
230	30	0.87055	158.415	511.118
231	30	0.881587	159.193	537.566
232	30	0.896473	159.996	564.46
233	30	0.907769	160.82	591.693
234	30	0.923014	161.672	619.383
235	30	0.93459	162.546	647.421
236	30	0.950222	163.449	675.928
237	30	0.9621	164.374	704.791

238	30	0.97815	165.331	734.135	
239	30	0.990356		166.312	763.846
240	30	1.00687	167.326	794.052	
241	30	1.01943	168.365	824.635	
242	30	1.03643	169.439	855.727	
243	30	1.04939	170.54	887.209	
244	30	1.06694	171.679	919.217	
245	30	1.08032	172.846	951.627	
246	30	1.09847	174.052	984.581	
247	30	1.11232	175.29	1017.95	
248	30	1.13113	176.569	1051.88	
249	30	1.1455	177.881	1086.25	
250	30	1.16505	179.239	1121.2	
251	30	1.18	180.631	1156.6	
252	30	1.20036	182.072	1192.61	
253	30	1.21596	183.55	1229.09	
254	30	1.23724	185.081	1266.21	
255	30	1.25357	186.653	1303.81	
256	30	1.27588	188.28	1342.09	
257	30	1.29303	189.952	1380.88	
258	30	1.31652	191.686	1420.38	
259	30	1.33462	193.467	1460.42	
260	30	1.35946	195.315	1501.2	
261	30	1.37866	197.216	1542.56	
262	30	1.40507	199.19	1584.71	
263	30	1.42554	201.222	1627.48	
264	30	1.4538	203.336	1671.09	
265	30	1.47579	205.514	1715.37	
266	30	1.50626	207.782	1760.55	
267	31	1.53007	210.123	1807.99	
268	32	1.56322	212.567	1858.01	
269	36	1.58927	215.093	1915.22	
270	39	1.62576	217.736	1978.63	
271	40	1.65463	220.474	2044.81	
272	40	1.6954	223.348	2112.63	
273	40	1.72793	226.334	2181.75	
274	40	1.77438	229.482	2252.72	
275	47	1.81191	232.765	2337.88	
276	48	1.86629	236.248	2427.46	
277	50	1.91103	239.9	2523.01	
278	51	1.97737	243.81	2623.86	
279	53	2.03352	247.946	2731.64	
280	59	2.12007	252.44	2856.72	
281	66	2.19728	257.268	3001.74	
282	69	2.32634	262.68	3162.26	
283	90	2.45727	268.718	3383.41	
284	90	2.74777	276.269	3630.71	

Data Set Standard Deviation = 14.3518
Numerator = 1.31821e+007
Denominator = 1.61038e+007
W Statistic = 0.818567 = 1.31821e+007 / 1.61038e+007

5% Critical value of 0.976 exceeds 0.818567
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.818567
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Zinc

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.905786
0.905786 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	1.3	0.00350877	-2.747	77 46.7278	348.683
2	1.3	0.00701754	-2.457	27 46.7278	334.497
3	1.3	0.0105263	-2.326	34 46.7278	328.103
4	1.3	0.0140351	-2.197	28 46.7278	321.801
5	1.3	0.0175439	-2.120	07 46.7278	318.03
6	1.3	0.0210526	-2.033	52 46.7278	313.804
7	1.3	0.0245614	-1.977	37 46.7278	311.062
8	1.3	0.0280702	-1.911	03 46.7278	307.822
9	1.3	0.0315789	-1.866	29 46.7278	305.637
10	1.3	0.0350877	-1.811	91 46.7278	302.982
11	1.3	0.0385965	-1.774	38 46.7278	301.149
12	1.3	0.0421053	-1.727	93 46.7278	298.881
13	1.3	0.045614	-1.6954	46.7278	297.292
14	1.3	0.0491228	-1.654	63 46.7278	295.301
15	1.3	0.0526316	-1.625	76 46.7278	293.891
16	1.3	0.0561404	-1.589	27 46.7278	292.109
17	1.3	0.0596491	-1.563	22 46.7278	290.837
18	1.3	0.0631579	-1.530	07 46.7278	289.218
19	1.3	0.0666667	-1.506	26 46.7278	288.056
20	1.3	0.0701754	-1.475	79 46.7278	286.568
21	1.3	0.0736842	-1.4538	46.7278	285.494
22	1.3	0.077193	-1.425	54 46.7278	284.114
23	2.6	0.0807018	-1.405	07 54.4556	283.114
24	2.7	0.0842105	-1.378	66 55.05	281.824
25	2.9	0.0877193	-1.359	46 56.2389	280.887
26	3	0.0912281	-1.334	62 56.8333	279.674
27	3.2	0.0947368	-1.316	52 58.0222	278.79
28	3.4	0.0982456	-1.293	03 59.2111	277.643
29	3.5	0.101754	-1.275	88 59.8056	276.805
30	3.5	0.105263	-1.253	57 59.8056	275.716
31	3.6	0.108772	-1.237	24 60.4	274.918
32	3.6	0.112281	-1.215	96 60.4	273.879
33	3.7	0.115789	-1.200	36 60.9944	273.118
34	3.8	0.119298	-1.18	61.5889	272.123
35	4	0.122807	-1.165	05 62.7778	271.393
36	4	0.126316	-1.1455	62.7778	270.439
37	4.2	0.129825	-1.131	13 63.9667	269.737
38	4.4	0.133333	-1.112	32 65.1556	268.818
39	4.5	0.136842	-1.098	47 65.75	268.142
40	4.5	0.140351	-1.080	32 65.75	267.256
41	4.5	0.14386	-1.066	94 65.75	266.602
42	4.8	0.147368	-1.049	39 67.5333	265.745
43	4.9	0.150877	-1.036	43 68.1278	265.112
44	4.9	0.154386	-1.019	43 68.1278	264.282
45	5	0.157895	-1.006	87 68.7222	263.669
46	5.1	0.161404	-0.990356	69.3167	262.862
47	5.1	0.164912	-0.978	15 69.3167	262.266
48	5.2	0.168421	-0.9621	69.9111	261.483

49	5.3	0.17193	-0.950222	70.5056	260.903
50	5.3	0.175439	-0.934597	0.5056	260.139
51	5.4	0.178947	-0.923014	71.1	259.574
52	5.5	0.182456	-0.907769	71.6944	258.829
53	5.5	0.185965	-0.896473	71.6944	258.278
54	5.6	0.189474	-0.881587	72.2889	257.551
55	6	0.192982	-0.870557	4.6667	257.012
56	6	0.196491	-0.855996	74.6667	256.301
57	6.3	0.2	-0.841621	76.45	255.599
58	6.3	0.203509	-0.830953	76.45	255.078
59	6.4	0.207018	-0.816874	77.0444	254.391
60	6.5	0.210526	-0.806422	77.6389	253.88
61	6.6	0.214035	-0.792618	78.2333	253.206
62	6.6	0.217544	-0.782366	78.2333	252.706
63	6.7	0.221053	-0.768821	78.8278	252.044
64	6.7	0.224561	-0.758753	78.8278	251.552
65	6.9	0.22807	-0.745449	80.0167	250.903
66	7	0.231579	-0.735557	80.6111	250.42
67	7	0.235088	-0.722479	80.6111	249.781
68	7	0.238596	-0.712751	80.6111	249.306
69	7.3	0.242105	-0.699883	82.3944	248.678
70	7.3	0.245614	-0.690309	82.3944	248.21
71	7.4	0.249123	-0.677639	82.9889	247.591
72	7.6	0.252632	-0.668209	84.1778	247.131
73	7.6	0.25614	-0.655726	84.1778	246.521
74	7.9	0.259649	-0.646431	85.9611	246.067
75	8.2	0.263158	-0.634124	87.7444	245.466
76	8.2	0.266667	-0.624956	87.7444	245.019
77	8.3	0.270175	-0.612813	88.3389	244.426
78	8.4	0.273684	-0.603765	88.9333	243.984
79	8.5	0.277193	-0.591776	89.5278	243.398
80	8.5	0.280702	-0.582841	89.5278	242.962
81	8.6	0.284211	-0.570999	90.1222	242.384
82	8.6	0.287719	-0.562179	0.1222	241.953
83	8.7	0.291228	-0.550465	90.7167	241.381
84	9.5	0.294737	-0.541736	95.4722	240.955
85	10	0.298246	-0.530162	98.4444	240.39
86	10	0.301754	-0.521527	98.4444	239.968
87	10	0.305263	-0.510074	98.4444	239.409
88	10	0.308772	-0.501527	98.4444	238.991
89	10	0.312281	-0.490189	98.4444	238.438
90	11	0.315789	-0.481728	104.389	238.024
91	11	0.319298	-0.470498	104.389	237.476
92	11	0.322807	-0.462114	104.389	237.067
93	11	0.326316	-0.450985	104.389	236.523
94	11	0.329825	-0.442676	104.389	236.117
95	11	0.333333	-0.431644	104.389	235.579
96	11	0.336842	-0.423405	104.389	235.176
97	11	0.340351	-0.412463	104.389	234.642
98	11	0.34386	-0.40429	104.389	234.243
99	12	0.347368	-0.393433	110.333	233.713
100	12	0.350877	-0.385321	110.333	233.317
101	12	0.354386	-0.374544	110.333	232.79
102	12	0.357895	-0.36649	110.333	232.397
103	13	0.361404	-0.355788	116.278	231.874
104	14	0.364912	-0.347787	122.222	231.484
105	14	0.368421	-0.337155	122.222	230.964
106	14	0.37193	-0.329206	122.222	230.576
107	14	0.375439	-0.318639	122.222	230.06
108	15	0.378947	-0.310738	128.167	229.674
109	15	0.382456	-0.300232	128.167	229.161
110	15	0.385965	-0.292375	128.167	228.778

