FINAL
May 2013 (N=26) 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

September 2013

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Kevin Haborak, P.G.

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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 May 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 May 2013. The monitoring is required by the North Carolina Department of Environmental and Natural Resources (NCDENR) Solid Waste Management Division. This was the twenty-sixth (N=26) 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-4, 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. LMW-8 was not sampled during this event because the path to the well was blocked by a fallen tree. 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.

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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 November of 2012 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 May 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 May 2013 sampling event for groundwater and methane monitoring performed by the USACE, Savannah District. It was the N=26 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

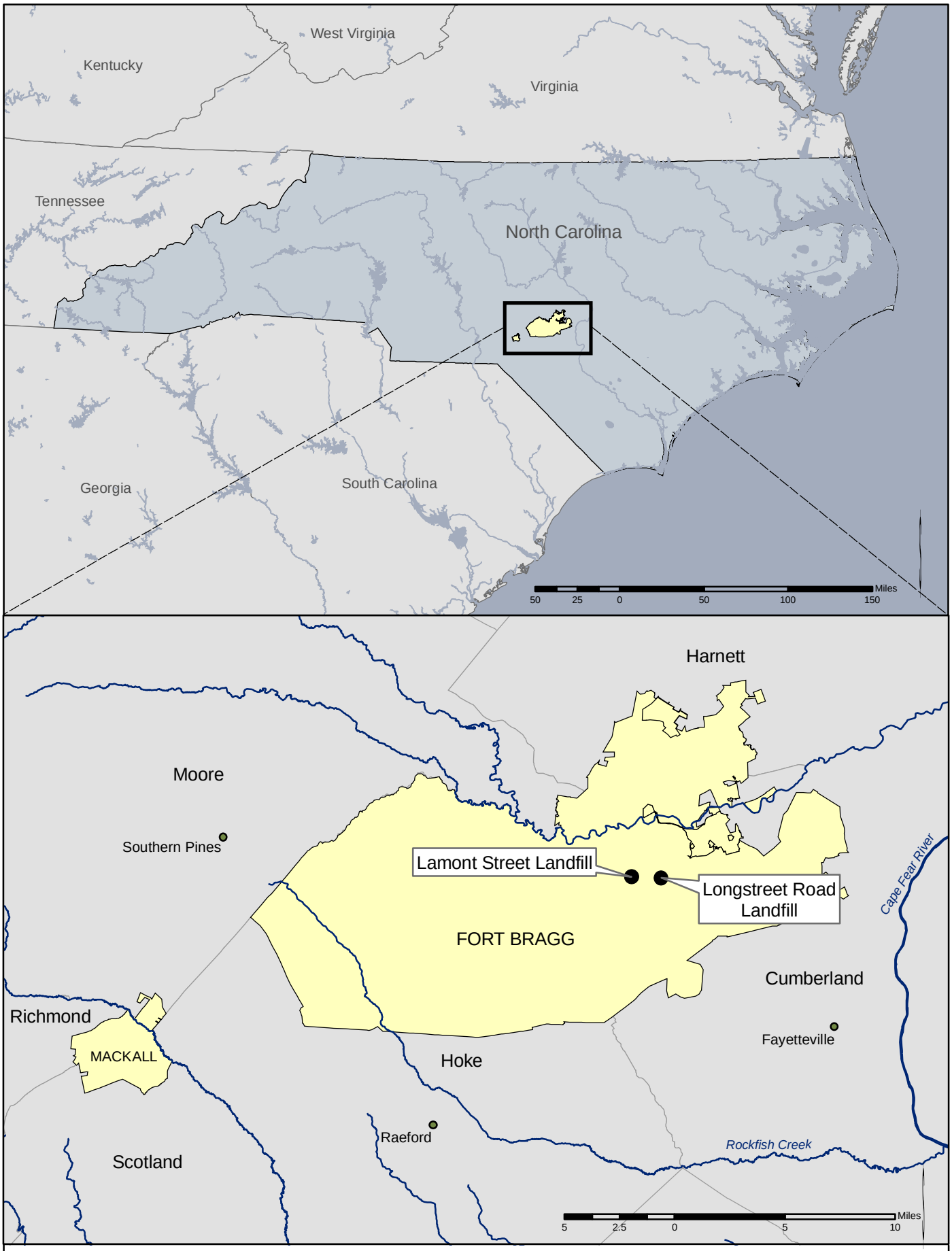

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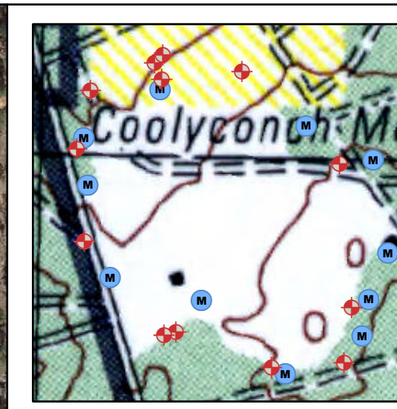
Figure 1

Site Map -- Ft. Bragg, NC



Legend

- Groundwater Monitoring Well
- Methane Sample

1 inch = 250 feet

0 125 250 500'

N

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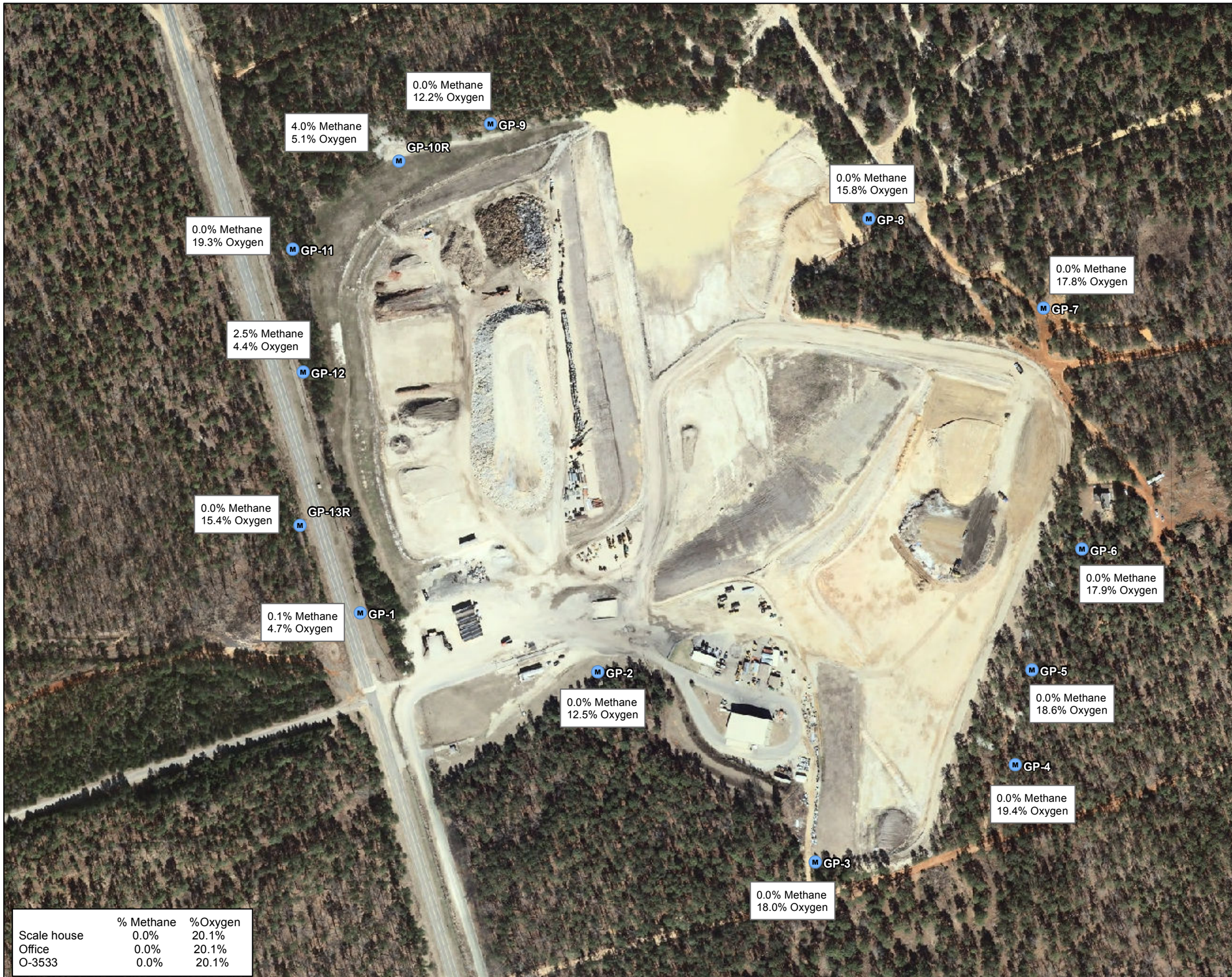
LAMONT STREET LANDFILL

LOCATION MAP

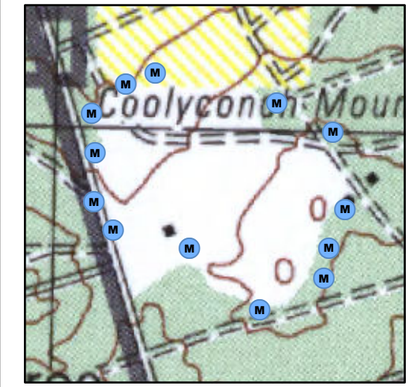
FORT BRAGG, NC

DATE: SEPT 2013

FIGURE: 2



	% Methane	%Oxygen
Scale house	0.0%	20.1%
Office	0.0%	20.1%
O-3533	0.0%	20.1%



Legend

M METHANE SAMPLE

1 inch = 250 feet

0 125 250 500'

N

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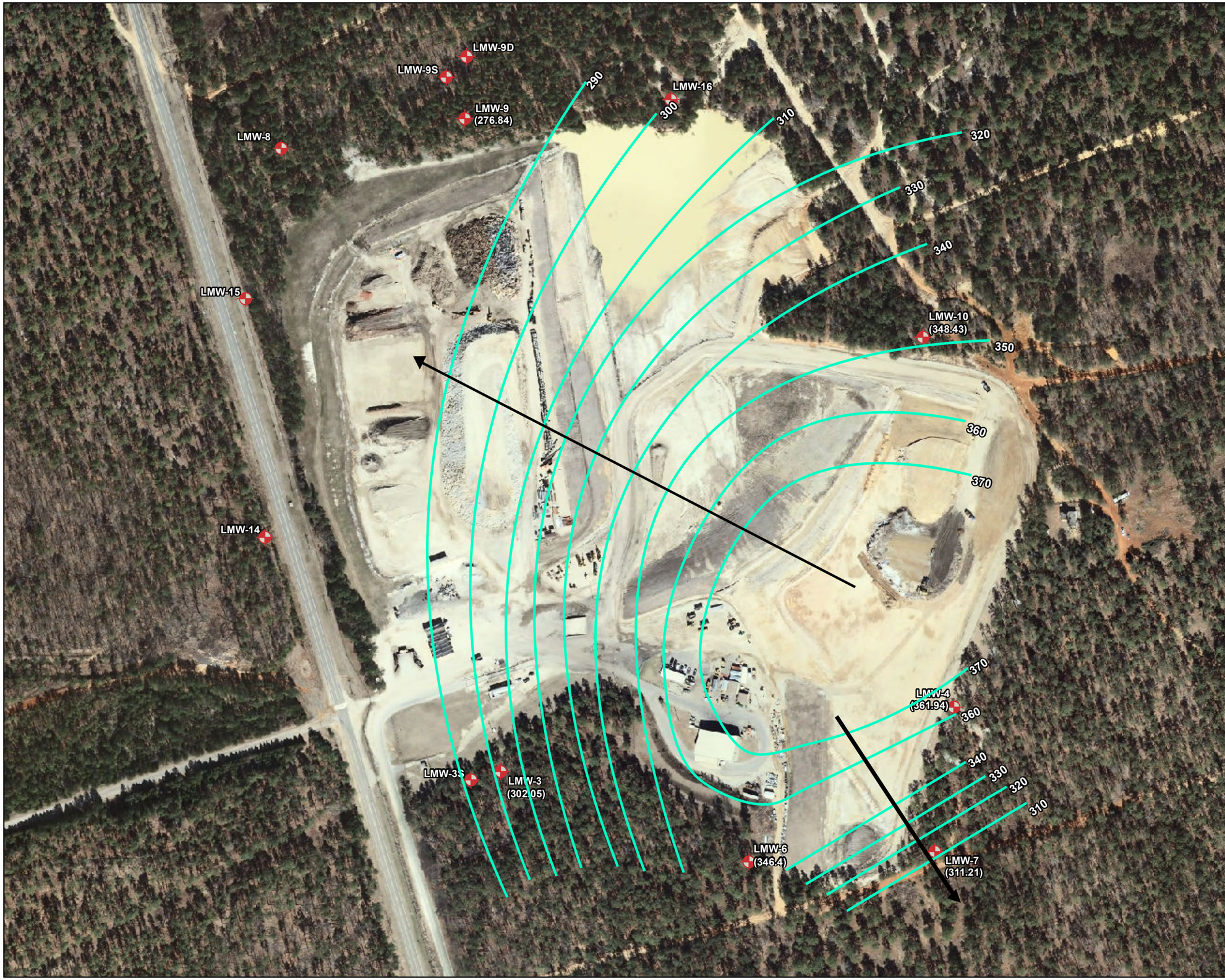
LAMONT STREET LANDFILL

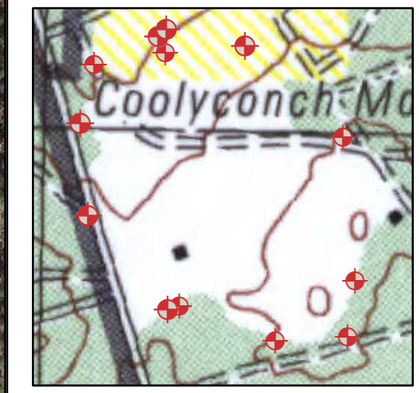
METHANE MONITORING RESULTS
MAY 2013

FORT BRAGG, NC

DATE: SEPT 2013

FIGURE: 3





Legend

Monitoring Well

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'

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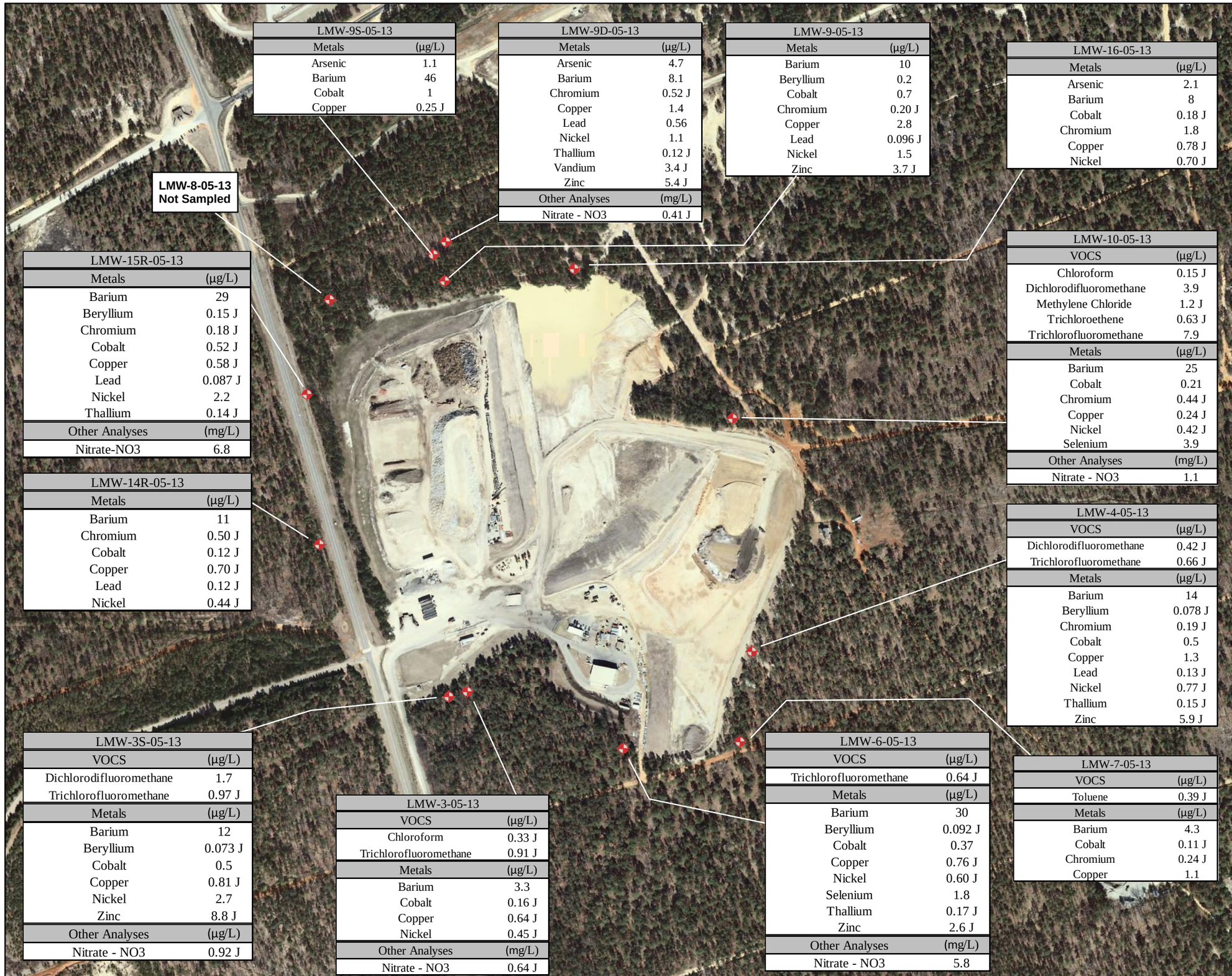
LAMONT STREET LANDFILL

POTENTIOMETRIC SURFACE MAP
MAY 2013
FORT BRAGG, NC

DATE: SEPT 2013 | FIGURE: 4



LMW-9S-05-13	
Metals	(µg/L)
Arsenic	1.1
Barium	46
Cobalt	1
Copper	0.25 J

LMW-9D-05-13	
Metals	(µg/L)
Arsenic	4.7
Barium	8.1
Chromium	0.52 J
Copper	1.4
Lead	0.56
Nickel	1.1
Thallium	0.12 J
Vandium	3.4 J
Zinc	5.4 J
Other Analyses	(mg/L)
Nitrate - NO3	0.41 J

LMW-9-05-13	
Metals	(µg/L)
Barium	10
Beryllium	0.2
Cobalt	0.7
Chromium	0.20 J
Copper	2.8
Lead	0.096 J
Nickel	1.5
Zinc	3.7 J

LMW-16-05-13	
Metals	(µg/L)
Arsenic	2.1
Barium	8
Cobalt	0.18 J
Chromium	1.8
Copper	0.78 J
Nickel	0.70 J

LMW-15R-05-13	
Metals	(µg/L)
Barium	29
Beryllium	0.15 J
Chromium	0.18 J
Cobalt	0.52 J
Copper	0.58 J
Lead	0.087 J
Nickel	2.2
Thallium	0.14 J
Other Analyses	(mg/L)
Nitrate-NO3	6.8

LMW-10-05-13	
VOCS	(µg/L)
Chloroform	0.15 J
Dichlorodifluoromethane	3.9
Methylene Chloride	1.2 J
Trichloroethene	0.63 J
Trichlorofluoromethane	7.9
Metals	(µg/L)
Barium	25
Cobalt	0.21
Chromium	0.44 J
Copper	0.24 J
Nickel	0.42 J
Selenium	3.9
Other Analyses	(mg/L)
Nitrate - NO3	1.1

LMW-14R-05-13	
Metals	(µg/L)
Barium	11
Chromium	0.50 J
Cobalt	0.12 J
Copper	0.70 J
Lead	0.12 J
Nickel	0.44 J

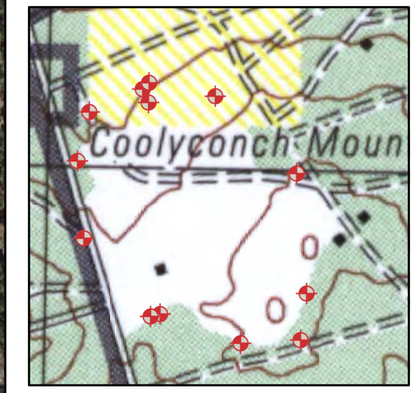
LMW-4-05-13	
VOCS	(µg/L)
Dichlorodifluoromethane	0.42 J
Trichlorofluoromethane	0.66 J
Metals	(µg/L)
Barium	14
Beryllium	0.078 J
Chromium	0.19 J
Cobalt	0.5
Copper	1.3
Lead	0.13 J
Nickel	0.77 J
Thallium	0.15 J
Zinc	5.9 J

LMW-3S-05-13	
VOCS	(µg/L)
Dichlorodifluoromethane	1.7
Trichlorofluoromethane	0.97 J
Metals	(µg/L)
Barium	12
Beryllium	0.073 J
Cobalt	0.5
Copper	0.81 J
Nickel	2.7
Zinc	8.8 J
Other Analyses	(µg/L)
Nitrate - NO3	0.92 J

LMW-3-05-13	
VOCS	(µg/L)
Chloroform	0.33 J
Trichlorofluoromethane	0.91 J
Metals	(µg/L)
Barium	3.3
Cobalt	0.16 J
Copper	0.64 J
Nickel	0.45 J
Other Analyses	(mg/L)
Nitrate - NO3	0.64 J

LMW-6-05-13	
VOCS	(µg/L)
Trichlorofluoromethane	0.64 J
Metals	(µg/L)
Barium	30
Beryllium	0.092 J
Cobalt	0.37
Copper	0.76 J
Nickel	0.60 J
Selenium	1.8
Thallium	0.17 J
Zinc	2.6 J
Other Analyses	(mg/L)
Nitrate - NO3	5.8

LMW-7-05-13	
VOCS	(µg/L)
Toluene	0.39 J
Metals	(µg/L)
Barium	4.3
Cobalt	0.11 J
Chromium	0.24 J
Copper	1.1



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'

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LAMONT STREET LANDFILL

GROUNDWATER
ANALYTICAL RESULTS
MAY 2013

FORT BRAGG, NC

DATE: SEPT 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	05 May 2013	13:19	0.1%	4.7%	14.4%
Gas- GP -2	05 May 2013	12:59	0.0 %	12.5%	8.5%
Gas- GP -3	05 May 2013	13:06	0.0%	18.0%	1.7%
Gas- GP -4	05 May 2013	12:19	0.0%	19.4%	0.7%
Gas- GP -5	05 May 2013	12:23	0.0 %	18.6%	1.2%
Gas- GP -6	05 May 2013	12:27	0.0%	17.9%	7.0%
Gas- GP -7	05 May 2013	12:31	0.0%	17.8%	1.6%
Gas- GP -8	05 May 2013	12:36	0.0%	15.8%	3.1%
Gas- GP -9	05 May 2013	12:43	0.0%	12.2%	8.0%
Gas- GP -10R	05 May 2013	12:47	4.0%	5.1%	15.8%
Gas- GP -11	05 May 2013	13:32	0.0%	19.3%	0.9%
Gas- GP -12	05 May 2013	13:28	2.5%	4.4%	13.0
Gas- GP -13R	05 May 2013	12:08	0.0%	15.4%	2.6%
Office	05 May 2013	13:02	0.0%	20.1%	0.0%
Scale House	05 May 2013	13:09	0.0%	20.1%	0.0%
O-3533	05 May 2013	13:12	0.0%	20.1%	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)
		November-08	November-08	June-09	June-09	November-09	November-09	June-10	June-10	November-10	November-10	June-11	June-11	November-11	November-11	May-12	May-12	November-12	November-12
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
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
LMW-4	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
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
LMW-7	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
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
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
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
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
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
LMW-14R	*	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
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
LMW-16	*	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

Note:

TOC – Top of casing, btoc – Below top of casing, NA – Not Available

bgs – Below ground surface, amsl – Above mean sea level NS – Not Surveyed

Δ --- Selected Well for Long Term *Well & ground-water elevations unavailable at this time.

TOC elevation is based on vertical datum NGVD29 (source: USGS RFI, Aug. 1999)

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

Well ID	Sample Identification	pH	Specific Conductivity (µs/cm)	Temperature (°C)	Turbidity (N.T.U.)	Dissolved Oxygen (mg/L)	ORP
LMW-3	GW-LMW-3-5-13	4.95	0.021	16.88	0.58	5.42	151.8
LMW-3S	GW-LMW-3S-5-13	4.80	0.032	16.74	1.15	4.20	160.4
LMW-4	GW-LMW-4-5-13	4.84	0.027	16.64	12.9	4.21	159.6
LMW-6	GW-LMW-6-5-13	5.11	0.177	17.19	1.86	1.14	180.6
LMW-7	GW-LMW-7-5-13	5.69	0.017	16.75	5.48	8.14	161.5
LMW-8	GW-LMW-8-5-13	NS	NS	NS	NS	NS	NS
LMW-9	GW-LMW-9-5-13	4.78	0.062	19.23	39.9	3.56	222.1
LMW-9S	GW-LMW-9S-5-13	5.86	0.343	18.19	--	0.57	53.7
LMW-9D	GW-LMW-9D-5-13	6.39	0.055	16.12	106	6.03	119.5
LMW-10	GW-LMW-10-5-13	5.00	0.057	19.18	6.04	5.31	98.2
LMW-14R	GW-LMW-14R-5-13	4.94	0.019	17.50	5.99	6.67	156.5
LMW-15R	GW-LMW-15R-5-13	4.60	0.044	17.53	3.33	6.98	174.5
LMW-16	GW-LMW-16-5-13	6.51	0.359	19.14	4.87	0.54	68.0

Note:

N.T.U. --- Nephelometric Turbidity Unit
ORP --- Oxidation Reduction Potential
* - Not reported
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)	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-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	LMW-4 11/12	LMW-4 05/13	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-7 04/05	LMW-7 10/05	LMW-7 6/06	LMW-7 6/06
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	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	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	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	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.21 J	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	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	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	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	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	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	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	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	BRL	BRL	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	NA	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	BRL	BRL	BRL	BRL	BRL	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	4.69 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NA	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	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	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	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	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	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	0.52 J	0.33 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	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	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	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	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	0.57J	0.92J	BRL	BRL	0.71 J	0.95 J	BRL	1.1	BRL	0.81 J	BRL	1	0.66 J	0.60 J	0.42 J	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
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	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	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	0.25J	BRL	BRL	0.23J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	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	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	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	BRL	BRL	BRL	BRL	BRL	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	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	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	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
toluene	1000	1000	BRL	BRL	BRL	BRL	BRL	BRL	0.3 J	BRL	BRL	BRL	BRL	0.38 J	BRL	BRL	BRL	BRL	0.33 J	BRL	BRL	BRL	0.47J	BRL	BRL	BRL	0.25 J	< 2	BRL	BRL	1.2	BRL	BRL	0.42 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.30 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.07 J	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	BRL	BRL	BRL	BRL	BRL	BRL	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	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
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	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	1	0.66 J	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	BRL	BRL	BRL	BRL
Total Xylenes	530	0.01	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	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
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	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	1.13 J	BRL	BRL	BRL	0.51 J	BRL	BRL	BRL	BRL	BRL	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
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	14.2	12.5	11.8	10	13.6	24.7	1.14J	11.20	14.7	15	13	15	14	14	16	15	13	14	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	31.7	30	20	10
Beryllium	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	BRL	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.071 J	NA	NA	BRL	BRL	BRL	BRL	0.078 J	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	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	BRL	BRL	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.24	0.24	0.27	0.29 J	0.27	0.25	0.26	0.26	0.5	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	BRL	BRL	BRL	BRL
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	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	0.24 J	0.19 J	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	19.0 J	23.2	BRL	BRL
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	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	0.23 J	1.3	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	10.8 J	11.1	10J	BRL
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	130	BRL	BRL	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
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	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	BRL	0.13 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	3.11	3.07	3.37	2.31
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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	5.6	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	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	1.1	0.77 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	18.9 J	BRL	BRL	BRL
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	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	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	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	0.15 J	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
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	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	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	BRL	BRL	BRL	BRL	BRL	BRL	3.7 J	4.21	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	12.6 J	18.5J	8.0J	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	11	5.9 J	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	27.5 J	31.4J	40J	20J
Other Analyses																																																												
Mercury	1.05	**NA**	NA	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	NA	NA	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	NA	NA	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	BRL	BRL	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5500	5600	5,800	NA	NA	NA	NA
Nitrate/Nitrite as N (SM 4500)

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)	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	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-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-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	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-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
VOCs (EPA 8260B)																																																													
1,1,2,2-tetrachloroethane	0.17	NA	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	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	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	NS	NS	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.43J	BRL	BRL	BRL	BRL
1,2,3-trichloropropane	0.005	NA	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	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	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	NS	NS	BRL	BRL	BRL	BRL	0.25 J	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	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	NS	NS	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	0.21 J	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	NS	NS	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	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	NS	NS	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	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	NS	NS	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	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	NS	NS	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	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	NS	NS	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	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	NS	NS	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	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	NS	NS	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	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	NS	NS	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
acetone	700	NA	BRL	BRL	BRL	282	4.22 J	BRL	NS	NS	7.5 J	BRL	11 J	BRL	BRL	BRL	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	5.6 J	BRL	BRL	BRL	BRL	BRL	BRL	NS	NA	NA	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
acrolein	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	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	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	NS	NS	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	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	NS	NS	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	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	NS	NS	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
chloroetane	2800	4.6*	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	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	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	NS	NS	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	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	0.5 J	BRL	NS	NS	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	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	NS	NS	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	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	BRL	BRL	BRL
dibromochloromethane	0.41	80	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
dichlorodifluoromethane	1400	390*	BRL	BRL	0.71 J	BRL	BRL	BRL	NS	NS	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	2.02	9.35	2.5	BRL	3.4	4.66	2.42
diisopropyl ether	70	NA	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	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	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	NS	NS	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
m&p xylene	530#	10000#	0.230J	BRL	BRL	BRL	BRL	BRL	NS	NS	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	0.41 J	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	0.63 J	BRL	NS	NS	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	NS	BRL	BRL	BRL	BRL	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
MTBE	200	13*	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	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	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	NS	NS	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	0.22 J	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	NS	NS	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	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	NS	NS	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	BRL	1.87 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	4.94
toluene	1000	1000	0.850J	BRL	BRL	BRL	0.5 J	NS	NS	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	0.52 J	BRL	0.41 J	BRL	BRL	0.39 J	BRL	BRL	BRL	BRL	0.26 J	BRL	BRL	BRL	BRL	0.57J	BRL	BRL	0.24 J
trans-1,2-dichloroethene	70	100	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	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	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	NS	NS	BRL	BRL	BRL	0.22 J	0.22 J	BRL	0.24J	0.23J	BRL	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	BRL	0.83 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.16 J	0.14 J	BRL	BRL	BRL	0.39 J	0.56J	0.91J	0.440J	BRL	BRL	0.48 J	BRL	0.58 J
trichlorofluoromethane	2100	1300*	BRL	2.5	4.79	BRL	BRL	BRL	NS	NS	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.26J	2.07	7.01	3.3	BRL	7.73	10.6	BRL
Total Xylenes	530	0.01	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	BRL	0.22 J	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	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	NS	NS	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	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	1.05 J	BRL	BRL	**10.8**	BRL	NS	NS	BRL	1.8	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	1.04 J	BRL	BRL	1.52J	BRL	1.12 J	BRL	BRL	8.7	1.1 J	BRL	0.58 J	1.6	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.15 J	BRL	BRL	BRL	BRL
Barium	2000	2000	11.6	27.4	6.28	5.48 J	7	12	NS	NS	5.2	13	8.5	7.6	6.9	4.3	48.5	38.1	40	32.0	34.0	41.0	34.9	29	40	40	30	44	32	45	39	38	NS	BRL	BRL	BRL	10	3.84	6.29	3 J	2.71	4	3.1	2.9	2.8	4	3.3	3.4	13	21	10	13.5	BRL	20	11.9	21.3	BRL	16.7	12	12.7
Beryllium	NA	4	NA	NA	NA	NA	NA	0.15 J	NS	NS	NA	0.34	BRL	0.094 J	0.092 J	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	BRL	BRL	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.089 J	NA	NS	0.12 J	BRL	BRL	0.27	0.38	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	5	BRL	BRL	BRL	BRL	BRL	1.2	NS	NS	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	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.94J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Cobalt	NA	NA	1.03	BRL	BRL	BRL	BRL	0.63	NS	NS	0.19 J	2.7	0.44	0.29	0.41	0.11 J	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.15 J	0.13 J	0.13 J	0.16 J	0.13 J	0.11 J	1.3	1.8	0.7	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Chromium	50	100	5.28	24.7	BRL	7.18	BRL	5.8	NS	NS	0.25 J	12	0.27 J	0.37 J	1.6	0.24 J	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	10J	BRL	7.14	BRL	BRL	BRL	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	2.72 J	BRL	BRL	BRL	BRL
Copper	1000	1000	6.64	6.05 J	7.53 J	BRL	BRL	4	NS	NS	3.8	13	3.5	2.1	1.5	1.1	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	BRL	BRL	BRL	10J	BRL	5.28 J	7 J	BRL	BRL	0.88 J	0.59 J	2.4	1.7	0.65 J	0.78 J	4.2	5	2.8	BRL	BRL	BRL	BRL	BRL	BRL	5.41 J	2.79 J	BRL
Iron	300	NA	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	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	BRL	200	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Lead	15	15	1.81	3.51	BRL	BRL	0.533 J	0.88	NS	NS	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	NS	0.525 J	BRL	BRL	0.87J	0.989J	1.40	BRL	1.41	BRL	0.17 J	BRL	0.16 J	0.57	BRL	BRL	0.097 J	0.094 J	0.096 J	BRL	BRL	0.78J	BRL	4.15	BRL	BRL	0.524 J
Manganese	50	NA	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	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	BRL	1.4 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Nickel	100	730*	4.23	7.73	4.71 J	2.42	3 J	5.5	NS	NS	1.7	7.5	1.5	4.2	2.1	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	3.26 J	BRL	1.49 J	9	0.33 J	0.46 J	BRL	0.63 J	0.96 J	0.55 J	2.4	3.5	1.5	BRL	BRL	BRL	BRL	BRL	BRL	3.24 J	1.53 J	BRL
Selenium	50	50	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	BRL	0.30 J	0.86	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.28 J	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	NS	NS	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	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	NS	NS	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	BRL	BRL	BRL	BRL	BRL	0.13 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Tin	NA	NA	BRL	BRL	BRL	BRL	BRL	BRL	NS	NS	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Vanadium	NA	260*	3.56J	14.8	BRL	BRL	BRL	2.9 J	NS	NS	BRL	7	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	8.4 J	8.4 J	BRL	30	BRL	7.06	BRL	2.78 J	BRL	2.6 J	BRL	BRL	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	8.0J	BRL	3.12 J	BRL	BRL	BRL
Zinc	2100	5000	21.6	51.0	BRL	10.9	BRL	BRL	NS	NS	9.5 J	59	15	11	6.4 J	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	20J	BRL	17.1 J	BRL	7.93 J	BRL	BRL	7 J	4.4 J	4.5 J	3.7 J	6.6 J	BRL	12 J	3.7 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	40.8	BRL
Other Analyses																																																													
Mercury	1.05	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-NO3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	360 J	790 J	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite as N (SM 4500)	1,000	1,000	0.119

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)	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-1 11/06	LMW-3S 11/06	GW-LMW-3S 06/07	GW-LMW-3S 11/07	GW-LMW-3S 05/08	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-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-9S 11/06	GW-LMW-9S 06/07	GW-LMW-9S 11/07	GW-LMW-9S 05/08	GW-LMW-9S 11/08	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-15 11/06	LMW-16 11/06	GW-LMW-16 06/07
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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**0.66 J**	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	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**0.76 J**	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	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	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**0.82 J**	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**0.43 J**	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**0.24 J**	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	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	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	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	0.22 J	BRL	BRL	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	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	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	5.8 J	BRL	BRL	BRL	1.60J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	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	BRL	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	**1.3**	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	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	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	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	0.20 J	0.14 J	0.23 J	BRL	0.25 J	0.15 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	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	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	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	**2.08**	BRL	BRL	BRL	BRL	BRL	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
dichlorodifluoromethane	1400	390*	BRL	4.9	BRL	BRL	BRL	10	6.7	6.2	3.9	BRL	12.6	BRL	BRL	0.62 J	2.76	BRL	BRL	4	2.3	0.76 J	BRL	2.1	3.2	1.7	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	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	BRL	BRL	BRL	BRL	BRL	BRL	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	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	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	2.4 J	2.2 J	1.8 J	1.9 J	1.2 J	BRL	BRL	BRL	BRL	BRL	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	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.33 J	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	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	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	0.24 J	BRL	0.27 J	BRL	0.35 J	0.28 J	0.29 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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
toluene	1000	1000	BRL	BRL	BRL	BRL	0.38 J	BRL	BRL	BRL	BRL	BRL	BRL	1.4	1.4	BRL	0.22 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.43 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.20 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.240J	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	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	0.88 J	1.7	1.1	0.97 J	1.4	1.9	1.4	1.6	0.63 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	0.13 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
trichlorofluoromethane	2100	1300*	6.6	13	5.8	7.3	3.7	14	14	13	7.9	BRL	0.330J	BRL	1.03 J	0.52 J	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	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	BRL	BRL	BRL	BRL	BRL	BRL	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	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1	0.84 J	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	BRL	1.68 J	4.54	BRL	BRL	2.1	0.47 J	0.57 J	1.2	0.46 J	0.47 J	0.54 J	1.2	1.1	BRL	BRL	2.13
Barium	2000	2000	13	12	12	14	21	23	23	25	25	BRL	5.95	18.7	13	8.86	13.8	12	10	12	16	14	5.4	13	14	12	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	77.3	80.9	2	75.3	61	3.1	48	38	53	59	66	39	68	46	37.4	23.1	41.3
Beryllium	NA	4	NA	NA	NA	NA	BRL	BRL	BRL	BRL	BRL	NA	NA	NA	NA	NA	NA	0.076 J	NA	NA	0.12 J	0.10 J	BRL	BRL	BRL	0.073 J	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	BRL	0.2	NA	NA	NA	NA	NA	NA	NA	NA	0.071 J	BRL	BRL	BRL	BRL	BRL	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	BRL	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	0.13 J	0.15 J	0.2	0.16 J	0.23	0.19 J	0.25	0.23	0.21	BRL	BRL	BRL	BRL	0.53 J	BRL	0.42	0.42	0.57	0.53	0.45	0.2	0.52	0.61	0.5	BRL	BRL	3	BRL	BRL	BRL	BRL	BRL	0.081 J	0.13 J	BRL	BRL	BRL	0.7	1.27	1.04 J	BRL	1.13	BRL	BRL	0.25	0.16 J	0.26	0.87	1.1	1	0.89	1	BRL	BRL	BRL
Chromium	50	100	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	BRL	BRL	11.6	BRL	BRL	BRL	1.7 J	0.54 J	0.37 J	4.1	3.3	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	5.73	BRL	BRL	BRL	BRL	0.44 J	0.58 J	4.4	BRL	0.27 J	BRL	BRL	BRL	BRL	BRL	20.7
Copper	1000	1000	0.51 J	BRL	1.9	0.39 J	0.35 J	0.57 J	BRL	BRL	0.24 J	8.51	2.54J	BRL	6	BRL	BRL	BRL	0.82 J	BRL	1.7	1.3	1.1	0.81 J	0.99 J	0.81 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	BRL	BRL	7	BRL	BRL	0.69 J	1.7	1.7	1.6	0.49 J	0.88 J	0.23 J	BRL	0.25 J	3.66J	BRL	7.37 J
Iron	300	NA	BRL	BRL	41 J	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	BRL	150	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	360	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Lead	15	15	BRL	BRL	0.11 J	BRL	BRL	BRL	0.25 J	BRL	BRL	BRL	BRL	3.71	1.47	BRL	BRL	0.58	BRL	0.093 J	1.7	1.7	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	2.16	1.19	BRL	0.761	0.71	0.21 J	0.11 J	0.55	BRL	BRL	BRL	BRL	BRL	0.559J	0.643J	5.28
Manganese	50	NA	BRL	BRL	1.1 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	23	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	BRL	13	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Nickel	100	730*	0.38 J	0.5 J	BRL	BRL	0.70 J	0.89 J	BRL	0.71 J	0.42 J	BRL	2.41	4.92 J	5	3.72	3.7 J	2.6	2.8	4.1	3.1	3.1	0.95 J	2.8	3	2.7	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	1.15J	BRL	BRL	1.51 J	BRL	0.55 J	0.97 J	BRL	0.44 J	0.67 J	0.85 J	BRL	0.71 J	BRL	1.80J	1.03J	BRL
Selenium	50	50	BRL	BRL	BRL	BRL	2.8	3.1	4.3	5	3.9	1.15J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	4.95 J	BRL	BRL	BRL	BRL	BRL	0.49 J	BRL	BRL	BRL	BRL	BRL	4.56	4.53	BRL	BRL	BRL	BRL	BRL	BRL	0.26 J	0.38 J	0.22 J	BRL	0.25 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	**33**	**BRL**	BRL	BRL	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	BRL2	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	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Tin	NA	NA	BRL	0.63 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	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	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	9.91	BRL	BRL	BRL	2.1 J	BRL	BRL	4.6 J	3.2 J	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	5.99	BRL	BRL	BRL	2.5 J	BRL	BRL	6.2	BRL	BRL	BRL	BRL	BRL	BRL	BRL	41.9
Zinc	2100	5000	BRL	21	3.6 J	5.3 J	4.2 J	5.5 J	BRL	BRL	BRL	BRL	10.1	16.6 J	48	15.2	BRL	BRL	13	BRL	11	7.6 J	5.5 J	11	12	8.8 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	32.2	BRL	3.5 J	15 B	3.5 J	3.6 J	BRL	8.2 J	BRL	BRL	BRL	14.0	BRL	16.5 J
Other Analyses																																																											
Mercury	1.05	**NA**	NA	NA	NA	NA	NA	BRL	NA	NA	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	NA	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42	NA	NA	NA	NA	NA	NA
Nitrate-NO3	NA	NA	NA	NA	NA	NA	NA	NA	1300	1300	1,100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	820 J	770 J	920 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite as N (SM 4500)	1,000	1,000	NA	2,400	3,700	520	580	510	NA	NA	NA	BRL	0.321	196	228	550	343	NA	710 J	BRL	88 J	150 J	240 J	NA	NA	NA	0.107	461	39	BRL	130	NA	430 J	580 J	97 J	130 J	330	85 J	NA	NA	0.19	1,000	147	BRL	132	NA	770 J	600 J	210 J	BRL50	BRL50	BRL	NA	NA	4.78	0.0520	166

porting Limit; NA -- Not Available; NS -- Not Sampled; U -- Target analytes were

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)	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	GW-LMW-16-DUP	GW-LMW-16-DUP	GW-LMW-14R 06/07	GW-LMW-14R 11/07	GW-LMW-14R 05/08	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	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
VOCs (EPA 8260B)																																												
1,1,2,2-tetrachloroethane	0.17	NA	BRL	BRL	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	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	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
1,2-dibromo-3-chloropropane	0.025	0.2	BRL	BRL	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	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	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
acetone	700	NA	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	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
acrolein	NA	NA	BRL	BRL	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	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	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
cis-1,2-dichloroethene	70	70	BRL	BRL	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	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	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
methylene chloride (dichloromethane)	4.6	5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	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	3.1 J B	BRL	BRL	BRL
MTBE	200	13*	BRL	BRL	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	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	NS	BRL	BRL	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
sec-butylbenzene	70	NA	BRL	BRL	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	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	NS	BRL	BRL	BRL	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	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.61 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	0.29 J	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	NS	BRL	BRL	BRL	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	9.27	0.56 J	0.59 J	0.5 J	0.54 J	1	0.54 J	1.8	1.1	2.1	BRL	11	1.11 J	BRL	BRL	9.08	0.41 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	**12.7**	2.5	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Barium	2000	2000	35	22.9	23	14	13	8.8	10	11	8.8	9.2	9.2	8	29	4 J	14.6	12	9.72	133	13	12	13	12	11	14	13	13	11	NS	38.5	27	24.3	37.6	42	14	36	30	25	32	32	30	29
Beryllium	NA	4	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	BRL	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.8	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
Cadmium	5	5	BRL	BRL	0.002 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	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Cobalt	NA	NA	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	BRL	BRL	BRL	BRL	0.51 J	BRL	0.24	0.3	0.17 J	0.21	0.2	0.18 J	0.15 J	0.19 J	0.12 J	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
Chromium	50	100	BRL	BRL	BRL	0.83 J	0.53 J	0.56 J		0.70 J	BRL	BRL	0.94 J	1.8	BRL	BRL	BRL	BRL	BRL	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	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
Copper	1000	1000	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	6	BRL	BRL	BRL	BRL	BRL	0.81 J	0.92 J	BRL	0.96 J	2	0.72 J	0.41 J	BRL	0.70 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
Iron	300	NA	BRL	BRL	BRL	BRL	BRL	150	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	43 J	BRL	BRL	BRL	BRL	BRL	BRL	NS	BRL	BRL	BRL	BRL	BRL	110	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Lead	15	15	2.62	BRL	BRL	BRL	0.099 J	0.26 J	BRL	<0.16 J	BRL	BRL	BRL	BRL	4.21	BRL	4.42	BRL	BRL	BRL	0.22 J	0.14 J	0.10 J	0.11 J	0.3	BRL	0.12 J	BRL	0.12 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
Manganese	50	NA	BRL	BRL	BRL	BRL	BRL	1.1 J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.3J	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	1.6 J	BRL	BRL	BRL	BRL	BRL	BRL
Nickel	100	730*	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	BRL	BRL	BRL	BRL	2.39	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	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
Selenium	50	50	2.20 J	BRL	BRL	BRL	BRL	BRL	0.31 J	BRL	0.25 J	BRL	0.21 J	BRL	2.50 J	BRL	BRL	BRL	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
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	NS	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	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	0.14 J
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	NS	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Vanadium	NA	260*	69	BRL	BRL	BRL	BRL	BRL	BRL	2.7 J	BRL	BRL	1.5 J	BRL	26	BRL	2.30 J	BRL	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
Zinc	2100	5000	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	15.4 J	BRL	18.2	BRL	6.3 J	26 B	4.9 J	4.5 J	10	10	6.7 J	BRL	BRL	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
Other Analyses																																											
Mercury	1.05	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	BRL	NA	NA	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	NA	BRL	NA	NA	NA
Nitrate-NO3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BRL	BRL	BRL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7400	6,800
Nitrate/Nitrite as N (SM 4500)	1,000	1,000	1020	380	33 J	NA	BRL	< 40	72	180 J	240 J	NA	NA	NA	1010	< 40	326	143	370	960	NA	BRL	BRL	72	350	120 J	360	NA	NA	2260	1,400	1620	BRL	1460	NA	7,300 H	**21000**	1600	68,000 J	1,800	1,600.0	NA	NA

Not Available; NS -- Not Sampled; U -- Target analytes were not detected above the reporting limits; J -- Analyte was present but concentration is an estimated value; Bold--Concentration exceeds NC 2L Std; * No MCL, used PRG; #Used total values;
**Used values for Chlordane; <> -- Data not recieved from laboratory; ^value changed based on Data Validation.

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:** 5/01/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1455**
WEATHER CONDITIONS: Cloudy 61°

Location: Lamont street Landfill	**Sample ID: LMW-14R-5-13**

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):	52.28	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				0.76	(gallons)
Flow Rate:	189	(ml/min)	Purge Vol:	2.3	(gallons)
Length of Time Purged:	45	(minutes)	Sample Time:	1540	
Amount Purged:	3.0	(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	1515	1529	1540
pH	5.02	5.00	4.94
Sp. Cond	0.020	0.019	0.019
Temp. °C	17.38	17.5	17.50
Turbidity	15.0	13.2	5.99
DO	6.85	6.72	6.67
ORP	164.5	157.6	156.5
Water Level	52.54	52.50	52.50

5. NOTES: MS/MSD taken 1545

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

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 05/02/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **0832**
WEATHER CONDITIONS: Cloudy 60°

Location: Lamont street Landfill	**Sample ID: LMW-15R-5-13**

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):	40.82	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			0.92	(gallons)
Flow Rate:	237	(ml/min)	Purge Vol:	1.8	(gallons)
Length of Time Purged:	30	(minutes)	Sample Time:	832	
Amount Purged:	1.9	(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	0820	0827	0832
pH	4.54	4.58	4.60
Sp. Cond	0.043	0.044	0.044
Temp. °C	17.58	17.57	17.53
Turbidity	8.67	5.11	3.33
DO	7.14	7.00	6.98
ORP	169.3	174.5	174.5
Water Level	41.57	41.60	41.61

5. NOTES: Dup taken at 1230/ DUP1-5-13

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

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 05/03/12
SAMPLED BY: R. Hill & C. Poston **TIME :** **0950**
WEATHER CONDITIONS: Partly Cloudy 64°

Location: Lamont street Landfill	**Sample ID: LMW-9S-5-13**

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):	61.34	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	55.43	(ft)	Diameter (d):	0.167	(ft)
	Well Volume = (5.904 x d^2(wd-dw)) =			0.97	(gallons)
Flow Rate:	350	(ml/min)	Purge Vol:	2.5	(gallons)
Length of Time Purged:	27	(minutes)	Sample Time:	950	
Amount Purged:	2.6	(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	0935	0940	0945	0950
pH	5.85	5.86	5.86	5.86
Sp. Cond	0.338	0.343	0.344	0.343
Temp. °C	18.06	18.09	18.16	18.19
Turbidity	4.02	2.06	1.13	1.12
DO	0.55	0.57	0.59	0.57
ORP	64.1	58.5	56.1	53.7
Water Level	55.45	55.45	55.45	55.45

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:** 05/03/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **0850**
WEATHER CONDITIONS: Partly Cloudy 60°

Location: Lamont street Landfill	**Sample ID: LMW-9D-05-13**

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):	86.98	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	82.61	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				0.72	(gallons)
Flow Rate:	189	(ml/min)	Purge Vol:	1.5	(gallons)
Length of Time Purged:	30	(minutes)	Sample Time:	846	
Amount Purged:	1.5	(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	0835	0846
pH	6.33	6.39
Sp. Cond	0.052	0.055
Temp. °C	16.93	16.12
Turbidity	35.4	106
DO	6.89	6.03
ORP	118	119.5
Water Level	84.56	84.62

5. NOTES: Turbidity increase therefore sample was taken @ 850

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

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 05/02/13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1450**
WEATHER CONDITIONS: Cloudy 63°

Location: Lamont street Landfill	**Sample ID: LMW-10-05-13**

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):	83.11	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	80.25	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				0.47	(gallons)
Flow Rate:	54	(ml/min)	Purge Vol:	1.0	(gallons)
Length of Time Purged:	70	(minutes)	Purge Time:	1445	
Amount Purged:	1.0	(gallons)	Pump Depth:	82	

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	1415	1425	1435	1445
pH	5.05	5.03	5.01	5.00
Sp. Cond	0.056	0.056	0.056	0.057
Temp. °C	21.38	21.67	19.26	19.18
Turbidity	40.2	25.2	18.5	6.04
DO	5.91	6.57	5.40	5.31
ORP	100.7	80.2	93.2	98.2
Water Level	80.35	80.35	80.35	80.35

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:** 05-02-13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1255**
WEATHER CONDITIONS: Cloudy 61°

Location: Lamont street Landfill	**Sample ID: LMW-7-05-13**

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):	132	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	125.41	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				1.08	(gallons)
Flow Rate:	2	(ml/min)	Purge Vol:	< 1	(gallons)
Length of Time Purged:	111	(minutes)	Sample Time:	1255	
Amount Purged:	< 1	(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	1121					
pH	5.69					
Sp. Cond	0.017					
Temp. °C	16.75					
Turbidity	5.48					
DO	8.14					
ORP	161.5					
Water Level	127.05					

5. NOTES: Stopped purging at 1121 because no flow. SHG let well recharge.

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

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 05-02-13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1031**
WEATHER CONDITIONS: Cloudy 60°

Location: Lamont street Landfill	**Sample ID: LMW-4-05-13**

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):	87.11	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	79.85	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				1.19	(gallons)
Flow Rate:	229	(ml/min)	Purge Vol:	2.0	(gallons)
Length of Time Purged:	33	(minutes)	Sample Time:	1030	
Amount Purged:	2.0	(gallons)	Pump Depth:	85	

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	1005	1015	1025
pH	4.84	4.89	4.84
Sp. Cond	0.027	0.027	0.027
Temp. °C	16.63	16.63	16.63
Turbidity	5.48	6.94	12.9
DO	4.59	4.06	4.21
ORP	157.6	158.8	159.6
Water Level	82.48	82.50	82.55

5. NOTES: Turbidity increasing samples.

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

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 05-01-13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1140**
WEATHER CONDITIONS: Cloudy 62°

Location: Lamont street Landfill	**Sample ID: LMW-3S-05-13**

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):	69.81	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	63.57	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				1.02	(gallons)
Flow Rate:	177	(ml/min)	Purge Vol:	3.0	(gallons)
Length of Time Purged:	64	(minutes)	Sample Time:	1140	
Amount Purged:	3.0	(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	1100	1105	1111	1122	1130	1135
pH	4.73	4.75	4.77	4.79	4.80	4.80
Sp. Cond	0.035	0.035	0.034	0.033	0.032	0.032
Temp. °C	16.80	16.92	16.96	16.77	16.71	16.74
Turbidity	12.1	7.21	3.89	2.47	1.73	1.15
DO	2.18	2.53	3.20	3.96	4.00	4.20
ORP	156.4	157.9	158.8	161.3	161.0	160.4
Water Level	65.4	65.4	65.4	65.4	65.4	65.4

5. NOTES: Fecal Coliform sample taken after ½ x vol purged at 5-6-13 @ 1510

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

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 05-1-13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1415**
WEATHER CONDITIONS: Cloudy 61°

Location: Lamont street Landfill	**Sample ID: LMW-3-05-13**

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):	122.99	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	106.27	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				2.74	(gallons)
Flow Rate:	118	(ml/min)	Purge Vol:	2.0	(gallons)
Length of Time Purged:	64	(minutes)	Sample Time:	1415	
Amount Purged:	2.00	(gallons)	Pump Depth:	121	(ft)

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	1350	1400	1405
pH	4.96	4.95	4.95
Sp. Cond	0.021	0.021	0.021
Temp. °C	16.90	16.76	16.88
Turbidity	1.03	0.70	0.58
DO	5.40	5.44	5.42
ORP	150.7	151.5	151.8
Water Level	108.95	108.93	108.95

5. NOTES:

Fecal coliform sample taken after 1x vol purged. 5-6-13 @ 1535

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

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 05-01-13
SAMPLED BY: R. Hill & C. Poston **TIME :** 956
WEATHER CONDITIONS: Cloudy 60°

Location: Lamont street Landfill	**Sample ID: LMW-6-05-13**

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):	94.65	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	85.05	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				1.57	(gallons)
Flow Rate:	516	(ml/min)	Purge Vol:	3.0	(gallons)
Length of Time Purged:	22	(minutes)	Sample Time:	956	
Amount Purged:	3.0	(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	0945	0951	0955
pH	5.03	5.04	5.11
Sp. Cond	0.181	0.179	0.177
Temp. °C	17.12	17.17	17.19
Turbidity	3.7	1.92	1.86
DO	0.85	1.02	1.14
ORP	180.2	180.5	180.6
Water Level	85.82	85.80	85.80

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:** 05-02-13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1630**
WEATHER CONDITIONS: Cloudy 67°

Location: Lamont street Landfill	**Sample ID: LMW-16-05-13**

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):	42	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	36.91	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				0.83	(gallons)
Flow Rate:	143	(ml/min)	Purge Vol:	2.5	(gallons)
Length of Time Purged:	66	(minutes)	Sample Time:	1630	
Amount Purged:	3.0	(gallons)	Pump Depth:	41	

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	1531	1541	1551	1601	1611	1621
pH	6.46	6.46	6.48	6.49	6.51	6.51
Sp. Cond	0.352	0.355	0.357	0.358	0.359	0.359
Temp. °C	19.99	19.21	19.45	19.32	19.16	19.14
Turbidity	87.1	86.1	32	15.0	7.0	4.87
DO	2.60	1.51	1.09	0.85	0.66	0.54
ORP	122.1	109.4	98.4	90.2	78.3	68
Water Level	37.91	38.05	38.05	38.05	38.05	38.05

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:** 05-03-13
SAMPLED BY: R. Hill & C. Poston **TIME :** **1350**
WEATHER CONDITIONS: Partly Cloudy 67°

Location: Lamont street Landfill	**Sample ID: LMW-9-05-13**

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):	135.69	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	87.95	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				7.83	(gallons)
Flow Rate:	246	(ml/min)	Purge Vol:	6.5	(gallons)
Length of Time Purged:	100	(minutes)	Sample Time:	1350	
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	1220	1230	1240	1250	1300	1315	1330	1345
pH	4.63	4.63	4.65	4.67	4.69	4.75	4.77	4.78
Sp. Cond	0.128	0.102	0.093	0.092	0.081	0.072	0.066	0.062
Temp. °C	19.45	19.53	19.43	20.14	19.60	20.17	19.67	19.23
Turbidity	36.1	41.8	45.0	43.3	44.5	37.7	34.8	39.9
DO	1.24	2.46	2.85	3.30	3.55	3.38	3.60	3.56
ORP	203.8	218.6	221.8	224.8	225.6	224.2	223.6	222.1
Water Level	87.99	87.99	87.99	87.99	87.99	87.99	87.99	87.99

5. NOTES: Blank collected at 1515. LMW-8-5-13 unaccessable due to washed out road and knocked down tree.

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

1. CLIENT: Fort Bragg Lamont St Landfill **DATE:** 11/28/12
SAMPLED BY: R. Hill & C. Poston **TIME :** NA
WEATHER CONDITIONS: Sunny 55°

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

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):	88.05	(ft)	Diameter (d):	2.00	(in)
Depth to Water (dw):	49.97	(ft)	Diameter (d):	0.167	(ft)
Well Volume = (5.904 x d^2(wd-dw)) =				6.25	(gallons)
Flow Rate:	168.24	(ml/min)	Purge Vol:	2.0	(gallons)
Length of Time Purged:	45	(minutes)	Sample Time:	NS	
Amount Purged:	2	(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						
pH						
Sp. Cond						
Temp. °C						
Turbidity						
DO						
ORP						
Water Level						

5. NOTES: In-accessable

APPENDIX B

DATA VALIDATION REPORTS

ELECTRONIC ONLY

Validation Report and Data Summary
Lamont Landfill, Fort Bragg, NC
Test America Job Number: 680-89881-1

Sample Collection

Groundwater samples from Lamont Landfill, Fort Bragg, NC were collected on 1 May 2013 in pre-preserved bottles and placed on ice immediately after collection. All samples were delivered to Test America's Savannah, Georgia laboratory on 2 May 2013. Four groundwater samples were collected for *appendix I metals* (6020A) and *nitrate as N* (300.0) samples were collected for the above mentioned analyses and performed by Test America-Savannah personnel.

Data Validation Summary

Metals

All samples were prepared and analyzed within their holding times. Samples were prepared in one batch (275267) and analyzed in one batch (275552). Each batch contained a method blank, a LCS, and a MS/MSD.

Batch 275552. No metals were detected in the method blank. Percent recoveries in the LCS sample were within their acceptance ranges. The MS/MSD samples had percent recoveries and RPDs were within their acceptance ranges. No changes to sample results were made during this data validation for this batch.

Batch samples were: LMW-6-5-13, LMW-3-5-13, LMW-3S-5-13, and LMW-14R-5-13.

Anions

All samples were prepared and analyzed within their holding times. Samples were analyzed for *nitrate & nitrite as nitrogen*. The analytical batch contained the following QC samples: a method blank, LCS/LCSD and MS/MSD.

Nitrate + Nitrite as Nitrogen

Batch 275389. *Nitrate + Nitrite as Nitrogen* was not detected in the method blank. Percent recovery and RPD in the LCS/LCSD and MS/MSD were within the acceptance ranges. All batch samples required a dilution (5X) prior to analysis. The reporting limits have been changed accordingly. No changes to sample results were made during data validation.

Batch samples were: LMW-6-5-13, LMW-3-5-13, LMW-3S-5-13, and LMW-14R-5-13.

Summary of completeness:

An assessment was performed considering all non-qualified results during data validation over the total possible results. The J-flags implemented during the data validation process were added to indicate estimated values due to discrepancies as noted, not to be confused with the J-flags assessed by the laboratory as the result of an analyte detected below the reporting limit but above the method detection limit. None of these data were considered a qualified result in the calculation below:

$$\% \text{ completeness} = \frac{\text{number of non-qualified results}}{\text{number of possible results}} \times 100$$

% completeness = 256-0/256 X 100 = 100 %

Recommendation

The validated analytical results and associated tables, as reviewed for *ANALYTICAL REPORT TestAmerica Job ID: 680-89881-1* should be considered accurate and acceptable to use for Lamont Landfill, Fort Bragg, NC.

Jeff Smith, Chemist
US Army Corps of Engineers
Environmental and Materials Unit
Savannah District
13 June 2013

Validation Report and Data Summary
Lamont Landfill, Fort Bragg, NC
Test America Job Number: 680-89949-1

Sample Collection

Groundwater samples from Lamont Landfill, Fort Bragg, NC were collected on 2 May 2013 in pre-preserved bottles and placed on ice immediately after collection. All samples were delivered to Test America's Savannah, Georgia laboratory on 3 May 2013. Five groundwater samples were collected for *appendix I metals* (6020) and *nitrate as N* (300.0) samples were collected for the above mentioned analyses and performed by Test America-Savannah personnel.

Data Validation Summary

Metals

All samples were prepared and analyzed within their holding times. Samples were prepared in one batch (275474) and analyzed in one batch (275967). Each batch contained a method blank, a LCS, and a MS/MSD.

Batch 275967. No metals were detected in the method blank. Percent recoveries in the LCS sample were within their acceptance ranges. The MS/MSD samples had percent recoveries and RPDs were within their acceptance ranges. No changes to sample results were made during this data validation for this batch.

Batch samples were: LMW-15R-5-13, LMW-4-5-13, DUP-1-5-13, LMW-7-5-13, LMW-10-5-13, and LMW-16-5-13.

Anions

All samples were prepared and analyzed within their holding times. Samples were analyzed for *nitrate & nitrite as nitrogen*. The analytical batch contained the following QC samples: a method blank, LCS/LCSD and MS/MSD.

Nitrate + Nitrite as Nitrogen

Batch 275630. *Nitrate + Nitrite as Nitrogen* was not detected in the method blank. Percent recovery and RPD in the LCS/LCSD and MS/MSD were within the acceptance ranges. All

batch samples required a dilution (5X) prior to analysis. The reporting limits have been changed accordingly. No changes to sample results were made during data validation.

Batch samples were: LMW-15R-5-13, LMW-4-5-13, DUP-1-5-13, LMW-7-5-13, LMW-10-5-13, and LMW-16-5-13.

Summary of completeness:

An assessment was performed considering all non-qualified results during data validation over the total possible results. The J-flags implemented during the data validation process were added to indicate estimated values due to discrepancies as noted, not to be confused with the J-flags assessed by the laboratory as the result of an analyte detected below the reporting limit but above the method detection limit. None of these data were considered a qualified result in the calculation below:

$$\% \text{ completeness} = \frac{\text{number of non-qualified results}}{\text{number of possible results}} \times 100$$

% completeness = 96-0/96 X 100 = 100 %

Recommendation

The validated analytical results and associated tables, as reviewed for *ANALYTICAL REPORT TestAmerica Job ID: 680-89949-1* should be considered accurate and acceptable to use for Lamont Landfill, Fort Bragg, NC.

Jeff Smith, Chemist
US Army Corps of Engineers
Environmental and Materials Unit
Savannah District
31 May 2013

* USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review: EPA-540-R-08-01, June 2008.

Validation Report and Data Summary
Lamont Landfill, Fort Bragg, NC
Test America Job Number: 680-90002-1

Sample Collection

Groundwater samples from Lamont Landfill, Fort Bragg, NC were collected on 1-3 May 2013 in pre-preserved bottles and placed on ice immediately after collection. All samples were delivered to Test America's Savannah, Georgia laboratory on 4 May 2013. Thirteen groundwater samples were collected for *volatile organic compounds* (VOCs). Three groundwater samples were collected for *appendix I metals* (6020) and *nitrate as N* (300.0) samples were collected for the above mentioned analyses and performed by Test America-Savannah personnel.

Data Validation Summary

Volatile Organic Compounds

All samples were prepared and analyzed within the specified holding time. Samples were analyzed in two batches (275661, and 276334). These analytical batches contained a method blank (MB), laboratory control samples/laboratory control sample duplicates (LCS/LCSD), and surrogates for quality control (QC).

Batch 275661. No VOC analytes were detected in the method blank or trip blank. Surrogate recoveries were all within their acceptance ranges. The LCS/LCSD had analyte bromomethane exceed the RPD. There were no detections of associated samples, however, the precision for this analyte in this batch is in question so an additional "J" will be accessed for this data review as these non-detections are now considered an estimate.

Batch samples were: LMW-6-5-13, LMW-3-5-13, LMW-3S-5-13, LMW-14R-5-13, LMW-15R-5-13, LMW-4-5-13, DUP-1-5-13, LMW-7-5-13, LMW-10-5-13, LMW-16-5-13, Trip Blank, LMW-9D-5-13, and BLANK-1-5-13.

Batch 276334. NO VOC analyte was detected in the method blank. Surrogate recoveries were all within their acceptance ranges. The LCS/LCSD had analytes bromomethane and chloroethane exceed the RPD. There were no detections of associated samples, however, the precision for these analytes in this batch is in question so an additional "J" will be accessed for this data review as these non-detections are now considered an estimate

Batch samples were: LMW-9S-5-13, and LMW-9-5-13.

Metals

All samples were prepared and analyzed within their holding times. Samples were prepared in one batch (275574) and analyzed in one batch (275778). Each batch contained a method blank, a LCS, and a MS/MSD.

Batch 275778. No metals were detected in the method blank. Percent recoveries in the LCS sample were within their acceptance ranges. The MS/MSD samples had percent recoveries and RPDs were within their acceptance ranges. No changes to sample results were made during this data validation for this batch.

Batch samples were: LMW-9D-5-13, LMW-9S-5-13, LMW-9-5-13, BLANK-9-5-13.

Anions

All samples were prepared and analyzed within their holding times. Samples were analyzed for *nitrate & nitrite as nitrogen*. The analytical batch contained the following QC samples: a method blank, LCS/LCSD and MS/MSD.

Nitrate + Nitrite as Nitrogen

Batch 275630. *Nitrate + Nitrite as Nitrogen* was not detected in the method blank. Percent recovery and RPD in the LCS/LCSD and MS/MSD were within the acceptance ranges. All batch samples required a dilution (5X) prior to analysis. The reporting limits have been changed accordingly. No changes to sample results were made during data validation.

Batch samples were: LMW-9D-5-13, LMW-9S-5-13, LMW-9-5-13, BLANK-9-5-13.

Table 1: Summary of Qualified Data

Method	Discrepancy	Action	Samples affected
VOC 8260B	Batch275661: The LCS/LCSD had analyte bromomethane exceed the RPD. There were no detections of associated samples.	The precision for this analyte in this batch is in question so an additional "J" will be accessed for this data review as these non-detections are now considered an estimate.	**LMW-6-15-13, LMW-3-15-13, LMW-3S-5-13, LMW-14R-5-13, LMW-15R-5-13, LMW-4-5-13, DUP-1-5-13, LMW-7-5-13, LMW-10-5-13, LMW-16-5-13, TRIP BLANK, LMW-9D-5-13, and BLANK-1-5-13.**

VOC 8260B	Batch276334: The LCS/LCSD had analytes bromomethane and chloroethane exceed the RPD. There were no detections of associated samples.	The precision for this analyte in this batch is in question so an additional "J" will be accessed for this data review as these non-detections are now considered an estimate.	**LMW-9S-5-13, and LMW-9-5-13.**

Summary of completeness:

An assessment was performed considering all non-qualified results during data validation over the total possible results. The J-flags implemented during the data validation process were added to indicate estimated values due to discrepancies as noted, not to be confused with the J-flags assessed by the laboratory as the result of an analyte detected below the reporting limit but above the method detection limit. None of these data were considered a qualified result in the calculation below:

$$\% \text{ completeness} = \frac{\text{number of non-qualified results}}{\text{number of possible results}} \times 100$$

% completeness = 954-17/954 X 100 = 98 %

Recommendation

The validated analytical results and associated tables, as reviewed for *ANALYTICAL REPORT TestAmerica Job ID: 680-90002-1* should be considered accurate and acceptable to use for Lamont Landfill, Fort Bragg, NC.

Jeff Smith, Chemist
US Army Corps of Engineers
Environmental and Materials Unit
Savannah District
31 May 2013

* USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review: EPA-540-R-08-01, June 2008.

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: 680-90002-1
Client Project/Site: Ft.Bragg - Lamont Landfill

For:
U.S. Army Corps of Engineers
PO BOX 889
Savannah, Georgia 31402-0889

Attn: Mr. Kevin Haborak

Authorized for release by:
5/15/2013 3:35:45 PM

Linda Wolfe, Project Manager I
linda.wolfe@testamericainc.com

LINKS

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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.

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Job ID: 680-90002-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: U.S. Army Corps of Engineers

Project: Ft.Bragg - Lamont Landfill

Report Number: 680-90002-1

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 05/04/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.8 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples LMW-6-5-13 (680-90002-1), LMW-3-5-13 (680-90002-2), LMW-3S-5-13 (680-90002-3), LMW-14R-5-13 (680-90002-4), LMW-15R-5-13 (680-90002-5), LMW-4-5-13 (680-90002-6), DUP-1-5-13 (680-90002-7), LMW-7-5-13 (680-90002-8), LMW-10-5-13 (680-90002-9), LMW-16-5-13 (680-90002-10), TRIP BLANK (LOT # 040913) (680-90002-11), LMW-9D-5-13 (680-90002-12), LMW-9S-5-13 (680-90002-13), LMW-9-5-13 (680-90002-14) and BLANK-1-5-13 (680-90002-15) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/06/2013 and 05/10/2013.

Bromomethane exceeded the rpd limit for the LCS and LCSD in batch 680-275661. Bromomethane and Chloroethane exceeded the rpd limit for the LCS and LCSD in batch 680-276334/5.

No other difficulties were encountered during the volatiles analyses.

All other quality control parameters were within the acceptance limits.

METALS (ICPMS)
Samples LMW-9D-5-13 (680-90002-12), LMW-9S-5-13 (680-90002-13), LMW-9-5-13 (680-90002-14) and BLANK-1-5-13 (680-90002-15) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 05/06/2013 and analyzed on 05/07/2013.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

ANIONS (NITRATE/NITRITE)
Samples LMW-9D-5-13 (680-90002-12), LMW-9S-5-13 (680-90002-13), LMW-9-5-13 (680-90002-14) and BLANK-1-5-13 (680-90002-15) were analyzed for Anions (Nitrate/Nitrite) in accordance with EPA Method 300.0. The samples were analyzed on 05/04/2013.

Samples LMW-9D-5-13 (680-90002-12)[5X], LMW-9S-5-13 (680-90002-13)[5X], LMW-9-5-13 (680-90002-14)[5X] and BLANK-1-5-13 (680-90002-15)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Job ID: 680-90002-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

No difficulties were encountered during the Anions analyses.

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: 680-90002-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-90002-1	LMW-6-5-13	Water	05/01/13 09:56	05/04/13 09:40
680-90002-2	LMW-3-5-13	Water	05/01/13 14:15	05/04/13 09:40
680-90002-3	LMW-3S-5-13	Water	05/01/13 11:40	05/04/13 09:40
680-90002-4	LMW-14R-5-13	Water	05/01/13 15:45	05/04/13 09:40
680-90002-5	LMW-15R-5-13	Water	05/02/13 08:35	05/04/13 09:40
680-90002-6	LMW-4-5-13	Water	05/02/13 10:30	05/04/13 09:40
680-90002-7	DUP-1-5-13	Water	05/02/13 12:30	05/04/13 09:40
680-90002-8	LMW-7-5-13	Water	05/02/13 12:55	05/04/13 09:40
680-90002-9	LMW-10-5-13	Water	05/02/13 14:50	05/04/13 09:40
680-90002-10	LMW-16-5-13	Water	05/02/13 16:30	05/04/13 09:40
680-90002-11	TRIP BLANK (LOT # 040913)	Water	05/01/13 09:00	05/04/13 09:40
680-90002-12	LMW-9D-5-13	Water	05/03/13 08:50	05/04/13 09:40
680-90002-13	LMW-9S-5-13	Water	05/03/13 09:55	05/04/13 09:40
680-90002-14	LMW-9-5-13	Water	05/03/13 13:50	05/04/13 09:40
680-90002-15	BLANK-1-5-13	Water	05/03/13 15:15	05/04/13 09:40

Method Summary

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

TestAmerica Job ID: 680-90002-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
300.0	Anions, Ion Chromatography	MCAWW	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.
Q	One or more quality control criteria failed.
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
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

General Chemistry

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

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)
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)
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: 680-90002-1

Client Sample ID: LMW-6-5-13 — Lab Sample ID: 680-90002-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichlorofluoromethane	0.64	J	1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: LMW-3-5-13 — Lab Sample ID: 680-90002-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.33	J	1.0	0.14	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.91	J	1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: LMW-3S-5-13 — Lab Sample ID: 680-90002-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	1.7		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.97	J	1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: LMW-14R-5-13 — Lab Sample ID: 680-90002-4

No Detections.

Client Sample ID: LMW-15R-5-13 — Lab Sample ID: 680-90002-5

No Detections.

Client Sample ID: LMW-4-5-13 — Lab Sample ID: 680-90002-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	0.42	J	1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.66	J	1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: DUP-1-5-13 — Lab Sample ID: 680-90002-7

No Detections.

Client Sample ID: LMW-7-5-13 — Lab Sample ID: 680-90002-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.39	J	1.0	0.33	ug/L	1		8260B	Total/NA

Client Sample ID: LMW-10-5-13 — Lab Sample ID: 680-90002-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.15	J	1.0	0.14	ug/L	1		8260B	Total/NA
Dichlorodifluoromethane	3.9		1.0	0.25	ug/L	1		8260B	Total/NA
Methylene Chloride	1.2	J	5.0	1.0	ug/L	1		8260B	Total/NA
Trichloroethene	0.63	J	1.0	0.13	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	7.9		1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: LMW-16-5-13 — Lab Sample ID: 680-90002-10

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 680-90002-1

Client Sample ID: TRIP BLANK (LOT # 040913) — Lab Sample ID: 680-90002-11

No Detections.