111	15	0.389474	-0.281926	128.167	228.267
112	15	0.392982	-0.27411	128.167	227.886
113	16	0.396491	-0.263715	134.111	227.378
114	16	0.4	-0.253347	134.111	226.872
115	17	0.403509	-0.24559	140.056	226.493
116	17	0.407018	-0.235269	140.056	225.989
117	18	0.410526	-0.227545	146	225.612
118	18	0.414035	-0.217267	146	225.11
119	18	0.417544	-0.209575	146	224.734
120	20	0.421053	-0.199336	157.889	224.234
121	20	0.424561	-0.191671	157.889	223.86
122	20	0.42807	-0.181468	157.889	223.362
123	20	0.431579	-0.173829	157.889	222.989
124	20	0.435088	-0.163659	157.889	222.492
125	21	0.438596	-0.156042	163.833	222.12
126	24	0.442105	-0.1459	181.667	221.625
127	27	0.445614	-0.138305	199.5	221.254
128	27	0.449123	-0.128189	199.5	220.76
129	29	0.452632	-0.12061	211.389	220.39
130	30	0.45614	-0.110516	217.333	219.897
131	30	0.459649	-0.102953	217.333	219.528
132	30	0.463158	-0.0928787	217.333	219.036
133	30	0.466667	-0.0853288	217.333	218.667
134	30	0.470175	-0.0752698	217.333	218.176
135	30	0.473684	-0.0677301	217.333	217.807
136	30	0.477193	-0.0576847	217.333	217.317
137	30	0.480702	-0.0501541	217.333	216.949
138	30	0.484211	-0.0401167	217.333	216.459
139	30	0.487719	-0.0325917	217.333	216.092
140	30	0.491228	-0.0225612	217.333	215.602
141	30	0.494737	-0.0150408	217.333	215.234
142	30	0.498246	-0.00501359	217.333	214.745
143	30	0.501754	0.00501359	217.333	214.255
144	30	0.505263	0.0150408	217.333	213.766
145	30	0.508772	0.0225612	217.333	213.398
146	30	0.512281	0.0325917	217.333	212.908
147	30	0.515789	0.0401167	217.333	212.541
148	30	0.519298	0.0501541	217.333	212.051
149	30	0.522807	0.0576847	217.333	211.683
150	30	0.526316	0.0677301	217.333	211.193
151	30	0.529825	0.0752698	217.333	210.824
152	30	0.533333	0.0853288	217.333	210.333
153	30	0.536842	0.0928787	217.333	209.964
154	30	0.540351	0.102953	217.333	209.472
155	30	0.54386	0.110516	217.333	209.103
156	30	0.547368	0.12061	217.333	208.61
157	30	0.550877	0.128189	217.333	208.24
158	30	0.554386	0.138305	217.333	207.746
159	30	0.557895	0.1459	217.333	207.375
160	30	0.561404	0.156042	217.333	206.88
161	30	0.564912	0.163659	217.333	206.508
162	30	0.568421	0.173829	217.333	206.011
163	30	0.57193	0.181468	217.333	205.638
164	30	0.575439	0.191671	217.333	205.14
165	30	0.578947	0.199336	217.333	204.766
166	30	0.582456	0.209575	217.333	204.266
167	30	0.585965	0.217267	217.333	203.89
168	30	0.589474	0.227545	217.333	203.388
169	30	0.592982	0.235269	217.333	203.011
170	30	0.596491	0.24559	217.333	202.507
171	30	0.6	0.253347	217.333	202.128
172	30	0.603509	0.263715	217.333	201.622

173	30	0.607018	0.27411	217.333	201.114
174	30	0.610526	0.281926	217.333	200.733
175	30	0.614035	0.292375	217.333	200.222
176	30	0.617544	0.300232	217.333	199.839
177	30	0.621053	0.310738	217.333	199.326
178	30	0.624561	0.318639	217.333	198.94
179	30	0.62807	0.329206	217.333	198.424
180	30	0.631579	0.337155	217.333	198.036
181	30	0.635088	0.347787	217.333	197.516
182	30	0.638596	0.355788	217.333	197.126
183	30	0.642105	0.36649	217.333	196.603
184	30	0.645614	0.374544	217.333	196.21
185	30	0.649123	0.385321	217.333	195.683
186	30	0.652632	0.393433	217.333	195.287
187	30	0.65614	0.40429	217.333	194.757
188	30	0.659649	0.412463	217.333	194.358
189	30	0.663158	0.423405	217.333	193.824
190	30	0.666667	0.431644	217.333	193.421
191	30	0.670175	0.442676	217.333	192.883
192	30	0.673684	0.450985	217.333	192.477
193	30	0.677193	0.462114	217.333	191.933
194	30	0.680702	0.470498	217.333	191.524
195	30	0.684211	0.481728	217.333	190.976
196	30	0.687719	0.490189	217.333	190.562
197	30	0.691228	0.501527	217.333	190.009
198	30	0.694737	0.510074	217.333	189.591
199	30	0.698246	0.521527	217.333	189.032
200	30	0.701754	0.530162	217.333	188.61
201	30	0.705263	0.541736	217.333	188.045
202	30	0.708772	0.550465	217.333	187.619
203	30	0.712281	0.56217	217.333	187.047
204	30	0.715789	0.570999	217.333	186.616
205	30	0.719298	0.582841	217.333	186.038
206	30	0.722807	0.591776	217.333	185.602
207	30	0.726316	0.603765	217.333	185.016
208	30	0.729825	0.612813	217.333	184.574
209	30	0.733333	0.624956	217.333	183.981
210	30	0.736842	0.634124	217.333	183.534
211	30	0.740351	0.646431	217.333	182.933
212	30	0.74386	0.655726	217.333	182.479
213	30	0.747368	0.668209	217.333	181.869
214	30	0.750877	0.677639	217.333	181.409
215	30	0.754386	0.690309	217.333	180.79
216	30	0.757895	0.699883	217.333	180.322
217	30	0.761404	0.712751	217.333	179.694
218	30	0.764912	0.722479	217.333	179.219
219	30	0.768421	0.735557	217.333	178.58
220	30	0.77193	0.745449	217.333	178.097
221	30	0.775439	0.758753	217.333	177.448
222	30	0.778947	0.768821	217.333	176.956
223	30	0.782456	0.782366	217.333	176.294
224	30	0.785965	0.792618	217.333	175.794
225	30	0.789474	0.806422	217.333	175.12
226	30	0.792982	0.816874	217.333	174.609
227	30	0.796491	0.830953	217.333	173.922
228	30	0.8	0.841621	217.333	173.401
229	30	0.803509	0.855996	217.333	172.699
230	30	0.807018	0.87055	217.333	171.988
231	30	0.810526	0.881587	217.333	171.449
232	30	0.814035	0.896473	217.333	170.722
233	30	0.817544	0.907769	217.333	170.171
234	30	0.821053	0.923014	217.333	169.426

235	30	0.824561	0.93459	217.333	168.861	
236	30	0.82807	0.950222	217.333	168.097	
237	30	0.831579	0.9621	217.333	167.517	
238	30	0.835088	0.97815	217.333	166.734	
239	30	0.838596	0.990356	217.333	166.138	
240	30	0.842105	1.00687	217.333	165.331	
241	30	0.845614	1.01943	217.333	164.718	
242	30	0.849123	1.03643	217.333	163.888	
243	30	0.852632	1.04939	217.333	163.255	
244	30	0.85614	1.06694	217.333	162.398	
245	30	0.859649	1.08032	217.333	161.744	
246	30	0.863158	1.09847	217.333	160.858	
247	30	0.866667	1.11232	217.333	160.182	
248	30	0.870175	1.13113	217.333	159.263	
249	30	0.873684	1.1455	217.333	158.561	
250	30	0.877193	1.16505	217.333	157.607	
251	30	0.880702	1.18	217.333	156.877	
252	30	0.884211	1.20036	217.333	155.882	
253	30	0.887719	1.21596	217.333	155.121	
254	30	0.891228	1.23724	217.333	154.082	
255	30	0.894737	1.25357	217.333	153.284	
256	30	0.898246	1.27588	217.333	152.195	
257	30	0.901754	1.29303	217.333	151.357	
258	30	0.905263	1.31652	217.333	150.21	
259	30	0.908772	1.33462	217.333	149.326	
260	30	0.912281	1.35946	217.333	148.113	
261	30	0.915789	1.37866	217.333	147.176	
262	30	0.919298	1.40507	217.333	145.886	
263	30	0.922807	1.42554	217.333	144.886	
264	30	0.926316	1.4538	217.333	143.506	
265	30	0.929825	1.47579	217.333	142.432	
266	30	0.933333	1.50626	217.333	140.944	
267	31	0.936842	1.53007	223.278	139.782	
268	32	0.940351	1.56322	229.222	138.163	
269	36	0.94386	1.58927	253	136.891	
270	39	0.947368	1.62576	270.833	135.109	
271	40	0.950877	1.65463	276.778	133.699	
272	40	0.954386	1.6954	276.778	131.708	
273	40	0.957895	1.72793	276.778	130.119	
274	40	0.961404	1.77438	276.778	127.851	
275	47	0.964912	1.81191	318.389	126.018	
276	48	0.968421	1.86629	324.333	123.363	
277	50	0.97193	1.91103	336.222	121.178	
278	51	0.975439	1.97737	342.167	117.938	
279	53	0.978947	2.03352	354.056	115.196	
280	59	0.982456	2.12007	389.722	110.97	
281	66	0.985965	2.19728	431.333	107.199	
282	69	0.989474	2.32634	449.167	100.897	
283	90	0.992982	2.45727	574	94.5032	
284	90	0.996491	2.74777	574	80.3175	

Shapiro-Francia Test of Normality

Parameter: Zinc

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

Total Number of Measurements = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.262364	-2.747777	.55021	-0.720915
2	0.262364	-2.457271	3.5884	-1.36562
3	0.262364	-2.326341	9.0003	-1.97597
4	0.262364	-2.197282	3.8283	-2.55245
5	0.262364	-2.120072	8.323	-3.10868
6	0.262364	-2.033523	2.4582	-3.64221
7	0.262364	-1.977373	6.3682	-4.161
8	0.262364	-1.911034	0.0203	-4.66238
9	0.262364	-1.866294	3.5033	-5.15203
10	0.262364	-1.811914	6.7863	-5.62741
11	0.262364	-1.774384	9.9348	-6.09295
12	0.262364	-1.727935	2.9205	-6.54629
13	0.262364	-1.6954	55.7949	-6.99111
14	0.262364	-1.654635	8.5327	-7.42522
15	0.262364	-1.625766	1.1758	-7.85176
16	0.262364	-1.589276	3.7015	-8.26873
17	0.262364	-1.563226	6.1452	-8.67886
18	0.262364	-1.530076	8.4863	-9.0803
19	0.262364	-1.506267	0.7551	-9.47549
20	0.262364	-1.475797	2.9331	-9.86268
21	0.262364	-1.4538	75.0466	-10.2441
22	0.262364	-1.425547	7.0788	-10.6181
23	0.955511	-1.405077	9.053	-11.9607
24	0.993252	-1.378668	0.9537	-13.33
25	1.06471	-1.359468	2.8019	-14.7775
26	1.09861	-1.334628	4.5831	-16.2437
27	1.16315	-1.316528	6.3163	-17.775
28	1.22378	-1.293038	7.9883	-19.3574
29	1.25276	-1.275888	9.6161	-20.9558
30	1.25276	-1.253579	1.1875	-22.5262
31	1.28093	-1.237249	2.7183	-24.111
32	1.28093	-1.215969	4.1969	-25.6686
33	1.30833	-1.200369	5.6377	-27.239
34	1.335	-1.18	97.0301	-28.8143
35	1.38629	-1.165059	8.3875	-30.4294
36	1.38629	-1.1455	99.6996	-32.0175
37	1.43508	-1.131131	00.979	-33.6407
38	1.4816	-1.112321	02.216	-35.2887
39	1.50408	-1.098471	03.423	-36.9409
40	1.50408	-1.080321	04.59	-38.5658
41	1.50408	-1.066941	05.728	-40.1706
42	1.56862	-1.049391	06.83	-41.8167
43	1.58924	-1.036431	07.904	-43.4638
44	1.58924	-1.019431	08.943	-45.0839
45	1.60944	-1.006871	09.957	-46.7044
46	1.62924	-0.990356	110.938	-48.3179
47	1.62924	-0.978151	11.894	-49.9116
48	1.64866	-0.9621	112.82	-51.4977
49	1.66771	-0.950222	113.723	-53.0824
50	1.66771	-0.934591	14.596	-54.641
51	1.6864	-0.923014	115.448	-56.1976

52	1.70475	-0.907769	116.272	-57.7451
53	1.70475	-0.896473	117.076	-59.2734
54	1.72277	-0.881587	117.853	-60.7922
55	1.79176	-0.87055	118.611	-62.352
56	1.79176	-0.855996	119.344	-63.8857
57	1.84055	-0.841621	120.052	-65.4348
58	1.84055	-0.830953	120.743	-66.9642
59	1.8563	-0.816874	121.41	-68.4805
60	1.8718	-0.806422	122.06	-69.99
61	1.88707	-0.792618	122.689	-71.4857
62	1.88707	-0.782366	123.301	-72.9621
63	1.90211	-0.768821	123.892	-74.4245
64	1.90211	-0.758753	124.467	-75.8677
65	1.93152	-0.745449	125.023	-77.3076
66	1.94591	-0.735557	125.564	-78.7389
67	1.94591	-0.722479	126.086	-80.1448
68	1.94591	-0.712751	126.594	-81.5317
69	1.98787	-0.699883	127.084	-82.923
70	1.98787	-0.690309	127.561	-84.2952
71	2.00148	-0.677639	128.02	-85.6515
72	2.02815	-0.668209	128.466	-87.0067
73	2.02815	-0.655726	128.896	-88.3367
74	2.06686	-0.646431	129.314	-89.6727
75	2.10413	-0.634124	129.716	-91.007
76	2.10413	-0.624956	130.107	-92.322
77	2.11626	-0.612813	130.482	-93.6189
78	2.12823	-0.603765	130.847	-94.9038
79	2.14007	-0.591776	131.197	-96.1703
80	2.14007	-0.582841	131.537	-97.4176
81	2.15176	-0.570999	131.863	-98.6462
82	2.15176	-0.56217	132.179	-99.8559
83	2.16332	-0.550465	132.482	-101.047
84	2.25129	-0.541736	132.775	-102.266
85	2.30259	-0.530162	133.056	-103.487
86	2.30259	-0.521527	133.328	-104.688
87	2.30259	-0.510074	133.589	-105.862
88	2.30259	-0.501527	133.84	-107.017
89	2.30259	-0.490189	134.08	-108.146
90	2.3979	-0.481728	134.312	-109.301
91	2.3979	-0.470498	134.534	-110.429
92	2.3979	-0.462114	134.747	-111.537
93	2.3979	-0.450985	134.951	-112.619
94	2.3979	-0.442676	135.147	-113.68
95	2.3979	-0.431644	135.333	-114.715
96	2.3979	-0.423405	135.512	-115.731
97	2.3979	-0.412463	135.682	-116.72
98	2.3979	-0.40429	135.846	-117.689
99	2.48491	-0.393433	136.001	-118.667
100	2.48491	-0.385321	136.149	-119.624
101	2.48491	-0.374544	136.289	-120.555
102	2.48491	-0.36649	136.424	-121.466
103	2.56495	-0.355788	136.55	-122.378
104	2.63906	-0.347787	136.671	-123.296
105	2.63906	-0.337155	136.785	-124.186
106	2.63906	-0.329206	136.893	-125.055
107	2.63906	-0.318639	136.995	-125.896
108	2.70805	-0.310738	137.091	-126.737
109	2.70805	-0.300232	137.182	-127.55
110	2.70805	-0.292375	137.267	-128.342
111	2.70805	-0.281926	137.346	-129.105
112	2.70805	-0.27411	137.422	-129.848
113	2.77259	-0.263715	137.491	-130.579

114	2.77259	-0.253347	137.555	-131.281
115	2.83321	-0.24559	137.616	-131.977
116	2.83321	-0.235269	137.671	-132.644
117	2.89037	-0.227545	137.723	-133.301
118	2.89037	-0.217267	137.77	-133.929
119	2.89037	-0.209575	137.814	-134.535
120	2.99573	-0.199336	137.854	-135.132
121	2.99573	-0.191671	137.89	-135.706
122	2.99573	-0.181468	137.923	-136.25
123	2.99573	-0.173829	137.954	-136.771
124	2.99573	-0.163659	137.98	-137.261
125	3.04452	-0.156042	138.005	-137.736
126	3.17805	-0.1459	138.026	-138.2
127	3.29584	-0.138305	138.045	-138.656
128	3.29584	-0.128189	138.062	-139.078
129	3.3673	-0.12061	138.076	-139.484
130	3.4012	-0.110516	138.088	-139.86
131	3.4012	-0.102953	138.099	-140.21
132	3.4012	-0.0928787	138.108	-140.526
133	3.4012	-0.0853288	138.115	-140.816
134	3.4012	-0.0752698	138.12	-141.072
135	3.4012	-0.0677301	138.125	-141.303
136	3.4012	-0.0576847	138.128	-141.499
137	3.4012	-0.0501541	138.131	-141.67
138	3.4012	-0.0401167	138.132	-141.806
139	3.4012	-0.0325917	138.134	-141.917
140	3.4012	-0.0225612	138.134	-141.994
141	3.4012	-0.0150408	138.134	-142.045
142	3.4012	-0.00501359	138.134	-142.062
143	3.4012	0.00501359	138.134	-142.045
144	3.4012	0.0150408	138.135	-141.994
145	3.4012	0.0225612	138.135	-141.917
146	3.4012	0.0325917	138.136	-141.806
147	3.4012	0.0401167	138.138	-141.67
148	3.4012	0.0501541	138.14	-141.499
149	3.4012	0.0576847	138.144	-141.303
150	3.4012	0.0677301	138.148	-141.072
151	3.4012	0.0752698	138.154	-140.816
152	3.4012	0.0853288	138.161	-140.526
153	3.4012	0.0928787	138.17	-140.21
154	3.4012	0.102953	138.18	-139.86
155	3.4012	0.110516	138.193	-139.484
156	3.4012	0.12061	138.207	-139.074
157	3.4012	0.128189	138.224	-138.638
158	3.4012	0.138305	138.243	-138.168
159	3.4012	0.1459	138.264	-137.671
160	3.4012	0.156042	138.288	-137.141
161	3.4012	0.163659	138.315	-136.584
162	3.4012	0.173829	138.345	-135.993
163	3.4012	0.181468	138.378	-135.376
164	3.4012	0.191671	138.415	-134.724
165	3.4012	0.199336	138.455	-134.046
166	3.4012	0.209575	138.499	-133.333
167	3.4012	0.217267	138.546	-132.594
168	3.4012	0.227545	138.598	-131.82
169	3.4012	0.235269	138.653	-131.02
170	3.4012	0.24559	138.713	-130.184
171	3.4012	0.253347	138.777	-129.323
172	3.4012	0.263715	138.847	-128.426
173	3.4012	0.27411	138.922	-127.494
174	3.4012	0.281926	139.002	-126.535
175	3.4012	0.292375	139.087	-125.54