Client Sample ID: LMW-9D-5-13 — Lab Sample ID: 680-90002-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.7		1.0	0.40	ug/L	1		6020A	Total/NA
Barium	8.1		1.0	0.15	ug/L	1		6020A	Total/NA
Chromium	0.52	J	1.0	0.16	ug/L	1		6020A	Total/NA
Cobalt	0.13	J	0.20	0.078	ug/L	1		6020A	Total/NA
Copper	1.4		1.0	0.21	ug/L	1		6020A	Total/NA
Lead	0.56		0.30	0.080	ug/L	1		6020A	Total/NA
Nickel	1.1		1.0	0.40	ug/L	1		6020A	Total/NA
Thallium	0.12	J	0.20	0.10	ug/L	1		6020A	Total/NA
Vanadium	3.4	J	5.0	1.4	ug/L	1		6020A	Total/NA
Zinc	5.4	J	10	2.6	ug/L	1		6020A	Total/NA
Nitrate-NO3	0.41	J	1.1	0.36	mg/L	5		300.0	Total/NA

Client Sample ID: LMW-9S-5-13 — Lab Sample ID: 680-90002-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.1		1.0	0.40	ug/L	1		6020A	Total/NA
Barium	46		1.0	0.15	ug/L	1		6020A	Total/NA
Cobalt	1.0		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.25	J	1.0	0.21	ug/L	1		6020A	Total/NA

Client Sample ID: LMW-9-5-13 — Lab Sample ID: 680-90002-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	10		1.0	0.15	ug/L	1		6020A	Total/NA
Beryllium	0.20		0.20	0.070	ug/L	1		6020A	Total/NA
Chromium	0.20	J	1.0	0.16	ug/L	1		6020A	Total/NA
Cobalt	0.70		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	2.8		1.0	0.21	ug/L	1		6020A	Total/NA
Lead	0.096	J	0.30	0.080	ug/L	1		6020A	Total/NA
Nickel	1.5		1.0	0.40	ug/L	1		6020A	Total/NA
Zinc	3.7	J	10	2.6	ug/L	1		6020A	Total/NA

Client Sample ID: BLANK-1-5-13 — Lab Sample ID: 680-90002-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.51	J	1.0	0.15	ug/L	1		6020A	Total/NA
Copper	0.32	J	1.0	0.21	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: LMW-6-5-13
Date Collected: 05/01/13 09:56
Date Received: 05/04/13 09:40

Lab Sample ID: 680-90002-1
Matrix: Water

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			05/06/13 14:38	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 14:38	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 14:38	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 14:38	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 14:38	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 14:38	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 14:38	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 14:38	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 14:38	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 14:38	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 14:38	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 14:38	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 14:38	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 14:38	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 14:38	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 14:38	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 14:38	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 14:38	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 14:38	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 14:38	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 14:38	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 14:38	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 14:38	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 14:38	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 14:38	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 14:38	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 14:38	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 14:38	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 14:38	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 14:38	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 14:38	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 14:38	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 14:38	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 14:38	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 14:38	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 14:38	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 14:38	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 14:38	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 14:38	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 14:38	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 14:38	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 14:38	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 14:38	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 14:38	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 14:38	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 14:38	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 14:38	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 14:38	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 14:38	1

Client Sample ID: LMW-6-5-13

Lab Sample ID: 680-90002-1

Date Collected: 05/01/13 09:56

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 14:38	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 14:38	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 14:38	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 14:38	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 14:38	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 14:38	1
Trichlorofluoromethane	**0.64**	**J**	1.0	0.25	ug/L			05/06/13 14:38	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 14:38	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 14:38	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 14:38	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 14:38	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 14:38	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*70 - 130*		*05/06/13 14:38*	*1*
Dibromofluoromethane	*85*		*70 - 130*		*05/06/13 14:38*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*05/06/13 14:38*	*1*

Client Sample ID: LMW-3-5-13

Lab Sample ID: 680-90002-2

Date Collected: 05/01/13 14:15

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 15:08	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 15:08	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 15:08	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 15:08	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 15:08	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 15:08	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 15:08	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 15:08	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 15:08	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 15:08	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 15:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 15:08	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 15:08	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 15:08	1
Chloroform	**0.33**	**J**	1.0	0.14	ug/L			05/06/13 15:08	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 15:08	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 15:08	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 15:08	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 15:08	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 15:08	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 15:08	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 15:08	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 15:08	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 15:08	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 15:08	1

Client Sample ID: LMW-3-5-13

Lab Sample ID: 680-90002-2

Date Collected: 05/01/13 14:15

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 15:08	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 15:08	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 15:08	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 15:08	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 15:08	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 15:08	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 15:08	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 15:08	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 15:08	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 15:08	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 15:08	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 15:08	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 15:08	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 15:08	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 15:08	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 15:08	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 15:08	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 15:08	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 15:08	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 15:08	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 15:08	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 15:08	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 15:08	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 15:08	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 15:08	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 15:08	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 15:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 15:08	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 15:08	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 15:08	1
Trichlorofluoromethane	**0.91**	**J**	1.0	0.25	ug/L			05/06/13 15:08	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 15:08	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 15:08	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 15:08	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 15:08	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 15:08	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*87*		*70 - 130*		*05/06/13 15:08*	*1*
Dibromofluoromethane	*85*		*70 - 130*		*05/06/13 15:08*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/06/13 15:08*	*1*

Client Sample ID: LMW-3S-5-13

Lab Sample ID: 680-90002-3

Date Collected: 05/01/13 11:40

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 15:38	1

Client Sample ID: LMW-3S-5-13

Lab Sample ID: 680-90002-3

Date Collected: 05/01/13 11:40

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 15:38	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 15:38	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 15:38	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 15:38	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 15:38	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 15:38	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 15:38	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 15:38	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 15:38	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 15:38	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 15:38	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 15:38	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 15:38	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 15:38	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 15:38	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 15:38	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 15:38	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 15:38	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 15:38	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 15:38	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 15:38	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 15:38	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 15:38	1
Dichlorodifluoromethane	**1.7**		1.0	0.25	ug/L			05/06/13 15:38	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 15:38	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 15:38	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 15:38	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 15:38	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 15:38	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 15:38	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 15:38	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 15:38	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 15:38	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 15:38	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 15:38	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 15:38	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 15:38	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 15:38	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 15:38	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 15:38	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 15:38	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 15:38	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 15:38	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 15:38	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 15:38	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 15:38	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 15:38	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 15:38	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 15:38	1

Client Sample ID: LMW-3S-5-13

Lab Sample ID: 680-90002-3

Date Collected: 05/01/13 11:40

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 15:38	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 15:38	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 15:38	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 15:38	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 15:38	1
Trichlorofluoromethane	**0.97**	**J**	1.0	0.25	ug/L			05/06/13 15:38	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 15:38	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 15:38	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 15:38	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 15:38	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 15:38	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*70 - 130*		*05/06/13 15:38*	*1*
Dibromofluoromethane	*85*		*70 - 130*		*05/06/13 15:38*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*05/06/13 15:38*	*1*

Client Sample ID: LMW-14R-5-13

Lab Sample ID: 680-90002-4

Date Collected: 05/01/13 15:45

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 16:08	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 16:08	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 16:08	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 16:08	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 16:08	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 16:08	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 16:08	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 16:08	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 16:08	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 16:08	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 16:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 16:08	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 16:08	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 16:08	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 16:08	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 16:08	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 16:08	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 16:08	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 16:08	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 16:08	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 16:08	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 16:08	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 16:08	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 16:08	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 16:08	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 16:08	1

Client Sample ID: LMW-14R-5-13

Lab Sample ID: 680-90002-4

Date Collected: 05/01/13 15:45

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 16:08	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 16:08	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 16:08	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 16:08	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 16:08	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 16:08	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 16:08	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 16:08	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 16:08	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 16:08	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 16:08	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 16:08	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 16:08	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 16:08	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 16:08	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 16:08	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 16:08	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 16:08	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 16:08	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 16:08	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 16:08	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 16:08	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 16:08	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 16:08	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 16:08	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 16:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 16:08	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 16:08	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 16:08	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 16:08	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 16:08	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 16:08	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 16:08	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 16:08	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 16:08	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 16:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*87*		*70 - 130*		*05/06/13 16:08*	*1*
Dibromofluoromethane	*83*		*70 - 130*		*05/06/13 16:08*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/06/13 16:08*	*1*

Client Sample ID: LMW-15R-5-13

Lab Sample ID: 680-90002-5

Date Collected: 05/02/13 08:35

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 16:38	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 16:38	1

Client Sample ID: LMW-15R-5-13

Lab Sample ID: 680-90002-5

Date Collected: 05/02/13 08:35

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 16:38	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 16:38	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 16:38	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 16:38	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 16:38	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 16:38	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 16:38	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 16:38	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 16:38	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 16:38	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 16:38	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 16:38	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 16:38	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 16:38	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 16:38	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 16:38	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 16:38	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 16:38	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 16:38	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 16:38	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 16:38	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 16:38	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 16:38	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 16:38	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 16:38	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 16:38	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 16:38	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 16:38	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 16:38	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 16:38	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 16:38	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 16:38	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 16:38	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 16:38	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 16:38	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 16:38	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 16:38	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 16:38	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 16:38	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 16:38	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 16:38	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 16:38	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 16:38	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 16:38	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 16:38	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 16:38	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 16:38	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 16:38	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 16:38	1

Client Sample ID: LMW-15R-5-13

Lab Sample ID: 680-90002-5

Date Collected: 05/02/13 08:35

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 16:38	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 16:38	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 16:38	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 16:38	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 16:38	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 16:38	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 16:38	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 16:38	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 16:38	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 16:38	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*70 - 130*		*05/06/13 16:38*	*1*
Dibromofluoromethane	*84*		*70 - 130*		*05/06/13 16:38*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*05/06/13 16:38*	*1*

Client Sample ID: LMW-4-5-13

Lab Sample ID: 680-90002-6

Date Collected: 05/02/13 10:30

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 17:08	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 17:08	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 17:08	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 17:08	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 17:08	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 17:08	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 17:08	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 17:08	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 17:08	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 17:08	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 17:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 17:08	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 17:08	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 17:08	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 17:08	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 17:08	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 17:08	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 17:08	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 17:08	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 17:08	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 17:08	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 17:08	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 17:08	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 17:08	1
Dichlorodifluoromethane	**0.42**	**J**	1.0	0.25	ug/L			05/06/13 17:08	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 17:08	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 17:08	1

Client Sample ID: LMW-4-5-13

Lab Sample ID: 680-90002-6

Date Collected: 05/02/13 10:30

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 17:08	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 17:08	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 17:08	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 17:08	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 17:08	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 17:08	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 17:08	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 17:08	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 17:08	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 17:08	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 17:08	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 17:08	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 17:08	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 17:08	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 17:08	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 17:08	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 17:08	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 17:08	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 17:08	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 17:08	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 17:08	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 17:08	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 17:08	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 17:08	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 17:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 17:08	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 17:08	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 17:08	1
Trichlorofluoromethane	**0.66**	**J**	1.0	0.25	ug/L			05/06/13 17:08	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 17:08	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 17:08	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 17:08	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 17:08	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 17:08	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*70 - 130*		*05/06/13 17:08*	*1*
Dibromofluoromethane	*83*		*70 - 130*		*05/06/13 17:08*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/06/13 17:08*	*1*

Client Sample ID: DUP-1-5-13

Lab Sample ID: 680-90002-7

Date Collected: 05/02/13 12:30

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 17:38	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 17:38	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 17:38	1

Client Sample ID: DUP-1-5-13
Date Collected: 05/02/13 12:30
Date Received: 05/04/13 09:40

Lab Sample ID: 680-90002-7
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			05/06/13 17:38	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 17:38	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 17:38	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 17:38	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 17:38	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 17:38	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 17:38	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 17:38	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 17:38	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 17:38	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 17:38	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 17:38	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 17:38	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 17:38	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 17:38	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 17:38	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 17:38	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 17:38	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 17:38	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 17:38	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 17:38	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 17:38	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 17:38	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 17:38	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 17:38	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 17:38	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 17:38	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 17:38	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 17:38	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 17:38	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 17:38	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 17:38	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 17:38	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 17:38	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 17:38	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 17:38	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 17:38	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 17:38	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 17:38	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 17:38	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 17:38	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 17:38	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 17:38	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 17:38	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 17:38	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 17:38	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 17:38	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 17:38	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 17:38	1

Client Sample ID: DUP-1-5-13

Lab Sample ID: 680-90002-7

Date Collected: 05/02/13 12:30

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 17:38	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 17:38	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 17:38	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 17:38	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 17:38	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 17:38	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 17:38	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 17:38	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 17:38	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*70 - 130*		*05/06/13 17:38*	*1*
Dibromofluoromethane	*85*		*70 - 130*		*05/06/13 17:38*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/06/13 17:38*	*1*

Client Sample ID: LMW-7-5-13

Lab Sample ID: 680-90002-8

Date Collected: 05/02/13 12:55

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 18:08	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 18:08	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 18:08	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 18:08	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 18:08	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 18:08	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 18:08	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 18:08	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 18:08	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 18:08	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 18:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 18:08	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 18:08	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 18:08	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 18:08	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 18:08	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 18:08	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 18:08	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 18:08	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 18:08	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 18:08	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 18:08	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 18:08	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 18:08	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 18:08	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 18:08	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 18:08	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 18:08	1

Client Sample ID: LMW-7-5-13

Lab Sample ID: 680-90002-8

Date Collected: 05/02/13 12:55

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 18:08	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 18:08	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 18:08	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 18:08	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 18:08	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 18:08	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 18:08	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 18:08	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 18:08	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 18:08	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 18:08	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 18:08	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 18:08	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 18:08	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 18:08	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 18:08	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 18:08	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 18:08	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 18:08	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 18:08	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 18:08	1
Toluene	**0.39**	**J**	1.0	0.33	ug/L			05/06/13 18:08	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 18:08	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 18:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 18:08	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 18:08	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 18:08	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 18:08	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 18:08	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 18:08	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 18:08	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 18:08	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 18:08	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*70 - 130*		*05/06/13 18:08*	*1*
Dibromofluoromethane	*85*		*70 - 130*		*05/06/13 18:08*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/06/13 18:08*	*1*

Client Sample ID: LMW-10-5-13

Lab Sample ID: 680-90002-9

Date Collected: 05/02/13 14:50

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 18:38	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 18:38	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 18:38	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 18:38	1

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

TestAmerica Job ID: 680-90002-1

Client Sample ID: LMW-10-5-13
Date Collected: 05/02/13 14:50
Date Received: 05/04/13 09:40

Lab Sample ID: 680-90002-9
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			05/06/13 18:38	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 18:38	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 18:38	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 18:38	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 18:38	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 18:38	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 18:38	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 18:38	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 18:38	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 18:38	1
Chloroform	**0.15**	**J**	1.0	0.14	ug/L			05/06/13 18:38	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 18:38	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 18:38	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 18:38	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 18:38	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 18:38	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 18:38	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 18:38	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 18:38	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 18:38	1
Dichlorodifluoromethane	**3.9**		1.0	0.25	ug/L			05/06/13 18:38	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 18:38	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 18:38	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 18:38	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 18:38	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 18:38	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 18:38	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 18:38	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 18:38	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 18:38	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 18:38	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 18:38	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 18:38	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 18:38	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 18:38	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 18:38	1
Methylene Chloride	**1.2**	**J**	5.0	1.0	ug/L			05/06/13 18:38	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 18:38	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 18:38	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 18:38	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 18:38	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 18:38	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 18:38	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 18:38	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 18:38	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 18:38	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 18:38	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 18:38	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 18:38	1

Client Sample ID: LMW-10-5-13

Lab Sample ID: 680-90002-9

Date Collected: 05/02/13 14:50

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 18:38	1
Trichloroethene	**0.63**	**J**	1.0	0.13	ug/L			05/06/13 18:38	1
Trichlorofluoromethane	**7.9**		1.0	0.25	ug/L			05/06/13 18:38	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 18:38	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 18:38	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 18:38	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 18:38	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 18:38	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*70 - 130*		*05/06/13 18:38*	*1*
Dibromofluoromethane	*84*		*70 - 130*		*05/06/13 18:38*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/06/13 18:38*	*1*

Client Sample ID: LMW-16-5-13

Lab Sample ID: 680-90002-10

Date Collected: 05/02/13 16:30

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 19:08	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 19:08	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 19:08	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 19:08	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 19:08	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 19:08	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 19:08	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 19:08	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 19:08	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 19:08	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 19:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 19:08	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 19:08	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 19:08	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 19:08	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 19:08	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 19:08	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 19:08	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 19:08	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 19:08	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 19:08	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 19:08	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 19:08	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 19:08	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 19:08	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 19:08	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 19:08	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 19:08	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 19:08	1

Client Sample ID: LMW-16-5-13

Lab Sample ID: 680-90002-10

Date Collected: 05/02/13 16:30

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 19:08	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 19:08	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 19:08	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 19:08	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 19:08	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 19:08	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 19:08	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 19:08	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 19:08	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 19:08	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 19:08	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 19:08	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 19:08	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 19:08	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 19:08	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 19:08	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 19:08	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 19:08	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 19:08	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 19:08	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 19:08	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 19:08	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 19:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 19:08	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 19:08	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 19:08	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 19:08	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 19:08	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 19:08	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 19:08	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 19:08	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 19:08	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*87*		*70 - 130*		*05/06/13 19:08*	*1*
Dibromofluoromethane	*84*		*70 - 130*		*05/06/13 19:08*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*05/06/13 19:08*	*1*

Client Sample ID: TRIP BLANK (LOT # 040913)

Lab Sample ID: 680-90002-11

Date Collected: 05/01/13 09:00

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 13:38	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 13:38	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 13:38	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 13:38	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 13:38	1

Client Sample ID: TRIP BLANK (LOT # 040913)
Date Collected: 05/01/13 09:00
Date Received: 05/04/13 09:40

Lab Sample ID: 680-90002-11
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			05/06/13 13:38	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 13:38	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 13:38	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 13:38	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 13:38	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 13:38	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 13:38	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 13:38	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 13:38	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 13:38	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 13:38	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 13:38	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 13:38	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 13:38	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 13:38	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 13:38	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 13:38	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 13:38	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 13:38	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 13:38	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 13:38	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 13:38	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 13:38	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 13:38	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 13:38	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 13:38	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 13:38	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 13:38	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 13:38	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 13:38	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 13:38	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 13:38	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 13:38	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 13:38	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 13:38	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 13:38	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 13:38	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 13:38	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 13:38	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 13:38	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 13:38	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 13:38	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 13:38	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 13:38	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 13:38	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 13:38	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 13:38	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 13:38	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 13:38	1

Client Sample ID: TRIP BLANK (LOT # 040913)

Lab Sample ID: 680-90002-11

Date Collected: 05/01/13 09:00

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 13:38	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 13:38	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 13:38	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 13:38	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 13:38	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 13:38	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 13:38	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 13:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*70 - 130*		*05/06/13 13:38*	*1*
Dibromofluoromethane	*86*		*70 - 130*		*05/06/13 13:38*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*05/06/13 13:38*	*1*

Client Sample ID: LMW-9D-5-13

Lab Sample ID: 680-90002-12

Date Collected: 05/03/13 08:50

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 19:38	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 19:38	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 19:38	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 19:38	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 19:38	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 19:38	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 19:38	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 19:38	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 19:38	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 19:38	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 19:38	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 19:38	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 19:38	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 19:38	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 19:38	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 19:38	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 19:38	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 19:38	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 19:38	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 19:38	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 19:38	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 19:38	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 19:38	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 19:38	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 19:38	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 19:38	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 19:38	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 19:38	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 19:38	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 19:38	1

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

TestAmerica Job ID: 680-90002-1

Client Sample ID: LMW-9D-5-13
Date Collected: 05/03/13 08:50
Date Received: 05/04/13 09:40

Lab Sample ID: 680-90002-12
Matrix: Water

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			05/06/13 19:38	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 19:38	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 19:38	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 19:38	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 19:38	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 19:38	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 19:38	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 19:38	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 19:38	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 19:38	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 19:38	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 19:38	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 19:38	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 19:38	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 19:38	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 19:38	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 19:38	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 19:38	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 19:38	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 19:38	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 19:38	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 19:38	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 19:38	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 19:38	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 19:38	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 19:38	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 19:38	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 19:38	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 19:38	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 19:38	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 19:38	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*86*		*70 - 130*		*05/06/13 19:38*	*1*
Dibromofluoromethane	*84*		*70 - 130*		*05/06/13 19:38*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/06/13 19:38*	*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		05/06/13 08:38	05/07/13 11:56	1
Arsenic	**4.7**		1.0	0.40	ug/L		05/06/13 08:38	05/07/13 11:56	1
Barium	**8.1**		1.0	0.15	ug/L		05/06/13 08:38	05/07/13 11:56	1
Beryllium	0.070	U	0.20	0.070	ug/L		05/06/13 08:38	05/07/13 11:56	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/06/13 08:38	05/07/13 11:56	1
Chromium	**0.52**	**J**	1.0	0.16	ug/L		05/06/13 08:38	05/07/13 11:56	1
Cobalt	**0.13**	**J**	0.20	0.078	ug/L		05/06/13 08:38	05/07/13 11:56	1
Copper	**1.4**		1.0	0.21	ug/L		05/06/13 08:38	05/07/13 11:56	1
Lead	**0.56**		0.30	0.080	ug/L		05/06/13 08:38	05/07/13 11:56	1
Nickel	**1.1**		1.0	0.40	ug/L		05/06/13 08:38	05/07/13 11:56	1

Client Sample ID: LMW-9D-5-13

Lab Sample ID: 680-90002-12

Date Collected: 05/03/13 08:50

Matrix: Water

Date Received: 05/04/13 09:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.21	U	0.50	0.21	ug/L		05/06/13 08:38	05/07/13 11:56	1
Silver	0.10	U	0.20	0.10	ug/L		05/06/13 08:38	05/07/13 11:56	1
Thallium	**0.12**	**J**	0.20	0.10	ug/L		05/06/13 08:38	05/07/13 11:56	1
Vanadium	**3.4**	**J**	5.0	1.4	ug/L		05/06/13 08:38	05/07/13 11:56	1
Zinc	**5.4**	**J**	10	2.6	ug/L		05/06/13 08:38	05/07/13 11:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	**0.41**	**J**	1.1	0.36	mg/L			05/04/13 13:19	5

Client Sample ID: LMW-9S-5-13

Lab Sample ID: 680-90002-13

Date Collected: 05/03/13 09:55

Matrix: Water

Date Received: 05/04/13 09:40

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			05/10/13 14:23	1
Benzene	0.25	U	1.0	0.25	ug/L			05/10/13 14:23	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/10/13 14:23	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/10/13 14:23	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/10/13 14:23	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/10/13 14:23	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/10/13 14:23	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/10/13 14:23	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/10/13 14:23	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/10/13 14:23	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/10/13 14:23	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/10/13 14:23	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/10/13 14:23	1
Chloroethane	2.0	U Q	5.0	2.0	ug/L			05/10/13 14:23	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/10/13 14:23	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/10/13 14:23	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/10/13 14:23	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/10/13 14:23	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/10/13 14:23	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/10/13 14:23	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/10/13 14:23	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/10/13 14:23	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/10/13 14:23	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/10/13 14:23	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/10/13 14:23	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/10/13 14:23	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/10/13 14:23	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/10/13 14:23	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/10/13 14:23	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/10/13 14:23	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/10/13 14:23	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/10/13 14:23	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/10/13 14:23	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/10/13 14:23	1

Client Sample ID: LMW-9S-5-13

Lab Sample ID: 680-90002-13

Date Collected: 05/03/13 09:55

Matrix: Water

Date Received: 05/04/13 09:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/10/13 14:23	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/10/13 14:23	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/10/13 14:23	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/10/13 14:23	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/10/13 14:23	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/10/13 14:23	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/10/13 14:23	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/10/13 14:23	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/10/13 14:23	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/10/13 14:23	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/10/13 14:23	1
Styrene	0.11	U	1.0	0.11	ug/L			05/10/13 14:23	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/10/13 14:23	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/10/13 14:23	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/10/13 14:23	1
Toluene	0.33	U	1.0	0.33	ug/L			05/10/13 14:23	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/10/13 14:23	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/10/13 14:23	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/10/13 14:23	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/10/13 14:23	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/10/13 14:23	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/10/13 14:23	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/10/13 14:23	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/10/13 14:23	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/10/13 14:23	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/10/13 14:23	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/10/13 14:23	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/10/13 14:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*05/10/13 14:23*	*1*
Dibromofluoromethane	*103*		*70 - 130*		*05/10/13 14:23*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*05/10/13 14:23*	*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		05/06/13 08:38	05/07/13 12:03	1
Arsenic	**1.1**		1.0	0.40	ug/L		05/06/13 08:38	05/07/13 12:03	1
Barium	**46**		1.0	0.15	ug/L		05/06/13 08:38	05/07/13 12:03	1
Beryllium	0.070	U	0.20	0.070	ug/L		05/06/13 08:38	05/07/13 12:03	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/06/13 08:38	05/07/13 12:03	1
Chromium	0.16	U	1.0	0.16	ug/L		05/06/13 08:38	05/07/13 12:03	1
Cobalt	**1.0**		0.20	0.078	ug/L		05/06/13 08:38	05/07/13 12:03	1
Copper	**0.25**	**J**	1.0	0.21	ug/L		05/06/13 08:38	05/07/13 12:03	1
Lead	0.080	U	0.30	0.080	ug/L		05/06/13 08:38	05/07/13 12:03	1
Nickel	0.40	U	1.0	0.40	ug/L		05/06/13 08:38	05/07/13 12:03	1
Selenium	0.21	U	0.50	0.21	ug/L		05/06/13 08:38	05/07/13 12:03	1
Silver	0.10	U	0.20	0.10	ug/L		05/06/13 08:38	05/07/13 12:03	1
Thallium	0.10	U	0.20	0.10	ug/L		05/06/13 08:38	05/07/13 12:03	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/06/13 08:38	05/07/13 12:03	1

Client Sample ID: LMW-9S-5-13

Lab Sample ID: 680-90002-13

Date Collected: 05/03/13 09:55

Matrix: Water

Date Received: 05/04/13 09:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	2.6	U	10	2.6	ug/L		05/06/13 08:38	05/07/13 12:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	0.36	U	1.1	0.36	mg/L			05/04/13 14:06	5

Client Sample ID: LMW-9-5-13

Lab Sample ID: 680-90002-14

Date Collected: 05/03/13 13:50

Matrix: Water

Date Received: 05/04/13 09:40

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			05/10/13 14:53	1
Benzene	0.25	U	1.0	0.25	ug/L			05/10/13 14:53	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/10/13 14:53	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/10/13 14:53	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/10/13 14:53	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/10/13 14:53	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/10/13 14:53	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/10/13 14:53	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/10/13 14:53	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/10/13 14:53	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/10/13 14:53	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/10/13 14:53	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/10/13 14:53	1
Chloroethane	2.0	U Q	5.0	2.0	ug/L			05/10/13 14:53	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/10/13 14:53	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/10/13 14:53	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/10/13 14:53	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/10/13 14:53	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/10/13 14:53	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/10/13 14:53	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/10/13 14:53	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/10/13 14:53	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/10/13 14:53	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/10/13 14:53	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/10/13 14:53	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/10/13 14:53	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/10/13 14:53	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/10/13 14:53	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/10/13 14:53	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/10/13 14:53	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/10/13 14:53	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/10/13 14:53	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/10/13 14:53	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/10/13 14:53	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/10/13 14:53	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/10/13 14:53	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/10/13 14:53	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/10/13 14:53	1

Client Sample ID: LMW-9-5-13

Lab Sample ID: 680-90002-14

Date Collected: 05/03/13 13:50

Matrix: Water

Date Received: 05/04/13 09:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/10/13 14:53	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/10/13 14:53	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/10/13 14:53	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/10/13 14:53	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/10/13 14:53	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/10/13 14:53	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/10/13 14:53	1
Styrene	0.11	U	1.0	0.11	ug/L			05/10/13 14:53	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/10/13 14:53	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/10/13 14:53	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/10/13 14:53	1
Toluene	0.33	U	1.0	0.33	ug/L			05/10/13 14:53	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/10/13 14:53	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/10/13 14:53	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/10/13 14:53	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/10/13 14:53	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/10/13 14:53	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/10/13 14:53	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/10/13 14:53	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/10/13 14:53	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/10/13 14:53	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/10/13 14:53	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/10/13 14:53	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/10/13 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*05/10/13 14:53*	*1*
Dibromofluoromethane	*104*		*70 - 130*		*05/10/13 14:53*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/10/13 14:53*	*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		05/06/13 08:38	05/07/13 12:10	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/06/13 08:38	05/07/13 12:10	1
Barium	**10**		1.0	0.15	ug/L		05/06/13 08:38	05/07/13 12:10	1
Beryllium	**0.20**		0.20	0.070	ug/L		05/06/13 08:38	05/07/13 12:10	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/06/13 08:38	05/07/13 12:10	1
Chromium	**0.20**	**J**	1.0	0.16	ug/L		05/06/13 08:38	05/07/13 12:10	1
Cobalt	**0.70**		0.20	0.078	ug/L		05/06/13 08:38	05/07/13 12:10	1
Copper	**2.8**		1.0	0.21	ug/L		05/06/13 08:38	05/07/13 12:10	1
Lead	**0.096**	**J**	0.30	0.080	ug/L		05/06/13 08:38	05/07/13 12:10	1
Nickel	**1.5**		1.0	0.40	ug/L		05/06/13 08:38	05/07/13 12:10	1
Selenium	0.21	U	0.50	0.21	ug/L		05/06/13 08:38	05/07/13 12:10	1
Silver	0.10	U	0.20	0.10	ug/L		05/06/13 08:38	05/07/13 12:10	1
Thallium	0.10	U	0.20	0.10	ug/L		05/06/13 08:38	05/07/13 12:10	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/06/13 08:38	05/07/13 12:10	1
Zinc	**3.7**	**J**	10	2.6	ug/L		05/06/13 08:38	05/07/13 12:10	1

Client Sample ID: LMW-9-5-13

Lab Sample ID: 680-90002-14

Date Collected: 05/03/13 13:50

Matrix: Water

Date Received: 05/04/13 09:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	0.36	U	1.1	0.36	mg/L			05/04/13 14:21	5

Client Sample ID: BLANK-1-5-13

Lab Sample ID: 680-90002-15

Date Collected: 05/03/13 15:15

Matrix: Water

Date Received: 05/04/13 09:40

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			05/06/13 14:08	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 14:08	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 14:08	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 14:08	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 14:08	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 14:08	1
Bromomethane	2.0	U Q	5.0	2.0	ug/L			05/06/13 14:08	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 14:08	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 14:08	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 14:08	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 14:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 14:08	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 14:08	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 14:08	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 14:08	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 14:08	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 14:08	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 14:08	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 14:08	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 14:08	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 14:08	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 14:08	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 14:08	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 14:08	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 14:08	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 14:08	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 14:08	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 14:08	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 14:08	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 14:08	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 14:08	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 14:08	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 14:08	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 14:08	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 14:08	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 14:08	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 14:08	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 14:08	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 14:08	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 14:08	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 14:08	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 14:08	1

Client Sample ID: BLANK-1-5-13

Lab Sample ID: 680-90002-15

Date Collected: 05/03/13 15:15

Matrix: Water

Date Received: 05/04/13 09:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 14:08	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 14:08	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 14:08	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 14:08	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 14:08	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 14:08	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 14:08	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 14:08	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 14:08	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 14:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 14:08	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 14:08	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 14:08	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 14:08	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 14:08	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 14:08	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 14:08	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 14:08	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 14:08	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 14:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*70 - 130*		*05/06/13 14:08*	*1*
Dibromofluoromethane	*86*		*70 - 130*		*05/06/13 14:08*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/06/13 14:08*	*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		05/06/13 08:38	05/07/13 12:16	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/06/13 08:38	05/07/13 12:16	1
Barium	**0.51**	**J**	1.0	0.15	ug/L		05/06/13 08:38	05/07/13 12:16	1
Beryllium	0.070	U	0.20	0.070	ug/L		05/06/13 08:38	05/07/13 12:16	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/06/13 08:38	05/07/13 12:16	1
Chromium	0.16	U	1.0	0.16	ug/L		05/06/13 08:38	05/07/13 12:16	1
Cobalt	0.078	U J	0.20	0.078	ug/L		05/06/13 08:38	05/07/13 12:16	1
Copper	**0.32**	**J**	1.0	0.21	ug/L		05/06/13 08:38	05/07/13 12:16	1
Lead	0.080	U	0.30	0.080	ug/L		05/06/13 08:38	05/07/13 12:16	1
Nickel	0.40	U	1.0	0.40	ug/L		05/06/13 08:38	05/07/13 12:16	1
Selenium	0.21	U	0.50	0.21	ug/L		05/06/13 08:38	05/07/13 12:16	1
Silver	0.10	U	0.20	0.10	ug/L		05/06/13 08:38	05/07/13 12:16	1
Thallium	0.10	U	0.20	0.10	ug/L		05/06/13 08:38	05/07/13 12:16	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/06/13 08:38	05/07/13 12:16	1
Zinc	2.6	U	10	2.6	ug/L		05/06/13 08:38	05/07/13 12:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	0.36	U	1.1	0.36	mg/L			05/04/13 14:37	5

Surrogate Summary

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

TestAmerica Job ID: 680-90002-1

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)
680-90002-1	LMW-6-5-13	89	85	100
680-90002-2	LMW-3-5-13	87	85	99
680-90002-3	LMW-3S-5-13	89	85	97
680-90002-4	LMW-14R-5-13	87	83	98
680-90002-4 MS	LMW-14R-5-13	89	87	97
680-90002-4 MSD	LMW-14R-5-13	101	97	107
680-90002-5	LMW-15R-5-13	88	84	97
680-90002-6	LMW-4-5-13	89	83	99
680-90002-7	DUP-1-5-13	88	85	99
680-90002-8	LMW-7-5-13	89	85	99
680-90002-9	LMW-10-5-13	88	84	98
680-90002-10	LMW-16-5-13	87	84	96
680-90002-11	TRIP BLANK (LOT # 040913)	88	86	97
680-90002-12	LMW-9D-5-13	86	84	98
680-90002-13	LMW-9S-5-13	97	103	100
680-90002-14	LMW-9-5-13	98	104	99
680-90002-15	BLANK-1-5-13	90	86	98
LCS 680-275661/4	Lab Control Sample	96	88	98
LCS 680-276334/4	Lab Control Sample	98	94	96
LCSD 680-275661/5	Lab Control Sample Dup	89	83	91
LCSD 680-276334/5	Lab Control Sample Dup	105	103	104
MB 680-275661/7	Method Blank	88	85	97
MB 680-276334/7	Method Blank	97	105	98

Surrogate Legend

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

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

Lab Sample ID: MB 680-275661/7
Matrix: Water
Analysis Batch: 275661

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			05/06/13 13:08	1
Benzene	0.25	U	1.0	0.25	ug/L			05/06/13 13:08	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/06/13 13:08	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/06/13 13:08	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/06/13 13:08	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/06/13 13:08	1
Bromomethane	2.0	U	5.0	2.0	ug/L			05/06/13 13:08	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/06/13 13:08	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 13:08	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/06/13 13:08	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/06/13 13:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/06/13 13:08	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 13:08	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/06/13 13:08	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/06/13 13:08	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/06/13 13:08	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/06/13 13:08	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/06/13 13:08	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/06/13 13:08	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/06/13 13:08	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/06/13 13:08	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/06/13 13:08	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 13:08	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/06/13 13:08	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 13:08	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/06/13 13:08	1
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/06/13 13:08	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/06/13 13:08	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/06/13 13:08	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/06/13 13:08	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 13:08	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/06/13 13:08	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/06/13 13:08	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/06/13 13:08	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/06/13 13:08	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/06/13 13:08	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/06/13 13:08	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/06/13 13:08	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/06/13 13:08	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/06/13 13:08	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/06/13 13:08	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/06/13 13:08	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/06/13 13:08	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/06/13 13:08	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/06/13 13:08	1
Styrene	0.11	U	1.0	0.11	ug/L			05/06/13 13:08	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/06/13 13:08	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/06/13 13:08	1

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

Lab Sample ID: MB 680-275661/7
Matrix: Water
Analysis Batch: 275661

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			05/06/13 13:08	1
Toluene	0.33	U	1.0	0.33	ug/L			05/06/13 13:08	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/06/13 13:08	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/06/13 13:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/06/13 13:08	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/06/13 13:08	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/06/13 13:08	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/06/13 13:08	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/06/13 13:08	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 13:08	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/06/13 13:08	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/06/13 13:08	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/06/13 13:08	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/06/13 13:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*70 - 130*		*05/06/13 13:08*	*1*
Dibromofluoromethane	*85*		*70 - 130*		*05/06/13 13:08*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*05/06/13 13:08*	*1*

Lab Sample ID: LCS 680-275661/4
Matrix: Water
Analysis Batch: 275661

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	115		ug/L		115	39 - 162
Benzene	50.0	50.7		ug/L		101	74 - 123
Bromobenzene	50.0	46.3		ug/L		93	79 - 125
Chlorobromomethane	50.0	42.1		ug/L		84	60 - 136
Dichlorobromomethane	50.0	54.7		ug/L		109	72 - 129
Bromoform	50.0	44.3		ug/L		89	60 - 134
Bromomethane	50.0	38.6		ug/L		77	10 - 171
2-Butanone (MEK)	100	107		ug/L		107	55 - 142
n-Butylbenzene	50.0	50.2		ug/L		100	72 - 128
sec-Butylbenzene	50.0	48.2		ug/L		96	71 - 130
tert-Butylbenzene	50.0	47.9		ug/L		96	72 - 130
Carbon tetrachloride	50.0	51.5		ug/L		103	70 - 131
Chlorobenzene	50.0	46.3		ug/L		93	79 - 120
Chloroethane	50.0	38.2		ug/L		76	47 - 148
Chloroform	50.0	45.7		ug/L		91	76 - 128
Chloromethane	50.0	48.7		ug/L		97	47 - 151
2-Chlorotoluene	50.0	47.0		ug/L		94	78 - 126
4-Chlorotoluene	50.0	46.0		ug/L		92	79 - 124
Chlorodibromomethane	50.0	50.6		ug/L		101	63 - 134
1,2-Dibromo-3-Chloropropane	50.0	40.5		ug/L		81	57 - 126
Ethylene Dibromide	50.0	49.1		ug/L		98	75 - 127
1,2-Dichlorobenzene	50.0	45.9		ug/L		92	77 - 124
1,3-Dichlorobenzene	50.0	47.3		ug/L		95	79 - 123

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

Lab Sample ID: LCS 680-275661/4
Matrix: Water
Analysis Batch: 275661

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	46.1		ug/L		92	76 - 124
Dichlorodifluoromethane	50.0	45.4		ug/L		91	41 - 165
1,1-Dichloroethane	50.0	47.9		ug/L		96	69 - 132
1,2-Dichloroethane	50.0	57.9		ug/L		116	75 - 120
cis-1,2-Dichloroethene	50.0	44.0		ug/L		88	78 - 127
trans-1,2-Dichloroethene	50.0	42.8		ug/L		86	78 - 130
1,1-Dichloroethene	50.0	38.8		ug/L		78	73 - 134
1,2-Dichloropropane	50.0	58.9		ug/L		118	71 - 126
1,3-Dichloropropane	50.0	58.2		ug/L		116	73 - 125
2,2-Dichloropropane	50.0	48.8		ug/L		98	72 - 147
1,1-Dichloropropene	50.0	60.2		ug/L		120	74 - 130
cis-1,3-Dichloropropene	50.0	59.5		ug/L		119	73 - 128
trans-1,3-Dichloropropene	50.0	60.6		ug/L		121	72 - 127
Ethylbenzene	50.0	48.8		ug/L		98	78 - 125
Hexachlorobutadiene	50.0	42.4		ug/L		85	62 - 145
Isopropylbenzene	50.0	44.8		ug/L		90	72 - 129
4-Isopropyltoluene	50.0	48.0		ug/L		96	69 - 129
Methylene Chloride	50.0	42.3		ug/L		85	79 - 124
4-Methyl-2-pentanone (MIBK)	100	104		ug/L		104	51 - 143
Methyl tert-butyl ether	100	90.2		ug/L		90	76 - 126
Naphthalene	50.0	46.0		ug/L		92	56 - 136
N-Propylbenzene	50.0	47.8		ug/L		96	74 - 130
Styrene	50.0	48.4		ug/L		97	75 - 129
1,1,1,2-Tetrachloroethane	50.0	50.5		ug/L		101	68 - 132
1,1,2,2-Tetrachloroethane	50.0	46.2		ug/L		92	71 - 127
Tetrachloroethene	50.0	45.9		ug/L		92	77 - 128
Toluene	50.0	49.8		ug/L		100	77 - 125
1,2,3-Trichlorobenzene	50.0	43.6		ug/L		87	63 - 136
1,2,4-Trichlorobenzene	50.0	42.7		ug/L		85	67 - 134
1,1,1-Trichloroethane	50.0	55.2		ug/L		110	76 - 126
1,1,2-Trichloroethane	50.0	48.5		ug/L		97	69 - 127
Trichloroethene	50.0	50.1		ug/L		100	80 - 120
Trichlorofluoromethane	50.0	46.7		ug/L		93	66 - 144
1,2,3-Trichloropropane	50.0	54.3		ug/L		109	74 - 126
1,2,4-Trimethylbenzene	50.0	49.7		ug/L		99	72 - 129
1,3,5-Trimethylbenzene	50.0	49.9		ug/L		100	72 - 130
Vinyl chloride	50.0	44.9		ug/L		90	58 - 141
Isopropyl ether	50.0	50.9		ug/L		102	54 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*70 - 130*
Dibromofluoromethane	*88*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

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

Lab Sample ID: LCSD 680-275661/5
Matrix: Water
Analysis Batch: 275661

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	3	50
Benzene	50.0	46.5		ug/L		93	74 - 123	9	30
Bromobenzene	50.0	42.9		ug/L		86	79 - 125	8	30
Chlorobromomethane	50.0	46.3		ug/L		93	60 - 136	9	30
Dichlorobromomethane	50.0	51.0		ug/L		102	72 - 129	7	30
Bromoform	50.0	41.1		ug/L		82	60 - 134	7	30
Bromomethane	50.0	22.2	Q	ug/L		44	10 - 171	54	50
2-Butanone (MEK)	100	101		ug/L		101	55 - 142	6	30
n-Butylbenzene	50.0	47.0		ug/L		94	72 - 128	7	30
sec-Butylbenzene	50.0	44.8		ug/L		90	71 - 130	7	30
tert-Butylbenzene	50.0	45.0		ug/L		90	72 - 130	6	30
Carbon tetrachloride	50.0	47.4		ug/L		95	70 - 131	8	30
Chlorobenzene	50.0	43.1		ug/L		86	79 - 120	7	30
Chloroethane	50.0	40.0		ug/L		80	47 - 148	5	40
Chloroform	50.0	43.3		ug/L		87	76 - 128	5	30
Chloromethane	50.0	49.0		ug/L		98	47 - 151	1	30
2-Chlorotoluene	50.0	43.1		ug/L		86	78 - 126	8	30
4-Chlorotoluene	50.0	42.3		ug/L		85	79 - 124	8	30
Chlorodibromomethane	50.0	46.9		ug/L		94	63 - 134	8	50
1,2-Dibromo-3-Chloropropane	50.0	37.1		ug/L		74	57 - 126	9	50
Ethylene Dibromide	50.0	45.1		ug/L		90	75 - 127	8	30
1,2-Dichlorobenzene	50.0	41.8		ug/L		84	77 - 124	9	30
1,3-Dichlorobenzene	50.0	43.5		ug/L		87	79 - 123	8	30
1,4-Dichlorobenzene	50.0	42.7		ug/L		85	76 - 124	8	30
Dichlorodifluoromethane	50.0	43.0		ug/L		86	41 - 165	5	50
1,1-Dichloroethane	50.0	45.7		ug/L		91	69 - 132	5	30
1,2-Dichloroethane	50.0	52.7		ug/L		105	75 - 120	9	30
cis-1,2-Dichloroethene	50.0	42.0		ug/L		84	78 - 127	5	30
trans-1,2-Dichloroethene	50.0	40.8		ug/L		82	78 - 130	5	30
1,1-Dichloroethene	50.0	41.0		ug/L		82	73 - 134	6	30
1,2-Dichloropropane	50.0	54.9		ug/L		110	71 - 126	7	30
1,3-Dichloropropane	50.0	54.0		ug/L		108	73 - 125	7	30
2,2-Dichloropropane	50.0	45.8		ug/L		92	72 - 147	6	30
1,1-Dichloropropene	50.0	55.5		ug/L		111	74 - 130	8	30
cis-1,3-Dichloropropene	50.0	55.3		ug/L		111	73 - 128	7	30
trans-1,3-Dichloropropene	50.0	55.4		ug/L		111	72 - 127	9	50
Ethylbenzene	50.0	45.8		ug/L		92	78 - 125	6	30
Hexachlorobutadiene	50.0	43.1		ug/L		86	62 - 145	1	30
Isopropylbenzene	50.0	41.2		ug/L		82	72 - 129	8	30
4-Isopropyltoluene	50.0	45.1		ug/L		90	69 - 129	6	50
Methylene Chloride	50.0	40.5		ug/L		81	79 - 124	4	30
4-Methyl-2-pentanone (MIBK)	100	97.2		ug/L		97	51 - 143	7	30
Methyl tert-butyl ether	100	84.7		ug/L		85	76 - 126	6	30
Naphthalene	50.0	43.0		ug/L		86	56 - 136	7	30
N-Propylbenzene	50.0	44.6		ug/L		89	74 - 130	7	30
Styrene	50.0	45.0		ug/L		90	75 - 129	7	30
1,1,1,2-Tetrachloroethane	50.0	47.0		ug/L		94	68 - 132	7	30
1,1,2,2-Tetrachloroethane	50.0	43.8		ug/L		88	71 - 127	5	30

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

Lab Sample ID: LCSD 680-275661/5
Matrix: Water
Analysis Batch: 275661

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	43.2		ug/L		86	77 - 128	6	30
Toluene	50.0	45.3		ug/L		91	77 - 125	10	30
1,2,3-Trichlorobenzene	50.0	40.7		ug/L		81	63 - 136	7	30
1,2,4-Trichlorobenzene	50.0	40.5		ug/L		81	67 - 134	5	30
1,1,1-Trichloroethane	50.0	50.2		ug/L		100	76 - 126	9	30
1,1,2-Trichloroethane	50.0	45.2		ug/L		90	69 - 127	7	30
Trichloroethene	50.0	46.4		ug/L		93	80 - 120	8	30
Trichlorofluoromethane	50.0	49.5		ug/L		99	66 - 144	6	30
1,2,3-Trichloropropane	50.0	50.6		ug/L		101	74 - 126	7	30
1,2,4-Trimethylbenzene	50.0	46.1		ug/L		92	72 - 129	7	50
1,3,5-Trimethylbenzene	50.0	46.3		ug/L		93	72 - 130	8	50
Vinyl chloride	50.0	43.9		ug/L		88	58 - 141	2	30
Isopropyl ether	50.0	51.8		ug/L		104	54 - 153	2	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*89*		*70 - 130*
Dibromofluoromethane	*83*		*70 - 130*
Toluene-d8 (Surr)	*91*		*70 - 130*

Lab Sample ID: 680-90002-4 MS
Matrix: Water
Analysis Batch: 275661

Client Sample ID: LMW-14R-5-13
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	75.8		ug/L		76	39 - 162
Benzene	0.25	U	50.0	47.9		ug/L		96	74 - 123
Bromobenzene	0.16	U	50.0	43.6		ug/L		87	79 - 125
Chlorobromomethane	0.14	U	50.0	52.4		ug/L		105	60 - 136
Dichlorobromomethane	0.25	U	50.0	50.4		ug/L		101	72 - 129
Bromoform	0.50	U	50.0	42.4		ug/L		85	60 - 134
Bromomethane	2.0	U Q	50.0	18.5		ug/L		37	10 - 171
2-Butanone (MEK)	1.0	U	100	83.8		ug/L		84	55 - 142
n-Butylbenzene	0.10	U	50.0	45.3		ug/L		91	72 - 128
sec-Butylbenzene	0.16	U	50.0	46.0		ug/L		92	71 - 130
tert-Butylbenzene	0.12	U	50.0	46.3		ug/L		93	72 - 130
Carbon tetrachloride	0.50	U	50.0	54.7		ug/L		109	70 - 131
Chlorobenzene	0.25	U	50.0	44.6		ug/L		89	79 - 120
Chloroethane	2.0	U	50.0	43.7		ug/L		87	47 - 148
Chloroform	0.14	U	50.0	44.8		ug/L		90	76 - 128
Chloromethane	0.33	U	50.0	52.7		ug/L		105	47 - 151
2-Chlorotoluene	0.17	U	50.0	45.6		ug/L		91	78 - 126
4-Chlorotoluene	0.27	U	50.0	44.4		ug/L		89	79 - 124
Chlorodibromomethane	0.10	U	50.0	45.7		ug/L		91	63 - 134
1,2-Dibromo-3-Chloropropane	0.44	U	50.0	39.9		ug/L		80	57 - 126
Ethylene Dibromide	0.25	U	50.0	46.8		ug/L		94	75 - 127
1,2-Dichlorobenzene	0.21	U	50.0	43.3		ug/L		87	77 - 124
1,3-Dichlorobenzene	0.25	U	50.0	44.8		ug/L		90	79 - 123
1,4-Dichlorobenzene	0.28	U	50.0	43.6		ug/L		87	76 - 124

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

Lab Sample ID: 680-90002-4 MS
Matrix: Water
Analysis Batch: 275661

Client Sample ID: LMW-14R-5-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	0.25	U	50.0	51.2		ug/L		102	41 - 165
1,1-Dichloroethane	0.25	U	50.0	45.9		ug/L		92	69 - 132
1,2-Dichloroethane	0.10	U	50.0	51.3		ug/L		103	75 - 120
cis-1,2-Dichloroethene	0.15	U	50.0	41.2		ug/L		82	78 - 127
trans-1,2-Dichloroethene	0.20	U	50.0	42.0		ug/L		84	78 - 130
1,1-Dichloroethene	0.11	U	50.0	39.2		ug/L		78	73 - 134
1,2-Dichloropropane	0.13	U	50.0	48.2		ug/L		96	71 - 126
1,3-Dichloropropane	0.13	U	50.0	47.7		ug/L		95	73 - 125
2,2-Dichloropropane	0.12	U	50.0	42.7		ug/L		85	72 - 147
1,1-Dichloropropene	0.25	U	50.0	49.6		ug/L		99	74 - 130
cis-1,3-Dichloropropene	0.11	U	50.0	47.0		ug/L		94	73 - 128
trans-1,3-Dichloropropene	0.21	U	50.0	47.9		ug/L		96	72 - 127
Ethylbenzene	0.11	U	50.0	46.9		ug/L		94	78 - 125
Hexachlorobutadiene	0.40	U	50.0	40.2		ug/L		80	62 - 145
Isopropylbenzene	0.10	U	50.0	46.4		ug/L		93	72 - 129
4-Isopropyltoluene	0.13	U	50.0	46.2		ug/L		92	69 - 129
Methylene Chloride	1.0	U	50.0	47.0		ug/L		94	79 - 124
4-Methyl-2-pentanone (MIBK)	1.0	U	100	96.6		ug/L		97	51 - 143
Methyl tert-butyl ether	0.20	U	100	78.2		ug/L		78	76 - 126
Naphthalene	1.0	U	50.0	39.6		ug/L		79	56 - 136
N-Propylbenzene	0.15	U	50.0	46.1		ug/L		92	74 - 130
Styrene	0.11	U	50.0	45.9		ug/L		92	75 - 129
1,1,1,2-Tetrachloroethane	0.33	U	50.0	46.3		ug/L		93	68 - 132
1,1,2,2-Tetrachloroethane	0.18	U	50.0	44.3		ug/L		89	71 - 127
Tetrachloroethene	0.15	U	50.0	44.1		ug/L		88	77 - 128
Toluene	0.33	U	50.0	48.2		ug/L		96	77 - 125
1,2,3-Trichlorobenzene	0.35	U	50.0	38.3		ug/L		77	63 - 136
1,2,4-Trichlorobenzene	0.25	U	50.0	38.0		ug/L		76	67 - 134
1,1,1-Trichloroethane	0.50	U	50.0	53.2		ug/L		106	76 - 126
1,1,2-Trichloroethane	0.13	U	50.0	46.7		ug/L		93	69 - 127
Trichloroethene	0.13	U	50.0	46.0		ug/L		92	80 - 120
Trichlorofluoromethane	0.25	U	50.0	59.5		ug/L		119	66 - 144
1,2,3-Trichloropropane	0.41	U	50.0	45.4		ug/L		91	74 - 126
1,2,4-Trimethylbenzene	0.33	U	50.0	47.2		ug/L		94	72 - 129
1,3,5-Trimethylbenzene	0.33	U	50.0	46.7		ug/L		93	72 - 130
Vinyl chloride	0.18	U	50.0	47.9		ug/L		96	58 - 141

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*89*		*70 - 130*
Dibromofluoromethane	*87*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: 680-90002-4 MSD
Matrix: Water
Analysis Batch: 275661

Client Sample ID: LMW-14R-5-13
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	98.8		ug/L		99	39 - 162	26	50

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

Lab Sample ID: 680-90002-4 MSD
Matrix: Water
Analysis Batch: 275661

Client Sample ID: LMW-14R-5-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.25	U	50.0	52.7		ug/L		105	74 - 123	10	30
Bromobenzene	0.16	U	50.0	49.7		ug/L		99	79 - 125	13	30
Chlorobromomethane	0.14	U	50.0	56.9		ug/L		114	60 - 136	8	30
Dichlorobromomethane	0.25	U	50.0	55.2		ug/L		110	72 - 129	9	30
Bromoform	0.50	U	50.0	47.5		ug/L		95	60 - 134	12	30
Bromomethane	2.0	U Q	50.0	21.6		ug/L		43	10 - 171	16	50
2-Butanone (MEK)	1.0	U	100	91.0		ug/L		91	55 - 142	8	30
n-Butylbenzene	0.10	U	50.0	53.9		ug/L		108	72 - 128	17	30
sec-Butylbenzene	0.16	U	50.0	53.9		ug/L		108	71 - 130	16	30
tert-Butylbenzene	0.12	U	50.0	53.4		ug/L		107	72 - 130	14	30
Carbon tetrachloride	0.50	U	50.0	60.2		ug/L		120	70 - 131	10	30
Chlorobenzene	0.25	U	50.0	49.7		ug/L		99	79 - 120	11	30
Chloroethane	2.0	U	50.0	49.3		ug/L		99	47 - 148	12	40
Chloroform	0.14	U	50.0	48.5		ug/L		97	76 - 128	8	30
Chloromethane	0.33	U	50.0	59.9		ug/L		120	47 - 151	13	30
2-Chlorotoluene	0.17	U	50.0	51.2		ug/L		102	78 - 126	12	30
4-Chlorotoluene	0.27	U	50.0	52.1		ug/L		104	79 - 124	16	30
Chlorodibromomethane	0.10	U	50.0	51.1		ug/L		102	63 - 134	11	50
1,2-Dibromo-3-Chloropropane	0.44	U	50.0	44.7		ug/L		89	57 - 126	11	50
Ethylene Dibromide	0.25	U	50.0	50.8		ug/L		102	75 - 127	8	30
1,2-Dichlorobenzene	0.21	U	50.0	49.7		ug/L		99	77 - 124	14	30
1,3-Dichlorobenzene	0.25	U	50.0	51.4		ug/L		103	79 - 123	14	30
1,4-Dichlorobenzene	0.28	U	50.0	50.1		ug/L		100	76 - 124	14	30
Dichlorodifluoromethane	0.25	U	50.0	57.6		ug/L		115	41 - 165	12	50
1,1-Dichloroethane	0.25	U	50.0	50.2		ug/L		100	69 - 132	9	30
1,2-Dichloroethane	0.10	U	50.0	56.0		ug/L		112	75 - 120	9	30
cis-1,2-Dichloroethene	0.15	U	50.0	46.5		ug/L		93	78 - 127	12	30
trans-1,2-Dichloroethene	0.20	U	50.0	46.3		ug/L		93	78 - 130	10	30
1,1-Dichloroethene	0.11	U	50.0	50.5		ug/L		101	73 - 134	25	30
1,2-Dichloropropane	0.13	U	50.0	52.4		ug/L		105	71 - 126	8	30
1,3-Dichloropropane	0.13	U	50.0	52.9		ug/L		106	73 - 125	10	30
2,2-Dichloropropane	0.12	U	50.0	46.8		ug/L		94	72 - 147	9	30
1,1-Dichloropropene	0.25	U	50.0	55.8		ug/L		112	74 - 130	12	30
cis-1,3-Dichloropropene	0.11	U	50.0	52.2		ug/L		104	73 - 128	10	30
trans-1,3-Dichloropropene	0.21	U	50.0	52.9		ug/L		106	72 - 127	10	50
Ethylbenzene	0.11	U	50.0	52.7		ug/L		105	78 - 125	12	30
Hexachlorobutadiene	0.40	U	50.0	48.1		ug/L		96	62 - 145	18	30
Isopropylbenzene	0.10	U	50.0	53.3		ug/L		107	72 - 129	14	30
4-Isopropyltoluene	0.13	U	50.0	53.3		ug/L		107	69 - 129	14	50
Methylene Chloride	1.0	U	50.0	51.8		ug/L		104	79 - 124	10	30
4-Methyl-2-pentanone (MIBK)	1.0	U	100	104		ug/L		104	51 - 143	8	30
Methyl tert-butyl ether	0.20	U	100	86.7		ug/L		87	76 - 126	10	30
Naphthalene	1.0	U	50.0	47.1		ug/L		94	56 - 136	17	30
N-Propylbenzene	0.15	U	50.0	53.2		ug/L		106	74 - 130	14	30
Styrene	0.11	U	50.0	51.5		ug/L		103	75 - 129	11	30
1,1,1,2-Tetrachloroethane	0.33	U	50.0	51.3		ug/L		103	68 - 132	10	30
1,1,2,2-Tetrachloroethane	0.18	U	50.0	48.8		ug/L		98	71 - 127	10	30
Tetrachloroethene	0.15	U	50.0	50.2		ug/L		100	77 - 128	13	30

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

Lab Sample ID: 680-90002-4 MSD
Matrix: Water
Analysis Batch: 275661

Client Sample ID: LMW-14R-5-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	0.33	U	50.0	53.5		ug/L		107	77 - 125	11	30
1,2,3-Trichlorobenzene	0.35	U	50.0	46.3		ug/L		93	63 - 136	19	30
1,2,4-Trichlorobenzene	0.25	U	50.0	45.9		ug/L		92	67 - 134	19	30
1,1,1-Trichloroethane	0.50	U	50.0	58.8		ug/L		118	76 - 126	10	30
1,1,2-Trichloroethane	0.13	U	50.0	51.7		ug/L		103	69 - 127	10	30
Trichloroethene	0.13	U	50.0	50.7		ug/L		101	80 - 120	10	30
Trichlorofluoromethane	0.25	U	50.0	67.9		ug/L		136	66 - 144	13	30
1,2,3-Trichloropropane	0.41	U	50.0	50.4		ug/L		101	74 - 126	10	30
1,2,4-Trimethylbenzene	0.33	U	50.0	54.1		ug/L		108	72 - 129	13	50
1,3,5-Trimethylbenzene	0.33	U	50.0	54.1		ug/L		108	72 - 130	15	50
Vinyl chloride	0.18	U	50.0	54.8		ug/L		110	58 - 141	13	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
Dibromofluoromethane	*97*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: MB 680-276334/7
Matrix: Water
Analysis Batch: 276334

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			05/10/13 11:52	1
Benzene	0.25	U	1.0	0.25	ug/L			05/10/13 11:52	1
Bromobenzene	0.16	U	1.0	0.16	ug/L			05/10/13 11:52	1
Chlorobromomethane	0.14	U	1.0	0.14	ug/L			05/10/13 11:52	1
Dichlorobromomethane	0.25	U	1.0	0.25	ug/L			05/10/13 11:52	1
Bromoform	0.50	U	1.0	0.50	ug/L			05/10/13 11:52	1
Bromomethane	2.0	U	5.0	2.0	ug/L			05/10/13 11:52	1
2-Butanone (MEK)	1.0	U	10	1.0	ug/L			05/10/13 11:52	1
n-Butylbenzene	0.10	U	1.0	0.10	ug/L			05/10/13 11:52	1
sec-Butylbenzene	0.16	U	1.0	0.16	ug/L			05/10/13 11:52	1
tert-Butylbenzene	0.12	U	1.0	0.12	ug/L			05/10/13 11:52	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			05/10/13 11:52	1
Chlorobenzene	0.25	U	1.0	0.25	ug/L			05/10/13 11:52	1
Chloroethane	2.0	U	5.0	2.0	ug/L			05/10/13 11:52	1
Chloroform	0.14	U	1.0	0.14	ug/L			05/10/13 11:52	1
Chloromethane	0.33	U	1.0	0.33	ug/L			05/10/13 11:52	1
2-Chlorotoluene	0.17	U	1.0	0.17	ug/L			05/10/13 11:52	1
4-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/10/13 11:52	1
Chlorodibromomethane	0.10	U	1.0	0.10	ug/L			05/10/13 11:52	1
1,2-Dibromo-3-Chloropropane	0.44	U	1.0	0.44	ug/L			05/10/13 11:52	1
Ethylene Dibromide	0.25	U	1.0	0.25	ug/L			05/10/13 11:52	1
1,2-Dichlorobenzene	0.21	U	1.0	0.21	ug/L			05/10/13 11:52	1
1,3-Dichlorobenzene	0.25	U	1.0	0.25	ug/L			05/10/13 11:52	1
1,4-Dichlorobenzene	0.28	U	1.0	0.28	ug/L			05/10/13 11:52	1
Dichlorodifluoromethane	0.25	U	1.0	0.25	ug/L			05/10/13 11:52	1
1,1-Dichloroethane	0.25	U	1.0	0.25	ug/L			05/10/13 11:52	1

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

Lab Sample ID: MB 680-276334/7
Matrix: Water
Analysis Batch: 276334

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	0.10	U	1.0	0.10	ug/L			05/10/13 11:52	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			05/10/13 11:52	1
trans-1,2-Dichloroethene	0.20	U	1.0	0.20	ug/L			05/10/13 11:52	1
1,1-Dichloroethene	0.11	U	1.0	0.11	ug/L			05/10/13 11:52	1
1,2-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/10/13 11:52	1
1,3-Dichloropropane	0.13	U	1.0	0.13	ug/L			05/10/13 11:52	1
2,2-Dichloropropane	0.12	U	1.0	0.12	ug/L			05/10/13 11:52	1
1,1-Dichloropropene	0.25	U	1.0	0.25	ug/L			05/10/13 11:52	1
cis-1,3-Dichloropropene	0.11	U	1.0	0.11	ug/L			05/10/13 11:52	1
trans-1,3-Dichloropropene	0.21	U	1.0	0.21	ug/L			05/10/13 11:52	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			05/10/13 11:52	1
Hexachlorobutadiene	0.40	U	1.0	0.40	ug/L			05/10/13 11:52	1
Isopropylbenzene	0.10	U	1.0	0.10	ug/L			05/10/13 11:52	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			05/10/13 11:52	1
Methylene Chloride	1.0	U	5.0	1.0	ug/L			05/10/13 11:52	1
4-Methyl-2-pentanone (MIBK)	1.0	U	10	1.0	ug/L			05/10/13 11:52	1
Methyl tert-butyl ether	0.20	U	10	0.20	ug/L			05/10/13 11:52	1
Naphthalene	1.0	U	5.0	1.0	ug/L			05/10/13 11:52	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			05/10/13 11:52	1
Styrene	0.11	U	1.0	0.11	ug/L			05/10/13 11:52	1
1,1,1,2-Tetrachloroethane	0.33	U	1.0	0.33	ug/L			05/10/13 11:52	1
1,1,2,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			05/10/13 11:52	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			05/10/13 11:52	1
Toluene	0.33	U	1.0	0.33	ug/L			05/10/13 11:52	1
1,2,3-Trichlorobenzene	0.35	U	1.0	0.35	ug/L			05/10/13 11:52	1
1,2,4-Trichlorobenzene	0.25	U	1.0	0.25	ug/L			05/10/13 11:52	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			05/10/13 11:52	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			05/10/13 11:52	1
Trichloroethene	0.13	U	1.0	0.13	ug/L			05/10/13 11:52	1
Trichlorofluoromethane	0.25	U	1.0	0.25	ug/L			05/10/13 11:52	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			05/10/13 11:52	1
1,2,4-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/10/13 11:52	1
1,3,5-Trimethylbenzene	0.33	U	1.0	0.33	ug/L			05/10/13 11:52	1
Vinyl chloride	0.18	U	1.0	0.18	ug/L			05/10/13 11:52	1
1-Chlorohexane	0.27	U	1.0	0.27	ug/L			05/10/13 11:52	1
Isopropyl ether	0.24	U	10	0.24	ug/L			05/10/13 11:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*05/10/13 11:52*	*1*
Dibromofluoromethane	*105*		*70 - 130*		*05/10/13 11:52*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/10/13 11:52*	*1*

Lab Sample ID: LCS 680-276334/4
Matrix: Water
Analysis Batch: 276334

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	101		ug/L		101	39 - 162

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

Lab Sample ID: LCS 680-276334/4
Matrix: Water
Analysis Batch: 276334

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	46.5		ug/L		93	74 - 123
Bromobenzene	50.0	50.1		ug/L		100	79 - 125
Chlorobromomethane	50.0	46.4		ug/L		93	60 - 136
Dichlorobromomethane	50.0	52.6		ug/L		105	72 - 129
Bromoform	50.0	47.6		ug/L		95	60 - 134
Bromomethane	50.0	22.3		ug/L		45	10 - 171
2-Butanone (MEK)	100	95.6		ug/L		96	55 - 142
n-Butylbenzene	50.0	51.3		ug/L		103	72 - 128
sec-Butylbenzene	50.0	49.9		ug/L		100	71 - 130
tert-Butylbenzene	50.0	49.4		ug/L		99	72 - 130
Carbon tetrachloride	50.0	52.0		ug/L		104	70 - 131
Chlorobenzene	50.0	47.8		ug/L		96	79 - 120
Chloroethane	50.0	36.2		ug/L		72	47 - 148
Chloroform	50.0	46.2		ug/L		92	76 - 128
Chloromethane	50.0	44.1		ug/L		88	47 - 151
2-Chlorotoluene	50.0	49.6		ug/L		99	78 - 126
4-Chlorotoluene	50.0	49.8		ug/L		100	79 - 124
Chlorodibromomethane	50.0	53.9		ug/L		108	63 - 134
1,2-Dibromo-3-Chloropropane	50.0	59.5		ug/L		119	57 - 126
Ethylene Dibromide	50.0	51.7		ug/L		103	75 - 127
1,2-Dichlorobenzene	50.0	49.6		ug/L		99	77 - 124
1,3-Dichlorobenzene	50.0	49.5		ug/L		99	79 - 123
1,4-Dichlorobenzene	50.0	49.8		ug/L		100	76 - 124
Dichlorodifluoromethane	50.0	52.4		ug/L		105	41 - 165
1,1-Dichloroethane	50.0	45.1		ug/L		90	69 - 132
1,2-Dichloroethane	50.0	50.0		ug/L		100	75 - 120
cis-1,2-Dichloroethene	50.0	44.8		ug/L		90	78 - 127
trans-1,2-Dichloroethene	50.0	45.2		ug/L		90	78 - 130
1,1-Dichloroethene	50.0	46.9		ug/L		94	73 - 134
1,2-Dichloropropane	50.0	47.6		ug/L		95	71 - 126
1,3-Dichloropropane	50.0	50.4		ug/L		101	73 - 125
2,2-Dichloropropane	50.0	50.7		ug/L		101	72 - 147
1,1-Dichloropropene	50.0	48.3		ug/L		97	74 - 130
cis-1,3-Dichloropropene	50.0	51.5		ug/L		103	73 - 128
trans-1,3-Dichloropropene	50.0	53.7		ug/L		107	72 - 127
Ethylbenzene	50.0	47.4		ug/L		95	78 - 125
Hexachlorobutadiene	50.0	53.1		ug/L		106	62 - 145
Isopropylbenzene	50.0	48.7		ug/L		97	72 - 129
4-Isopropyltoluene	50.0	51.0		ug/L		102	69 - 129
Methylene Chloride	50.0	46.3		ug/L		93	79 - 124
4-Methyl-2-pentanone (MIBK)	100	103		ug/L		103	51 - 143
Methyl tert-butyl ether	100	98.3		ug/L		98	76 - 126
Naphthalene	50.0	59.5		ug/L		119	56 - 136
N-Propylbenzene	50.0	49.5		ug/L		99	74 - 130
Styrene	50.0	49.8		ug/L		100	75 - 129
1,1,1,2-Tetrachloroethane	50.0	51.0		ug/L		102	68 - 132
1,1,2,2-Tetrachloroethane	50.0	50.9		ug/L		102	71 - 127
Tetrachloroethene	50.0	47.8		ug/L		96	77 - 128

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

Lab Sample ID: LCS 680-276334/4
Matrix: Water
Analysis Batch: 276334

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	50.0	46.6		ug/L		93	77 - 125
1,2,3-Trichlorobenzene	50.0	54.5		ug/L		109	63 - 136
1,2,4-Trichlorobenzene	50.0	53.6		ug/L		107	67 - 134
1,1,1-Trichloroethane	50.0	50.6		ug/L		101	76 - 126
1,1,2-Trichloroethane	50.0	49.0		ug/L		98	69 - 127
Trichloroethene	50.0	48.3		ug/L		97	80 - 120
Trichlorofluoromethane	50.0	42.1		ug/L		84	66 - 144
1,2,3-Trichloropropane	50.0	51.6		ug/L		103	74 - 126
1,2,4-Trimethylbenzene	50.0	49.7		ug/L		99	72 - 129
1,3,5-Trimethylbenzene	50.0	50.3		ug/L		101	72 - 130
Vinyl chloride	50.0	41.8		ug/L		84	58 - 141
Isopropyl ether	50.0	44.6		ug/L		89	54 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*70 - 130*
Dibromofluoromethane	*94*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 680-276334/5
Matrix: Water
Analysis Batch: 276334

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	106		ug/L		106	39 - 162	5	50
Benzene	50.0	50.9		ug/L		102	74 - 123	9	30
Bromobenzene	50.0	53.2		ug/L		106	79 - 125	6	30
Chlorobromomethane	50.0	50.9		ug/L		102	60 - 136	9	30
Dichlorobromomethane	50.0	54.8		ug/L		110	72 - 129	4	30
Bromoform	50.0	45.8		ug/L		92	60 - 134	4	30
Bromomethane	50.0	51.8	Q	ug/L		104	10 - 171	80	50
2-Butanone (MEK)	100	101		ug/L		101	55 - 142	5	30
n-Butylbenzene	50.0	53.7		ug/L		107	72 - 128	5	30
sec-Butylbenzene	50.0	52.3		ug/L		105	71 - 130	5	30
tert-Butylbenzene	50.0	52.3		ug/L		105	72 - 130	6	30
Carbon tetrachloride	50.0	54.3		ug/L		109	70 - 131	4	30
Chlorobenzene	50.0	51.8		ug/L		104	79 - 120	8	30
Chloroethane	50.0	63.0	Q	ug/L		126	47 - 148	54	40
Chloroform	50.0	51.1		ug/L		102	76 - 128	10	30
Chloromethane	50.0	49.1		ug/L		98	47 - 151	11	30
2-Chlorotoluene	50.0	52.0		ug/L		104	78 - 126	5	30
4-Chlorotoluene	50.0	53.6		ug/L		107	79 - 124	7	30
Chlorodibromomethane	50.0	54.0		ug/L		108	63 - 134	0	50
1,2-Dibromo-3-Chloropropane	50.0	56.8		ug/L		114	57 - 126	5	50
Ethylene Dibromide	50.0	54.2		ug/L		108	75 - 127	5	30
1,2-Dichlorobenzene	50.0	52.8		ug/L		106	77 - 124	6	30
1,3-Dichlorobenzene	50.0	52.8		ug/L		106	79 - 123	6	30
1,4-Dichlorobenzene	50.0	53.0		ug/L		106	76 - 124	6	30
Dichlorodifluoromethane	50.0	55.7		ug/L		111	41 - 165	6	50

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

Lab Sample ID: LCSD 680-276334/5
Matrix: Water
Analysis Batch: 276334

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
1,1-Dichloroethane			50.0	50.7		ug/L		101	69 - 132	12	30
1,2-Dichloroethane			50.0	54.1		ug/L		108	75 - 120	8	30
cis-1,2-Dichloroethene			50.0	50.3		ug/L		101	78 - 127	12	30
trans-1,2-Dichloroethene			50.0	50.4		ug/L		101	78 - 130	11	30
1,1-Dichloroethene			50.0	51.1		ug/L		102	73 - 134	9	30
1,2-Dichloropropane			50.0	52.3		ug/L		105	71 - 126	10	30
1,3-Dichloropropane			50.0	53.8		ug/L		108	73 - 125	7	30
2,2-Dichloropropane			50.0	53.5		ug/L		107	72 - 147	5	30
1,1-Dichloropropene			50.0	52.5		ug/L		105	74 - 130	8	30
cis-1,3-Dichloropropene			50.0	54.4		ug/L		109	73 - 128	6	30
trans-1,3-Dichloropropene			50.0	54.6		ug/L		109	72 - 127	2	50
Ethylbenzene			50.0	50.9		ug/L		102	78 - 125	7	30
Hexachlorobutadiene			50.0	58.8		ug/L		118	62 - 145	10	30
Isopropylbenzene			50.0	51.7		ug/L		103	72 - 129	6	30
4-Isopropyltoluene			50.0	53.8		ug/L		108	69 - 129	5	50
Methylene Chloride			50.0	50.6		ug/L		101	79 - 124	9	30
4-Methyl-2-pentanone (MIBK)			100	108		ug/L		108	51 - 143	4	30
Methyl tert-butyl ether			100	106		ug/L		106	76 - 126	7	30
Naphthalene			50.0	61.0		ug/L		122	56 - 136	3	30
N-Propylbenzene			50.0	53.0		ug/L		106	74 - 130	7	30
Styrene			50.0	52.6		ug/L		105	75 - 129	5	30
1,1,1,2-Tetrachloroethane			50.0	54.3		ug/L		109	68 - 132	6	30
1,1,2,2-Tetrachloroethane			50.0	53.1		ug/L		106	71 - 127	4	30
Tetrachloroethene			50.0	51.6		ug/L		103	77 - 128	8	30
Toluene			50.0	49.8		ug/L		100	77 - 125	7	30
1,2,3-Trichlorobenzene			50.0	56.4		ug/L		113	63 - 136	3	30
1,2,4-Trichlorobenzene			50.0	55.7		ug/L		111	67 - 134	4	30
1,1,1-Trichloroethane			50.0	53.4		ug/L		107	76 - 126	6	30
1,1,2-Trichloroethane			50.0	52.7		ug/L		105	69 - 127	7	30
Trichloroethene			50.0	52.7		ug/L		105	80 - 120	9	30
Trichlorofluoromethane			50.0	49.8		ug/L		100	66 - 144	17	30
1,2,3-Trichloropropane			50.0	54.2		ug/L		108	74 - 126	5	30
1,2,4-Trimethylbenzene			50.0	52.3		ug/L		105	72 - 129	5	50
1,3,5-Trimethylbenzene			50.0	53.1		ug/L		106	72 - 130	6	50
Vinyl chloride			50.0	46.9		ug/L		94	58 - 141	11	30
Isopropyl ether			50.0	47.0		ug/L		94	54 - 153	5	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*103*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

QC Sample Results

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

TestAmerica Job ID: 680-90002-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-275574/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275778 — **Prep Batch: 275574**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		05/06/13 08:38	05/07/13 11:43	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/06/13 08:38	05/07/13 11:43	1
Barium	0.15	U	1.0	0.15	ug/L		05/06/13 08:38	05/07/13 11:43	1
Beryllium	0.070	U	0.20	0.070	ug/L		05/06/13 08:38	05/07/13 11:43	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/06/13 08:38	05/07/13 11:43	1
Chromium	0.16	U	1.0	0.16	ug/L		05/06/13 08:38	05/07/13 11:43	1
Cobalt	0.078	U	0.20	0.078	ug/L		05/06/13 08:38	05/07/13 11:43	1
Copper	0.21	U	1.0	0.21	ug/L		05/06/13 08:38	05/07/13 11:43	1
Lead	0.080	U	0.30	0.080	ug/L		05/06/13 08:38	05/07/13 11:43	1
Nickel	0.40	U	1.0	0.40	ug/L		05/06/13 08:38	05/07/13 11:43	1
Selenium	0.21	U	0.50	0.21	ug/L		05/06/13 08:38	05/07/13 11:43	1
Silver	0.10	U	0.20	0.10	ug/L		05/06/13 08:38	05/07/13 11:43	1
Thallium	0.10	U	0.20	0.10	ug/L		05/06/13 08:38	05/07/13 11:43	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/06/13 08:38	05/07/13 11:43	1
Zinc	2.6	U	10	2.6	ug/L		05/06/13 08:38	05/07/13 11:43	1

Lab Sample ID: LCS 680-275574/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275778 — **Prep Batch: 275574**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	20.0	22.3		ug/L		111	75 - 125
Arsenic	40.0	40.9		ug/L		102	75 - 125
Barium	40.0	40.7		ug/L		102	75 - 125
Beryllium	20.0	22.4		ug/L		112	75 - 125
Cadmium	20.0	21.3		ug/L		106	75 - 125
Chromium	40.0	35.1		ug/L		88	75 - 125
Cobalt	20.0	16.0		ug/L		80	75 - 125
Copper	40.0	35.7		ug/L		89	75 - 125
Lead	20.0	19.9		ug/L		100	75 - 125
Nickel	40.0	35.2		ug/L		88	75 - 125
Selenium	40.0	46.3		ug/L		116	75 - 125
Silver	20.0	20.5		ug/L		103	75 - 125
Thallium	16.0	15.8		ug/L		99	75 - 125
Vanadium	40.0	34.6		ug/L		86	75 - 125
Zinc	40.0	43.3		ug/L		108	75 - 125

Lab Sample ID: 680-90002-15 MS — **Client Sample ID: BLANK-1-5-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275778 — **Prep Batch: 275574**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.99	U	20.0	22.3		ug/L		111	75 - 125
Arsenic	0.40	U	40.0	40.7		ug/L		102	75 - 125
Barium	0.51	J	40.0	41.4		ug/L		102	75 - 125
Beryllium	0.070	U	20.0	22.8		ug/L		114	75 - 125
Cadmium	0.20	U	20.0	21.2		ug/L		106	75 - 125
Chromium	0.16	U	40.0	35.8		ug/L		89	75 - 125

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

Lab Sample ID: 680-90002-15 MS — **Client Sample ID: BLANK-1-5-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275778 — **Prep Batch: 275574**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.078	U J	20.0	16.3		ug/L		81	75 - 125
Copper	0.32	J	40.0	36.1		ug/L		90	75 - 125
Lead	0.080	U	20.0	19.8		ug/L		99	75 - 125
Nickel	0.40	U	40.0	36.0		ug/L		90	75 - 125
Selenium	0.21	U	40.0	45.7		ug/L		114	75 - 125
Silver	0.10	U	20.0	20.5		ug/L		102	75 - 125
Thallium	0.10	U	16.0	16.1		ug/L		100	75 - 125
Vanadium	1.4	U	40.0	35.3		ug/L		88	75 - 125
Zinc	2.6	U	40.0	42.7		ug/L		107	75 - 125

Lab Sample ID: 680-90002-15 MSD — **Client Sample ID: BLANK-1-5-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275778 — **Prep Batch: 275574**

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	21.6		ug/L		108	75 - 125	3	20
Arsenic	0.40	U	40.0	36.2		ug/L		91	75 - 125	12	20
Barium	0.51	J	40.0	40.2		ug/L		99	75 - 125	3	20
Beryllium	0.070	U	20.0	21.9		ug/L		110	75 - 125	4	20
Cadmium	0.20	U	20.0	20.7		ug/L		103	75 - 125	3	20
Chromium	0.16	U	40.0	31.9		ug/L		80	75 - 125	11	20
Cobalt	0.078	U J	20.0	14.4	J	ug/L		72	75 - 125	12	20
Copper	0.32	J	40.0	32.1		ug/L		80	75 - 125	12	20
Lead	0.080	U	20.0	18.9		ug/L		95	75 - 125	4	20
Nickel	0.40	U	40.0	31.8		ug/L		80	75 - 125	12	20
Selenium	0.21	U	40.0	40.7		ug/L		102	75 - 125	12	20
Silver	0.10	U	20.0	20.2		ug/L		101	75 - 125	1	20
Thallium	0.10	U	16.0	15.6		ug/L		97	75 - 125	3	20
Vanadium	1.4	U	40.0	31.6		ug/L		79	75 - 125	11	20
Zinc	2.6	U	40.0	37.8		ug/L		94	75 - 125	12	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-275630/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275630

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	0.36	U	1.1	0.36	mg/L			05/04/13 12:33	5

Lab Sample ID: LCS 680-275630/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275630

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate-NO3	22.1	21.0		mg/L		95	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 680-275630/4
Matrix: Water
Analysis Batch: 275630

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
Nitrate-NO3			22.1	21.0		mg/L		95	90 - 110	0	30

Lab Sample ID: 680-90002-12 MS
Matrix: Water
Analysis Batch: 275630

Client Sample ID: LMW-9D-5-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate-NO3	0.41	J	22.1	21.8		mg/L		97	90 - 110		

Lab Sample ID: 680-90002-12 MSD
Matrix: Water
Analysis Batch: 275630

Client Sample ID: LMW-9D-5-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate-NO3	0.41	J	22.1	21.0		mg/L		93	90 - 110	4	30

QC Association Summary

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

TestAmerica Job ID: 680-90002-1

GC/MS VOA

Analysis Batch: 275661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-90002-1	LMW-6-5-13	Total/NA	Water	8260B	
680-90002-2	LMW-3-5-13	Total/NA	Water	8260B	
680-90002-3	LMW-3S-5-13	Total/NA	Water	8260B	
680-90002-4	LMW-14R-5-13	Total/NA	Water	8260B	
680-90002-4 MS	LMW-14R-5-13	Total/NA	Water	8260B	
680-90002-4 MSD	LMW-14R-5-13	Total/NA	Water	8260B	
680-90002-5	LMW-15R-5-13	Total/NA	Water	8260B	
680-90002-6	LMW-4-5-13	Total/NA	Water	8260B	
680-90002-7	DUP-1-5-13	Total/NA	Water	8260B	
680-90002-8	LMW-7-5-13	Total/NA	Water	8260B	
680-90002-9	LMW-10-5-13	Total/NA	Water	8260B	
680-90002-10	LMW-16-5-13	Total/NA	Water	8260B	
680-90002-11	TRIP BLANK (LOT # 040913)	Total/NA	Water	8260B	
680-90002-12	LMW-9D-5-13	Total/NA	Water	8260B	
680-90002-15	BLANK-1-5-13	Total/NA	Water	8260B	
LCS 680-275661/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-275661/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-275661/7	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 276334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-90002-13	LMW-9S-5-13	Total/NA	Water	8260B	
680-90002-14	LMW-9-5-13	Total/NA	Water	8260B	
LCS 680-276334/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-276334/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-276334/7	Method Blank	Total/NA	Water	8260B	

Metals

Prep Batch: 275574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-90002-12	LMW-9D-5-13	Total/NA	Water	3030C	
680-90002-13	LMW-9S-5-13	Total/NA	Water	3030C	
680-90002-14	LMW-9-5-13	Total/NA	Water	3030C	
680-90002-15	BLANK-1-5-13	Total/NA	Water	3030C	
680-90002-15 MS	BLANK-1-5-13	Total/NA	Water	3030C	
680-90002-15 MSD	BLANK-1-5-13	Total/NA	Water	3030C	
LCS 680-275574/2-A	Lab Control Sample	Total/NA	Water	3030C	
MB 680-275574/1-A	Method Blank	Total/NA	Water	3030C	

Analysis Batch: 275778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-90002-12	LMW-9D-5-13	Total/NA	Water	6020A	275574
680-90002-13	LMW-9S-5-13	Total/NA	Water	6020A	275574
680-90002-14	LMW-9-5-13	Total/NA	Water	6020A	275574
680-90002-15	BLANK-1-5-13	Total/NA	Water	6020A	275574
680-90002-15 MS	BLANK-1-5-13	Total/NA	Water	6020A	275574
680-90002-15 MSD	BLANK-1-5-13	Total/NA	Water	6020A	275574
LCS 680-275574/2-A	Lab Control Sample	Total/NA	Water	6020A	275574
MB 680-275574/1-A	Method Blank	Total/NA	Water	6020A	275574

QC Association Summary

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

TestAmerica Job ID: 680-90002-1

General Chemistry

Analysis Batch: 275630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-90002-12	LMW-9D-5-13	Total/NA	Water	300.0	
680-90002-12 MS	LMW-9D-5-13	Total/NA	Water	300.0	
680-90002-12 MSD	LMW-9D-5-13	Total/NA	Water	300.0	
680-90002-13	LMW-9S-5-13	Total/NA	Water	300.0	
680-90002-14	LMW-9-5-13	Total/NA	Water	300.0	
680-90002-15	BLANK-1-5-13	Total/NA	Water	300.0	
LCS 680-275630/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-275630/4	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-275630/2	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

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

TestAmerica Job ID: 680-90002-1

Client Sample ID: LMW-6-5-13 — Lab Sample ID: 680-90002-1

Date Collected: 05/01/13 09:56 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 14:38	AJMC	TAL SAV

Client Sample ID: LMW-3-5-13 — Lab Sample ID: 680-90002-2

Date Collected: 05/01/13 14:15 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 15:08	AJMC	TAL SAV

Client Sample ID: LMW-3S-5-13 — Lab Sample ID: 680-90002-3

Date Collected: 05/01/13 11:40 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 15:38	AJMC	TAL SAV

Client Sample ID: LMW-14R-5-13 — Lab Sample ID: 680-90002-4

Date Collected: 05/01/13 15:45 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 16:08	AJMC	TAL SAV

Client Sample ID: LMW-15R-5-13 — Lab Sample ID: 680-90002-5

Date Collected: 05/02/13 08:35 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 16:38	AJMC	TAL SAV

Client Sample ID: LMW-4-5-13 — Lab Sample ID: 680-90002-6

Date Collected: 05/02/13 10:30 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 17:08	AJMC	TAL SAV

Lab Chronicle

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

TestAmerica Job ID: 680-90002-1

Client Sample ID: DUP-1-5-13 — Lab Sample ID: 680-90002-7

Date Collected: 05/02/13 12:30 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 17:38	AJMC	TAL SAV

Client Sample ID: LMW-7-5-13 — Lab Sample ID: 680-90002-8

Date Collected: 05/02/13 12:55 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 18:08	AJMC	TAL SAV

Client Sample ID: LMW-10-5-13 — Lab Sample ID: 680-90002-9

Date Collected: 05/02/13 14:50 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 18:38	AJMC	TAL SAV

Client Sample ID: LMW-16-5-13 — Lab Sample ID: 680-90002-10

Date Collected: 05/02/13 16:30 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 19:08	AJMC	TAL SAV

Client Sample ID: TRIP BLANK (LOT # 040913) — Lab Sample ID: 680-90002-11

Date Collected: 05/01/13 09:00 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 13:38	AJMC	TAL SAV

Client Sample ID: LMW-9D-5-13 — Lab Sample ID: 680-90002-12

Date Collected: 05/03/13 08:50 — **Matrix: Water**
Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 19:38	AJMC	TAL SAV
Total/NA	Prep	3030C			275574	05/06/13 08:38	BB	TAL SAV
Total/NA	Analysis	6020A		1	275778	05/07/13 11:56	BR	TAL SAV
Total/NA	Analysis	300.0		5	275630	05/04/13 13:19	PAT	TAL SAV

Lab Chronicle

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

TestAmerica Job ID: 680-90002-1

Client Sample ID: LMW-9S-5-13

Lab Sample ID: 680-90002-13

Date Collected: 05/03/13 09:55

Matrix: Water

Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	276334	05/10/13 14:23	AJMC	TAL SAV
Total/NA	Prep	3030C			275574	05/06/13 08:38	BB	TAL SAV
Total/NA	Analysis	6020A		1	275778	05/07/13 12:03	BR	TAL SAV
Total/NA	Analysis	300.0		5	275630	05/04/13 14:06	PAT	TAL SAV

Client Sample ID: LMW-9-5-13

Lab Sample ID: 680-90002-14

Date Collected: 05/03/13 13:50

Matrix: Water

Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	276334	05/10/13 14:53	AJMC	TAL SAV
Total/NA	Prep	3030C			275574	05/06/13 08:38	BB	TAL SAV
Total/NA	Analysis	6020A		1	275778	05/07/13 12:10	BR	TAL SAV
Total/NA	Analysis	300.0		5	275630	05/04/13 14:21	PAT	TAL SAV

Client Sample ID: BLANK-1-5-13

Lab Sample ID: 680-90002-15

Date Collected: 05/03/13 15:15

Matrix: Water

Date Received: 05/04/13 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	275661	05/06/13 14:08	AJMC	TAL SAV
Total/NA	Prep	3030C			275574	05/06/13 08:38	BB	TAL SAV
Total/NA	Analysis	6020A		1	275778	05/07/13 12:16	BR	TAL SAV
Total/NA	Analysis	300.0		5	275630	05/04/13 14:37	PAT	TAL SAV

Laboratory References:

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

Serial Number 66756

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	PROJECT NO.	PROJECT LOCATION (STATE)
LAMONT LANDFILL		NC
TAL (LAB) PROJECT MANAGER: LINDA WOLFE	P.O. NUMBER: BPA # 070	CONTRACT NO.
CLIENT (SITE) PM: KEVIN HABORAK	CLIENT PHONE	CLIENT FAX
CLIENT NAME: USACE SAVANNAH	CLIENT E-MAIL	
CLIENT ADDRESS: 100 W OGLETHORPE AVE SAVANNAH GA 31401		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 1 OF 2

STANDARD REPORT DELIVERY ✓

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ◯

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	8260-AP2 VOC									REMARKS
								ICE	PRESERVATIVE								
								NUMBER OF CONTAINERS SUBMITTED									
5-1-13	0956	LMW-6-5-13	G	X				3									
5-1-13	1415	LMW-3-5-13	G	X				3									
5-1-13	1140	LMW-35-5-13	G	X				3									
5-1-13	1545	LMW-14R-5-13	G	X				3									MS/MSD TAKEN
5-1-13	1545	MS/MSD 5-13	G	X				3									
5-2-13	0835	LMW-15R-5-13	G	X				3									
5-2-13	1030	LMW-4-5-13	G	X				3									
5-2-13	1230	DUP-1-5-13	G	X				3									
5-2-13	1255	LMW-7-5-13	G	X				3									
5-2-13	1450	LMW-10-5-13	G	X				3									
5-2-13	1630	LMW-16-5-13	G	X				3									
5-1-13	0900	TRIP BLANK	G	X				2									

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	5-3-13	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]	5/4/13	0940	YES ◯ NO ◯		680-90002	2.6°C

TAL8240-680 (1008)

5/15/2013

Serial Number 67154

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	PROJECT NO.	PROJECT LOCATION (STATE)
LAMONT LANDFILL		NC
TAL (LAB) PROJECT MANAGER: LINDA WOLFE	P.O. NUMBER: BPA# 070	CONTRACT NO.
CLIENT (SITE) PM: KEVIN MABORAK	CLIENT PHONE	CLIENT FAX
CLIENT NAME: USACE SAVANNAH	CLIENT E-MAIL	
CLIENT ADDRESS: 100 W OGLETHORPE AVE SAVANNAH GA 31401		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 2 OF 2

STANDARD REPORT DELIVERY (X)

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ( )

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	REQUIRED ANALYSIS: HNO3 GOOD-AS, METALS	ICE 300-N NITROGEN	ICE 8260-APPROVED								REMARKS
								PRESERVATIVE										
								NUMBER OF CONTAINERS SUBMITTED										
5-3-13	0850	LMW-90-5-13	G	X				1	1	3								
5-3-13	0955	LMW-95-5-13	G	X				1	1	3								
5-3-13	1350	LMW-9-5-13	G	X				1	1	3								
5-3-13	1515	BLANK-1-5-13	G	X				1	1	3								

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	5-3-13	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
	5/4/13	0940	YES ( ) NO ( )		680-90002	

TAL8240-680 (1008)

5/15/2013

Login Sample Receipt Checklist

Client: U.S. Army Corps of Engineers

Job Number: 680-90002-1

Login Number: 90002
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.	True	
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 Landfill

TestAmerica Job ID: 680-90002-1

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
A2LA	DoD ELAP		0399-01	05-31-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13 *
California	NELAP	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-13
Florida	NELAP	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-13
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAP	5	200022	11-30-13
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13 *
Kentucky	State Program	4	90084	12-31-12 *
Kentucky (UST)	State Program	4	18	03-31-13 *
Louisiana	NELAP	6	30690	06-30-13
Louisiana	NELAP	6	LA100015	12-31-13
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-13
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	01-01-14
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13 *
New Jersey	NELAP	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
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	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAP	3	68-00474	06-30-13 *
Puerto Rico	State Program	2	GA00006	01-01-14
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAP	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-13 *
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-13
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

* 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: 680-89949-1
Client Project/Site: Ft.Bragg - Lamont Landfill

For:
U.S. Army Corps of Engineers
PO BOX 889
Savannah, Georgia 31402-0889

Attn: Mr. Kevin Haborak

Authorized for release by:
5/8/2013 5:09:08 PM

Linda Wolfe, Project Manager I
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.