176	3.4012	0.300232	139.177	-124.519
177	3.4012	0.310738	139.274	-123.462
178	3.4012	0.318639	139.375	-122.378
179	3.4012	0.329206	139.484	-121.259
180	3.4012	0.337155	139.597	-120.112
181	3.4012	0.347787	139.718	-118.929
182	3.4012	0.355788	139.845	-117.719
183	3.4012	0.36649	139.979	-116.472
184	3.4012	0.374544	140.12	-115.199
185	3.4012	0.385321	140.268	-113.888
186	3.4012	0.393433	140.423	-112.55
187	3.4012	0.40429	140.586	-111.175
188	3.4012	0.412463	140.756	-109.772
189	3.4012	0.423405	140.936	-108.332
190	3.4012	0.431644	141.122	-106.864
191	3.4012	0.442676	141.318	-105.358
192	3.4012	0.450985	141.521	-103.824
193	3.4012	0.462114	141.735	-102.253
194	3.4012	0.470498	141.956	-100.652
195	3.4012	0.481728	142.188	-99.0138
196	3.4012	0.490189	142.429	-97.3466
197	3.4012	0.501527	142.68	-95.6408
198	3.4012	0.510074	142.94	-93.9059
199	3.4012	0.521527	143.212	-92.1321
200	3.4012	0.530162	143.493	-90.3289
201	3.4012	0.541736	143.787	-88.4864
202	3.4012	0.550465	144.09	-86.6141
203	3.4012	0.56217	144.406	-84.7021
204	3.4012	0.570999	144.732	-82.76
205	3.4012	0.582841	145.072	-80.7776
206	3.4012	0.591776	145.422	-78.7649
207	3.4012	0.603765	145.786	-76.7114
208	3.4012	0.612813	146.162	-74.6271
209	3.4012	0.624956	146.552	-72.5015
210	3.4012	0.634124	146.955	-70.3447
211	3.4012	0.646431	147.372	-68.1461
212	3.4012	0.655726	147.802	-65.9158
213	3.4012	0.668209	148.249	-63.6431
214	3.4012	0.677639	148.708	-61.3383
215	3.4012	0.690309	149.185	-58.9904
216	3.4012	0.699883	149.674	-56.61
217	3.4012	0.712751	150.182	-54.1858
218	3.4012	0.722479	150.704	-51.7285
219	3.4012	0.735557	151.245	-49.2267
220	3.4012	0.745449	151.801	-46.6913
221	3.4012	0.758753	152.377	-44.1106
222	3.4012	0.768821	152.968	-41.4957
223	3.4012	0.782366	153.58	-38.8347
224	3.4012	0.792618	154.208	-36.1389
225	3.4012	0.806422	154.859	-33.3961
226	3.4012	0.816874	155.526	-30.6177
227	3.4012	0.830953	156.216	-27.7915
228	3.4012	0.841621	156.925	-24.929
229	3.4012	0.855996	157.657	-22.0176
230	3.4012	0.87055	158.415	-19.0567
231	3.4012	0.881587	159.193	-16.0582
232	3.4012	0.896473	159.996	-13.0091
233	3.4012	0.907769	160.82	-9.92162
234	3.4012	0.923014	161.672	-6.78226
235	3.4012	0.93459	162.546	-3.60354
236	3.4012	0.950222	163.449	-0.371648
237	3.4012	0.9621	164.374	2.90064

238	3.4012	0.97815	165.331	6.22753	
239	3.4012	0.990356		166.312	9.59592
240	3.4012	1.00687	167.326	13.0205	
241	3.4012	1.01943	168.365	16.4877	
242	3.4012	1.03643	169.439	20.0129	
243	3.4012	1.04939	170.54	23.582	
244	3.4012	1.06694	171.679	27.2109	
245	3.4012	1.08032	172.846	30.8853	
246	3.4012	1.09847	174.052	34.6214	
247	3.4012	1.11232	175.29	38.4046	
248	3.4012	1.13113	176.569	42.2518	
249	3.4012	1.1455	177.881	46.1479	
250	3.4012	1.16505	179.239	50.1104	
251	3.4012	1.18	180.631	54.1239	
252	3.4012	1.20036	182.072	58.2065	
253	3.4012	1.21596	183.55	62.3422	
254	3.4012	1.23724	185.081	66.5503	
255	3.4012	1.25357	186.653	70.814	
256	3.4012	1.27588	188.28	75.1535	
257	3.4012	1.29303	189.952	79.5513	
258	3.4012	1.31652	191.686	84.0291	
259	3.4012	1.33462	193.467	88.5684	
260	3.4012	1.35946	195.315	93.1922	
261	3.4012	1.37866	197.216	97.8813	
262	3.4012	1.40507	199.19	102.66	
263	3.4012	1.42554	201.222	107.509	
264	3.4012	1.4538	203.336	112.453	
265	3.4012	1.47579	205.514	117.473	
266	3.4012	1.50626	207.782	122.596	
267	3.43399	1.53007	210.123	127.85	
268	3.46574	1.56322	212.567	133.268	
269	3.58352	1.58927	215.093	138.963	
270	3.66356	1.62576	217.736	144.919	
271	3.68888	1.65463	220.474	151.023	
272	3.68888	1.6954	223.348	157.277	
273	3.68888	1.72793	226.334	163.651	
274	3.68888	1.77438	229.482	170.197	
275	3.85015	1.81191	232.765	177.173	
276	3.8712	1.86629	236.248	184.398	
277	3.91202	1.91103	239.9	191.874	
278	3.93183	1.97737	243.81	199.648	
279	3.97029	2.03352	247.946	207.722	
280	4.07754	2.12007	252.44	216.367	
281	4.18965	2.19728	257.268	225.572	
282	4.23411	2.32634	262.68	235.422	
283	4.49981	2.45727	268.718	246.48	
284	4.49981	2.74777	276.269	258.844	

Data Set Standard Deviation = 1.02499
Numerator = 67000.2
Denominator = 82139.9
W Statistic = 0.815684 = 67000.2 / 82139.9

5% Critical value of 0.976 exceeds 0.815684
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.815684
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Zinc

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.902487
0.902487 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	0.262364	0.00350877	-2.74777	67.073	348.683
2	0.262364	0.00701754	-2.45727	67.073	334.497
3	0.262364	0.0105263	-2.32634	67.073	328.103
4	0.262364	0.0140351	-2.19728	67.073	321.801
5	0.262364	0.0175439	-2.12007	67.073	318.03
6	0.262364	0.0210526	-2.03352	67.073	313.804
7	0.262364	0.0245614	-1.97737	67.073	311.062
8	0.262364	0.0280702	-1.91103	67.073	307.822
9	0.262364	0.0315789	-1.86629	67.073	305.637
10	0.262364	0.0350877	-1.81191	67.073	302.982
11	0.262364	0.0385965	-1.77438	67.073	301.149
12	0.262364	0.0421053	-1.72793	67.073	298.881
13	0.262364	0.045614	-1.6954	67.073	297.292
14	0.262364	0.0491228	-1.65463	67.073	295.301
15	0.262364	0.0526316	-1.62576	67.073	293.891
16	0.262364	0.0561404	-1.58927	67.073	292.109
17	0.262364	0.0596491	-1.56322	67.073	290.837
18	0.262364	0.0631579	-1.53007	67.073	289.218
19	0.262364	0.0666667	-1.50626	67.073	288.056
20	0.262364	0.0701754	-1.47579	67.073	286.568
21	0.262364	0.0736842	-1.4538	67.073	285.494
22	0.262364	0.077193	-1.42554	67.073	284.114
23	0.955511	0.0807018	-1.40507	141.24	283.114
24	0.993252	0.0842105	-1.37866	145.278	281.824
25	1.06471	0.0877193	-1.35946	152.924	280.887
26	1.09861	0.0912281	-1.33462	156.552	279.674
27	1.16315	0.0947368	-1.31652	163.457	278.79
28	1.22378	0.0982456	-1.29303	169.944	277.643
29	1.25276	0.101754	-1.27588	173.046	276.805
30	1.25276	0.105263	-1.25357	173.046	275.716
31	1.28093	0.108772	-1.23724	176.06	274.918
32	1.28093	0.112281	-1.21596	176.06	273.879
33	1.30833	0.115789	-1.20036	178.992	273.118
34	1.335	0.119298	-1.18	181.845	272.123
35	1.38629	0.122807	-1.16505	187.333	271.393
36	1.38629	0.126316	-1.1455	187.333	270.439
37	1.43508	0.129825	-1.13113	192.554	269.737
38	1.4816	0.133333	-1.11232	197.532	268.818
39	1.50408	0.136842	-1.09847	199.936	268.142
40	1.50408	0.140351	-1.08032	199.936	267.256
41	1.50408	0.14386	-1.06694	199.936	266.602
42	1.56862	0.147368	-1.04939	206.842	265.745
43	1.58924	0.150877	-1.03643	209.048	265.112
44	1.58924	0.154386	-1.01943	209.048	264.282
45	1.60944	0.157895	-1.00687	211.21	263.669
46	1.62924	0.161404	-0.990356	213.329	262.862
47	1.62924	0.164912	-0.97815	213.329	262.266
48	1.64866	0.168421	-0.9621	215.406	261.483

49	1.66771	0.17193	-0.950222	217.445	260.903	
50	1.66771	0.175439	-0.93459	217.445	260.139	
51	1.6864	0.178947	-0.923014	219.445	259.574	
52	1.70475	0.182456	-0.907769	221.408	258.829	
53	1.70475	0.185965	-0.896473	221.408	258.278	
54	1.72277	0.189474	-0.881587	223.336	257.551	
55	1.79176	0.192982	-0.87055	230.718	257.012	
56	1.79176	0.196491	-0.855996	230.718	256.301	
57	1.84055	0.2	-0.841621	235.939	255.599	
58	1.84055	0.203509	-0.830953	235.939	255.078	
59	1.8563	0.207018	-0.816874	237.624	254.391	
60	1.8718	0.210526	-0.806422	239.283	253.88	
61	1.88707	0.214035	-0.792618	240.916	253.206	
62	1.88707	0.217544	-0.782366	240.916	252.706	
63	1.90211	0.221053	-0.768821	242.526	252.044	
64	1.90211	0.224561	-0.758753	242.526	251.552	
65	1.93152	0.22807	-0.745449	245.673	250.903	
66	1.94591	0.231579	-0.735557	247.212	250.42	
67	1.94591	0.235088	-0.722479	247.212	249.781	
68	1.94591	0.238596	-0.712751	247.212	249.306	
69	1.98787	0.242105	-0.699883	251.703	248.678	
70	1.98787	0.245614	-0.690309	251.703	248.21	
71	2.00148	0.249123	-0.677639	253.158	247.591	
72	2.02815	0.252632	-0.668209	256.012	247.131	
73	2.02815	0.25614	-0.655726	256.012	246.521	
74	2.06686	0.259649	-0.646431	260.154	246.067	
75	2.10413	0.263158	-0.634124	264.142	245.466	
76	2.10413	0.266667	-0.624956	264.142	245.019	
77	2.11626	0.270175	-0.612813	265.439	244.426	
78	2.12823	0.273684	-0.603765	266.721	243.984	
79	2.14007	0.277193	-0.591776	267.987	243.398	
80	2.14007	0.280702	-0.582841	267.987	242.962	
81	2.15176	0.284211	-0.570999	269.239	242.384	
82	2.15176	0.287719	-0.56217	269.239	241.953	
83	2.16332	0.291228	-0.550465	270.476	241.381	
84	2.25129	0.294737	-0.541736	279.888	240.955	
85	2.30259	0.298246	-0.530162	285.377	240.39	
86	2.30259	0.301754	-0.521527	285.377	239.968	
87	2.30259	0.305263	-0.510074	285.377	239.409	
88	2.30259	0.308772	-0.501527	285.377	238.991	
89	2.30259	0.312281	-0.490189	285.377	238.438	
90	2.3979	0.315789	-0.481728	295.575	238.024	
91	2.3979	0.319298	-0.470498	295.575	237.476	
92	2.3979	0.322807	-0.462114	295.575	237.067	
93	2.3979	0.326316	-0.450985	295.575	236.523	
94	2.3979	0.329825	-0.442676	295.575	236.117	
95	2.3979	0.333333	-0.431644	295.575	235.579	
96	2.3979	0.336842	-0.423405	295.575	235.176	
97	2.3979	0.340351	-0.412463	295.575	234.642	
98	2.3979	0.34386	-0.40429	295.575	234.243	
99	2.48491	0.347368	-0.393433	304.885	233.713	
100	2.48491	0.350877	-0.385321	304.885	233.317	
101	2.48491	0.354386	-0.374544	304.885	232.79	
102	2.48491	0.357895	-0.36649	304.885	232.397	
103	2.56495	0.361404	-0.355788	313.45	231.874	
104	2.63906	0.364912	-0.347787	321.379	231.484	
105	2.63906	0.368421	-0.337155	321.379	230.964	
106	2.63906	0.37193	-0.329206	321.379	230.576	
107	2.63906	0.375439	-0.318639	321.379	230.06	
108	2.70805	0.378947	-0.310738	328.761	229.674	
109	2.70805	0.382456	-0.300232	328.761	229.161	
110	2.70805	0.385965	-0.292375	328.761	228.778	

111	2.70805	0.389474	-0.281926	328.761	228.267
112	2.70805	0.392982	-0.27411	328.761	227.886
113	2.77259	0.396491	-0.263715	335.667	227.378
114	2.77259	0.4	-0.253347	335.667	226.872
115	2.83321	0.403509	-0.24559	342.154	226.493
116	2.83321	0.407018	-0.235269	342.154	225.989
117	2.89037	0.410526	-0.227545	348.27	225.612
118	2.89037	0.414035	-0.217267	348.27	225.11
119	2.89037	0.417544	-0.209575	348.27	224.734
120	2.99573	0.421053	-0.199336	359.543	224.234
121	2.99573	0.424561	-0.191671	359.543	223.86
122	2.99573	0.42807	-0.181468	359.543	223.362
123	2.99573	0.431579	-0.173829	359.543	222.989
124	2.99573	0.435088	-0.163659	359.543	222.492
125	3.04452	0.438596	-0.156042	364.764	222.12
126	3.17805	0.442105	-0.1459	379.052	221.625
127	3.29584	0.445614	-0.138305	391.655	221.254
128	3.29584	0.449123	-0.128189	391.655	220.76
129	3.3673	0.452632	-0.12061	399.301	220.39
130	3.4012	0.45614	-0.110516	402.928	219.897
131	3.4012	0.459649	-0.102953	402.928	219.528
132	3.4012	0.463158	-0.0928787	402.928	219.036
133	3.4012	0.466667	-0.0853288	402.928	218.667
134	3.4012	0.470175	-0.0752698	402.928	218.176
135	3.4012	0.473684	-0.0677301	402.928	217.807
136	3.4012	0.477193	-0.0576847	402.928	217.317
137	3.4012	0.480702	-0.0501541	402.928	216.949
138	3.4012	0.484211	-0.0401167	402.928	216.459
139	3.4012	0.487719	-0.0325917	402.928	216.092
140	3.4012	0.491228	-0.0225612	402.928	215.602
141	3.4012	0.494737	-0.0150408	402.928	215.234
142	3.4012	0.498246	-0.00501359	402.928	214.745
143	3.4012	0.501754	0.00501359	402.928	214.255
144	3.4012	0.505263	0.0150408	402.928	213.766
145	3.4012	0.508772	0.0225612	402.928	213.398
146	3.4012	0.512281	0.0325917	402.928	212.908
147	3.4012	0.515789	0.0401167	402.928	212.541
148	3.4012	0.519298	0.0501541	402.928	212.051
149	3.4012	0.522807	0.0576847	402.928	211.683
150	3.4012	0.526316	0.0677301	402.928	211.193
151	3.4012	0.529825	0.0752698	402.928	210.824
152	3.4012	0.533333	0.0853288	402.928	210.333
153	3.4012	0.536842	0.0928787	402.928	209.964
154	3.4012	0.540351	0.102953	402.928	209.472
155	3.4012	0.54386	0.110516	402.928	209.103
156	3.4012	0.547368	0.12061	402.928	208.61
157	3.4012	0.550877	0.128189	402.928	208.24
158	3.4012	0.554386	0.138305	402.928	207.746
159	3.4012	0.557895	0.1459	402.928	207.375
160	3.4012	0.561404	0.156042	402.928	206.88
161	3.4012	0.564912	0.163659	402.928	206.508
162	3.4012	0.568421	0.173829	402.928	206.011
163	3.4012	0.57193	0.181468	402.928	205.638
164	3.4012	0.575439	0.191671	402.928	205.14
165	3.4012	0.578947	0.199336	402.928	204.766
166	3.4012	0.582456	0.209575	402.928	204.266
167	3.4012	0.585965	0.217267	402.928	203.89
168	3.4012	0.589474	0.227545	402.928	203.388
169	3.4012	0.592982	0.235269	402.928	203.011
170	3.4012	0.596491	0.24559	402.928	202.507
171	3.4012	0.6	0.253347	402.928	202.128
172	3.4012	0.603509	0.263715	402.928	201.622