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Job ID: 680-89949-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: U.S. Army Corps of Engineers

Project: Ft.Bragg - Lamont Landfill

Report Number: 680-89949-1

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 05/03/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 0.2 C.

METALS (ICPMS)
Samples LMW-15R-5-13 (680-89949-1), LMW-4-5-13 (680-89949-2), DUP-1-5-13 (680-89949-3), LMW-7-5-13 (680-89949-4), LMW-10-5-13 (680-89949-5) and LMW-16-5-13 (680-89949-6) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 05/03/2013 and analyzed on 05/07/2013.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

ANIONS (NITRATE/NITRITE)
Samples LMW-15R-5-13 (680-89949-1), LMW-4-5-13 (680-89949-2), DUP-1-5-13 (680-89949-3), LMW-7-5-13 (680-89949-4), LMW-10-5-13 (680-89949-5) and LMW-16-5-13 (680-89949-6) were analyzed for Anions (Nitrate/Nitrite) in accordance with EPA Method 300.0. The samples were analyzed on 05/03/2013.

Samples LMW-15R-5-13 (680-89949-1)[5X], LMW-4-5-13 (680-89949-2)[5X], DUP-1-5-13 (680-89949-3)[5X], LMW-7-5-13 (680-89949-4)[5X], LMW-10-5-13 (680-89949-5)[5X] and LMW-16-5-13 (680-89949-6)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the Anions analyses.

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: 680-89949-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-89949-1	LMW-15R-5-13	Water	05/02/13 08:35	05/03/13 09:44
680-89949-2	LMW-4-5-13	Water	05/02/13 10:30	05/03/13 09:44
680-89949-3	DUP-1-5-13	Water	05/02/13 12:30	05/03/13 09:44
680-89949-4	LMW-7-5-13	Water	05/02/13 12:55	05/03/13 09:44
680-89949-5	LMW-10-5-13	Water	05/02/13 14:50	05/03/13 09:44
680-89949-6	LMW-16-5-13	Water	05/02/13 16:30	05/03/13 09:44

Method Summary

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

TestAmerica Job ID: 680-89949-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL SAV
300.0	Anions, Ion Chromatography	MCAWW	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: 680-89949-1

Qualifiers

Metals

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.

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

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)
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)
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: 680-89949-1

Client Sample ID: LMW-15R-5-13 — Lab Sample ID: 680-89949-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	29		1.0	0.15	ug/L	1		6020A	Total/NA
Beryllium	0.15	J	0.20	0.070	ug/L	1		6020A	Total/NA
Chromium	0.18	J	1.0	0.16	ug/L	1		6020A	Total/NA
Cobalt	0.52	J	0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.58	J	1.0	0.21	ug/L	1		6020A	Total/NA
Lead	0.087	J	0.30	0.080	ug/L	1		6020A	Total/NA
Nickel	2.2		1.0	0.40	ug/L	1		6020A	Total/NA
Thallium	0.14	J	0.20	0.10	ug/L	1		6020A	Total/NA
Nitrate-NO3	6.8		1.1	0.36	mg/L	5		300.0	Total/NA

Client Sample ID: LMW-4-5-13 — Lab Sample ID: 680-89949-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	14		1.0	0.15	ug/L	1		6020A	Total/NA
Beryllium	0.078	J	0.20	0.070	ug/L	1		6020A	Total/NA
Chromium	0.19	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	1.3		1.0	0.21	ug/L	1		6020A	Total/NA
Lead	0.13	J	0.30	0.080	ug/L	1		6020A	Total/NA
Nickel	0.77	J	1.0	0.40	ug/L	1		6020A	Total/NA
Thallium	0.15	J	0.20	0.10	ug/L	1		6020A	Total/NA
Zinc	5.9	J	10	2.6	ug/L	1		6020A	Total/NA

Client Sample ID: DUP-1-5-13 — Lab Sample ID: 680-89949-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	29		1.0	0.15	ug/L	1		6020A	Total/NA
Beryllium	0.13	J	0.20	0.070	ug/L	1		6020A	Total/NA
Chromium	0.17	J	1.0	0.16	ug/L	1		6020A	Total/NA
Cobalt	0.50		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.55	J	1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	0.98	J	1.0	0.40	ug/L	1		6020A	Total/NA
Nitrate-NO3	6.7		1.1	0.36	mg/L	5		300.0	Total/NA

Client Sample ID: LMW-7-5-13 — Lab Sample ID: 680-89949-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	4.3		1.0	0.15	ug/L	1		6020A	Total/NA
Chromium	0.24	J	1.0	0.16	ug/L	1		6020A	Total/NA
Cobalt	0.11	J	0.20	0.078	ug/L	1		6020A	Total/NA
Copper	1.1		1.0	0.21	ug/L	1		6020A	Total/NA

Client Sample ID: LMW-10-5-13 — Lab Sample ID: 680-89949-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	25		1.0	0.15	ug/L	1		6020A	Total/NA
Chromium	0.44	J	1.0	0.16	ug/L	1		6020A	Total/NA
Cobalt	0.21		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.24	J	1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	0.42	J	1.0	0.40	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: LMW-10-5-13 (Continued) — Lab Sample ID: 680-89949-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	3.9		0.50	0.21	ug/L	1		6020A	Total/NA
Nitrate-NO3	1.1		1.1	0.36	mg/L	5		300.0	Total/NA

Client Sample ID: LMW-16-5-13 — Lab Sample ID: 680-89949-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.1		1.0	0.40	ug/L	1		6020A	Total/NA
Barium	8.0		1.0	0.15	ug/L	1		6020A	Total/NA
Chromium	1.8		1.0	0.16	ug/L	1		6020A	Total/NA
Cobalt	0.18	J	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	0.70	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: 680-89949-1

Client Sample ID: LMW-15R-5-13

Lab Sample ID: 680-89949-1

Date Collected: 05/02/13 08:35

Matrix: Water

Date Received: 05/03/13 09:44

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		05/03/13 16:49	05/07/13 13:30	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 13:30	1
Barium	**29**		1.0	0.15	ug/L		05/03/13 16:49	05/07/13 13:30	1
Beryllium	**0.15**	**J**	0.20	0.070	ug/L		05/03/13 16:49	05/07/13 13:30	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/03/13 16:49	05/07/13 13:30	1
Chromium	**0.18**	**J**	1.0	0.16	ug/L		05/03/13 16:49	05/07/13 13:30	1
Cobalt	**0.52**	**J**	0.20	0.078	ug/L		05/03/13 16:49	05/07/13 13:30	1
Copper	**0.58**	**J**	1.0	0.21	ug/L		05/03/13 16:49	05/07/13 13:30	1
Lead	**0.087**	**J**	0.30	0.080	ug/L		05/03/13 16:49	05/07/13 13:30	1
Nickel	**2.2**		1.0	0.40	ug/L		05/03/13 16:49	05/07/13 13:30	1
Selenium	0.21	U	0.50	0.21	ug/L		05/03/13 16:49	05/07/13 13:30	1
Silver	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 13:30	1
Thallium	**0.14**	**J**	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 13:30	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/03/13 16:49	05/07/13 13:30	1
Zinc	2.6	U	10	2.6	ug/L		05/03/13 16:49	05/07/13 13:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	**6.8**		1.1	0.36	mg/L			05/03/13 17:20	5

Client Sample ID: LMW-4-5-13

Lab Sample ID: 680-89949-2

Date Collected: 05/02/13 10:30

Matrix: Water

Date Received: 05/03/13 09:44

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		05/03/13 16:49	05/07/13 14:03	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 14:03	1
Barium	**14**		1.0	0.15	ug/L		05/03/13 16:49	05/07/13 14:03	1
Beryllium	**0.078**	**J**	0.20	0.070	ug/L		05/03/13 16:49	05/07/13 14:03	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/03/13 16:49	05/07/13 14:03	1
Chromium	**0.19**	**J**	1.0	0.16	ug/L		05/03/13 16:49	05/07/13 14:03	1
Cobalt	**0.22**		0.20	0.078	ug/L		05/03/13 16:49	05/07/13 14:03	1
Copper	**1.3**		1.0	0.21	ug/L		05/03/13 16:49	05/07/13 14:03	1
Lead	**0.13**	**J**	0.30	0.080	ug/L		05/03/13 16:49	05/07/13 14:03	1
Nickel	**0.77**	**J**	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 14:03	1
Selenium	0.21	U	0.50	0.21	ug/L		05/03/13 16:49	05/07/13 14:03	1
Silver	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 14:03	1
Thallium	**0.15**	**J**	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 14:03	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/03/13 16:49	05/07/13 14:03	1
Zinc	**5.9**	**J**	10	2.6	ug/L		05/03/13 16:49	05/07/13 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	0.36	U	1.1	0.36	mg/L			05/03/13 18:06	5

Client Sample Results

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

TestAmerica Job ID: 680-89949-1

Client Sample ID: DUP-1-5-13

Lab Sample ID: 680-89949-3

Date Collected: 05/02/13 12:30
Matrix: Water
Date Received: 05/03/13 09:44

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		05/03/13 16:49	05/07/13 14:10	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 14:10	1
Barium	**29**		1.0	0.15	ug/L		05/03/13 16:49	05/07/13 14:10	1
Beryllium	**0.13**	**J**	0.20	0.070	ug/L		05/03/13 16:49	05/07/13 14:10	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/03/13 16:49	05/07/13 14:10	1
Chromium	**0.17**	**J**	1.0	0.16	ug/L		05/03/13 16:49	05/07/13 14:10	1
Cobalt	**0.50**		0.20	0.078	ug/L		05/03/13 16:49	05/07/13 14:10	1
Copper	**0.55**	**J**	1.0	0.21	ug/L		05/03/13 16:49	05/07/13 14:10	1
Lead	0.080	U	0.30	0.080	ug/L		05/03/13 16:49	05/07/13 14:10	1
Nickel	**0.98**	**J**	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 14:10	1
Selenium	0.21	U	0.50	0.21	ug/L		05/03/13 16:49	05/07/13 14:10	1
Silver	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 14:10	1
Thallium	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 14:10	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/03/13 16:49	05/07/13 14:10	1
Zinc	2.6	U	10	2.6	ug/L		05/03/13 16:49	05/07/13 14:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	**6.7**		1.1	0.36	mg/L			05/03/13 18:21	5

Client Sample ID: LMW-7-5-13

Lab Sample ID: 680-89949-4

Date Collected: 05/02/13 12:55
Matrix: Water
Date Received: 05/03/13 09:44

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		05/03/13 16:49	05/07/13 14:16	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 14:16	1
Barium	**4.3**		1.0	0.15	ug/L		05/03/13 16:49	05/07/13 14:16	1
Beryllium	0.070	U	0.20	0.070	ug/L		05/03/13 16:49	05/07/13 14:16	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/03/13 16:49	05/07/13 14:16	1
Chromium	**0.24**	**J**	1.0	0.16	ug/L		05/03/13 16:49	05/07/13 14:16	1
Cobalt	**0.11**	**J**	0.20	0.078	ug/L		05/03/13 16:49	05/07/13 14:16	1
Copper	**1.1**		1.0	0.21	ug/L		05/03/13 16:49	05/07/13 14:16	1
Lead	0.080	U	0.30	0.080	ug/L		05/03/13 16:49	05/07/13 14:16	1
Nickel	0.40	U	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 14:16	1
Selenium	0.21	U	0.50	0.21	ug/L		05/03/13 16:49	05/07/13 14:16	1
Silver	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 14:16	1
Thallium	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 14:16	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/03/13 16:49	05/07/13 14:16	1
Zinc	2.6	U	10	2.6	ug/L		05/03/13 16:49	05/07/13 14:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	0.36	U	1.1	0.36	mg/L			05/03/13 18:37	5

Client Sample Results

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

TestAmerica Job ID: 680-89949-1

Client Sample ID: LMW-10-5-13

Lab Sample ID: 680-89949-5

Date Collected: 05/02/13 14:50
Matrix: Water
Date Received: 05/03/13 09:44

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		05/03/13 16:49	05/07/13 14:36	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 14:36	1
Barium	**25**		1.0	0.15	ug/L		05/03/13 16:49	05/07/13 14:36	1
Beryllium	0.070	U	0.20	0.070	ug/L		05/03/13 16:49	05/07/13 14:36	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/03/13 16:49	05/07/13 14:36	1
Chromium	**0.44**	**J**	1.0	0.16	ug/L		05/03/13 16:49	05/07/13 14:36	1
Cobalt	**0.21**		0.20	0.078	ug/L		05/03/13 16:49	05/07/13 14:36	1
Copper	**0.24**	**J**	1.0	0.21	ug/L		05/03/13 16:49	05/07/13 14:36	1
Lead	0.080	U	0.30	0.080	ug/L		05/03/13 16:49	05/07/13 14:36	1
Nickel	**0.42**	**J**	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 14:36	1
Selenium	**3.9**		0.50	0.21	ug/L		05/03/13 16:49	05/07/13 14:36	1
Silver	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 14:36	1
Thallium	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 14:36	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/03/13 16:49	05/07/13 14:36	1
Zinc	2.6	U	10	2.6	ug/L		05/03/13 16:49	05/07/13 14:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	**1.1**		1.1	0.36	mg/L			05/03/13 18:52	5

Client Sample ID: LMW-16-5-13

Lab Sample ID: 680-89949-6

Date Collected: 05/02/13 16:30
Matrix: Water
Date Received: 05/03/13 09:44

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		05/03/13 16:49	05/07/13 14:43	1
Arsenic	**2.1**		1.0	0.40	ug/L		05/03/13 16:49	05/07/13 14:43	1
Barium	**8.0**		1.0	0.15	ug/L		05/03/13 16:49	05/07/13 14:43	1
Beryllium	0.070	U	0.20	0.070	ug/L		05/03/13 16:49	05/07/13 14:43	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/03/13 16:49	05/07/13 14:43	1
Chromium	**1.8**		1.0	0.16	ug/L		05/03/13 16:49	05/07/13 14:43	1
Cobalt	**0.18**	**J**	0.20	0.078	ug/L		05/03/13 16:49	05/07/13 14:43	1
Copper	**0.78**	**J**	1.0	0.21	ug/L		05/03/13 16:49	05/07/13 14:43	1
Lead	0.080	U	0.30	0.080	ug/L		05/03/13 16:49	05/07/13 14:43	1
Nickel	**0.70**	**J**	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 14:43	1
Selenium	0.21	U	0.50	0.21	ug/L		05/03/13 16:49	05/07/13 14:43	1
Silver	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 14:43	1
Thallium	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 14:43	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/03/13 16:49	05/07/13 14:43	1
Zinc	2.6	U	10	2.6	ug/L		05/03/13 16:49	05/07/13 14:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	0.36	U	1.1	0.36	mg/L			05/03/13 19:07	5

QC Sample Results

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

TestAmerica Job ID: 680-89949-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-275474/1-A
Matrix: Water
Analysis Batch: 275967

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 275474

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		05/03/13 16:49	05/07/13 13:16	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 13:16	1
Barium	0.15	U	1.0	0.15	ug/L		05/03/13 16:49	05/07/13 13:16	1
Beryllium	0.070	U	0.20	0.070	ug/L		05/03/13 16:49	05/07/13 13:16	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/03/13 16:49	05/07/13 13:16	1
Chromium	0.16	U	1.0	0.16	ug/L		05/03/13 16:49	05/07/13 13:16	1
Cobalt	0.078	U	0.20	0.078	ug/L		05/03/13 16:49	05/07/13 13:16	1
Copper	0.21	U	1.0	0.21	ug/L		05/03/13 16:49	05/07/13 13:16	1
Lead	0.080	U	0.30	0.080	ug/L		05/03/13 16:49	05/07/13 13:16	1
Nickel	0.40	U	1.0	0.40	ug/L		05/03/13 16:49	05/07/13 13:16	1
Selenium	0.21	U	0.50	0.21	ug/L		05/03/13 16:49	05/07/13 13:16	1
Silver	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 13:16	1
Thallium	0.10	U	0.20	0.10	ug/L		05/03/13 16:49	05/07/13 13:16	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/03/13 16:49	05/07/13 13:16	1
Zinc	2.6	U	10	2.6	ug/L		05/03/13 16:49	05/07/13 13:16	1

Lab Sample ID: LCS 680-275474/2-A
Matrix: Water
Analysis Batch: 275967

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 275474

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	20.0	22.0		ug/L		110	75 - 125
Arsenic	40.0	39.4		ug/L		99	75 - 125
Barium	40.0	40.0		ug/L		100	75 - 125
Beryllium	20.0	22.8		ug/L		114	75 - 125
Cadmium	20.0	21.0		ug/L		105	75 - 125
Chromium	40.0	34.7		ug/L		87	75 - 125
Cobalt	20.0	15.6		ug/L		78	75 - 125
Copper	40.0	34.8		ug/L		87	75 - 125
Lead	20.0	19.2		ug/L		96	75 - 125
Nickel	40.0	34.7		ug/L		87	75 - 125
Selenium	40.0	45.8		ug/L		114	75 - 125
Silver	20.0	20.0		ug/L		100	75 - 125
Thallium	16.0	15.6		ug/L		98	75 - 125
Vanadium	40.0	34.2		ug/L		85	75 - 125
Zinc	40.0	41.8		ug/L		104	75 - 125

Lab Sample ID: 680-89949-1 MS
Matrix: Water
Analysis Batch: 275967

Client Sample ID: LMW-15R-5-13
Prep Type: Total/NA
Prep Batch: 275474

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.99	U	20.0	21.5		ug/L		107	75 - 125
Arsenic	0.40	U	40.0	40.1		ug/L		100	75 - 125
Barium	29		40.0	68.4		ug/L		97	75 - 125
Beryllium	0.15	J	20.0	22.2		ug/L		110	75 - 125
Cadmium	0.20	U	20.0	20.4		ug/L		102	75 - 125
Chromium	0.18	J	40.0	34.9		ug/L		87	75 - 125

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

Lab Sample ID: 680-89949-1 MS — **Client Sample ID: LMW-15R-5-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275967 — **Prep Batch: 275474**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.52	J	20.0	16.5		ug/L		80	75 - 125
Copper	0.58	J	40.0	35.7		ug/L		88	75 - 125
Lead	0.087	J	20.0	19.0		ug/L		95	75 - 125
Nickel	2.2		40.0	36.8		ug/L		87	75 - 125
Selenium	0.21	U	40.0	43.9		ug/L		110	75 - 125
Silver	0.10	U	20.0	19.5		ug/L		98	75 - 125
Thallium	0.14	J	16.0	15.5		ug/L		96	75 - 125
Vanadium	1.4	U	40.0	34.5		ug/L		86	75 - 125
Zinc	2.6	U	40.0	43.2		ug/L		108	75 - 125

Lab Sample ID: 680-89949-1 MSD — **Client Sample ID: LMW-15R-5-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275967 — **Prep Batch: 275474**

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	21.2		ug/L		106	75 - 125	1	20
Arsenic	0.40	U	40.0	37.2		ug/L		93	75 - 125	7	20
Barium	29		40.0	67.6		ug/L		95	75 - 125	1	20
Beryllium	0.15	J	20.0	22.0		ug/L		109	75 - 125	1	20
Cadmium	0.20	U	20.0	20.2		ug/L		101	75 - 125	1	20
Chromium	0.18	J	40.0	32.3		ug/L		80	75 - 125	7	20
Cobalt	0.52	J	20.0	15.2	J	ug/L		73	75 - 125	9	20
Copper	0.58	J	40.0	32.8		ug/L		81	75 - 125	8	20
Lead	0.087	J	20.0	18.8		ug/L		94	75 - 125	1	20
Nickel	2.2		40.0	34.4		ug/L		80	75 - 125	7	20
Selenium	0.21	U	40.0	41.1		ug/L		103	75 - 125	7	20
Silver	0.10	U	20.0	19.1		ug/L		95	75 - 125	2	20
Thallium	0.14	J	16.0	15.5		ug/L		96	75 - 125	0	20
Vanadium	1.4	U	40.0	31.9		ug/L		80	75 - 125	8	20
Zinc	2.6	U	40.0	39.3		ug/L		98	75 - 125	9	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-275527/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275527

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	0.36	U	1.1	0.36	mg/L			05/03/13 16:33	5

Lab Sample ID: LCS 680-275527/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275527

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate-NO3	22.1	20.7		mg/L		94	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 680-275527/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275527

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate-NO3			22.1	20.7		mg/L		94	90 - 110	0	30

Lab Sample ID: 680-89949-1 MS — **Client Sample ID: LMW-15R-5-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275527

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate-NO3	6.8		22.1	29.5		mg/L		103	90 - 110		

Lab Sample ID: 680-89949-1 MSD — **Client Sample ID: LMW-15R-5-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275527

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate-NO3	6.8		22.1	29.4		mg/L		102	90 - 110	0	30

QC Association Summary

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

TestAmerica Job ID: 680-89949-1

Metals

Prep Batch: 275474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-89949-1	LMW-15R-5-13	Total/NA	Water	3030C	
680-89949-1 MS	LMW-15R-5-13	Total/NA	Water	3030C	
680-89949-1 MSD	LMW-15R-5-13	Total/NA	Water	3030C	
680-89949-2	LMW-4-5-13	Total/NA	Water	3030C	
680-89949-3	DUP-1-5-13	Total/NA	Water	3030C	
680-89949-4	LMW-7-5-13	Total/NA	Water	3030C	
680-89949-5	LMW-10-5-13	Total/NA	Water	3030C	
680-89949-6	LMW-16-5-13	Total/NA	Water	3030C	
LCS 680-275474/2-A	Lab Control Sample	Total/NA	Water	3030C	
MB 680-275474/1-A	Method Blank	Total/NA	Water	3030C	

Analysis Batch: 275967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-89949-1	LMW-15R-5-13	Total/NA	Water	6020A	275474
680-89949-1 MS	LMW-15R-5-13	Total/NA	Water	6020A	275474
680-89949-1 MSD	LMW-15R-5-13	Total/NA	Water	6020A	275474
680-89949-2	LMW-4-5-13	Total/NA	Water	6020A	275474
680-89949-3	DUP-1-5-13	Total/NA	Water	6020A	275474
680-89949-4	LMW-7-5-13	Total/NA	Water	6020A	275474
680-89949-5	LMW-10-5-13	Total/NA	Water	6020A	275474
680-89949-6	LMW-16-5-13	Total/NA	Water	6020A	275474
LCS 680-275474/2-A	Lab Control Sample	Total/NA	Water	6020A	275474
MB 680-275474/1-A	Method Blank	Total/NA	Water	6020A	275474

General Chemistry

Analysis Batch: 275527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-89949-1	LMW-15R-5-13	Total/NA	Water	300.0	
680-89949-1 MS	LMW-15R-5-13	Total/NA	Water	300.0	
680-89949-1 MSD	LMW-15R-5-13	Total/NA	Water	300.0	
680-89949-2	LMW-4-5-13	Total/NA	Water	300.0	
680-89949-3	DUP-1-5-13	Total/NA	Water	300.0	
680-89949-4	LMW-7-5-13	Total/NA	Water	300.0	
680-89949-5	LMW-10-5-13	Total/NA	Water	300.0	
680-89949-6	LMW-16-5-13	Total/NA	Water	300.0	
LCS 680-275527/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-275527/4	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-275527/2	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

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

TestAmerica Job ID: 680-89949-1

Client Sample ID: LMW-15R-5-13 — Lab Sample ID: 680-89949-1

Date Collected: 05/02/13 08:35 — **Matrix: Water**
Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3030C			275474	05/03/13 16:49	BB	TAL SAV
Total/NA	Analysis	6020A		1	275967	05/07/13 13:30	BR	TAL SAV
Total/NA	Analysis	300.0		5	275527	05/03/13 17:20	PAT	TAL SAV

Client Sample ID: LMW-4-5-13 — Lab Sample ID: 680-89949-2

Date Collected: 05/02/13 10:30 — **Matrix: Water**
Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3030C			275474	05/03/13 16:49	BB	TAL SAV
Total/NA	Analysis	6020A		1	275967	05/07/13 14:03	BR	TAL SAV
Total/NA	Analysis	300.0		5	275527	05/03/13 18:06	PAT	TAL SAV

Client Sample ID: DUP-1-5-13 — Lab Sample ID: 680-89949-3

Date Collected: 05/02/13 12:30 — **Matrix: Water**
Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3030C			275474	05/03/13 16:49	BB	TAL SAV
Total/NA	Analysis	6020A		1	275967	05/07/13 14:10	BR	TAL SAV
Total/NA	Analysis	300.0		5	275527	05/03/13 18:21	PAT	TAL SAV

Client Sample ID: LMW-7-5-13 — Lab Sample ID: 680-89949-4

Date Collected: 05/02/13 12:55 — **Matrix: Water**
Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3030C			275474	05/03/13 16:49	BB	TAL SAV
Total/NA	Analysis	6020A		1	275967	05/07/13 14:16	BR	TAL SAV
Total/NA	Analysis	300.0		5	275527	05/03/13 18:37	PAT	TAL SAV

Client Sample ID: LMW-10-5-13 — Lab Sample ID: 680-89949-5

Date Collected: 05/02/13 14:50 — **Matrix: Water**
Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3030C			275474	05/03/13 16:49	BB	TAL SAV
Total/NA	Analysis	6020A		1	275967	05/07/13 14:36	BR	TAL SAV
Total/NA	Analysis	300.0		5	275527	05/03/13 18:52	PAT	TAL SAV

Lab Chronicle

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

TestAmerica Job ID: 680-89949-1

Client Sample ID: LMW-16-5-13

Lab Sample ID: 680-89949-6

Date Collected: 05/02/13 16:30

Matrix: Water

Date Received: 05/03/13 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3030C			275474	05/03/13 16:49	BB	TAL SAV
Total/NA	Analysis	6020A		1	275967	05/07/13 14:43	BR	TAL SAV
Total/NA	Analysis	300.0		5	275527	05/03/13 19:07	PAT	TAL SAV

Laboratory References:

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

Serial Number

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	PROJECT NO.	PROJECT LOCATION (STATE)
LAMONT LANDFILL		NC
TAL (LAB) PROJECT MANAGER: LINDA WOLFE	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: KEVIN HABCZAK	CLIENT PHONE	CLIENT FAX
CLIENT NAME: USACE SAVANNAH	CLIENT E-MAIL	
CLIENT ADDRESS: 100 WOLLETHORPE AVE SAVANNAH GA 31401		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ✓

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE)

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	GC/MS - ASTM METHOD	300 - MARCHEM									REMARKS
								HNO_3	ICE									
								NUMBER OF CONTAINERS SUBMITTED										
5-2-13	0935	LMW-15R-5-13	G	X				1	1									
5-2-13	1030	LMW-4-5-13	G	X				1	1									
5-2-13	1230	DUP-1-5-13	G	X				1	1									
5-2-13	1255	LMW-7-5-13	G	X				1	1									
5-2-13	1450	LMW-10-5-13	G	X				1	1									
5-2-13	1630	LMW-16-5-13	G	X				1	1									

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	5-2-13	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
	5/3/13	0944	YES ○ NO ○		680-89949	0.2°C

TAL8240-680 (1008)

Login Sample Receipt Checklist

Client: U.S. Army Corps of Engineers

Job Number: 680-89949-1

Login Number: 89949
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.	True	
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 Landfill

TestAmerica Job ID: 680-89949-1

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
A2LA	DoD ELAP		0399-01	05-31-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13 *
California	NELAP	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-13
Florida	NELAP	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-13
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAP	5	200022	11-30-13
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13 *
Kentucky	State Program	4	90084	12-31-12 *
Kentucky (UST)	State Program	4	18	03-31-13 *
Louisiana	NELAP	6	30690	06-30-13
Louisiana	NELAP	6	LA100015	12-31-13
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-13
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	01-01-14
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13 *
New Jersey	NELAP	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
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	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAP	3	68-00474	06-30-13 *
Puerto Rico	State Program	2	GA00006	01-01-14
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAP	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-13 *
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-13
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

* 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: 680-89881-1
Client Project/Site: Ft.Bragg - Lamont Landfill

For:
U.S. Army Corps of Engineers
PO BOX 889
Savannah, Georgia 31402-0889

Attn: Mr. Kevin Haborak

Authorized for release by:
5/8/2013 11:44:38 AM

Linda Wolfe, Project Manager I
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.

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Job ID: 680-89881-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: U.S. Army Corps of Engineers

Project: Ft.Bragg - Lamont Landfill

Report Number: 680-89881-1

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 05/02/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.8 C.

METALS (ICPMS)
Samples LMW-6-5-13 (680-89881-1), LMW-3-5-13 (680-89881-2), LMW-3S-5-13 (680-89881-3) and LMW-14R-5-13 (680-89881-4) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 05/02/2013 and analyzed on 05/03/2013.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

ANIONS (NITRATE/NITRITE)
Samples LMW-6-5-13 (680-89881-1), LMW-3-5-13 (680-89881-2), LMW-3S-5-13 (680-89881-3) and LMW-14R-5-13 (680-89881-4) were analyzed for Anions (Nitrate/Nitrite) in accordance with EPA Method 300.0. The samples were analyzed on 05/03/2013.

Samples LMW-6-5-13 (680-89881-1)[5X], LMW-3-5-13 (680-89881-2)[5X], LMW-3S-5-13 (680-89881-3)[5X] and LMW-14R-5-13 (680-89881-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the Anions analyses.

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: 680-89881-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-89881-1	LMW-6-5-13	Water	05/01/13 09:56	05/02/13 09:49
680-89881-2	LMW-3-5-13	Water	05/01/13 14:15	05/02/13 09:49
680-89881-3	LMW-3S-5-13	Water	05/01/13 11:40	05/02/13 09:49
680-89881-4	LMW-14R-5-13	Water	05/01/13 15:45	05/02/13 09:49

Method Summary

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

TestAmerica Job ID: 680-89881-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL SAV
300.0	Anions, Ion Chromatography	MCAWW	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: 680-89881-1

Qualifiers

Metals

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

General Chemistry

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

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)
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)
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: 680-89881-1

Client Sample ID: LMW-6-5-13 — Lab Sample ID: 680-89881-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	30		1.0	0.15	ug/L	1		6020A	Total/NA
Beryllium	0.092	J	0.20	0.070	ug/L	1		6020A	Total/NA
Cobalt	0.37		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.76	J	1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	0.60	J	1.0	0.40	ug/L	1		6020A	Total/NA
Selenium	1.8		0.50	0.21	ug/L	1		6020A	Total/NA
Thallium	0.17	J	0.20	0.10	ug/L	1		6020A	Total/NA
Zinc	2.6	J	10	2.6	ug/L	1		6020A	Total/NA
Nitrate-NO3	5.8		1.1	0.36	mg/L	5		300.0	Total/NA

Client Sample ID: LMW-3-5-13 — Lab Sample ID: 680-89881-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	3.3		1.0	0.15	ug/L	1		6020A	Total/NA
Cobalt	0.16	J	0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.64	J	1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	0.45	J	1.0	0.40	ug/L	1		6020A	Total/NA
Nitrate-NO3	0.64	J	1.1	0.36	mg/L	5		300.0	Total/NA

Client Sample ID: LMW-3S-5-13 — Lab Sample ID: 680-89881-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	12		1.0	0.15	ug/L	1		6020A	Total/NA
Beryllium	0.073	J	0.20	0.070	ug/L	1		6020A	Total/NA
Cobalt	0.50		0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.81	J	1.0	0.21	ug/L	1		6020A	Total/NA
Nickel	2.7		1.0	0.40	ug/L	1		6020A	Total/NA
Zinc	8.8	J	10	2.6	ug/L	1		6020A	Total/NA
Nitrate-NO3	0.92	J	1.1	0.36	mg/L	5		300.0	Total/NA

Client Sample ID: LMW-14R-5-13 — Lab Sample ID: 680-89881-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	11		1.0	0.15	ug/L	1		6020A	Total/NA
Chromium	0.50	J	1.0	0.16	ug/L	1		6020A	Total/NA
Cobalt	0.12	J	0.20	0.078	ug/L	1		6020A	Total/NA
Copper	0.70	J	1.0	0.21	ug/L	1		6020A	Total/NA
Lead	0.12	J	0.30	0.080	ug/L	1		6020A	Total/NA
Nickel	0.44	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: 680-89881-1

Client Sample ID: LMW-6-5-13

Lab Sample ID: 680-89881-1

Date Collected: 05/01/13 09:56
Matrix: Water
Date Received: 05/02/13 09:49

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		05/02/13 14:05	05/03/13 12:08	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/02/13 14:05	05/03/13 12:08	1
Barium	**30**		1.0	0.15	ug/L		05/02/13 14:05	05/03/13 12:08	1
Beryllium	**0.092**	**J**	0.20	0.070	ug/L		05/02/13 14:05	05/03/13 12:08	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/02/13 14:05	05/03/13 12:08	1
Chromium	0.16	U	1.0	0.16	ug/L		05/02/13 14:05	05/03/13 12:08	1
Cobalt	**0.37**		0.20	0.078	ug/L		05/02/13 14:05	05/03/13 12:08	1
Copper	**0.76**	**J**	1.0	0.21	ug/L		05/02/13 14:05	05/03/13 12:08	1
Lead	0.080	U	0.30	0.080	ug/L		05/02/13 14:05	05/03/13 12:08	1
Nickel	**0.60**	**J**	1.0	0.40	ug/L		05/02/13 14:05	05/03/13 12:08	1
Selenium	**1.8**		0.50	0.21	ug/L		05/02/13 14:05	05/03/13 12:08	1
Silver	0.10	U	0.20	0.10	ug/L		05/02/13 14:05	05/03/13 12:08	1
Thallium	**0.17**	**J**	0.20	0.10	ug/L		05/02/13 14:05	05/03/13 12:08	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/02/13 14:05	05/03/13 12:08	1
Zinc	**2.6**	**J**	10	2.6	ug/L		05/02/13 14:05	05/03/13 12:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	**5.8**		1.1	0.36	mg/L			05/03/13 03:33	5

Client Sample ID: LMW-3-5-13

Lab Sample ID: 680-89881-2

Date Collected: 05/01/13 14:15
Matrix: Water
Date Received: 05/02/13 09:49

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		05/02/13 14:05	05/03/13 12:15	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/02/13 14:05	05/03/13 12:15	1
Barium	**3.3**		1.0	0.15	ug/L		05/02/13 14:05	05/03/13 12:15	1
Beryllium	0.070	U	0.20	0.070	ug/L		05/02/13 14:05	05/03/13 12:15	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/02/13 14:05	05/03/13 12:15	1
Chromium	0.16	U	1.0	0.16	ug/L		05/02/13 14:05	05/03/13 12:15	1
Cobalt	**0.16**	**J**	0.20	0.078	ug/L		05/02/13 14:05	05/03/13 12:15	1
Copper	**0.64**	**J**	1.0	0.21	ug/L		05/02/13 14:05	05/03/13 12:15	1
Lead	0.080	U	0.30	0.080	ug/L		05/02/13 14:05	05/03/13 12:15	1
Nickel	**0.45**	**J**	1.0	0.40	ug/L		05/02/13 14:05	05/03/13 12:15	1
Selenium	0.21	U	0.50	0.21	ug/L		05/02/13 14:05	05/03/13 12:15	1
Silver	0.10	U	0.20	0.10	ug/L		05/02/13 14:05	05/03/13 12:15	1
Thallium	0.10	U	0.20	0.10	ug/L		05/02/13 14:05	05/03/13 12:15	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/02/13 14:05	05/03/13 12:15	1
Zinc	2.6	U	10	2.6	ug/L		05/02/13 14:05	05/03/13 12:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	**0.64**	**J**	1.1	0.36	mg/L			05/03/13 03:48	5

Client Sample Results

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

TestAmerica Job ID: 680-89881-1

Client Sample ID: LMW-3S-5-13

Lab Sample ID: 680-89881-3

Date Collected: 05/01/13 11:40
Matrix: Water
Date Received: 05/02/13 09:49

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		05/02/13 14:05	05/03/13 12:21	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/02/13 14:05	05/03/13 12:21	1
Barium	**12**		1.0	0.15	ug/L		05/02/13 14:05	05/03/13 12:21	1
Beryllium	**0.073**	**J**	0.20	0.070	ug/L		05/02/13 14:05	05/03/13 12:21	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/02/13 14:05	05/03/13 12:21	1
Chromium	0.16	U	1.0	0.16	ug/L		05/02/13 14:05	05/03/13 12:21	1
Cobalt	**0.50**		0.20	0.078	ug/L		05/02/13 14:05	05/03/13 12:21	1
Copper	**0.81**	**J**	1.0	0.21	ug/L		05/02/13 14:05	05/03/13 12:21	1
Lead	0.080	U	0.30	0.080	ug/L		05/02/13 14:05	05/03/13 12:21	1
Nickel	**2.7**		1.0	0.40	ug/L		05/02/13 14:05	05/03/13 12:21	1
Selenium	0.21	U	0.50	0.21	ug/L		05/02/13 14:05	05/03/13 12:21	1
Silver	0.10	U	0.20	0.10	ug/L		05/02/13 14:05	05/03/13 12:21	1
Thallium	0.10	U	0.20	0.10	ug/L		05/02/13 14:05	05/03/13 12:21	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/02/13 14:05	05/03/13 12:21	1
Zinc	**8.8**	**J**	10	2.6	ug/L		05/02/13 14:05	05/03/13 12:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	**0.92**	**J**	1.1	0.36	mg/L			05/03/13 04:04	5

Client Sample ID: LMW-14R-5-13

Lab Sample ID: 680-89881-4

Date Collected: 05/01/13 15:45
Matrix: Water
Date Received: 05/02/13 09:49

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		05/02/13 14:05	05/03/13 12:28	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/02/13 14:05	05/03/13 12:28	1
Barium	**11**		1.0	0.15	ug/L		05/02/13 14:05	05/03/13 12:28	1
Beryllium	0.070	U	0.20	0.070	ug/L		05/02/13 14:05	05/03/13 12:28	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/02/13 14:05	05/03/13 12:28	1
Chromium	**0.50**	**J**	1.0	0.16	ug/L		05/02/13 14:05	05/03/13 12:28	1
Cobalt	**0.12**	**J**	0.20	0.078	ug/L		05/02/13 14:05	05/03/13 12:28	1
Copper	**0.70**	**J**	1.0	0.21	ug/L		05/02/13 14:05	05/03/13 12:28	1
Lead	**0.12**	**J**	0.30	0.080	ug/L		05/02/13 14:05	05/03/13 12:28	1
Nickel	**0.44**	**J**	1.0	0.40	ug/L		05/02/13 14:05	05/03/13 12:28	1
Selenium	0.21	U	0.50	0.21	ug/L		05/02/13 14:05	05/03/13 12:28	1
Silver	0.10	U	0.20	0.10	ug/L		05/02/13 14:05	05/03/13 12:28	1
Thallium	0.10	U	0.20	0.10	ug/L		05/02/13 14:05	05/03/13 12:28	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/02/13 14:05	05/03/13 12:28	1
Zinc	2.6	U	10	2.6	ug/L		05/02/13 14:05	05/03/13 12:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	0.36	U	1.1	0.36	mg/L			05/03/13 04:19	5

QC Sample Results

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

TestAmerica Job ID: 680-89881-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-275267/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275522 — **Prep Batch: 275267**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	2.0	0.99	ug/L		05/02/13 14:05	05/03/13 11:55	1
Arsenic	0.40	U	1.0	0.40	ug/L		05/02/13 14:05	05/03/13 11:55	1
Barium	0.15	U	1.0	0.15	ug/L		05/02/13 14:05	05/03/13 11:55	1
Beryllium	0.070	U	0.20	0.070	ug/L		05/02/13 14:05	05/03/13 11:55	1
Cadmium	0.20	U	0.50	0.20	ug/L		05/02/13 14:05	05/03/13 11:55	1
Chromium	0.16	U	1.0	0.16	ug/L		05/02/13 14:05	05/03/13 11:55	1
Cobalt	0.078	U	0.20	0.078	ug/L		05/02/13 14:05	05/03/13 11:55	1
Copper	0.21	U	1.0	0.21	ug/L		05/02/13 14:05	05/03/13 11:55	1
Lead	0.080	U	0.30	0.080	ug/L		05/02/13 14:05	05/03/13 11:55	1
Nickel	0.40	U	1.0	0.40	ug/L		05/02/13 14:05	05/03/13 11:55	1
Selenium	0.21	U	0.50	0.21	ug/L		05/02/13 14:05	05/03/13 11:55	1
Silver	0.10	U	0.20	0.10	ug/L		05/02/13 14:05	05/03/13 11:55	1
Thallium	0.10	U	0.20	0.10	ug/L		05/02/13 14:05	05/03/13 11:55	1
Vanadium	1.4	U	5.0	1.4	ug/L		05/02/13 14:05	05/03/13 11:55	1
Zinc	2.6	U	10	2.6	ug/L		05/02/13 14:05	05/03/13 11:55	1

Lab Sample ID: LCS 680-275267/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275522 — **Prep Batch: 275267**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	51.9		ug/L		104	75 - 125
Arsenic	100	104		ug/L		104	75 - 125
Barium	100	101		ug/L		101	75 - 125
Beryllium	50.0	50.8		ug/L		102	75 - 125
Cadmium	50.0	49.7		ug/L		99	75 - 125
Chromium	100	95.1		ug/L		95	75 - 125
Cobalt	50.0	47.6		ug/L		95	75 - 125
Copper	100	97.0		ug/L		97	75 - 125
Lead	50.0	47.5		ug/L		95	75 - 125
Nickel	100	95.9		ug/L		96	75 - 125
Selenium	100	103		ug/L		103	75 - 125
Silver	50.0	49.5		ug/L		99	75 - 125
Thallium	40.0	38.1		ug/L		95	75 - 125
Vanadium	100	95.5		ug/L		96	75 - 125
Zinc	100	102		ug/L		102	75 - 125

Lab Sample ID: 680-89881-4 MS — **Client Sample ID: LMW-14R-5-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275522 — **Prep Batch: 275267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.99	U	50.0	50.9		ug/L		102	75 - 125
Arsenic	0.40	U	100	105		ug/L		105	75 - 125
Barium	11		100	110		ug/L		100	75 - 125
Beryllium	0.070	U	50.0	49.9		ug/L		100	75 - 125
Cadmium	0.20	U	50.0	48.7		ug/L		97	75 - 125
Chromium	0.50	J	100	94.6		ug/L		94	75 - 125

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

Lab Sample ID: 680-89881-4 MS — **Client Sample ID: LMW-14R-5-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275522 — **Prep Batch: 275267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.12	J	50.0	47.3		ug/L		94	75 - 125
Copper	0.70	J	100	95.6		ug/L		95	75 - 125
Lead	0.12	J	50.0	47.1		ug/L		94	75 - 125
Nickel	0.44	J	100	97.7		ug/L		97	75 - 125
Selenium	0.21	U	100	101		ug/L		101	75 - 125
Silver	0.10	U	50.0	48.3		ug/L		97	75 - 125
Thallium	0.10	U	40.0	37.7		ug/L		94	75 - 125
Vanadium	1.4	U	100	94.8		ug/L		95	75 - 125
Zinc	2.6	U	100	101		ug/L		101	75 - 125

Lab Sample ID: 680-89881-4 MSD — **Client Sample ID: LMW-14R-5-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275522 — **Prep Batch: 275267**

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	51.9		ug/L		104	75 - 125	2	20
Arsenic	0.40	U	100	109		ug/L		109	75 - 125	4	20
Barium	11		100	113		ug/L		103	75 - 125	3	20
Beryllium	0.070	U	50.0	50.6		ug/L		101	75 - 125	1	20
Cadmium	0.20	U	50.0	49.2		ug/L		98	75 - 125	1	20
Chromium	0.50	J	100	100		ug/L		100	75 - 125	6	20
Cobalt	0.12	J	50.0	47.6		ug/L		95	75 - 125	1	20
Copper	0.70	J	100	101		ug/L		100	75 - 125	5	20
Lead	0.12	J	50.0	47.8		ug/L		95	75 - 125	1	20
Nickel	0.44	J	100	100		ug/L		100	75 - 125	3	20
Selenium	0.21	U	100	105		ug/L		105	75 - 125	4	20
Silver	0.10	U	50.0	49.2		ug/L		98	75 - 125	2	20
Thallium	0.10	U	40.0	38.6		ug/L		97	75 - 125	2	20
Vanadium	1.4	U	100	101		ug/L		101	75 - 125	6	20
Zinc	2.6	U	100	100		ug/L		100	75 - 125	1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-275389/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275389

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-NO3	0.36	U	1.1	0.36	mg/L			05/03/13 02:47	5

Lab Sample ID: LCS 680-275389/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 275389

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate-NO3	22.1	20.6		mg/L		93	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 680-275389/4
Matrix: Water
Analysis Batch: 275389

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
Nitrate-NO3			22.1	20.6		mg/L		93	90 - 110	0	30

Lab Sample ID: 680-89881-4 MS
Matrix: Water
Analysis Batch: 275389

Client Sample ID: LMW-14R-5-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate-NO3	0.36	U	22.1	20.8		mg/L		94	90 - 110		

Lab Sample ID: 680-89881-4 MSD
Matrix: Water
Analysis Batch: 275389

Client Sample ID: LMW-14R-5-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate-NO3	0.36	U	22.1	20.9		mg/L		94	90 - 110	0	30

QC Association Summary

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

TestAmerica Job ID: 680-89881-1

Metals

Prep Batch: 275267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-89881-1	LMW-6-5-13	Total/NA	Water	3030C	
680-89881-2	LMW-3-5-13	Total/NA	Water	3030C	
680-89881-3	LMW-3S-5-13	Total/NA	Water	3030C	
680-89881-4	LMW-14R-5-13	Total/NA	Water	3030C	
680-89881-4 MS	LMW-14R-5-13	Total/NA	Water	3030C	
680-89881-4 MSD	LMW-14R-5-13	Total/NA	Water	3030C	
LCS 680-275267/2-A	Lab Control Sample	Total/NA	Water	3030C	
MB 680-275267/1-A	Method Blank	Total/NA	Water	3030C	

Analysis Batch: 275522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-89881-1	LMW-6-5-13	Total/NA	Water	6020A	275267
680-89881-2	LMW-3-5-13	Total/NA	Water	6020A	275267
680-89881-3	LMW-3S-5-13	Total/NA	Water	6020A	275267
680-89881-4	LMW-14R-5-13	Total/NA	Water	6020A	275267
680-89881-4 MS	LMW-14R-5-13	Total/NA	Water	6020A	275267
680-89881-4 MSD	LMW-14R-5-13	Total/NA	Water	6020A	275267
LCS 680-275267/2-A	Lab Control Sample	Total/NA	Water	6020A	275267
MB 680-275267/1-A	Method Blank	Total/NA	Water	6020A	275267

General Chemistry

Analysis Batch: 275389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-89881-1	LMW-6-5-13	Total/NA	Water	300.0	
680-89881-2	LMW-3-5-13	Total/NA	Water	300.0	
680-89881-3	LMW-3S-5-13	Total/NA	Water	300.0	
680-89881-4	LMW-14R-5-13	Total/NA	Water	300.0	
680-89881-4 MS	LMW-14R-5-13	Total/NA	Water	300.0	
680-89881-4 MSD	LMW-14R-5-13	Total/NA	Water	300.0	
LCS 680-275389/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-275389/4	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-275389/2	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

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

TestAmerica Job ID: 680-89881-1

Client Sample ID: LMW-6-5-13 — Lab Sample ID: 680-89881-1

Date Collected: 05/01/13 09:56 — **Matrix: Water**
Date Received: 05/02/13 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3030C			275267	05/02/13 14:05	BB	TAL SAV
Total/NA	Analysis	6020A		1	275522	05/03/13 12:08	BR	TAL SAV
Total/NA	Analysis	300.0		5	275389	05/03/13 03:33	PAT	TAL SAV

Client Sample ID: LMW-3-5-13 — Lab Sample ID: 680-89881-2

Date Collected: 05/01/13 14:15 — **Matrix: Water**
Date Received: 05/02/13 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3030C			275267	05/02/13 14:05	BB	TAL SAV
Total/NA	Analysis	6020A		1	275522	05/03/13 12:15	BR	TAL SAV
Total/NA	Analysis	300.0		5	275389	05/03/13 03:48	PAT	TAL SAV

Client Sample ID: LMW-3S-5-13 — Lab Sample ID: 680-89881-3

Date Collected: 05/01/13 11:40 — **Matrix: Water**
Date Received: 05/02/13 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3030C			275267	05/02/13 14:05	BB	TAL SAV
Total/NA	Analysis	6020A		1	275522	05/03/13 12:21	BR	TAL SAV
Total/NA	Analysis	300.0		5	275389	05/03/13 04:04	PAT	TAL SAV

Client Sample ID: LMW-14R-5-13 — Lab Sample ID: 680-89881-4

Date Collected: 05/01/13 15:45 — **Matrix: Water**
Date Received: 05/02/13 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3030C			275267	05/02/13 14:05	BB	TAL SAV
Total/NA	Analysis	6020A		1	275522	05/03/13 12:28	BR	TAL SAV
Total/NA	Analysis	300.0		5	275389	05/03/13 04:19	PAT	TAL SAV

Laboratory References:

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

Serial Number 67153

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: LAMONT LANDFILL	PROJECT NO.	PROJECT LOCATION (STATE): NC
TAL (LAB) PROJECT MANAGER: LINDA WOLFE	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: KEVIN HABORAK	CLIENT PHONE	CLIENT FAX
CLIENT NAME: USACE SAVANNAH	CLIENT E-MAIL	
CLIENT ADDRESS: 100 W OGLETHORPE AVE SAVANNAH GA 31401		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE ___ OF ___

STANDARD REPORT DELIVERY ( )
DATE DUE ____
EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
DATE DUE ____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	REQUIRED ANALYSIS: 6020-As Metals	300-Nitrate as N									REMARKS
								PRESERVATIVE: HNO_3	ICE									
								NUMBER OF CONTAINERS SUBMITTED										
5-1-13	0956	LMW-6-5-13	G	X				1	1									
5-1-13	1415	LMW-3-5-13	G	X				1	1									
5-1-13	1140	LMW-3S-5-13	G	X				1	1									
5-1-13	1545	LMW-14R-5-13	G	X				1	1									
5-1-13	1545	MS/MSD-5-13	G	X				1	1									

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	5-1-13	1800						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY 6800643

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
	5/2/13	0949	YES ( ) NO ( )		680-89881	2.8°C

TAL8240-680 (1008)

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5/8/2013

Login Sample Receipt Checklist

Client: U.S. Army Corps of Engineers

Job Number: 680-89881-1

Login Number: 89881

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.	True	
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 Landfill

TestAmerica Job ID: 680-89881-1

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
A2LA	DoD ELAP		0399-01	05-31-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13 *
California	NELAP	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-13
Florida	NELAP	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-13
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAP	5	200022	11-30-13
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13 *
Kentucky	State Program	4	90084	12-31-12 *
Kentucky (UST)	State Program	4	18	03-31-13 *
Louisiana	NELAP	6	30690	06-30-13
Louisiana	NELAP	6	LA100015	12-31-13
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-13
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	01-01-14
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13 *
New Jersey	NELAP	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
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	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAP	3	68-00474	06-30-13 *
Puerto Rico	State Program	2	GA00006	01-01-14
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAP	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-13 *
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-13
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

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

APPENDIX D

STATISTICAL REPORTS

ELECTRONIC ONLY

Concentrations (ppb)

Parameter: 1,2,4-Trichlorobenzene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements: 77
Total Non-Detect: 76
Percent Non-Detects: 98.7013%
Total Background Measurements: 6
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	6	6 (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

There are 12 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	6	6 (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
LMW-14R	6	6 (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
LMW-15R	6	6 (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
LMW-16	6	6 (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
LMW-3	6	6 (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

LMW-3S	6	6 (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
LMW-6	6	6 (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
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
LMW-8	6	6 (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
LMW-9	6	6 (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
LMW-9D	6	6 (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
LMW-9S	6	6 (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

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 = 77

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.125	-2.25713	5.09463	-0.282141
2	0.125	-1.95996	8.93608	-0.527136
3	0.125	-1.77438	12.0845	-0.748934
4	0.125	-1.63524	14.7585	-0.953338
5	0.125	-1.52203	17.0751	-1.14359
6	0.125	-1.4325	19.1272	-1.32266
7	0.125	-1.34694	20.9414	-1.49102
8	0.125	-1.27024	22.5549	-1.6498
9	0.125	-1.20036	23.9958	-1.79985
10	0.125	-1.1359	25.286	-1.94183
11	0.125	-1.07584	26.4434	-2.07631
12	0.125	-1.02365	27.4913	-2.20427
13	0.125	-0.970094	28.4324	-2.32553
14	0.125	-0.919183	29.2773	-2.44043
15	0.125	-0.87055	30.0351	-2.54925
16	0.125	-0.823893	30.7139	-2.65224
17	0.125	-0.782366	31.326	-2.75003
18	0.125	-0.738846	31.8719	-2.84239
19	0.125	-0.696684	32.3573	-2.92947
20	0.125	-0.655726	32.7873	-3.01144
21	0.125	-0.615839	33.1665	-3.08842
22	0.125	-0.576911	33.4994	-3.16053
23	0.125	-0.541736	33.7928	-3.22825
24	0.125	-0.504372	34.0472	-3.2913
25	0.125	-0.467699	34.266	-3.34976
26	0.125	-0.431644	34.4523	-3.40371
27	0.125	-0.396142	34.6092	-3.45323
28	0.125	-0.363809	34.7416	-3.49871
29	0.125	-0.329206	34.85	-3.53986
30	0.125	-0.294992	34.937	-3.57673
31	0.125	-0.26112	35.0052	-3.60937
32	0.125	-0.227545	35.0569	-3.63782
33	0.125	-0.194225	35.0947	-3.66209
34	0.125	-0.163659	35.1214	-3.68255
35	0.125	-0.130716	35.1385	-3.69889
36	0.125	-0.0979139	35.1481	-3.71113
37	0.125	-0.0652187	35.1524	-3.71928
38	0.125	-0.0325917	35.1534	-3.72336
39	0.125	0	35.1534	-3.72336
40	0.125	0.0325917	35.1545	-3.71928
41	0.125	0.0652187	35.1587	-3.71113
42	0.125	0.0979139	35.1683	-3.69889
43	0.125	0.130716	35.1854	-3.68255
44	0.125	0.163659	35.2122	-3.66209
45	0.125	0.194225	35.2499	-3.63782
46	0.125	0.227545	35.3017	-3.60937
47	0.125	0.26112	35.3699	-3.57673
48	0.125	0.294992	35.4569	-3.53986
49	0.125	0.329206	35.5653	-3.49871
50	0.125	0.363809	35.6976	-3.45323
51	0.125	0.396142	35.8546	-3.40371

52	0.125	0.431644	36.0409	-3.34976
53	0.125	0.467699	36.2596	-3.2913
54	0.125	0.504372	36.514	-3.22825
55	0.125	0.541736	36.8075	-3.16053
56	0.125	0.576911	37.1403	-3.08842
57	0.125	0.615839	37.5196	-3.01144
58	0.125	0.655726	37.9496	-2.92947
59	0.125	0.696684	38.4349	-2.84239
60	0.125	0.738846	38.9808	-2.75003
61	0.125	0.782366	39.5929	-2.65224
62	0.125	0.823893	40.2717	-2.54925
63	0.125	0.87055	41.0296	-2.44043
64	0.125	0.919183	41.8745	-2.32553
65	0.125	0.970094	42.8156	-2.20427
66	0.125	1.02365	43.8634	-2.07631
67	0.125	1.07584	45.0208	-1.94183
68	0.125	1.1359	46.3111	-1.79985
69	0.125	1.20036	47.752	-1.6498
70	0.125	1.27024	49.3655	-1.49102
71	0.125	1.34694	51.1797	-1.32266
72	0.125	1.4325	53.2318	-1.14359
73	0.125	1.52203	55.5484	-0.953338
74	0.125	1.63524	58.2224	-0.748934
75	0.125	1.77438	61.3708	-0.527136
76	0.125	1.95996	65.2122	-0.282141
77	0.25	2.25713	70.3069	0.282141

Data Set Standard Deviation = 0.0142451
Numerator = 0.0796036
Denominator = 1.08428
W Statistic = 0.0734163 = 0.0796036 / 1.08428

5% Critical value of 0.969 exceeds 0.0734163
Evidence of non-normality at 95% level of significance

1% Critical value of 0.957 exceeds 0.0734163
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 = 0.281856
0.281856 < 0.985 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	0.125	0.0128205	-2.25713	261.917	324.723
2	0.125	0.025641	-1.95996	261.917	310.211
3	0.125	0.0384615	-1.77438	261.917	301.149
4	0.125	0.0512821	-1.63524	261.917	294.354
5	0.125	0.0641026	-1.52203	261.917	288.826
6	0.125	0.0769231	-1.4325	261.917	284.454
7	0.125	0.0897436	-1.34694	261.917	280.276
8	0.125	0.102564	-1.27024	261.917	276.53
9	0.125	0.115385	-1.20036	261.917	273.118
10	0.125	0.128205	-1.1359	261.917	269.97
11	0.125	0.141026	-1.07584	261.917	267.037
12	0.125	0.153846	-1.02365	261.917	264.488
13	0.125	0.166667	-0.970094	261.917	261.873
14	0.125	0.179487	-0.919183	261.917	259.387
15	0.125	0.192308	-0.87055	261.917	257.012
16	0.125	0.205128	-0.823893	261.917	254.733
17	0.125	0.217949	-0.782366	261.917	252.706
18	0.125	0.230769	-0.738846	261.917	250.58
19	0.125	0.24359	-0.696684	261.917	248.521
20	0.125	0.25641	-0.655726	261.917	246.521
21	0.125	0.269231	-0.615839	261.917	244.573
22	0.125	0.282051	-0.576911	261.917	242.672
23	0.125	0.294872	-0.541736	261.917	240.955
24	0.125	0.307692	-0.504372	261.917	239.13
25	0.125	0.320513	-0.467699	261.917	237.339
26	0.125	0.333333	-0.431644	261.917	235.579
27	0.125	0.346154	-0.396142	261.917	233.845
28	0.125	0.358974	-0.363809	261.917	232.266
29	0.125	0.371795	-0.329206	261.917	230.576
30	0.125	0.384615	-0.294992	261.917	228.905
31	0.125	0.397436	-0.26112	261.917	227.251
32	0.125	0.410256	-0.227545	261.917	225.612
33	0.125	0.423077	-0.194225	261.917	223.985
34	0.125	0.435897	-0.163659	261.917	222.492
35	0.125	0.448718	-0.130716	261.917	220.883
36	0.125	0.461538	-0.0979139	261.917	219.281
37	0.125	0.474359	-0.0652187	261.917	217.685
38	0.125	0.487179	-0.0325917	261.917	216.092
39	0.125	0.5	0	261.917	214.5
40	0.125	0.512821	0.0325917	261.917	212.908
41	0.125	0.525641	0.0652187	261.917	211.315
42	0.125	0.538462	0.0979139	261.917	209.719
43	0.125	0.551282	0.130716	261.917	208.117
44	0.125	0.564103	0.163659	261.917	206.508
45	0.125	0.576923	0.194225	261.917	205.015
46	0.125	0.589744	0.227545	261.917	203.388
47	0.125	0.602564	0.26112	261.917	201.749
48	0.125	0.615385	0.294992	261.917	200.095

49	0.125	0.628205	0.329206	261.917	198.424
50	0.125	0.641026	0.363809	261.917	196.734
51	0.125	0.653846	0.396142	261.917	195.155
52	0.125	0.666667	0.431644	261.917	193.421
53	0.125	0.679487	0.467699	261.917	191.661
54	0.125	0.692308	0.504372	261.917	189.87
55	0.125	0.705128	0.541736	261.917	188.045
56	0.125	0.717949	0.576911	261.917	186.328
57	0.125	0.730769	0.615839	261.917	184.427
58	0.125	0.74359	0.655726	261.917	182.479
59	0.125	0.75641	0.696684	261.917	180.479
60	0.125	0.769231	0.738846	261.917	178.42
61	0.125	0.782051	0.782366	261.917	176.294
62	0.125	0.794872	0.823893	261.917	174.267
63	0.125	0.807692	0.87055	261.917	171.988
64	0.125	0.820513	0.919183	261.917	169.613
65	0.125	0.833333	0.970094	261.917	167.127
66	0.125	0.846154	1.02365	261.917	164.512
67	0.125	0.858974	1.07584	261.917	161.963
68	0.125	0.871795	1.1359	261.917	159.03
69	0.125	0.884615	1.20036	261.917	155.882
70	0.125	0.897436	1.27024	261.917	152.47
71	0.125	0.910256	1.34694	261.917	148.724
72	0.125	0.923077	1.4325	261.917	144.546
73	0.125	0.935897	1.52203	261.917	140.174
74	0.125	0.948718	1.63524	261.917	134.646
75	0.125	0.961538	1.77438	261.917	127.851
76	0.125	0.974359	1.95996	261.917	118.789
77	0.25	0.987179	2.25713	484.833	104.277

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 = 77

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.07944	-2.25713	5.09463	4.69357
2	-2.07944	-1.95996	8.93608	8.76919
3	-2.07944	-1.77438	12.0845	12.4589
4	-2.07944	-1.63524	14.7585	15.8593
5	-2.07944	-1.52203	17.0751	19.0243
6	-2.07944	-1.4325	19.1272	22.0031
7	-2.07944	-1.34694	20.9414	24.804
8	-2.07944	-1.27024	22.5549	27.4453
9	-2.07944	-1.20036	23.9958	29.9414
10	-2.07944	-1.1359	25.286	32.3034
11	-2.07944	-1.07584	26.4434	34.5406
12	-2.07944	-1.02365	27.4913	36.6692
13	-2.07944	-0.970094	28.4324	38.6865
14	-2.07944	-0.919183	29.2773	40.5979
15	-2.07944	-0.87055	30.0351	42.4081
16	-2.07944	-0.823893	30.7139	44.1213
17	-2.07944	-0.782366	31.326	45.7482
18	-2.07944	-0.738846	31.8719	47.2846
19	-2.07944	-0.696684	32.3573	48.7333
20	-2.07944	-0.655726	32.7873	50.0969
21	-2.07944	-0.615839	33.1665	51.3775
22	-2.07944	-0.576911	33.4994	52.5771
23	-2.07944	-0.541736	33.7928	53.7036
24	-2.07944	-0.504372	34.0472	54.7525
25	-2.07944	-0.467699	34.266	55.725
26	-2.07944	-0.431644	34.4523	56.6226
27	-2.07944	-0.396142	34.6092	57.4463
28	-2.07944	-0.363809	34.7416	58.2029
29	-2.07944	-0.329206	34.85	58.8874
30	-2.07944	-0.294992	34.937	59.5008
31	-2.07944	-0.26112	35.0052	60.0438
32	-2.07944	-0.227545	35.0569	60.517
33	-2.07944	-0.194225	35.0947	60.9209
34	-2.07944	-0.163659	35.1214	61.2612
35	-2.07944	-0.130716	35.1385	61.533
36	-2.07944	-0.0979139	35.1481	61.7366
37	-2.07944	-0.0652187	35.1524	61.8722
38	-2.07944	-0.0325917	35.1534	61.94
39	-2.07944	0	35.1534	61.94
40	-2.07944	0.0325917	35.1545	61.8722
41	-2.07944	0.0652187	35.1587	61.7366
42	-2.07944	0.0979139	35.1683	61.533
43	-2.07944	0.130716	35.1854	61.2612
44	-2.07944	0.163659	35.2122	60.9209
45	-2.07944	0.194225	35.2499	60.517
46	-2.07944	0.227545	35.3017	60.0438
47	-2.07944	0.26112	35.3699	59.5008
48	-2.07944	0.294992	35.4569	58.8874
49	-2.07944	0.329206	35.5653	58.2029
50	-2.07944	0.363809	35.6976	57.4463
51	-2.07944	0.396142	35.8546	56.6226

52	-2.079440.431644		36.0409	55.725
53	-2.079440.467699		36.2596	54.7525
54	-2.079440.504372		36.514	53.7036
55	-2.079440.541736		36.8075	52.5771
56	-2.079440.576911		37.1403	51.3775
57	-2.079440.615839		37.5196	50.0969
58	-2.079440.655726		37.9496	48.7333
59	-2.079440.696684		38.4349	47.2846
60	-2.079440.738846		38.9808	45.7482
61	-2.079440.782366		39.5929	44.1213
62	-2.079440.823893		40.2717	42.4081
63	-2.079440.87055	41.0296	40.5979	
64	-2.079440.919183		41.8745	38.6865
65	-2.079440.970094		42.8156	36.6692
66	-2.079441.02365	43.8634	34.5406	
67	-2.079441.07584	45.0208	32.3034	
68	-2.079441.1359	46.3111	29.9414	
69	-2.079441.20036	47.752	27.4453	
70	-2.079441.27024	49.3655	24.804	
71	-2.079441.34694	51.1797	22.0031	
72	-2.079441.4325	53.2318	19.0243	
73	-2.079441.52203	55.5484	15.8593	
74	-2.079441.63524	58.2224	12.4589	
75	-2.079441.77438	61.3708	8.76919	
76	-2.079441.95996	65.2122	4.69357	
77	-1.386292.25713	70.3069	1.56452	

Data Set Standard Deviation = 0.0789915
Numerator = 2.44773
Denominator = 33.3405
W Statistic = 0.0734163 = 2.44773 / 33.3405

5% Critical value of 0.969 exceeds 0.0734163
Evidence of non-normality at 95% level of significance

1% Critical value of 0.957 exceeds 0.0734163
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 = 0.281856
0.281856 < 0.985 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.079440	0.0128205	-2.25713	203.166	324.723
2	-2.079440	0.025641	-1.95996	203.166	310.211
3	-2.079440	0.0384615	-1.77438	203.166	301.149
4	-2.079440	0.0512821	-1.63524	203.166	294.354
5	-2.079440	0.0641026	-1.52203	203.166	288.826
6	-2.079440	0.0769231	-1.4325	203.166	284.454
7	-2.079440	0.0897436	-1.34694	203.166	280.276
8	-2.079440	0.102564	-1.27024	203.166	276.53
9	-2.079440	0.115385	-1.20036	203.166	273.118
10	-2.079440	0.128205	-1.1359	203.166	269.97
11	-2.079440	0.141026	-1.07584	203.166	267.037
12	-2.079440	0.153846	-1.02365	203.166	264.488
13	-2.079440	0.166667	-0.970094	203.166	261.873
14	-2.079440	0.179487	-0.919183	203.166	259.387
15	-2.079440	0.192308	-0.87055	203.166	257.012
16	-2.079440	0.205128	-0.823893	203.166	254.733
17	-2.079440	0.217949	-0.782366	203.166	252.706
18	-2.079440	0.230769	-0.738846	203.166	250.58
19	-2.079440	0.24359	-0.696684	203.166	248.521
20	-2.079440	0.25641	-0.655726	203.166	246.521
21	-2.079440	0.269231	-0.615839	203.166	244.573
22	-2.079440	0.282051	-0.576911	203.166	242.672
23	-2.079440	0.294872	-0.541736	203.166	240.955
24	-2.079440	0.307692	-0.504372	203.166	239.13
25	-2.079440	0.320513	-0.467699	203.166	237.339
26	-2.079440	0.333333	-0.431644	203.166	235.579
27	-2.079440	0.346154	-0.396142	203.166	233.845
28	-2.079440	0.358974	-0.363809	203.166	232.266
29	-2.079440	0.371795	-0.329206	203.166	230.576
30	-2.079440	0.384615	-0.294992	203.166	228.905
31	-2.079440	0.397436	-0.26112	203.166	227.251
32	-2.079440	0.410256	-0.227545	203.166	225.612
33	-2.079440	0.423077	-0.194225	203.166	223.985
34	-2.079440	0.435897	-0.163659	203.166	222.492
35	-2.079440	0.448718	-0.130716	203.166	220.883
36	-2.079440	0.461538	-0.0979139	203.166	219.281
37	-2.079440	0.474359	-0.0652187	203.166	217.685
38	-2.079440	0.487179	-0.0325917	203.166	216.092
39	-2.079440	0.5	0	203.166	214.5
40	-2.079440	0.512821	0.0325917	203.166	212.908
41	-2.079440	0.525641	0.0652187	203.166	211.315
42	-2.079440	0.538462	0.0979139	203.166	209.719
43	-2.079440	0.551282	0.130716	203.166	208.117
44	-2.079440	0.564103	0.163659	203.166	206.508
45	-2.079440	0.576923	0.194225	203.166	205.015
46	-2.079440	0.589744	0.227545	203.166	203.388
47	-2.079440	0.602564	0.26112	203.166	201.749
48	-2.079440	0.615385	0.294992	203.166	200.095

49	-2.079440.628205	0.329206	203.166	198.424
50	-2.079440.641026	0.363809	203.166	196.734
51	-2.079440.653846	0.396142	203.166	195.155
52	-2.079440.666667	0.431644	203.166	193.421
53	-2.079440.679487	0.467699	203.166	191.661
54	-2.079440.692308	0.504372	203.166	189.87
55	-2.079440.705128	0.541736	203.166	188.045
56	-2.079440.717949	0.576911	203.166	186.328
57	-2.079440.730769	0.615839	203.166	184.427
58	-2.079440.74359	0.655726	203.166	182.479
59	-2.079440.75641	0.696684	203.166	180.479
60	-2.079440.769231	0.738846	203.166	178.42
61	-2.079440.782051	0.782366	203.166	176.294
62	-2.079440.794872	0.823893	203.166	174.267
63	-2.079440.807692	0.87055	203.166	171.988
64	-2.079440.820513	0.919183	203.166	169.613
65	-2.079440.833333	0.970094	203.166	167.127
66	-2.079440.846154	1.02365	203.166	164.512
67	-2.079440.858974	1.07584	203.166	161.963
68	-2.079440.871795	1.1359	203.166	159.03
69	-2.079440.884615	1.20036	203.166	155.882
70	-2.079440.897436	1.27024	203.166	152.47
71	-2.079440.910256	1.34694	203.166	148.724
72	-2.079440.923077	1.4325	203.166	144.546
73	-2.079440.935897	1.52203	203.166	140.174
74	-2.079440.948718	1.63524	203.166	134.646
75	-2.079440.961538	1.77438	203.166	127.851
76	-2.079440.974359	1.95996	203.166	118.789
77	-1.386290.987179	2.25713	326.778	104.277

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 = 98.7013%
Number of comparisons = 12
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 6
Maximum Background Value = 0
Confidence Level = 42.9%
False Positive Rate = 57.1%

Location	Date	Count	Mean	Significant
LMW-10	11/16/2012	1	-2.07944	FALSE
LMW-14R	11/16/2012	1	-2.07944	FALSE
LMW-15R	11/16/2012	1	-2.07944	FALSE
LMW-16	11/16/2012	1	-2.07944	FALSE
LMW-3	11/16/2012	1	-2.07944	FALSE
LMW-3S	11/16/2012	1	-2.07944	FALSE
LMW-6	11/16/2012	1	-2.07944	FALSE
LMW-7	11/16/2012	1	-1.38629	FALSE
LMW-8	11/16/2012	1	-2.07944	FALSE
LMW-9	11/16/2012	1	-2.07944	FALSE
LMW-9D	11/16/2012	1	-2.07944	FALSE
LMW-9S	11/16/2012	1	-2.07944	FALSE

Concentrations (ppb)

Parameter: 1,2-cis-Dichloroethylene

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 272
Total Non-Detect: 265
Percent Non-Detects: 97.4265%
Total Background Measurements: 22
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	22	22 (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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	19	19 (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
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	
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	
			6/11/2009	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	
LMW-15R	15	15 (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	