173	3.4012	0.607018	0.27411	402.928	201.114
174	3.4012	0.610526	0.281926	402.928	200.733
175	3.4012	0.614035	0.292375	402.928	200.222
176	3.4012	0.617544	0.300232	402.928	199.839
177	3.4012	0.621053	0.310738	402.928	199.326
178	3.4012	0.624561	0.318639	402.928	198.94
179	3.4012	0.62807	0.329206	402.928	198.424
180	3.4012	0.631579	0.337155	402.928	198.036
181	3.4012	0.635088	0.347787	402.928	197.516
182	3.4012	0.638596	0.355788	402.928	197.126
183	3.4012	0.642105	0.36649	402.928	196.603
184	3.4012	0.645614	0.374544	402.928	196.21
185	3.4012	0.649123	0.385321	402.928	195.683
186	3.4012	0.652632	0.393433	402.928	195.287
187	3.4012	0.65614	0.40429	402.928	194.757
188	3.4012	0.659649	0.412463	402.928	194.358
189	3.4012	0.663158	0.423405	402.928	193.824
190	3.4012	0.666667	0.431644	402.928	193.421
191	3.4012	0.670175	0.442676	402.928	192.883
192	3.4012	0.673684	0.450985	402.928	192.477
193	3.4012	0.677193	0.462114	402.928	191.933
194	3.4012	0.680702	0.470498	402.928	191.524
195	3.4012	0.684211	0.481728	402.928	190.976
196	3.4012	0.687719	0.490189	402.928	190.562
197	3.4012	0.691228	0.501527	402.928	190.009
198	3.4012	0.694737	0.510074	402.928	189.591
199	3.4012	0.698246	0.521527	402.928	189.032
200	3.4012	0.701754	0.530162	402.928	188.61
201	3.4012	0.705263	0.541736	402.928	188.045
202	3.4012	0.708772	0.550465	402.928	187.619
203	3.4012	0.712281	0.56217	402.928	187.047
204	3.4012	0.715789	0.570999	402.928	186.616
205	3.4012	0.719298	0.582841	402.928	186.038
206	3.4012	0.722807	0.591776	402.928	185.602
207	3.4012	0.726316	0.603765	402.928	185.016
208	3.4012	0.729825	0.612813	402.928	184.574
209	3.4012	0.733333	0.624956	402.928	183.981
210	3.4012	0.736842	0.634124	402.928	183.534
211	3.4012	0.740351	0.646431	402.928	182.933
212	3.4012	0.74386	0.655726	402.928	182.479
213	3.4012	0.747368	0.668209	402.928	181.869
214	3.4012	0.750877	0.677639	402.928	181.409
215	3.4012	0.754386	0.690309	402.928	180.79
216	3.4012	0.757895	0.699883	402.928	180.322
217	3.4012	0.761404	0.712751	402.928	179.694
218	3.4012	0.764912	0.722479	402.928	179.219
219	3.4012	0.768421	0.735557	402.928	178.58
220	3.4012	0.77193	0.745449	402.928	178.097
221	3.4012	0.775439	0.758753	402.928	177.448
222	3.4012	0.778947	0.768821	402.928	176.956
223	3.4012	0.782456	0.782366	402.928	176.294
224	3.4012	0.785965	0.792618	402.928	175.794
225	3.4012	0.789474	0.806422	402.928	175.12
226	3.4012	0.792982	0.816874	402.928	174.609
227	3.4012	0.796491	0.830953	402.928	173.922
228	3.4012	0.8	0.841621	402.928	173.401
229	3.4012	0.803509	0.855996	402.928	172.699
230	3.4012	0.807018	0.87055	402.928	171.988
231	3.4012	0.810526	0.881587	402.928	171.449
232	3.4012	0.814035	0.896473	402.928	170.722
233	3.4012	0.817544	0.907769	402.928	170.171
234	3.4012	0.821053	0.923014	402.928	169.426

235	3.4012	0.824561		0.93459	402.928	168.861
236	3.4012	0.82807	0.950222		402.928	168.097
237	3.4012	0.831579		0.9621	402.928	167.517
238	3.4012	0.835088		0.97815	402.928	166.734
239	3.4012	0.838596		0.990356	402.928	166.138
240	3.4012	0.842105		1.00687	402.928	165.331
241	3.4012	0.845614		1.01943	402.928	164.718
242	3.4012	0.849123		1.03643	402.928	163.888
243	3.4012	0.852632		1.04939	402.928	163.255
244	3.4012	0.85614	1.06694	402.928	162.398	
245	3.4012	0.859649		1.08032	402.928	161.744
246	3.4012	0.863158		1.09847	402.928	160.858
247	3.4012	0.866667		1.11232	402.928	160.182
248	3.4012	0.870175		1.13113	402.928	159.263
249	3.4012	0.873684		1.1455	402.928	158.561
250	3.4012	0.877193		1.16505	402.928	157.607
251	3.4012	0.880702		1.18	402.928	156.877
252	3.4012	0.884211		1.20036	402.928	155.882
253	3.4012	0.887719		1.21596	402.928	155.121
254	3.4012	0.891228		1.23724	402.928	154.082
255	3.4012	0.894737		1.25357	402.928	153.284
256	3.4012	0.898246		1.27588	402.928	152.195
257	3.4012	0.901754		1.29303	402.928	151.357
258	3.4012	0.905263		1.31652	402.928	150.21
259	3.4012	0.908772		1.33462	402.928	149.326
260	3.4012	0.912281		1.35946	402.928	148.113
261	3.4012	0.915789		1.37866	402.928	147.176
262	3.4012	0.919298		1.40507	402.928	145.886
263	3.4012	0.922807		1.42554	402.928	144.886
264	3.4012	0.926316		1.4538	402.928	143.506
265	3.4012	0.929825		1.47579	402.928	142.432
266	3.4012	0.933333		1.50626	402.928	140.944
267	3.43399	0.936842		1.53007	406.437	139.782
268	3.46574	0.940351		1.56322	409.834	138.163
269	3.58352	0.94386	1.58927	422.437	136.891	
270	3.66356	0.947368		1.62576	431.001	135.109
271	3.68888	0.950877		1.65463	433.71	133.699
272	3.68888	0.954386		1.6954	433.71	131.708
273	3.68888	0.957895		1.72793	433.71	130.119
274	3.68888	0.961404		1.77438	433.71	127.851
275	3.85015	0.964912		1.81191	450.966	126.018
276	3.8712	0.968421		1.86629	453.219	123.363
277	3.91202	0.97193	1.91103	457.586	121.178	
278	3.93183	0.975439		1.97737	459.705	117.938
279	3.97029	0.978947		2.03352	463.821	115.196
280	4.07754	0.982456		2.12007	475.297	110.97
281	4.18965	0.985965		2.19728	487.293	107.199
282	4.23411	0.989474		2.32634	492.049	100.897
283	4.49981	0.992982		2.45727	520.48	94.5032
284	4.49981	0.996491		2.74777	520.48	80.3175

Kruskal-Wallis Non-Parametric Test

Parameter: Zinc

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4R	1/16/1998	ND<3.4012	79.5
	3/16/1999	3.91202 J	277
	9/23/1999	ND<3.4012	79.5
	3/14/2000	ND<3.4012	79.5
	9/23/2003	ND<3.4012	79.5
	3/10/2004	ND<3.4012	79.5
	10/12/2004	ND<3.4012	79.5
	4/1/2005	ND<3.4012	79.5
	10/26/2005	ND<3.4012	79.5
	6/19/2006	ND<3.4012	79.5
	11/18/2006	2.3979 J	226
	6/2/2007	3.85015	275
	11/15/2007	ND<3.4012	79.5
	5/20/2008	2.70805 J	244
	11/20/2008	ND<3.4012	79.5
	6/11/2009	1.90211 J	199
	6/30/2010	1.93152 J	201
	11/17/2010	1.98787 J	205
	7/6/2011	2.99573	256
	11/22/2011	2.3979	227
	5/16/2012	1.79176 J	191
	11/16/2012	2.3979	228
	11/16/2013	ND<0.262364 U	79.5

Rank Sum = 3483
Rank Mean = 151.435

Background Rank Sum = 3483
Background Rank Mean = 151.435

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-9S	11/18/2006	ND<3.4012	79.5
	6/2/2007	ND<3.4012	79.5
	11/15/2007	ND<3.4012	79.5
	5/20/2008	3.46574 J	268
	11/20/2008	ND<3.4012	79.5
	6/11/2009	1.64866 J	184
	6/30/2010	1.25276 J	165
	11/17/2010	1.28093 J	167
	7/6/2011	ND<0.262364 U	79.5
	11/22/2011	1.84055 J	193
	5/16/2012	ND<0.262364 U	79.5
	11/16/2012	ND<0.262364 U	79.5
	11/16/2013	ND<0.262364 U	79.5

Rank Sum = 1613
Rank Mean = 124.077

LMW-15R	11/18/2006	2.63906 J	240

	6/2/2007	ND<3.4012	79.5
	11/15/2007	ND<3.4012	79.5
	11/15/2007	ND<3.4012	79.5
	5/20/2008	3.66356 J	270
	5/20/2008	ND<3.4012	79.5
	11/20/2008	ND<3.4012	79.5
	11/20/2008	ND<3.4012	79.5
	6/11/2009	1.8718 J	196
	6/30/2010	1.88707 J	197
	11/17/2010	2.11626 J	213
	7/6/2011	2.15176 J	217
	11/22/2011	2.14007 J	215
	5/16/2012	ND<0.262364 U	79.5
	11/16/2012	ND<0.262364 U	79.5
	11/16/2013	ND<0.262364 U	79.5

Rank Sum = 2263.5
Rank Mean = 141.469

LMW-16	11/18/2006	ND<3.4012	79.5
	6/2/2007	2.77259 J	249
	11/15/2007	4.23411	282
	5/20/2008	2.70805 J	245
	11/20/2008	ND<3.4012	79.5
	6/11/2009	ND<0.262364 U	79.5
	6/30/2010	2.06686 J	210
	11/17/2010	1.6864 J	187
	7/6/2011	1.62924 J	182
	11/22/2011	2.48491	235
	5/16/2012	1.335 J	170
	11/16/2012	ND<0.262364 U	79.5
	11/16/2013	ND<0.262364 U	79.5

Rank Sum = 2157.5
Rank Mean = 165.962

LMW-3	11/19/1996	ND<3.4012	79.5
	3/24/1997	ND<3.4012	79.5
	1/16/1998	ND<3.4012	79.5
	3/16/1999	2.99573 J	257
	9/23/1999	ND<3.4012	79.5
	3/14/2000	ND<3.4012	79.5
	9/23/2003	ND<3.4012	79.5
	3/10/2004	ND<3.4012	79.5
	10/12/2004	ND<3.4012	79.5
	4/1/2005	ND<3.4012	79.5
	10/26/2005	ND<3.4012	79.5
	6/19/2006	ND<3.4012	79.5
	11/18/2006	1.79176 J	192
	6/2/2007	ND<3.4012	79.5
	11/15/2007	4.18965	281
	5/20/2008	2.48491 J	236
	11/20/2008	ND<3.4012	79.5
	6/11/2009	1.98787 J B	206
	6/30/2010	2.14007 J	216
	11/17/2010	2.3979	229
	7/6/2011	2.02815 J	208
	11/22/2011	2.63906	241
	5/16/2012	1.38629 J	171
	11/16/2012	1.09861 J	162
	11/16/2013	ND<0.262364 U	79.5