LMW-16	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
			6/11/2009	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
LMW-3	24	24 (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
LMW-3S	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
			6/11/2009	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
LMW-6	22	22 (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
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-8	22	15 (68.1818%)	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
LMW-9	22	22 (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	
LMW-9D	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	
			6/11/2009	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	
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	
			6/11/2009	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	
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 = 272

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	-2.096932	8.2255	-0.15727
6	0.075	-2.033523	2.3607	-0.309784
7	0.075	-1.959963	6.2021	-0.456781
8	0.075	-1.8957	39.7958	-0.598958
9	0.075	-1.852184	3.2263	-0.737871
10	0.075	-1.799124	6.4632	-0.872805
11	0.075	-1.750694	9.5281	-1.00411
12	0.075	-1.716885	2.4757	-1.13287
13	0.075	-1.674665	5.2802	-1.25847
14	0.075	-1.635245	7.9542	-1.38112
15	0.075	-1.607256	0.5375	-1.50166
16	0.075	-1.571796	3.008	-1.61954
17	0.075	-1.5382	65.3741	-1.73491
18	0.075	-1.5141	67.6666	-1.84847
19	0.075	-1.483286	9.8667	-1.95971
20	0.075	-1.4538	71.9802	-2.06875
21	0.075	-1.4325	74.0323	-2.17619
22	0.075	-1.405077	6.0066	-2.28157
23	0.075	-1.378667	7.9072	-2.38497
24	0.075	-1.359467	9.7554	-2.48692
25	0.075	-1.334628	1.5366	-2.58702
26	0.075	-1.310588	3.2542	-2.68532
27	0.075	-1.293038	4.9262	-2.78229
28	0.075	-1.270248	6.5397	-2.87756
29	0.075	-1.248098	8.0974	-2.97117
30	0.075	-1.231878	9.6149	-3.06356
31	0.075	-1.210739	1.0807	-3.15436
32	0.075	-1.190129	2.4971	-3.24362
33	0.075	-1.174999	3.8777	-3.33174
34	0.075	-1.155229	5.2123	-3.41839
35	0.075	-1.1359	96.5025	-3.50358
36	0.075	-1.121689	7.7607	-3.5877
37	0.075	-1.103069	8.9774	-3.67043
38	0.075	-1.08482	100.154	-3.7518
39	0.075	-1.07138	101.302	-3.83215
40	0.075	-1.05375	102.412	-3.91118
41	0.075	-1.03643	103.487	-3.98891
42	0.075	-1.02365	104.535	-4.06569
43	0.075	-1.00687	105.548	-4.1412
44	0.075	-0.990356	106.529	-4.21548
45	0.075	-0.97815	107.486	-4.28884
46	0.075	-0.9621	108.412	-4.361
47	0.075	-0.946291	109.307	-4.43197
48	0.075	-0.93459	110.18	-4.50206
49	0.075	-0.919183	111.025	-4.571
50	0.075	-0.903992	111.843	-4.6388
51	0.075	-0.892733	112.64	-4.70576

52	0.075	-0.877897	113.41	-4.7716
53	0.075	-0.863249	114.155	-4.83634
54	0.075	-0.852385	114.882	-4.90027
55	0.075	-0.838054	115.584	-4.96312
56	0.075	-0.823893	116.263	-5.02492
57	0.075	-0.813379	116.925	-5.08592
58	0.075	-0.7995	117.564	-5.14588
59	0.075	-0.785774	118.181	-5.20482
60	0.075	-0.775574	118.783	-5.26298
61	0.075	-0.7621	119.364	-5.32014
62	0.075	-0.748762	119.924	-5.3763
63	0.075	-0.738846	120.47	-5.43171
64	0.075	-0.725736	120.997	-5.48614
65	0.075	-0.712751	121.505	-5.5396
66	0.075	-0.703089	121.999	-5.59233
67	0.075	-0.690309	122.476	-5.6441
68	0.075	-0.677639	122.935	-5.69493
69	0.075	-0.668209	123.381	-5.74504
70	0.075	-0.655726	123.811	-5.79422
71	0.075	-0.643345	124.225	-5.84247
72	0.075	-0.634124	124.627	-5.89003
73	0.075	-0.621911	125.014	-5.93667
74	0.075	-0.609791	125.386	-5.98241
75	0.075	-0.60076	125.747	-6.02747
76	0.075	-0.588793	126.094	-6.07163
77	0.075	-0.576911	126.426	-6.11489
78	0.075	-0.568052	126.749	-6.1575
79	0.075	-0.556308	127.059	-6.19922
80	0.075	-0.544642	127.355	-6.24007
81	0.075	-0.53594	127.643	-6.28026
82	0.075	-0.524401	127.918	-6.31959
83	0.075	-0.51293	128.181	-6.35806
84	0.075	-0.504372	128.435	-6.39589
85	0.075	-0.493018	128.678	-6.43287
86	0.075	-0.481728	128.91	-6.469
87	0.075	-0.473299	129.134	-6.5045
88	0.5	-0.462114	129.348	-6.73555
89	0.5	-0.450985	129.551	-6.96105
90	0.5	-0.442676	129.747	-7.18238
91	0.5	-0.431644	129.933	-7.39821
92	0.5	-0.423405	130.113	-7.60991
93	0.5	-0.412463	130.283	-7.81614
94	0.5	-0.401571	130.444	-8.01692
95	0.5	-0.393433	130.599	-8.21364
96	0.5	-0.382622	130.745	-8.40495
97	0.5	-0.371856	130.883	-8.59088
98	0.5	-0.363809	131.016	-8.77278
99	0.5	-0.353118	131.141	-8.94934
100	0.5	-0.342466	131.258	-9.12058
101	0.5	-0.334503	131.37	-9.28783
102	0.5	-0.323919	131.475	-9.44979
103	0.5	-0.31337	131.573	-9.60647
104	0.5	-0.305481	131.666	-9.75921
105	0.5	-0.294992	131.753	-9.90671
106	0.5	-0.284535	131.834	-10.049
107	0.5	-0.276714	131.911	-10.1873
108	0.5	-0.266311	131.982	-10.3205
109	0.5	-0.255936	132.047	-10.4485
110	0.5	-0.248174	132.109	-10.5725
111	0.5	-0.237847	132.165	-10.6915
112	0.5	-0.227545	132.217	-10.8052
113	0.5	-0.219834	132.265	-10.9152

114	0.5	-0.209575	132.309	-11.0199
115	0.5	-0.199336	132.349	-11.1196
116	0.5	-0.191671	132.386	-11.2154
117	0.5	-0.181468	132.419	-11.3062
118	0.5	-0.171285	132.448	-11.3918
119	0.5	-0.163659	132.475	-11.4737
120	0.5	-0.153505	132.498	-11.5504
121	0.5	-0.143367	132.519	-11.6221
122	0.5	-0.135774	132.537	-11.69
123	0.5	-0.125661	132.553	-11.7528
124	0.5	-0.115562	132.567	-11.8106
125	0.5	-0.107995	132.578	-11.8646
126	0.5	-0.0979139	132.588	-11.9135
127	0.5	-0.0878447	132.596	-11.9575
128	0.5	-0.0802981	132.602	-11.9976
129	0.5	-0.0702426	132.607	-12.0327
130	0.5	-0.0601949	132.611	-12.0628
131	0.5	-0.0526632	132.613	-12.0892
132	0.5	-0.0426257	132.615	-12.1105
133	0.5	-0.0325917	132.616	-12.1268
134	0.5	-0.0250691	132.617	-12.1393
135	0.5	-0.0150408	132.617	-12.1468
136	0.5	-0.00501359	132.617	-12.1493
137	0.5	0.00501359	132.617	-12.1468
138	0.5	0.0150408	132.617	-12.1393
139	0.5	0.0250691	132.618	-12.1268
140	0.5	0.0325917	132.619	-12.1105
141	0.5	0.0426257	132.621	-12.0892
142	0.5	0.0526632	132.624	-12.0628
143	0.5	0.0601949	132.627	-12.0327
144	0.5	0.0702426	132.632	-11.9976
145	0.5	0.0802981	132.639	-11.9575
146	0.5	0.0878447	132.646	-11.9135
147	0.5	0.0979139	132.656	-11.8646
148	0.5	0.107995	132.668	-11.8106
149	0.5	0.115562	132.681	-11.7528
150	0.5	0.125661	132.697	-11.69
151	0.5	0.135774	132.715	-11.6221
152	0.5	0.143367	132.736	-11.5504
153	0.5	0.153505	132.759	-11.4737
154	0.5	0.163659	132.786	-11.3918
155	0.5	0.171285	132.815	-11.3062
156	0.5	0.181468	132.848	-11.2154
157	0.5	0.191671	132.885	-11.1196
158	0.5	0.199336	132.925	-11.0199
159	0.5	0.209575	132.969	-10.9152
160	0.5	0.219834	133.017	-10.8052
161	0.5	0.227545	133.069	-10.6915
162	0.5	0.237847	133.125	-10.5725
163	0.5	0.248174	133.187	-10.4485
164	0.5	0.255936	133.252	-10.3205
165	0.5	0.266311	133.323	-10.1873
166	0.5	0.276714	133.4	-10.049
167	0.5	0.284535	133.481	-9.90671
168	0.5	0.294992	133.568	-9.75921
169	0.5	0.305481	133.661	-9.60647
170	0.5	0.31337	133.759	-9.44979
171	0.5	0.323919	133.864	-9.28783
172	0.5	0.334503	133.976	-9.12058
173	0.5	0.342466	134.094	-8.94934
174	0.5	0.353118	134.218	-8.77278
175	0.5	0.363809	134.351	-8.59088

176	0.5	0.371856		134.489	-8.40495
177	0.5	0.382622		134.635	-8.21364
178	0.5	0.393433		134.79	-8.01692
179	0.5	0.401571		134.951	-7.81614
180	0.5	0.412463		135.121	-7.60991
181	0.5	0.423405		135.301	-7.39821
182	0.5	0.431644		135.487	-7.18238
183	0.5	0.442676		135.683	-6.96105
184	0.5	0.450985		135.886	-6.73555
185	0.5	0.462114		136.1	-6.5045
186	0.5	0.473299		136.324	-6.26785
187	0.5	0.481728		136.556	-6.02698
188	0.5	0.493018		136.799	-5.78047
189	0.5	0.504372		137.053	-5.52829
190	0.5	0.51293	137.317	-5.27182	
191	0.5	0.524401		137.592	-5.00962
192	0.5	0.53594	137.879	-4.74165	
193	0.5	0.544642		138.175	-4.46933
194	0.5	0.556308		138.485	-4.19118
195	0.5	0.568052		138.808	-3.90715
196	0.5	0.576911		139.14	-3.6187
197	0.5	0.588793		139.487	-3.3243
198	0.5	0.60076	139.848	-3.02392	
199	0.5	0.609791		140.22	-2.71902
200	0.5	0.621911		140.607	-2.40807
201	0.5	0.634124		141.009	-2.09101
202	0.5	0.643345		141.423	-1.76933
203	0.5	0.655726		141.853	-1.44147
204	0.5	0.668209		142.299	-1.10737
205	0.5	0.677639		142.758	-0.768546
206	0.5	0.690309		143.235	-0.423391
207	0.5	0.703089		143.729	-0.0718467
208	0.5	0.712751		144.237	0.284529
209	0.5	0.725736		144.764	0.647396
210	0.5	0.738846		145.31	1.01682
211	0.5	0.748762		145.87	1.3912
212	0.5	0.7621	146.451	1.77225	
213	0.5	0.775574		147.053	2.16004
214	0.5	0.785774		147.67	2.55292
215	0.5	0.7995	148.309	2.95267	
216	0.5	0.813379		148.971	3.35936
217	0.5	0.823893		149.65	3.77131
218	0.5	0.838054		150.352	4.19034
219	0.5	0.852385		151.079	4.61653
220	0.5	0.863249		151.824	5.04815
221	0.5	0.877897		152.595	5.4871
222	0.5	0.892733		153.392	5.93347
223	0.5	0.903992		154.209	6.38547
224	0.5	0.919183		155.054	6.84506
225	0.5	0.93459	155.927	7.31235	
226	0.5	0.946291		156.823	7.7855
227	0.5	0.9621	157.748	8.26655	
228	0.5	0.97815	158.705	8.75562	
229	0.5	0.990356		159.686	9.2508
230	0.5	1.00687	160.7	9.75423	
231	0.5	1.02365	161.747	10.2661	
232	0.5	1.03643	162.822	10.7843	
233	0.5	1.05375	163.932	11.3111	
234	0.5	1.07138	165.08	11.8468	
235	0.5	1.08482	166.257	12.3892	
236	0.5	1.10306	167.473	12.9408	
237	0.5	1.12168	168.732	13.5016	

238	0.5	1.1359	170.022	14.0696
239	0.5	1.15522	171.356	14.6472
240	0.5	1.17499	172.737	15.2347
241	0.5	1.19012	174.153	15.8297
242	0.5	1.21073	175.619	16.4351
243	0.5	1.23187	177.137	17.051
244	0.5	1.24809	178.694	17.6751
245	0.5	1.27024	180.308	18.3102
246	0.5	1.29303	181.98	18.9567
247	0.5	1.31058	183.697	19.612
248	0.5	1.33462	185.479	20.2793
249	0.5	1.35946	187.327	20.959
250	0.5	1.37866	189.228	21.6484
251	0.5	1.40507	191.202	22.3509
252	0.5	1.4325	193.254	23.0672
253	0.5	1.4538	195.367	23.7941
254	0.5	1.48328	197.568	24.5357
255	0.5	1.5141	199.86	25.2928
256	0.5	1.5382	202.226	26.0619
257	0.5	1.57179	204.697	26.8477
258	0.5	1.60725	207.28	27.6514
259	0.5	1.63524	209.954	28.469
260	0.5	1.67466	212.758	29.3063
261	0.5	1.71688	215.706	30.1648
262	0.5	1.75069	218.771	31.0401
263	0.5	1.79912	222.008	31.9397
264	0.5	1.85218	225.438	32.8658
265	0.5	1.8957	229.032	33.8136
266	0.67	1.95996	232.873	35.1268
267	1.1	2.03352	237.009	37.3636
268	1.5	2.09693	241.406	40.509
269	1.7	2.19728	246.234	44.2444
270	2.4	2.32634	251.646	49.8276
271	2.7	2.45727	257.684	56.4623
272	3.2	2.74777	265.234	65.2551

Data Set Standard Deviation = 0.342443
Numerator = 4258.23
Denominator = 8428.99
W Statistic = 0.505189 = 4258.23 / 8428.99

5% Critical value of 0.976 exceeds 0.505189
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.505189
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 = 0.714199
0.714199 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.003663		-2.747773	9	348.683
2	0	0.00732601		-2.457273	9	334.497
3	0	0.010989		-2.326343	9	328.103
4	0	0.014652		-2.197283	9	321.801
5	0.075	0.018315		-2.096934	9.0313	316.9
6	0.075	0.021978		-2.033524	9.0313	313.804
7	0.075	0.025641		-1.959964	9.0313	310.211
8	0.075	0.029304		-1.8957	49.0313	307.073
9	0.075	0.032967		-1.852184	9.0313	304.948
10	0.075	0.03663	-1.799124	9.0313	302.357	
11	0.075	0.040293		-1.750694	9.0313	299.992
12	0.075	0.043956		-1.716884	9.0313	298.341
13	0.075	0.047619		-1.674664	9.0313	296.279
14	0.075	0.0512821		-1.635244	9.0313	294.354
15	0.075	0.0549451		-1.607254	9.0313	292.987
16	0.075	0.0586081		-1.571794	9.0313	291.256
17	0.075	0.0622711		-1.5382	49.0313	289.615
18	0.075	0.0659341		-1.5141	49.0313	288.439
19	0.075	0.0695971		-1.483284	9.0313	286.934
20	0.075	0.0732601		-1.4538	49.0313	285.494
21	0.075	0.0769231		-1.4325	49.0313	284.454
22	0.075	0.0805861		-1.405074	9.0313	283.114
23	0.075	0.0842491		-1.378664	9.0313	281.824
24	0.075	0.0879121		-1.359464	9.0313	280.887
25	0.075	0.0915751		-1.334624	9.0313	279.674
26	0.075	0.0952381		-1.310584	9.0313	278.5
27	0.075	0.0989011		-1.293034	9.0313	277.643
28	0.075	0.102564		-1.270244	9.0313	276.53
29	0.075	0.106227		-1.248094	9.0313	275.448
30	0.075	0.10989	-1.231874	9.0313	274.656	
31	0.075	0.113553		-1.210734	9.0313	273.624
32	0.075	0.117216		-1.190124	9.0313	272.617
33	0.075	0.120879		-1.174994	9.0313	271.879
34	0.075	0.124542		-1.155224	9.0313	270.913
35	0.075	0.128205		-1.1359	49.0313	269.97
36	0.075	0.131868		-1.121684	9.0313	269.275
37	0.075	0.135531		-1.103064	9.0313	268.366
38	0.075	0.139194		-1.084824	9.0313	267.476
39	0.075	0.142857		-1.071384	9.0313	266.819
40	0.075	0.14652	-1.053754	9.0313	265.958	
41	0.075	0.150183		-1.036434	9.0313	265.112
42	0.075	0.153846		-1.023654	9.0313	264.488
43	0.075	0.157509		-1.006874	9.0313	263.669
44	0.075	0.161172		-0.990356	49.0313	262.862
45	0.075	0.164835		-0.978154	9.0313	262.266
46	0.075	0.168498		-0.9621	49.0313	261.483
47	0.075	0.172161		-0.946291	49.0313	260.711
48	0.075	0.175824		-0.934594	9.0313	260.139

49	0.075	0.179487	-0.919183	49.0313	259.387
50	0.075	0.18315	-0.903992	49.0313	258.645
51	0.075	0.186813	-0.892733	49.0313	258.095
52	0.075	0.190476	-0.877897	49.0313	257.371
53	0.075	0.194139	-0.863249	49.0313	256.655
54	0.075	0.197802	-0.852385	49.0313	256.125
55	0.075	0.201465	-0.838054	49.0313	255.425
56	0.075	0.205128	-0.823893	49.0313	254.733
57	0.075	0.208791	-0.813379	49.0313	254.22
58	0.075	0.212454	-0.7995	49.0313	253.542
59	0.075	0.216117	-0.785774	49.0313	252.872
60	0.075	0.21978	-0.775574	49.0313	252.374
61	0.075	0.223443	-0.7621	49.0313	251.716
62	0.075	0.227106	-0.748762	49.0313	251.065
63	0.075	0.230769	-0.738846	49.0313	250.58
64	0.075	0.234432	-0.725736	49.0313	249.94
65	0.075	0.238095	-0.712751	49.0313	249.306
66	0.075	0.241758	-0.703089	49.0313	248.834
67	0.075	0.245421	-0.690309	49.0313	248.21
68	0.075	0.249084	-0.677639	49.0313	247.591
69	0.075	0.252747	-0.668209	49.0313	247.131
70	0.075	0.25641	-0.655726	49.0313	246.521
71	0.075	0.260073	-0.643345	49.0313	245.917
72	0.075	0.263736	-0.634124	49.0313	245.466
73	0.075	0.267399	-0.621911	49.0313	244.87
74	0.075	0.271062	-0.609791	49.0313	244.278
75	0.075	0.274725	-0.60076	49.0313	243.837
76	0.075	0.278388	-0.588793	49.0313	243.253
77	0.075	0.282051	-0.576911	49.0313	242.672
78	0.075	0.285714	-0.568052	49.0313	242.24
79	0.075	0.289377	-0.556308	49.0313	241.666
80	0.075	0.29304	-0.544642	49.0313	241.097
81	0.075	0.296703	-0.53594	49.0313	240.672
82	0.075	0.300366	-0.524401	49.0313	240.108
83	0.075	0.304029	-0.51293	49.0313	239.548
84	0.075	0.307692	-0.504372	49.0313	239.13
85	0.075	0.311355	-0.493018	49.0313	238.576
86	0.075	0.315018	-0.481728	49.0313	238.024
87	0.075	0.318681	-0.473299	49.0313	237.613
88	0.5	0.322344	-0.462114	105.875	237.067
89	0.5	0.326007	-0.450985	105.875	236.523
90	0.5	0.32967	-0.442676	105.875	236.117
91	0.5	0.333333	-0.431644	105.875	235.579
92	0.5	0.336996	-0.423405	105.875	235.176
93	0.5	0.340659	-0.412463	105.875	234.642
94	0.5	0.344322	-0.401571	105.875	234.11
95	0.5	0.347985	-0.393433	105.875	233.713
96	0.5	0.351648	-0.382622	105.875	233.185
97	0.5	0.355311	-0.371856	105.875	232.659
98	0.5	0.358974	-0.363809	105.875	232.266
99	0.5	0.362637	-0.353118	105.875	231.744
100	0.5	0.3663	-0.342466	105.875	231.224
101	0.5	0.369963	-0.334503	105.875	230.835
102	0.5	0.373626	-0.323919	105.875	230.318
103	0.5	0.377289	-0.31337	105.875	229.803
104	0.5	0.380952	-0.305481	105.875	229.418
105	0.5	0.384615	-0.294992	105.875	228.905
106	0.5	0.388278	-0.284535	105.875	228.395
107	0.5	0.391941	-0.276714	105.875	228.013
108	0.5	0.395604	-0.266311	105.875	227.505
109	0.5	0.399267	-0.255936	105.875	226.998
110	0.5	0.40293	-0.248174	105.875	226.619

111	0.5	0.406593	-0.237847	105.875	226.115
112	0.5	0.410256	-0.227545	105.875	225.612
113	0.5	0.413919	-0.219834	105.875	225.235
114	0.5	0.417582	-0.209575	105.875	224.734
115	0.5	0.421245	-0.199336	105.875	224.234
116	0.5	0.424908	-0.191671	105.875	223.86
117	0.5	0.428571	-0.181468	105.875	223.362
118	0.5	0.432234	-0.171285	105.875	222.864
119	0.5	0.435897	-0.163659	105.875	222.492
120	0.5	0.43956	-0.153505	105.875	221.996
121	0.5	0.443223	-0.143367	105.875	221.501
122	0.5	0.446886	-0.135774	105.875	221.13
123	0.5	0.450549	-0.125661	105.875	220.636
124	0.5	0.454212	-0.115562	105.875	220.143
125	0.5	0.457875	-0.107995	105.875	219.774
126	0.5	0.461538	-0.0979139	105.875	219.281
127	0.5	0.465201	-0.0878447	105.875	218.79
128	0.5	0.468864	-0.0802981	105.875	218.421
129	0.5	0.472527	-0.0702426	105.875	217.93
130	0.5	0.47619	-0.0601949	105.875	217.44
131	0.5	0.479853	-0.0526632	105.875	217.072
132	0.5	0.483516	-0.0426257	105.875	216.582
133	0.5	0.487179	-0.0325917	105.875	216.092
134	0.5	0.490842	-0.0250691	105.875	215.724
135	0.5	0.494505	-0.0150408	105.875	215.234
136	0.5	0.498168	-0.00501359	105.875	214.745
137	0.5	0.501832	0.00501359	105.875	214.255
138	0.5	0.505495	0.0150408	105.875	213.766
139	0.5	0.509158	0.0250691	105.875	213.276
140	0.5	0.512821	0.0325917	105.875	212.908
141	0.5	0.516484	0.0426257	105.875	212.418
142	0.5	0.520147	0.0526632	105.875	211.928
143	0.5	0.52381	0.0601949	105.875	211.56
144	0.5	0.527473	0.0702426	105.875	211.07
145	0.5	0.531136	0.0802981	105.875	210.579
146	0.5	0.534799	0.0878447	105.875	210.21
147	0.5	0.538462	0.0979139	105.875	209.719
148	0.5	0.542125	0.107995	105.875	209.226
149	0.5	0.545788	0.115562	105.875	208.857
150	0.5	0.549451	0.125661	105.875	208.364
151	0.5	0.553114	0.135774	105.875	207.87
152	0.5	0.556777	0.143367	105.875	207.499
153	0.5	0.56044	0.153505	105.875	207.004
154	0.5	0.564103	0.163659	105.875	206.508
155	0.5	0.567766	0.171285	105.875	206.136
156	0.5	0.571429	0.181468	105.875	205.638
157	0.5	0.575092	0.191671	105.875	205.14
158	0.5	0.578755	0.199336	105.875	204.766
159	0.5	0.582418	0.209575	105.875	204.266
160	0.5	0.586081	0.219834	105.875	203.765
161	0.5	0.589744	0.227545	105.875	203.388
162	0.5	0.593407	0.237847	105.875	202.885
163	0.5	0.59707	0.248174	105.875	202.381
164	0.5	0.600733	0.255936	105.875	202.002
165	0.5	0.604396	0.266311	105.875	201.495
166	0.5	0.608059	0.276714	105.875	200.987
167	0.5	0.611722	0.284535	105.875	200.605
168	0.5	0.615385	0.294992	105.875	200.095
169	0.5	0.619048	0.305481	105.875	199.582
170	0.5	0.622711	0.31337	105.875	199.197
171	0.5	0.626374	0.323919	105.875	198.682
172	0.5	0.630037	0.334503	105.875	198.165

173	0.5	0.6337	0.342466	105.875	197.776
174	0.5	0.637363	0.353118	105.875	197.256
175	0.5	0.641026	0.363809	105.875	196.734
176	0.5	0.644689	0.371856	105.875	196.341
177	0.5	0.648352	0.382622	105.875	195.815
178	0.5	0.652015	0.393433	105.875	195.287
179	0.5	0.655678	0.401571	105.875	194.89
180	0.5	0.659341	0.412463	105.875	194.358
181	0.5	0.663004	0.423405	105.875	193.824
182	0.5	0.666667	0.431644	105.875	193.421
183	0.5	0.67033	0.442676	105.875	192.883
184	0.5	0.673993	0.450985	105.875	192.477
185	0.5	0.677656	0.462114	105.875	191.933
186	0.5	0.681319	0.473299	105.875	191.387
187	0.5	0.684982	0.481728	105.875	190.976
188	0.5	0.688645	0.493018	105.875	190.424
189	0.5	0.692308	0.504372	105.875	189.87
190	0.5	0.695971	0.51293	105.875	189.452
191	0.5	0.699634	0.524401	105.875	188.892
192	0.5	0.703297	0.53594	105.875	188.328
193	0.5	0.70696	0.544642	105.875	187.903
194	0.5	0.710623	0.556308	105.875	187.334
195	0.5	0.714286	0.568052	105.875	186.76
196	0.5	0.717949	0.576911	105.875	186.328
197	0.5	0.721612	0.588793	105.875	185.747
198	0.5	0.725275	0.60076	105.875	185.163
199	0.5	0.728938	0.609791	105.875	184.722
200	0.5	0.732601	0.621911	105.875	184.13
201	0.5	0.736264	0.634124	105.875	183.534
202	0.5	0.739927	0.643345	105.875	183.083
203	0.5	0.74359	0.655726	105.875	182.479
204	0.5	0.747253	0.668209	105.875	181.869
205	0.5	0.750916	0.677639	105.875	181.409
206	0.5	0.754579	0.690309	105.875	180.79
207	0.5	0.758242	0.703089	105.875	180.166
208	0.5	0.761905	0.712751	105.875	179.694
209	0.5	0.765568	0.725736	105.875	179.06
210	0.5	0.769231	0.738846	105.875	178.42
211	0.5	0.772894	0.748762	105.875	177.935
212	0.5	0.776557	0.7621	105.875	177.284
213	0.5	0.78022	0.775574	105.875	176.626
214	0.5	0.783883	0.785774	105.875	176.128
215	0.5	0.787546	0.7995	105.875	175.458
216	0.5	0.791209	0.813379	105.875	174.78
217	0.5	0.794872	0.823893	105.875	174.267
218	0.5	0.798535	0.838054	105.875	173.575
219	0.5	0.802198	0.852385	105.875	172.875
220	0.5	0.805861	0.863249	105.875	172.345
221	0.5	0.809524	0.877897	105.875	171.629
222	0.5	0.813187	0.892733	105.875	170.905
223	0.5	0.81685	0.903992	105.875	170.355
224	0.5	0.820513	0.919183	105.875	169.613
225	0.5	0.824176	0.93459	105.875	168.861
226	0.5	0.827839	0.946291	105.875	168.289
227	0.5	0.831502	0.9621	105.875	167.517
228	0.5	0.835165	0.97815	105.875	166.734
229	0.5	0.838828	0.990356	105.875	166.138
230	0.5	0.842491	1.00687	105.875	165.331
231	0.5	0.846154	1.02365	105.875	164.512
232	0.5	0.849817	1.03643	105.875	163.888
233	0.5	0.85348	1.05375	105.875	163.042
234	0.5	0.857143	1.07138	105.875	162.181

235	0.5	0.860806	1.08482	105.875	161.524
236	0.5	0.864469	1.10306	105.875	160.634
237	0.5	0.868132	1.12168	105.875	159.725
238	0.5	0.871795	1.1359	105.875	159.03
239	0.5	0.875458	1.15522	105.875	158.087
240	0.5	0.879121	1.17499	105.875	157.121
241	0.5	0.882784	1.19012	105.875	156.383
242	0.5	0.886447	1.21073	105.875	155.376
243	0.5	0.89011	1.23187	105.875	154.344
244	0.5	0.893773	1.24809	105.875	153.552
245	0.5	0.897436	1.27024	105.875	152.47
246	0.5	0.901099	1.29303	105.875	151.357
247	0.5	0.904762	1.31058	105.875	150.5
248	0.5	0.908425	1.33462	105.875	149.326
249	0.5	0.912088	1.35946	105.875	148.113
250	0.5	0.915751	1.37866	105.875	147.176
251	0.5	0.919414	1.40507	105.875	145.886
252	0.5	0.923077	1.4325	105.875	144.546
253	0.5	0.92674	1.4538	105.875	143.506
254	0.5	0.930403	1.48328	105.875	142.066
255	0.5	0.934066	1.5141	105.875	140.561
256	0.5	0.937729	1.5382	105.875	139.385
257	0.5	0.941392	1.57179	105.875	137.744
258	0.5	0.945055	1.60725	105.875	136.013
259	0.5	0.948718	1.63524	105.875	134.646
260	0.5	0.952381	1.67466	105.875	132.721
261	0.5	0.956044	1.71688	105.875	130.659
262	0.5	0.959707	1.75069	105.875	129.008
263	0.5	0.96337	1.79912	105.875	126.643
264	0.5	0.967033	1.85218	105.875	124.052
265	0.5	0.970696	1.8957	105.875	121.927
266	0.67	0.974359	1.95996	128.613	118.789
267	1.1	0.978022	2.03352	186.125	115.196
268	1.5	0.981685	2.09693	239.625	112.1
269	1.7	0.985348	2.19728	266.375	107.199
270	2.4	0.989011	2.32634	360	100.897
271	2.7	0.992674	2.45727	400.125	94.5032
272	3.2	0.996337	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 = 272

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	-2.09693	28.2255	30.6315
6	-2.59027	-2.03352	32.3607	35.8988
7	-2.59027	-1.95996	36.2021	40.9756
8	-2.59027	-1.8957	39.7958	45.886
9	-2.59027	-1.85218	43.2263	50.6836
10	-2.59027	-1.79912	46.4632	55.3438
11	-2.59027	-1.75069	49.5281	59.8786
12	-2.59027	-1.71688	52.4757	64.3258
13	-2.59027	-1.67466	55.2802	68.6636
14	-2.59027	-1.63524	57.9542	72.8993
15	-2.59027	-1.60725	60.5375	77.0625
16	-2.59027	-1.57179	63.008	81.1338
17	-2.59027	-1.5382	65.3741	85.1182
18	-2.59027	-1.5141	67.6666	89.0401
19	-2.59027	-1.48328	69.8667	92.8822
20	-2.59027	-1.4538	71.9802	96.648
21	-2.59027	-1.4325	74.0323	100.359
22	-2.59027	-1.40507	76.0066	103.998
23	-2.59027	-1.37866	77.9072	107.569
24	-2.59027	-1.35946	79.7554	111.091
25	-2.59027	-1.33462	81.5366	114.548
26	-2.59027	-1.31058	83.2542	117.942
27	-2.59027	-1.29303	84.9262	121.292
28	-2.59027	-1.27024	86.5397	124.582
29	-2.59027	-1.24809	88.0974	127.815
30	-2.59027	-1.23187	89.6149	131.006
31	-2.59027	-1.21073	91.0807	134.142
32	-2.59027	-1.19012	92.4971	137.224
33	-2.59027	-1.17499	93.8777	140.268
34	-2.59027	-1.15522	95.2123	143.26
35	-2.59027	-1.1359	96.5025	146.203
36	-2.59027	-1.12168	97.7607	149.108
37	-2.59027	-1.10306	98.9774	151.965
38	-2.59027	-1.08482	100.154	154.775
39	-2.59027	-1.07138	101.302	157.55
40	-2.59027	-1.05375	102.412	160.28
41	-2.59027	-1.03643	103.487	162.964
42	-2.59027	-1.02365	104.535	165.616
43	-2.59027	-1.00687	105.548	168.224
44	-2.59027	-0.990356	106.529	170.789
45	-2.59027	-0.97815	107.486	173.323
46	-2.59027	-0.9621	108.412	175.815
47	-2.59027	-0.946291	109.307	178.266
48	-2.59027	-0.93459	110.18	180.687
49	-2.59027	-0.919183	111.025	183.068
50	-2.59027	-0.903992	111.843	185.41
51	-2.59027	-0.892733	112.64	187.722

52	-2.59027	-0.877897	113.41	189.996
53	-2.59027	-0.863249	114.155	192.232
54	-2.59027	-0.852385	114.882	194.44
55	-2.59027	-0.838054	115.584	196.611
56	-2.59027	-0.823893	116.263	198.745
57	-2.59027	-0.813379	116.925	200.852
58	-2.59027	-0.7995	117.564	202.923
59	-2.59027	-0.785774	118.181	204.958
60	-2.59027	-0.775574	118.783	206.967
61	-2.59027	-0.7621	119.364	208.941
62	-2.59027	-0.748762	119.924	210.88
63	-2.59027	-0.738846	120.47	212.794
64	-2.59027	-0.725736	120.997	214.674
65	-2.59027	-0.712751	121.505	216.52
66	-2.59027	-0.703089	121.999	218.342
67	-2.59027	-0.690309	122.476	220.13
68	-2.59027	-0.677639	122.935	221.885
69	-2.59027	-0.668209	123.381	223.616
70	-2.59027	-0.655726	123.811	225.314
71	-2.59027	-0.643345	124.225	226.981
72	-2.59027	-0.634124	124.627	228.623
73	-2.59027	-0.621911	125.014	230.234
74	-2.59027	-0.609791	125.386	231.814
75	-2.59027	-0.60076	125.747	233.37
76	-2.59027	-0.588793	126.094	234.895
77	-2.59027	-0.576911	126.426	236.389
78	-2.59027	-0.568052	126.749	237.861
79	-2.59027	-0.556308	127.059	239.302
80	-2.59027	-0.544642	127.355	240.712
81	-2.59027	-0.53594	127.643	242.101
82	-2.59027	-0.524401	127.918	243.459
83	-2.59027	-0.51293	128.181	244.788
84	-0.693147	-0.504372	128.435	245.137
85	-0.693147	-0.493018	128.678	245.479
86	-0.693147	-0.481728	128.91	245.813
87	-0.693147	-0.473299	129.134	246.141
88	-0.693147	-0.462114	129.348	246.461
89	-0.693147	-0.450985	129.551	246.774
90	-0.693147	-0.442676	129.747	247.081
91	-0.693147	-0.431644	129.933	247.38
92	-0.693147	-0.423405	130.113	247.673
93	-0.693147	-0.412463	130.283	247.959
94	-0.693147	-0.401571	130.444	248.238
95	-0.693147	-0.393433	130.599	248.51
96	-0.693147	-0.382622	130.745	248.776
97	-0.693147	-0.371856	130.883	249.033
98	-0.693147	-0.363809	131.016	249.285
99	-0.693147	-0.353118	131.141	249.53
100	-0.693147	-0.342466	131.258	249.768
101	-0.693147	-0.334503	131.37	249.999
102	-0.693147	-0.323919	131.475	250.224
103	-0.693147	-0.31337	131.573	250.441
104	-0.693147	-0.305481	131.666	250.653
105	-0.693147	-0.294992	131.753	250.857
106	-0.693147	-0.284535	131.834	251.055
107	-0.693147	-0.276714	131.911	251.246
108	-0.693147	-0.266311	131.982	251.431
109	-0.693147	-0.255936	132.047	251.608
110	-0.693147	-0.248174	132.109	251.78
111	-0.693147	-0.237847	132.165	251.945
112	-0.693147	-0.227545	132.217	252.103
113	-0.693147	-0.219834	132.265	252.255

114	-0.693147	-0.209575	132.309	252.401
115	-0.693147	-0.199336	132.349	252.539
116	-0.693147	-0.191671	132.386	252.672
117	-0.693147	-0.181468	132.419	252.797
118	-0.693147	-0.171285	132.448	252.916
119	-0.693147	-0.163659	132.475	253.03
120	-0.693147	-0.153505	132.498	253.136
121	-0.693147	-0.143367	132.519	253.235
122	-0.693147	-0.135774	132.537	253.33
123	-0.693147	-0.125661	132.553	253.417
124	-0.693147	-0.115562	132.567	253.497
125	-0.693147	-0.107995	132.578	253.572
126	-0.693147	-0.0979139	132.588	253.639
127	-0.693147	-0.0878447	132.596	253.7
128	-0.693147	-0.0802981	132.602	253.756
129	-0.693147	-0.0702426	132.607	253.805
130	-0.693147	-0.0601949	132.611	253.846
131	-0.693147	-0.0526632	132.613	253.883
132	-0.693147	-0.0426257	132.615	253.912
133	-0.693147	-0.0325917	132.616	253.935
134	-0.693147	-0.0250691	132.617	253.952
135	-0.693147	-0.0150408	132.617	253.963
136	-0.693147	-0.00501359	132.617	253.966
137	-0.693147	0.00501359	132.617	253.963
138	-0.693147	0.0150408	132.617	253.952
139	-0.693147	0.0250691	132.618	253.935
140	-0.693147	0.0325917	132.619	253.912
141	-0.693147	0.0426257	132.621	253.883
142	-0.693147	0.0526632	132.624	253.846
143	-0.693147	0.0601949	132.627	253.805
144	-0.693147	0.0702426	132.632	253.756
145	-0.693147	0.0802981	132.639	253.7
146	-0.693147	0.0878447	132.646	253.639
147	-0.693147	0.0979139	132.656	253.572
148	-0.693147	0.107995	132.668	253.497
149	-0.693147	0.115562	132.681	253.417
150	-0.693147	0.125661	132.697	253.33
151	-0.693147	0.135774	132.715	253.235
152	-0.693147	0.143367	132.736	253.136
153	-0.693147	0.153505	132.759	253.03
154	-0.693147	0.163659	132.786	252.916
155	-0.693147	0.171285	132.815	252.797
156	-0.693147	0.181468	132.848	252.672
157	-0.693147	0.191671	132.885	252.539
158	-0.693147	0.199336	132.925	252.401
159	-0.693147	0.209575	132.969	252.255
160	-0.693147	0.219834	133.017	252.103
161	-0.693147	0.227545	133.069	251.945
162	-0.693147	0.237847	133.125	251.78
163	-0.693147	0.248174	133.187	251.608
164	-0.693147	0.255936	133.252	251.431
165	-0.693147	0.266311	133.323	251.246
166	-0.693147	0.276714	133.4	251.055
167	-0.693147	0.284535	133.481	250.857
168	-0.693147	0.294992	133.568	250.653
169	-0.693147	0.305481	133.661	250.441
170	-0.693147	0.31337	133.759	250.224
171	-0.693147	0.323919	133.864	249.999
172	-0.693147	0.334503	133.976	249.768
173	-0.693147	0.342466	134.094	249.53
174	-0.693147	0.353118	134.218	249.285
175	-0.693147	0.363809	134.351	249.033

176	-0.693147	0.371856	134.489	248.776
177	-0.693147	0.382622	134.635	248.51
178	-0.693147	0.393433	134.79	248.238
179	-0.693147	0.401571	134.951	247.959
180	-0.693147	0.412463	135.121	247.673
181	-0.693147	0.423405	135.301	247.38
182	-0.693147	0.431644	135.487	247.081
183	-0.693147	0.442676	135.683	246.774
184	-0.693147	0.450985	135.886	246.461
185	-0.693147	0.462114	136.1	246.141
186	-0.693147	0.473299	136.324	245.813
187	-0.693147	0.481728	136.556	245.479
188	-0.693147	0.493018	136.799	245.137
189	-0.693147	0.504372	137.053	244.788
190	-0.693147	0.51293	137.317	244.432
191	-0.693147	0.524401	137.592	244.069
192	-0.693147	0.53594	137.879	243.697
193	-0.693147	0.544642	138.175	243.32
194	-0.693147	0.556308	138.485	242.934
195	-0.693147	0.568052	138.808	242.54
196	-0.693147	0.576911	139.14	242.14
197	-0.693147	0.588793	139.487	241.732
198	-0.693147	0.60076	139.848	241.316
199	-0.693147	0.609791	140.22	240.893
200	-0.693147	0.621911	140.607	240.462
201	-0.693147	0.634124	141.009	240.023
202	-0.693147	0.643345	141.423	239.577
203	-0.693147	0.655726	141.853	239.122
204	-0.693147	0.668209	142.299	238.659
205	-0.693147	0.677639	142.758	238.189
206	-0.693147	0.690309	143.235	237.711
207	-0.693147	0.703089	143.729	237.223
208	-0.693147	0.712751	144.237	236.729
209	-0.693147	0.725736	144.764	236.226
210	-0.693147	0.738846	145.31	235.714
211	-0.693147	0.748762	145.87	235.195
212	-0.693147	0.7621	146.451	234.667
213	-0.693147	0.775574	147.053	234.129
214	-0.693147	0.785774	147.67	233.585
215	-0.693147	0.7995	148.309	233.031
216	-0.693147	0.813379	148.971	232.467
217	-0.693147	0.823893	149.65	231.896
218	-0.693147	0.838054	150.352	231.315
219	-0.693147	0.852385	151.079	230.724
220	-0.693147	0.863249	151.824	230.126
221	-0.693147	0.877897	152.595	229.517
222	-0.693147	0.892733	153.392	228.898
223	-0.693147	0.903992	154.209	228.272
224	-0.693147	0.919183	155.054	227.635
225	-0.693147	0.93459	155.927	226.987
226	-0.693147	0.946291	156.823	226.331
227	-0.693147	0.9621	157.748	225.664
228	-0.693147	0.97815	158.705	224.986
229	-0.693147	0.990356	159.686	224.299
230	-0.693147	1.00687	160.7	223.602
231	-0.693147	1.02365	161.747	222.892
232	-0.693147	1.03643	162.822	222.174
233	-0.693147	1.05375	163.932	221.443
234	-0.693147	1.07138	165.08	220.701
235	-0.693147	1.08482	166.257	219.949
236	-0.693147	1.10306	167.473	219.184
237	-0.693147	1.12168	168.732	218.407

238	-0.693147	1.1359	170.022	217.619
239	-0.693147	1.15522	171.356	216.819
240	-0.693147	1.17499	172.737	216.004
241	-0.693147	1.19012	174.153	215.179
242	-0.693147	1.21073	175.619	214.34
243	-0.693147	1.23187	177.137	213.486
244	-0.693147	1.24809	178.694	212.621
245	-0.693147	1.27024	180.308	211.74
246	-0.693147	1.29303	181.98	210.844
247	-0.693147	1.31058	183.697	209.936
248	-0.693147	1.33462	185.479	209.011
249	-0.693147	1.35946	187.327	208.068
250	-0.693147	1.37866	189.228	207.113
251	-0.693147	1.40507	191.202	206.139
252	-0.693147	1.4325	193.254	205.146
253	-0.693147	1.4538	195.367	204.138
254	-0.693147	1.48328	197.568	203.11
255	-0.693147	1.5141	199.86	202.061
256	-0.693147	1.5382	202.226	200.994
257	-0.693147	1.57179	204.697	199.905
258	-0.693147	1.60725	207.28	198.791
259	-0.693147	1.63524	209.954	197.657
260	-0.693147	1.67466	212.758	196.497
261	-0.693147	1.71688	215.706	195.307
262	-0.400478	1.75069	218.771	194.605
263	0	1.79912	222.008	194.605
264	0	1.85218	225.438	194.605
265	0	1.8957	229.032	194.605
266	0	1.95996	232.873	194.605
267	0.0953102	2.03352	237.009	194.799
268	0.405465	2.09693	241.406	195.649
269	0.530628	2.19728	246.234	196.815
270	0.875469	2.32634	251.646	198.852
271	0.993252	2.45727	257.684	201.293
272	1.16315	2.74777	265.234	204.489

Data Set Standard Deviation = 0.929731
Numerator = 41815.7
Denominator = 62131.7
W Statistic = 0.673017 = 41815.7 / 62131.7

5% Critical value of 0.976 exceeds 0.673017
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.673017
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 = 0.819855
0.819855 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.590270	.003663	-2.747778	2.8414	348.683
2	-2.590270	.00732601	-2.457278	2.8414	334.497
3	-2.590270	.010989	-2.326348	2.8414	328.103
4	-2.590270	.014652	-2.197288	2.8414	321.801
5	-2.590270	.018315	-2.096938	2.8414	316.9
6	-2.590270	.021978	-2.033528	2.8414	313.804
7	-2.590270	.025641	-1.959968	2.8414	310.211
8	-2.590270	.029304	-1.8957	82.8414	307.073
9	-2.590270	.032967	-1.852188	2.8414	304.948
10	-2.590270	.03663	-1.799128	2.8414	302.357
11	-2.590270	.040293	-1.750698	2.8414	299.992
12	-2.590270	.043956	-1.716888	2.8414	298.341
13	-2.590270	.047619	-1.674668	2.8414	296.279
14	-2.590270	.0512821	-1.635248	2.8414	294.354
15	-2.590270	.0549451	-1.607258	2.8414	292.987
16	-2.590270	.0586081	-1.571798	2.8414	291.256
17	-2.590270	.0622711	-1.5382	82.8414	289.615
18	-2.590270	.0659341	-1.5141	82.8414	288.439
19	-2.590270	.0695971	-1.483288	2.8414	286.934
20	-2.590270	.0732601	-1.4538	82.8414	285.494
21	-2.590270	.0769231	-1.4325	82.8414	284.454
22	-2.590270	.0805861	-1.405078	2.8414	283.114
23	-2.590270	.0842491	-1.378668	2.8414	281.824
24	-2.590270	.0879121	-1.359468	2.8414	280.887
25	-2.590270	.0915751	-1.334628	2.8414	279.674
26	-2.590270	.0952381	-1.310588	2.8414	278.5
27	-2.590270	.0989011	-1.293038	2.8414	277.643
28	-2.590270	.102564	-1.270248	2.8414	276.53
29	-2.590270	.106227	-1.248098	2.8414	275.448
30	-2.590270	.10989	-1.231878	2.8414	274.656
31	-2.590270	.113553	-1.210738	2.8414	273.624
32	-2.590270	.117216	-1.190128	2.8414	272.617
33	-2.590270	.120879	-1.174998	2.8414	271.879
34	-2.590270	.124542	-1.155228	2.8414	270.913
35	-2.590270	.128205	-1.1359	82.8414	269.97
36	-2.590270	.131868	-1.121688	2.8414	269.275
37	-2.590270	.135531	-1.103068	2.8414	268.366
38	-2.590270	.139194	-1.084828	2.8414	267.476
39	-2.590270	.142857	-1.071388	2.8414	266.819
40	-2.590270	.14652	-1.053758	2.8414	265.958
41	-2.590270	.150183	-1.036438	2.8414	265.112
42	-2.590270	.153846	-1.023658	2.8414	264.488
43	-2.590270	.157509	-1.006878	2.8414	263.669
44	-2.590270	.161172	-0.990356	82.8414	262.862
45	-2.590270	.164835	-0.978158	2.8414	262.266
46	-2.590270	.168498	-0.9621	82.8414	261.483
47	-2.590270	.172161	-0.946291	82.8414	260.711
48	-2.590270	.175824	-0.934598	2.8414	260.139

49	-2.590270.179487	-0.919183	82.8414	259.387	
50	-2.590270.18315	-0.903992	82.8414	258.645	
51	-2.590270.186813	-0.892733	82.8414	258.095	
52	-2.590270.190476	-0.877897	82.8414	257.371	
53	-2.590270.194139	-0.863249	82.8414	256.655	
54	-2.590270.197802	-0.852385	82.8414	256.125	
55	-2.590270.201465	-0.838054	82.8414	255.425	
56	-2.590270.205128	-0.823893	82.8414	254.733	
57	-2.590270.208791	-0.813379	82.8414	254.22	
58	-2.590270.212454	-0.7995	82.8414	253.542	
59	-2.590270.216117	-0.785774	82.8414	252.872	
60	-2.590270.21978	-0.775574	82.8414	252.374	
61	-2.590270.223443	-0.7621	82.8414	251.716	
62	-2.590270.227106	-0.748762	82.8414	251.065	
63	-2.590270.230769	-0.738846	82.8414	250.58	
64	-2.590270.234432	-0.725736	82.8414	249.94	
65	-2.590270.238095	-0.712751	82.8414	249.306	
66	-2.590270.241758	-0.703089	82.8414	248.834	
67	-2.590270.245421	-0.690309	82.8414	248.21	
68	-2.590270.249084	-0.677639	82.8414	247.591	
69	-2.590270.252747	-0.668209	82.8414	247.131	
70	-2.590270.25641	-0.655726	82.8414	246.521	
71	-2.590270.260073	-0.643345	82.8414	245.917	
72	-2.590270.263736	-0.634124	82.8414	245.466	
73	-2.590270.267399	-0.621911	82.8414	244.87	
74	-2.590270.271062	-0.609791	82.8414	244.278	
75	-2.590270.274725	-0.600768	2.8414	243.837	
76	-2.590270.278388	-0.588793	82.8414	243.253	
77	-2.590270.282051	-0.576911	82.8414	242.672	
78	-2.590270.285714	-0.568052	82.8414	242.24	
79	-2.590270.289377	-0.556308	82.8414	241.666	
80	-2.590270.29304	-0.544642	82.8414	241.097	
81	-2.590270.296703	-0.535948	2.8414	240.672	
82	-2.590270.300366	-0.524401	82.8414	240.108	
83	-2.590270.304029	-0.512938	2.8414	239.548	
84	-0.693147	0.307692	-0.504372	285.833	239.13
85	-0.693147	0.311355	-0.493018	285.833	238.576
86	-0.693147	0.315018	-0.481728	285.833	238.024
87	-0.693147	0.318681	-0.473299	285.833	237.613
88	-0.693147	0.322344	-0.462114	285.833	237.067
89	-0.693147	0.326007	-0.450985	285.833	236.523
90	-0.693147	0.32967	-0.442676	285.833	236.117
91	-0.693147	0.333333	-0.431644	285.833	235.579
92	-0.693147	0.336996	-0.423405	285.833	235.176
93	-0.693147	0.340659	-0.412463	285.833	234.642
94	-0.693147	0.344322	-0.401571	285.833	234.11
95	-0.693147	0.347985	-0.393433	285.833	233.713
96	-0.693147	0.351648	-0.382622	285.833	233.185
97	-0.693147	0.355311	-0.371856	285.833	232.659
98	-0.693147	0.358974	-0.363809	285.833	232.266
99	-0.693147	0.362637	-0.353118	285.833	231.744
100	-0.693147	0.3663	-0.342466	285.833	231.224
101	-0.693147	0.369963	-0.334503	285.833	230.835
102	-0.693147	0.373626	-0.323919	285.833	230.318
103	-0.693147	0.377289	-0.31337	285.833	229.803
104	-0.693147	0.380952	-0.305481	285.833	229.418
105	-0.693147	0.384615	-0.294992	285.833	228.905
106	-0.693147	0.388278	-0.284535	285.833	228.395
107	-0.693147	0.391941	-0.276714	285.833	228.013
108	-0.693147	0.395604	-0.266311	285.833	227.505
109	-0.693147	0.399267	-0.255936	285.833	226.998
110	-0.693147	0.40293	-0.248174	285.833	226.619

111	-0.693147	0.406593	-0.237847	285.833	226.115
112	-0.693147	0.410256	-0.227545	285.833	225.612
113	-0.693147	0.413919	-0.219834	285.833	225.235
114	-0.693147	0.417582	-0.209575	285.833	224.734
115	-0.693147	0.421245	-0.199336	285.833	224.234
116	-0.693147	0.424908	-0.191671	285.833	223.86
117	-0.693147	0.428571	-0.181468	285.833	223.362
118	-0.693147	0.432234	-0.171285	285.833	222.864
119	-0.693147	0.435897	-0.163659	285.833	222.492
120	-0.693147	0.43956	-0.153505	285.833	221.996
121	-0.693147	0.443223	-0.143367	285.833	221.501
122	-0.693147	0.446886	-0.135774	285.833	221.13
123	-0.693147	0.450549	-0.125661	285.833	220.636
124	-0.693147	0.454212	-0.115562	285.833	220.143
125	-0.693147	0.457875	-0.107995	285.833	219.774
126	-0.693147	0.461538	-0.0979139	285.833	219.281
127	-0.693147	0.465201	-0.0878447	285.833	218.79
128	-0.693147	0.468864	-0.0802981	285.833	218.421
129	-0.693147	0.472527	-0.0702426	285.833	217.93
130	-0.693147	0.47619	-0.0601949	285.833	217.44
131	-0.693147	0.479853	-0.0526632	285.833	217.072
132	-0.693147	0.483516	-0.0426257	285.833	216.582
133	-0.693147	0.487179	-0.0325917	285.833	216.092
134	-0.693147	0.490842	-0.0250691	285.833	215.724
135	-0.693147	0.494505	-0.0150408	285.833	215.234
136	-0.693147	0.498168	-0.00501359	285.833	214.745
137	-0.693147	0.501832	0.00501359	285.833	214.255
138	-0.693147	0.505495	0.0150408	285.833	213.766
139	-0.693147	0.509158	0.0250691	285.833	213.276
140	-0.693147	0.512821	0.0325917	285.833	212.908
141	-0.693147	0.516484	0.0426257	285.833	212.418
142	-0.693147	0.520147	0.0526632	285.833	211.928
143	-0.693147	0.52381	0.0601949	285.833	211.56
144	-0.693147	0.527473	0.0702426	285.833	211.07
145	-0.693147	0.531136	0.0802981	285.833	210.579
146	-0.693147	0.534799	0.0878447	285.833	210.21
147	-0.693147	0.538462	0.0979139	285.833	209.719
148	-0.693147	0.542125	0.107995	285.833	209.226
149	-0.693147	0.545788	0.115562	285.833	208.857
150	-0.693147	0.549451	0.125661	285.833	208.364
151	-0.693147	0.553114	0.135774	285.833	207.87
152	-0.693147	0.556777	0.143367	285.833	207.499
153	-0.693147	0.56044	0.153505	285.833	207.004
154	-0.693147	0.564103	0.163659	285.833	206.508
155	-0.693147	0.567766	0.171285	285.833	206.136
156	-0.693147	0.571429	0.181468	285.833	205.638
157	-0.693147	0.575092	0.191671	285.833	205.14
158	-0.693147	0.578755	0.199336	285.833	204.766
159	-0.693147	0.582418	0.209575	285.833	204.266
160	-0.693147	0.586081	0.219834	285.833	203.765
161	-0.693147	0.589744	0.227545	285.833	203.388
162	-0.693147	0.593407	0.237847	285.833	202.885
163	-0.693147	0.59707	0.248174	285.833	202.381
164	-0.693147	0.600733	0.255936	285.833	202.002
165	-0.693147	0.604396	0.266311	285.833	201.495
166	-0.693147	0.608059	0.276714	285.833	200.987
167	-0.693147	0.611722	0.284535	285.833	200.605
168	-0.693147	0.615385	0.294992	285.833	200.095
169	-0.693147	0.619048	0.305481	285.833	199.582
170	-0.693147	0.622711	0.31337	285.833	199.197
171	-0.693147	0.626374	0.323919	285.833	198.682
172	-0.693147	0.630037	0.334503	285.833	198.165

173	-0.693147	0.6337	0.342466	285.833	197.776
174	-0.693147	0.637363	0.353118	285.833	197.256
175	-0.693147	0.641026	0.363809	285.833	196.734
176	-0.693147	0.644689	0.371856	285.833	196.341
177	-0.693147	0.648352	0.382622	285.833	195.815
178	-0.693147	0.652015	0.393433	285.833	195.287
179	-0.693147	0.655678	0.401571	285.833	194.89
180	-0.693147	0.659341	0.412463	285.833	194.358
181	-0.693147	0.663004	0.423405	285.833	193.824
182	-0.693147	0.666667	0.431644	285.833	193.421
183	-0.693147	0.67033	0.442676	285.833	192.883
184	-0.693147	0.673993	0.450985	285.833	192.477
185	-0.693147	0.677656	0.462114	285.833	191.933
186	-0.693147	0.681319	0.473299	285.833	191.387
187	-0.693147	0.684982	0.481728	285.833	190.976
188	-0.693147	0.688645	0.493018	285.833	190.424
189	-0.693147	0.692308	0.504372	285.833	189.87
190	-0.693147	0.695971	0.51293	285.833	189.452
191	-0.693147	0.699634	0.524401	285.833	188.892
192	-0.693147	0.703297	0.53594	285.833	188.328
193	-0.693147	0.70696	0.544642	285.833	187.903
194	-0.693147	0.710623	0.556308	285.833	187.334
195	-0.693147	0.714286	0.568052	285.833	186.76
196	-0.693147	0.717949	0.576911	285.833	186.328
197	-0.693147	0.721612	0.588793	285.833	185.747
198	-0.693147	0.725275	0.60076	285.833	185.163
199	-0.693147	0.728938	0.609791	285.833	184.722
200	-0.693147	0.732601	0.621911	285.833	184.13
201	-0.693147	0.736264	0.634124	285.833	183.534
202	-0.693147	0.739927	0.643345	285.833	183.083
203	-0.693147	0.74359	0.655726	285.833	182.479
204	-0.693147	0.747253	0.668209	285.833	181.869
205	-0.693147	0.750916	0.677639	285.833	181.409
206	-0.693147	0.754579	0.690309	285.833	180.79
207	-0.693147	0.758242	0.703089	285.833	180.166
208	-0.693147	0.761905	0.712751	285.833	179.694
209	-0.693147	0.765568	0.725736	285.833	179.06
210	-0.693147	0.769231	0.738846	285.833	178.42
211	-0.693147	0.772894	0.748762	285.833	177.935
212	-0.693147	0.776557	0.7621	285.833	177.284
213	-0.693147	0.78022	0.775574	285.833	176.626
214	-0.693147	0.783883	0.785774	285.833	176.128
215	-0.693147	0.787546	0.7995	285.833	175.458
216	-0.693147	0.791209	0.813379	285.833	174.78
217	-0.693147	0.794872	0.823893	285.833	174.267
218	-0.693147	0.798535	0.838054	285.833	173.575
219	-0.693147	0.802198	0.852385	285.833	172.875
220	-0.693147	0.805861	0.863249	285.833	172.345
221	-0.693147	0.809524	0.877897	285.833	171.629
222	-0.693147	0.813187	0.892733	285.833	170.905
223	-0.693147	0.81685	0.903992	285.833	170.355
224	-0.693147	0.820513	0.919183	285.833	169.613
225	-0.693147	0.824176	0.93459	285.833	168.861
226	-0.693147	0.827839	0.946291	285.833	168.289
227	-0.693147	0.831502	0.9621	285.833	167.517
228	-0.693147	0.835165	0.97815	285.833	166.734
229	-0.693147	0.838828	0.990356	285.833	166.138
230	-0.693147	0.842491	1.00687	285.833	165.331
231	-0.693147	0.846154	1.02365	285.833	164.512
232	-0.693147	0.849817	1.03643	285.833	163.888
233	-0.693147	0.85348	1.05375	285.833	163.042
234	-0.693147	0.857143	1.07138	285.833	162.181

235	-0.693147	0.860806	1.08482	285.833	161.524
236	-0.693147	0.864469	1.10306	285.833	160.634
237	-0.693147	0.868132	1.12168	285.833	159.725
238	-0.693147	0.871795	1.1359	285.833	159.03
239	-0.693147	0.875458	1.15522	285.833	158.087
240	-0.693147	0.879121	1.17499	285.833	157.121
241	-0.693147	0.882784	1.19012	285.833	156.383
242	-0.693147	0.886447	1.21073	285.833	155.376
243	-0.693147	0.89011	1.23187	285.833	154.344
244	-0.693147	0.893773	1.24809	285.833	153.552
245	-0.693147	0.897436	1.27024	285.833	152.47
246	-0.693147	0.901099	1.29303	285.833	151.357
247	-0.693147	0.904762	1.31058	285.833	150.5
248	-0.693147	0.908425	1.33462	285.833	149.326
249	-0.693147	0.912088	1.35946	285.833	148.113
250	-0.693147	0.915751	1.37866	285.833	147.176
251	-0.693147	0.919414	1.40507	285.833	145.886
252	-0.693147	0.923077	1.4325	285.833	144.546
253	-0.693147	0.92674	1.4538	285.833	143.506
254	-0.693147	0.930403	1.48328	285.833	142.066
255	-0.693147	0.934066	1.5141	285.833	140.561
256	-0.693147	0.937729	1.5382	285.833	139.385
257	-0.693147	0.941392	1.57179	285.833	137.744
258	-0.693147	0.945055	1.60725	285.833	136.013
259	-0.693147	0.948718	1.63524	285.833	134.646
260	-0.693147	0.952381	1.67466	285.833	132.721
261	-0.693147	0.956044	1.71688	285.833	130.659
262	-0.400478	0.959707	1.75069	317.149	129.008
263	0	0.96337	1.79912	360	126.643
264	0	0.967033	1.85218	360	124.052
265	0	0.970696	1.8957	360	121.927
266	0	0.974359	1.95996	360	118.789
267	0.0953102	0.978022	2.03352	370.198	115.196
268	0.405465	0.981685	2.09693	403.385	112.1
269	0.530628	0.985348	2.19728	416.777	107.199
270	0.875469	0.989011	2.32634	453.675	100.897
271	0.993252	0.992674	2.45727	466.278	94.5032
272	1.16315	0.996337	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 = 97.4265%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 22
Maximum Background Value = 0
Confidence Level = 73.3%
False Positive Rate = 26.7%

Location	Date	Count	Mean	Significant
LMW-10	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
LMW-14R	11/16/2012	1	-2.59027	FALSE
LMW-15R	11/16/2012	1	-2.59027	FALSE
LMW-16	11/16/2012	1	-2.59027	FALSE
LMW-3	11/16/2012	1	-2.59027	FALSE
LMW-3S	11/16/2012	1	-2.59027	FALSE
LMW-6	11/16/2012	1	-2.59027	FALSE
LMW-7	11/16/2012	1	-2.59027	FALSE
LMW-8	11/16/2012	1	0.993252	TRUE
LMW-9	11/16/2012	1	-2.59027	FALSE
LMW-9D	11/16/2012	1	-2.59027	FALSE
LMW-9S	11/16/2012	1	-2.59027	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
ND<-0.693147	ND<-0.693147	0	11	0
ND<-0.693147	ND<-0.693147	0	11	0
ND<-0.693147	ND<-0.693147	0	11	0
ND<-0.693147	ND<-0.693147	0	11	0
ND<-0.693147	ND<-0.693147	0	11	0
ND<-0.693147	ND<-0.693147	0	11	0
ND<0 J	ND<-0.693147	0.693147	12	0
ND<0 J	ND<-0.693147	0.693147	13	0
ND<0 J	ND<-0.693147	0.693147	14	0
ND<-0.693147	ND<-0.693147	0	14	0
ND<0 J	ND<-0.693147	0.693147	15	0
ND<-0.693147	ND<-0.693147	0	15	0
ND<-0.693147	ND<-0.693147	0	15	0
0.875469	ND<-0.693147	1.56862	16	0
0.0953102	ND<-0.693147	0.788457	17	0
-0.400478 J	ND<-0.693147	0.29267	18	0
0.405465	ND<-0.693147	1.09861	19	0
0.530628	ND<-0.693147	1.22378	20	0
1.16315	ND<-0.693147	1.8563	21	0
0.993252	ND<-0.693147	1.6864	22	0
ND<-0.693147	ND<-0.693147	0	22	0
ND<-0.693147	ND<-0.693147	0	22	0
ND<-0.693147	ND<-0.693147	0	22	0
ND<-0.693147	ND<-0.693147	0	22	0
ND<-0.693147	ND<-0.693147	0	22	0
ND<0 J	ND<-0.693147	0.693147	23	0
ND<0 J	ND<-0.693147	0.693147	24	0

ND<0 J	ND<-0.693147	0.693147	25	0	
ND<-0.693147	ND<-0.693147	0	25	0	
ND<0 J	ND<-0.693147	0.693147	26	0	
ND<-0.693147	ND<-0.693147	0	26	0	
ND<-0.693147	ND<-0.693147	0	26	0	
0.875469	ND<-0.693147	1.56862	27	0	
0.0953102	ND<-0.693147	0.788457	28	0	
-0.400478 J	ND<-0.693147	0.29267	29	0	
0.405465	ND<-0.693147	1.09861	30	0	
0.530628	ND<-0.693147	1.22378	31	0	
1.16315	ND<-0.693147	1.8563	32	0	
0.993252	ND<-0.693147	1.6864	33	0	
ND<-0.693147	ND<-0.693147	0	33	0	
ND<-0.693147	ND<-0.693147	0	33	0	
ND<-0.693147	ND<-0.693147	0	33	0	
ND<-0.693147	ND<-0.693147	0	33	0	
ND<0 J	ND<-0.693147	0.693147	34	0	
ND<0 J	ND<-0.693147	0.693147	35	0	
ND<0 J	ND<-0.693147	0.693147	36	0	
ND<-0.693147	ND<-0.693147	0	36	0	
ND<0 J	ND<-0.693147	0.693147	37	0	
ND<-0.693147	ND<-0.693147	0	37	0	
ND<-0.693147	ND<-0.693147	0	37	0	
0.875469	ND<-0.693147	1.56862	38	0	
0.0953102	ND<-0.693147	0.788457	39	0	
-0.400478 J	ND<-0.693147	0.29267	40	0	
0.405465	ND<-0.693147	1.09861	41	0	
0.530628	ND<-0.693147	1.22378	42	0	
1.16315	ND<-0.693147	1.8563	43	0	
0.993252	ND<-0.693147	1.6864	44	0	
ND<-0.693147	ND<-0.693147	0	44	0	
ND<-0.693147	ND<-0.693147	0	44	0	
ND<-0.693147	ND<-0.693147	0	44	0	
ND<0 J	ND<-0.693147	0.693147	45	0	
ND<0 J	ND<-0.693147	0.693147	46	0	
ND<0 J	ND<-0.693147	0.693147	47	0	
ND<-0.693147	ND<-0.693147	0	47	0	
ND<0 J	ND<-0.693147	0.693147	48	0	
ND<-0.693147	ND<-0.693147	0	48	0	
ND<-0.693147	ND<-0.693147	0	48	0	
0.875469	ND<-0.693147	1.56862	49	0	
0.0953102	ND<-0.693147	0.788457	50	0	
-0.400478 J	ND<-0.693147	0.29267	51	0	
0.405465	ND<-0.693147	1.09861	52	0	
0.530628	ND<-0.693147	1.22378	53	0	
1.16315	ND<-0.693147	1.8563	54	0	
0.993252	ND<-0.693147	1.6864	55	0	
ND<-0.693147	ND<-0.693147	0	55	0	
ND<-0.693147	ND<-0.693147	0	55	0	
ND<0 J	ND<-0.693147	0.693147	56	0	
ND<0 J	ND<-0.693147	0.693147	57	0	
ND<0 J	ND<-0.693147	0.693147	58	0	
ND<-0.693147	ND<-0.693147	0	58	0	
ND<0 J	ND<-0.693147	0.693147	59	0	
ND<-0.693147	ND<-0.693147	0	59	0	
ND<-0.693147	ND<-0.693147	0	59	0	
0.875469	ND<-0.693147	1.56862	60	0	
0.0953102	ND<-0.693147	0.788457	61	0	
-0.400478 J	ND<-0.693147	0.29267	62	0	

0.405465	ND<-0.693147	1.09861	63	0	
0.530628	ND<-0.693147	1.22378	64	0	
1.16315	ND<-0.693147	1.8563	65	0	
0.993252	ND<-0.693147	1.6864	66	0	
ND<-0.693147	ND<-0.693147	0	66	0	
ND<0 J	ND<-0.693147	0.693147	67	0	
ND<0 J	ND<-0.693147	0.693147	68	0	
ND<0 J	ND<-0.693147	0.693147	69	0	
ND<-0.693147	ND<-0.693147	0	69	0	
ND<0 J	ND<-0.693147	0.693147	70	0	
ND<-0.693147	ND<-0.693147	0	70	0	
ND<-0.693147	ND<-0.693147	0	70	0	
0.875469	ND<-0.693147	1.56862	71	0	
0.0953102	ND<-0.693147	0.788457	72	0	0
-0.400478 J	ND<-0.693147	0.29267	73	0	
0.405465	ND<-0.693147	1.09861	74	0	
0.530628	ND<-0.693147	1.22378	75	0	
1.16315	ND<-0.693147	1.8563	76	0	
0.993252	ND<-0.693147	1.6864	77	0	
ND<0 J	ND<-0.693147	0.693147	78	0	
ND<0 J	ND<-0.693147	0.693147	79	0	
ND<0 J	ND<-0.693147	0.693147	80	0	
ND<-0.693147	ND<-0.693147	0	80	0	
ND<0 J	ND<-0.693147	0.693147	81	0	
ND<-0.693147	ND<-0.693147	0	81	0	
ND<-0.693147	ND<-0.693147	0	81	0	
0.875469	ND<-0.693147	1.56862	82	0	
0.0953102	ND<-0.693147	0.788457	83	0	0
-0.400478 J	ND<-0.693147	0.29267	84	0	
0.405465	ND<-0.693147	1.09861	85	0	
0.530628	ND<-0.693147	1.22378	86	0	
1.16315	ND<-0.693147	1.8563	87	0	
0.993252	ND<-0.693147	1.6864	88	0	
ND<0 J	ND<0 J	0	88	0	
ND<0 J	ND<0 J	0	88	0	
ND<-0.693147	ND<0 J	-0.693147	88	1	
ND<0 J	ND<0 J	0	88	1	
ND<-0.693147	ND<0 J	-0.693147	88	2	
ND<-0.693147	ND<0 J	-0.693147	88	3	
0.875469	ND<0 J	0.875469	89	3	
0.0953102	ND<0 J	0.0953102	90	3	
-0.400478 J	ND<0 J	-0.400478	90	4	
0.405465	ND<0 J	0.405465	91	4	
0.530628	ND<0 J	0.530628	92	4	
1.16315	ND<0 J	1.16315	93	4	
0.993252	ND<0 J	0.993252	94	4	
ND<0 J	ND<0 J	0	94	4	
ND<-0.693147	ND<0 J	-0.693147	94	5	
ND<0 J	ND<0 J	0	94	5	
ND<-0.693147	ND<0 J	-0.693147	94	6	
ND<-0.693147	ND<0 J	-0.693147	94	7	
0.875469	ND<0 J	0.875469	95	7	
0.0953102	ND<0 J	0.0953102	96	7	
-0.400478 J	ND<0 J	-0.400478	96	8	
0.405465	ND<0 J	0.405465	97	8	
0.530628	ND<0 J	0.530628	98	8	
1.16315	ND<0 J	1.16315	99	8	
0.993252	ND<0 J	0.993252	100	8	

ND<-0.693147	ND<0 J	-0.693147	100	9
ND<0 J	ND<0 J	0	100	9
ND<-0.693147	ND<0 J	-0.693147	100	10
ND<-0.693147	ND<0 J	-0.693147	100	11
0.875469	ND<0 J	0.875469	101	11
0.0953102	ND<0 J	0.0953102	102	11
-0.400478 J	ND<0 J	-0.400478	102	12
0.405465	ND<0 J	0.405465	103	12
0.530628	ND<0 J	0.530628	104	12
1.16315	ND<0 J	1.16315	105	12
0.993252	ND<0 J	0.993252	106	12
ND<0 J	ND<-0.693147	0.693147	107	12
ND<-0.693147	ND<-0.693147	0	107	12
ND<-0.693147	ND<-0.693147	0	107	12
0.875469	ND<-0.693147	1.56862	108	12
0.0953102	ND<-0.693147	0.788457	109	12
-0.400478 J	ND<-0.693147	0.29267	110	12
0.405465	ND<-0.693147	1.09861	111	12
0.530628	ND<-0.693147	1.22378	112	12
1.16315	ND<-0.693147	1.8563	113	12
0.993252	ND<-0.693147	1.6864	114	12
ND<-0.693147	ND<0 J	-0.693147	114	13
ND<-0.693147	ND<0 J	-0.693147	114	14
0.875469	ND<0 J	0.875469	115	14
0.0953102	ND<0 J	0.0953102	116	14
-0.400478 J	ND<0 J	-0.400478	116	15
0.405465	ND<0 J	0.405465	117	15
0.530628	ND<0 J	0.530628	118	15
1.16315	ND<0 J	1.16315	119	15
0.993252	ND<0 J	0.993252	120	15
ND<-0.693147	ND<-0.693147	0	120	15
0.875469	ND<-0.693147	1.56862	121	15
0.0953102	ND<-0.693147	0.788457	122	15
-0.400478 J	ND<-0.693147	0.29267	123	15
0.405465	ND<-0.693147	1.09861	124	15
0.530628	ND<-0.693147	1.22378	125	15
1.16315	ND<-0.693147	1.8563	126	15
0.993252	ND<-0.693147	1.6864	127	15
0.875469	ND<-0.693147	1.56862	128	15
0.0953102	ND<-0.693147	0.788457	129	15
-0.400478 J	ND<-0.693147	0.29267	130	15
0.405465	ND<-0.693147	1.09861	131	15
0.530628	ND<-0.693147	1.22378	132	15
1.16315	ND<-0.693147	1.8563	133	15
0.993252	ND<-0.693147	1.6864	134	15
0.0953102	0.875469	-0.780159	134	16
-0.400478 J	0.875469	-1.27595	134	17
0.405465	0.875469	-0.470004	134	18
0.530628	0.875469	-0.34484	134	19
1.16315	0.875469	0.287682	135	19
0.993252	0.875469	0.117783	136	19
-0.400478 J	0.0953102	-0.495788	136	20
0.405465	0.0953102	0.310155	137	20
0.530628	0.0953102	0.435318	138	20

1.16315	0.0953102	1.06784 139	20	
0.993252	0.0953102	0.897942	140	20
0.405465	-0.400478 J	0.805943	141	20
0.530628	-0.400478 J	0.931106	142	20
1.16315	-0.400478 J	1.56363 143	20	
0.993252	-0.400478 J	1.39373 144	20	
0.530628	0.405465	0.125163	145	20
1.16315	0.405465	0.757686	146	20
0.993252	0.405465	0.587787	147	20
1.16315	0.530628	0.632523	148	20
0.993252	0.530628	0.462624	149	20
0.993252	1.16315	-0.169899	149	21

S Statistic = 149 - 21 = 128

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

There are 0 time periods with multiple data

A = 3126
B = 0
C = 1014
D = 0
E = 122
F = 0
a = 22638
b = 83160
c = 924
Group Variance = 1084
Z-Score = 3.85735

Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|3.85735| > 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 = -1.29678
Baseline Std Dev = 0.904416
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std	Mean
1/16/1998	-0.693147	0	0.667424	
1/16/1998	-0.693147	0	0.667424	
3/16/1999	-0.693147	0	0.667424	
3/16/1999	-0.693147	0	0.667424	
9/23/1999	-0.693147	0	0.667424	
9/23/1999	-0.693147	0	0.667424	
3/14/2000	-0.693147	0	0.667424	
3/14/2000	-0.693147	0	0.667424	
9/23/2003	-0.693147	0	0.667424	
9/23/2003	-0.693147	0	0.667424	
3/10/2004	-0.693147	0	0.667424	
3/10/2004	-0.693147	0	0.667424	
10/12/2004	-0.693147	0	0.667424	
10/12/2004	-0.693147	0	0.667424	
4/1/2005	-0.693147	0	0.667424	
4/1/2005	-0.693147	0	0.667424	
10/26/2005	0	0.433826	1.43383	
10/26/2005	0	0.433826	1.43383	
6/19/2006	0	0.867653	1.43383	
6/19/2006	0	0.867653	1.43383	
11/18/2006	0	1.30148	1.43383	
11/18/2006	0	1.30148	1.43383	
6/2/2007	-0.693147	0.968903	0.667424	
6/2/2007	-0.693147	0.968903	0.667424	
11/15/2007	0	1.40273	1.43383	
11/15/2007	0	1.40273	1.43383	
5/20/2008	-0.693147	1.07015	0.667424	
5/20/2008	-0.693147	1.07015	0.667424	
11/20/2008	-0.693147	0.737577	0.667424	
11/20/2008	-0.693147	0.737577	0.667424	
6/11/2009	0.875469	2.1394	2.40182	
6/11/2009	0.875469	2.1394	2.40182	
6/30/2010	0.0953102	2.67861	1.53921	
6/30/2010	0.0953102	2.67861	1.53921	
11/17/2010	-0.400478	2.66963	0.991024	
11/17/2010	-0.400478	2.66963	0.991024	
7/6/2011	0.405465	3.55177	1.88214	
7/6/2011	0.405465	3.55177	1.88214	
11/22/2011	0.530628	4.57231	2.02053	
11/22/2011	0.530628	4.57231	2.02053	
5/16/2012	1.16315	6.29221	2.71991	
5/16/2012	1.16315	6.29221	2.71991	
11/16/2012	0.993252	7.82426	2.53205	
11/16/2012	0.993252	7.82426	2.53205	

Concentrations (ppb)

Parameter: 4-Isopropyltoluene

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 13
Total Non-Detect: 10
Percent Non-Detects: 76.9231%
Total Background Measurements: 1
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	1	1 (100%)	11/16/2012	ND<0.13 U	ND<0.13 U

There are 12 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	1	0 (0%)	11/16/2012	0.22 J	0.22 J
LMW-14R	1	1 (100%)	11/16/2012	ND<0.13 U	ND<0.13 U
LMW-15R	1	1 (100%)	11/16/2012	ND<0.13 U	ND<0.13 U
LMW-16	1	1 (100%)	11/16/2012	ND<0.13 U	ND<0.13 U
LMW-3	1	0 (0%)	11/16/2012	0.95 J	0.95 J
LMW-3S	1	0 (0%)	11/16/2012	0.44 J	0.44 J
LMW-6	1	1 (100%)	11/16/2012	ND<0.13 U	ND<0.13 U
LMW-7	1	1 (100%)	11/16/2012	ND<0.13 U	ND<0.13 U
LMW-8	1	1 (100%)	11/16/2012	ND<0.13 U	ND<0.13 U
LMW-9	1	1 (100%)	11/16/2012	ND<0.13 U	ND<0.13 U
LMW-9D	1	1 (100%)	11/16/2012	ND<0.13 U	ND<0.13 U
LMW-9S	1	1 (100%)	11/16/2012	ND<0.13 U	ND<0.13 U

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Wilks Test of Normality

Parameter: 4-Isopropyltoluene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

K = 6 for 13 measurements

i	x(i)	x(n-i+1)	x(n-1+1)-x(i)	a(n-i+1)	b(i)
1	0.065	0.95	0.885	0.5359	0.474272
2	0.065	0.44	0.375	0.3325	0.124688
3	0.065	0.22	0.155	0.2412	0.037386
4	0.065	0.065	0	0.1707	0
5	0.065	0.065	0	0.1099	0
6	0.065	0.065	0	0.0539	0
7	0.065	0.065	0		
8	0.065	0.065	0		
9	0.065	0.065	0		
10	0.065	0.065	0		
11	0.22	0.065	-0.155		
12	0.44	0.065	-0.375		
13	0.95	0.065	-0.885		

Sum of b values = 0.636345
Sample Standard Deviation = 0.257206
W Statistic = 0.510085

5% Critical value of 0.866 exceeds 0.510085
Evidence of non-normality at 95% level of significance

1% Critical value of 0.814 exceeds 0.510085
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: 4-Isopropyltoluene

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.69604
0.69604 < 0.931 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.065	0.0714286		-1.4683	73.775	322.059
2	0.065	0.142857		-1.0713	73.775	292.978
3	0.065	0.214286		-0.792618	73.775	272.559
4	0.065	0.285714		-0.568052	73.775	256.11
5	0.065	0.357143		-0.3664	73.775	241.345
6	0.065	0.428571		-0.181468	73.775	227.793
7	0.065	0.5	0	73.775	214.5	
8	0.065	0.571429		0.181468	73.775	201.207
9	0.065	0.642857		0.36649	73.775	187.655
10	0.065	0.714286		0.568052	73.775	172.89
11	0.22	0.785714		0.792618	156.7	156.441
12	0.44	0.857143		1.07138	274.4	136.022
13	0.95	0.928571		1.46838	547.25	106.941

Shapiro-Wilks Test of Normality

Parameter: 4-Isopropyltoluene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

K = 6 for 13 measurements

i	x(i)	x(n-i+1)	x(n-1+1)-x(i)	a(n-i+1)	b(i)
1	-2.73337	-0.0512933	2.68207	0.5359	1.43732
2	-2.73337	-0.820981	1.91239	0.3325	0.635869
3	-2.73337	-1.51413	1.21924	0.2412	0.294081
4	-2.73337	-2.73337	0	0.1707	0
5	-2.73337	-2.73337	0	0.1099	0
6	-2.73337	-2.73337	0	0.0539	0
7	-2.73337	-2.73337			
8	-2.73337	-2.73337			
9	-2.73337	-2.73337			
10	-2.73337	-2.73337			
11	-1.51413	-2.73337	-1.21924		
12	-0.820981	-2.73337	-1.91239		
13	-0.0512933	-2.73337	-2.68207		

Sum of b values = 2.36727
Sample Standard Deviation = 0.900804
W Statistic = 0.575513

5% Critical value of 0.866 exceeds 0.575513
Evidence of non-normality at 95% level of significance

1% Critical value of 0.814 exceeds 0.575513
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: 4-Isopropyltoluene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.752997
0.752997 < 0.931 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.73337	0.0714286	-1.46838	86.5494	322.059
2	-2.73337	0.142857	-1.07138	86.5494	292.978
3	-2.73337	0.214286	-0.792618	86.5494	272.559
4	-2.73337	0.285714	-0.568052	86.5494	256.11
5	-2.73337	0.357143	-0.36649	86.5494	241.345
6	-2.73337	0.428571	-0.181468	86.5494	227.793
7	-2.73337	0.5	0	86.5494	214.5
8	-2.73337	0.571429	0.181468	86.5494	201.207
9	-2.73337	0.642857	0.36649	86.5494	187.655
10	-2.73337	0.714286	0.568052	86.5494	172.89
11	-1.51413	0.785714	0.792618	303.981	156.441
12	-0.820981	0.857143	1.07138	427.592	136.022
13	-0.0512933	0.928571	1.46838	564.853	106.941

Kruskal-Wallis Non-Parametric Test

Parameter: 4-Isopropyltoluene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Kruskal Wallis Ranks

Background Locations

Loc. ID	Date	Value	Rank
LMW-4	11/16/2012	ND<-2.73337 U	5.5

Rank Sum = 5.5
Rank Mean = 5.5

Background Rank Sum = 5.5
Background Rank Mean = 5.5

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	11/16/2012	-1.51413 J	11

Rank Sum = 11
Rank Mean = 11

LMW-14R	11/16/2012	ND<-2.73337 U	5.5

Rank Sum = 5.5
Rank Mean = 5.5

LMW-15R	11/16/2012	ND<-2.73337 U	5.5

Rank Sum = 5.5
Rank Mean = 5.5

LMW-16	11/16/2012	ND<-2.73337 U	5.5

Rank Sum = 5.5
Rank Mean = 5.5

LMW-3	11/16/2012	-0.0512933 J	13

Rank Sum = 13
Rank Mean = 13

LMW-3S	11/16/2012	-0.820981 J	12

Rank Sum = 12
Rank Mean = 12

LMW-6	11/16/2012	ND<-2.73337 U	5.5

Rank Sum = 5.5
Rank Mean = 5.5

LMW-7	11/16/2012	ND<-2.73337 U	5.5

Rank Sum = 5.5
Rank Mean = 5.5

LMW-8	11/16/2012	ND<-2.73337 U	5.5

Rank Sum = 5.5
Rank Mean = 5.5

LMW-9	11/16/2012	ND<-2.73337 U	5.5

Rank Sum = 5.5

Rank Mean = 5.5

LMW-9D 11/16/2012 ND<-2.73337 U 5.5
Rank Sum = 5.5
Rank Mean = 5.5

LMW-9S 11/16/2012 ND<-2.73337 U 5.5
Rank Sum = 5.5
Rank Mean = 5.5

Calculation Results:

Kruskal-Wallis H Statistic = 6.56044
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 12
95% Confidence comparison value is 21.0261 at 12 degrees of freedom
6.56044 < 21.0261 indicating no significant group difference at 5% significance level
12 < 21.0261 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ppb)

Parameter: Arsenic

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 207
Percent Non-Detects: 72.8873%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	21 (91.3043%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	17 (85%)	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

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		
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-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-14R	14	10 (71.4286%)	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	
LMW-15R	15	14 (93.3333%)	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
LMW-16	13	3 (23.0769%)	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
LMW-3	25	23 (92%)	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
LMW-3S	13	10 (76.9231%)	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
LMW-6	23	19 (82.6087%)	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
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
LMW-8	23	15 (65.2174%)	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	
LMW-9	23	15 (65.2174%)	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
LMW-9D	13	1 (7.69231%)	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	
LMW-9S	12	3 (25%)	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	
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

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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.2	-2.747777	7.55021	-0.549553
2	0.2	-2.457271	3.5884	-1.04101
3	0.2	-2.326341	9.0003	-1.50628
4	0.2	-2.197282	3.8283	-1.94573
5	0.2	-2.120072	8.323	-2.36975
6	0.2	-2.033523	2.4582	-2.77645
7	0.2	-1.977373	6.3682	-3.17192
8	0.2	-1.911034	0.0203	-3.55413
9	0.2	-1.866294	3.5033	-3.92739
10	0.2	-1.811914	6.7863	-4.28977
11	0.2	-1.774384	9.9348	-4.64465
12	0.2	-1.727935	2.9205	-4.99023
13	0.2	-1.6954	55.7949	-5.32931
14	0.2	-1.654635	8.5327	-5.66024
15	0.2	-1.625766	1.1758	-5.98539
16	0.2	-1.589276	3.7015	-6.30324
17	0.2	-1.563226	6.1452	-6.61589
18	0.2	-1.530076	8.4863	-6.9219
19	0.2	-1.506267	0.7551	-7.22315
20	0.2	-1.475797	2.9331	-7.51831
21	0.2	-1.4538	75.0466	-7.80907
22	0.2	-1.425547	7.0788	-8.09418
23	0.2	-1.405077	9.053	-8.3752
24	0.2	-1.378668	0.9537	-8.65093
25	0.2	-1.359468	2.8019	-8.92282
26	0.2	-1.334628	4.5831	-9.18975
27	0.2	-1.316528	6.3163	-9.45305
28	0.2	-1.293038	7.9883	-9.71166
29	0.2	-1.275888	9.6161	-9.96683
30	0.2	-1.253579	1.1875	-10.2175
31	0.2	-1.237249	2.7183	-10.465
32	0.2	-1.215969	4.1969	-10.7082
33	0.2	-1.200369	5.6377	-10.9483
34	0.2	-1.18	97.0301	-11.1843
35	0.2	-1.165059	8.3875	-11.4173
36	0.2	-1.1455	99.6996	-11.6464
37	0.2	-1.131131	00.979	-11.8726
38	0.2	-1.112321	02.216	-12.0951
39	0.2	-1.098471	03.423	-12.3148
40	0.2	-1.080321	04.59	-12.5308
41	0.2	-1.066941	05.728	-12.7442
42	0.2	-1.049391	06.83	-12.9541
43	0.2	-1.036431	07.904	-13.1614
44	0.2	-1.019431	08.943	-13.3653
45	0.2	-1.006871	09.957	-13.5666
46	0.2	-0.990356	110.938	-13.7647
47	0.2	-0.978151	11.894	-13.9603
48	0.2	-0.9621	112.82	-14.1527
49	0.2	-0.950222	113.723	-14.3428
50	0.2	-0.934591	14.596	-14.5297
51	0.2	-0.923014	115.448	-14.7143

52	0.2	-0.907769	116.272	-14.8959
53	0.2	-0.896473	117.076	-15.0752
54	0.2	-0.881587	117.853	-15.2515
55	0.2	-0.87055	118.611	-15.4256
56	0.41	-0.855996	119.344	-15.7765
57	0.42	-0.841621	120.052	-16.13
58	0.43	-0.830953	120.743	-16.4873
59	0.44	-0.816874	121.41	-16.8468
60	0.46	-0.806422	122.06	-17.2177
61	0.46	-0.792618	122.689	-17.5823
62	0.46	-0.782366	123.301	-17.9422
63	0.47	-0.768821	123.892	-18.3036
64	0.47	-0.758753	124.467	-18.6602
65	0.48	-0.745449	125.023	-19.018
66	0.49	-0.735557	125.564	-19.3784
67	0.5	-0.722479	126.086	-19.7396
68	0.52	-0.712751	126.594	-20.1103
69	0.53	-0.699883	127.084	-20.4812
70	0.54	-0.690309	127.561	-20.854
71	0.54	-0.677639	128.02	-21.2199
72	0.54	-0.668209	128.466	-21.5807
73	0.56	-0.655726	128.896	-21.9479
74	0.57	-0.646431	129.314	-22.3164
75	0.58	-0.634124	129.716	-22.6842
76	0.59	-0.624956	130.107	-23.0529
77	0.65	-0.612813	130.482	-23.4513
78	0.73	-0.603765	130.847	-23.892
79	0.81	-0.591776	131.197	-24.3713
80	0.84	-0.582841	131.537	-24.8609
81	1	-0.570999	131.863	-25.4319
82	1	-0.56217	132.179	-25.9941
83	1	-0.550465	132.482	-26.5446
84	1	-0.541736	132.775	-27.0863
85	1	-0.530162	133.056	-27.6165
86	1	-0.521527	133.328	-28.138
87	1	-0.510074	133.589	-28.6481
88	1	-0.501527	133.84	-29.1496
89	1	-0.490189	134.08	-29.6398
90	1	-0.481728	134.312	-30.1215
91	1	-0.470498	134.534	-30.592
92	1	-0.462114	134.747	-31.0541
93	1	-0.450985	134.951	-31.5051
94	1	-0.442676	135.147	-31.9478
95	1	-0.431644	135.333	-32.3794
96	1	-0.423405	135.512	-32.8028
97	1	-0.412463	135.682	-33.2153
98	1	-0.40429	135.846	-33.6196
99	1	-0.393433	136.001	-34.013
100	1	-0.385321	136.149	-34.3983
101	1	-0.374544	136.289	-34.7729
102	1	-0.36649	136.424	-35.1394
103	1	-0.355788	136.55	-35.4952
104	1	-0.347787	136.671	-35.8429
105	1	-0.337155	136.785	-36.1801
106	1	-0.329206	136.893	-36.5093
107	1	-0.318639	136.995	-36.8279
108	1	-0.310738	137.091	-37.1387
109	1	-0.300232	137.182	-37.4389
110	1	-0.292375	137.267	-37.7313
111	1	-0.281926	137.346	-38.0132
112	1	-0.27411	137.422	-38.2873
113	1	-0.263715	137.491	-38.551

114	1	-0.253347	137.555	-38.8044
115	1	-0.24559	137.616	-39.05
116	1	-0.235269	137.671	-39.2852
117	1	-0.227545	137.723	-39.5128
118	1	-0.217267	137.77	-39.7301
119	1	-0.209575	137.814	-39.9396
120	1	-0.199336	137.854	-40.139
121	1	-0.191671	137.89	-40.3306
122	1	-0.181468	137.923	-40.5121
123	1	-0.173829	137.954	-40.6859
124	1	-0.163659	137.98	-40.8496
125	1	-0.156042	138.005	-41.0056
126	1	-0.1459	138.026	-41.1515
127	1	-0.138305	138.045	-41.2898
128	1	-0.128189	138.062	-41.418
129	1	-0.12061	138.076	-41.5386
130	1	-0.110516	138.088	-41.6492
131	1	-0.102953	138.099	-41.7521
132	1	-0.0928787	138.108	-41.845
133	1	-0.0853288	138.115	-41.9303
134	1	-0.0752698	138.12	-42.0056
135	1	-0.0677301	138.125	-42.0733
136	1	-0.0576847	138.128	-42.131
137	1	-0.0501541	138.131	-42.1812
138	1	-0.0401167	138.132	-42.2213
139	1	-0.0325917	138.134	-42.2539
140	1	-0.0225612	138.134	-42.2764
141	1	-0.0150408	138.134	-42.2915
142	1	-0.00501359	138.134	-42.2965
143	1	0.00501359	138.134	-42.2915
144	1	0.0150408	138.135	-42.2764
145	1	0.0225612	138.135	-42.2539
146	1	0.0325917	138.136	-42.2213
147	1	0.0401167	138.138	-42.1812
148	1	0.0501541	138.14	-42.131
149	1	0.0576847	138.144	-42.0733
150	1	0.0677301	138.148	-42.0056
151	1	0.0752698	138.154	-41.9303
152	1	0.0853288	138.161	-41.845
153	1	0.0928787	138.17	-41.7521
154	1	0.102953	138.18	-41.6492
155	1	0.110516	138.193	-41.5386
156	1	0.12061	138.207	-41.418
157	1	0.128189	138.224	-41.2898
158	1	0.138305	138.243	-41.1515
159	1	0.1459	138.264	-41.0056
160	1	0.156042	138.288	-40.8496
161	1	0.163659	138.315	-40.6859
162	1	0.173829	138.345	-40.5121
163	1	0.181468	138.378	-40.3306
164	1	0.191671	138.415	-40.139
165	1	0.199336	138.455	-39.9396
166	1	0.209575	138.499	-39.7301
167	1	0.217267	138.546	-39.5128
168	1	0.227545	138.598	-39.2852
169	1	0.235269	138.653	-39.05
170	1	0.24559	138.713	-38.8044
171	1	0.253347	138.777	-38.551
172	1	0.263715	138.847	-38.2873
173	1	0.27411	138.922	-38.0132
174	1	0.281926	139.002	-37.7313
175	1	0.292375	139.087	-37.4389

176	1	0.300232	139.177	-37.1387
177	1	0.310738	139.274	-36.8279
178	1	0.318639	139.375	-36.5093
179	1	0.329206	139.484	-36.1801
180	1	0.337155	139.597	-35.8429
181	1	0.347787	139.718	-35.4952
182	1	0.355788	139.845	-35.1394
183	1	0.36649	139.979	-34.7729
184	1	0.374544	140.12	-34.3983
185	1	0.385321	140.268	-34.013
186	1	0.393433	140.423	-33.6196
187	1	0.40429	140.586	-33.2153
188	1	0.412463	140.756	-32.8028
189	1	0.423405	140.936	-32.3794
190	1	0.431644	141.122	-31.9478
191	1	0.442676	141.318	-31.5051
192	1	0.450985	141.521	-31.0541
193	1	0.462114	141.735	-30.592
194	1	0.470498	141.956	-30.1215
195	1	0.481728	142.188	-29.6398
196	1	0.490189	142.429	-29.1496
197	1	0.501527	142.68	-28.6481
198	1	0.510074	142.94	-28.138
199	1	0.521527	143.212	-27.6165
200	1	0.530162	143.493	-27.0863
201	1	0.541736	143.787	-26.5446
202	1	0.550465	144.09	-25.9941
203	1	0.56217	144.406	-25.4319
204	1	0.570999	144.732	-24.8609
205	1	0.582841	145.072	-24.2781
206	1	0.591776	145.422	-23.6863
207	1	0.603765	145.786	-23.0825
208	1	0.612813	146.162	-22.4697
209	1	0.624956	146.552	-21.8448
210	1	0.634124	146.955	-21.2107
211	1	0.646431	147.372	-20.5642
212	1	0.655726	147.802	-19.9085
213	1	0.668209	148.249	-19.2403
214	1	0.677639	148.708	-18.5626
215	1	0.690309	149.185	-17.8723
216	1	0.699883	149.674	-17.1725
217	1	0.712751	150.182	-16.4597
218	1	0.722479	150.704	-15.7372
219	1	0.735557	151.245	-15.0017
220	1	0.745449	151.801	-14.2562
221	1	0.758753	152.377	-13.4975
222	1	0.768821	152.968	-12.7286
223	1	0.782366	153.58	-11.9463
224	1	0.792618	154.208	-11.1537
225	1	0.806422	154.859	-10.3472
226	1	0.816874	155.526	-9.53037
227	1	0.830953	156.216	-8.69941
228	1	0.841621	156.925	-7.85779
229	1	0.855996	157.657	-7.0018
230	1	0.87055	158.415	-6.13125
231	1	0.881587	159.193	-5.24966
232	1	0.896473	159.996	-4.35319
233	1	0.907769	160.82	-3.44542
234	1	0.923014	161.672	-2.5224
235	1	0.93459	162.546	-1.58781
236	1	0.950222	163.449	-0.637592
237	1	0.9621	164.374	0.324508

238	1	0.97815	165.331	1.30266	
239	1	0.990356		166.312	2.29301
240	1	1.00687	167.326	3.29988	
241	1	1.01943	168.365	4.31931	
242	1	1.03643	169.439	5.35574	
243	1	1.04939	170.54	6.40513	
244	1	1.06694	171.679	7.47206	
245	1.1	1.08032	172.846	8.66042	
246	1.1	1.09847	174.052	9.86873	
247	1.1	1.11232	175.29	11.0923	
248	1.2	1.13113	176.569	12.4496	
249	1.2	1.1455	177.881	13.8242	
250	1.2	1.16505	179.239	15.2223	
251	1.3	1.18	180.631	16.7563	
252	1.6	1.20036	182.072	18.6769	
253	1.7	1.21596	183.55	20.744	
254	1.8	1.23724	185.081	22.971	
255	1.8	1.25357	186.653	25.2275	
256	1.8	1.27588	188.28	27.524	
257	2	1.29303	189.952	30.1101	
258	2	1.31652	191.686	32.7431	
259	2	1.33462	193.467	35.4124	
260	2.1	1.35946	195.315	38.2673	
261	2.5	1.37866	197.216	41.7139	
262	2.5	1.40507	199.19	45.2266	
263	2.6	1.42554	201.222	48.933	
264	3	1.4538	203.336	53.2944	
265	3	1.47579	205.514	57.7218	
266	3	1.50626	207.782	62.2406	
267	3.2	1.53007	210.123	67.1368	
268	4	1.56322	212.567	73.3897	
269	5.3	1.58927	215.093	81.8128	
270	7	1.62576	217.736	93.1931	
271	7	1.65463	220.474	104.776	
272	8	1.6954	223.348	118.339	
273	9	1.72793	226.334	133.89	
274	9	1.77438	229.482	149.859	
275	10	1.81191	232.765	167.979	
276	10	1.86629	236.248	186.642	
277	12	1.91103	239.9	209.574	
278	16	1.97737	243.81	241.212	
279	18	2.03352	247.946	277.815	
280	23	2.12007	252.44	326.577	
281	25	2.19728	257.268	381.509	
282	34	2.32634	262.68	460.605	
283	57	2.45727	268.718	600.669	
284	60	2.74777	276.269	765.535	

Data Set Standard Deviation = 5.8445
Numerator = 586044
Denominator = 2.67063e+006
W Statistic = 0.219441 = 586044 / 2.67063e+006

5% Critical value of 0.976 exceeds 0.219441
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.219441
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 = 0.475572
0.475572 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.2	0.00350877	-2.74777	40.7833	348.683	
2	0.2	0.00701754	-2.45727	40.7833	334.497	
3	0.2	0.0105263	-2.32634	40.7833	328.103	
4	0.2	0.0140351	-2.19728	40.7833	321.801	
5	0.2	0.0175439	-2.12007	40.7833	318.03	
6	0.2	0.0210526	-2.03352	40.7833	313.804	
7	0.2	0.0245614	-1.97737	40.7833	311.062	
8	0.2	0.0280702	-1.91103	40.7833	307.822	
9	0.2	0.0315789	-1.86629	40.7833	305.637	
10	0.2	0.0350877	-1.81191	40.7833	302.982	
11	0.2	0.0385965	-1.77438	40.7833	301.149	
12	0.2	0.0421053	-1.72793	40.7833	298.881	
13	0.2	0.045614	-1.6954	40.7833	297.292	
14	0.2	0.0491228	-1.65463	40.7833	295.301	
15	0.2	0.0526316	-1.62576	40.7833	293.891	
16	0.2	0.0561404	-1.58927	40.7833	292.109	
17	0.2	0.0596491	-1.56322	40.7833	290.837	
18	0.2	0.0631579	-1.53007	40.7833	289.218	
19	0.2	0.0666667	-1.50626	40.7833	288.056	
20	0.2	0.0701754	-1.47579	40.7833	286.568	
21	0.2	0.0736842	-1.4538	40.7833	285.494	
22	0.2	0.077193	-1.42554	40.7833	284.114	
23	0.2	0.0807018	-1.40507	40.7833	283.114	
24	0.2	0.0842105	-1.37866	40.7833	281.824	
25	0.2	0.0877193	-1.35946	40.7833	280.887	
26	0.2	0.0912281	-1.33462	40.7833	279.674	
27	0.2	0.0947368	-1.31652	40.7833	278.79	
28	0.2	0.0982456	-1.29303	40.7833	277.643	
29	0.2	0.101754	-1.27588	40.7833	276.805	
30	0.2	0.105263	-1.25357	40.7833	275.716	
31	0.2	0.108772	-1.23724	40.7833	274.918	
32	0.2	0.112281	-1.21596	40.7833	273.879	
33	0.2	0.115789	-1.20036	40.7833	273.118	
34	0.2	0.119298	-1.18	40.7833	272.123	
35	0.2	0.122807	-1.16505	40.7833	271.393	
36	0.2	0.126316	-1.1455	40.7833	270.439	
37	0.2	0.129825	-1.13113	40.7833	269.737	
38	0.2	0.133333	-1.11232	40.7833	268.818	
39	0.2	0.136842	-1.09847	40.7833	268.142	
40	0.2	0.140351	-1.08032	40.7833	267.256	
41	0.2	0.14386	-1.06694	40.7833	266.602	
42	0.2	0.147368	-1.04939	40.7833	265.745	
43	0.2	0.150877	-1.03643	40.7833	265.112	
44	0.2	0.154386	-1.01943	40.7833	264.282	
45	0.2	0.157895	-1.00687	40.7833	263.669	
46	0.2	0.161404	-0.990356	40.7833	262.862	
47	0.2	0.164912	-0.97815	40.7833	262.266	
48	0.2	0.168421	-0.9621	40.7833	261.483	

49	0.2	0.17193	-0.950222	40.7833	260.903
50	0.2	0.175439	-0.934594	0.7833	260.139
51	0.2	0.178947	-0.923014	40.7833	259.574
52	0.2	0.182456	-0.907769	40.7833	258.829
53	0.2	0.185965	-0.896473	40.7833	258.278
54	0.2	0.189474	-0.881587	40.7833	257.551
55	0.2	0.192982	-0.870554	0.7833	257.012
56	0.41	0.196491	-0.855996	42.6558	256.301
57	0.42	0.2	-0.841621	42.745	255.599
58	0.43	0.203509	-0.830953	42.8342	255.078
59	0.44	0.207018	-0.816874	42.9233	254.391
60	0.46	0.210526	-0.806422	43.1017	253.88
61	0.46	0.214035	-0.792618	43.1017	253.206
62	0.46	0.217544	-0.782366	43.1017	252.706
63	0.47	0.221053	-0.768821	43.1908	252.044
64	0.47	0.224561	-0.758753	43.1908	251.552
65	0.48	0.22807	-0.745449	43.28	250.903
66	0.49	0.231579	-0.735557	43.3692	250.42
67	0.5	0.235088	-0.722479	43.4583	249.781
68	0.52	0.238596	-0.712751	43.6367	249.306
69	0.53	0.242105	-0.699883	43.7258	248.678
70	0.54	0.245614	-0.690309	43.815	248.21
71	0.54	0.249123	-0.677639	43.815	247.591
72	0.54	0.252632	-0.668209	43.815	247.131
73	0.56	0.25614	-0.655726	43.9933	246.521
74	0.57	0.259649	-0.646431	44.0825	246.067
75	0.58	0.263158	-0.634124	44.1717	245.466
76	0.59	0.266667	-0.624956	44.2608	245.019
77	0.65	0.270175	-0.612813	44.7958	244.426
78	0.73	0.273684	-0.603765	45.5092	243.984
79	0.81	0.277193	-0.591776	46.2225	243.398
80	0.84	0.280702	-0.582841	46.49	242.962
81	1	0.284211	-0.570999	47.9167	242.384
82	1	0.287719	-0.562174	7.9167	241.953
83	1	0.291228	-0.550465	47.9167	241.381
84	1	0.294737	-0.541736	47.9167	240.955
85	1	0.298246	-0.530162	47.9167	240.39
86	1	0.301754	-0.521527	47.9167	239.968
87	1	0.305263	-0.510074	47.9167	239.409
88	1	0.308772	-0.501527	47.9167	238.991
89	1	0.312281	-0.490189	47.9167	238.438
90	1	0.315789	-0.481728	47.9167	238.024
91	1	0.319298	-0.470498	47.9167	237.476
92	1	0.322807	-0.462114	47.9167	237.067
93	1	0.326316	-0.450985	47.9167	236.523
94	1	0.329825	-0.442676	47.9167	236.117
95	1	0.333333	-0.431644	47.9167	235.579
96	1	0.336842	-0.423405	47.9167	235.176
97	1	0.340351	-0.412463	47.9167	234.642
98	1	0.34386	-0.404294	7.9167	234.243
99	1	0.347368	-0.393433	47.9167	233.713
100	1	0.350877	-0.385321	47.9167	233.317
101	1	0.354386	-0.374544	47.9167	232.79
102	1	0.357895	-0.366494	7.9167	232.397
103	1	0.361404	-0.355788	47.9167	231.874
104	1	0.364912	-0.347787	47.9167	231.484
105	1	0.368421	-0.337155	47.9167	230.964
106	1	0.37193	-0.329206	47.9167	230.576
107	1	0.375439	-0.318639	47.9167	230.06
108	1	0.378947	-0.310738	47.9167	229.674
109	1	0.382456	-0.300232	47.9167	229.161
110	1	0.385965	-0.292375	47.9167	228.778

111	1	0.389474	-0.281926	47.9167	228.267
112	1	0.392982	-0.274114	7.9167	227.886
113	1	0.396491	-0.263715	47.9167	227.378
114	1	0.4	-0.253347	47.9167	226.872
115	1	0.403509	-0.245594	7.9167	226.493
116	1	0.407018	-0.235269	47.9167	225.989
117	1	0.410526	-0.227545	47.9167	225.612
118	1	0.414035	-0.217267	47.9167	225.11
119	1	0.417544	-0.209575	47.9167	224.734
120	1	0.421053	-0.199336	47.9167	224.234
121	1	0.424561	-0.191671	47.9167	223.86
122	1	0.42807	-0.181468	47.9167	223.362
123	1	0.431579	-0.173829	47.9167	222.989
124	1	0.435088	-0.163659	47.9167	222.492
125	1	0.438596	-0.156042	47.9167	222.12
126	1	0.442105	-0.1459	47.9167	221.625
127	1	0.445614	-0.138305	47.9167	221.254
128	1	0.449123	-0.128189	47.9167	220.76
129	1	0.452632	-0.120614	7.9167	220.39
130	1	0.45614	-0.110516	47.9167	219.897
131	1	0.459649	-0.102953	47.9167	219.528
132	1	0.463158	-0.0928787	47.9167	219.036
133	1	0.466667	-0.0853288	47.9167	218.667
134	1	0.470175	-0.0752698	47.9167	218.176
135	1	0.473684	-0.0677301	47.9167	217.807
136	1	0.477193	-0.0576847	47.9167	217.317
137	1	0.480702	-0.0501541	47.9167	216.949
138	1	0.484211	-0.0401167	47.9167	216.459
139	1	0.487719	-0.0325917	47.9167	216.092
140	1	0.491228	-0.0225612	47.9167	215.602
141	1	0.494737	-0.0150408	47.9167	215.234
142	1	0.498246	-0.00501359	47.9167	214.745
143	1	0.501754	0.00501359	47.9167	214.255
144	1	0.505263	0.0150408	47.9167	213.766
145	1	0.508772	0.0225612	47.9167	213.398
146	1	0.512281	0.0325917	47.9167	212.908
147	1	0.515789	0.0401167	47.9167	212.541
148	1	0.519298	0.0501541	47.9167	212.051
149	1	0.522807	0.0576847	47.9167	211.683
150	1	0.526316	0.0677301	47.9167	211.193
151	1	0.529825	0.0752698	47.9167	210.824
152	1	0.533333	0.0853288	47.9167	210.333
153	1	0.536842	0.0928787	47.9167	209.964
154	1	0.540351	0.102953	47.9167	209.472
155	1	0.54386	0.110516	47.9167	209.103
156	1	0.547368	0.12061	47.9167	208.61
157	1	0.550877	0.128189	47.9167	208.24
158	1	0.554386	0.138305	47.9167	207.746
159	1	0.557895	0.1459	47.9167	207.375
160	1	0.561404	0.156042	47.9167	206.88
161	1	0.564912	0.163659	47.9167	206.508
162	1	0.568421	0.173829	47.9167	206.011
163	1	0.57193	0.181468	47.9167	205.638
164	1	0.575439	0.191671	47.9167	205.14
165	1	0.578947	0.199336	47.9167	204.766
166	1	0.582456	0.209575	47.9167	204.266
167	1	0.585965	0.217267	47.9167	203.89
168	1	0.589474	0.227545	47.9167	203.388
169	1	0.592982	0.235269	47.9167	203.011
170	1	0.596491	0.24559	47.9167	202.507
171	1	0.6	0.253347	47.9167	202.128
172	1	0.603509	0.263715	47.9167	201.622

173	1	0.607018	0.27411	47.9167	201.114
174	1	0.610526	0.281926	47.9167	200.733
175	1	0.614035	0.292375	47.9167	200.222
176	1	0.617544	0.300232	47.9167	199.839
177	1	0.621053	0.310738	47.9167	199.326
178	1	0.624561	0.318639	47.9167	198.94
179	1	0.62807	0.329206	47.9167	198.424
180	1	0.631579	0.337155	47.9167	198.036
181	1	0.635088	0.347787	47.9167	197.516
182	1	0.638596	0.355788	47.9167	197.126
183	1	0.642105	0.36649	47.9167	196.603
184	1	0.645614	0.374544	47.9167	196.21
185	1	0.649123	0.385321	47.9167	195.683
186	1	0.652632	0.393433	47.9167	195.287
187	1	0.65614	0.40429	47.9167	194.757
188	1	0.659649	0.412463	47.9167	194.358
189	1	0.663158	0.423405	47.9167	193.824
190	1	0.666667	0.431644	47.9167	193.421
191	1	0.670175	0.442676	47.9167	192.883
192	1	0.673684	0.450985	47.9167	192.477
193	1	0.677193	0.462114	47.9167	191.933
194	1	0.680702	0.470498	47.9167	191.524
195	1	0.684211	0.481728	47.9167	190.976
196	1	0.687719	0.490189	47.9167	190.562
197	1	0.691228	0.501527	47.9167	190.009
198	1	0.694737	0.510074	47.9167	189.591
199	1	0.698246	0.521527	47.9167	189.032
200	1	0.701754	0.530162	47.9167	188.61
201	1	0.705263	0.541736	47.9167	188.045
202	1	0.708772	0.550465	47.9167	187.619
203	1	0.712281	0.56217	47.9167	187.047
204	1	0.715789	0.570999	47.9167	186.616
205	1	0.719298	0.582841	47.9167	186.038
206	1	0.722807	0.591776	47.9167	185.602
207	1	0.726316	0.603765	47.9167	185.016
208	1	0.729825	0.612813	47.9167	184.574
209	1	0.733333	0.624956	47.9167	183.981
210	1	0.736842	0.634124	47.9167	183.534
211	1	0.740351	0.646431	47.9167	182.933
212	1	0.74386	0.655726	47.9167	182.479
213	1	0.747368	0.668209	47.9167	181.869
214	1	0.750877	0.677639	47.9167	181.409
215	1	0.754386	0.690309	47.9167	180.79
216	1	0.757895	0.699883	47.9167	180.322
217	1	0.761404	0.712751	47.9167	179.694
218	1	0.764912	0.722479	47.9167	179.219
219	1	0.768421	0.735557	47.9167	178.58
220	1	0.77193	0.745449	47.9167	178.097
221	1	0.775439	0.758753	47.9167	177.448
222	1	0.778947	0.768821	47.9167	176.956
223	1	0.782456	0.782366	47.9167	176.294
224	1	0.785965	0.792618	47.9167	175.794
225	1	0.789474	0.806422	47.9167	175.12
226	1	0.792982	0.816874	47.9167	174.609
227	1	0.796491	0.830953	47.9167	173.922
228	1	0.8	0.841621	47.9167	173.401
229	1	0.803509	0.855996	47.9167	172.699
230	1	0.807018	0.87055	47.9167	171.988
231	1	0.810526	0.881587	47.9167	171.449
232	1	0.814035	0.896473	47.9167	170.722
233	1	0.817544	0.907769	47.9167	170.171
234	1	0.821053	0.923014	47.9167	169.426

235	1	0.824561	0.93459	47.9167	168.861	
236	1	0.82807	0.950222	47.9167	168.097	
237	1	0.831579	0.9621	47.9167	167.517	
238	1	0.835088	0.97815	47.9167	166.734	
239	1	0.838596	0.990356	47.9167	166.138	
240	1	0.842105	1.00687	47.9167	165.331	
241	1	0.845614	1.01943	47.9167	164.718	
242	1	0.849123	1.03643	47.9167	163.888	
243	1	0.852632	1.04939	47.9167	163.255	
244	1	0.85614	1.06694	47.9167	162.398	
245	1.1	0.859649	1.08032	48.8083	161.744	
246	1.1	0.863158	1.09847	48.8083	160.858	
247	1.1	0.866667	1.11232	48.8083	160.182	
248	1.2	0.870175	1.13113	49.7	159.263	
249	1.2	0.873684	1.1455	49.7	158.561	
250	1.2	0.877193	1.16505	49.7	157.607	
251	1.3	0.880702	1.18	50.5917	156.877	
252	1.6	0.884211	1.20036	53.2667	155.882	
253	1.7	0.887719	1.21596	54.1583	155.121	
254	1.8	0.891228	1.23724	55.05	154.082	
255	1.8	0.894737	1.25357	55.05	153.284	
256	1.8	0.898246	1.27588	55.05	152.195	
257	2	0.901754	1.29303	56.8333	151.357	
258	2	0.905263	1.31652	56.8333	150.21	
259	2	0.908772	1.33462	56.8333	149.326	
260	2.1	0.912281	1.35946	57.725	148.113	
261	2.5	0.915789	1.37866	61.2917	147.176	
262	2.5	0.919298	1.40507	61.2917	145.886	
263	2.6	0.922807	1.42554	62.1833	144.886	
264	3	0.926316	1.4538	65.75	143.506	
265	3	0.929825	1.47579	65.75	142.432	
266	3	0.933333	1.50626	65.75	140.944	
267	3.2	0.936842	1.53007	67.5333	139.782	
268	4	0.940351	1.56322	74.6667	138.163	
269	5.3	0.94386	1.58927	86.2583	136.891	
270	7	0.947368	1.62576	101.417	135.109	
271	7	0.950877	1.65463	101.417	133.699	
272	8	0.954386	1.6954	110.333	131.708	
273	9	0.957895	1.72793	119.25	130.119	
274	9	0.961404	1.77438	119.25	127.851	
275	10	0.964912	1.81191	128.167	126.018	
276	10	0.968421	1.86629	128.167	123.363	
277	12	0.97193	1.91103	146	121.178	
278	16	0.975439	1.97737	181.667	117.938	
279	18	0.978947	2.03352	199.5	115.196	
280	23	0.982456	2.12007	244.083	110.97	
281	25	0.985965	2.19728	261.917	107.199	
282	34	0.989474	2.32634	342.167	100.897	
283	57	0.992982	2.45727	547.25	94.5032	
284	60	0.996491	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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.60944	-2.74777	7.55021	4.42236
2	-1.60944	-2.45727	13.5884	8.37719
3	-1.60944	-2.32634	19.0003	12.1213
4	-1.60944	-2.19728	23.8283	15.6577
5	-1.60944	-2.12007	28.323	19.0698
6	-1.60944	-2.03352	32.4582	22.3426
7	-1.60944	-1.97737	36.3682	25.5251
8	-1.60944	-1.91103	40.0203	28.6008
9	-1.60944	-1.86629	43.5033	31.6044
10	-1.60944	-1.81191	46.7863	34.5206
11	-1.60944	-1.77438	49.9348	37.3764
12	-1.60944	-1.72793	52.9205	40.1574
13	-1.60944	-1.6954	55.7949	42.886
14	-1.60944	-1.65463	58.5327	45.549
15	-1.60944	-1.62576	61.1758	48.1656
16	-1.60944	-1.58927	63.7015	50.7234
17	-1.60944	-1.56322	66.1452	53.2393
18	-1.60944	-1.53007	68.4863	55.7019
19	-1.60944	-1.50626	70.7551	58.1261
20	-1.60944	-1.47579	72.9331	60.5013
21	-1.60944	-1.4538	75.0466	62.8411
22	-1.60944	-1.42554	77.0788	65.1354
23	-1.60944	-1.40507	79.053	67.3968
24	-1.60944	-1.37866	80.9537	69.6157
25	-1.60944	-1.35946	82.8019	71.8036
26	-1.60944	-1.33462	84.5831	73.9516
27	-1.60944	-1.31652	86.3163	76.0705
28	-1.60944	-1.29303	87.9883	78.1515
29	-1.60944	-1.27588	89.6161	80.205
30	-1.60944	-1.25357	91.1875	82.2225
31	-1.60944	-1.23724	92.7183	84.2138
32	-1.60944	-1.21596	94.1969	86.1708
33	-1.60944	-1.20036	95.6377	88.1027
34	-1.60944	-1.18	97.0301	90.0018
35	-1.60944	-1.16505	98.3875	91.8769
36	-1.60944	-1.1455	99.6996	93.7205
37	-1.60944	-1.13113	100.979	95.541
38	-1.60944	-1.11232	102.216	97.3312
39	-1.60944	-1.09847	103.423	99.0991
40	-1.60944	-1.08032	104.59	100.838
41	-1.60944	-1.06694	105.728	102.555
42	-1.60944	-1.04939	106.83	104.244
43	-1.60944	-1.03643	107.904	105.912
44	-1.60944	-1.01943	108.943	107.553
45	-1.60944	-1.00687	109.957	109.173
46	-1.60944	-0.990356	110.938	110.767
47	-1.60944	-0.97815	111.894	112.341
48	-1.60944	-0.9621	112.82	113.89
49	-1.60944	-0.950222	113.723	115.419
50	-1.60944	-0.93459	114.596	116.923
51	-1.60944	-0.923014	115.448	118.409

52	-1.60944	-0.907769	116.272	119.87
53	-1.60944	-0.896473	117.076	121.313
54	-1.60944	-0.881587	117.853	122.732
55	-1.60944	-0.87055	118.611	124.133
56	-0.891598	-0.855996	119.344	124.896
57	-0.867501	-0.841621	120.052	125.626
58	-0.84397	-0.830953	120.743	126.327
59	-0.820981	-0.816874	121.41	126.998
60	-0.776529	-0.806422	122.06	127.624
61	-0.776529	-0.792618	122.689	128.24
62	-0.776529	-0.782366	123.301	128.847
63	-0.755023	-0.768821	123.892	129.428
64	-0.755023	-0.758753	124.467	130
65	-0.733969	-0.745449	125.023	130.548
66	-0.71335	-0.735557	125.564	131.072
67	-0.693147	-0.722479	126.086	131.573
68	-0.653926	-0.712751	126.594	132.039
69	-0.634878	-0.699883	127.084	132.484
70	-0.616186	-0.690309	127.561	132.909
71	-0.616186	-0.677639	128.02	133.326
72	-0.616186	-0.668209	128.466	133.738
73	-0.579818	-0.655726	128.896	134.118
74	-0.562119	-0.646431	129.314	134.482
75	-0.544727	-0.634124	129.716	134.827
76	-0.527633	-0.624956	130.107	135.157
77	-0.430783	-0.612813	130.482	135.421
78	-0.314711	-0.603765	130.847	135.611
79	-0.210721	-0.591776	131.197	135.736
80	-0.174353	-0.582841	131.537	135.837
81	0	-0.570999	131.863	135.837
82	0	-0.56217	132.179	135.837
83	0	-0.550465	132.482	135.837
84	0	-0.541736	132.775	135.837
85	0	-0.530162	133.056	135.837
86	0	-0.521527	133.328	135.837
87	0	-0.510074	133.589	135.837
88	0	-0.501527	133.84	135.837
89	0	-0.490189	134.08	135.837
90	0	-0.481728	134.312	135.837
91	0	-0.470498	134.534	135.837
92	0	-0.462114	134.747	135.837
93	0	-0.450985	134.951	135.837
94	0	-0.442676	135.147	135.837
95	0	-0.431644	135.333	135.837
96	0	-0.423405	135.512	135.837
97	0	-0.412463	135.682	135.837
98	0	-0.40429	135.846	135.837
99	0	-0.393433	136.001	135.837
100	0	-0.385321	136.149	135.837
101	0	-0.374544	136.289	135.837
102	0	-0.36649	136.424	135.837
103	0	-0.355788	136.55	135.837
104	0	-0.347787	136.671	135.837
105	0	-0.337155	136.785	135.837
106	0	-0.329206	136.893	135.837
107	0	-0.318639	136.995	135.837
108	0	-0.310738	137.091	135.837
109	0	-0.300232	137.182	135.837
110	0	-0.292375	137.267	135.837
111	0	-0.281926	137.346	135.837
112	0	-0.27411	137.422	135.837
113	0	-0.263715	137.491	135.837

114	0	-0.253347	137.555	135.837
115	0	-0.24559	137.616	135.837
116	0	-0.235269	137.671	135.837
117	0	-0.227545	137.723	135.837
118	0	-0.217267	137.77	135.837
119	0	-0.209575	137.814	135.837
120	0	-0.199336	137.854	135.837
121	0	-0.191671	137.89	135.837
122	0	-0.181468	137.923	135.837
123	0	-0.173829	137.954	135.837
124	0	-0.163659	137.98	135.837
125	0	-0.156042	138.005	135.837
126	0	-0.1459	138.026	135.837
127	0	-0.138305	138.045	135.837
128	0	-0.128189	138.062	135.837
129	0	-0.12061	138.076	135.837
130	0	-0.110516	138.088	135.837
131	0	-0.102953	138.099	135.837
132	0	-0.0928787	138.108	135.837
133	0	-0.0853288	138.115	135.837
134	0	-0.0752698	138.12	135.837
135	0	-0.0677301	138.125	135.837
136	0	-0.0576847	138.128	135.837
137	0	-0.0501541	138.131	135.837
138	0	-0.0401167	138.132	135.837
139	0	-0.0325917	138.134	135.837
140	0	-0.0225612	138.134	135.837
141	0	-0.0150408	138.134	135.837
142	0	-0.00501359	138.134	135.837
143	0	0.00501359	138.134	135.837
144	0	0.0150408	138.135	135.837
145	0	0.0225612	138.135	135.837
146	0	0.0325917	138.136	135.837
147	0	0.0401167	138.138	135.837
148	0	0.0501541	138.14	135.837
149	0	0.0576847	138.144	135.837
150	0	0.0677301	138.148	135.837
151	0	0.0752698	138.154	135.837
152	0	0.0853288	138.161	135.837
153	0	0.0928787	138.17	135.837
154	0	0.102953	138.18	135.837
155	0	0.110516	138.193	135.837
156	0	0.12061	138.207	135.837
157	0	0.128189	138.224	135.837
158	0	0.138305	138.243	135.837
159	0	0.1459	138.264	135.837
160	0	0.156042	138.288	135.837
161	0	0.163659	138.315	135.837
162	0	0.173829	138.345	135.837
163	0	0.181468	138.378	135.837
164	0	0.191671	138.415	135.837
165	0	0.199336	138.455	135.837
166	0	0.209575	138.499	135.837
167	0	0.217267	138.546	135.837
168	0	0.227545	138.598	135.837
169	0	0.235269	138.653	135.837
170	0	0.24559	138.713	135.837
171	0	0.253347	138.777	135.837
172	0	0.263715	138.847	135.837
173	0	0.27411	138.922	135.837
174	0	0.281926	139.002	135.837
175	0	0.292375	139.087	135.837

176	0	0.300232	139.177	135.837
177	0	0.310738	139.274	135.837
178	0	0.318639	139.375	135.837
179	0	0.329206	139.484	135.837
180	0	0.337155	139.597	135.837
181	0	0.347787	139.718	135.837
182	0	0.355788	139.845	135.837
183	0	0.36649	139.979	135.837
184	0	0.374544	140.12	135.837
185	0	0.385321	140.268	135.837
186	0	0.393433	140.423	135.837
187	0	0.40429	140.586	135.837
188	0	0.412463	140.756	135.837
189	0	0.423405	140.936	135.837
190	0	0.431644	141.122	135.837
191	0	0.442676	141.318	135.837
192	0	0.450985	141.521	135.837
193	0	0.462114	141.735	135.837
194	0	0.470498	141.956	135.837
195	0	0.481728	142.188	135.837
196	0	0.490189	142.429	135.837
197	0	0.501527	142.68	135.837
198	0	0.510074	142.94	135.837
199	0	0.521527	143.212	135.837
200	0	0.530162	143.493	135.837
201	0	0.541736	143.787	135.837
202	0	0.550465	144.09	135.837
203	0	0.56217	144.406	135.837
204	0	0.570999	144.732	135.837
205	0	0.582841	145.072	135.837
206	0	0.591776	145.422	135.837
207	0	0.603765	145.786	135.837
208	0	0.612813	146.162	135.837
209	0	0.624956	146.552	135.837
210	0	0.634124	146.955	135.837
211	0	0.646431	147.372	135.837
212	0	0.655726	147.802	135.837
213	0	0.668209	148.249	135.837
214	0	0.677639	148.708	135.837
215	0	0.690309	149.185	135.837
216	0	0.699883	149.674	135.837
217	0	0.712751	150.182	135.837
218	0	0.722479	150.704	135.837
219	0	0.735557	151.245	135.837
220	0	0.745449	151.801	135.837
221	0	0.758753	152.377	135.837
222	0	0.768821	152.968	135.837
223	0	0.782366	153.58	135.837
224	0	0.792618	154.208	135.837
225	0	0.806422	154.859	135.837
226	0	0.816874	155.526	135.837
227	0	0.830953	156.216	135.837
228	0	0.841621	156.925	135.837
229	0	0.855996	157.657	135.837
230	0	0.87055	158.415	135.837
231	0	0.881587	159.193	135.837
232	0	0.896473	159.996	135.837
233	0	0.907769	160.82	135.837
234	0	0.923014	161.672	135.837
235	0	0.93459	162.546	135.837
236	0	0.950222	163.449	135.837
237	0	0.9621	164.374	135.837

238	0	0.97815	165.331	135.837	
239	0	0.990356		166.312	135.837
240	0	1.00687	167.326	135.837	
241	0	1.01943	168.365	135.837	
242	0	1.03643	169.439	135.837	
243	0	1.04939	170.54	135.837	
244	0	1.06694	171.679	135.837	
245	0.0953102		1.08032	172.846	135.94
246	0.0953102		1.09847	174.052	136.045
247	0.0953102		1.11232	175.29	136.151
248	0.182322		1.13113	176.569	136.357
249	0.182322		1.1455	177.881	136.566
250	0.182322		1.16505	179.239	136.778
251	0.262364		1.18	180.631	137.088
252	0.470004		1.20036	182.072	137.652
253	0.530628		1.21596	183.55	138.297
254	0.587787		1.23724	185.081	139.025
255	0.587787		1.25357	186.653	139.761
256	0.587787		1.27588	188.28	140.511
257	0.693147		1.29303	189.952	141.408
258	0.693147		1.31652	191.686	142.32
259	0.693147		1.33462	193.467	143.245
260	0.741937		1.35946	195.315	144.254
261	0.916291		1.37866	197.216	145.517
262	0.916291		1.40507	199.19	146.805
263	0.955511		1.42554	201.222	148.167
264	1.09861	1.4538	203.336	149.764	
265	1.09861	1.47579	205.514	151.385	
266	1.09861	1.50626	207.782	153.04	
267	1.16315	1.53007	210.123	154.82	
268	1.38629	1.56322	212.567	156.987	
269	1.66771	1.58927	215.093	159.637	
270	1.94591	1.62576	217.736	162.801	
271	1.94591	1.65463	220.474	166.021	
272	2.07944	1.6954	223.348	169.546	
273	2.19722	1.72793	226.334	173.343	
274	2.19722	1.77438	229.482	177.241	
275	2.30259	1.81191	232.765	181.414	
276	2.30259	1.86629	236.248	185.711	
277	2.48491	1.91103	239.9	190.46	
278	2.77259	1.97737	243.81	195.942	
279	2.89037	2.03352	247.946	201.82	
280	3.13549	2.12007	252.44	208.467	
281	3.21888	2.19728	257.268	215.54	
282	3.52636	2.32634	262.68	223.743	
283	4.04305	2.45727	268.718	233.678	
284	4.09434	2.74777	276.269	244.929	

Data Set Standard Deviation = 0.998224
Numerator = 59990
Denominator = 77906.5
W Statistic = 0.770025 = 59990 / 77906.5

5% Critical value of 0.976 exceeds 0.770025
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.770025
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 = 0.878963
0.878963 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-1.609440	0.00350877	-2.747776	8.8501	348.683
2	-1.609440	0.00701754	-2.457276	8.8501	334.497
3	-1.609440	0.0105263	-2.326346	8.8501	328.103
4	-1.609440	0.0140351	-2.197286	8.8501	321.801
5	-1.609440	0.0175439	-2.120076	8.8501	318.03
6	-1.609440	0.0210526	-2.033526	8.8501	313.804
7	-1.609440	0.0245614	-1.977376	8.8501	311.062
8	-1.609440	0.0280702	-1.911036	8.8501	307.822
9	-1.609440	0.0315789	-1.866296	8.8501	305.637
10	-1.609440	0.0350877	-1.811916	8.8501	302.982
11	-1.609440	0.0385965	-1.774386	8.8501	301.149
12	-1.609440	0.0421053	-1.727936	8.8501	298.881
13	-1.609440	0.045614	-1.6954	68.8501	297.292
14	-1.609440	0.0491228	-1.654636	8.8501	295.301
15	-1.609440	0.0526316	-1.625766	8.8501	293.891
16	-1.609440	0.0561404	-1.589276	8.8501	292.109
17	-1.609440	0.0596491	-1.563226	8.8501	290.837
18	-1.609440	0.0631579	-1.530076	8.8501	289.218
19	-1.609440	0.0666667	-1.506266	8.8501	288.056
20	-1.609440	0.0701754	-1.475796	8.8501	286.568
21	-1.609440	0.0736842	-1.4538	68.8501	285.494
22	-1.609440	0.077193	-1.425546	8.8501	284.114
23	-1.609440	0.0807018	-1.405076	8.8501	283.114
24	-1.609440	0.0842105	-1.378666	8.8501	281.824
25	-1.609440	0.0877193	-1.359466	8.8501	280.887
26	-1.609440	0.0912281	-1.334626	8.8501	279.674
27	-1.609440	0.0947368	-1.316526	8.8501	278.79
28	-1.609440	0.0982456	-1.293036	8.8501	277.643
29	-1.609440	0.101754	-1.275886	8.8501	276.805
30	-1.609440	0.105263	-1.253576	8.8501	275.716
31	-1.609440	0.108772	-1.237246	8.8501	274.918
32	-1.609440	0.112281	-1.215966	8.8501	273.879
33	-1.609440	0.115789	-1.200366	8.8501	273.118
34	-1.609440	0.119298	-1.18	68.8501	272.123
35	-1.609440	0.122807	-1.165056	8.8501	271.393
36	-1.609440	0.126316	-1.1455	68.8501	270.439
37	-1.609440	0.129825	-1.131136	8.8501	269.737
38	-1.609440	0.133333	-1.112326	8.8501	268.818
39	-1.609440	0.136842	-1.098476	8.8501	268.142
40	-1.609440	0.140351	-1.080326	8.8501	267.256
41	-1.609440	0.14386	-1.066946	8.8501	266.602
42	-1.609440	0.147368	-1.049396	8.8501	265.745
43	-1.609440	0.150877	-1.036436	8.8501	265.112
44	-1.609440	0.154386	-1.019436	8.8501	264.282
45	-1.609440	0.157895	-1.006876	8.8501	263.669
46	-1.609440	0.161404	-0.990356	68.8501	262.862
47	-1.609440	0.164912	-0.978156	8.8501	262.266
48	-1.609440	0.168421	-0.9621	68.8501	261.483

49	-1.60944	0.17193	-0.950222	68.8501	260.903	
50	-1.60944	0.175439	-0.93459	68.8501	260.139	
51	-1.60944	0.178947	-0.923014	68.8501	259.574	
52	-1.60944	0.182456	-0.907769	68.8501	258.829	
53	-1.60944	0.185965	-0.896473	68.8501	258.278	
54	-1.60944	0.189474	-0.881587	68.8501	257.551	
55	-1.60944	0.192982	-0.87055	68.8501	257.012	
56	-0.891598	0.196491	-0.855996	123.714	256.301	
57	-0.867501	0.2	-0.841621	125.555	255.599	
58	-0.84397	0.203509	-0.830953	127.354	255.078	
59	-0.820981	0.207018	-0.816874	129.111	254.391	
60	-0.776529	0.210526	-0.806422	132.508	253.88	
61	-0.776529	0.214035	-0.792618	132.508	253.206	
62	-0.776529	0.217544	-0.782366	132.508	252.706	
63	-0.755023	0.221053	-0.768821	134.152	252.044	
64	-0.755023	0.224561	-0.758753	134.152	251.552	
65	-0.733969	0.22807	-0.745449	135.761	250.903	
66	-0.71335	0.231579	-0.735557	137.337	250.42	
67	-0.693147	0.235088	-0.722479	138.881	249.781	
68	-0.653926	0.238596	-0.712751	141.878	249.306	
69	-0.634878	0.242105	-0.699883	143.334	248.678	
70	-0.616186	0.245614	-0.690309	144.763	248.21	
71	-0.616186	0.249123	-0.677639	144.763	247.591	
72	-0.616186	0.252632	-0.668209	144.763	247.131	
73	-0.579818	0.25614	-0.655726	147.542	246.521	
74	-0.562119	0.259649	-0.646431	148.895	246.067	
75	-0.544727	0.263158	-0.634124	150.224	245.466	
76	-0.527633	0.266667	-0.624956	151.531	245.019	
77	-0.430783	0.270175	-0.612813	158.933	244.426	
78	-0.314711	0.273684	-0.603765	167.804	243.984	
79	-0.210721	0.277193	-0.591776	175.752	243.398	
80	-0.174353	0.280702	-0.582841	178.532	242.962	
81	0	0.284211	-0.570999	191.857	242.384	
82	0	0.287719	-0.56217	191.857	241.953	
83	0	0.291228	-0.550465	191.857	241.381	
84	0	0.294737	-0.541736	191.857	240.955	
85	0	0.298246	-0.530162	191.857	240.39	
86	0	0.301754	-0.521527	191.857	239.968	
87	0	0.305263	-0.510074	191.857	239.409	
88	0	0.308772	-0.501527	191.857	238.991	
89	0	0.312281	-0.490189	191.857	238.438	
90	0	0.315789	-0.481728	191.857	238.024	
91	0	0.319298	-0.470498	191.857	237.476	
92	0	0.322807	-0.462114	191.857	237.067	
93	0	0.326316	-0.450985	191.857	236.523	
94	0	0.329825	-0.442676	191.857	236.117	
95	0	0.333333	-0.431644	191.857	235.579	
96	0	0.336842	-0.423405	191.857	235.176	
97	0	0.340351	-0.412463	191.857	234.642	
98	0	0.34386	-0.40429	191.857	234.243	
99	0	0.347368	-0.393433	191.857	233.713	
100	0	0.350877	-0.385321	191.857	233.317	
101	0	0.354386	-0.374544	191.857	232.79	
102	0	0.357895	-0.36649	191.857	232.397	
103	0	0.361404	-0.355788	191.857	231.874	
104	0	0.364912	-0.347787	191.857	231.484	
105	0	0.368421	-0.337155	191.857	230.964	
106	0	0.37193	-0.329206	191.857	230.576	
107	0	0.375439	-0.318639	191.857	230.06	
108	0	0.378947	-0.310738	191.857	229.674	
109	0	0.382456	-0.300232	191.857	229.161	
110	0	0.385965	-0.292375	191.857	228.778	

111	0	0.389474	-0.281926	191.857	228.267
112	0	0.392982	-0.27411	191.857	227.886
113	0	0.396491	-0.263715	191.857	227.378
114	0	0.4	-0.253347	191.857	226.872
115	0	0.403509	-0.24559	191.857	226.493
116	0	0.407018	-0.235269	191.857	225.989
117	0	0.410526	-0.227545	191.857	225.612
118	0	0.414035	-0.217267	191.857	225.11
119	0	0.417544	-0.209575	191.857	224.734
120	0	0.421053	-0.199336	191.857	224.234
121	0	0.424561	-0.191671	191.857	223.86
122	0	0.42807	-0.181468	191.857	223.362
123	0	0.431579	-0.173829	191.857	222.989
124	0	0.435088	-0.163659	191.857	222.492
125	0	0.438596	-0.156042	191.857	222.12
126	0	0.442105	-0.1459	191.857	221.625
127	0	0.445614	-0.138305	191.857	221.254
128	0	0.449123	-0.128189	191.857	220.76
129	0	0.452632	-0.12061	191.857	220.39
130	0	0.45614	-0.110516	191.857	219.897
131	0	0.459649	-0.102953	191.857	219.528
132	0	0.463158	-0.0928787	191.857	219.036
133	0	0.466667	-0.0853288	191.857	218.667
134	0	0.470175	-0.0752698	191.857	218.176
135	0	0.473684	-0.0677301	191.857	217.807
136	0	0.477193	-0.0576847	191.857	217.317
137	0	0.480702	-0.0501541	191.857	216.949
138	0	0.484211	-0.0401167	191.857	216.459
139	0	0.487719	-0.0325917	191.857	216.092
140	0	0.491228	-0.0225612	191.857	215.602
141	0	0.494737	-0.0150408	191.857	215.234
142	0	0.498246	-0.00501359	191.857	214.745
143	0	0.501754	0.00501359	191.857	214.255
144	0	0.505263	0.0150408	191.857	213.766
145	0	0.508772	0.0225612	191.857	213.398
146	0	0.512281	0.0325917	191.857	212.908
147	0	0.515789	0.0401167	191.857	212.541
148	0	0.519298	0.0501541	191.857	212.051
149	0	0.522807	0.0576847	191.857	211.683
150	0	0.526316	0.0677301	191.857	211.193
151	0	0.529825	0.0752698	191.857	210.824
152	0	0.533333	0.0853288	191.857	210.333
153	0	0.536842	0.0928787	191.857	209.964
154	0	0.540351	0.102953	191.857	209.472
155	0	0.54386	0.110516	191.857	209.103
156	0	0.547368	0.12061	191.857	208.61
157	0	0.550877	0.128189	191.857	208.24
158	0	0.554386	0.138305	191.857	207.746
159	0	0.557895	0.1459	191.857	207.375
160	0	0.561404	0.156042	191.857	206.88
161	0	0.564912	0.163659	191.857	206.508
162	0	0.568421	0.173829	191.857	206.011
163	0	0.57193	0.181468	191.857	205.638
164	0	0.575439	0.191671	191.857	205.14
165	0	0.578947	0.199336	191.857	204.766
166	0	0.582456	0.209575	191.857	204.266
167	0	0.585965	0.217267	191.857	203.89
168	0	0.589474	0.227545	191.857	203.388
169	0	0.592982	0.235269	191.857	203.011
170	0	0.596491	0.24559	191.857	202.507
171	0	0.6	0.253347	191.857	202.128
172	0	0.603509	0.263715	191.857	201.622

173	0	0.607018	0.27411	191.857	201.114
174	0	0.610526	0.281926	191.857	200.733
175	0	0.614035	0.292375	191.857	200.222
176	0	0.617544	0.300232	191.857	199.839
177	0	0.621053	0.310738	191.857	199.326
178	0	0.624561	0.318639	191.857	198.94
179	0	0.62807	0.329206	191.857	198.424
180	0	0.631579	0.337155	191.857	198.036
181	0	0.635088	0.347787	191.857	197.516
182	0	0.638596	0.355788	191.857	197.126
183	0	0.642105	0.36649	191.857	196.603
184	0	0.645614	0.374544	191.857	196.21
185	0	0.649123	0.385321	191.857	195.683
186	0	0.652632	0.393433	191.857	195.287
187	0	0.65614	0.40429	191.857	194.757
188	0	0.659649	0.412463	191.857	194.358
189	0	0.663158	0.423405	191.857	193.824
190	0	0.666667	0.431644	191.857	193.421
191	0	0.670175	0.442676	191.857	192.883
192	0	0.673684	0.450985	191.857	192.477
193	0	0.677193	0.462114	191.857	191.933
194	0	0.680702	0.470498	191.857	191.524
195	0	0.684211	0.481728	191.857	190.976
196	0	0.687719	0.490189	191.857	190.562
197	0	0.691228	0.501527	191.857	190.009
198	0	0.694737	0.510074	191.857	189.591
199	0	0.698246	0.521527	191.857	189.032
200	0	0.701754	0.530162	191.857	188.61
201	0	0.705263	0.541736	191.857	188.045
202	0	0.708772	0.550465	191.857	187.619
203	0	0.712281	0.56217	191.857	187.047
204	0	0.715789	0.570999	191.857	186.616
205	0	0.719298	0.582841	191.857	186.038
206	0	0.722807	0.591776	191.857	185.602
207	0	0.726316	0.603765	191.857	185.016
208	0	0.729825	0.612813	191.857	184.574
209	0	0.733333	0.624956	191.857	183.981
210	0	0.736842	0.634124	191.857	183.534
211	0	0.740351	0.646431	191.857	182.933
212	0	0.74386	0.655726	191.857	182.479
213	0	0.747368	0.668209	191.857	181.869
214	0	0.750877	0.677639	191.857	181.409
215	0	0.754386	0.690309	191.857	180.79
216	0	0.757895	0.699883	191.857	180.322
217	0	0.761404	0.712751	191.857	179.694
218	0	0.764912	0.722479	191.857	179.219
219	0	0.768421	0.735557	191.857	178.58
220	0	0.77193	0.745449	191.857	178.097
221	0	0.775439	0.758753	191.857	177.448
222	0	0.778947	0.768821	191.857	176.956
223	0	0.782456	0.782366	191.857	176.294
224	0	0.785965	0.792618	191.857	175.794
225	0	0.789474	0.806422	191.857	175.12
226	0	0.792982	0.816874	191.857	174.609
227	0	0.796491	0.830953	191.857	173.922
228	0	0.8	0.841621	191.857	173.401
229	0	0.803509	0.855996	191.857	172.699
230	0	0.807018	0.87055	191.857	171.988
231	0	0.810526	0.881587	191.857	171.449
232	0	0.814035	0.896473	191.857	170.722
233	0	0.817544	0.907769	191.857	170.171
234	0	0.821053	0.923014	191.857	169.426

235	0	0.824561	0.93459	191.857	168.861	
236	0	0.82807	0.950222	191.857	168.097	
237	0	0.831579	0.9621	191.857	167.517	
238	0	0.835088	0.97815	191.857	166.734	
239	0	0.838596	0.990356	191.857	166.138	
240	0	0.842105	1.00687	191.857	165.331	
241	0	0.845614	1.01943	191.857	164.718	
242	0	0.849123	1.03643	191.857	163.888	
243	0	0.852632	1.04939	191.857	163.255	
244	0	0.85614	1.06694	191.857	162.398	
245	0.0953102	0.859649	1.08032	199.142	161.744	
246	0.0953102	0.863158	1.09847	199.142	160.858	
247	0.0953102	0.866667	1.11232	199.142	160.182	
248	0.182322	0.870175	1.13113	205.792	159.263	
249	0.182322	0.873684	1.1455	205.792	158.561	
250	0.182322	0.877193	1.16505	205.792	157.607	
251	0.262364	0.880702	1.18	211.909	156.877	
252	0.470004	0.884211	1.20036	227.779	155.882	
253	0.530628	0.887719	1.21596	232.412	155.121	
254	0.587787	0.891228	1.23724	236.781	154.082	
255	0.587787	0.894737	1.25357	236.781	153.284	
256	0.587787	0.898246	1.27588	236.781	152.195	
257	0.693147	0.901754	1.29303	244.833	151.357	
258	0.693147	0.905263	1.31652	244.833	150.21	
259	0.693147	0.908772	1.33462	244.833	149.326	
260	0.741937	0.912281	1.35946	248.562	148.113	
261	0.916291	0.915789	1.37866	261.888	147.176	
262	0.916291	0.919298	1.40507	261.888	145.886	
263	0.955511	0.922807	1.42554	264.886	144.886	
264	1.09861	0.926316	1.4538	275.823	143.506	
265	1.09861	0.929825	1.47579	275.823	142.432	
266	1.09861	0.933333	1.50626	275.823	140.944	
267	1.16315	0.936842	1.53007	280.755	139.782	
268	1.38629	0.940351	1.56322	297.81	138.163	
269	1.66771	0.94386	1.58927	319.318	136.891	
270	1.94591	0.947368	1.62576	340.58	135.109	
271	1.94591	0.950877	1.65463	340.58	133.699	
272	2.07944	0.954386	1.6954	350.786	131.708	
273	2.19722	0.957895	1.72793	359.788	130.119	
274	2.19722	0.961404	1.77438	359.788	127.851	
275	2.30259	0.964912	1.81191	367.84	126.018	
276	2.30259	0.968421	1.86629	367.84	123.363	
277	2.48491	0.97193	1.91103	381.775	121.178	
278	2.77259	0.975439	1.97737	403.762	117.938	
279	2.89037	0.978947	2.03352	412.764	115.196	
280	3.13549	0.982456	2.12007	431.498	110.97	
281	3.21888	0.985965	2.19728	437.871	107.199	
282	3.52636	0.989474	2.32634	461.372	100.897	
283	4.04305	0.992982	2.45727	500.862	94.5032	
284	4.09434	0.996491	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-4	1/16/1998	ND<0	104
	3/16/1999	ND<0	104
	9/23/1999	ND<0	104
	3/14/2000	ND<0	104
	9/23/2003	ND<0	104
	3/10/2004	ND<0	104
	10/12/2004	ND<0	104
	4/1/2005	ND<0	104
	10/26/2005	ND<0	104
	6/19/2006	ND<0	104
	11/18/2006	ND<0	104
	6/2/2007	0 J	233
	11/15/2007	0 J	234
	5/20/2008	ND<0	104
	11/20/2008	ND<0	104
	6/11/2009	ND<-1.60944 U	104
	11/16/2009	ND<-1.60944 U	104
	6/30/2010	ND<-1.60944 U	104
	11/17/2010	ND<-1.60944 U	104
	7/6/2011	ND<-1.60944 U	104
	11/22/2011	ND<-1.60944 U	104
	5/16/2012	ND<-1.60944 U	104
	11/16/2012	ND<-1.60944 U	104

Rank Sum = 2651
Rank Mean = 115.261

Background Rank Sum = 2651
Background Rank Mean = 115.261

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	3/14/2000	3.13549	280
	9/23/2003	ND<0	104
	3/10/2004	3.21888	281
	10/12/2004	ND<0	104
	4/1/2005	ND<0	104
	10/26/2005	ND<0	104
	6/19/2006	ND<0	104
	11/18/2006	ND<0	104
	6/2/2007	0 J	235
	11/15/2007	ND<0	104
	5/20/2008	ND<0	104
	11/20/2008	ND<0	104
	6/11/2009	ND<-1.60944 U	104
	11/16/2009	ND<-1.60944 U	104
	6/30/2010	ND<-1.60944 U	104
	11/17/2010	ND<-1.60944 U	104
	7/6/2011	ND<-1.60944 U	104

	11/22/2011	ND<-1.60944	U	104
	5/16/2012	ND<-1.60944	U	104
	11/16/2012	ND<-1.60944	U	104

Rank Sum = 2564
Rank Mean = 128.2

LMW-11	3/14/2000	2.48491		277
	9/23/2003	ND<0	104	
	3/10/2004	2.89037		279
	10/12/2004	ND<0	104	
	4/1/2005	ND<0	104	
	10/26/2005	ND<0	104	
	6/19/2006	ND<0	104	
	6/2/2007	ND<0	104	
	11/15/2007	ND<0	104	
	5/20/2008	ND<0	104	
	11/20/2008	ND<0	104	

Rank Sum = 1492
Rank Mean = 135.636

LMW-12	3/14/2000	4.04305		283
	9/23/2003	ND<0	104	
	3/10/2004	ND<0	104	
	10/12/2004	ND<0	104	
	4/1/2005	ND<0	104	
	10/26/2005	ND<0	104	
	6/19/2006	ND<0	104	
	6/2/2007	ND<0	104	
	11/15/2007	ND<0	104	
	5/20/2008	ND<0	104	
	11/20/2008	ND<0	104	

Rank Sum = 1323
Rank Mean = 120.273

LMW-13	3/14/2000	2.77259		278
	9/23/2003	ND<0	104	
	3/10/2004	ND<0	104	
	10/12/2004	ND<0	104	
	4/1/2005	ND<0	104	
	10/26/2005	ND<0	104	
	6/19/2006	ND<0	104	
	6/2/2007	ND<0	104	
	11/15/2007	ND<0	104	
	5/20/2008	ND<0	104	
	11/20/2008	ND<0	104	

Rank Sum = 1318
Rank Mean = 119.818

LMW-14R	6/2/2007	0	J	236
	11/15/2007	ND<0		104
	5/20/2008	ND<0		104
	11/20/2008	2.19722		273
	6/11/2009	-0.891598	J	208
	11/16/2009	ND<-1.60944	U	104
	11/16/2009	ND<-1.60944	U	104
	11/16/2009	-0.755023	J	215
	6/30/2010	ND<-1.60944	U	104
	11/17/2010	ND<-1.60944	U	104
	7/6/2011	ND<-1.60944	U	104
	11/22/2011	ND<-1.60944	U	104
	5/16/2012	ND<-1.60944	U	104
	11/16/2012	ND<-1.60944	U	104

Rank Sum = 1972
Rank Mean = 140.857

LMW-15R	11/18/2006	ND<0	104
	6/2/2007	ND<0	104
	11/15/2007	ND<0	104
	11/15/2007	ND<0	104
	5/20/2008	ND<0	104
	5/20/2008	ND<0	104
	11/20/2008	ND<0	104
	11/20/2008	ND<0	104
	6/11/2009	0.916291	261
	6/30/2010	ND<-1.60944 U	104
	11/17/2010	ND<-1.60944 U	104
	7/6/2011	ND<-1.60944 U	104
	11/22/2011	ND<-1.60944 U	104
	5/16/2012	ND<-1.60944 U	104
	11/16/2012	ND<-1.60944 U	104

Rank Sum = 1717
Rank Mean = 114.467

LMW-16	11/18/2006	ND<0	104
	6/2/2007	0.693147	257
	11/15/2007	ND<0	104
	5/20/2008	ND<0	104
	11/20/2008	2.19722	274
	6/11/2009	-0.579818 J	225
	11/16/2009	-0.527633 J	228
	6/30/2010	-0.693147 J	219
	11/17/2010	-0.616186 J	222
	7/6/2011	0	237
	11/22/2011	-0.616186 J	223
	5/16/2012	0.587787	254
	11/16/2012	0.0953102	245

Rank Sum = 2696
Rank Mean = 207.385

LMW-3	11/19/1996	ND<0	104
	3/24/1997	ND<0	104
	1/16/1998	ND<0	104
	3/16/1999	ND<0	104
	9/23/1999	ND<0	104
	3/14/2000	ND<0	104
	9/23/2003	ND<0	104
	3/10/2004	ND<0	104
	10/12/2004	ND<0	104
	4/1/2005	ND<0	104
	10/26/2005	ND<0	104
	6/19/2006	ND<0	104
	11/18/2006	ND<0	104
	6/2/2007	ND<0	104
	11/15/2007	ND<0	104
	5/20/2008	ND<0	104
	11/20/2008	ND<0	104
	6/11/2009	-0.867501 J B	209
	11/16/2009	ND<-1.60944 U	104
	6/30/2010	ND<-1.60944 U	104
	11/17/2010	-0.820981 J	211
	7/6/2011	ND<-1.60944 U	104
	11/22/2011	ND<-1.60944 U	104
	5/16/2012	ND<-1.60944 U	104
	11/16/2012	ND<-1.60944 U	104

Rank Sum = 2812
Rank Mean = 112.48

LMW-3S	11/18/2006	ND<0	104	
	6/2/2007	ND<0	104	
	11/15/2007	ND<0	104	
	5/20/2008	ND<0	104	
	11/20/2008	ND<0	104	
	6/11/2009	-0.314711 J B		230
	11/16/2009	ND<-1.60944 U		104
	6/30/2010	ND<-1.60944 U		104
	11/17/2010	0	238	
	7/6/2011	-0.174353 J	232	
	11/22/2011	ND<-1.60944 U		104
	5/16/2012	ND<-1.60944 U		104
	11/16/2012	ND<-1.60944 U		104

Rank Sum = 1740
Rank Mean = 133.846

LMW-6	1/16/1998	ND<0	104	
	3/16/1999	ND<0	104	
	9/23/1999	ND<0	104	
	3/14/2000	ND<0	104	
	9/23/2003	ND<0	104	
	3/10/2004	ND<0	104	
	10/12/2004	ND<0	104	
	4/1/2005	ND<0	104	
	10/26/2005	ND<0	104	
	6/19/2006	ND<0	104	
	11/18/2006	ND<0	104	
	6/2/2007	0 J	239	
	11/15/2007	ND<0	104	
	5/20/2008	ND<0	104	
	11/20/2008	ND<0	104	
	6/11/2009	-0.430783 J B		229
	11/16/2009	ND<-1.60944 U		104
	6/30/2010	-0.776529 J		212
	11/17/2010	-0.653926 J		220
	7/6/2011	ND<-1.60944 U	104	
	11/22/2011	ND<-1.60944 U		104
	5/16/2012	ND<-1.60944 U		104
	11/16/2012	ND<-1.60944 U		104

Rank Sum = 2876
Rank Mean = 125.043

LMW-7	1/16/1998	ND<0	104	
	3/16/1999	ND<0	104	
	9/23/1999	ND<0	104	
	3/14/2000	2.30259		275
	9/23/2003	ND<0	104	
	3/10/2004	ND<0	104	
	10/12/2004	ND<0	104	
	4/1/2005	ND<0	104	
	10/26/2005	ND<0	104	
	6/19/2006	ND<0	104	
	11/18/2006	ND<0	104	
	6/2/2007	0 J	240	
	11/15/2007	ND<0	104	
	5/20/2008	ND<0	104	
	11/20/2008	2.30259		276
	6/11/2009	0.0953102 J B		246
	11/17/2010	ND<-1.60944 U		104

	7/6/2011	0.587787		255
	11/22/2011	ND<-1.60944	U	104
	5/16/2012	ND<-1.60944	U	104
	11/16/2012	ND<-1.60944	U	104

Rank Sum = 2956
Rank Mean = 140.762

LMW-8	1/16/1998	ND<0		104
	3/16/1999	ND<0		104
	9/23/1999	ND<0		104
	3/14/2000	ND<0		104
	9/23/2003	ND<0		104
	3/10/2004	ND<0		104
	10/12/2004	ND<0		104
	4/1/2005	ND<0		104
	10/26/2005	ND<0		104
	6/19/2006	ND<0		104
	11/18/2006	ND<0		104
	6/2/2007	ND<0		104
	11/15/2007	ND<0		104
	5/20/2008	ND<0		104
	11/20/2008	ND<0		104
	6/11/2009	-0.71335	J	218
	11/16/2009	-0.634878	J	221
	6/30/2010	-0.84397	J	210
	11/17/2010	-0.733969	J	217
	7/6/2011	-0.210721	J	231
	11/22/2011	0.182322		248
	5/16/2012	0.262364		251
	11/16/2012	0.530628		253

Rank Sum = 3409
Rank Mean = 148.217

LMW-9	1/16/1998	ND<0		104
	3/16/1999	ND<0		104
	9/23/1999	1.09861		264
	3/14/2000	ND<0		104
	9/23/2003	ND<0		104
	3/10/2004	ND<0		104
	10/12/2004	ND<0		104
	4/1/2005	0	J	241
	10/26/2005	ND<0		104
	6/19/2006	0	J	242
	11/18/2006	ND<0		104
	6/2/2007	0	J	243
	11/15/2007	ND<0		104
	5/20/2008	ND<0		104
	11/20/2008	2.07944		272
	6/11/2009	0.0953102	J	247
	11/16/2009	ND<-1.60944	U	104
	6/30/2010	-0.544727	J	227
	11/17/2010	0.470004		252
	7/6/2011	ND<-1.60944	U	104
	11/22/2011	ND<-1.60944	U	104
	5/16/2012	ND<-1.60944	U	104
	11/16/2012	ND<-1.60944	U	104

Rank Sum = 3548
Rank Mean = 154.261

LMW-9D	11/18/2006	1.94591		270
	6/2/2007	1.94591		271
	11/15/2007	ND<0		104

	5/20/2008	1.09861	265
	11/20/2008	1.09861	266
	6/11/2009	0.741937	260
	11/16/2009	0.693147	258
	6/30/2010	0.587787	256
	11/17/2010	0.693147	259
	7/6/2011	1.16315	267
	11/22/2011	0.916291	262
	5/16/2012	0.955511	263
	11/16/2012	1.66771	269

Rank Sum = 3270
Rank Mean = 251.538

LMW-9S	11/18/2006	ND<0	104
	6/2/2007	0 J	244
	11/15/2007	1.38629	268
	5/20/2008	ND<0	104
	11/20/2008	ND<0	104
	6/11/2009	-0.776529 J	213
	6/30/2010	-0.562119 J	226
	11/17/2010	0.182322	249
	7/6/2011	-0.776529 J	214
	11/22/2011	-0.755023 J	216
	5/16/2012	-0.616186 J	224
	11/16/2012	0.182322	250

Rank Sum = 2416
Rank Mean = 201.333

MW-5	1/16/1998	ND<0	104
	3/16/1999	ND<0	104
	9/23/1999	ND<0	104
	3/14/2000	3.52636	282
	9/23/2003	ND<0	104
	3/10/2004	4.09434	284
	10/12/2004	ND<0	104
	4/1/2005	ND<0	104
	10/26/2005	ND<0	104
	6/19/2006	ND<0	104
	11/15/2007	ND<0	104
	5/20/2008	ND<0	104
	11/20/2008	ND<0	104

Rank Sum = 1710
Rank Mean = 131.538

Calculation Results:

Kruskal-Wallis H Statistic = 49.1464
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 80.2016
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
49.1464 > 26.2962 indicating a significant group difference at 5% significance level
80.2016 > 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 115.261