Rank Sum = 3512
Rank Mean = 140.48

LMW-3S	11/18/2006	2.30259	J	221
	6/2/2007	2.77259	J	250
	11/15/2007	3.8712	J	276
	5/20/2008	2.70805	J	246
	11/20/2008	ND<3.4012		79.5
	6/11/2009	2.89037	B	253
	6/30/2010	2.63906	Q	242
	11/17/2010	2.3979		230
	7/6/2011	2.02815	J	209
	11/22/2011	1.70475	J	188
	5/16/2012	2.3979		231
	11/16/2012	2.48491		237
	11/16/2013	2.12823	J	214

Rank Sum = 2876.5
Rank Mean = 221.269

LMW-10	3/14/2000	ND<3.4012		79.5
	9/23/2003	ND<3.4012		79.5
	3/10/2004	ND<3.4012		79.5
	10/12/2004	ND<3.4012		79.5
	4/1/2005	ND<3.4012		79.5
	10/26/2005	ND<3.4012		79.5
	6/19/2006	ND<3.4012		79.5
	11/18/2006	ND<3.4012		79.5
	6/2/2007	ND<3.4012		79.5
	11/15/2007	ND<3.4012		79.5
	5/20/2008	3.68888	J	271
	11/20/2008	ND<3.4012		79.5
	6/11/2009	ND<0.262364	U	79.5
	6/30/2010	1.28093	J	168
	11/17/2010	1.66771	J	185
	7/6/2011	1.43508	J	173
	11/22/2011	1.70475	J	189
	5/16/2012	ND<0.262364	U	79.5
	11/16/2012	ND<0.262364	U	79.5
	11/16/2013	ND<0.262364	U	79.5

Rank Sum = 2178.5
Rank Mean = 108.925

LMW-6	1/16/1998	ND<3.4012		79.5
	3/16/1999	3.4012	J	266
	9/23/1999	3.97029	J	279
	3/14/2000	ND<3.4012		79.5
	9/23/2003	ND<3.4012		79.5
	3/10/2004	ND<3.4012		79.5
	10/12/2004	ND<3.4012		79.5
	4/1/2005	ND<3.4012		79.5
	10/26/2005	ND<3.4012		79.5
	6/19/2006	2.99573	J	258
	11/18/2006	1.94591	J	202
	6/2/2007	2.83321	J	251
	11/15/2007	3.29584	J	263
	5/20/2008	2.30259	J	222
	11/20/2008	ND<3.4012		79.5
	6/11/2009	2.10413	J B	211
	6/30/2010	2.3979		232
	11/17/2010	2.15176	J	218
	7/6/2011	2.16332	J	219
	11/22/2011	1.58924	J	179
	5/16/2012	1.06471	J	161
	11/16/2012	1.22378	J	164
	11/16/2013	ND<0.262364	U	79.5

Rank Sum = 3840.5
Rank Mean = 166.978

LMW-9D	11/18/2006	1.94591 J	203
	6/2/2007	ND<3.4012	79.5
	11/15/2007	ND<3.4012	79.5
	5/20/2008	2.89037 J	254
	11/20/2008	ND<3.4012	79.5
	6/11/2009	1.25276 J	166
	6/30/2010	1.72277 J	190
	11/17/2010	1.62924 J	183
	7/6/2011	2.56495	239
	11/22/2011	2.63906	243
	5/16/2012	0.993252 J	160
	11/16/2012	1.66771 J	186
	11/16/2013	1.38629 J	172

Rank Sum = 2234.5
Rank Mean = 171.885

LMW-14R	6/2/2007	2.70805 J	247
	11/15/2007	ND<3.4012	79.5
	5/20/2008	2.89037 J	255
	11/20/2008	ND<3.4012	79.5
	6/11/2009	1.84055 J	194
	6/30/2010	1.58924 J	180
	11/17/2010	1.50408 J	175
	7/6/2011	2.30259	223
	11/22/2011	2.30259	224
	5/16/2012	1.90211 J	200
	11/16/2012	ND<0.262364 U	79.5
	11/16/2013	0.955511 J	159

Rank Sum = 2095.5
Rank Mean = 174.625

LMW-8	1/16/1998	ND<3.4012	79.5
	3/16/1999	4.49981	283
	9/23/1999	ND<3.4012	79.5
	3/14/2000	ND<3.4012	79.5
	9/23/2003	ND<3.4012	79.5
	3/10/2004	ND<3.4012	79.5
	10/12/2004	ND<3.4012	79.5
	4/1/2005	ND<3.4012	79.5
	10/26/2005	ND<3.4012	79.5
	6/19/2006	ND<3.4012	79.5
	11/18/2006	ND<3.4012	79.5
	6/2/2007	ND<3.4012	79.5
	11/15/2007	ND<3.4012	79.5
	5/20/2008	1.60944 J	181
	11/20/2008	ND<3.4012	79.5
	6/11/2009	2.10413 J	212
	6/30/2010	1.50408 J	176
	11/17/2010	1.16315 J	163
	7/6/2011	2.3979 J	233
	11/22/2011	3.17805	262
	5/16/2012	ND<0.262364 U	79.5
	11/16/2012	ND<0.262364 U	79.5
	11/16/2013	ND<0.262364 U	79.5

Rank Sum = 2782
Rank Mean = 120.957

LMW-9	1/16/1998	ND<3.4012	79.5
	3/16/1999	4.49981	284

	9/23/1999	ND<3.4012	79.5
	3/14/2000	ND<3.4012	79.5
	9/23/2003	ND<3.4012	79.5
	3/10/2004	ND<3.4012	79.5
	10/12/2004	ND<3.4012	79.5
	4/1/2005	ND<3.4012	79.5
	10/26/2005	ND<3.4012	79.5
	6/19/2006	2.99573 J	259
	11/18/2006	ND<3.4012	79.5
	6/2/2007	2.83321 J	252
	11/15/2007	ND<3.4012	79.5
	5/20/2008	1.94591 J	204
	11/20/2008	ND<3.4012	79.5
	6/11/2009	ND<0.262364 U	79.5
	6/30/2010	1.4816 J	174
	11/17/2010	1.50408 J	177
	7/6/2011	1.30833 J	169
	11/22/2011	1.88707 J	198
	5/16/2012	2.00148 J	207
	11/16/2012	2.48491 J	238
	11/16/2013	1.56862 J	178

Rank Sum = 3294
Rank Mean = 143.217

LMW-7	1/16/1998	ND<3.4012	79.5
	3/16/1999	2.99573 J	260
	9/23/1999	3.68888 J	272
	3/14/2000	ND<3.4012	79.5
	9/23/2003	ND<3.4012	79.5
	3/10/2004	ND<3.4012	79.5
	10/12/2004	ND<3.4012	79.5
	4/1/2005	3.29584 J	264
	10/26/2005	3.43399 J	267
	6/19/2006	3.68888 J	273
	11/18/2006	3.04452 J	261
	6/2/2007	3.93183	278
	11/15/2007	ND<3.4012	79.5
	5/20/2008	2.30259 J	225
	11/20/2008	ND<3.4012	79.5
	6/11/2009	3.3673 B	265
	11/17/2010	2.25129 J	220
	7/6/2011	4.07754	280
	11/22/2011	2.70805	248
	5/16/2012	2.3979	234
	11/16/2012	1.8563 J	195

Rank Sum = 4098.5
Rank Mean = 195.167

LMW-11	3/14/2000	ND<3.4012	79.5
	9/23/2003	ND<3.4012	79.5
	3/10/2004	ND<3.4012	79.5
	10/12/2004	ND<3.4012	79.5
	4/1/2005	ND<3.4012	79.5
	10/26/2005	ND<3.4012	79.5
	6/19/2006	ND<3.4012	79.5
	6/2/2007	ND<3.4012	79.5
	11/15/2007	ND<3.4012	79.5
	5/20/2008	ND<3.4012	79.5
	11/20/2008	ND<3.4012	79.5

Rank Sum = 874.5
Rank Mean = 79.5

LMW-13	3/14/2000	ND<3.4012	79.5
	9/23/2003	ND<3.4012	79.5
	3/10/2004	ND<3.4012	79.5
	10/12/2004	ND<3.4012	79.5
	4/1/2005	ND<3.4012	79.5
	10/26/2005	ND<3.4012	79.5
	6/19/2006	ND<3.4012	79.5
	6/2/2007	ND<3.4012	79.5
	11/15/2007	ND<3.4012	79.5
	5/20/2008	ND<3.4012	79.5
	11/20/2008	ND<3.4012	79.5

Rank Sum = 874.5
Rank Mean = 79.5

LMW-12	3/14/2000	ND<3.4012	79.5
	9/23/2003	ND<3.4012	79.5
	3/10/2004	ND<3.4012	79.5
	10/12/2004	ND<3.4012	79.5
	4/1/2005	ND<3.4012	79.5
	10/26/2005	ND<3.4012	79.5
	6/19/2006	ND<3.4012	79.5
	6/2/2007	ND<3.4012	79.5
	11/15/2007	ND<3.4012	79.5
	5/20/2008	ND<3.4012	79.5
	11/20/2008	ND<3.4012	79.5