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**128.2**	**12.9391**	**58.4144**
LMW-11	**135.636**	**20.3755**	**70.0396**
LMW-12	**120.273**	**5.01186**	**70.0396**
LMW-13	**119.818**	**4.55731**	**70.0396**

LMW-14R	140.857	25.5963	64.7646	
LMW-15R	114.467	-0.794203		63.4084
LMW-16	207.385	92.1237	66.2949	
LMW-3	112.48	-2.78087	55.2015	
LMW-3S	133.846	18.5853	66.2949	
LMW-6	125.043	9.78261	56.3398	
LMW-7	140.762	25.501	57.6657	
LMW-8	148.217	32.9565	56.3398	
LMW-9	154.261	39	56.3398	
LMW-9D	251.538	136.278	66.2949	
LMW-9S	201.333	86.0725	68.0368	
MW-5	131.538	16.2776	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 115.261

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	128.2	12.9391	68.9963
LMW-11	135.636	20.3755	82.7275
LMW-12	120.273	5.01186	82.7275
LMW-13	119.818	4.55731	82.7275
LMW-14R	140.857	25.5963	76.4969
LMW-15R	114.467	-0.794203	74.895
LMW-16	207.385	92.1237	78.3044
LMW-3	112.48	-2.78087	65.2015
LMW-3S	133.846	18.5853	78.3044
LMW-6	125.043	9.78261	66.546
LMW-7	140.762	25.501	68.112
LMW-8	148.217	32.9565	66.546
LMW-9	154.261	39	66.546
LMW-9D	251.538	136.278	78.3044
LMW-9S	201.333	86.0725	80.3619
MW-5	131.538	16.2776	78.3044

Mann-Kendall Trend Analysis

Parameter: Arsenic

Location: LMW-16

Natural Logarithm Transformation

Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
0.693147	ND<0	0.693147	1	0
ND<0	ND<0	0	1	0
ND<0	ND<0	0	1	0
2.19722	ND<0	2.19722	2	0
-0.579818 J	ND<0	-0.579818	2	1
-0.527633 J	ND<0	-0.527633	2	2
-0.693147 J	ND<0	-0.693147	2	3
-0.616186 J	ND<0	-0.616186	2	4
0	ND<0	0	2	4
-0.616186 J	ND<0	-0.616186	2	5
0.587787	ND<0	0.587787	3	5
0.0953102	ND<0	0.0953102	4	5
ND<0	0.693147	-0.693147	4	6
ND<0	0.693147	-0.693147	4	7
2.19722	0.693147	1.50408	5	7
-0.579818 J	0.693147	-1.272975		8
-0.527633 J	0.693147	-1.220785		9
-0.693147 J	0.693147	-1.386295		10
-0.616186 J	0.693147	-1.309335		11
0	0.693147	-0.693147	5	12
-0.616186 J	0.693147	-1.309335		13
0.587787	0.693147	-0.105361	5	14
0.0953102	0.693147	-0.597837	5	15
ND<0	ND<0	0	5	15
2.19722	ND<0	2.19722	6	15
-0.579818 J	ND<0	-0.579818	6	16
-0.527633 J	ND<0	-0.527633	6	17
-0.693147 J	ND<0	-0.693147	6	18
-0.616186 J	ND<0	-0.616186	6	19
0	ND<0	0	6	19
-0.616186 J	ND<0	-0.616186	6	20
0.587787	ND<0	0.587787	7	20
0.0953102	ND<0	0.0953102	8	20
2.19722	ND<0	2.19722	9	20
-0.579818 J	ND<0	-0.579818	9	21
-0.527633 J	ND<0	-0.527633	9	22
-0.693147 J	ND<0	-0.693147	9	23
-0.616186 J	ND<0	-0.616186	9	24
0	ND<0	0	9	24
-0.616186 J	ND<0	-0.616186	9	25
0.587787	ND<0	0.587787	10	25
0.0953102	ND<0	0.0953102	11	25
-0.579818 J	2.19722	-2.777041	11	26
-0.527633 J	2.19722	-2.724861	11	27
-0.693147 J	2.19722	-2.890371	11	28
-0.616186 J	2.19722	-2.813411	11	29

0	2.19722	-2.1972211	30	
-0.616186 J	2.19722	-2.8134111	31	
0.587787	2.19722	-1.6094411	32	
0.0953102	2.19722	-2.1019111	33	
-0.527633 J	-0.579818 J	0.0521858	12	33
-0.693147 J	-0.579818 J	-0.113329	12	34
-0.616186 J	-0.579818 J	-0.0363676	12	35
0	-0.579818 J	0.579818	13	35
-0.616186 J	-0.579818 J	-0.0363676	13	36
0.587787	-0.579818 J	1.16761	14	36
0.0953102	-0.579818 J	0.675129	15	36
-0.693147 J	-0.527633 J	-0.165514	15	37
-0.616186 J	-0.527633 J	-0.0885534	15	38
0	-0.527633 J	0.527633	16	38
-0.616186 J	-0.527633 J	-0.0885534	16	39
0.587787	-0.527633 J	1.11542	17	39
0.0953102	-0.527633 J	0.622943	18	39
-0.616186 J	-0.693147 J	0.076961	19	39
0	-0.693147 J	0.693147	20	39
-0.616186 J	-0.693147 J	0.076961	21	39
0.587787	-0.693147 J	1.28093	22	39
0.0953102	-0.693147 J	0.788457	23	39
0	-0.616186 J	0.616186	24	39
-0.616186 J	-0.616186 J	0	24	39
0.587787	-0.616186 J	1.20397	25	39
0.0953102	-0.616186 J	0.711496	26	39
-0.616186 J	0	-0.616186	26	40
0.587787	0	0.587787	27	40
0.0953102	0	0.0953102	28	40
0.587787	-0.616186 J	1.20397	29	40
0.0953102	-0.616186 J	0.711496	30	40
0.0953102	0.587787	-0.492476	30	41

S Statistic = 30 - 41 = -11

Tied Group	Value	Members
1	0	4
2	-0.616186	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
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 = -0.62137
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.62137| <= 1.97737 indicating no evidence of a trend

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	
ND<0	1.94591	-1.94591	0	12	
1.09861	1.94591	-0.847298	0	13	
1.09861	1.94591	-0.847298	0	14	
0.741937	1.94591	-1.203970	15		
0.693147	1.94591	-1.252760	16		
0.587787	1.94591	-1.358120	17		
0.693147	1.94591	-1.252760	18		
1.16315	1.94591	-0.782759	0	19	
0.916291	1.94591	-1.029620	20		
0.955511	1.94591	-0.990399	0	21	
1.66771	1.94591	-0.278203	0	22	
1.09861	ND<0	1.09861	1	22	
1.09861	ND<0	1.09861	2	22	
0.741937	ND<0	0.741937	3	22	
0.693147	ND<0	0.693147	4	22	
0.587787	ND<0	0.587787	5	22	
0.693147	ND<0	0.693147	6	22	
1.16315	ND<0	1.16315	7	22	
0.916291	ND<0	0.916291	8	22	
0.955511	ND<0	0.955511	9	22	
1.66771	ND<0	1.66771	10	22	
1.09861	1.09861	0	10	22	
0.741937	1.09861	-0.356675	10	23	
0.693147	1.09861	-0.405465	10	24	
0.587787	1.09861	-0.510826	10	25	
0.693147	1.09861	-0.405465	10	26	
1.16315	1.09861	0.0645385	11	26	
0.916291	1.09861	-0.182322	11	27	
0.955511	1.09861	-0.143101	11	28	
1.66771	1.09861	0.569095	12	28	
0.741937	1.09861	-0.356675	12	29	
0.693147	1.09861	-0.405465	12	30	
0.587787	1.09861	-0.510826	12	31	
0.693147	1.09861	-0.405465	12	32	

1.16315	1.09861	0.0645385	13	32
0.916291	1.09861	-0.182322	13	33
0.955511	1.09861	-0.143101	13	34
1.66771	1.09861	0.569095	14	34
0.693147	0.741937	-0.0487902	14	35
0.587787	0.741937	-0.154151	14	36
0.693147	0.741937	-0.0487902	14	37
1.16315	0.741937	0.421213	15	37
0.916291	0.741937	0.174353	16	37
0.955511	0.741937	0.213574	17	37
1.66771	0.741937	0.925769	18	37
0.587787	0.693147	-0.105361	18	38
0.693147	0.693147	0 18	38	
1.16315	0.693147	0.470004	19	38
0.916291	0.693147	0.223144	20	38
0.955511	0.693147	0.262364	21	38
1.66771	0.693147	0.97456 22	38	
0.693147	0.587787	0.105361	23	38
1.16315	0.587787	0.575364	24	38
0.916291	0.587787	0.328504	25	38
0.955511	0.587787	0.367725	26	38
1.66771	0.587787	1.07992 27	38	
1.16315	0.693147	0.470004	28	38
0.916291	0.693147	0.223144	29	38
0.955511	0.693147	0.262364	30	38
1.66771	0.693147	0.97456 31	38	
0.916291	1.16315	-0.2468631	39	
0.955511	1.16315	-0.207639	31	40
1.66771	1.16315	0.504556	32	40
0.955511	0.916291	0.0392207	33	40
1.66771	0.916291	0.751416	34	40
1.66771	0.955511	0.712195	35	40

S Statistic = 35 - 40 = -5

Tied Group	Value	Members
1	1.94591	2
2	1.09861	2
3	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

There are 0 time periods with multiple data

A = 54
B = 0
C = 0
D = 0
E = 6
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 265.667
Z-Score = -0.24541
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.24541| <= 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
1.38629	0 J	1.38629	4	5
ND<0	0 J	0	4	5
ND<0	0 J	0	4	5
-0.776529 J	0 J	-0.776529	4	6
-0.562119 J	0 J	-0.562119	4	7
0.182322	0 J	0.182322	5	7
-0.776529 J	0 J	-0.776529	5	8
-0.755023 J	0 J	-0.755023	5	9
-0.616186 J	0 J	-0.616186	5	10
0.182322	0 J	0.182322	6	10
ND<0	1.38629	-1.386296	11	
ND<0	1.38629	-1.386296	12	
-0.776529 J	1.38629	-2.162826		13
-0.562119 J	1.38629	-1.948416		14
0.182322	1.38629	-1.203976		15
-0.776529 J	1.38629	-2.162826		16
-0.755023 J	1.38629	-2.141326		17
-0.616186 J	1.38629	-2.002486		18
0.182322	1.38629	-1.203976		19
ND<0	ND<0	0	6	19
-0.776529 J	ND<0	-0.776529	6	20
-0.562119 J	ND<0	-0.562119	6	21
0.182322	ND<0	0.182322	7	21
-0.776529 J	ND<0	-0.776529	7	22
-0.755023 J	ND<0	-0.755023	7	23
-0.616186 J	ND<0	-0.616186	7	24
0.182322	ND<0	0.182322	8	24
-0.776529 J	ND<0	-0.776529	8	25
-0.562119 J	ND<0	-0.562119	8	26
0.182322	ND<0	0.182322	9	26
-0.776529 J	ND<0	-0.776529	9	27
-0.755023 J	ND<0	-0.755023	9	28
-0.616186 J	ND<0	-0.616186	9	29
0.182322	ND<0	0.182322	10	29

-0.562119 J	-0.776529 J	0.21441	11	29	
0.182322	-0.776529 J	0.95885	12	29	
-0.776529 J	-0.776529 J	0	12	29	
-0.755023 J	-0.776529 J	0.0215062		13	29
-0.616186 J	-0.776529 J	0.160343		14	29
0.182322	-0.776529 J	0.95885	15	29	
0.182322	-0.562119 J	0.74444	16	29	
-0.776529 J	-0.562119 J	-0.2144	116	30	
-0.755023 J	-0.562119 J	-0.192904		16	31
-0.616186 J	-0.562119 J	-0.0540672		16	32
0.182322	-0.562119 J	0.74444	17	32	
-0.776529 J	0.182322	-0.958	517	33	
-0.755023 J	0.182322	-0.937344		17	34
-0.616186 J	0.182322	-0.798508		17	35
0.182322	0.182322	0	17	35	
-0.755023 J	-0.776529 J	0.0215062		18	35
-0.616186 J	-0.776529 J	0.160343		19	35
0.182322	-0.776529 J	0.95885	20	35	
-0.616186 J	-0.755023 J	0.138836		21	35
0.182322	-0.755023 J	0.937344		22	35
0.182322	-0.616186 J	0.798508		23	35

S Statistic = 23 - 35 = -12

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

There are 0 time periods with multiple data

A = 192
B = 0
C = 24
D = 0
E = 16
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 202

Z-Score = -0.773957
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.773957| <= 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 = -0.559804
Baseline Std Dev = 0.783772
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std	Mean
11/18/2006	1.94591	2.197	3.197	
11/18/2006	1.94591	2.197	3.197	
6/2/2007	1.94591	4.39399	3.197	
6/2/2007	1.94591	4.39399	3.197	
11/15/2007	0	4.10824	0.714244	
11/15/2007	0	4.10824	0.714244	
5/20/2008	1.09861	5.22418	2.11594	
5/20/2008	1.09861	5.22418	2.11594	
11/20/2008	1.09861	6.34012	2.11594	
11/20/2008	1.09861	6.34012	2.11594	
6/11/2009	0.741937	7.00099	1.66087	
6/11/2009	0.741937	7.00099	1.66087	
11/16/2009	0.693147	7.59961	1.59862	
11/16/2009	0.693147	7.59961	1.59862	
6/30/2010	0.587787	8.0638	1.46419	
6/30/2010	0.587787	8.0638	1.46419	
11/17/2010	0.693147	8.66242	1.59862	
11/17/2010	0.693147	8.66242	1.59862	
7/6/2011	1.16315	9.8607	2.19829	
7/6/2011	1.16315	9.8607	2.19829	
11/22/2011	0.916291	10.744	1.88332	
11/22/2011	0.916291	10.744	1.88332	
5/16/2012	0.955511	11.6774	1.93336	
5/16/2012	0.955511	11.6774	1.93336	
11/16/2012	1.66771	13.5194	2.84204	
11/16/2012	1.66771	13.5194	2.84204	

Shewhart-CUSUM Control Chart

Parameter: Arsenic

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -0.559804
Baseline Std Dev = 0.783772
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	0	0	0.714244
11/18/2006	0	0	0.714244
6/2/2007	0	0	0.714244
6/2/2007	0	0	0.714244
11/15/2007	1.38629	1.48299	2.48299
11/15/2007	1.38629	1.48299	2.48299
5/20/2008	0	1.19724	0.714244
5/20/2008	0	1.19724	0.714244
11/20/2008	0	0.911481	0.714244
11/20/2008	0	0.911481	0.714244
6/11/2009	-0.776529	0	-0.276515
6/11/2009	-0.776529	0	-0.276515
6/30/2010	-0.562119	0	-0.00295293
6/30/2010	-0.562119	0	-0.00295293
11/17/2010	0.182322	0	0.946865
11/17/2010	0.182322	0	0.946865
7/6/2011	-0.776529	0	-0.276515
7/6/2011	-0.776529	0	-0.276515
11/22/2011	-0.755023	0	-0.249075
11/22/2011	-0.755023	0	-0.249075
5/16/2012	-0.616186	0	-0.0719363
5/16/2012	-0.616186	0	-0.0719363
11/16/2012	0.182322	0	0.946865
11/16/2012	0.182322	0	0.946865

Concentrations (ppb)

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 88
Percent Non-Detects: 30.9859%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	5 (21.7391%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	6 (30%)	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

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	
LMW-14R	14	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	48	48	
			11/16/2009	14	14	
			11/16/2009	12	12	
			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	
LMW-15R	15	3 (20%)	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	ND<10	ND<10	
			11/20/2008	38	38	
			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
LMW-16	13	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
LMW-3	25	9 (36%)	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
LMW-3S	13	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
LMW-6	23	5 (21.7391%)	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	
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-8	23	5 (21.7391%)	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	
LMW-9	23	7 (30.4348%)	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	
LMW-9D	13	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	
LMW-9S	12	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	
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

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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1.9	-2.74777	7.55021	-5.22075
2	2	-2.45727	13.5884	-10.1353
3	2	-2.32634	19.0003	-14.788
4	2.1	-2.19728	23.8283	-19.4023
5	2.5	-2.12007	28.323	-24.7025
6	2.8	-2.03352	32.4582	-30.3963
7	2.8	-1.97737	36.3682	-35.9329
8	2.8	-1.91103	40.0203	-41.2838
9	2.9	-1.86629	43.5033	-46.6961
10	2.9	-1.81191	46.7863	-51.9506
11	3	-1.77438	49.9348	-57.2738
12	3	-1.72793	52.9205	-62.4576
13	3	-1.6954	55.7949	-67.5437
14	3.1	-1.65463	58.5327	-72.6731
15	3.1	-1.62576	61.1758	-77.713
16	3.3	-1.58927	63.7015	-82.9575
17	3.4	-1.56322	66.1452	-88.2725
18	3.5	-1.53007	68.4863	-93.6277
19	3.8	-1.50626	70.7551	-99.3515
20	4	-1.47579	72.9331	-105.255
21	4	-1.4538	75.0466	-111.07
22	4.5	-1.42554	77.0788	-117.485
23	4.6	-1.40507	79.053	-123.948
24	5	-1.37866	80.9537	-130.841
25	5	-1.35946	82.8019	-137.639
26	5	-1.33462	84.5831	-144.312
27	5	-1.31652	86.3163	-150.895
28	5	-1.29303	87.9883	-157.36
29	5	-1.27588	89.6161	-163.739
30	5	-1.25357	91.1875	-170.007
31	5	-1.23724	92.7183	-176.193
32	5	-1.21596	94.1969	-182.273
33	5	-1.20036	95.6377	-188.275
34	5	-1.18	97.0301	-194.175
35	5	-1.16505	98.3875	-200
36	5	-1.1455	99.6996	-205.727
37	5	-1.13113	100.979	-211.383
38	5	-1.11232	102.216	-216.945
39	5	-1.09847	103.423	-222.437
40	5	-1.08032	104.59	-227.839
41	5	-1.06694	105.728	-233.173
42	5	-1.04939	106.83	-238.42
43	5	-1.03643	107.904	-243.602
44	5	-1.01943	108.943	-248.7
45	5	-1.00687	109.957	-253.734
46	5	-0.990356	110.938	-258.686
47	5	-0.97815	111.894	-263.576
48	5	-0.9621	112.82	-268.387
49	5	-0.950222	113.723	-273.138
50	5	-0.93459	114.596	-277.811
51	5	-0.923014	115.448	-282.426

52	5	-0.907769	116.272	-286.965
53	5	-0.896473	117.076	-291.447
54	5	-0.881587	117.853	-295.855
55	5	-0.87055	118.611	-300.208
56	5	-0.855996	119.344	-304.488
57	5	-0.841621	120.052	-308.696
58	5	-0.830953	120.743	-312.851
59	5	-0.816874	121.41	-316.935
60	5	-0.806422	122.06	-320.967
61	5	-0.792618	122.689	-324.93
62	5	-0.782366	123.301	-328.842
63	5	-0.768821	123.892	-332.686
64	5	-0.758753	124.467	-336.48
65	5	-0.745449	125.023	-340.207
66	5	-0.735557	125.564	-343.885
67	5	-0.722479	126.086	-347.497
68	5	-0.712751	126.594	-351.061
69	5	-0.699883	127.084	-354.561
70	5	-0.690309	127.561	-358.012
71	5	-0.677639	128.02	-361.4
72	5	-0.668209	128.466	-364.741
73	5	-0.655726	128.896	-368.02
74	5	-0.646431	129.314	-371.252
75	5	-0.634124	129.716	-374.423
76	5	-0.624956	130.107	-377.548
77	5	-0.612813	130.482	-380.612
78	5	-0.603765	130.847	-383.631
79	5	-0.591776	131.197	-386.589
80	5	-0.582841	131.537	-389.504
81	5	-0.570999	131.863	-392.359
82	5	-0.56217	132.179	-395.169
83	5	-0.550465	132.482	-397.922
84	5	-0.541736	132.775	-400.63
85	5	-0.530162	133.056	-403.281
86	5	-0.521527	133.328	-405.889
87	5	-0.510074	133.589	-408.439
88	5	-0.501527	133.84	-410.947
89	5	-0.490189	134.08	-413.398
90	5	-0.481728	134.312	-415.806
91	5	-0.470498	134.534	-418.159
92	5	-0.462114	134.747	-420.47
93	5	-0.450985	134.951	-422.724
94	5	-0.442676	135.147	-424.938
95	5	-0.431644	135.333	-427.096
96	5	-0.423405	135.512	-429.213
97	5	-0.412463	135.682	-431.275
98	5	-0.40429	135.846	-433.297
99	5	-0.393433	136.001	-435.264
100	5	-0.385321	136.149	-437.191
101	5	-0.374544	136.289	-439.063
102	5	-0.36649	136.424	-440.896
103	5	-0.355788	136.55	-442.675
104	5	-0.347787	136.671	-444.414
105	5	-0.337155	136.785	-446.099
106	5	-0.329206	136.893	-447.745
107	5	-0.318639	136.995	-449.339
108	5	-0.310738	137.091	-450.892
109	5	-0.300232	137.182	-452.394
110	5	-0.292375	137.267	-453.855
111	5	-0.281926	137.346	-455.265
112	5	-0.27411	137.422	-456.636
113	5	-0.263715	137.491	-457.954

114	5	-0.253347	137.555	-459.221
115	5	-0.24559	137.616	-460.449
116	5	-0.235269	137.671	-461.625
117	5	-0.227545	137.723	-462.763
118	5	-0.217267	137.77	-463.849
119	5	-0.209575	137.814	-464.897
120	5.2	-0.199336	137.854	-465.934
121	5.4	-0.191671	137.89	-466.969
122	6	-0.181468	137.923	-468.057
123	6	-0.173829	137.954	-469.1
124	6.4	-0.163659	137.98	-470.148
125	6.9	-0.156042	138.005	-471.225
126	7	-0.1459	138.026	-472.246
127	7	-0.138305	138.045	-473.214
128	7	-0.128189	138.062	-474.111
129	7	-0.12061	138.076	-474.956
130	7.2	-0.110516	138.088	-475.751
131	7.6	-0.102953	138.099	-476.534
132	8	-0.0928787	138.108	-477.277
133	8	-0.0853288	138.115	-477.959
134	8	-0.0752698	138.12	-478.562
135	8	-0.0677301	138.125	-479.103
136	8.5	-0.0576847	138.128	-479.594
137	8.8	-0.0501541	138.131	-480.035
138	8.8	-0.0401167	138.132	-480.388
139	9	-0.0325917	138.134	-480.681
140	9	-0.0225612	138.134	-480.884
141	9	-0.0150408	138.134	-481.02
142	9.2	-0.00501359	138.134	-481.066
143	9.2	0.00501359	138.134	-481.02
144	10	0.0150408	138.135	-480.869
145	10	0.0225612	138.135	-480.644
146	10	0.0325917	138.136	-480.318
147	10	0.0401167	138.138	-479.917
148	10	0.0501541	138.14	-479.415
149	10	0.0576847	138.144	-478.838
150	10	0.0677301	138.148	-478.161
151	11	0.0752698	138.154	-477.333
152	11	0.0853288	138.161	-476.394
153	11	0.0928787	138.17	-475.373
154	11	0.102953	138.18	-474.24
155	11	0.110516	138.193	-473.025
156	12	0.12061	138.207	-471.577
157	12	0.128189	138.224	-470.039
158	12	0.138305	138.243	-468.379
159	12	0.1459	138.264	-466.629
160	12	0.156042	138.288	-464.756
161	12	0.163659	138.315	-462.792
162	12	0.173829	138.345	-460.706
163	12	0.181468	138.378	-458.529
164	12	0.191671	138.415	-456.229
165	12	0.199336	138.455	-453.837
166	12	0.209575	138.499	-451.322
167	12	0.217267	138.546	-448.714
168	12	0.227545	138.598	-445.984
169	13	0.235269	138.653	-442.925
170	13	0.24559	138.713	-439.733
171	13	0.253347	138.777	-436.439
172	13	0.263715	138.847	-433.011
173	13	0.27411	138.922	-429.448
174	13	0.281926	139.002	-425.782
175	13	0.292375	139.087	-421.982

176	13	0.300232	139.177	-418.079
177	13	0.310738	139.274	-414.039
178	13	0.318639	139.375	-409.897
179	13	0.329206	139.484	-405.617
180	13	0.337155	139.597	-401.234
181	13	0.347787	139.718	-396.713
182	13	0.355788	139.845	-392.087
183	13	0.36649	139.979	-387.323
184	13	0.374544	140.12	-382.454
185	13	0.385321	140.268	-377.445
186	13	0.393433	140.423	-372.33
187	13	0.40429	140.586	-367.074
188	13	0.412463	140.756	-361.712
189	14	0.423405	140.936	-355.785
190	14	0.431644	141.122	-349.742
191	14	0.442676	141.318	-343.544
192	14	0.450985	141.521	-337.231
193	14	0.462114	141.735	-330.761
194	14	0.470498	141.956	-324.174
195	14	0.481728	142.188	-317.43
196	14	0.490189	142.429	-310.567
197	14	0.501527	142.68	-303.546
198	14	0.510074	142.94	-296.405
199	14	0.521527	143.212	-289.103
200	15	0.530162	143.493	-281.151
201	15	0.541736	143.787	-273.025
202	16	0.550465	144.09	-264.217
203	16	0.56217	144.406	-255.223
204	17	0.570999	144.732	-245.516
205	18	0.582841	145.072	-235.025
206	18	0.591776	145.422	-224.373
207	20	0.603765	145.786	-212.297
208	20	0.612813	146.162	-200.041
209	20	0.624956	146.552	-187.542
210	20	0.634124	146.955	-174.859
211	20	0.646431	147.372	-161.931
212	20	0.655726	147.802	-148.816
213	21	0.668209	148.249	-134.784
214	21	0.677639	148.708	-120.554
215	21	0.690309	149.185	-106.057
216	22	0.699883	149.674	-90.6596
217	22	0.712751	150.182	-74.9791
218	22	0.722479	150.704	-59.0845
219	23	0.735557	151.245	-42.1667
220	23	0.745449	151.801	-25.0214
221	23	0.758753	152.377	-7.57008
222	23	0.768821	152.968	10.1128
223	24	0.782366	153.58	28.8896
224	24	0.792618	154.208	47.9124
225	25	0.806422	154.859	68.0729
226	25	0.816874	155.526	88.4948
227	27	0.830953	156.216	110.931
228	27	0.841621	156.925	133.654
229	28	0.855996	157.657	157.622
230	29	0.87055	158.415	182.868
231	30	0.881587	159.193	209.316
232	30	0.896473	159.996	236.21
233	30	0.907769	160.82	263.443
234	30	0.923014	161.672	291.133
235	31	0.93459	162.546	320.106
236	32	0.950222	163.449	350.513
237	32	0.9621	164.374	381.3

238	32	0.97815	165.331	412.601	
239	32	0.990356		166.312	444.292
240	33	1.00687	167.326	477.519	
241	33	1.01943	168.365	511.16	
242	34	1.03643	169.439	546.399	
243	34	1.04939	170.54	582.078	
244	35	1.06694	171.679	619.421	
245	36	1.08032	172.846	658.312	
246	36	1.09847	174.052	697.857	
247	37	1.11232	175.29	739.013	
248	38	1.13113	176.569	781.996	
249	38	1.1455	177.881	825.525	
250	38	1.16505	179.239	869.797	
251	38	1.18	180.631	914.637	
252	38	1.20036	182.072	960.251	
253	39	1.21596	183.55	1007.67	
254	39	1.23724	185.081	1055.93	
255	40	1.25357	186.653	1106.07	
256	40	1.27588	188.28	1157.1	
257	40	1.29303	189.952	1208.82	
258	41	1.31652	191.686	1262.8	
259	41	1.33462	193.467	1317.52	
260	42	1.35946	195.315	1374.62	
261	42	1.37866	197.216	1432.52	
262	44	1.40507	199.19	1494.35	
263	44	1.42554	201.222	1557.07	
264	45	1.4538	203.336	1622.49	
265	48	1.47579	205.514	1693.33	
266	48	1.50626	207.782	1765.63	
267	49	1.53007	210.123	1840.6	
268	52	1.56322	212.567	1921.89	
269	53	1.58927	215.093	2006.12	
270	55	1.62576	217.736	2095.54	
271	59	1.65463	220.474	2193.16	
272	61	1.6954	223.348	2296.58	
273	66	1.72793	226.334	2410.62	
274	68	1.77438	229.482	2531.28	
275	73	1.81191	232.765	2663.55	
276	74	1.86629	236.248	2801.66	
277	75	1.91103	239.9	2944.98	
278	77	1.97737	243.81	3097.24	
279	77	2.03352	247.946	3253.82	
280	79	2.12007	252.44	3421.31	
281	80	2.19728	257.268	3597.09	
282	92	2.32634	262.68	3811.11	
283	109	2.45727	268.718	4078.96	
284	120	2.74777	276.269	4408.69	

Data Set Standard Deviation = 18.9385
Numerator = 1.94365e+007
Denominator = 2.80421e+007
W Statistic = 0.693119 = 1.94365e+007 / 2.80421e+007

5% Critical value of 0.976 exceeds 0.693119
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.693119
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 = 0.834096
0.834096 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	1.9	0.00350877	-2.747	774	4.0825	348.683	
2	2	0.00701754	-2.457	274	4.35	334.497	
3	2	0.0105263	-2.326	344	4.35	328.103	
4	2.1	0.0140351	-2.197	284	4.6175	321.801	
5	2.5	0.0175439	-2.120	074	5.6875	318.03	
6	2.8	0.0210526	-2.033	524	6.49	313.804	
7	2.8	0.0245614	-1.977	374	6.49	311.062	
8	2.8	0.0280702	-1.911	034	6.49	307.822	
9	2.9	0.0315789	-1.866	294	6.7575	305.637	
10	2.9	0.0350877	-1.811	914	6.7575	302.982	
11	3	0.0385965	-1.774	384	7.025	301.149	
12	3	0.0421053	-1.727	934	7.025	298.881	
13	3	0.045614	-1.695	4	47.025	297.292	
14	3.1	0.0491228	-1.654	634	7.2925	295.301	
15	3.1	0.0526316	-1.625	764	7.2925	293.891	
16	3.3	0.0561404	-1.589	274	7.8275	292.109	
17	3.4	0.0596491	-1.563	224	8.095	290.837	
18	3.5	0.0631579	-1.530	074	8.3625	289.218	
19	3.8	0.0666667	-1.506	264	9.165	288.056	
20	4	0.0701754	-1.475	794	9.7	286.568	
21	4	0.0736842	-1.453	8	49.7	285.494	
22	4.5	0.077193	-1.425	545	1.0375	284.114	
23	4.6	0.0807018	-1.405	075	1.305	283.114	
24	5	0.0842105	-1.378	665	2.375	281.824	
25	5	0.0877193	-1.359	465	2.375	280.887	
26	5	0.0912281	-1.334	625	2.375	279.674	
27	5	0.0947368	-1.316	525	2.375	278.79	
28	5	0.0982456	-1.293	035	2.375	277.643	
29	5	0.101754	-1.275	885	2.375	276.805	
30	5	0.105263	-1.253	575	2.375	275.716	
31	5	0.108772	-1.237	245	2.375	274.918	
32	5	0.112281	-1.215	965	2.375	273.879	
33	5	0.115789	-1.200	365	2.375	273.118	
34	5	0.119298	-1.18		52.375	272.123	
35	5	0.122807	-1.165	055	2.375	271.393	
36	5	0.126316	-1.145	5	52.375	270.439	
37	5	0.129825	-1.131	135	2.375	269.737	
38	5	0.133333	-1.112	325	2.375	268.818	
39	5	0.136842	-1.098	475	2.375	268.142	
40	5	0.140351	-1.080	325	2.375	267.256	
41	5	0.14386	-1.066	945	2.375	266.602	
42	5	0.147368	-1.049	395	2.375	265.745	
43	5	0.150877	-1.036	435	2.375	265.112	
44	5	0.154386	-1.019	435	2.375	264.282	
45	5	0.157895	-1.006	875	2.375	263.669	
46	5	0.161404	-0.990356		52.375	262.862	
47	5	0.164912	-0.978	155	2.375	262.266	
48	5	0.168421	-0.962	1	52.375	261.483	

49	5	0.17193	-0.950222	52.375	260.903
50	5	0.175439	-0.934595	52.375	260.139
51	5	0.178947	-0.923014	52.375	259.574
52	5	0.182456	-0.907769	52.375	258.829
53	5	0.185965	-0.896473	52.375	258.278
54	5	0.189474	-0.881587	52.375	257.551
55	5	0.192982	-0.870555	52.375	257.012
56	5	0.196491	-0.855996	52.375	256.301
57	5	0.2	-0.841621	52.375	255.599
58	5	0.203509	-0.830953	52.375	255.078
59	5	0.207018	-0.816874	52.375	254.391
60	5	0.210526	-0.806422	52.375	253.88
61	5	0.214035	-0.792618	52.375	253.206
62	5	0.217544	-0.782366	52.375	252.706
63	5	0.221053	-0.768821	52.375	252.044
64	5	0.224561	-0.758753	52.375	251.552
65	5	0.22807	-0.745449	52.375	250.903
66	5	0.231579	-0.735557	52.375	250.42
67	5	0.235088	-0.722479	52.375	249.781
68	5	0.238596	-0.712751	52.375	249.306
69	5	0.242105	-0.699883	52.375	248.678
70	5	0.245614	-0.690309	52.375	248.21
71	5	0.249123	-0.677639	52.375	247.591
72	5	0.252632	-0.668209	52.375	247.131
73	5	0.25614	-0.655726	52.375	246.521
74	5	0.259649	-0.646431	52.375	246.067
75	5	0.263158	-0.634124	52.375	245.466
76	5	0.266667	-0.624956	52.375	245.019
77	5	0.270175	-0.612813	52.375	244.426
78	5	0.273684	-0.603765	52.375	243.984
79	5	0.277193	-0.591776	52.375	243.398
80	5	0.280702	-0.582841	52.375	242.962
81	5	0.284211	-0.570999	52.375	242.384
82	5	0.287719	-0.562175	52.375	241.953
83	5	0.291228	-0.550465	52.375	241.381
84	5	0.294737	-0.541736	52.375	240.955
85	5	0.298246	-0.530162	52.375	240.39
86	5	0.301754	-0.521527	52.375	239.968
87	5	0.305263	-0.510074	52.375	239.409
88	5	0.308772	-0.501527	52.375	238.991
89	5	0.312281	-0.490189	52.375	238.438
90	5	0.315789	-0.481728	52.375	238.024
91	5	0.319298	-0.470498	52.375	237.476
92	5	0.322807	-0.462114	52.375	237.067
93	5	0.326316	-0.450985	52.375	236.523
94	5	0.329825	-0.442676	52.375	236.117
95	5	0.333333	-0.431644	52.375	235.579
96	5	0.336842	-0.423405	52.375	235.176
97	5	0.340351	-0.412463	52.375	234.642
98	5	0.34386	-0.404295	52.375	234.243
99	5	0.347368	-0.393433	52.375	233.713
100	5	0.350877	-0.385321	52.375	233.317
101	5	0.354386	-0.374544	52.375	232.79
102	5	0.357895	-0.366495	52.375	232.397
103	5	0.361404	-0.355788	52.375	231.874
104	5	0.364912	-0.347787	52.375	231.484
105	5	0.368421	-0.337155	52.375	230.964
106	5	0.37193	-0.329206	52.375	230.576
107	5	0.375439	-0.318639	52.375	230.06
108	5	0.378947	-0.310738	52.375	229.674
109	5	0.382456	-0.300232	52.375	229.161
110	5	0.385965	-0.292375	52.375	228.778

111	5	0.389474	-0.281926	52.375	228.267
112	5	0.392982	-0.274115	52.375	227.886
113	5	0.396491	-0.263715	52.375	227.378
114	5	0.4	-0.253347	52.375	226.872
115	5	0.403509	-0.245595	52.375	226.493
116	5	0.407018	-0.235269	52.375	225.989
117	5	0.410526	-0.227545	52.375	225.612
118	5	0.414035	-0.217267	52.375	225.11
119	5	0.417544	-0.209575	52.375	224.734
120	5.2	0.421053	-0.199336	52.91	224.234
121	5.4	0.424561	-0.191671	53.445	223.86
122	6	0.42807	-0.181468	55.05	223.362
123	6	0.431579	-0.173829	55.05	222.989
124	6.4	0.435088	-0.163659	56.12	222.492
125	6.9	0.438596	-0.156042	57.4575	222.12
126	7	0.442105	-0.1459	57.725	221.625
127	7	0.445614	-0.138305	57.725	221.254
128	7	0.449123	-0.128189	57.725	220.76
129	7	0.452632	-0.120615	57.725	220.39
130	7.2	0.45614	-0.110516	58.26	219.897
131	7.6	0.459649	-0.102953	59.33	219.528
132	8	0.463158	-0.0928787	60.4	219.036
133	8	0.466667	-0.0853288	60.4	218.667
134	8	0.470175	-0.0752698	60.4	218.176
135	8	0.473684	-0.0677301	60.4	217.807
136	8.5	0.477193	-0.0576847	61.7375	217.317
137	8.8	0.480702	-0.0501541	62.54	216.949
138	8.8	0.484211	-0.0401167	62.54	216.459
139	9	0.487719	-0.0325917	63.075	216.092
140	9	0.491228	-0.0225612	63.075	215.602
141	9	0.494737	-0.0150408	63.075	215.234
142	9.2	0.498246	-0.00501359	63.61	214.745
143	9.2	0.501754	0.00501359	63.61	214.255
144	10	0.505263	0.0150408	65.75	213.766
145	10	0.508772	0.0225612	65.75	213.398
146	10	0.512281	0.0325917	65.75	212.908
147	10	0.515789	0.0401167	65.75	212.541
148	10	0.519298	0.0501541	65.75	212.051
149	10	0.522807	0.0576847	65.75	211.683
150	10	0.526316	0.0677301	65.75	211.193
151	11	0.529825	0.0752698	68.425	210.824
152	11	0.533333	0.0853288	68.425	210.333
153	11	0.536842	0.0928787	68.425	209.964
154	11	0.540351	0.102953	68.425	209.472
155	11	0.54386	0.110516	68.425	209.103
156	12	0.547368	0.12061	71.1	208.61
157	12	0.550877	0.128189	71.1	208.24
158	12	0.554386	0.138305	71.1	207.746
159	12	0.557895	0.1459	71.1	207.375
160	12	0.561404	0.156042	71.1	206.88
161	12	0.564912	0.163659	71.1	206.508
162	12	0.568421	0.173829	71.1	206.011
163	12	0.57193	0.181468	71.1	205.638
164	12	0.575439	0.191671	71.1	205.14
165	12	0.578947	0.199336	71.1	204.766
166	12	0.582456	0.209575	71.1	204.266
167	12	0.585965	0.217267	71.1	203.89
168	12	0.589474	0.227545	71.1	203.388
169	13	0.592982	0.235269	73.775	203.011
170	13	0.596491	0.24559	73.775	202.507
171	13	0.6	0.253347	73.775	202.128
172	13	0.603509	0.263715	73.775	201.622

173	13	0.607018	0.27411	73.775	201.114
174	13	0.610526	0.281926	73.775	200.733
175	13	0.614035	0.292375	73.775	200.222
176	13	0.617544	0.300232	73.775	199.839
177	13	0.621053	0.310738	73.775	199.326
178	13	0.624561	0.318639	73.775	198.94
179	13	0.62807	0.329206	73.775	198.424
180	13	0.631579	0.337155	73.775	198.036
181	13	0.635088	0.347787	73.775	197.516
182	13	0.638596	0.355788	73.775	197.126
183	13	0.642105	0.36649	73.775	196.603
184	13	0.645614	0.374544	73.775	196.21
185	13	0.649123	0.385321	73.775	195.683
186	13	0.652632	0.393433	73.775	195.287
187	13	0.65614	0.40429	73.775	194.757
188	13	0.659649	0.412463	73.775	194.358
189	14	0.663158	0.423405	76.45	193.824
190	14	0.666667	0.431644	76.45	193.421
191	14	0.670175	0.442676	76.45	192.883
192	14	0.673684	0.450985	76.45	192.477
193	14	0.677193	0.462114	76.45	191.933
194	14	0.680702	0.470498	76.45	191.524
195	14	0.684211	0.481728	76.45	190.976
196	14	0.687719	0.490189	76.45	190.562
197	14	0.691228	0.501527	76.45	190.009
198	14	0.694737	0.510074	76.45	189.591
199	14	0.698246	0.521527	76.45	189.032
200	15	0.701754	0.530162	79.125	188.61
201	15	0.705263	0.541736	79.125	188.045
202	16	0.708772	0.550465	81.8	187.619
203	16	0.712281	0.56217	81.8	187.047
204	17	0.715789	0.570999	84.475	186.616
205	18	0.719298	0.582841	87.15	186.038
206	18	0.722807	0.591776	87.15	185.602
207	20	0.726316	0.603765	92.5	185.016
208	20	0.729825	0.612813	92.5	184.574
209	20	0.733333	0.624956	92.5	183.981
210	20	0.736842	0.634124	92.5	183.534
211	20	0.740351	0.646431	92.5	182.933
212	20	0.74386	0.655726	92.5	182.479
213	21	0.747368	0.668209	95.175	181.869
214	21	0.750877	0.677639	95.175	181.409
215	21	0.754386	0.690309	95.175	180.79
216	22	0.757895	0.699883	97.85	180.322
217	22	0.761404	0.712751	97.85	179.694
218	22	0.764912	0.722479	97.85	179.219
219	23	0.768421	0.735557	100.525	178.58
220	23	0.77193	0.745449	100.525	178.097
221	23	0.775439	0.758753	100.525	177.448
222	23	0.778947	0.768821	100.525	176.956
223	24	0.782456	0.782366	103.2	176.294
224	24	0.785965	0.792618	103.2	175.794
225	25	0.789474	0.806422	105.875	175.12
226	25	0.792982	0.816874	105.875	174.609
227	27	0.796491	0.830953	111.225	173.922
228	27	0.8	0.841621	111.225	173.401
229	28	0.803509	0.855996	113.9	172.699
230	29	0.807018	0.87055	116.575	171.988
231	30	0.810526	0.881587	119.25	171.449
232	30	0.814035	0.896473	119.25	170.722
233	30	0.817544	0.907769	119.25	170.171
234	30	0.821053	0.923014	119.25	169.426

235	31	0.824561	0.93459	121.925	168.861	
236	32	0.82807	0.950222	124.6	168.097	
237	32	0.831579	0.9621	124.6	167.517	
238	32	0.835088	0.97815	124.6	166.734	
239	32	0.838596	0.990356	124.6	166.138	
240	33	0.842105	1.00687	127.275	165.331	
241	33	0.845614	1.01943	127.275	164.718	
242	34	0.849123	1.03643	129.95	163.888	
243	34	0.852632	1.04939	129.95	163.255	
244	35	0.85614	1.06694	132.625	162.398	
245	36	0.859649	1.08032	135.3	161.744	
246	36	0.863158	1.09847	135.3	160.858	
247	37	0.866667	1.11232	137.975	160.182	
248	38	0.870175	1.13113	140.65	159.263	
249	38	0.873684	1.1455	140.65	158.561	
250	38	0.877193	1.16505	140.65	157.607	
251	38	0.880702	1.18	140.65	156.877	
252	38	0.884211	1.20036	140.65	155.882	
253	39	0.887719	1.21596	143.325	155.121	
254	39	0.891228	1.23724	143.325	154.082	
255	40	0.894737	1.25357	146	153.284	
256	40	0.898246	1.27588	146	152.195	
257	40	0.901754	1.29303	146	151.357	
258	41	0.905263	1.31652	148.675	150.21	
259	41	0.908772	1.33462	148.675	149.326	
260	42	0.912281	1.35946	151.35	148.113	
261	42	0.915789	1.37866	151.35	147.176	
262	44	0.919298	1.40507	156.7	145.886	
263	44	0.922807	1.42554	156.7	144.886	
264	45	0.926316	1.4538	159.375	143.506	
265	48	0.929825	1.47579	167.4	142.432	
266	48	0.933333	1.50626	167.4	140.944	
267	49	0.936842	1.53007	170.075	139.782	
268	52	0.940351	1.56322	178.1	138.163	
269	53	0.94386	1.58927	180.775	136.891	
270	55	0.947368	1.62576	186.125	135.109	
271	59	0.950877	1.65463	196.825	133.699	
272	61	0.954386	1.6954	202.175	131.708	
273	66	0.957895	1.72793	215.55	130.119	
274	68	0.961404	1.77438	220.9	127.851	
275	73	0.964912	1.81191	234.275	126.018	
276	74	0.968421	1.86629	236.95	123.363	
277	75	0.97193	1.91103	239.625	121.178	
278	77	0.975439	1.97737	244.975	117.938	
279	77	0.978947	2.03352	244.975	115.196	
280	79	0.982456	2.12007	250.325	110.97	
281	80	0.985965	2.19728	253	107.199	
282	92	0.989474	2.32634	285.1	100.897	
283	109	0.992982	2.45727	330.575	94.5032	
284	120	0.996491	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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.641854	-2.747777.55021	-1.76366	
2	0.693147	-2.4572713.5884	-3.46692	
3	0.693147	-2.3263419.0003	-5.07941	
4	0.741937	-2.1972823.8283	-6.70966	
5	0.916291	-2.1200728.323	-8.65226	
6	1.02962	-2.0335232.4582	-10.746	
7	1.02962	-1.9773736.3682	-12.7819	
8	1.02962	-1.9110340.0203	-14.7496	
9	1.06471	-1.8662943.5033	-16.7366	
10	1.06471	-1.8119146.7863	-18.6658	
11	1.09861	-1.7743849.9348	-20.6152	
12	1.09861	-1.7279352.9205	-22.5135	
13	1.09861	-1.6954 55.7949	-24.3761	
14	1.1314	-1.6546358.5327	-26.2481	
15	1.1314	-1.6257661.1758	-28.0875	
16	1.19392	-1.5892763.7015	-29.985	
17	1.22378	-1.5632266.1452	-31.898	
18	1.25276	-1.5300768.4863	-33.8148	
19	1.335	-1.5062670.7551	-35.8257	
20	1.38629	-1.4757972.9331	-37.8716	
21	1.38629	-1.4538 75.0466	-39.887	
22	1.50408	-1.4255477.0788	-42.0311	
23	1.52606	-1.4050779.053	-44.1753	
24	1.60944	-1.3786680.9537	-46.3942	
25	1.60944	-1.3594682.8019	-48.5821	
26	1.60944	-1.3346284.5831	-50.7301	
27	1.60944	-1.3165286.3163	-52.849	
28	1.60944	-1.2930387.9883	-54.9301	
29	1.60944	-1.2758889.6161	-56.9835	
30	1.60944	-1.2535791.1875	-59.001	
31	1.60944	-1.2372492.7183	-60.9923	
32	1.60944	-1.2159694.1969	-62.9493	
33	1.60944	-1.2003695.6377	-64.8812	
34	1.60944	-1.18 97.0301	-66.7803	
35	1.60944	-1.1650598.3875	-68.6554	
36	1.60944	-1.1455 99.6996	-70.499	
37	1.60944	-1.13113100.979	-72.3195	
38	1.60944	-1.11232102.216	-74.1097	
39	1.60944	-1.09847103.423	-75.8776	
40	1.60944	-1.08032104.59	-77.6164	
41	1.60944	-1.06694105.728	-79.3335	
42	1.60944	-1.04939106.83	-81.0224	
43	1.60944	-1.03643107.904	-82.6905	
44	1.60944	-1.01943108.943	-84.3312	
45	1.60944	-1.00687109.957	-85.9517	
46	1.60944	-0.990356	110.938	-87.5456
47	1.60944	-0.97815111.894	-89.1199	
48	1.60944	-0.9621 112.82	-90.6683	
49	1.60944	-0.950222	113.723	-92.1977
50	1.60944	-0.93459114.596	-93.7018	
51	1.60944	-0.923014	115.448	-95.1874

52	1.60944	-0.907769	116.272	-96.6484
53	1.60944	-0.896473	117.076	-98.0912
54	1.60944	-0.881587	117.853	-99.51
55	1.60944	-0.87055	118.611	-100.911
56	1.60944	-0.855996	119.344	-102.289
57	1.60944	-0.841621	120.052	-103.643
58	1.60944	-0.830953	120.743	-104.981
59	1.60944	-0.816874	121.41	-106.295
60	1.60944	-0.806422	122.06	-107.593
61	1.60944	-0.792618	122.689	-108.869
62	1.60944	-0.782366	123.301	-110.128
63	1.60944	-0.768821	123.892	-111.366
64	1.60944	-0.758753	124.467	-112.587
65	1.60944	-0.745449	125.023	-113.786
66	1.60944	-0.735557	125.564	-114.97
67	1.60944	-0.722479	126.086	-116.133
68	1.60944	-0.712751	126.594	-117.28
69	1.60944	-0.699883	127.084	-118.407
70	1.60944	-0.690309	127.561	-119.518
71	1.60944	-0.677639	128.02	-120.608
72	1.60944	-0.668209	128.466	-121.684
73	1.60944	-0.655726	128.896	-122.739
74	1.60944	-0.646431	129.314	-123.779
75	1.60944	-0.634124	129.716	-124.8
76	1.60944	-0.624956	130.107	-125.806
77	1.60944	-0.612813	130.482	-126.792
78	1.60944	-0.603765	130.847	-127.764
79	1.60944	-0.591776	131.197	-128.716
80	1.60944	-0.582841	131.537	-129.654
81	1.60944	-0.570999	131.863	-130.573
82	1.60944	-0.56217	132.179	-131.478
83	1.60944	-0.550465	132.482	-132.364
84	1.60944	-0.541736	132.775	-133.236
85	1.60944	-0.530162	133.056	-134.089
86	1.60944	-0.521527	133.328	-134.929
87	1.60944	-0.510074	133.589	-135.749
88	1.60944	-0.501527	133.84	-136.557
89	1.60944	-0.490189	134.08	-137.346
90	1.60944	-0.481728	134.312	-138.121
91	1.60944	-0.470498	134.534	-138.878
92	1.60944	-0.462114	134.747	-139.622
93	1.60944	-0.450985	134.951	-140.348
94	1.60944	-0.442676	135.147	-141.06
95	1.60944	-0.431644	135.333	-141.755
96	1.60944	-0.423405	135.512	-142.436
97	1.60944	-0.412463	135.682	-143.1
98	1.60944	-0.40429	135.846	-143.751
99	1.60944	-0.393433	136.001	-144.384
100	1.60944	-0.385321	136.149	-145.004
101	1.60944	-0.374544	136.289	-145.607
102	1.60944	-0.36649	136.424	-146.197
103	1.60944	-0.355788	136.55	-146.769
104	1.60944	-0.347787	136.671	-147.329
105	1.60944	-0.337155	136.785	-147.872
106	1.60944	-0.329206	136.893	-148.402
107	1.60944	-0.318639	136.995	-148.914
108	1.60944	-0.310738	137.091	-149.415
109	1.60944	-0.300232	137.182	-149.898
110	1.60944	-0.292375	137.267	-150.368
111	1.60944	-0.281926	137.346	-150.822
112	1.60944	-0.27411	137.422	-151.263
113	1.60944	-0.263715	137.491	-151.688

114	1.60944	-0.253347	137.555	-152.095
115	1.60944	-0.24559	137.616	-152.491
116	1.60944	-0.235269	137.671	-152.869
117	1.60944	-0.227545	137.723	-153.236
118	1.60944	-0.217267	137.77	-153.585
119	1.60944	-0.209575	137.814	-153.923
120	1.64866	-0.199336	137.854	-154.251
121	1.6864	-0.191671	137.89	-154.574
122	1.79176	-0.181468	137.923	-154.9
123	1.79176	-0.173829	137.954	-155.211
124	1.8563	-0.163659	137.98	-155.515
125	1.93152	-0.156042	138.005	-155.816
126	1.94591	-0.1459	138.026	-156.1
127	1.94591	-0.138305	138.045	-156.369
128	1.94591	-0.128189	138.062	-156.619
129	1.94591	-0.12061	138.076	-156.853
130	1.97408	-0.110516	138.088	-157.072
131	2.02815	-0.102953	138.099	-157.28
132	2.07944	-0.0928787	138.108	-157.473
133	2.07944	-0.0853288	138.115	-157.651
134	2.07944	-0.0752698	138.12	-157.807
135	2.07944	-0.0677301	138.125	-157.948
136	2.14007	-0.0576847	138.128	-158.072
137	2.17475	-0.0501541	138.131	-158.181
138	2.17475	-0.0401167	138.132	-158.268
139	2.19722	-0.0325917	138.134	-158.34
140	2.19722	-0.0225612	138.134	-158.389
141	2.19722	-0.0150408	138.134	-158.422
142	2.2192	-0.00501359	138.134	-158.433
143	2.2192	0.00501359	138.134	-158.422
144	2.30259	0.0150408	138.135	-158.388
145	2.30259	0.0225612	138.135	-158.336
146	2.30259	0.0325917	138.136	-158.261
147	2.30259	0.0401167	138.138	-158.168
148	2.30259	0.0501541	138.14	-158.053
149	2.30259	0.0576847	138.144	-157.92
150	2.30259	0.0677301	138.148	-157.764
151	2.3979	0.0752698	138.154	-157.584
152	2.3979	0.0853288	138.161	-157.379
153	2.3979	0.0928787	138.17	-157.156
154	2.3979	0.102953	138.18	-156.909
155	2.3979	0.110516	138.193	-156.644
156	2.48491	0.12061	138.207	-156.345
157	2.48491	0.128189	138.224	-156.026
158	2.48491	0.138305	138.243	-155.682
159	2.48491	0.1459	138.264	-155.32
160	2.48491	0.156042	138.288	-154.932
161	2.48491	0.163659	138.315	-154.525
162	2.48491	0.173829	138.345	-154.094
163	2.48491	0.181468	138.378	-153.643
164	2.48491	0.191671	138.415	-153.166
165	2.48491	0.199336	138.455	-152.671
166	2.48491	0.209575	138.499	-152.15
167	2.48491	0.217267	138.546	-151.61
168	2.48491	0.227545	138.598	-151.045
169	2.56495	0.235269	138.653	-150.441
170	2.56495	0.24559	138.713	-149.811
171	2.56495	0.253347	138.777	-149.162
172	2.56495	0.263715	138.847	-148.485
173	2.56495	0.27411	138.922	-147.782
174	2.56495	0.281926	139.002	-147.059
175	2.56495	0.292375	139.087	-146.309

176	2.56495	0.300232	139.177	-145.539
177	2.56495	0.310738	139.274	-144.742
178	2.56495	0.318639	139.375	-143.925
179	2.56495	0.329206	139.484	-143.08
180	2.56495	0.337155	139.597	-142.216
181	2.56495	0.347787	139.718	-141.323
182	2.56495	0.355788	139.845	-140.411
183	2.56495	0.36649	139.979	-139.471
184	2.56495	0.374544	140.12	-138.51
185	2.56495	0.385321	140.268	-137.522
186	2.56495	0.393433	140.423	-136.513
187	2.56495	0.40429	140.586	-135.476
188	2.56495	0.412463	140.756	-134.418
189	2.63906	0.423405	140.936	-133.3
190	2.63906	0.431644	141.122	-132.161
191	2.63906	0.442676	141.318	-130.993
192	2.63906	0.450985	141.521	-129.803
193	2.63906	0.462114	141.735	-128.583
194	2.63906	0.470498	141.956	-127.342
195	2.63906	0.481728	142.188	-126.07
196	2.63906	0.490189	142.429	-124.777
197	2.63906	0.501527	142.68	-123.453
198	2.63906	0.510074	142.94	-122.107
199	2.63906	0.521527	143.212	-120.731
200	2.70805	0.530162	143.493	-119.295
201	2.70805	0.541736	143.787	-117.828
202	2.77259	0.550465	144.09	-116.302
203	2.77259	0.56217	144.406	-114.743
204	2.83321	0.570999	144.732	-113.125
205	2.89037	0.582841	145.072	-111.441
206	2.89037	0.591776	145.422	-109.73
207	2.99573	0.603765	145.786	-107.921
208	2.99573	0.612813	146.162	-106.086
209	2.99573	0.624956	146.552	-104.213
210	2.99573	0.634124	146.955	-102.314
211	2.99573	0.646431	147.372	-100.377
212	2.99573	0.655726	147.802	-98.4129
213	3.04452	0.668209	148.249	-96.3785
214	3.04452	0.677639	148.708	-94.3154
215	3.04452	0.690309	149.185	-92.2137
216	3.09104	0.699883	149.674	-90.0504
217	3.09104	0.712751	150.182	-87.8472
218	3.09104	0.722479	150.704	-85.614
219	3.13549	0.735557	151.245	-83.3077
220	3.13549	0.745449	151.801	-80.9703
221	3.13549	0.758753	152.377	-78.5913
222	3.13549	0.768821	152.968	-76.1806
223	3.17805	0.782366	153.58	-73.6942
224	3.17805	0.792618	154.208	-71.1753
225	3.21888	0.806422	154.859	-68.5795
226	3.21888	0.816874	155.526	-65.9501
227	3.29584	0.830953	156.216	-63.2114
228	3.29584	0.841621	156.925	-60.4375
229	3.3322	0.855996	157.657	-57.5852
230	3.3673	0.87055	158.415	-54.6538
231	3.4012	0.881587	159.193	-51.6553
232	3.4012	0.896473	159.996	-48.6062
233	3.4012	0.907769	160.82	-45.5187
234	3.4012	0.923014	161.672	-42.3794
235	3.43399	0.93459	162.546	-39.17
236	3.46574	0.950222	163.449	-35.8768
237	3.46574	0.9621	164.374	-32.5424

238	3.46574	0.97815	165.331	-29.1524
239	3.46574	0.990356	166.312	-25.7201
240	3.49651	1.00687	167.326	-22.1996
241	3.49651	1.01943	168.365	-18.6352
242	3.52636	1.03643	169.439	-14.9803
243	3.52636	1.04939	170.54	-11.2798
244	3.55535	1.06694	171.679	-7.48647
245	3.58352	1.08032	172.846	-3.61512
246	3.58352	1.09847	174.052	0.321267
247	3.61092	1.11232	175.29	4.33777
248	3.63759	1.13113	176.569	8.45236
249	3.63759	1.1455	177.881	12.6192
250	3.63759	1.16505	179.239	16.8572
251	3.63759	1.18	180.631	21.1495
252	3.63759	1.20036	182.072	25.516
253	3.66356	1.21596	183.55	29.9707
254	3.66356	1.23724	185.081	34.5034
255	3.68888	1.25357	186.653	39.1276
256	3.68888	1.27588	188.28	43.8342
257	3.68888	1.29303	189.952	48.604
258	3.71357	1.31652	191.686	53.493
259	3.71357	1.33462	193.467	58.4493
260	3.73767	1.35946	195.315	63.5305
261	3.73767	1.37866	197.216	68.6834
262	3.78419	1.40507	199.19	74.0005
263	3.78419	1.42554	201.222	79.395
264	3.80666	1.4538	203.336	84.9292
265	3.8712	1.47579	205.514	90.6423
266	3.8712	1.50626	207.782	96.4733
267	3.89182	1.53007	210.123	102.428
268	3.95124	1.56322	212.567	108.605
269	3.97029	1.58927	215.093	114.915
270	4.00733	1.62576	217.736	121.43
271	4.07754	1.65463	220.474	128.176
272	4.11087	1.6954	223.348	135.146
273	4.18965	1.72793	226.334	142.385
274	4.21951	1.77438	229.482	149.872
275	4.29046	1.81191	232.765	157.646
276	4.30407	1.86629	236.248	165.679
277	4.31749	1.91103	239.9	173.93
278	4.34381	1.97737	243.81	182.519
279	4.34381	2.03352	247.946	191.352
280	4.36945	2.12007	252.44	200.616
281	4.38203	2.19728	257.268	210.244
282	4.52179	2.32634	262.68	220.764
283	4.69135	2.45727	268.718	232.292
284	4.78749	2.74777	276.269	245.446

Data Set Standard Deviation = 0.913683
Numerator = 60244
Denominator = 65269.3
W Statistic = 0.923006 = 60244 / 65269.3

5% Critical value of 0.976 exceeds 0.923006
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.923006
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 = 0.959927
0.959927 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	0.641854	0.00350877	-2.74777	107.678	348.683
2	0.693147	0.00701754	-2.45727	113.167	334.497
3	0.693147	0.0105263	-2.32634	113.167	328.103
4	0.741937	0.0140351	-2.19728	118.387	321.801
5	0.916291	0.0175439	-2.12007	137.043	318.03
6	1.02962	0.0210526	-2.03352	149.169	313.804
7	1.02962	0.0245614	-1.97737	149.169	311.062
8	1.02962	0.0280702	-1.91103	149.169	307.822
9	1.06471	0.0315789	-1.86629	152.924	305.637
10	1.06471	0.0350877	-1.81191	152.924	302.982
11	1.09861	0.0385965	-1.77438	156.552	301.149
12	1.09861	0.0421053	-1.72793	156.552	298.881
13	1.09861	0.045614	-1.6954	156.552	297.292
14	1.1314	0.0491228	-1.65463	160.06	295.301
15	1.1314	0.0526316	-1.62576	160.06	293.891
16	1.19392	0.0561404	-1.58927	166.75	292.109
17	1.22378	0.0596491	-1.56322	169.944	290.837
18	1.25276	0.0631579	-1.53007	173.046	289.218
19	1.335	0.0666667	-1.50626	181.845	288.056
20	1.38629	0.0701754	-1.47579	187.333	286.568
21	1.38629	0.0736842	-1.4538	187.333	285.494
22	1.50408	0.077193	-1.42554	199.936	284.114
23	1.52606	0.0807018	-1.40507	202.288	283.114
24	1.60944	0.0842105	-1.37866	211.21	281.824
25	1.60944	0.0877193	-1.35946	211.21	280.887
26	1.60944	0.0912281	-1.33462	211.21	279.674
27	1.60944	0.0947368	-1.31652	211.21	278.79
28	1.60944	0.0982456	-1.29303	211.21	277.643
29	1.60944	0.101754	-1.27588	211.21	276.805
30	1.60944	0.105263	-1.25357	211.21	275.716
31	1.60944	0.108772	-1.23724	211.21	274.918
32	1.60944	0.112281	-1.21596	211.21	273.879
33	1.60944	0.115789	-1.20036	211.21	273.118
34	1.60944	0.119298	-1.18	211.21	272.123
35	1.60944	0.122807	-1.16505	211.21	271.393
36	1.60944	0.126316	-1.1455	211.21	270.439
37	1.60944	0.129825	-1.13113	211.21	269.737
38	1.60944	0.133333	-1.11232	211.21	268.818
39	1.60944	0.136842	-1.09847	211.21	268.142
40	1.60944	0.140351	-1.08032	211.21	267.256
41	1.60944	0.14386	-1.06694	211.21	266.602
42	1.60944	0.147368	-1.04939	211.21	265.745
43	1.60944	0.150877	-1.03643	211.21	265.112
44	1.60944	0.154386	-1.01943	211.21	264.282
45	1.60944	0.157895	-1.00687	211.21	263.669
46	1.60944	0.161404	-0.990356	211.21	262.862
47	1.60944	0.164912	-0.97815	211.21	262.266
48	1.60944	0.168421	-0.9621	211.21	261.483

49	1.60944	0.17193	-0.950222	211.21	260.903	
50	1.60944	0.175439	-0.93459	211.21	260.139	
51	1.60944	0.178947	-0.923014	211.21	259.574	
52	1.60944	0.182456	-0.907769	211.21	258.829	
53	1.60944	0.185965	-0.896473	211.21	258.278	
54	1.60944	0.189474	-0.881587	211.21	257.551	
55	1.60944	0.192982	-0.87055	211.21	257.012	
56	1.60944	0.196491	-0.855996	211.21	256.301	
57	1.60944	0.2	-0.841621	211.21	255.599	
58	1.60944	0.203509	-0.830953	211.21	255.078	
59	1.60944	0.207018	-0.816874	211.21	254.391	
60	1.60944	0.210526	-0.806422	211.21	253.88	
61	1.60944	0.214035	-0.792618	211.21	253.206	
62	1.60944	0.217544	-0.782366	211.21	252.706	
63	1.60944	0.221053	-0.768821	211.21	252.044	
64	1.60944	0.224561	-0.758753	211.21	251.552	
65	1.60944	0.22807	-0.745449	211.21	250.903	
66	1.60944	0.231579	-0.735557	211.21	250.42	
67	1.60944	0.235088	-0.722479	211.21	249.781	
68	1.60944	0.238596	-0.712751	211.21	249.306	
69	1.60944	0.242105	-0.699883	211.21	248.678	
70	1.60944	0.245614	-0.690309	211.21	248.21	
71	1.60944	0.249123	-0.677639	211.21	247.591	
72	1.60944	0.252632	-0.668209	211.21	247.131	
73	1.60944	0.25614	-0.655726	211.21	246.521	
74	1.60944	0.259649	-0.646431	211.21	246.067	
75	1.60944	0.263158	-0.634124	211.21	245.466	
76	1.60944	0.266667	-0.624956	211.21	245.019	
77	1.60944	0.270175	-0.612813	211.21	244.426	
78	1.60944	0.273684	-0.603765	211.21	243.984	
79	1.60944	0.277193	-0.591776	211.21	243.398	
80	1.60944	0.280702	-0.582841	211.21	242.962	
81	1.60944	0.284211	-0.570999	211.21	242.384	
82	1.60944	0.287719	-0.56217	211.21	241.953	
83	1.60944	0.291228	-0.550465	211.21	241.381	
84	1.60944	0.294737	-0.541736	211.21	240.955	
85	1.60944	0.298246	-0.530162	211.21	240.39	
86	1.60944	0.301754	-0.521527	211.21	239.968	
87	1.60944	0.305263	-0.510074	211.21	239.409	
88	1.60944	0.308772	-0.501527	211.21	238.991	
89	1.60944	0.312281	-0.490189	211.21	238.438	
90	1.60944	0.315789	-0.481728	211.21	238.024	
91	1.60944	0.319298	-0.470498	211.21	237.476	
92	1.60944	0.322807	-0.462114	211.21	237.067	
93	1.60944	0.326316	-0.450985	211.21	236.523	
94	1.60944	0.329825	-0.442676	211.21	236.117	
95	1.60944	0.333333	-0.431644	211.21	235.579	
96	1.60944	0.336842	-0.423405	211.21	235.176	
97	1.60944	0.340351	-0.412463	211.21	234.642	
98	1.60944	0.34386	-0.40429	211.21	234.243	
99	1.60944	0.347368	-0.393433	211.21	233.713	
100	1.60944	0.350877	-0.385321	211.21	233.317	
101	1.60944	0.354386	-0.374544	211.21	232.79	
102	1.60944	0.357895	-0.36649	211.21	232.397	
103	1.60944	0.361404	-0.355788	211.21	231.874	
104	1.60944	0.364912	-0.347787	211.21	231.484	
105	1.60944	0.368421	-0.337155	211.21	230.964	
106	1.60944	0.37193	-0.329206	211.21	230.576	
107	1.60944	0.375439	-0.318639	211.21	230.06	
108	1.60944	0.378947	-0.310738	211.21	229.674	
109	1.60944	0.382456	-0.300232	211.21	229.161	
110	1.60944	0.385965	-0.292375	211.21	228.778	

111	1.60944	0.389474	-0.281926	211.21	228.267
112	1.60944	0.392982	-0.27411	211.21	227.886
113	1.60944	0.396491	-0.263715	211.21	227.378
114	1.60944	0.4	-0.253347	211.21	226.872
115	1.60944	0.403509	-0.24559	211.21	226.493
116	1.60944	0.407018	-0.235269	211.21	225.989
117	1.60944	0.410526	-0.227545	211.21	225.612
118	1.60944	0.414035	-0.217267	211.21	225.11
119	1.60944	0.417544	-0.209575	211.21	224.734
120	1.64866	0.421053	-0.199336	215.406	224.234
121	1.6864	0.424561	-0.191671	219.445	223.86
122	1.79176	0.42807	-0.181468	230.718	223.362
123	1.79176	0.431579	-0.173829	230.718	222.989
124	1.8563	0.435088	-0.163659	237.624	222.492
125	1.93152	0.438596	-0.156042	245.673	222.12
126	1.94591	0.442105	-0.1459	247.212	221.625
127	1.94591	0.445614	-0.138305	247.212	221.254
128	1.94591	0.449123	-0.128189	247.212	220.76
129	1.94591	0.452632	-0.12061	247.212	220.39
130	1.97408	0.45614	-0.110516	250.227	219.897
131	2.02815	0.459649	-0.102953	256.012	219.528
132	2.07944	0.463158	-0.0928787	261.5	219.036
133	2.07944	0.466667	-0.0853288	261.5	218.667
134	2.07944	0.470175	-0.0752698	261.5	218.176
135	2.07944	0.473684	-0.0677301	261.5	217.807
136	2.14007	0.477193	-0.0576847	267.987	217.317
137	2.17475	0.480702	-0.0501541	271.698	216.949
138	2.17475	0.484211	-0.0401167	271.698	216.459
139	2.19722	0.487719	-0.0325917	274.103	216.092
140	2.19722	0.491228	-0.0225612	274.103	215.602
141	2.19722	0.494737	-0.0150408	274.103	215.234
142	2.2192	0.498246	-0.00501359	276.455	214.745
143	2.2192	0.501754	0.00501359	276.455	214.255
144	2.30259	0.505263	0.0150408	285.377	213.766
145	2.30259	0.508772	0.0225612	285.377	213.398
146	2.30259	0.512281	0.0325917	285.377	212.908
147	2.30259	0.515789	0.0401167	285.377	212.541
148	2.30259	0.519298	0.0501541	285.377	212.051
149	2.30259	0.522807	0.0576847	285.377	211.683
150	2.30259	0.526316	0.0677301	285.377	211.193
151	2.3979	0.529825	0.0752698	295.575	210.824
152	2.3979	0.533333	0.0853288	295.575	210.333
153	2.3979	0.536842	0.0928787	295.575	209.964
154	2.3979	0.540351	0.102953	295.575	209.472
155	2.3979	0.54386	0.110516	295.575	209.103
156	2.48491	0.547368	0.12061	304.885	208.61
157	2.48491	0.550877	0.128189	304.885	208.24
158	2.48491	0.554386	0.138305	304.885	207.746
159	2.48491	0.557895	0.1459	304.885	207.375
160	2.48491	0.561404	0.156042	304.885	206.88
161	2.48491	0.564912	0.163659	304.885	206.508
162	2.48491	0.568421	0.173829	304.885	206.011
163	2.48491	0.57193	0.181468	304.885	205.638
164	2.48491	0.575439	0.191671	304.885	205.14
165	2.48491	0.578947	0.199336	304.885	204.766
166	2.48491	0.582456	0.209575	304.885	204.266
167	2.48491	0.585965	0.217267	304.885	203.89
168	2.48491	0.589474	0.227545	304.885	203.388
169	2.56495	0.592982	0.235269	313.45	203.011
170	2.56495	0.596491	0.24559	313.45	202.507
171	2.56495	0.6	0.253347	313.45	202.128
172	2.56495	0.603509	0.263715	313.45	201.622

173	2.56495	0.607018	0.27411	313.45	201.114
174	2.56495	0.610526	0.281926	313.45	200.733
175	2.56495	0.614035	0.292375	313.45	200.222
176	2.56495	0.617544	0.300232	313.45	199.839
177	2.56495	0.621053	0.310738	313.45	199.326
178	2.56495	0.624561	0.318639	313.45	198.94
179	2.56495	0.62807	0.329206	313.45	198.424
180	2.56495	0.631579	0.337155	313.45	198.036
181	2.56495	0.635088	0.347787	313.45	197.516
182	2.56495	0.638596	0.355788	313.45	197.126
183	2.56495	0.642105	0.36649	313.45	196.603
184	2.56495	0.645614	0.374544	313.45	196.21
185	2.56495	0.649123	0.385321	313.45	195.683
186	2.56495	0.652632	0.393433	313.45	195.287
187	2.56495	0.65614	0.40429	313.45	194.757
188	2.56495	0.659649	0.412463	313.45	194.358
189	2.63906	0.663158	0.423405	321.379	193.824
190	2.63906	0.666667	0.431644	321.379	193.421
191	2.63906	0.670175	0.442676	321.379	192.883
192	2.63906	0.673684	0.450985	321.379	192.477
193	2.63906	0.677193	0.462114	321.379	191.933
194	2.63906	0.680702	0.470498	321.379	191.524
195	2.63906	0.684211	0.481728	321.379	190.976
196	2.63906	0.687719	0.490189	321.379	190.562
197	2.63906	0.691228	0.501527	321.379	190.009
198	2.63906	0.694737	0.510074	321.379	189.591
199	2.63906	0.698246	0.521527	321.379	189.032
200	2.70805	0.701754	0.530162	328.761	188.61
201	2.70805	0.705263	0.541736	328.761	188.045
202	2.77259	0.708772	0.550465	335.667	187.619
203	2.77259	0.712281	0.56217	335.667	187.047
204	2.83321	0.715789	0.570999	342.154	186.616
205	2.89037	0.719298	0.582841	348.27	186.038
206	2.89037	0.722807	0.591776	348.27	185.602
207	2.99573	0.726316	0.603765	359.543	185.016
208	2.99573	0.729825	0.612813	359.543	184.574
209	2.99573	0.733333	0.624956	359.543	183.981
210	2.99573	0.736842	0.634124	359.543	183.534
211	2.99573	0.740351	0.646431	359.543	182.933
212	2.99573	0.74386	0.655726	359.543	182.479
213	3.04452	0.747368	0.668209	364.764	181.869
214	3.04452	0.750877	0.677639	364.764	181.409
215	3.04452	0.754386	0.690309	364.764	180.79
216	3.09104	0.757895	0.699883	369.742	180.322
217	3.09104	0.761404	0.712751	369.742	179.694
218	3.09104	0.764912	0.722479	369.742	179.219
219	3.13549	0.768421	0.735557	374.498	178.58
220	3.13549	0.77193	0.745449	374.498	178.097
221	3.13549	0.775439	0.758753	374.498	177.448
222	3.13549	0.778947	0.768821	374.498	176.956
223	3.17805	0.782456	0.782366	379.052	176.294
224	3.17805	0.785965	0.792618	379.052	175.794
225	3.21888	0.789474	0.806422	383.42	175.12
226	3.21888	0.792982	0.816874	383.42	174.609
227	3.29584	0.796491	0.830953	391.655	173.922
228	3.29584	0.8	0.841621	391.655	173.401
229	3.3322	0.803509	0.855996	395.546	172.699
230	3.3673	0.807018	0.87055	399.301	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	3.43399	0.824561	0.93459	406.437	168.861	
236	3.46574	0.82807	0.950222	409.834	168.097	
237	3.46574	0.831579	0.9621	409.834	167.517	
238	3.46574	0.835088	0.97815	409.834	166.734	
239	3.46574	0.838596	0.990356	409.834	166.138	
240	3.49651	0.842105	1.00687	413.126	165.331	
241	3.49651	0.845614	1.01943	413.126	164.718	
242	3.52636	0.849123	1.03643	416.321	163.888	
243	3.52636	0.852632	1.04939	416.321	163.255	
244	3.55535	0.85614	1.06694	419.422	162.398	
245	3.58352	0.859649	1.08032	422.437	161.744	
246	3.58352	0.863158	1.09847	422.437	160.858	
247	3.61092	0.866667	1.11232	425.368	160.182	
248	3.63759	0.870175	1.13113	428.222	159.263	
249	3.63759	0.873684	1.1455	428.222	158.561	
250	3.63759	0.877193	1.16505	428.222	157.607	
251	3.63759	0.880702	1.18	428.222	156.877	
252	3.63759	0.884211	1.20036	428.222	155.882	
253	3.66356	0.887719	1.21596	431.001	155.121	
254	3.66356	0.891228	1.23724	431.001	154.082	
255	3.68888	0.894737	1.25357	433.71	153.284	
256	3.68888	0.898246	1.27588	433.71	152.195	
257	3.68888	0.901754	1.29303	433.71	151.357	
258	3.71357	0.905263	1.31652	436.352	150.21	
259	3.71357	0.908772	1.33462	436.352	149.326	
260	3.73767	0.912281	1.35946	438.931	148.113	
261	3.73767	0.915789	1.37866	438.931	147.176	
262	3.78419	0.919298	1.40507	443.908	145.886	
263	3.78419	0.922807	1.42554	443.908	144.886	
264	3.80666	0.926316	1.4538	446.313	143.506	
265	3.8712	0.929825	1.47579	453.219	142.432	
266	3.8712	0.933333	1.50626	453.219	140.944	
267	3.89182	0.936842	1.53007	455.425	139.782	
268	3.95124	0.940351	1.56322	461.783	138.163	
269	3.97029	0.94386	1.58927	463.821	136.891	
270	4.00733	0.947368	1.62576	467.785	135.109	
271	4.07754	0.950877	1.65463	475.297	133.699	
272	4.11087	0.954386	1.6954	478.864	131.708	
273	4.18965	0.957895	1.72793	487.293	130.119	
274	4.21951	0.961404	1.77438	490.487	127.851	
275	4.29046	0.964912	1.81191	498.079	126.018	
276	4.30407	0.968421	1.86629	499.535	123.363	
277	4.31749	0.97193	1.91103	500.971	121.178	
278	4.34381	0.975439	1.97737	503.787	117.938	
279	4.34381	0.978947	2.03352	503.787	115.196	
280	4.36945	0.982456	2.12007	506.531	110.97	
281	4.38203	0.985965	2.19728	507.877	107.199	
282	4.52179	0.989474	2.32634	522.831	100.897	
283	4.69135	0.992982	2.45727	540.974	94.5032	
284	4.78749	0.996491	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-4	1/16/1998	ND<1.60944	44.5
	3/16/1999	2.99573	207
	9/23/1999	2.07944 J	132
	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	189
	10/26/2005	2.48491	156
	6/19/2006	2.30259	144
	11/18/2006	2.56495	169
	6/2/2007	3.17805	223
	11/15/2007	2.56495	170
	5/20/2008	2.3979	151
	11/20/2008	2.63906	190
	6/11/2009	2.56495	171
	11/16/2009	2.56495	172
	6/30/2010	2.70805	200
	11/17/2010	2.63906	191
	7/6/2011	2.63906	192
	11/22/2011	2.77259	202
	5/16/2012	2.70805	201
	11/16/2012	2.56495	173

Rank Sum = 3455.5
Rank Mean = 150.239

Background Rank Sum = 3455.5
Background Rank Mean = 150.239

Compliance Locations

Loc. ID	Date	Value	Rank
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	174
	10/26/2005	ND<1.60944	44.5
	6/19/2006	2.99573	208
	11/18/2006	2.3979	152
	6/2/2007	3.04452	213
	11/15/2007	ND<1.60944	44.5
	5/20/2008	2.48491	157
	11/20/2008	2.48491	158
	6/11/2009	2.56495	175
	11/16/2009	2.48491	159
	6/30/2010	2.48491	160
	11/17/2010	2.63906	193
	7/6/2011	3.04452	214

	11/22/2011	3.13549	219
	5/16/2012	3.13549	220
	11/16/2012	3.21888	225

Rank Sum = 2894
Rank Mean = 144.7

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

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-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

LMW-14R	6/2/2007	2.63906	194
	11/15/2007	2.48491	161
	5/20/2008	2.19722 J	139
	11/20/2008	2.56495	176
	6/11/2009	2.56495	177
	11/16/2009	3.8712	265
	11/16/2009	2.63906	195
	11/16/2009	2.48491	162
	6/30/2010	2.56495	178
	11/17/2010	2.48491	163
	7/6/2011	2.3979	153
	11/22/2011	2.63906	196
	5/16/2012	2.56495	179
	11/16/2012	2.56495	180

Rank Sum = 2518
Rank Mean = 179.857

LMW-15R	11/18/2006	3.61092		247
	6/2/2007	3.63759	248	
	11/15/2007	ND<1.60944		44.5
	11/15/2007	3.29584		227
	5/20/2008	ND<1.60944		44.5
	5/20/2008	3.17805		224
	11/20/2008	ND<1.60944		44.5
	11/20/2008	3.63759		249
	6/11/2009	3.73767		260
	6/30/2010	3.58352		245
	11/17/2010	3.4012	231	
	7/6/2011	3.21888	226	
	11/22/2011	3.46574		236
	5/16/2012	3.46574		237
	11/16/2012	3.4012	232	

Rank Sum = 2995.5
Rank Mean = 199.7

LMW-16	11/18/2006	3.13549		221
	6/2/2007	3.71357	258	
	11/15/2007	3.55535		244
	5/20/2008	3.09104		216
	11/20/2008	3.13549		222
	6/11/2009	2.63906		197
	11/16/2009	2.56495		181
	6/30/2010	2.17475		137
	11/17/2010	2.30259		145
	7/6/2011	2.3979	154	
	11/22/2011	2.17475		138
	5/16/2012	2.2192	142	
	11/16/2012	2.2192	143	

Rank Sum = 2398
Rank Mean = 184.462

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	133
	9/23/1999	1.94591	J	126
	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	127
	6/19/2006	1.60944	J	112
	11/18/2006	1.94591	J	128
	6/2/2007	1.60944	113	
	11/15/2007	ND<1.60944		44.5
	5/20/2008	1.60944	J	114
	11/20/2008	1.60944	J	115
	6/11/2009	1.97408		130
	11/16/2009	1.8563	124	
	6/30/2010	1.60944		116
	11/17/2010	2.56495		182
	7/6/2011	1.25276	106	
	11/22/2011	2.48491		164
	5/16/2012	1.52606		111
	11/16/2012	1.50408		110

Rank Sum = 2411.5
Rank Mean = 96.46

LMW-3S	11/18/2006	1.60944	J	117
	6/2/2007	2.89037		205
	11/15/2007	2.56495		183
	5/20/2008	2.07944	J	134
	11/20/2008	2.56495		184
	6/11/2009	2.48491		165
	11/16/2009	2.30259		146
	6/30/2010	2.48491		166
	11/17/2010	2.77259		203
	7/6/2011	2.63906		198
	11/22/2011	1.6864		121
	5/16/2012	2.56495		185
	11/16/2012	2.63906		199

Rank Sum = 2206
Rank Mean = 169.692

LMW-6	1/16/1998	ND<1.60944		44.5
	3/16/1999	2.07944	J	135
	9/23/1999	2.89037		206
	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	140
	10/26/2005	2.48491		167
	6/19/2006	2.99573		209
	11/18/2006	3.49651		240
	6/2/2007	3.95124		268
	11/15/2007	3.73767		261
	5/20/2008	3.89182		267
	11/20/2008	4.29046		275
	6/11/2009	4.52179		282
	11/16/2009	4.30407		276
	6/30/2010	4.34381		278
	11/17/2010	4.36945		280
	7/6/2011	4.00733		270
	11/22/2011	3.78419	J	262
	5/16/2012	3.58352		246
	11/16/2012	3.49651		241

Rank Sum = 4525.5
Rank Mean = 196.761

LMW-7	1/16/1998	ND<1.60944		44.5
	3/16/1999	2.99573		210
	9/23/1999	3.09104		217
	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		235
	10/26/2005	3.4012		233
	6/19/2006	2.99573		211
	11/18/2006	2.3979		155
	6/2/2007	3.29584		228
	11/15/2007	1.79176	J	122
	5/20/2008	1.60944	J	118
	11/20/2008	1.94591	J	129
	6/11/2009	2.48491		168
	11/17/2010	1.64866		120

	7/6/2011	2.56495		186
	11/22/2011	2.14007		136
	5/16/2012	2.02815		131
	11/16/2012	1.93152		125

Rank Sum = 2946.5
Rank Mean = 140.31

LMW-8	1/16/1998	ND<1.60944		44.5
	3/16/1999	2.30259		147
	9/23/1999	4.69135		283
	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	266	
	10/26/2005	3.63759		250
	6/19/2006	3.68888		255
	11/18/2006	3.46574		238
	6/2/2007	3.52636	242	
	11/15/2007	3.71357		259
	5/20/2008	3.52636		243
	11/20/2008	3.3673	230	
	6/11/2009	3.68888		256
	11/16/2009	3.68888		257
	6/30/2010	3.4012	234	
	11/17/2010	3.78419		263
	7/6/2011	3.46574	239	
	11/22/2011	3.80666		264
	5/16/2012	3.66356		253
	11/16/2012	3.63759		251

Rank Sum = 4652.5
Rank Mean = 202.283

LMW-9	1/16/1998	ND<1.60944		44.5
	3/16/1999	2.30259		148
	9/23/1999	3.09104		218
	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		149
	11/18/2006	1.09861	J	99
	6/2/2007	1.79176	123	
	11/15/2007	1.09861	J	100
	5/20/2008	0.693147	J	90
	11/20/2008	1.38629	J	108
	6/11/2009	1.1314	102	
	11/16/2009	1.06471		97
	6/30/2010	1.02962		94
	11/17/2010	1.38629		109
	7/6/2011	1.19392	104	
	11/22/2011	1.22378		105
	5/16/2012	2.56495		187
	11/16/2012	3.04452		215

Rank Sum = 2359.5
Rank Mean = 102.587

LMW-9D	11/18/2006	2.56495		188
	6/2/2007	1.60944	119	
	11/15/2007	4.78749		284

	5/20/2008	2.30259	150
	11/20/2008	1.09861 J	101
	6/11/2009	1.1314	103
	11/16/2009	1.06471	98
	6/30/2010	0.741937	92
	11/17/2010	1.02962	95
	7/6/2011	1.335	107
	11/22/2011	1.02962	96
	5/16/2012	0.916291	93
	11/16/2012	0.641854	89

Rank Sum = 1615
Rank Mean = 124.231

LMW-9S	11/18/2006	4.34381	279
	6/2/2007	4.38203	281
	11/15/2007	0.693147 J	91
	5/20/2008	4.31749	277
	11/20/2008	4.11087	272
	6/11/2009	3.3322	229
	6/30/2010	3.63759	252
	11/17/2010	3.97029	269
	7/6/2011	4.07754	271
	11/22/2011	4.18965	273
	5/16/2012	3.66356	254
	11/16/2012	4.21951	274

Rank Sum = 3022
Rank Mean = 251.833

MW-5	1/16/1998	ND<1.60944	44.5
	3/16/1999	2.99573	212
	9/23/1999	2.19722 J	141
	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	204
	5/20/2008	ND<1.60944	44.5
	11/20/2008	ND<1.60944	44.5

Rank Sum = 1002
Rank Mean = 77.0769

Calculation Results:

Kruskal-Wallis H Statistic = 127.888
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 131.809
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
127.888 > 26.2962 indicating a significant group difference at 5% significance level
131.809 > 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 150.239

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**144.7**	**-5.53913**	**58.4144**
LMW-11	**44.5**	**-105.739**	**70.0396**
LMW-12	**44.5**	**-105.739**	**70.0396**
LMW-13	**44.5**	**-105.739**	**70.0396**

LMW-14R	179.857	29.618	64.7646
LMW-15R	199.7	49.4609	63.4084
LMW-16	184.462	34.2224	66.2949
LMW-3	96.46	-53.7791	55.2015
LMW-3S	169.692	19.4532	66.2949
LMW-6	196.761	46.5217	56.3398
LMW-7	140.31	-9.9296	57.6657
LMW-8	202.283	52.0435	56.3398
LMW-9	102.587	-47.652	56.3398
LMW-9D	124.231	-26.008	66.2949
LMW-9S	251.833	101.594	68.0368
MW-5	77.0769	-73.162	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 150.239

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	144.7	-5.5391	68.9963
LMW-11	44.5	-105.739	82.7275
LMW-12	44.5	-105.739	82.7275
LMW-13	44.5	-105.739	82.7275
LMW-14R	179.857	29.618	76.4969
LMW-15R	199.7	49.4609	74.895
LMW-16	184.462	34.2224	78.3044
LMW-3	96.46	-53.7791	65.2015
LMW-3S	169.692	19.4532	78.3044
LMW-6	196.761	46.5217	66.546
LMW-7	140.31	-9.9296	68.112
LMW-8	202.283	52.0435	66.546
LMW-9	102.587	-47.652	66.546
LMW-9D	124.231	-26.008	78.3044
LMW-9S	251.833	101.594	80.3619
MW-5	77.0769	-73.162	78.3044

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
0.693147 J		4.38203	-3.688881	11	
4.31749		4.38203	-0.0645385	1	12
4.11087		4.38203	-0.271153	1	13
3.3322	4.38203	-1.049821	14
3.63759		4.38203	-0.744441	15
3.97029		4.38203	-0.411735	1	16
4.07754		4.38203	-0.304489	1	17
4.18965		4.38203	-0.192372	1	18
3.66356		4.38203	-0.718465	1	19
4.21951		4.38203	-0.162519	1	20
4.31749		0.693147 J	3.62434	2	20
4.11087		0.693147 J	3.41773	3	20
3.3322	0.693147 J	2.63906	4	20
3.63759		0.693147 J	2.94444	5	20
3.97029		0.693147 J	3.27714	6	20
4.07754		0.693147 J	3.38439	7	20
4.18965		0.693147 J	3.49651	8	20
3.66356		0.693147 J	2.97041	9	20
4.21951		0.693147 J	3.52636	10	20
4.11087		4.31749	-0.206614	10	21
3.3322	4.31749	-0.985284	10	22
3.63759		4.31749	-0.679902	10	23
3.97029		4.31749	-0.347196	10	24
4.07754		4.31749	-0.239951	10	25
4.18965		4.31749	-0.127833	10	26
3.66356		4.31749	-0.653926	10	27
4.21951		4.31749	-0.0979804	10	28
3.3322	4.11087	-0.778669	10	29
3.63759		4.11087	-0.473288	10	30
3.97029		4.11087	-0.140582	10	31
4.07754		4.11087	-0.0333364	10	32
4.18965		4.11087	0.0787809	11	32
3.66356		4.11087	-0.447312	11	33
4.21951		4.11087	0.108634	12	33

3.63759	3.3322	0.305382	13	33
3.97029	3.3322	0.638087	14	33
4.07754	3.3322	0.745333	15	33
4.18965	3.3322	0.85745 16	33	
3.66356	3.3322	0.331357	17	33
4.21951	3.3322	0.887303	18	33

3.97029	3.63759	0.332706	19	33
4.07754	3.63759	0.439951	20	33
4.18965	3.63759	0.552069	21	33
3.66356	3.63759	0.0259755	22	33
4.21951	3.63759	0.581922	23	33

4.07754	3.97029	0.107246	24	33
4.18965	3.97029	0.219363	25	33
3.66356	3.97029	-0.3067325	34	
4.21951	3.97029	0.249216	26	34

4.18965	4.07754	0.112117	27	34
3.66356	4.07754	-0.413976	27	35
4.21951	4.07754	0.14197 28	35	

3.66356	4.18965	-0.526093	28	36
4.21951	4.18965	0.029853	29	36

4.21951	3.66356	0.555946	30	36

S Statistic = 30 - 36 = -6

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

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
Z-Score = -0.342863
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.342863| <= 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 = 2.39372
Baseline Std Dev = 0.471796
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean	
11/18/2006	4.34381	3.13333	4.13333	
11/18/2006	4.34381	3.13333	4.13333	
6/2/2007	4.38203	6.34768	4.21435	
6/2/2007	4.38203	6.34768	4.21435	
11/15/2007	0.693147		1.74322	-3.60446
11/15/2007	0.693147		1.74322	-3.60446
5/20/2008	4.31749	4.82077	4.07755	
5/20/2008	4.31749	4.82077	4.07755	
11/20/2008	4.11087	7.46039	3.63962	
11/20/2008	4.11087	7.46039	3.63962	
6/11/2009	3.3322	8.44958	1.98918	
6/11/2009	3.3322	8.44958	1.98918	
6/30/2010	3.63759	10.086	2.63646	
6/30/2010	3.63759	10.086	2.63646	
11/17/2010	3.97029	12.4277	3.34165	
11/17/2010	3.97029	12.4277	3.34165	
7/6/2011	4.07754	14.9966	3.56896	
7/6/2011	4.07754	14.9966	3.56896	
11/22/2011	4.18965	17.8033	3.8066	
11/22/2011	4.18965	17.8033	3.8066	
5/16/2012	3.66356	19.4948	2.69152	
5/16/2012	3.66356	19.4948	2.69152	
11/16/2012	4.21951	22.3646	3.86988	
11/16/2012	4.21951	22.3646	3.86988	

Concentrations (ppb)

Parameter: Beryllium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 259
Percent Non-Detects: 91.1972%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	22 (95.6522%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	20 (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

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	
LMW-14R	13	13 (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
LMW-15R	16	10 (62.5%)	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	
LMW-16	13	13 (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
LMW-3	25	25 (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
LMW-3S	13	10 (76.9231%)	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
LMW-6	23	17 (73.913%)	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
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-8	23	23 (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
LMW-9	23	19 (82.6087%)	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
LMW-9D	13	13 (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
LMW-9S	12	11 (91.6667%)	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
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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.035	-2.747777	55021	-0.0961718
2	0.035	-2.457271	3.5884	-0.182176
3	0.035	-2.326341	9.0003	-0.263598
4	0.035	-2.197282	3.8283	-0.340503
5	0.035	-2.120072	8.323	-0.414706
6	0.035	-2.033523	2.4582	-0.485879
7	0.035	-1.977373	6.3682	-0.555087
8	0.035	-1.911034	0.0203	-0.621973
9	0.035	-1.866294	3.5033	-0.687293
10	0.035	-1.811914	6.7863	-0.75071
11	0.035	-1.774384	9.9348	-0.812813
12	0.035	-1.727935	2.9205	-0.873291
13	0.035	-1.6954	55.7949	-0.93263
14	0.035	-1.654635	8.5327	-0.990542
15	0.035	-1.625766	1.1758	-1.04744
16	0.035	-1.589276	3.7015	-1.10307
17	0.035	-1.563226	6.1452	-1.15778
18	0.035	-1.530076	8.4863	-1.21133
19	0.035	-1.506267	0.7551	-1.26405
20	0.035	-1.475797	2.9331	-1.3157
21	0.035	-1.4538	75.0466	-1.36659
22	0.035	-1.425547	7.0788	-1.41648
23	0.035	-1.405077	9.053	-1.46566
24	0.035	-1.378668	0.9537	-1.51391
25	0.035	-1.359468	2.8019	-1.56149
26	0.035	-1.334628	4.5831	-1.60821
27	0.035	-1.316528	6.3163	-1.65428
28	0.035	-1.293038	7.9883	-1.69954
29	0.035	-1.275888	9.6161	-1.7442
30	0.035	-1.253579	1.1875	-1.78807
31	0.035	-1.237249	2.7183	-1.83137
32	0.035	-1.215969	4.1969	-1.87393
33	0.035	-1.200369	5.6377	-1.91594
34	0.035	-1.18	97.0301	-1.95724
35	0.035	-1.165059	8.3875	-1.99802
36	0.035	-1.1455	99.6996	-2.03811
37	0.035	-1.13113	100.979	-2.0777
38	0.035	-1.11232	102.216	-2.11664
39	0.035	-1.09847	103.423	-2.15508
40	0.035	-1.08032	104.59	-2.19289
41	0.035	-1.06694	105.728	-2.23024
42	0.035	-1.04939	106.83	-2.26696
43	0.035	-1.03643	107.904	-2.30324
44	0.035	-1.01943	108.943	-2.33892
45	0.035	-1.00687	109.957	-2.37416
46	0.035	-0.990356	110.938	-2.40882
47	0.035	-0.97815	111.894	-2.44306
48	0.035	-0.9621	112.82	-2.47673
49	0.035	-0.950222	113.723	-2.50999
50	0.035	-0.93459	114.596	-2.5427
51	0.035	-0.923014	115.448	-2.575

52	0.035	-0.907769	116.272	-2.60678
53	0.035	-0.896473	117.076	-2.63815
54	0.035	-0.881587	117.853	-2.66901
55	0.035	-0.87055	118.611	-2.69948
56	0.035	-0.855996	119.344	-2.72944
57	0.035	-0.841621	120.052	-2.75889
58	0.035	-0.830953	120.743	-2.78798
59	0.035	-0.816874	121.41	-2.81657
60	0.035	-0.806422	122.06	-2.84479
61	0.035	-0.792618	122.689	-2.87253
62	0.035	-0.782366	123.301	-2.89992
63	0.035	-0.768821	123.892	-2.92683
64	0.035	-0.758753	124.467	-2.95338
65	0.035	-0.745449	125.023	-2.97947
66	0.035	-0.735557	125.564	-3.00522
67	0.035	-0.722479	126.086	-3.0305
68	0.035	-0.712751	126.594	-3.05545
69	0.035	-0.699883	127.084	-3.07995
70	0.035	-0.690309	127.561	-3.10411
71	0.035	-0.677639	128.02	-3.12782
72	0.035	-0.668209	128.466	-3.15121
73	0.035	-0.655726	128.896	-3.17416
74	0.035	-0.646431	129.314	-3.19679
75	0.035	-0.634124	129.716	-3.21898
76	0.035	-0.624956	130.107	-3.24086
77	0.035	-0.612813	130.482	-3.2623
78	0.071	-0.603765	130.847	-3.30517
79	0.071	-0.591776	131.197	-3.34719
80	0.075	-0.582841	131.537	-3.3909
81	0.076	-0.570999	131.863	-3.4343
82	0.085	-0.56217	132.179	-3.48208
83	0.089	-0.550465	132.482	-3.53107
84	0.092	-0.541736	132.775	-3.58091
85	0.094	-0.530162	133.056	-3.63075
86	0.1	-0.521527	133.328	-3.6829
87	0.12	-0.510074	133.589	-3.74411
88	0.12	-0.501527	133.84	-3.80429
89	0.13	-0.490189	134.08	-3.86802
90	0.13	-0.481728	134.312	-3.93064
91	0.13	-0.470498	134.534	-3.99181
92	0.15	-0.462114	134.747	-4.06112
93	0.15	-0.450985	134.951	-4.12877
94	0.15	-0.442676	135.147	-4.19517
95	0.15	-0.431644	135.333	-4.25992
96	0.16	-0.423405	135.512	-4.32766
97	0.17	-0.412463	135.682	-4.39778
98	0.19	-0.40429	135.846	-4.4746
99	0.27	-0.393433	136.001	-4.58082
100	0.29	-0.385321	136.149	-4.69257
101	0.34	-0.374544	136.289	-4.81991
102	0.38	-0.36649	136.424	-4.95918
103	5	-0.355788	136.55	-6.73812
104	5	-0.347787	136.671	-8.47705
105	5	-0.337155	136.785	-10.1628
106	5	-0.329206	136.893	-11.8089
107	5	-0.318639	136.995	-13.4021
108	5	-0.310738	137.091	-14.9557
109	5	-0.300232	137.182	-16.4569
110	5	-0.292375	137.267	-17.9188
111	5	-0.281926	137.346	-19.3284
112	5	-0.27411	137.422	-20.699
113	5	-0.263715	137.491	-22.0175

114	5	-0.253347	137.555	-23.2843
115	5	-0.24559	137.616	-24.5122
116	5	-0.235269	137.671	-25.6886
117	5	-0.227545	137.723	-26.8263
118	5	-0.217267	137.77	-27.9126
119	5	-0.209575	137.814	-28.9605
120	5	-0.199336	137.854	-29.9572
121	5	-0.191671	137.89	-30.9155
122	5	-0.181468	137.923	-31.8229
123	5	-0.173829	137.954	-32.692
124	5	-0.163659	137.98	-33.5103
125	5	-0.156042	138.005	-34.2905
126	5	-0.1459	138.026	-35.02
127	5	-0.138305	138.045	-35.7116
128	5	-0.128189	138.062	-36.3525
129	5	-0.12061	138.076	-36.9556
130	5	-0.110516	138.088	-37.5081
131	5	-0.102953	138.099	-38.0229
132	5	-0.0928787	138.108	-38.4873
133	5	-0.0853288	138.115	-38.9139
134	5	-0.0752698	138.12	-39.2903
135	5	-0.0677301	138.125	-39.6289
136	5	-0.0576847	138.128	-39.9174
137	5	-0.0501541	138.131	-40.1681
138	5	-0.0401167	138.132	-40.3687
139	5	-0.0325917	138.134	-40.5317
140	5	-0.0225612	138.134	-40.6445
141	5	-0.0150408	138.134	-40.7197
142	5	-0.00501359	138.134	-40.7447
143	5	0.00501359	138.134	-40.7197
144	5	0.0150408	138.135	-40.6445
145	5	0.0225612	138.135	-40.5317
146	5	0.0325917	138.136	-40.3687
147	5	0.0401167	138.138	-40.1681
148	5	0.0501541	138.14	-39.9174
149	5	0.0576847	138.144	-39.6289
150	5	0.0677301	138.148	-39.2903
151	5	0.0752698	138.154	-38.9139
152	5	0.0853288	138.161	-38.4873
153	5	0.0928787	138.17	-38.0229
154	5	0.102953	138.18	-37.5081
155	5	0.110516	138.193	-36.9556
156	5	0.12061	138.207	-36.3525
157	5	0.128189	138.224	-35.7116
158	5	0.138305	138.243	-35.02
159	5	0.1459	138.264	-34.2905
160	5	0.156042	138.288	-33.5103
161	5	0.163659	138.315	-32.692
162	5	0.173829	138.345	-31.8229
163	5	0.181468	138.378	-30.9155
164	5	0.191671	138.415	-29.9572
165	5	0.199336	138.455	-28.9605
166	5	0.209575	138.499	-27.9126
167	5	0.217267	138.546	-26.8263
168	5	0.227545	138.598	-25.6886
169	5	0.235269	138.653	-24.5122
170	5	0.24559	138.713	-23.2843
171	5	0.253347	138.777	-22.0175
172	5	0.263715	138.847	-20.699
173	5	0.27411	138.922	-19.3284
174	5	0.281926	139.002	-17.9188
175	5	0.292375	139.087	-16.4569

176	5	0.300232	139.177	-14.9557
177	5	0.310738	139.274	-13.4021
178	5	0.318639	139.375	-11.8089
179	5	0.329206	139.484	-10.1628
180	5	0.337155	139.597	-8.47705
181	5	0.347787	139.718	-6.73812
182	5	0.355788	139.845	-4.95918
183	5	0.36649	139.979	-3.12673
184	5	0.374544	140.12	-1.25401
185	5	0.385321	140.268	0.672595
186	5	0.393433	140.423	2.63976
187	5	0.40429	140.586	4.66121
188	5	0.412463	140.756	6.72352
189	5	0.423405	140.936	8.84055
190	5	0.431644	141.122	10.9988
191	5	0.442676	141.318	13.2121
192	5	0.450985	141.521	15.4671
193	5	0.462114	141.735	17.7776
194	5	0.470498	141.956	20.1301
195	5	0.481728	142.188	22.5388
196	5	0.490189	142.429	24.9897
197	5	0.501527	142.68	27.4974
198	5	0.510074	142.94	30.0477
199	5	0.521527	143.212	32.6554
200	5	0.530162	143.493	35.3062
201	5	0.541736	143.787	38.0148
202	5	0.550465	144.09	40.7672
203	5	0.56217	144.406	43.578
204	5	0.570999	144.732	46.433
205	5	0.582841	145.072	49.3472
206	5	0.591776	145.422	52.3061
207	5	0.603765	145.786	55.3249
208	5	0.612813	146.162	58.389
209	5	0.624956	146.552	61.5138
210	5	0.634124	146.955	64.6844
211	5	0.646431	147.372	67.9165
212	5	0.655726	147.802	71.1952
213	5	0.668209	148.249	74.5362
214	5	0.677639	148.708	77.9244
215	5	0.690309	149.185	81.376
216	5	0.699883	149.674	84.8754
217	5	0.712751	150.182	88.4391
218	5	0.722479	150.704	92.0515
219	5	0.735557	151.245	95.7293
220	5	0.745449	151.801	99.4566
221	5	0.758753	152.377	103.25
222	5	0.768821	152.968	107.094
223	5	0.782366	153.58	111.006
224	5	0.792618	154.208	114.969
225	5	0.806422	154.859	119.001
226	5	0.816874	155.526	123.086
227	5	0.830953	156.216	127.241
228	5	0.841621	156.925	131.449
229	5	0.855996	157.657	135.729
230	5	0.87055	158.415	140.081
231	5	0.881587	159.193	144.489
232	5	0.896473	159.996	148.972
233	5	0.907769	160.82	153.511
234	5	0.923014	161.672	158.126
235	5	0.93459	162.546	162.799
236	5	0.950222	163.449	167.55
237	5	0.9621	164.374	172.36

238	5	0.97815	165.331	177.251	
239	5	0.990356		166.312	182.203
240	5	1.00687	167.326	187.237	
241	5	1.01943	168.365	192.334	
242	5	1.03643	169.439	197.516	
243	5	1.04939	170.54	202.763	
244	5	1.06694	171.679	208.098	
245	5	1.08032	172.846	213.5	
246	5	1.09847	174.052	218.992	
247	5	1.11232	175.29	224.554	
248	5	1.13113	176.569	230.209	
249	5	1.1455	177.881	235.937	
250	5	1.16505	179.239	241.762	
251	5	1.18	180.631	247.662	
252	5	1.20036	182.072	253.664	
253	5	1.21596	183.55	259.744	
254	5	1.23724	185.081	265.93	
255	5	1.25357	186.653	272.198	
256	5	1.27588	188.28	278.577	
257	5	1.29303	189.952	285.042	
258	5	1.31652	191.686	291.625	
259	5	1.33462	193.467	298.298	
260	5	1.35946	195.315	305.095	
261	5	1.37866	197.216	311.988	
262	5	1.40507	199.19	319.014	
263	5	1.42554	201.222	326.142	
264	5	1.4538	203.336	333.411	
265	5	1.47579	205.514	340.789	
266	5	1.50626	207.782	348.321	
267	5	1.53007	210.123	355.971	
268	5	1.56322	212.567	363.787	
269	5	1.58927	215.093	371.734	
270	5	1.62576	217.736	379.862	
271	5	1.65463	220.474	388.136	
272	5	1.6954	223.348	396.613	
273	5	1.72793	226.334	405.252	
274	5	1.77438	229.482	414.124	
275	5	1.81191	232.765	423.184	
276	5	1.86629	236.248	432.515	
277	5	1.91103	239.9	442.07	
278	5	1.97737	243.81	451.957	
279	5	2.03352	247.946	462.125	
280	5	2.12007	252.44	472.725	
281	5	2.19728	257.268	483.711	
282	5	2.32634	262.68	495.343	
283	5	2.45727	268.718	507.63	
284	5	2.74777	276.269	521.368	

Data Set Standard Deviation = 2.37279
Numerator = 271825
Denominator = 440187
W Statistic = 0.617522 = 271825 / 440187

5% Critical value of 0.976 exceeds 0.617522
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.617522
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 = 0.783142
0.783142 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.035	0.00350877		-2.747	42.745	348.683
2	0.035	0.00701754		-2.457	42.745	334.497
3	0.035	0.0105263		-2.326	42.745	328.103
4	0.035	0.0140351		-2.197	42.745	321.801
5	0.035	0.0175439		-2.120	42.745	318.03
6	0.035	0.0210526		-2.033	42.745	313.804
7	0.035	0.0245614		-1.977	42.745	311.062
8	0.035	0.0280702		-1.911	42.745	307.822
9	0.035	0.0315789		-1.866	42.745	305.637
10	0.035	0.0350877		-1.811	42.745	302.982
11	0.035	0.0385965		-1.774	42.745	301.149
12	0.035	0.0421053		-1.727	42.745	298.881
13	0.035	0.045614		-1.695	42.745	297.292
14	0.035	0.0491228		-1.654	42.745	295.301
15	0.035	0.0526316		-1.625	42.745	293.891
16	0.035	0.0561404		-1.589	42.745	292.109
17	0.035	0.0596491		-1.563	42.745	290.837
18	0.035	0.0631579		-1.530	42.745	289.218
19	0.035	0.0666667		-1.506	42.745	288.056
20	0.035	0.0701754		-1.475	42.745	286.568
21	0.035	0.0736842		-1.453	42.745	285.494
22	0.035	0.077193		-1.425	42.745	284.114
23	0.035	0.0807018		-1.405	42.745	283.114
24	0.035	0.0842105		-1.378	42.745	281.824
25	0.035	0.0877193		-1.359	42.745	280.887
26	0.035	0.0912281		-1.334	42.745	279.674
27	0.035	0.0947368		-1.316	42.745	278.79
28	0.035	0.0982456		-1.293	42.745	277.643
29	0.035	0.101754		-1.275	42.745	276.805
30	0.035	0.105263		-1.253	42.745	275.716
31	0.035	0.108772		-1.237	42.745	274.918
32	0.035	0.112281		-1.215	42.745	273.879
33	0.035	0.115789		-1.200	42.745	273.118
34	0.035	0.119298		-1.18	42.745	272.123
35	0.035	0.122807		-1.165	42.745	271.393
36	0.035	0.126316		-1.145	42.745	270.439
37	0.035	0.129825		-1.131	42.745	269.737
38	0.035	0.133333		-1.112	42.745	268.818
39	0.035	0.136842		-1.098	42.745	268.142
40	0.035	0.140351		-1.080	42.745	267.256
41	0.035	0.14386	-1.066	94	42.745	266.602
42	0.035	0.147368		-1.049	42.745	265.745
43	0.035	0.150877		-1.036	42.745	265.112
44	0.035	0.154386		-1.019	42.745	264.282
45	0.035	0.157895		-1.006	42.745	263.669
46	0.035	0.161404		-0.990	356	42.745	262.862
47	0.035	0.164912		-0.978	15	42.745	262.266
48	0.035	0.168421		-0.962	1	42.745	261.483

49	0.035	0.17193	-0.950222	42.745	260.903
50	0.035	0.175439	-0.934594	2.745	260.139
51	0.035	0.178947	-0.923014	42.745	259.574
52	0.035	0.182456	-0.907769	42.745	258.829
53	0.035	0.185965	-0.896473	42.745	258.278
54	0.035	0.189474	-0.881587	42.745	257.551
55	0.035	0.192982	-0.870554	2.745	257.012
56	0.035	0.196491	-0.855996	42.745	256.301
57	0.035	0.2	-0.841621	42.745	255.599
58	0.035	0.203509	-0.830953	42.745	255.078
59	0.035	0.207018	-0.816874	42.745	254.391
60	0.035	0.210526	-0.806422	42.745	253.88
61	0.035	0.214035	-0.792618	42.745	253.206
62	0.035	0.217544	-0.782366	42.745	252.706
63	0.035	0.221053	-0.768821	42.745	252.044
64	0.035	0.224561	-0.758753	42.745	251.552
65	0.035	0.22807	-0.745449	42.745	250.903
66	0.035	0.231579	-0.735557	42.745	250.42
67	0.035	0.235088	-0.722479	42.745	249.781
68	0.035	0.238596	-0.712751	42.745	249.306
69	0.035	0.242105	-0.699883	42.745	248.678
70	0.035	0.245614	-0.690309	42.745	248.21
71	0.035	0.249123	-0.677639	42.745	247.591
72	0.035	0.252632	-0.668209	42.745	247.131
73	0.035	0.25614	-0.655726	42.745	246.521
74	0.035	0.259649	-0.646431	42.745	246.067
75	0.035	0.263158	-0.634124	42.745	245.466
76	0.035	0.266667	-0.624956	42.745	245.019
77	0.035	0.270175	-0.612813	42.745	244.426
78	0.071	0.273684	-0.603765	46.597	243.984
79	0.071	0.277193	-0.591776	46.597	243.398
80	0.075	0.280702	-0.582841	47.025	242.962
81	0.076	0.284211	-0.570999	47.132	242.384
82	0.085	0.287719	-0.562174	8.095	241.953
83	0.089	0.291228	-0.550465	48.523	241.381
84	0.092	0.294737	-0.541736	48.844	240.955
85	0.094	0.298246	-0.530162	49.058	240.39
86	0.1	0.301754	-0.521527	49.7	239.968
87	0.12	0.305263	-0.510074	51.84	239.409
88	0.12	0.308772	-0.501527	51.84	238.991
89	0.13	0.312281	-0.490189	52.91	238.438
90	0.13	0.315789	-0.481728	52.91	238.024
91	0.13	0.319298	-0.470498	52.91	237.476
92	0.15	0.322807	-0.462114	55.05	237.067
93	0.15	0.326316	-0.450985	55.05	236.523
94	0.15	0.329825	-0.442676	55.05	236.117
95	0.15	0.333333	-0.431644	55.05	235.579
96	0.16	0.336842	-0.423405	56.12	235.176
97	0.17	0.340351	-0.412463	57.19	234.642
98	0.19	0.34386	-0.404295	9.33	234.243
99	0.27	0.347368	-0.393433	67.89	233.713
100	0.29	0.350877	-0.385321	70.03	233.317
101	0.34	0.354386	-0.374544	75.38	232.79
102	0.38	0.357895	-0.366497	9.66	232.397
103	5	0.361404	-0.355788	574	231.874
104	5	0.364912	-0.347787	574	231.484
105	5	0.368421	-0.337155	574	230.964
106	5	0.37193	-0.329206	574	230.576
107	5	0.375439	-0.318639	574	230.06
108	5	0.378947	-0.310738	574	229.674
109	5	0.382456	-0.300232	574	229.161
110	5	0.385965	-0.292375	574	228.778

111	5	0.389474	-0.281926	574	228.267
112	5	0.392982	-0.27411574	227.886	
113	5	0.396491	-0.263715	574	227.378
114	5	0.4	-0.253347	574	226.872
115	5	0.403509	-0.24559574	226.493	
116	5	0.407018	-0.235269	574	225.989
117	5	0.410526	-0.227545	574	225.612
118	5	0.414035	-0.217267	574	225.11
119	5	0.417544	-0.209575	574	224.734
120	5	0.421053	-0.199336	574	224.234
121	5	0.424561	-0.191671	574	223.86
122	5	0.42807	-0.181468	574	223.362
123	5	0.431579	-0.173829	574	222.989
124	5	0.435088	-0.163659	574	222.492
125	5	0.438596	-0.156042	574	222.12
126	5	0.442105	-0.1459	574	221.625
127	5	0.445614	-0.138305	574	221.254
128	5	0.449123	-0.128189	574	220.76
129	5	0.452632	-0.12061574	220.39	
130	5	0.45614	-0.110516	574	219.897
131	5	0.459649	-0.102953	574	219.528
132	5	0.463158	-0.0928787	574	219.036
133	5	0.466667	-0.0853288	574	218.667
134	5	0.470175	-0.0752698	574	218.176
135	5	0.473684	-0.0677301	574	217.807
136	5	0.477193	-0.0576847	574	217.317
137	5	0.480702	-0.0501541	574	216.949
138	5	0.484211	-0.0401167	574	216.459
139	5	0.487719	-0.0325917	574	216.092
140	5	0.491228	-0.0225612	574	215.602
141	5	0.494737	-0.0150408	574	215.234
142	5	0.498246	-0.00501359	574	214.745
143	5	0.501754	0.00501359	574	214.255
144	5	0.505263	0.0150408	574	213.766
145	5	0.508772	0.0225612	574	213.398
146	5	0.512281	0.0325917	574	212.908
147	5	0.515789	0.0401167	574	212.541
148	5	0.519298	0.0501541	574	212.051
149	5	0.522807	0.0576847	574	211.683
150	5	0.526316	0.0677301	574	211.193
151	5	0.529825	0.0752698	574	210.824
152	5	0.533333	0.0853288	574	210.333
153	5	0.536842	0.0928787	574	209.964
154	5	0.540351	0.102953	574	209.472
155	5	0.54386	0.110516	574	209.103
156	5	0.547368	0.12061	574	208.61
157	5	0.550877	0.128189	574	208.24
158	5	0.554386	0.138305	574	207.746
159	5	0.557895	0.1459	574	207.375
160	5	0.561404	0.156042	574	206.88
161	5	0.564912	0.163659	574	206.508
162	5	0.568421	0.173829	574	206.011
163	5	0.57193	0.181468	574	205.638
164	5	0.575439	0.191671	574	205.14
165	5	0.578947	0.199336	574	204.766
166	5	0.582456	0.209575	574	204.266
167	5	0.585965	0.217267	574	203.89
168	5	0.589474	0.227545	574	203.388
169	5	0.592982	0.235269	574	203.011
170	5	0.596491	0.24559	574	202.507
171	5	0.6	0.253347	574	202.128
172	5	0.603509	0.263715	574	201.622

173	5	0.607018	0.27411	574	201.114
174	5	0.610526	0.281926	574	200.733
175	5	0.614035	0.292375	574	200.222
176	5	0.617544	0.300232	574	199.839
177	5	0.621053	0.310738	574	199.326
178	5	0.624561	0.318639	574	198.94
179	5	0.62807	0.329206	574	198.424
180	5	0.631579	0.337155	574	198.036
181	5	0.635088	0.347787	574	197.516
182	5	0.638596	0.355788	574	197.126
183	5	0.642105	0.36649	574	196.603
184	5	0.645614	0.374544	574	196.21
185	5	0.649123	0.385321	574	195.683
186	5	0.652632	0.393433	574	195.287
187	5	0.65614	0.40429	574	194.757
188	5	0.659649	0.412463	574	194.358
189	5	0.663158	0.423405	574	193.824
190	5	0.666667	0.431644	574	193.421
191	5	0.670175	0.442676	574	192.883
192	5	0.673684	0.450985	574	192.477
193	5	0.677193	0.462114	574	191.933
194	5	0.680702	0.470498	574	191.524
195	5	0.684211	0.481728	574	190.976
196	5	0.687719	0.490189	574	190.562
197	5	0.691228	0.501527	574	190.009
198	5	0.694737	0.510074	574	189.591
199	5	0.698246	0.521527	574	189.032
200	5	0.701754	0.530162	574	188.61
201	5	0.705263	0.541736	574	188.045
202	5	0.708772	0.550465	574	187.619
203	5	0.712281	0.56217	574	187.047
204	5	0.715789	0.570999	574	186.616
205	5	0.719298	0.582841	574	186.038
206	5	0.722807	0.591776	574	185.602
207	5	0.726316	0.603765	574	185.016
208	5	0.729825	0.612813	574	184.574
209	5	0.733333	0.624956	574	183.981
210	5	0.736842	0.634124	574	183.534
211	5	0.740351	0.646431	574	182.933
212	5	0.74386	0.655726	574	182.479
213	5	0.747368	0.668209	574	181.869
214	5	0.750877	0.677639	574	181.409
215	5	0.754386	0.690309	574	180.79
216	5	0.757895	0.699883	574	180.322
217	5	0.761404	0.712751	574	179.694
218	5	0.764912	0.722479	574	179.219
219	5	0.768421	0.735557	574	178.58
220	5	0.77193	0.745449	574	178.097
221	5	0.775439	0.758753	574	177.448
222	5	0.778947	0.768821	574	176.956
223	5	0.782456	0.782366	574	176.294
224	5	0.785965	0.792618	574	175.794
225	5	0.789474	0.806422	574	175.12
226	5	0.792982	0.816874	574	174.609
227	5	0.796491	0.830953	574	173.922
228	5	0.8	0.841621	574	173.401
229	5	0.803509	0.855996	574	172.699
230	5	0.807018	0.87055	574	171.988
231	5	0.810526	0.881587	574	171.449
232	5	0.814035	0.896473	574	170.722
233	5	0.817544	0.907769	574	170.171
234	5	0.821053	0.923014	574	169.426

235	5	0.824561	0.93459	574	168.861	
236	5	0.82807	0.950222	574	168.097	
237	5	0.831579	0.9621	574	167.517	
238	5	0.835088	0.97815	574	166.734	
239	5	0.838596	0.990356	574	166.138	
240	5	0.842105	1.00687	574	165.331	
241	5	0.845614	1.01943	574	164.718	
242	5	0.849123	1.03643	574	163.888	
243	5	0.852632	1.04939	574	163.255	
244	5	0.85614	1.06694	574	162.398	
245	5	0.859649	1.08032	574	161.744	
246	5	0.863158	1.09847	574	160.858	
247	5	0.866667	1.11232	574	160.182	
248	5	0.870175	1.13113	574	159.263	
249	5	0.873684	1.1455	574	158.561	
250	5	0.877193	1.16505	574	157.607	
251	5	0.880702	1.18	574	156.877	
252	5	0.884211	1.20036	574	155.882	
253	5	0.887719	1.21596	574	155.121	
254	5	0.891228	1.23724	574	154.082	
255	5	0.894737	1.25357	574	153.284	
256	5	0.898246	1.27588	574	152.195	
257	5	0.901754	1.29303	574	151.357	
258	5	0.905263	1.31652	574	150.21	
259	5	0.908772	1.33462	574	149.326	
260	5	0.912281	1.35946	574	148.113	
261	5	0.915789	1.37866	574	147.176	
262	5	0.919298	1.40507	574	145.886	
263	5	0.922807	1.42554	574	144.886	
264	5	0.926316	1.4538	574	143.506	
265	5	0.929825	1.47579	574	142.432	
266	5	0.933333	1.50626	574	140.944	
267	5	0.936842	1.53007	574	139.782	
268	5	0.940351	1.56322	574	138.163	
269	5	0.94386	1.58927	574	136.891	
270	5	0.947368	1.62576	574	135.109	
271	5	0.950877	1.65463	574	133.699	
272	5	0.954386	1.6954	574	131.708	
273	5	0.957895	1.72793	574	130.119	
274	5	0.961404	1.77438	574	127.851	
275	5	0.964912	1.81191	574	126.018	
276	5	0.968421	1.86629	574	123.363	
277	5	0.97193	1.91103	574	121.178	
278	5	0.975439	1.97737	574	117.938	
279	5	0.978947	2.03352	574	115.196	
280	5	0.982456	2.12007	574	110.97	
281	5	0.985965	2.19728	574	107.199	
282	5	0.989474	2.32634	574	100.897	
283	5	0.992982	2.45727	574	94.5032	
284	5	0.996491	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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.35241	-2.74777	7.55021	9.21163
2	-3.35241	-2.45727	13.5884	17.4494
3	-3.35241	-2.32634	19.0003	25.2483
4	-3.35241	-2.19728	23.8283	32.6144
5	-3.35241	-2.12007	28.323	39.7218
6	-3.35241	-2.03352	32.4582	46.539
7	-3.35241	-1.97737	36.3682	53.1679
8	-3.35241	-1.91103	40.0203	59.5745
9	-3.35241	-1.86629	43.5033	65.831
10	-3.35241	-1.81191	46.7863	71.9053
11	-3.35241	-1.77438	49.9348	77.8538
12	-3.35241	-1.72793	52.9205	83.6465
13	-3.35241	-1.6954	55.7949	89.3301
14	-3.35241	-1.65463	58.5327	94.8771
15	-3.35241	-1.62576	61.1758	100.327
16	-3.35241	-1.58927	63.7015	105.655
17	-3.35241	-1.56322	66.1452	110.896
18	-3.35241	-1.53007	68.4863	116.025
19	-3.35241	-1.50626	70.7551	121.075
20	-3.35241	-1.47579	72.9331	126.022
21	-3.35241	-1.4538	75.0466	130.896
22	-3.35241	-1.42554	77.0788	135.675
23	-3.35241	-1.40507	79.053	140.385
24	-3.35241	-1.37866	80.9537	145.007
25	-3.35241	-1.35946	82.8019	149.565
26	-3.35241	-1.33462	84.5831	154.039
27	-3.35241	-1.31652	86.3163	158.452
28	-3.35241	-1.29303	87.9883	162.787
29	-3.35241	-1.27588	89.6161	167.064
30	-3.35241	-1.25357	91.1875	171.267
31	-3.35241	-1.23724	92.7183	175.415
32	-3.35241	-1.21596	94.1969	179.491
33	-3.35241	-1.20036	95.6377	183.515
34	-3.35241	-1.18	97.0301	187.471
35	-3.35241	-1.16505	98.3875	191.377
36	-3.35241	-1.1455	99.6996	195.217
37	-3.35241	-1.13113	100.979	199.009
38	-3.35241	-1.11232	102.216	202.738
39	-3.35241	-1.09847	103.423	206.42
40	-3.35241	-1.08032	104.59	210.042
41	-3.35241	-1.06694	105.728	213.619
42	-3.35241	-1.04939	106.83	217.137
43	-3.35241	-1.03643	107.904	220.611
44	-3.35241	-1.01943	108.943	224.029
45	-3.35241	-1.00687	109.957	227.404
46	-3.35241	-0.990356	110.938	230.724
47	-3.35241	-0.97815	111.894	234.003
48	-3.35241	-0.9621	112.82	237.229
49	-3.35241	-0.950222	113.723	240.414
50	-3.35241	-0.93459	114.596	243.547
51	-3.35241	-0.923014	115.448	246.642

52	-3.35241	-0.907769	116.272	249.685
53	-3.35241	-0.896473	117.076	252.69
54	-3.35241	-0.881587	117.853	255.646
55	-3.35241	-0.87055	118.611	258.564
56	-3.35241	-0.855996	119.344	261.434
57	-3.35241	-0.841621	120.052	264.255
58	-3.35241	-0.830953	120.743	267.041
59	-3.35241	-0.816874	121.41	269.78
60	-3.35241	-0.806422	122.06	272.483
61	-3.35241	-0.792618	122.689	275.14
62	-3.35241	-0.782366	123.301	277.763
63	-3.35241	-0.768821	123.892	280.34
64	-3.35241	-0.758753	124.467	282.884
65	-3.35241	-0.745449	125.023	285.383
66	-3.35241	-0.735557	125.564	287.849
67	-3.35241	-0.722479	126.086	290.271
68	-3.35241	-0.712751	126.594	292.66
69	-3.35241	-0.699883	127.084	295.007
70	-3.35241	-0.690309	127.561	297.321
71	-3.35241	-0.677639	128.02	299.593
72	-3.35241	-0.668209	128.466	301.833
73	-3.35241	-0.655726	128.896	304.031
74	-3.35241	-0.646431	129.314	306.198
75	-3.35241	-0.634124	129.716	308.324
76	-3.35241	-0.624956	130.107	310.419
77	-3.35241	-0.612813	130.482	312.473
78	-2.64508	-0.603765	130.847	314.07
79	-2.64508	-0.591776	131.197	315.636
80	-2.59027	-0.582841	131.537	317.145
81	-2.57702	-0.570999	131.863	318.617
82	-2.4651	-0.56217	132.179	320.003
83	-2.41912	-0.550465	132.482	321.334
84	-2.38597	-0.541736	132.775	322.627
85	-2.36446	-0.530162	133.056	323.881
86	-2.30259	-0.521527	133.328	325.081
87	-2.12026	-0.510074	133.589	326.163
88	-2.12026	-0.501527	133.84	327.226
89	-2.04022	-0.490189	134.08	328.226
90	-2.04022	-0.481728	134.312	329.209
91	-2.04022	-0.470498	134.534	330.169
92	-1.89712	-0.462114	134.747	331.046
93	-1.89712	-0.450985	134.951	331.901
94	-1.89712	-0.442676	135.147	332.741
95	-1.89712	-0.431644	135.333	333.56
96	-1.83258	-0.423405	135.512	334.336
97	-1.77196	-0.412463	135.682	335.067
98	-1.66073	-0.40429	135.846	335.738
99	-1.30933	-0.393433	136.001	336.253
100	-1.23787	-0.385321	136.149	336.73
101	-1.07881	-0.374544	136.289	337.134
102	-0.967584	-0.36649	136.424	337.489
103	1.60944	-0.355788	136.55	336.916
104	1.60944	-0.347787	136.671	336.357
105	1.60944	-0.337155	136.785	335.814
106	1.60944	-0.329206	136.893	335.284
107	1.60944	-0.318639	136.995	334.771
108	1.60944	-0.310738	137.091	334.271
109	1.60944	-0.300232	137.182	333.788
110	1.60944	-0.292375	137.267	333.317
111	1.60944	-0.281926	137.346	332.864
112	1.60944	-0.27411	137.422	332.423
113	1.60944	-0.263715	137.491	331.998

114	1.60944	-0.253347	137.555	331.59
115	1.60944	-0.24559	137.616	331.195
116	1.60944	-0.235269	137.671	330.816
117	1.60944	-0.227545	137.723	330.45
118	1.60944	-0.217267	137.77	330.101
119	1.60944	-0.209575	137.814	329.763
120	1.60944	-0.199336	137.854	329.442
121	1.60944	-0.191671	137.89	329.134
122	1.60944	-0.181468	137.923	328.842
123	1.60944	-0.173829	137.954	328.562
124	1.60944	-0.163659	137.98	328.299
125	1.60944	-0.156042	138.005	328.048
126	1.60944	-0.1459	138.026	327.813
127	1.60944	-0.138305	138.045	327.59
128	1.60944	-0.128189	138.062	327.384
129	1.60944	-0.12061	138.076	327.19
130	1.60944	-0.110516	138.088	327.012
131	1.60944	-0.102953	138.099	326.846
132	1.60944	-0.0928787	138.108	326.697
133	1.60944	-0.0853288	138.115	326.559
134	1.60944	-0.0752698	138.12	326.438
135	1.60944	-0.0677301	138.125	326.329
136	1.60944	-0.0576847	138.128	326.236
137	1.60944	-0.0501541	138.131	326.156
138	1.60944	-0.0401167	138.132	326.091
139	1.60944	-0.0325917	138.134	326.039
140	1.60944	-0.0225612	138.134	326.002
141	1.60944	-0.0150408	138.134	325.978
142	1.60944	-0.00501359	138.134	325.97
143	1.60944	0.00501359	138.134	325.978
144	1.60944	0.0150408	138.135	326.002
145	1.60944	0.0225612	138.135	326.039
146	1.60944	0.0325917	138.136	326.091
147	1.60944	0.0401167	138.138	326.156
148	1.60944	0.0501541	138.14	326.236
149	1.60944	0.0576847	138.144	326.329
150	1.60944	0.0677301	138.148	326.438
151	1.60944	0.0752698	138.154	326.559
152	1.60944	0.0853288	138.161	326.697
153	1.60944	0.0928787	138.17	326.846
154	1.60944	0.102953	138.18	327.012
155	1.60944	0.110516	138.193	327.19
156	1.60944	0.12061	138.207	327.384
157	1.60944	0.128189	138.224	327.59
158	1.60944	0.138305	138.243	327.813
159	1.60944	0.1459	138.264	328.048
160	1.60944	0.156042	138.288	328.299
161	1.60944	0.163659	138.315	328.562
162	1.60944	0.173829	138.345	328.842
163	1.60944	0.181468	138.378	329.134
164	1.60944	0.191671	138.415	329.442
165	1.60944	0.199336	138.455	329.763
166	1.60944	0.209575	138.499	330.101
167	1.60944	0.217267	138.546	330.45
168	1.60944	0.227545	138.598	330.816
169	1.60944	0.235269	138.653	331.195
170	1.60944	0.24559	138.713	331.59
171	1.60944	0.253347	138.777	331.998
172	1.60944	0.263715	138.847	332.423
173	1.60944	0.27411	138.922	332.864
174	1.60944	0.281926	139.002	333.317
175	1.60944	0.292375	139.087	333.788

176	1.60944	0.300232		139.177	334.271
177	1.60944	0.310738		139.274	334.771
178	1.60944	0.318639		139.375	335.284
179	1.60944	0.329206		139.484	335.814
180	1.60944	0.337155		139.597	336.357
181	1.60944	0.347787		139.718	336.916
182	1.60944	0.355788		139.845	337.489
183	1.60944	0.36649	139.979	338.079	
184	1.60944	0.374544		140.12	338.682
185	1.60944	0.385321		140.268	339.302
186	1.60944	0.393433		140.423	339.935
187	1.60944	0.40429	140.586	340.586	
188	1.60944	0.412463		140.756	341.25
189	1.60944	0.423405		140.936	341.931
190	1.60944	0.431644		141.122	342.626
191	1.60944	0.442676		141.318	343.338
192	1.60944	0.450985		141.521	344.064
193	1.60944	0.462114		141.735	344.808
194	1.60944	0.470498		141.956	345.565
195	1.60944	0.481728		142.188	346.34
196	1.60944	0.490189		142.429	347.129
197	1.60944	0.501527		142.68	347.936
198	1.60944	0.510074		142.94	348.757
199	1.60944	0.521527		143.212	349.597
200	1.60944	0.530162		143.493	350.45
201	1.60944	0.541736		143.787	351.322
202	1.60944	0.550465		144.09	352.208
203	1.60944	0.56217	144.406	353.113	
204	1.60944	0.570999		144.732	354.032
205	1.60944	0.582841		145.072	354.97
206	1.60944	0.591776		145.422	355.922
207	1.60944	0.603765		145.786	356.894
208	1.60944	0.612813		146.162	357.88
209	1.60944	0.624956		146.552	358.886
210	1.60944	0.634124		146.955	359.906
211	1.60944	0.646431		147.372	360.947
212	1.60944	0.655726		147.802	362.002
213	1.60944	0.668209		148.249	363.078
214	1.60944	0.677639		148.708	364.168
215	1.60944	0.690309		149.185	365.279
216	1.60944	0.699883		149.674	366.406
217	1.60944	0.712751		150.182	367.553
218	1.60944	0.722479		150.704	368.716
219	1.60944	0.735557		151.245	369.899
220	1.60944	0.745449		151.801	371.099
221	1.60944	0.758753		152.377	372.32
222	1.60944	0.768821		152.968	373.558
223	1.60944	0.782366		153.58	374.817
224	1.60944	0.792618		154.208	376.093
225	1.60944	0.806422		154.859	377.39
226	1.60944	0.816874		155.526	378.705
227	1.60944	0.830953		156.216	380.042
228	1.60944	0.841621		156.925	381.397
229	1.60944	0.855996		157.657	382.775
230	1.60944	0.87055	158.415	384.176	
231	1.60944	0.881587		159.193	385.595
232	1.60944	0.896473		159.996	387.037
233	1.60944	0.907769		160.82	388.498
234	1.60944	0.923014		161.672	389.984
235	1.60944	0.93459	162.546	391.488	
236	1.60944	0.950222		163.449	393.017
237	1.60944	0.9621	164.374	394.566	

238	1.60944	0.97815	165.331	396.14	
239	1.60944	0.990356		166.312	397.734
240	1.60944	1.00687	167.326	399.355	
241	1.60944	1.01943	168.365	400.995	
242	1.60944	1.03643	169.439	402.663	
243	1.60944	1.04939	170.54	404.352	
244	1.60944	1.06694	171.679	406.069	
245	1.60944	1.08032	172.846	407.808	
246	1.60944	1.09847	174.052	409.576	
247	1.60944	1.11232	175.29	411.366	
248	1.60944	1.13113	176.569	413.187	
249	1.60944	1.1455	177.881	415.03	
250	1.60944	1.16505	179.239	416.905	
251	1.60944	1.18	180.631	418.805	
252	1.60944	1.20036	182.072	420.737	
253	1.60944	1.21596	183.55	422.694	
254	1.60944	1.23724	185.081	424.685	
255	1.60944	1.25357	186.653	426.702	
256	1.60944	1.27588	188.28	428.756	
257	1.60944	1.29303	189.952	430.837	
258	1.60944	1.31652	191.686	432.956	
259	1.60944	1.33462	193.467	435.104	
260	1.60944	1.35946	195.315	437.292	
261	1.60944	1.37866	197.216	439.511	
262	1.60944	1.40507	199.19	441.772	
263	1.60944	1.42554	201.222	444.066	
264	1.60944	1.4538	203.336	446.406	
265	1.60944	1.47579	205.514	448.781	
266	1.60944	1.50626	207.782	451.205	
267	1.60944	1.53007	210.123	453.668	
268	1.60944	1.56322	212.567	456.184	
269	1.60944	1.58927	215.093	458.742	
270	1.60944	1.62576	217.736	461.358	
271	1.60944	1.65463	220.474	464.021	
272	1.60944	1.6954	223.348	466.75	
273	1.60944	1.72793	226.334	469.531	
274	1.60944	1.77438	229.482	472.387	
275	1.60944	1.81191	232.765	475.303	
276	1.60944	1.86629	236.248	478.307	
277	1.60944	1.91103	239.9	481.382	
278	1.60944	1.97737	243.81	484.565	
279	1.60944	2.03352	247.946	487.838	
280	1.60944	2.12007	252.44	491.25	
281	1.60944	2.19728	257.268	494.786	
282	1.60944	2.32634	262.68	498.53	
283	1.60944	2.45727	268.718	502.485	
284	1.60944	2.74777	276.269	506.907	

Data Set Standard Deviation = 2.25754
Numerator = 256955
Denominator = 398464
W Statistic = 0.644864 = 256955 / 398464

5% Critical value of 0.976 exceeds 0.644864
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.644864
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 = 0.80041
0.80041 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-3.35241	0.00350877	-2.74777	96.7437	348.683
2	-3.35241	0.00701754	-2.45727	96.7437	334.497
3	-3.35241	0.0105263	-2.32634	96.7437	328.103
4	-3.35241	0.0140351	-2.19728	96.7437	321.801
5	-3.35241	0.0175439	-2.12007	96.7437	318.03
6	-3.35241	0.0210526	-2.03352	96.7437	313.804
7	-3.35241	0.0245614	-1.97737	96.7437	311.062
8	-3.35241	0.0280702	-1.91103	96.7437	307.822
9	-3.35241	0.0315789	-1.86629	96.7437	305.637
10	-3.35241	0.0350877	-1.81191	96.7437	302.982
11	-3.35241	0.0385965	-1.77438	96.7437	301.149
12	-3.35241	0.0421053	-1.72793	96.7437	298.881
13	-3.35241	0.045614	-1.6954	96.7437	297.292
14	-3.35241	0.0491228	-1.65463	96.7437	295.301
15	-3.35241	0.0526316	-1.62576	96.7437	293.891
16	-3.35241	0.0561404	-1.58927	96.7437	292.109
17	-3.35241	0.0596491	-1.56322	96.7437	290.837
18	-3.35241	0.0631579	-1.53007	96.7437	289.218
19	-3.35241	0.0666667	-1.50626	96.7437	288.056
20	-3.35241	0.0701754	-1.47579	96.7437	286.568
21	-3.35241	0.0736842	-1.4538	96.7437	285.494
22	-3.35241	0.077193	-1.42554	96.7437	284.114
23	-3.35241	0.0807018	-1.40507	96.7437	283.114
24	-3.35241	0.0842105	-1.37866	96.7437	281.824
25	-3.35241	0.0877193	-1.35946	96.7437	280.887
26	-3.35241	0.0912281	-1.33462	96.7437	279.674
27	-3.35241	0.0947368	-1.31652	96.7437	278.79
28	-3.35241	0.0982456	-1.29303	96.7437	277.643
29	-3.35241	0.101754	-1.27588	96.7437	276.805
30	-3.35241	0.105263	-1.25357	96.7437	275.716
31	-3.35241	0.108772	-1.23724	96.7437	274.918
32	-3.35241	0.112281	-1.21596	96.7437	273.879
33	-3.35241	0.115789	-1.20036	96.7437	273.118
34	-3.35241	0.119298	-1.18	96.7437	272.123
35	-3.35241	0.122807	-1.16505	96.7437	271.393
36	-3.35241	0.126316	-1.1455	96.7437	270.439
37	-3.35241	0.129825	-1.13113	96.7437	269.737
38	-3.35241	0.133333	-1.11232	96.7437	268.818
39	-3.35241	0.136842	-1.09847	96.7437	268.142
40	-3.35241	0.140351	-1.08032	96.7437	267.256
41	-3.35241	0.14386	-1.06694	96.7437	266.602
42	-3.35241	0.147368	-1.04939	96.7437	265.745
43	-3.35241	0.150877	-1.03643	96.7437	265.112
44	-3.35241	0.154386	-1.01943	96.7437	264.282
45	-3.35241	0.157895	-1.00687	96.7437	263.669
46	-3.35241	0.161404	-0.990356	96.7437	262.862
47	-3.35241	0.164912	-0.97815	96.7437	262.266
48	-3.35241	0.168421	-0.9621	96.7437	261.483

49	-3.352410	0.17193	-0.950222	96.7437	260.903
50	-3.352410	0.175439	-0.934599	6.7437	260.139
51	-3.352410	0.178947	-0.923014	96.7437	259.574
52	-3.352410	0.182456	-0.907769	96.7437	258.829
53	-3.352410	0.185965	-0.896473	96.7437	258.278
54	-3.352410	0.189474	-0.881587	96.7437	257.551
55	-3.352410	0.192982	-0.870559	6.7437	257.012
56	-3.352410	0.196491	-0.855996	96.7437	256.301
57	-3.352410	0.2	-0.841621	96.7437	255.599
58	-3.352410	0.203509	-0.830953	96.7437	255.078
59	-3.352410	0.207018	-0.816874	96.7437	254.391
60	-3.352410	0.210526	-0.806422	96.7437	253.88
61	-3.352410	0.214035	-0.792618	96.7437	253.206
62	-3.352410	0.217544	-0.782366	96.7437	252.706
63	-3.352410	0.221053	-0.768821	96.7437	252.044
64	-3.352410	0.224561	-0.758753	96.7437	251.552
65	-3.352410	0.22807	-0.745449	96.7437	250.903
66	-3.352410	0.231579	-0.735557	96.7437	250.42
67	-3.352410	0.235088	-0.722479	96.7437	249.781
68	-3.352410	0.238596	-0.712751	96.7437	249.306
69	-3.352410	0.242105	-0.699883	96.7437	248.678
70	-3.352410	0.245614	-0.690309	96.7437	248.21
71	-3.352410	0.249123	-0.677639	96.7437	247.591
72	-3.352410	0.252632	-0.668209	96.7437	247.131
73	-3.352410	0.25614	-0.655726	96.7437	246.521
74	-3.352410	0.259649	-0.646431	96.7437	246.067
75	-3.352410	0.263158	-0.634124	96.7437	245.466
76	-3.352410	0.266667	-0.624956	96.7437	245.019
77	-3.352410	0.270175	-0.612813	96.7437	244.426
78	-2.645080	0.273684	-0.603765	159.814	243.984
79	-2.645080	0.277193	-0.591776	159.814	243.398
80	-2.590270	0.280702	-0.582841	164.701	242.962
81	-2.577020	0.284211	-0.570999	165.882	242.384
82	-2.4651	0.287719	-0.562171	75.862	241.953
83	-2.419120	0.291228	-0.550465	179.962	241.381
84	-2.385970	0.294737	-0.541736	182.918	240.955
85	-2.364460	0.298246	-0.530162	184.836	240.39
86	-2.302590	0.301754	-0.521527	190.353	239.968
87	-2.120260	0.305263	-0.510074	206.61	239.409
88	-2.120260	0.308772	-0.501527	206.61	238.991
89	-2.040220	0.312281	-0.490189	213.747	238.438
90	-2.040220	0.315789	-0.481728	213.747	238.024
91	-2.040220	0.319298	-0.470498	213.747	237.476
92	-1.897120	0.322807	-0.462114	226.507	237.067
93	-1.897120	0.326316	-0.450985	226.507	236.523
94	-1.897120	0.329825	-0.442676	226.507	236.117
95	-1.897120	0.333333	-0.431644	226.507	235.579
96	-1.832580	0.336842	-0.423405	232.261	235.176
97	-1.771960	0.340351	-0.412463	237.667	234.642
98	-1.660730	0.34386	-0.40429	247.585	234.243
99	-1.309330	0.347368	-0.393433	278.918	233.713
100	-1.237870	0.350877	-0.385321	285.29	233.317
101	-1.078810	0.354386	-0.374544	299.473	232.79
102	-0.967584	0.357895	-0.36649	309.39	232.397
103	1.60944	0.361404	-0.355788	539.175	231.874
104	1.60944	0.364912	-0.347787	539.175	231.484
105	1.60944	0.368421	-0.337155	539.175	230.964
106	1.60944	0.37193	-0.329206	539.175	230.576
107	1.60944	0.375439	-0.318639	539.175	230.06
108	1.60944	0.378947	-0.310738	539.175	229.674
109	1.60944	0.382456	-0.300232	539.175	229.161
110	1.60944	0.385965	-0.292375	539.175	228.778

111	1.60944	0.389474	-0.281926	539.175	228.267
112	1.60944	0.392982	-0.27411	539.175	227.886
113	1.60944	0.396491	-0.263715	539.175	227.378
114	1.60944	0.4	-0.253347	539.175	226.872
115	1.60944	0.403509	-0.24559	539.175	226.493
116	1.60944	0.407018	-0.235269	539.175	225.989
117	1.60944	0.410526	-0.227545	539.175	225.612
118	1.60944	0.414035	-0.217267	539.175	225.11
119	1.60944	0.417544	-0.209575	539.175	224.734
120	1.60944	0.421053	-0.199336	539.175	224.234
121	1.60944	0.424561	-0.191671	539.175	223.86
122	1.60944	0.42807	-0.181468	539.175	223.362
123	1.60944	0.431579	-0.173829	539.175	222.989
124	1.60944	0.435088	-0.163659	539.175	222.492
125	1.60944	0.438596	-0.156042	539.175	222.12
126	1.60944	0.442105	-0.1459	539.175	221.625
127	1.60944	0.445614	-0.138305	539.175	221.254
128	1.60944	0.449123	-0.128189	539.175	220.76
129	1.60944	0.452632	-0.12061	539.175	220.39
130	1.60944	0.45614	-0.110516	539.175	219.897
131	1.60944	0.459649	-0.102953	539.175	219.528
132	1.60944	0.463158	-0.0928787	539.175	219.036
133	1.60944	0.466667	-0.0853288	539.175	218.667
134	1.60944	0.470175	-0.0752698	539.175	218.176
135	1.60944	0.473684	-0.0677301	539.175	217.807
136	1.60944	0.477193	-0.0576847	539.175	217.317
137	1.60944	0.480702	-0.0501541	539.175	216.949
138	1.60944	0.484211	-0.0401167	539.175	216.459
139	1.60944	0.487719	-0.0325917	539.175	216.092
140	1.60944	0.491228	-0.0225612	539.175	215.602
141	1.60944	0.494737	-0.0150408	539.175	215.234
142	1.60944	0.498246	-0.00501359	539.175	214.745
143	1.60944	0.501754	0.00501359	539.175	214.255
144	1.60944	0.505263	0.0150408	539.175	213.766
145	1.60944	0.508772	0.0225612	539.175	213.398
146	1.60944	0.512281	0.0325917	539.175	212.908
147	1.60944	0.515789	0.0401167	539.175	212.541
148	1.60944	0.519298	0.0501541	539.175	212.051
149	1.60944	0.522807	0.0576847	539.175	211.683
150	1.60944	0.526316	0.0677301	539.175	211.193
151	1.60944	0.529825	0.0752698	539.175	210.824
152	1.60944	0.533333	0.0853288	539.175	210.333
153	1.60944	0.536842	0.0928787	539.175	209.964
154	1.60944	0.540351	0.102953	539.175	209.472
155	1.60944	0.54386	0.110516	539.175	209.103
156	1.60944	0.547368	0.12061	539.175	208.61
157	1.60944	0.550877	0.128189	539.175	208.24
158	1.60944	0.554386	0.138305	539.175	207.746
159	1.60944	0.557895	0.1459	539.175	207.375
160	1.60944	0.561404	0.156042	539.175	206.88
161	1.60944	0.564912	0.163659	539.175	206.508
162	1.60944	0.568421	0.173829	539.175	206.011
163	1.60944	0.57193	0.181468	539.175	205.638
164	1.60944	0.575439	0.191671	539.175	205.14
165	1.60944	0.578947	0.199336	539.175	204.766
166	1.60944	0.582456	0.209575	539.175	204.266
167	1.60944	0.585965	0.217267	539.175	203.89
168	1.60944	0.589474	0.227545	539.175	203.388
169	1.60944	0.592982	0.235269	539.175	203.011
170	1.60944	0.596491	0.24559	539.175	202.507
171	1.60944	0.6	0.253347	539.175	202.128
172	1.60944	0.603509	0.263715	539.175	201.622

173	1.60944	0.607018	0.27411	539.175	201.114
174	1.60944	0.610526	0.281926	539.175	200.733
175	1.60944	0.614035	0.292375	539.175	200.222
176	1.60944	0.617544	0.300232	539.175	199.839
177	1.60944	0.621053	0.310738	539.175	199.326
178	1.60944	0.624561	0.318639	539.175	198.94
179	1.60944	0.62807	0.329206	539.175	198.424
180	1.60944	0.631579	0.337155	539.175	198.036
181	1.60944	0.635088	0.347787	539.175	197.516
182	1.60944	0.638596	0.355788	539.175	197.126
183	1.60944	0.642105	0.36649	539.175	196.603
184	1.60944	0.645614	0.374544	539.175	196.21
185	1.60944	0.649123	0.385321	539.175	195.683
186	1.60944	0.652632	0.393433	539.175	195.287
187	1.60944	0.65614	0.40429	539.175	194.757
188	1.60944	0.659649	0.412463	539.175	194.358
189	1.60944	0.663158	0.423405	539.175	193.824
190	1.60944	0.666667	0.431644	539.175	193.421
191	1.60944	0.670175	0.442676	539.175	192.883
192	1.60944	0.673684	0.450985	539.175	192.477
193	1.60944	0.677193	0.462114	539.175	191.933
194	1.60944	0.680702	0.470498	539.175	191.524
195	1.60944	0.684211	0.481728	539.175	190.976
196	1.60944	0.687719	0.490189	539.175	190.562
197	1.60944	0.691228	0.501527	539.175	190.009
198	1.60944	0.694737	0.510074	539.175	189.591
199	1.60944	0.698246	0.521527	539.175	189.032
200	1.60944	0.701754	0.530162	539.175	188.61
201	1.60944	0.705263	0.541736	539.175	188.045
202	1.60944	0.708772	0.550465	539.175	187.619
203	1.60944	0.712281	0.56217	539.175	187.047
204	1.60944	0.715789	0.570999	539.175	186.616
205	1.60944	0.719298	0.582841	539.175	186.038
206	1.60944	0.722807	0.591776	539.175	185.602
207	1.60944	0.726316	0.603765	539.175	185.016
208	1.60944	0.729825	0.612813	539.175	184.574
209	1.60944	0.733333	0.624956	539.175	183.981
210	1.60944	0.736842	0.634124	539.175	183.534
211	1.60944	0.740351	0.646431	539.175	182.933
212	1.60944	0.74386	0.655726	539.175	182.479
213	1.60944	0.747368	0.668209	539.175	181.869
214	1.60944	0.750877	0.677639	539.175	181.409
215	1.60944	0.754386	0.690309	539.175	180.79
216	1.60944	0.757895	0.699883	539.175	180.322
217	1.60944	0.761404	0.712751	539.175	179.694
218	1.60944	0.764912	0.722479	539.175	179.219
219	1.60944	0.768421	0.735557	539.175	178.58
220	1.60944	0.77193	0.745449	539.175	178.097
221	1.60944	0.775439	0.758753	539.175	177.448
222	1.60944	0.778947	0.768821	539.175	176.956
223	1.60944	0.782456	0.782366	539.175	176.294
224	1.60944	0.785965	0.792618	539.175	175.794
225	1.60944	0.789474	0.806422	539.175	175.12
226	1.60944	0.792982	0.816874	539.175	174.609
227	1.60944	0.796491	0.830953	539.175	173.922
228	1.60944	0.8	0.841621	539.175	173.401
229	1.60944	0.803509	0.855996	539.175	172.699
230	1.60944	0.807018	0.87055	539.175	171.988
231	1.60944	0.810526	0.881587	539.175	171.449
232	1.60944	0.814035	0.896473	539.175	170.722
233	1.60944	0.817544	0.907769	539.175	170.171
234	1.60944	0.821053	0.923014	539.175	169.426

235	1.60944	0.824561	0.93459	539.175	168.861	
236	1.60944	0.82807	0.950222	539.175	168.097	
237	1.60944	0.831579	0.9621	539.175	167.517	
238	1.60944	0.835088	0.97815	539.175	166.734	
239	1.60944	0.838596	0.990356	539.175	166.138	
240	1.60944	0.842105	1.00687	539.175	165.331	
241	1.60944	0.845614	1.01943	539.175	164.718	
242	1.60944	0.849123	1.03643	539.175	163.888	
243	1.60944	0.852632	1.04939	539.175	163.255	
244	1.60944	0.85614	1.06694	539.175	162.398	
245	1.60944	0.859649	1.08032	539.175	161.744	
246	1.60944	0.863158	1.09847	539.175	160.858	
247	1.60944	0.866667	1.11232	539.175	160.182	
248	1.60944	0.870175	1.13113	539.175	159.263	
249	1.60944	0.873684	1.1455	539.175	158.561	
250	1.60944	0.877193	1.16505	539.175	157.607	
251	1.60944	0.880702	1.18	539.175	156.877	
252	1.60944	0.884211	1.20036	539.175	155.882	
253	1.60944	0.887719	1.21596	539.175	155.121	
254	1.60944	0.891228	1.23724	539.175	154.082	
255	1.60944	0.894737	1.25357	539.175	153.284	
256	1.60944	0.898246	1.27588	539.175	152.195	
257	1.60944	0.901754	1.29303	539.175	151.357	
258	1.60944	0.905263	1.31652	539.175	150.21	
259	1.60944	0.908772	1.33462	539.175	149.326	
260	1.60944	0.912281	1.35946	539.175	148.113	
261	1.60944	0.915789	1.37866	539.175	147.176	
262	1.60944	0.919298	1.40507	539.175	145.886	
263	1.60944	0.922807	1.42554	539.175	144.886	
264	1.60944	0.926316	1.4538	539.175	143.506	
265	1.60944	0.929825	1.47579	539.175	142.432	
266	1.60944	0.933333	1.50626	539.175	140.944	
267	1.60944	0.936842	1.53007	539.175	139.782	
268	1.60944	0.940351	1.56322	539.175	138.163	
269	1.60944	0.94386	1.58927	539.175	136.891	
270	1.60944	0.947368	1.62576	539.175	135.109	
271	1.60944	0.950877	1.65463	539.175	133.699	
272	1.60944	0.954386	1.6954	539.175	131.708	
273	1.60944	0.957895	1.72793	539.175	130.119	
274	1.60944	0.961404	1.77438	539.175	127.851	
275	1.60944	0.964912	1.81191	539.175	126.018	
276	1.60944	0.968421	1.86629	539.175	123.363	
277	1.60944	0.97193	1.91103	539.175	121.178	
278	1.60944	0.975439	1.97737	539.175	117.938	
279	1.60944	0.978947	2.03352	539.175	115.196	
280	1.60944	0.982456	2.12007	539.175	110.97	
281	1.60944	0.985965	2.19728	539.175	107.199	
282	1.60944	0.989474	2.32634	539.175	100.897	
283	1.60944	0.992982	2.45727	539.175	94.5032	
284	1.60944	0.996491	2.74777	539.175	80.3175	

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Beryllium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 91.1972%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 23
Maximum Background Value = 1.60944
Confidence Level = 74.2%
False Positive Rate = 25.8%

Location	Date	Count	Mean	Significant
LMW-10	11/16/2012	1	-3.35241	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
LMW-14R	11/16/2012	1	-3.35241	FALSE
LMW-15R	11/16/2012	1	-1.89712	FALSE
LMW-16	11/16/2012	1	-3.35241	FALSE
LMW-3	11/16/2012	1	-3.35241	FALSE
LMW-3S	11/16/2012	1	-3.35241	FALSE
LMW-6	11/16/2012	1	-3.35241	FALSE
LMW-7	11/16/2012	1	-2.38597	FALSE
LMW-8	11/16/2012	1	-3.35241	FALSE
LMW-9	11/16/2012	1	-0.967584	FALSE
LMW-9D	11/16/2012	1	-3.35241	FALSE
LMW-9S	11/16/2012	1	-3.35241	FALSE
MW-5	11/20/2008	1	1.60944	FALSE

Concentrations (ppb)

Parameter: Cadmium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 263
Percent Non-Detects: 92.6056%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	21 (91.3043%)	1/16/1998	4	4
			3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/14/2000	3 J	3 J
			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<0.2 U	ND<0.2 U
			11/16/2009	ND<0.2 U	ND<0.2 U
			6/30/2010	ND<0.2 U	ND<0.2 U
			11/17/2010	ND<0.2 U	ND<0.2 U
			7/6/2011	ND<0.2 U	ND<0.2 U
			11/22/2011	ND<0.2 U	ND<0.2 U
			5/16/2012	ND<0.2 U	ND<0.2 U
			11/16/2012	ND<0.2 U	ND<0.2 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	19 (95%)	3/14/2000	1 J	1 J
			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<0 J	ND<0 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	ND<0.2 U	ND<0.2 U
			11/16/2009	ND<0.2 U	ND<0.2 U
			6/30/2010	ND<0.2 U	ND<0.2 U
			11/17/2010	ND<0.2 U	ND<0.2 U
			7/6/2011	ND<0.2 U	ND<0.2 U
			11/22/2011	ND<0.2 U	ND<0.2 U
			5/16/2012	ND<0.2 U	ND<0.2 U
			11/16/2012	ND<0.2 U	ND<0.2 U

LMW-11	11	10 (90.9091%)	3/14/2000	ND<20	ND<20
			9/23/2003	ND<20	ND<20
			3/10/2004	ND<20	ND<20
			10/12/2004	2 J	2 J
			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	4 J	4 J
			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	1 J	1 J
			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-14R	11	11 (100%)	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<0.2 U	ND<0.2 U
			6/30/2010	ND<0.2 U	ND<0.2 U
			11/17/2010	ND<0.2 U	ND<0.2 U
			7/6/2011	ND<0.2 U	ND<0.2 U
			11/22/2011	ND<0.2 U	ND<0.2 U
			5/16/2012	ND<0.2 U	ND<0.2 U
			11/16/2012	ND<0.2 U	ND<0.2 U
LMW-15R	18	18 (100%)	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	ND<0.2 U	ND<0.2 U
			11/16/2009	ND<0.2 U	ND<0.2 U
			11/16/2009	ND<0.2 U	ND<0.2 U
			11/16/2009	ND<0.2 U	ND<0.2 U
			6/30/2010	ND<0.2 U	ND<0.2 U

			11/17/2010	ND<0.2 U	ND<0.2 U
			7/6/2011	ND<0.2 U	ND<0.2 U
			11/22/2011	ND<0.2 U	ND<0.2 U
			5/16/2012	ND<0.2 U	ND<0.2 U
			11/16/2012	ND<0.2 U	ND<0.2 U
LMW-16	13	12 (92.3077%)	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	2 J	2 J
			6/11/2009	ND<0.2 U	ND<0.2 U
			11/16/2009	ND<0.2 U	ND<0.2 U
			6/30/2010	ND<0.2 U	ND<0.2 U
			11/17/2010	ND<0.2 U	ND<0.2 U
			7/6/2011	ND<0.2 U	ND<0.2 U
			11/22/2011	ND<0.2 U	ND<0.2 U
			5/16/2012	ND<0.2 U	ND<0.2 U
			11/16/2012	ND<0.2 U	ND<0.2 U
LMW-3	25	24 (96%)	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	2 J	2 J
			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<0.2 U	ND<0.2 U
			11/16/2009	ND<0.2 U	ND<0.2 U
			6/30/2010	ND<0.2 U	ND<0.2 U
			11/17/2010	ND<0.2 U	ND<0.2 U
			7/6/2011	ND<0.2 U	ND<0.2 U
			11/22/2011	ND<0.2 U	ND<0.2 U
			5/16/2012	ND<0.2 U	ND<0.2 U
			11/16/2012	ND<0.2 U	ND<0.2 U
LMW-3S	13	13 (100%)	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<0.2 U	ND<0.2 U
			11/16/2009	ND<0.2 U	ND<0.2 U
			6/30/2010	ND<0.2 U	ND<0.2 U
			11/17/2010	ND<0.2 U	ND<0.2 U
			7/6/2011	ND<0.2 U	ND<0.2 U
			11/22/2011	ND<0.2 U	ND<0.2 U
			5/16/2012	ND<0.2 U	ND<0.2 U
			11/16/2012	ND<0.2 U	ND<0.2 U
LMW-6	23	21 (91.3043%)	1/16/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20