Rank Sum = 874.5
Rank Mean = 79.5

MW-5	1/16/1998	ND<3.4012	79.5
	3/16/1999	3.68888 J	274
	9/23/1999	3.58352 J	269
	3/14/2000	ND<3.4012	79.5
	9/23/2003	ND<3.4012	79.5
	3/10/2004	ND<3.4012	79.5
	10/12/2004	ND<3.4012	79.5
	4/1/2005	ND<3.4012	79.5
	10/26/2005	ND<3.4012	79.5
	6/19/2006	ND<3.4012	79.5
	11/15/2007	ND<3.4012	79.5
	5/20/2008	ND<3.4012	79.5
	11/20/2008	ND<3.4012	79.5

Rank Sum = 1417.5
Rank Mean = 109.038

Calculation Results:

Kruskal-Wallis H Statistic = 54.6461
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 66.0127
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
54.6461 > 26.2962 indicating a significant group difference at 5% significance level
66.0127 > 26.2962 indicating a significant group difference at 5% significance level when adjusted for ties

Individual Well Comparisons at 1% Significance Level per Comparison

1% Z score is 2.32634
Mean background rank is 151.435

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-9S	**124.077**	**-27.357**	**66.2949**
LMW-15R	**141.469**	**-9.966**	**036 2.1975**
LMW-16	**165.962**	**14.5268**	**66.2949**
LMW-3	**140.48**	**-10.954**	**855.2015**

LMW-3S	221.269	69.8344	66.2949
LMW-10	108.925	-42.5098	58.4144
LMW-6	166.978	15.5435	56.3398
LMW-9D	171.885	20.4498	66.2949
LMW-14R	174.625	23.1902	68.0368
LMW-8	120.957	-30.4783	56.3398
LMW-9	143.217	-8.21739	56.3398
LMW-7	195.167	43.7319	57.6657
LMW-11	79.5	-71.9348	70.0396
LMW-13	79.5	-71.9348	70.0396
LMW-12	79.5	-71.9348	70.0396
MW-5	109.038	-42.3963	66.2949

Individual Well Comparisons at Groupwise 5% Significance Level (0.3125% Significance Level per comparison)

0.3125% Z score is 2.74777

Mean background rank is 151.435

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-9S	124.077	-27.3579	78.3044
LMW-15R	141.469	-9.96603	73.4648
LMW-16	165.962	14.5268	78.3044
LMW-3	140.48	-10.9548	65.2015
LMW-3S	221.269	69.8344	78.3044
LMW-10	108.925	-42.5098	68.9963
LMW-6	166.978	15.5435	66.546
LMW-9D	171.885	20.4498	78.3044
LMW-14R	174.625	23.1902	80.3619
LMW-8	120.957	-30.4783	66.546
LMW-9	143.217	-8.21739	66.546
LMW-7	195.167	43.7319	68.112
LMW-11	79.5	-71.9348	82.7275
LMW-13	79.5	-71.9348	82.7275
LMW-12	79.5	-71.9348	82.7275
MW-5	109.038	-42.3963	78.3044

Mann-Kendall Trend Analysis
Parameter: Zinc
Location: LMW-3S
Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
2.77259 J	2.30259 J	0.470004	1	0
3.8712 J	2.30259 J	1.56862	2	0
2.70805 J	2.30259 J	0.405465	3	0
ND<3.4012	2.30259 J	1.09861	4	0
2.89037 B	2.30259 J	0.587787	5	0
2.63906 Q	2.30259 J	0.336472	6	0
2.3979	2.30259 J	0.095310	2 7	0
2.02815 J	2.30259 J	-0.274437	7	1
1.70475 J	2.30259 J	-0.597837	7	2
2.3979	2.30259 J	0.095310	2 8	2
2.48491	2.30259 J	0.182322	9	2
2.12823 J	2.30259 J	-0.174353	9	3
3.8712 J	2.77259 J	1.09861	10	3
2.70805 J	2.77259 J	-0.0645385	10	4
ND<3.4012	2.77259 J	0.628609	11	4
2.89037 B	2.77259 J	0.117783	12	4
2.63906 Q	2.77259 J	-0.133531	12	5
2.3979	2.77259 J	-0.374693	12	6
2.02815 J	2.77259 J	-0.744441	2	7
1.70475 J	2.77259 J	-1.067841	2	8
2.3979	2.77259 J	-0.374693	12	9
2.48491	2.77259 J	-0.287682	12	10
2.12823 J	2.77259 J	-0.644357	12	11
2.70805 J	3.8712 J	-1.163151	2 12	
ND<3.4012	3.8712 J	-0.470004	12	13
2.89037 B	3.8712 J	-0.980829	12	14
2.63906 Q	3.8712 J	-1.232141	2 15	
2.3979	3.8712 J	-1.473311	2 16	
2.02815 J	3.8712 J	-1.843051	2 17	
1.70475 J	3.8712 J	-2.166451	2 18	
2.3979	3.8712 J	-1.473311	2 19	
2.48491	3.8712 J	-1.386291	2 20	
2.12823 J	3.8712 J	-1.742971	2 21	
ND<3.4012	2.70805 J	0.693147	13	21
2.89037 B	2.70805 J	0.182322	14	21
2.63906 Q	2.70805 J	-0.0689929	14	22
2.3979	2.70805 J	-0.310155	14	23
2.02815 J	2.70805 J	-0.679902	14	24
1.70475 J	2.70805 J	-1.0033	14	25
2.3979	2.70805 J	-0.310155	14	26
2.48491	2.70805 J	-0.223144	14	27
2.12823 J	2.70805 J	-0.579818	14	28
2.89037 B	ND<3.4012	-0.510826	14	29
2.63906 Q	ND<3.4012	-0.762141	4	30
2.3979	ND<3.4012	-1.0033	14	31
2.02815 J	ND<3.4012	-1.373051	4	32

1.70475 J	ND<3.4012	-1.6964514	33			
2.3979	ND<3.4012	-1.0033	14	34		
2.48491	ND<3.4012	-0.916291	14	35		
2.12823 J	ND<3.4012	-1.2729714	36			
2.63906 Q	2.89037 B	-0.251314	14	37		
2.3979	2.89037 B	-0.492476	14	38		
2.02815 J	2.89037 B	-0.862224	14	39		
1.70475 J	2.89037 B	-1.1856214	40			
2.3979	2.89037 B	-0.492476	14	41		
2.48491	2.89037 B	-0.405465	14	42		
2.12823 J	2.89037 B	-0.7621414	43			
2.3979	2.63906 Q	-0.241162	14	44		
2.02815 J	2.63906 Q	-0.610909	14	45		
1.70475 J	2.63906 Q	-0.934309	14	46		
2.3979	2.63906 Q	-0.241162	14	47		
2.48491	2.63906 Q	-0.154151	14	48		
2.12823 J	2.63906 Q	-0.510826	14	49		
2.02815 J	2.3979	-0.369747	14	50		
1.70475 J	2.3979	-0.693147	14	51		
2.3979	2.3979	0	14	51		
2.48491	2.3979	0.0870114	15	51		
2.12823 J	2.3979	-0.269664	15	52		
1.70475 J	2.02815 J	-0.3234	15	53		
2.3979	2.02815 J	0.369747	16	53		
2.48491	2.02815 J	0.456758	17	53		
2.12823 J	2.02815 J	0.100083	18	53		
2.3979	1.70475 J	0.693147	19	53		
2.48491	1.70475 J	0.780159	20	53		
2.12823 J	1.70475 J	0.423484	21	53		
2.48491	2.3979	0.0870114	22	53		
2.12823 J	2.3979	-0.269664	22	54		
2.12823 J	2.48491	-0.356675	22	55		

S Statistic = 22 - 55 = -33

Tied Group	Value	Members
1	2.3979	2

Time Period		Observations
11/18/2006		1
6/2/2007	1	
11/15/2007		1
5/20/2008		1
11/20/2008		1
6/11/2009		1
6/30/2010		1
11/17/2010		1
7/6/2011	1	
11/22/2011		1
5/16/2012		1
11/16/2012		1
11/16/2013		1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 267.667
Z-Score = -1.95593
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-1.95593| <= 1.97737 indicating no evidence of a trend

Shewhart-CUSUM Control Chart

Parameter: Zinc

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = 2.86732
Baseline Std Dev = 0.863896
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	2.30259	0	-0.653711
11/18/2006	2.30259	0	-0.653711
6/2/2007	2.77259	0	-0.10966
6/2/2007	2.77259	0	-0.10966
11/15/2007	3.8712	0.162035	1.16203
11/15/2007	3.8712	0.162035	1.16203
5/20/2008	2.70805	0	-0.184366
5/20/2008	2.70805	0	-0.184366
11/20/2008	3.4012	0	0.617984
11/20/2008	3.4012	0	0.617984
6/11/2009	2.89037	0	0.0266796
6/11/2009	2.89037	0	0.0266796
6/30/2010	2.63906	0	-0.264229
6/30/2010	2.63906	0	-0.264229
11/17/2010	2.3979	0	-0.543385
11/17/2010	2.3979	0	-0.543385
7/6/2011	2.02815	0	-0.971384
7/6/2011	2.02815	0	-0.971384
11/22/2011	1.70475	0	-1.34573
11/22/2011	1.70475	0	-1.34573
5/16/2012	2.3979	0	-0.543385
5/16/2012	2.3979	0	-0.543385
11/16/2012	2.48491	0	-0.442665
11/16/2012	2.48491	0	-0.442665
11/16/2013	2.12823	0	-0.855533
11/16/2013	2.12823	0	-0.855533