			9/23/1999	ND<20	ND<20	
			3/14/2000	1 J	1 J	
			9/23/2003	31	31	
			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<0.2 U	ND<0.2 U	
			11/16/2009	ND<0.2 U	ND<0.2 U	
			6/30/2010	ND<0.2 U	ND<0.2 U	
			11/17/2010	ND<0.2 U	ND<0.2 U	
			7/6/2011	ND<0.2 U	ND<0.2 U	
			11/22/2011	ND<0.2 U	ND<0.2 U	
			5/16/2012	ND<0.2 U	ND<0.2 U	
			11/16/2012	ND<0.2 U	ND<0.2 U	
LMW-7	21	12 (57.1429%)	1/16/1998	38	38	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/14/2000	3 J	3 J	
			9/23/2003	ND<20	ND<20	
			3/10/2004	ND<20	ND<20	
			10/12/2004	1 J	1 J	
			4/1/2005	ND<20	ND<20	
			10/26/2005	ND<0 J	ND<0 J	
			6/19/2006	ND<0 J	ND<0 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	1.2	1.2	
			11/17/2010	0.6	0.6	
			7/6/2011	4.9	4.9	
			11/22/2011	0.68	0.68	
			5/16/2012	0.24 J	0.24 J	
			11/16/2012	0.25 J	0.25 J	
LMW-8	23	22 (95.6522%)	1/16/1998	2 J	2 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	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	ND<0.2 U	ND<0.2 U	
			11/16/2009	ND<0.2 U	ND<0.2 U	
			6/30/2010	ND<0.2 U	ND<0.2 U	

			11/17/2010	ND<0.2 U	ND<0.2 U
			7/6/2011	ND<0.2 U	ND<0.2 U
			11/22/2011	ND<0.2 U	ND<0.2 U
			5/16/2012	ND<0.2 U	ND<0.2 U
			11/16/2012	ND<0.2 U	ND<0.2 U
LMW-9	23	23 (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
			11/18/2006	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<0.2 U	ND<0.2 U
			11/16/2009	ND<0.2 U	ND<0.2 U
			6/30/2010	ND<0.2 U	ND<0.2 U
			11/17/2010	ND<0.2 U	ND<0.2 U
			7/6/2011	ND<0.2 U	ND<0.2 U
			11/22/2011	ND<0.2 U	ND<0.2 U
			5/16/2012	ND<0.2 U	ND<0.2 U
			11/16/2012	ND<0.2 U	ND<0.2 U
LMW-9D	13	13 (100%)	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<0.2 U	ND<0.2 U
			11/16/2009	ND<0.2 U	ND<0.2 U
			6/30/2010	ND<0.2 U	ND<0.2 U
			11/17/2010	ND<0.2 U	ND<0.2 U
			7/6/2011	ND<0.2 U	ND<0.2 U
			11/22/2011	ND<0.2 U	ND<0.2 U
			5/16/2012	ND<0.2 U	ND<0.2 U
			11/16/2012	ND<0.2 U	ND<0.2 U
LMW-9S	12	12 (100%)	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<0.2 U	ND<0.2 U
			6/30/2010	ND<0.2 U	ND<0.2 U
			11/17/2010	ND<0.2 U	ND<0.2 U
			7/6/2011	ND<0.2 U	ND<0.2 U
			11/22/2011	ND<0.2 U	ND<0.2 U
			5/16/2012	ND<0.2 U	ND<0.2 U
			11/16/2012	ND<0.2 U	ND<0.2 U
MW-5	13	12 (92.3077%)	1/16/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/14/2000	3 J	3 J
			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: Cadmium

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	0.1	-2.197282	3.8283	-0.219728
5	0.1	-2.120072	8.323	-0.431735
6	0.1	-2.033523	2.4582	-0.635087
7	0.1	-1.977373	6.3682	-0.832824
8	0.1	-1.911034	0.0203	-1.02393
9	0.1	-1.866294	3.5033	-1.21056
10	0.1	-1.811914	6.7863	-1.39175
11	0.1	-1.774384	9.9348	-1.56919
12	0.1	-1.727935	2.9205	-1.74198
13	0.1	-1.6954	55.7949	-1.91152
14	0.1	-1.654635	8.5327	-2.07698
15	0.1	-1.625766	1.1758	-2.23956
16	0.1	-1.589276	3.7015	-2.39848
17	0.1	-1.563226	6.1452	-2.55481
18	0.1	-1.530076	8.4863	-2.70781
19	0.1	-1.506267	0.7551	-2.85844
20	0.1	-1.475797	2.9331	-3.00602
21	0.1	-1.4538	75.0466	-3.1514
22	0.1	-1.425547	7.0788	-3.29395
23	0.1	-1.405077	9.053	-3.43446
24	0.1	-1.378668	0.9537	-3.57233
25	0.1	-1.359468	2.8019	-3.70827
26	0.1	-1.334628	4.5831	-3.84173
27	0.1	-1.316528	6.3163	-3.97339
28	0.1	-1.293038	7.9883	-4.10269
29	0.1	-1.275888	9.6161	-4.23028
30	0.1	-1.253579	1.1875	-4.35563
31	0.1	-1.237249	2.7183	-4.47936
32	0.1	-1.215969	4.1969	-4.60095
33	0.1	-1.200369	5.6377	-4.72099
34	0.1	-1.18	97.0301	-4.83899
35	0.1	-1.165059	8.3875	-4.95549
36	0.1	-1.1455	99.6996	-5.07005
37	0.1	-1.13113	100.979	-5.18316
38	0.1	-1.11232	102.216	-5.29439
39	0.1	-1.09847	103.423	-5.40424
40	0.1	-1.08032	104.59	-5.51227
41	0.1	-1.06694	105.728	-5.61896
42	0.1	-1.04939	106.83	-5.7239
43	0.1	-1.03643	107.904	-5.82755
44	0.1	-1.01943	108.943	-5.92949
45	0.1	-1.00687	109.957	-6.03017
46	0.1	-0.990356	110.938	-6.12921
47	0.1	-0.97815	111.894	-6.22703
48	0.1	-0.9621	112.82	-6.32324
49	0.1	-0.950222	113.723	-6.41826
50	0.1	-0.93459	114.596	-6.51172
51	0.1	-0.923014	115.448	-6.60402

52	0.1	-0.907769	116.272	-6.69479
53	0.1	-0.896473	117.076	-6.78444
54	0.1	-0.881587	117.853	-6.8726
55	0.1	-0.87055	118.611	-6.95966
56	0.1	-0.855996	119.344	-7.04526
57	0.1	-0.841621	120.052	-7.12942
58	0.1	-0.830953	120.743	-7.21251
59	0.1	-0.816874	121.41	-7.2942
60	0.1	-0.806422	122.06	-7.37484
61	0.1	-0.792618	122.689	-7.4541
62	0.1	-0.782366	123.301	-7.53234
63	0.1	-0.768821	123.892	-7.60922
64	0.1	-0.758753	124.467	-7.6851
65	0.1	-0.745449	125.023	-7.75964
66	0.1	-0.735557	125.564	-7.8332
67	0.1	-0.722479	126.086	-7.90545
68	0.1	-0.712751	126.594	-7.97672
69	0.1	-0.699883	127.084	-8.04671
70	0.1	-0.690309	127.561	-8.11574
71	0.1	-0.677639	128.02	-8.1835
72	0.1	-0.668209	128.466	-8.25033
73	0.1	-0.655726	128.896	-8.3159
74	0.1	-0.646431	129.314	-8.38054
75	0.1	-0.634124	129.716	-8.44395
76	0.1	-0.624956	130.107	-8.50645
77	0.1	-0.612813	130.482	-8.56773
78	0.1	-0.603765	130.847	-8.62811
79	0.1	-0.591776	131.197	-8.68728
80	0.1	-0.582841	131.537	-8.74557
81	0.1	-0.570999	131.863	-8.80267
82	0.1	-0.56217	132.179	-8.85889
83	0.1	-0.550465	132.482	-8.91393
84	0.1	-0.541736	132.775	-8.96811
85	0.1	-0.530162	133.056	-9.02112
86	0.1	-0.521527	133.328	-9.07327
87	0.1	-0.510074	133.589	-9.12428
88	0.1	-0.501527	133.84	-9.17443
89	0.1	-0.490189	134.08	-9.22345
90	0.1	-0.481728	134.312	-9.27163
91	0.1	-0.470498	134.534	-9.31868
92	0.1	-0.462114	134.747	-9.36489
93	0.1	-0.450985	134.951	-9.40999
94	0.1	-0.442676	135.147	-9.45425
95	0.1	-0.431644	135.333	-9.49742
96	0.1	-0.423405	135.512	-9.53976
97	0.1	-0.412463	135.682	-9.581
98	0.1	-0.40429	135.846	-9.62143
99	0.1	-0.393433	136.001	-9.66078
100	0.24	-0.385321	136.149	-9.75325
101	0.25	-0.374544	136.289	-9.84689
102	0.6	-0.36649	136.424	-10.0668
103	0.68	-0.355788	136.55	-10.3087
104	1	-0.347787	136.671	-10.6565
105	1	-0.337155	136.785	-10.9937
106	1	-0.329206	136.893	-11.3229
107	1	-0.318639	136.995	-11.6415
108	1.2	-0.310738	137.091	-12.0144
109	2	-0.300232	137.182	-12.6149
110	2	-0.292375	137.267	-13.1996
111	2	-0.281926	137.346	-13.7635
112	2	-0.27411	137.422	-14.3117
113	3	-0.263715	137.491	-15.1028

114	3	-0.253347	137.555	-15.8629
115	3	-0.24559	137.616	-16.5996
116	4	-0.235269	137.671	-17.5407
117	4	-0.227545	137.723	-18.4509
118	4.9	-0.217267	137.77	-19.5155
119	10	-0.209575	137.814	-21.6112
120	10	-0.199336	137.854	-23.6046
121	10	-0.191671	137.89	-25.5213
122	10	-0.181468	137.923	-27.336
123	10	-0.173829	137.954	-29.0743
124	10	-0.163659	137.98	-30.7109
125	10	-0.156042	138.005	-32.2713
126	10	-0.1459	138.026	-33.7303
127	10	-0.138305	138.045	-35.1134
128	10	-0.128189	138.062	-36.3952
129	10	-0.12061	138.076	-37.6013
130	10	-0.110516	138.088	-38.7065
131	10	-0.102953	138.099	-39.736
132	10	-0.0928787	138.108	-40.6648
133	10	-0.0853288	138.115	-41.5181
134	10	-0.0752698	138.12	-42.2708
135	10	-0.0677301	138.125	-42.9481
136	10	-0.0576847	138.128	-43.525
137	10	-0.0501541	138.131	-44.0265
138	10	-0.0401167	138.132	-44.4277
139	10	-0.0325917	138.134	-44.7536
140	10	-0.0225612	138.134	-44.9792
141	10	-0.0150408	138.134	-45.1296
142	10	-0.00501359	138.134	-45.1797
143	10	0.00501359	138.134	-45.1296
144	10	0.0150408	138.135	-44.9792
145	10	0.0225612	138.135	-44.7536
146	10	0.0325917	138.136	-44.4277
147	10	0.0401167	138.138	-44.0265
148	10	0.0501541	138.14	-43.525
149	10	0.0576847	138.144	-42.9481
150	10	0.0677301	138.148	-42.2708
151	10	0.0752698	138.154	-41.5181
152	10	0.0853288	138.161	-40.6648
153	10	0.0928787	138.17	-39.736
154	10	0.102953	138.18	-38.7065
155	10	0.110516	138.193	-37.6013
156	10	0.12061	138.207	-36.3952
157	10	0.128189	138.224	-35.1134
158	10	0.138305	138.243	-33.7303
159	10	0.1459	138.264	-32.2713
160	10	0.156042	138.288	-30.7109
161	10	0.163659	138.315	-29.0743
162	10	0.173829	138.345	-27.336
163	10	0.181468	138.378	-25.5213
164	10	0.191671	138.415	-23.6046
165	10	0.199336	138.455	-21.6112
166	10	0.209575	138.499	-19.5155
167	10	0.217267	138.546	-17.3428
168	10	0.227545	138.598	-15.0674
169	10	0.235269	138.653	-12.7147
170	10	0.24559	138.713	-10.2588
171	10	0.253347	138.777	-7.72532
172	10	0.263715	138.847	-5.08818
173	10	0.27411	138.922	-2.34707
174	10	0.281926	139.002	0.472191
175	10	0.292375	139.087	3.39594

176	10	0.300232	139.177	6.39827
177	10	0.310738	139.274	9.50565
178	10	0.318639	139.375	12.692
179	10	0.329206	139.484	15.9841
180	10	0.337155	139.597	19.3557
181	10	0.347787	139.718	22.8335
182	10	0.355788	139.845	26.3914
183	10	0.36649	139.979	30.0563
184	10	0.374544	140.12	33.8017
185	10	0.385321	140.268	37.6549
186	10	0.393433	140.423	41.5893
187	10	0.40429	140.586	45.6322
188	10	0.412463	140.756	49.7568
189	10	0.423405	140.936	53.9908
190	10	0.431644	141.122	58.3073
191	10	0.442676	141.318	62.734
192	10	0.450985	141.521	67.2439
193	10	0.462114	141.735	71.865
194	10	0.470498	141.956	76.57
195	10	0.481728	142.188	81.3873
196	10	0.490189	142.429	86.2892
197	10	0.501527	142.68	91.3045
198	10	0.510074	142.94	96.4052
199	10	0.521527	143.212	101.62
200	10	0.530162	143.493	106.922
201	10	0.541736	143.787	112.339
202	10	0.550465	144.09	117.844
203	10	0.56217	144.406	123.466
204	10	0.570999	144.732	129.176
205	10	0.582841	145.072	135.004
206	10	0.591776	145.422	140.922
207	10	0.603765	145.786	146.96
208	10	0.612813	146.162	153.088
209	10	0.624956	146.552	159.337
210	10	0.634124	146.955	165.679
211	10	0.646431	147.372	172.143
212	10	0.655726	147.802	178.7
213	10	0.668209	148.249	185.382
214	10	0.677639	148.708	192.159
215	10	0.690309	149.185	199.062
216	10	0.699883	149.674	206.061
217	10	0.712751	150.182	213.188
218	10	0.722479	150.704	220.413
219	10	0.735557	151.245	227.768
220	10	0.745449	151.801	235.223
221	10	0.758753	152.377	242.81
222	10	0.768821	152.968	250.499
223	10	0.782366	153.58	258.322
224	10	0.792618	154.208	266.248
225	10	0.806422	154.859	274.313
226	10	0.816874	155.526	282.481
227	10	0.830953	156.216	290.791
228	10	0.841621	156.925	299.207
229	10	0.855996	157.657	307.767
230	10	0.87055	158.415	316.473
231	10	0.881587	159.193	325.288
232	10	0.896473	159.996	334.253
233	10	0.907769	160.82	343.331
234	10	0.923014	161.672	352.561
235	10	0.93459	162.546	361.907
236	10	0.950222	163.449	371.409
237	10	0.9621	164.374	381.03

238	10	0.97815	165.331	390.812	
239	10	0.990356		166.312	400.715
240	10	1.00687	167.326	410.784	
241	10	1.01943	168.365	420.978	
242	10	1.03643	169.439	431.342	
243	10	1.04939	170.54	441.836	
244	10	1.06694	171.679	452.506	
245	10	1.08032	172.846	463.309	
246	10	1.09847	174.052	474.294	
247	10	1.11232	175.29	485.417	
248	10	1.13113	176.569	496.728	
249	10	1.1455	177.881	508.183	
250	10	1.16505	179.239	519.834	
251	10	1.18	180.631	531.634	
252	10	1.20036	182.072	543.637	
253	10	1.21596	183.55	555.797	
254	10	1.23724	185.081	568.169	
255	10	1.25357	186.653	580.705	
256	10	1.27588	188.28	593.464	
257	10	1.29303	189.952	606.394	
258	10	1.31652	191.686	619.559	
259	10	1.33462	193.467	632.905	
260	10	1.35946	195.315	646.5	
261	10	1.37866	197.216	660.287	
262	10	1.40507	199.19	674.337	
263	10	1.42554	201.222	688.593	
264	10	1.4538	203.336	703.131	
265	10	1.47579	205.514	717.889	
266	10	1.50626	207.782	732.951	
267	10	1.53007	210.123	748.252	
268	10	1.56322	212.567	763.884	
269	10	1.58927	215.093	779.777	
270	10	1.62576	217.736	796.035	
271	10	1.65463	220.474	812.581	
272	10	1.6954	223.348	829.535	
273	10	1.72793	226.334	846.814	
274	10	1.77438	229.482	864.558	
275	10	1.81191	232.765	882.677	
276	10	1.86629	236.248	901.34	
277	10	1.91103	239.9	920.45	
278	10	1.97737	243.81	940.224	
279	10	2.03352	247.946	960.559	
280	10	2.12007	252.44	981.76	
281	10	2.19728	257.268	1003.73	
282	10	2.32634	262.68	1027	
283	31	2.45727	268.718	1103.17	
284	38	2.74777	276.269	1207.59	

Data Set Standard Deviation = 5.33685
Numerator = 1.45827e+006
Denominator = 2.22683e+006
W Statistic = 0.654861 = 1.45827e+006 / 2.22683e+006

5% Critical value of 0.976 exceeds 0.654861
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.654861
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Cadmium

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.809757
0.809757 < 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	0.1	0.0140351		-2.197284	0.3375	321.801
5	0.1	0.0175439		-2.120074	0.3375	318.03
6	0.1	0.0210526		-2.033524	0.3375	313.804
7	0.1	0.0245614		-1.977374	0.3375	311.062
8	0.1	0.0280702		-1.911034	0.3375	307.822
9	0.1	0.0315789		-1.866294	0.3375	305.637
10	0.1	0.0350877		-1.811914	0.3375	302.982
11	0.1	0.0385965		-1.774384	0.3375	301.149
12	0.1	0.0421053		-1.727934	0.3375	298.881
13	0.1	0.045614		-1.6954	40.3375	297.292
14	0.1	0.0491228		-1.654634	0.3375	295.301
15	0.1	0.0526316		-1.625764	0.3375	293.891
16	0.1	0.0561404		-1.589274	0.3375	292.109
17	0.1	0.0596491		-1.563224	0.3375	290.837
18	0.1	0.0631579		-1.530074	0.3375	289.218
19	0.1	0.0666667		-1.506264	0.3375	288.056
20	0.1	0.0701754		-1.475794	0.3375	286.568
21	0.1	0.0736842		-1.4538	40.3375	285.494
22	0.1	0.077193		-1.425544	0.3375	284.114
23	0.1	0.0807018		-1.405074	0.3375	283.114
24	0.1	0.0842105		-1.378664	0.3375	281.824
25	0.1	0.0877193		-1.359464	0.3375	280.887
26	0.1	0.0912281		-1.334624	0.3375	279.674
27	0.1	0.0947368		-1.316524	0.3375	278.79
28	0.1	0.0982456		-1.293034	0.3375	277.643
29	0.1	0.101754		-1.275884	0.3375	276.805
30	0.1	0.105263		-1.253574	0.3375	275.716
31	0.1	0.108772		-1.237244	0.3375	274.918
32	0.1	0.112281		-1.215964	0.3375	273.879
33	0.1	0.115789		-1.200364	0.3375	273.118
34	0.1	0.119298		-1.18	40.3375	272.123
35	0.1	0.122807		-1.165054	0.3375	271.393
36	0.1	0.126316		-1.1455	40.3375	270.439
37	0.1	0.129825		-1.131134	0.3375	269.737
38	0.1	0.133333		-1.112324	0.3375	268.818
39	0.1	0.136842		-1.098474	0.3375	268.142
40	0.1	0.140351		-1.080324	0.3375	267.256
41	0.1	0.14386	-1.066944	0.3375	266.602	
42	0.1	0.147368		-1.049394	0.3375	265.745
43	0.1	0.150877		-1.036434	0.3375	265.112
44	0.1	0.154386		-1.019434	0.3375	264.282
45	0.1	0.157895		-1.006874	0.3375	263.669
46	0.1	0.161404		-0.990356	40.3375	262.862
47	0.1	0.164912		-0.978154	0.3375	262.266
48	0.1	0.168421		-0.9621	40.3375	261.483

49	0.1	0.17193	-0.950222	40.3375	260.903
50	0.1	0.175439	-0.934594	40.3375	260.139
51	0.1	0.178947	-0.923014	40.3375	259.574
52	0.1	0.182456	-0.907769	40.3375	258.829
53	0.1	0.185965	-0.896473	40.3375	258.278
54	0.1	0.189474	-0.881587	40.3375	257.551
55	0.1	0.192982	-0.870554	40.3375	257.012
56	0.1	0.196491	-0.855996	40.3375	256.301
57	0.1	0.2	-0.841621	40.3375	255.599
58	0.1	0.203509	-0.830953	40.3375	255.078
59	0.1	0.207018	-0.816874	40.3375	254.391
60	0.1	0.210526	-0.806422	40.3375	253.88
61	0.1	0.214035	-0.792618	40.3375	253.206
62	0.1	0.217544	-0.782366	40.3375	252.706
63	0.1	0.221053	-0.768821	40.3375	252.044
64	0.1	0.224561	-0.758753	40.3375	251.552
65	0.1	0.22807	-0.745449	40.3375	250.903
66	0.1	0.231579	-0.735557	40.3375	250.42
67	0.1	0.235088	-0.722479	40.3375	249.781
68	0.1	0.238596	-0.712751	40.3375	249.306
69	0.1	0.242105	-0.699883	40.3375	248.678
70	0.1	0.245614	-0.690309	40.3375	248.21
71	0.1	0.249123	-0.677639	40.3375	247.591
72	0.1	0.252632	-0.668209	40.3375	247.131
73	0.1	0.25614	-0.655726	40.3375	246.521
74	0.1	0.259649	-0.646431	40.3375	246.067
75	0.1	0.263158	-0.634124	40.3375	245.466
76	0.1	0.266667	-0.624956	40.3375	245.019
77	0.1	0.270175	-0.612813	40.3375	244.426
78	0.1	0.273684	-0.603765	40.3375	243.984
79	0.1	0.277193	-0.591776	40.3375	243.398
80	0.1	0.280702	-0.582841	40.3375	242.962
81	0.1	0.284211	-0.570999	40.3375	242.384
82	0.1	0.287719	-0.562174	40.3375	241.953
83	0.1	0.291228	-0.550465	40.3375	241.381
84	0.1	0.294737	-0.541736	40.3375	240.955
85	0.1	0.298246	-0.530162	40.3375	240.39
86	0.1	0.301754	-0.521527	40.3375	239.968
87	0.1	0.305263	-0.510074	40.3375	239.409
88	0.1	0.308772	-0.501527	40.3375	238.991
89	0.1	0.312281	-0.490189	40.3375	238.438
90	0.1	0.315789	-0.481728	40.3375	238.024
91	0.1	0.319298	-0.470498	40.3375	237.476
92	0.1	0.322807	-0.462114	40.3375	237.067
93	0.1	0.326316	-0.450985	40.3375	236.523
94	0.1	0.329825	-0.442676	40.3375	236.117
95	0.1	0.333333	-0.431644	40.3375	235.579
96	0.1	0.336842	-0.423405	40.3375	235.176
97	0.1	0.340351	-0.412463	40.3375	234.642
98	0.1	0.34386	-0.404294	40.3375	234.243
99	0.1	0.347368	-0.393433	40.3375	233.713
100	0.24	0.350877	-0.385321	42.21	233.317
101	0.25	0.354386	-0.374544	42.3438	232.79
102	0.6	0.357895	-0.366494	7.025	232.397
103	0.68	0.361404	-0.355788	48.095	231.874
104	1	0.364912	-0.347787	52.375	231.484
105	1	0.368421	-0.337155	52.375	230.964
106	1	0.37193	-0.329206	52.375	230.576
107	1	0.375439	-0.318639	52.375	230.06
108	1.2	0.378947	-0.310738	55.05	229.674
109	2	0.382456	-0.300232	65.75	229.161
110	2	0.385965	-0.292375	65.75	228.778

111	2	0.389474	-0.281926	65.75	228.267
112	2	0.392982	-0.2741	165.75	227.886
113	3	0.396491	-0.263715	79.125	227.378
114	3	0.4	-0.253347	79.125	226.872
115	3	0.403509	-0.2455	79.125	226.493
116	4	0.407018	-0.235269	92.5	225.989
117	4	0.410526	-0.227545	92.5	225.612
118	4.9	0.414035	-0.217267	104.538	225.11
119	10	0.417544	-0.209575	172.75	224.734
120	10	0.421053	-0.199336	172.75	224.234
121	10	0.424561	-0.191671	172.75	223.86
122	10	0.42807	-0.181468	172.75	223.362
123	10	0.431579	-0.173829	172.75	222.989
124	10	0.435088	-0.163659	172.75	222.492
125	10	0.438596	-0.156042	172.75	222.12
126	10	0.442105	-0.1459	172.75	221.625
127	10	0.445614	-0.138305	172.75	221.254
128	10	0.449123	-0.128189	172.75	220.76
129	10	0.452632	-0.12061	172.75	220.39
130	10	0.45614	-0.110516	172.75	219.897
131	10	0.459649	-0.102953	172.75	219.528
132	10	0.463158	-0.0928787	172.75	219.036
133	10	0.466667	-0.0853288	172.75	218.667
134	10	0.470175	-0.0752698	172.75	218.176
135	10	0.473684	-0.0677301	172.75	217.807
136	10	0.477193	-0.0576847	172.75	217.317
137	10	0.480702	-0.0501541	172.75	216.949
138	10	0.484211	-0.0401167	172.75	216.459
139	10	0.487719	-0.0325917	172.75	216.092
140	10	0.491228	-0.0225612	172.75	215.602
141	10	0.494737	-0.0150408	172.75	215.234
142	10	0.498246	-0.00501359	172.75	214.745
143	10	0.501754	0.00501359	172.75	214.255
144	10	0.505263	0.0150408	172.75	213.766
145	10	0.508772	0.0225612	172.75	213.398
146	10	0.512281	0.0325917	172.75	212.908
147	10	0.515789	0.0401167	172.75	212.541
148	10	0.519298	0.0501541	172.75	212.051
149	10	0.522807	0.0576847	172.75	211.683
150	10	0.526316	0.0677301	172.75	211.193
151	10	0.529825	0.0752698	172.75	210.824
152	10	0.533333	0.0853288	172.75	210.333
153	10	0.536842	0.0928787	172.75	209.964
154	10	0.540351	0.102953	172.75	209.472
155	10	0.54386	0.110516	172.75	209.103
156	10	0.547368	0.12061	172.75	208.61
157	10	0.550877	0.128189	172.75	208.24
158	10	0.554386	0.138305	172.75	207.746
159	10	0.557895	0.1459	172.75	207.375
160	10	0.561404	0.156042	172.75	206.88
161	10	0.564912	0.163659	172.75	206.508
162	10	0.568421	0.173829	172.75	206.011
163	10	0.57193	0.181468	172.75	205.638
164	10	0.575439	0.191671	172.75	205.14
165	10	0.578947	0.199336	172.75	204.766
166	10	0.582456	0.209575	172.75	204.266
167	10	0.585965	0.217267	172.75	203.89
168	10	0.589474	0.227545	172.75	203.388
169	10	0.592982	0.235269	172.75	203.011
170	10	0.596491	0.24559	172.75	202.507
171	10	0.6	0.253347	172.75	202.128
172	10	0.603509	0.263715	172.75	201.622

173	10	0.607018	0.27411	172.75	201.114
174	10	0.610526	0.281926	172.75	200.733
175	10	0.614035	0.292375	172.75	200.222
176	10	0.617544	0.300232	172.75	199.839
177	10	0.621053	0.310738	172.75	199.326
178	10	0.624561	0.318639	172.75	198.94
179	10	0.62807	0.329206	172.75	198.424
180	10	0.631579	0.337155	172.75	198.036
181	10	0.635088	0.347787	172.75	197.516
182	10	0.638596	0.355788	172.75	197.126
183	10	0.642105	0.36649	172.75	196.603
184	10	0.645614	0.374544	172.75	196.21
185	10	0.649123	0.385321	172.75	195.683
186	10	0.652632	0.393433	172.75	195.287
187	10	0.65614	0.40429	172.75	194.757
188	10	0.659649	0.412463	172.75	194.358
189	10	0.663158	0.423405	172.75	193.824
190	10	0.666667	0.431644	172.75	193.421
191	10	0.670175	0.442676	172.75	192.883
192	10	0.673684	0.450985	172.75	192.477
193	10	0.677193	0.462114	172.75	191.933
194	10	0.680702	0.470498	172.75	191.524
195	10	0.684211	0.481728	172.75	190.976
196	10	0.687719	0.490189	172.75	190.562
197	10	0.691228	0.501527	172.75	190.009
198	10	0.694737	0.510074	172.75	189.591
199	10	0.698246	0.521527	172.75	189.032
200	10	0.701754	0.530162	172.75	188.61
201	10	0.705263	0.541736	172.75	188.045
202	10	0.708772	0.550465	172.75	187.619
203	10	0.712281	0.56217	172.75	187.047
204	10	0.715789	0.570999	172.75	186.616
205	10	0.719298	0.582841	172.75	186.038
206	10	0.722807	0.591776	172.75	185.602
207	10	0.726316	0.603765	172.75	185.016
208	10	0.729825	0.612813	172.75	184.574
209	10	0.733333	0.624956	172.75	183.981
210	10	0.736842	0.634124	172.75	183.534
211	10	0.740351	0.646431	172.75	182.933
212	10	0.74386	0.655726	172.75	182.479
213	10	0.747368	0.668209	172.75	181.869
214	10	0.750877	0.677639	172.75	181.409
215	10	0.754386	0.690309	172.75	180.79
216	10	0.757895	0.699883	172.75	180.322
217	10	0.761404	0.712751	172.75	179.694
218	10	0.764912	0.722479	172.75	179.219
219	10	0.768421	0.735557	172.75	178.58
220	10	0.77193	0.745449	172.75	178.097
221	10	0.775439	0.758753	172.75	177.448
222	10	0.778947	0.768821	172.75	176.956
223	10	0.782456	0.782366	172.75	176.294
224	10	0.785965	0.792618	172.75	175.794
225	10	0.789474	0.806422	172.75	175.12
226	10	0.792982	0.816874	172.75	174.609
227	10	0.796491	0.830953	172.75	173.922
228	10	0.8	0.841621	172.75	173.401
229	10	0.803509	0.855996	172.75	172.699
230	10	0.807018	0.87055	172.75	171.988
231	10	0.810526	0.881587	172.75	171.449
232	10	0.814035	0.896473	172.75	170.722
233	10	0.817544	0.907769	172.75	170.171
234	10	0.821053	0.923014	172.75	169.426

235	10	0.824561	0.93459	172.75	168.861	
236	10	0.82807	0.950222	172.75	168.097	
237	10	0.831579	0.9621	172.75	167.517	
238	10	0.835088	0.97815	172.75	166.734	
239	10	0.838596	0.990356	172.75	166.138	
240	10	0.842105	1.00687	172.75	165.331	
241	10	0.845614	1.01943	172.75	164.718	
242	10	0.849123	1.03643	172.75	163.888	
243	10	0.852632	1.04939	172.75	163.255	
244	10	0.85614	1.06694	172.75	162.398	
245	10	0.859649	1.08032	172.75	161.744	
246	10	0.863158	1.09847	172.75	160.858	
247	10	0.866667	1.11232	172.75	160.182	
248	10	0.870175	1.13113	172.75	159.263	
249	10	0.873684	1.1455	172.75	158.561	
250	10	0.877193	1.16505	172.75	157.607	
251	10	0.880702	1.18	172.75	156.877	
252	10	0.884211	1.20036	172.75	155.882	
253	10	0.887719	1.21596	172.75	155.121	
254	10	0.891228	1.23724	172.75	154.082	
255	10	0.894737	1.25357	172.75	153.284	
256	10	0.898246	1.27588	172.75	152.195	
257	10	0.901754	1.29303	172.75	151.357	
258	10	0.905263	1.31652	172.75	150.21	
259	10	0.908772	1.33462	172.75	149.326	
260	10	0.912281	1.35946	172.75	148.113	
261	10	0.915789	1.37866	172.75	147.176	
262	10	0.919298	1.40507	172.75	145.886	
263	10	0.922807	1.42554	172.75	144.886	
264	10	0.926316	1.4538	172.75	143.506	
265	10	0.929825	1.47579	172.75	142.432	
266	10	0.933333	1.50626	172.75	140.944	
267	10	0.936842	1.53007	172.75	139.782	
268	10	0.940351	1.56322	172.75	138.163	
269	10	0.94386	1.58927	172.75	136.891	
270	10	0.947368	1.62576	172.75	135.109	
271	10	0.950877	1.65463	172.75	133.699	
272	10	0.954386	1.6954	172.75	131.708	
273	10	0.957895	1.72793	172.75	130.119	
274	10	0.961404	1.77438	172.75	127.851	
275	10	0.964912	1.81191	172.75	126.018	
276	10	0.968421	1.86629	172.75	123.363	
277	10	0.97193	1.91103	172.75	121.178	
278	10	0.975439	1.97737	172.75	117.938	
279	10	0.978947	2.03352	172.75	115.196	
280	10	0.982456	2.12007	172.75	110.97	
281	10	0.985965	2.19728	172.75	107.199	
282	10	0.989474	2.32634	172.75	100.897	
283	31	0.992982	2.45727	453.625	94.5032	
284	38	0.996491	2.74777	547.25	80.3175	

Shapiro-Francia Test of Normality

Parameter: Cadmium

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	-2.30259	-2.74777	7.55021	6.32696
2	-2.30259	-2.45727	13.5884	11.985
3	-2.30259	-2.32634	19.0003	17.3416
4	-2.30259	-2.19728	23.8283	22.4011
5	-2.30259	-2.12007	28.323	27.2827
6	-2.30259	-2.03352	32.4582	31.9651
7	-2.30259	-1.97737	36.3682	36.5181
8	-2.30259	-1.91103	40.0203	40.9184
9	-2.30259	-1.86629	43.5033	45.2157
10	-2.30259	-1.81191	46.7863	49.3878
11	-2.30259	-1.77438	49.9348	53.4735
12	-2.30259	-1.72793	52.9205	57.4522
13	-2.30259	-1.6954	55.7949	61.356
14	-2.30259	-1.65463	58.5327	65.1659
15	-2.30259	-1.62576	61.1758	68.9094
16	-2.30259	-1.58927	63.7015	72.5688
17	-2.30259	-1.56322	66.1452	76.1682
18	-2.30259	-1.53007	68.4863	79.6913
19	-2.30259	-1.50626	70.7551	83.1596
20	-2.30259	-1.47579	72.9331	86.5578
21	-2.30259	-1.4538	75.0466	89.9053
22	-2.30259	-1.42554	77.0788	93.1877
23	-2.30259	-1.40507	79.053	96.423
24	-2.30259	-1.37866	80.9537	99.5975
25	-2.30259	-1.35946	82.8019	102.728
26	-2.30259	-1.33462	84.5831	105.801
27	-2.30259	-1.31652	86.3163	108.832
28	-2.30259	-1.29303	87.9883	111.81
29	-2.30259	-1.27588	89.6161	114.747
30	-2.30259	-1.25357	91.1875	117.634
31	-2.30259	-1.23724	92.7183	120.483
32	-2.30259	-1.21596	94.1969	123.283
33	-2.30259	-1.20036	95.6377	126.046
34	-2.30259	-1.18	97.0301	128.764
35	-2.30259	-1.16505	98.3875	131.446
36	-2.30259	-1.1455	99.6996	134.084
37	-2.30259	-1.13113	100.979	136.688
38	-2.30259	-1.11232	102.216	139.249
39	-2.30259	-1.09847	103.423	141.779
40	-2.30259	-1.08032	104.59	144.266
41	-2.30259	-1.06694	105.728	146.723
42	-2.30259	-1.04939	106.83	149.139
43	-2.30259	-1.03643	107.904	151.526
44	-2.30259	-1.01943	108.943	153.873
45	-2.30259	-1.00687	109.957	156.192
46	-2.30259	-0.990356	110.938	158.472
47	-2.30259	-0.97815	111.894	160.724
48	-2.30259	-0.9621	112.82	162.94
49	-2.30259	-0.950222	113.723	165.127
50	-2.30259	-0.93459	114.596	167.279
51	-2.30259	-0.923014	115.448	169.405

52	-2.30259	-0.907769	116.272	171.495
53	-2.30259	-0.896473	117.076	173.559
54	-2.30259	-0.881587	117.853	175.589
55	-2.30259	-0.87055	118.611	177.594
56	-2.30259	-0.855996	119.344	179.565
57	-2.30259	-0.841621	120.052	181.503
58	-2.30259	-0.830953	120.743	183.416
59	-2.30259	-0.816874	121.41	185.297
60	-2.30259	-0.806422	122.06	187.154
61	-2.30259	-0.792618	122.689	188.979
62	-2.30259	-0.782366	123.301	190.78
63	-2.30259	-0.768821	123.892	192.55
64	-2.30259	-0.758753	124.467	194.298
65	-2.30259	-0.745449	125.023	196.014
66	-2.30259	-0.735557	125.564	197.708
67	-2.30259	-0.722479	126.086	199.371
68	-2.30259	-0.712751	126.594	201.012
69	-2.30259	-0.699883	127.084	202.624
70	-2.30259	-0.690309	127.561	204.213
71	-2.30259	-0.677639	128.02	205.774
72	-2.30259	-0.668209	128.466	207.312
73	-2.30259	-0.655726	128.896	208.822
74	-2.30259	-0.646431	129.314	210.311
75	-2.30259	-0.634124	129.716	211.771
76	-2.30259	-0.624956	130.107	213.21
77	-2.30259	-0.612813	130.482	214.621
78	-2.30259	-0.603765	130.847	216.011
79	-2.30259	-0.591776	131.197	217.374
80	-2.30259	-0.582841	131.537	218.716
81	-2.30259	-0.570999	131.863	220.031
82	-2.30259	-0.56217	132.179	221.325
83	-2.30259	-0.550465	132.482	222.593
84	-2.30259	-0.541736	132.775	223.84
85	-2.30259	-0.530162	133.056	225.061
86	-2.30259	-0.521527	133.328	226.262
87	-2.30259	-0.510074	133.589	227.436
88	-2.30259	-0.501527	133.84	228.591
89	-2.30259	-0.490189	134.08	229.72
90	-2.30259	-0.481728	134.312	230.829
91	-2.30259	-0.470498	134.534	231.912
92	-2.30259	-0.462114	134.747	232.976
93	-2.30259	-0.450985	134.951	234.015
94	-2.30259	-0.442676	135.147	235.034
95	-2.30259	-0.431644	135.333	236.028
96	-2.30259	-0.423405	135.512	237.003
97	-1.42712	-0.412463	135.682	237.591
98	-1.38629	-0.40429	135.846	238.152
99	-0.510826	-0.393433	136.001	238.353
100	-0.385662	-0.385321	136.149	238.501
101	0	-0.374544	136.289	238.501
102	0	-0.36649	136.424	238.501
103	0	-0.355788	136.55	238.501
104	0	-0.347787	136.671	238.501
105	0	-0.337155	136.785	238.501
106	0	-0.329206	136.893	238.501
107	0	-0.318639	136.995	238.501
108	0.182322	-0.310738	137.091	238.445
109	0.693147	-0.300232	137.182	238.237
110	0.693147	-0.292375	137.267	238.034
111	0.693147	-0.281926	137.346	237.839
112	0.693147	-0.27411	137.422	237.649
113	1.09861	-0.263715	137.491	237.359

114	1.09861	-0.253347	137.555	237.08
115	1.09861	-0.24559	137.616	236.811
116	1.38629	-0.235269	137.671	236.485
117	1.38629	-0.227545	137.723	236.169
118	1.58924	-0.217267	137.77	235.824
119	2.30259	-0.209575	137.814	235.341
120	2.30259	-0.199336	137.854	234.882
121	2.30259	-0.191671	137.89	234.441
122	2.30259	-0.181468	137.923	234.023
123	2.30259	-0.173829	137.954	233.623
124	2.30259	-0.163659	137.98	233.246
125	2.30259	-0.156042	138.005	232.887
126	2.30259	-0.1459	138.026	232.551
127	2.30259	-0.138305	138.045	232.232
128	2.30259	-0.128189	138.062	231.937
129	2.30259	-0.12061	138.076	231.659
130	2.30259	-0.110516	138.088	231.405
131	2.30259	-0.102953	138.099	231.168
132	2.30259	-0.0928787	138.108	230.954
133	2.30259	-0.0853288	138.115	230.758
134	2.30259	-0.0752698	138.12	230.584
135	2.30259	-0.0677301	138.125	230.428
136	2.30259	-0.0576847	138.128	230.295
137	2.30259	-0.0501541	138.131	230.18
138	2.30259	-0.0401167	138.132	230.088
139	2.30259	-0.0325917	138.134	230.013
140	2.30259	-0.0225612	138.134	229.961
141	2.30259	-0.0150408	138.134	229.926
142	2.30259	-0.00501359	138.134	229.914
143	2.30259	0.00501359	138.134	229.926
144	2.30259	0.0150408	138.135	229.961
145	2.30259	0.0225612	138.135	230.013
146	2.30259	0.0325917	138.136	230.088
147	2.30259	0.0401167	138.138	230.18
148	2.30259	0.0501541	138.14	230.295
149	2.30259	0.0576847	138.144	230.428
150	2.30259	0.0677301	138.148	230.584
151	2.30259	0.0752698	138.154	230.758
152	2.30259	0.0853288	138.161	230.954
153	2.30259	0.0928787	138.17	231.168
154	2.30259	0.102953	138.18	231.405
155	2.30259	0.110516	138.193	231.659
156	2.30259	0.12061	138.207	231.937
157	2.30259	0.128189	138.224	232.232
158	2.30259	0.138305	138.243	232.551
159	2.30259	0.1459	138.264	232.887
160	2.30259	0.156042	138.288	233.246
161	2.30259	0.163659	138.315	233.623
162	2.30259	0.173829	138.345	234.023
163	2.30259	0.181468	138.378	234.441
164	2.30259	0.191671	138.415	234.882
165	2.30259	0.199336	138.455	235.341
166	2.30259	0.209575	138.499	235.824
167	2.30259	0.217267	138.546	236.324
168	2.30259	0.227545	138.598	236.848
169	2.30259	0.235269	138.653	237.39
170	2.30259	0.24559	138.713	237.955
171	2.30259	0.253347	138.777	238.539
172	2.30259	0.263715	138.847	239.146
173	2.30259	0.27411	138.922	239.777
174	2.30259	0.281926	139.002	240.426
175	2.30259	0.292375	139.087	241.099

176	2.30259	0.300232	139.177	241.791
177	2.30259	0.310738	139.274	242.506
178	2.30259	0.318639	139.375	243.24
179	2.30259	0.329206	139.484	243.998
180	2.30259	0.337155	139.597	244.774
181	2.30259	0.347787	139.718	245.575
182	2.30259	0.355788	139.845	246.394
183	2.30259	0.36649	139.979	247.238
184	2.30259	0.374544	140.12	248.101
185	2.30259	0.385321	140.268	248.988
186	2.30259	0.393433	140.423	249.894
187	2.30259	0.40429	140.586	250.825
188	2.30259	0.412463	140.756	251.774
189	2.30259	0.423405	140.936	252.749
190	2.30259	0.431644	141.122	253.743
191	2.30259	0.442676	141.318	254.762
192	2.30259	0.450985	141.521	255.801
193	2.30259	0.462114	141.735	256.865
194	2.30259	0.470498	141.956	257.948
195	2.30259	0.481728	142.188	259.058
196	2.30259	0.490189	142.429	260.186
197	2.30259	0.501527	142.68	261.341
198	2.30259	0.510074	142.94	262.516
199	2.30259	0.521527	143.212	263.716
200	2.30259	0.530162	143.493	264.937
201	2.30259	0.541736	143.787	266.185
202	2.30259	0.550465	144.09	267.452
203	2.30259	0.56217	144.406	268.746
204	2.30259	0.570999	144.732	270.061
205	2.30259	0.582841	145.072	271.403
206	2.30259	0.591776	145.422	272.766
207	2.30259	0.603765	145.786	274.156
208	2.30259	0.612813	146.162	275.567
209	2.30259	0.624956	146.552	277.006
210	2.30259	0.634124	146.955	278.466
211	2.30259	0.646431	147.372	279.955
212	2.30259	0.655726	147.802	281.465
213	2.30259	0.668209	148.249	283.003
214	2.30259	0.677639	148.708	284.564
215	2.30259	0.690309	149.185	286.153
216	2.30259	0.699883	149.674	287.765
217	2.30259	0.712751	150.182	289.406
218	2.30259	0.722479	150.704	291.069
219	2.30259	0.735557	151.245	292.763
220	2.30259	0.745449	151.801	294.479
221	2.30259	0.758753	152.377	296.227
222	2.30259	0.768821	152.968	297.997
223	2.30259	0.782366	153.58	299.798
224	2.30259	0.792618	154.208	301.623
225	2.30259	0.806422	154.859	303.48
226	2.30259	0.816874	155.526	305.361
227	2.30259	0.830953	156.216	307.274
228	2.30259	0.841621	156.925	309.212
229	2.30259	0.855996	157.657	311.183
230	2.30259	0.87055	158.415	313.188
231	2.30259	0.881587	159.193	315.218
232	2.30259	0.896473	159.996	317.282
233	2.30259	0.907769	160.82	319.372
234	2.30259	0.923014	161.672	321.498
235	2.30259	0.93459	162.546	323.65
236	2.30259	0.950222	163.449	325.838
237	2.30259	0.9621	164.374	328.053

238	2.30259	0.97815	165.331	330.305	
239	2.30259	0.990356		166.312	332.585
240	2.30259	1.00687	167.326	334.904	
241	2.30259	1.01943	168.365	337.251	
242	2.30259	1.03643	169.439	339.638	
243	2.30259	1.04939	170.54	342.054	
244	2.30259	1.06694	171.679	344.511	
245	2.30259	1.08032	172.846	346.998	
246	2.30259	1.09847	174.052	349.528	
247	2.30259	1.11232	175.29	352.089	
248	2.30259	1.13113	176.569	354.693	
249	2.30259	1.1455	177.881	357.331	
250	2.30259	1.16505	179.239	360.014	
251	2.30259	1.18	180.631	362.731	
252	2.30259	1.20036	182.072	365.495	
253	2.30259	1.21596	183.55	368.294	
254	2.30259	1.23724	185.081	371.143	
255	2.30259	1.25357	186.653	374.03	
256	2.30259	1.27588	188.28	376.967	
257	2.30259	1.29303	189.952	379.945	
258	2.30259	1.31652	191.686	382.976	
259	2.30259	1.33462	193.467	386.049	
260	2.30259	1.35946	195.315	389.18	
261	2.30259	1.37866	197.216	392.354	
262	2.30259	1.40507	199.19	395.589	
263	2.30259	1.42554	201.222	398.872	
264	2.30259	1.4538	203.336	402.219	
265	2.30259	1.47579	205.514	405.617	
266	2.30259	1.50626	207.782	409.086	
267	2.30259	1.53007	210.123	412.609	
268	2.30259	1.56322	212.567	416.208	
269	2.30259	1.58927	215.093	419.868	
270	2.30259	1.62576	217.736	423.611	
271	2.30259	1.65463	220.474	427.421	
272	2.30259	1.6954	223.348	431.325	
273	2.30259	1.72793	226.334	435.304	
274	2.30259	1.77438	229.482	439.389	
275	2.30259	1.81191	232.765	443.561	
276	2.30259	1.86629	236.248	447.859	
277	2.30259	1.91103	239.9	452.259	
278	2.30259	1.97737	243.81	456.812	
279	2.30259	2.03352	247.946	461.494	
280	2.30259	2.12007	252.44	466.376	
281	2.30259	2.19728	257.268	471.435	
282	2.30259	2.32634	262.68	476.792	
283	3.43399	2.45727	268.718	485.23	
284	3.63759	2.74777	276.269	495.225	

Data Set Standard Deviation = 2.15758
Numerator = 245248
Denominator = 363959
W Statistic = 0.673834 = 245248 / 363959

5% Critical value of 0.976 exceeds 0.673834
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.673834
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Cadmium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.818444
0.818444 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.30259	0.00350877	-2.74777	92.3024	348.683
2	-2.30259	0.00701754	-2.45727	92.3024	334.497
3	-2.30259	0.0105263	-2.32634	92.3024	328.103
4	-2.30259	0.0140351	-2.19728	92.3024	321.801
5	-2.30259	0.0175439	-2.12007	92.3024	318.03
6	-2.30259	0.0210526	-2.03352	92.3024	313.804
7	-2.30259	0.0245614	-1.97737	92.3024	311.062
8	-2.30259	0.0280702	-1.91103	92.3024	307.822
9	-2.30259	0.0315789	-1.86629	92.3024	305.637
10	-2.30259	0.0350877	-1.81191	92.3024	302.982
11	-2.30259	0.0385965	-1.77438	92.3024	301.149
12	-2.30259	0.0421053	-1.72793	92.3024	298.881
13	-2.30259	0.045614	-1.6954	92.3024	297.292
14	-2.30259	0.0491228	-1.65463	92.3024	295.301
15	-2.30259	0.0526316	-1.62576	92.3024	293.891
16	-2.30259	0.0561404	-1.58927	92.3024	292.109
17	-2.30259	0.0596491	-1.56322	92.3024	290.837
18	-2.30259	0.0631579	-1.53007	92.3024	289.218
19	-2.30259	0.0666667	-1.50626	92.3024	288.056
20	-2.30259	0.0701754	-1.47579	92.3024	286.568
21	-2.30259	0.0736842	-1.4538	92.3024	285.494
22	-2.30259	0.077193	-1.42554	92.3024	284.114
23	-2.30259	0.0807018	-1.40507	92.3024	283.114
24	-2.30259	0.0842105	-1.37866	92.3024	281.824
25	-2.30259	0.0877193	-1.35946	92.3024	280.887
26	-2.30259	0.0912281	-1.33462	92.3024	279.674
27	-2.30259	0.0947368	-1.31652	92.3024	278.79
28	-2.30259	0.0982456	-1.29303	92.3024	277.643
29	-2.30259	0.101754	-1.27588	92.3024	276.805
30	-2.30259	0.105263	-1.25357	92.3024	275.716
31	-2.30259	0.108772	-1.23724	92.3024	274.918
32	-2.30259	0.112281	-1.21596	92.3024	273.879
33	-2.30259	0.115789	-1.20036	92.3024	273.118
34	-2.30259	0.119298	-1.18	92.3024	272.123
35	-2.30259	0.122807	-1.16505	92.3024	271.393
36	-2.30259	0.126316	-1.1455	92.3024	270.439
37	-2.30259	0.129825	-1.13113	92.3024	269.737
38	-2.30259	0.133333	-1.11232	92.3024	268.818
39	-2.30259	0.136842	-1.09847	92.3024	268.142
40	-2.30259	0.140351	-1.08032	92.3024	267.256
41	-2.30259	0.14386	-1.06694	92.3024	266.602
42	-2.30259	0.147368	-1.04939	92.3024	265.745
43	-2.30259	0.150877	-1.03643	92.3024	265.112
44	-2.30259	0.154386	-1.01943	92.3024	264.282
45	-2.30259	0.157895	-1.00687	92.3024	263.669
46	-2.30259	0.161404	-0.990356	92.3024	262.862
47	-2.30259	0.164912	-0.97815	92.3024	262.266
48	-2.30259	0.168421	-0.9621	92.3024	261.483

49	-2.302590.17193	-0.950222	92.3024	260.903	
50	-2.302590.175439	-0.9345992.3024	260.139		
51	-2.302590.178947	-0.923014	92.3024	259.574	
52	-2.302590.182456	-0.907769	92.3024	258.829	
53	-2.302590.185965	-0.896473	92.3024	258.278	
54	-2.302590.189474	-0.881587	92.3024	257.551	
55	-2.302590.192982	-0.8705592.3024	257.012		
56	-2.302590.196491	-0.855996	92.3024	256.301	
57	-2.302590.2	-0.841621	92.3024	255.599	
58	-2.302590.203509	-0.830953	92.3024	255.078	
59	-2.302590.207018	-0.816874	92.3024	254.391	
60	-2.302590.210526	-0.806422	92.3024	253.88	
61	-2.302590.214035	-0.792618	92.3024	253.206	
62	-2.302590.217544	-0.782366	92.3024	252.706	
63	-2.302590.221053	-0.768821	92.3024	252.044	
64	-2.302590.224561	-0.758753	92.3024	251.552	
65	-2.302590.22807	-0.745449	92.3024	250.903	
66	-2.302590.231579	-0.735557	92.3024	250.42	
67	-2.302590.235088	-0.722479	92.3024	249.781	
68	-2.302590.238596	-0.712751	92.3024	249.306	
69	-2.302590.242105	-0.699883	92.3024	248.678	
70	-2.302590.245614	-0.690309	92.3024	248.21	
71	-2.302590.249123	-0.677639	92.3024	247.591	
72	-2.302590.252632	-0.668209	92.3024	247.131	
73	-2.302590.25614	-0.655726	92.3024	246.521	
74	-2.302590.259649	-0.646431	92.3024	246.067	
75	-2.302590.263158	-0.634124	92.3024	245.466	
76	-2.302590.266667	-0.624956	92.3024	245.019	
77	-2.302590.270175	-0.612813	92.3024	244.426	
78	-2.302590.273684	-0.603765	92.3024	243.984	
79	-2.302590.277193	-0.591776	92.3024	243.398	
80	-2.302590.280702	-0.582841	92.3024	242.962	
81	-2.302590.284211	-0.570999	92.3024	242.384	
82	-2.302590.287719	-0.5621792.3024	241.953		
83	-2.302590.291228	-0.550465	92.3024	241.381	
84	-2.302590.294737	-0.541736	92.3024	240.955	
85	-2.302590.298246	-0.530162	92.3024	240.39	
86	-2.302590.301754	-0.521527	92.3024	239.968	
87	-2.302590.305263	-0.510074	92.3024	239.409	
88	-2.302590.308772	-0.501527	92.3024	238.991	
89	-2.302590.312281	-0.490189	92.3024	238.438	
90	-2.302590.315789	-0.481728	92.3024	238.024	
91	-2.302590.319298	-0.470498	92.3024	237.476	
92	-2.302590.322807	-0.462114	92.3024	237.067	
93	-2.302590.326316	-0.450985	92.3024	236.523	
94	-2.302590.329825	-0.442676	92.3024	236.117	
95	-2.302590.333333	-0.431644	92.3024	235.579	
96	-2.302590.336842	-0.423405	92.3024	235.176	
97	-1.427120.340351	-0.412463	159.213	234.642	
98	-1.386290.34386	-0.40429162.333	234.243		
99	-0.510826	0.347368	-0.393433	229.244	233.713
100	-0.385662	0.350877	-0.385321	238.81	233.317
101	0	0.354386	-0.374544	268.286	232.79
102	0	0.357895	-0.36649268.286	232.397	
103	0	0.361404	-0.355788	268.286	231.874
104	0	0.364912	-0.347787	268.286	231.484
105	0	0.368421	-0.337155	268.286	230.964
106	0	0.37193	-0.329206	268.286	230.576
107	0	0.375439	-0.318639	268.286	230.06
108	0.182322	0.378947	-0.310738	282.22	229.674
109	0.693147	0.382456	-0.300232	321.262	229.161
110	0.693147	0.385965	-0.292375	321.262	228.778

111	0.693147	0.389474	-0.281926	321.262	228.267
112	0.693147	0.392982	-0.27411	321.262	227.886
113	1.09861	0.396491	-0.263715	352.251	227.378
114	1.09861	0.4	-0.253347	352.251	226.872
115	1.09861	0.403509	-0.24559	352.251	226.493
116	1.38629	0.407018	-0.235269	374.238	225.989
117	1.38629	0.410526	-0.227545	374.238	225.612
118	1.58924	0.414035	-0.217267	389.749	225.11
119	2.30259	0.417544	-0.209575	444.269	224.734
120	2.30259	0.421053	-0.199336	444.269	224.234
121	2.30259	0.424561	-0.191671	444.269	223.86
122	2.30259	0.42807	-0.181468	444.269	223.362
123	2.30259	0.431579	-0.173829	444.269	222.989
124	2.30259	0.435088	-0.163659	444.269	222.492
125	2.30259	0.438596	-0.156042	444.269	222.12
126	2.30259	0.442105	-0.1459	444.269	221.625
127	2.30259	0.445614	-0.138305	444.269	221.254
128	2.30259	0.449123	-0.128189	444.269	220.76
129	2.30259	0.452632	-0.12061	444.269	220.39
130	2.30259	0.45614	-0.110516	444.269	219.897
131	2.30259	0.459649	-0.102953	444.269	219.528
132	2.30259	0.463158	-0.0928787	444.269	219.036
133	2.30259	0.466667	-0.0853288	444.269	218.667
134	2.30259	0.470175	-0.0752698	444.269	218.176
135	2.30259	0.473684	-0.0677301	444.269	217.807
136	2.30259	0.477193	-0.0576847	444.269	217.317
137	2.30259	0.480702	-0.0501541	444.269	216.949
138	2.30259	0.484211	-0.0401167	444.269	216.459
139	2.30259	0.487719	-0.0325917	444.269	216.092
140	2.30259	0.491228	-0.0225612	444.269	215.602
141	2.30259	0.494737	-0.0150408	444.269	215.234
142	2.30259	0.498246	-0.00501359	444.269	214.745
143	2.30259	0.501754	0.00501359	444.269	214.255
144	2.30259	0.505263	0.0150408	444.269	213.766
145	2.30259	0.508772	0.0225612	444.269	213.398
146	2.30259	0.512281	0.0325917	444.269	212.908
147	2.30259	0.515789	0.0401167	444.269	212.541
148	2.30259	0.519298	0.0501541	444.269	212.051
149	2.30259	0.522807	0.0576847	444.269	211.683
150	2.30259	0.526316	0.0677301	444.269	211.193
151	2.30259	0.529825	0.0752698	444.269	210.824
152	2.30259	0.533333	0.0853288	444.269	210.333
153	2.30259	0.536842	0.0928787	444.269	209.964
154	2.30259	0.540351	0.102953	444.269	209.472
155	2.30259	0.54386	0.110516	444.269	209.103
156	2.30259	0.547368	0.12061	444.269	208.61
157	2.30259	0.550877	0.128189	444.269	208.24
158	2.30259	0.554386	0.138305	444.269	207.746
159	2.30259	0.557895	0.1459	444.269	207.375
160	2.30259	0.561404	0.156042	444.269	206.88
161	2.30259	0.564912	0.163659	444.269	206.508
162	2.30259	0.568421	0.173829	444.269	206.011
163	2.30259	0.57193	0.181468	444.269	205.638
164	2.30259	0.575439	0.191671	444.269	205.14
165	2.30259	0.578947	0.199336	444.269	204.766
166	2.30259	0.582456	0.209575	444.269	204.266
167	2.30259	0.585965	0.217267	444.269	203.89
168	2.30259	0.589474	0.227545	444.269	203.388
169	2.30259	0.592982	0.235269	444.269	203.011
170	2.30259	0.596491	0.24559	444.269	202.507
171	2.30259	0.6	0.253347	444.269	202.128
172	2.30259	0.603509	0.263715	444.269	201.622

173	2.30259	0.607018	0.27411	444.269	201.114
174	2.30259	0.610526	0.281926	444.269	200.733
175	2.30259	0.614035	0.292375	444.269	200.222
176	2.30259	0.617544	0.300232	444.269	199.839
177	2.30259	0.621053	0.310738	444.269	199.326
178	2.30259	0.624561	0.318639	444.269	198.94
179	2.30259	0.62807	0.329206	444.269	198.424
180	2.30259	0.631579	0.337155	444.269	198.036
181	2.30259	0.635088	0.347787	444.269	197.516
182	2.30259	0.638596	0.355788	444.269	197.126
183	2.30259	0.642105	0.36649	444.269	196.603
184	2.30259	0.645614	0.374544	444.269	196.21
185	2.30259	0.649123	0.385321	444.269	195.683
186	2.30259	0.652632	0.393433	444.269	195.287
187	2.30259	0.65614	0.40429	444.269	194.757
188	2.30259	0.659649	0.412463	444.269	194.358
189	2.30259	0.663158	0.423405	444.269	193.824
190	2.30259	0.666667	0.431644	444.269	193.421
191	2.30259	0.670175	0.442676	444.269	192.883
192	2.30259	0.673684	0.450985	444.269	192.477
193	2.30259	0.677193	0.462114	444.269	191.933
194	2.30259	0.680702	0.470498	444.269	191.524
195	2.30259	0.684211	0.481728	444.269	190.976
196	2.30259	0.687719	0.490189	444.269	190.562
197	2.30259	0.691228	0.501527	444.269	190.009
198	2.30259	0.694737	0.510074	444.269	189.591
199	2.30259	0.698246	0.521527	444.269	189.032
200	2.30259	0.701754	0.530162	444.269	188.61
201	2.30259	0.705263	0.541736	444.269	188.045
202	2.30259	0.708772	0.550465	444.269	187.619
203	2.30259	0.712281	0.56217	444.269	187.047
204	2.30259	0.715789	0.570999	444.269	186.616
205	2.30259	0.719298	0.582841	444.269	186.038
206	2.30259	0.722807	0.591776	444.269	185.602
207	2.30259	0.726316	0.603765	444.269	185.016
208	2.30259	0.729825	0.612813	444.269	184.574
209	2.30259	0.733333	0.624956	444.269	183.981
210	2.30259	0.736842	0.634124	444.269	183.534
211	2.30259	0.740351	0.646431	444.269	182.933
212	2.30259	0.74386	0.655726	444.269	182.479
213	2.30259	0.747368	0.668209	444.269	181.869
214	2.30259	0.750877	0.677639	444.269	181.409
215	2.30259	0.754386	0.690309	444.269	180.79
216	2.30259	0.757895	0.699883	444.269	180.322
217	2.30259	0.761404	0.712751	444.269	179.694
218	2.30259	0.764912	0.722479	444.269	179.219
219	2.30259	0.768421	0.735557	444.269	178.58
220	2.30259	0.77193	0.745449	444.269	178.097
221	2.30259	0.775439	0.758753	444.269	177.448
222	2.30259	0.778947	0.768821	444.269	176.956
223	2.30259	0.782456	0.782366	444.269	176.294
224	2.30259	0.785965	0.792618	444.269	175.794
225	2.30259	0.789474	0.806422	444.269	175.12
226	2.30259	0.792982	0.816874	444.269	174.609
227	2.30259	0.796491	0.830953	444.269	173.922
228	2.30259	0.8	0.841621	444.269	173.401
229	2.30259	0.803509	0.855996	444.269	172.699
230	2.30259	0.807018	0.87055	444.269	171.988
231	2.30259	0.810526	0.881587	444.269	171.449
232	2.30259	0.814035	0.896473	444.269	170.722
233	2.30259	0.817544	0.907769	444.269	170.171
234	2.30259	0.821053	0.923014	444.269	169.426

235	2.30259	0.824561	0.93459	444.269	168.861	
236	2.30259	0.82807	0.950222	444.269	168.097	
237	2.30259	0.831579	0.9621	444.269	167.517	
238	2.30259	0.835088	0.97815	444.269	166.734	
239	2.30259	0.838596	0.990356	444.269	166.138	
240	2.30259	0.842105	1.00687	444.269	165.331	
241	2.30259	0.845614	1.01943	444.269	164.718	
242	2.30259	0.849123	1.03643	444.269	163.888	
243	2.30259	0.852632	1.04939	444.269	163.255	
244	2.30259	0.85614	1.06694	444.269	162.398	
245	2.30259	0.859649	1.08032	444.269	161.744	
246	2.30259	0.863158	1.09847	444.269	160.858	
247	2.30259	0.866667	1.11232	444.269	160.182	
248	2.30259	0.870175	1.13113	444.269	159.263	
249	2.30259	0.873684	1.1455	444.269	158.561	
250	2.30259	0.877193	1.16505	444.269	157.607	
251	2.30259	0.880702	1.18	444.269	156.877	
252	2.30259	0.884211	1.20036	444.269	155.882	
253	2.30259	0.887719	1.21596	444.269	155.121	
254	2.30259	0.891228	1.23724	444.269	154.082	
255	2.30259	0.894737	1.25357	444.269	153.284	
256	2.30259	0.898246	1.27588	444.269	152.195	
257	2.30259	0.901754	1.29303	444.269	151.357	
258	2.30259	0.905263	1.31652	444.269	150.21	
259	2.30259	0.908772	1.33462	444.269	149.326	
260	2.30259	0.912281	1.35946	444.269	148.113	
261	2.30259	0.915789	1.37866	444.269	147.176	
262	2.30259	0.919298	1.40507	444.269	145.886	
263	2.30259	0.922807	1.42554	444.269	144.886	
264	2.30259	0.926316	1.4538	444.269	143.506	
265	2.30259	0.929825	1.47579	444.269	142.432	
266	2.30259	0.933333	1.50626	444.269	140.944	
267	2.30259	0.936842	1.53007	444.269	139.782	
268	2.30259	0.940351	1.56322	444.269	138.163	
269	2.30259	0.94386	1.58927	444.269	136.891	
270	2.30259	0.947368	1.62576	444.269	135.109	
271	2.30259	0.950877	1.65463	444.269	133.699	
272	2.30259	0.954386	1.6954	444.269	131.708	
273	2.30259	0.957895	1.72793	444.269	130.119	
274	2.30259	0.961404	1.77438	444.269	127.851	
275	2.30259	0.964912	1.81191	444.269	126.018	
276	2.30259	0.968421	1.86629	444.269	123.363	
277	2.30259	0.97193	1.91103	444.269	121.178	
278	2.30259	0.975439	1.97737	444.269	117.938	
279	2.30259	0.978947	2.03352	444.269	115.196	
280	2.30259	0.982456	2.12007	444.269	110.97	
281	2.30259	0.985965	2.19728	444.269	107.199	
282	2.30259	0.989474	2.32634	444.269	100.897	
283	3.43399	0.992982	2.45727	530.74	94.5032	
284	3.63759	0.996491	2.74777	546.301	80.3175	

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Cadmium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 92.6056%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 23
Maximum Background Value = 2.30259
Confidence Level = 74.2%
False Positive Rate = 25.8%

Location	Date	Count	Mean	Significant
LMW-10	11/16/2012	1	-2.30259	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
LMW-14R	11/16/2012	1	-2.30259	FALSE
LMW-15R	11/16/2012	1	-2.30259	FALSE
LMW-16	11/16/2012	1	-2.30259	FALSE
LMW-3	11/16/2012	1	-2.30259	FALSE
LMW-3S	11/16/2012	1	-2.30259	FALSE
LMW-6	11/16/2012	1	-2.30259	FALSE
LMW-7	11/16/2012	1	-1.38629	FALSE
LMW-8	11/16/2012	1	-2.30259	FALSE
LMW-9	11/16/2012	1	-2.30259	FALSE
LMW-9D	11/16/2012	1	-2.30259	FALSE
LMW-9S	11/16/2012	1	-2.30259	FALSE
MW-5	11/20/2008	1	2.30259	FALSE

Concentrations (ppb)

Parameter: Chloroform

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 268
Percent Non-Detects: 94.3662%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	22 (95.6522%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	16 (80%)	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

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		
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		
		6/11/2009	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	
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		
		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
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<0.14 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
LMW-3	25	17 (68%)	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
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<0.14 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
LMW-6	23	22 (95.6522%)	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
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
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
			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
LMW-9	23	22 (95.6522%)	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
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<0.14 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
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
			6/11/2009	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
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

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 = 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	0.07	-2.326341	9.0003	-0.162844
4	0.07	-2.197282	3.8283	-0.316654
5	0.07	-2.120072	8.323	-0.465059
6	0.07	-2.033523	2.4582	-0.607405
7	0.07	-1.977373	6.3682	-0.745821
8	0.07	-1.911034	0.0203	-0.879593
9	0.07	-1.866294	3.5033	-1.01023
10	0.07	-1.811914	6.7863	-1.13707
11	0.07	-1.774384	9.9348	-1.26127
12	0.07	-1.727935	2.9205	-1.38223
13	0.07	-1.6954	55.7949	-1.50091
14	0.07	-1.654635	8.5327	-1.61673
15	0.07	-1.625766	1.1758	-1.73053
16	0.07	-1.589276	3.7015	-1.84178
17	0.07	-1.563226	6.1452	-1.95121
18	0.07	-1.530076	8.4863	-2.05831
19	0.07	-1.506267	0.7551	-2.16375
20	0.07	-1.475797	2.9331	-2.26706
21	0.07	-1.4538	75.0466	-2.36882
22	0.07	-1.425547	7.0788	-2.46861
23	0.07	-1.405077	9.053	-2.56697
24	0.07	-1.378668	0.9537	-2.66347
25	0.07	-1.359468	2.8019	-2.75863
26	0.07	-1.334628	4.5831	-2.85206
27	0.07	-1.316528	6.3163	-2.94421
28	0.07	-1.293038	7.9883	-3.03473
29	0.07	-1.275888	9.6161	-3.12404
30	0.07	-1.253579	1.1875	-3.21179
31	0.07	-1.237249	2.7183	-3.29839
32	0.07	-1.215969	4.1969	-3.38351
33	0.07	-1.200369	5.6377	-3.46754
34	0.07	-1.18	97.0301	-3.55014
35	0.07	-1.165059	8.3875	-3.63169
36	0.07	-1.1455	99.6996	-3.71188
37	0.07	-1.131131	00.979	-3.79105
38	0.07	-1.112321	02.216	-3.86892
39	0.07	-1.098471	03.423	-3.94581
40	0.07	-1.080321	04.59	-4.02143
41	0.07	-1.066941	05.728	-4.09612
42	0.07	-1.049391	06.83	-4.16958
43	0.07	-1.036431	07.904	-4.24213
44	0.07	-1.019431	08.943	-4.31349
45	0.07	-1.006871	09.957	-4.38397
46	0.07	-0.990356	110.938	-4.45329
47	0.07	-0.978151	11.894	-4.52176
48	0.07	-0.9621	112.82	-4.58911
49	0.07	-0.950222	113.723	-4.65562
50	0.07	-0.934591	14.596	-4.72105
51	0.07	-0.923014	115.448	-4.78566

52	0.07	-0.907769	116.272	-4.8492
53	0.07	-0.896473	117.076	-4.91195
54	0.07	-0.881587	117.853	-4.97366
55	0.07	-0.87055	118.611	-5.0346
56	0.07	-0.855996	119.344	-5.09452
57	0.07	-0.841621	120.052	-5.15344
58	0.07	-0.830953	120.743	-5.2116
59	0.07	-0.816874	121.41	-5.26878
60	0.07	-0.806422	122.06	-5.32523
61	0.07	-0.792618	122.689	-5.38072
62	0.07	-0.782366	123.301	-5.43548
63	0.07	-0.768821	123.892	-5.4893
64	0.07	-0.758753	124.467	-5.54241
65	0.07	-0.745449	125.023	-5.59459
66	0.07	-0.735557	125.564	-5.64608
67	0.07	-0.722479	126.086	-5.69666
68	0.07	-0.712751	126.594	-5.74655
69	0.07	-0.699883	127.084	-5.79554
70	0.07	-0.690309	127.561	-5.84386
71	0.07	-0.677639	128.02	-5.8913
72	0.07	-0.668209	128.466	-5.93807
73	0.07	-0.655726	128.896	-5.98397
74	0.07	-0.646431	129.314	-6.02922
75	0.07	-0.634124	129.716	-6.07361
76	0.07	-0.624956	130.107	-6.11736
77	0.07	-0.612813	130.482	-6.16026
78	0.07	-0.603765	130.847	-6.20252
79	0.07	-0.591776	131.197	-6.24394
80	0.07	-0.582841	131.537	-6.28474
81	0.07	-0.570999	131.863	-6.32471
82	0.07	-0.56217	132.179	-6.36406
83	0.07	-0.550465	132.482	-6.4026
84	0.07	-0.541736	132.775	-6.44052
85	0.07	-0.530162	133.056	-6.47763
86	0.07	-0.521527	133.328	-6.51414
87	0.07	-0.510074	133.589	-6.54984
88	0.07	-0.501527	133.84	-6.58495
89	0.07	-0.490189	134.08	-6.61926
90	0.07	-0.481728	134.312	-6.65298
91	0.07	-0.470498	134.534	-6.68592
92	0.07	-0.462114	134.747	-6.71827
93	0.14	-0.450985	134.951	-6.7814
94	0.2	-0.442676	135.147	-6.86994
95	0.23	-0.431644	135.333	-6.96922
96	0.25	-0.423405	135.512	-7.07507
97	0.31	-0.412463	135.682	-7.20293
98	0.33	-0.40429	135.846	-7.33635
99	0.4	-0.393433	136.001	-7.49372
100	0.41	-0.385321	136.149	-7.6517
101	0.42	-0.374544	136.289	-7.80901
102	0.44	-0.36649	136.424	-7.97027
103	0.5	-0.355788	136.55	-8.14816
104	0.5	-0.347787	136.671	-8.32205
105	0.5	-0.337155	136.785	-8.49063
106	0.5	-0.329206	136.893	-8.65523
107	0.5	-0.318639	136.995	-8.81455
108	0.5	-0.310738	137.091	-8.96992
109	0.5	-0.300232	137.182	-9.12004
110	0.5	-0.292375	137.267	-9.26623
111	0.5	-0.281926	137.346	-9.40719
112	0.5	-0.27411	137.422	-9.54424
113	0.5	-0.263715	137.491	-9.6761

114	0.5	-0.253347	137.555	-9.80277
115	0.5	-0.24559	137.616	-9.92557
116	0.5	-0.235269	137.671	-10.0432
117	0.5	-0.227545	137.723	-10.157
118	0.5	-0.217267	137.77	-10.2656
119	0.5	-0.209575	137.814	-10.3704
120	0.5	-0.199336	137.854	-10.4701
121	0.5	-0.191671	137.89	-10.5659
122	0.5	-0.181468	137.923	-10.6566
123	0.5	-0.173829	137.954	-10.7436
124	0.5	-0.163659	137.98	-10.8254
125	0.5	-0.156042	138.005	-10.9034
126	0.5	-0.1459	138.026	-10.9764
127	0.5	-0.138305	138.045	-11.0455
128	0.5	-0.128189	138.062	-11.1096
129	0.5	-0.12061	138.076	-11.1699
130	0.5	-0.110516	138.088	-11.2252
131	0.5	-0.102953	138.099	-11.2766
132	0.5	-0.0928787	138.108	-11.3231
133	0.5	-0.0853288	138.115	-11.3657
134	0.5	-0.0752698	138.12	-11.4034
135	0.5	-0.0677301	138.125	-11.4372
136	0.5	-0.0576847	138.128	-11.4661
137	0.5	-0.0501541	138.131	-11.4912
138	0.5	-0.0401167	138.132	-11.5112
139	0.5	-0.0325917	138.134	-11.5275
140	0.5	-0.0225612	138.134	-11.5388
141	0.5	-0.0150408	138.134	-11.5463
142	0.5	-0.00501359	138.134	-11.5488
143	0.5	0.00501359	138.134	-11.5463
144	0.5	0.0150408	138.135	-11.5388
145	0.5	0.0225612	138.135	-11.5275
146	0.5	0.0325917	138.136	-11.5112
147	0.5	0.0401167	138.138	-11.4912
148	0.5	0.0501541	138.14	-11.4661
149	0.5	0.0576847	138.144	-11.4372
150	0.5	0.0677301	138.148	-11.4034
151	0.5	0.0752698	138.154	-11.3657
152	0.5	0.0853288	138.161	-11.3231
153	0.5	0.0928787	138.17	-11.2766
154	0.5	0.102953	138.18	-11.2252
155	0.5	0.110516	138.193	-11.1699
156	0.5	0.12061	138.207	-11.1096
157	0.5	0.128189	138.224	-11.0455
158	0.5	0.138305	138.243	-10.9764
159	0.5	0.1459	138.264	-10.9034
160	0.5	0.156042	138.288	-10.8254
161	0.5	0.163659	138.315	-10.7436
162	0.5	0.173829	138.345	-10.6566
163	0.5	0.181468	138.378	-10.5659
164	0.5	0.191671	138.415	-10.4701
165	0.5	0.199336	138.455	-10.3704
166	0.5	0.209575	138.499	-10.2656
167	0.5	0.217267	138.546	-10.157
168	0.5	0.227545	138.598	-10.0432
169	0.5	0.235269	138.653	-9.92557
170	0.5	0.24559	138.713	-9.80277
171	0.5	0.253347	138.777	-9.6761
172	0.5	0.263715	138.847	-9.54424
173	0.5	0.27411	138.922	-9.40719
174	0.5	0.281926	139.002	-9.26623
175	0.5	0.292375	139.087	-9.12004

176	0.5	0.300232	139.177	-8.96992
177	0.5	0.310738	139.274	-8.81455
178	0.5	0.318639	139.375	-8.65523
179	0.5	0.329206	139.484	-8.49063
180	0.5	0.337155	139.597	-8.32205
181	0.5	0.347787	139.718	-8.14816
182	0.5	0.355788	139.845	-7.97027
183	0.5	0.36649	139.979	-7.78702
184	0.5	0.374544	140.12	-7.59975
185	0.5	0.385321	140.268	-7.40709
186	0.5	0.393433	140.423	-7.21037
187	0.5	0.40429	140.586	-7.00823
188	0.5	0.412463	140.756	-6.802
189	0.5	0.423405	140.936	-6.59029
190	0.5	0.431644	141.122	-6.37447
191	0.5	0.442676	141.318	-6.15313
192	0.5	0.450985	141.521	-5.92764
193	0.5	0.462114	141.735	-5.69658
194	0.5	0.470498	141.956	-5.46133
195	0.5	0.481728	142.188	-5.22047
196	0.5	0.490189	142.429	-4.97538
197	0.5	0.501527	142.68	-4.72461
198	0.5	0.510074	142.94	-4.46958
199	0.5	0.521527	143.212	-4.20881
200	0.5	0.530162	143.493	-3.94373
201	0.5	0.541736	143.787	-3.67286
202	0.5	0.550465	144.09	-3.39763
203	0.5	0.56217	144.406	-3.11655
204	0.5	0.570999	144.732	-2.83105
205	0.5	0.582841	145.072	-2.53963
206	0.5	0.591776	145.422	-2.24374
207	0.5	0.603765	145.786	-1.94186
208	0.5	0.612813	146.162	-1.63545
209	0.5	0.624956	146.552	-1.32297
210	0.5	0.634124	146.955	-1.00591
211	0.5	0.646431	147.372	-0.682694
212	0.5	0.655726	147.802	-0.35483
213	0.5	0.668209	148.249	-0.0207257
214	0.5	0.677639	148.708	0.318094
215	0.5	0.690309	149.185	0.663248
216	0.5	0.699883	149.674	1.01319
217	0.5	0.712751	150.182	1.36957
218	0.5	0.722479	150.704	1.7308
219	0.5	0.735557	151.245	2.09858
220	0.5	0.745449	151.801	2.47131
221	0.5	0.758753	152.377	2.85068
222	0.5	0.768821	152.968	3.23509
223	0.5	0.782366	153.58	3.62628
224	0.5	0.792618	154.208	4.02259
225	0.5	0.806422	154.859	4.4258
226	0.5	0.816874	155.526	4.83423
227	0.5	0.830953	156.216	5.24971
228	0.5	0.841621	156.925	5.67052
229	0.5	0.855996	157.657	6.09852
230	0.5	0.87055	158.415	6.53379
231	0.5	0.881587	159.193	6.97459
232	0.5	0.896473	159.996	7.42282
233	0.5	0.907769	160.82	7.87671
234	0.5	0.923014	161.672	8.33822
235	0.5	0.93459	162.546	8.80551
236	0.5	0.950222	163.449	9.28062
237	0.5	0.9621	164.374	9.76167

238	0.5	0.97815	165.331	10.2507	
239	0.5	0.990356		166.312	10.7459
240	0.5	1.00687	167.326	11.2494	
241	0.5	1.01943	168.365	11.7591	
242	0.5	1.03643	169.439	12.2773	
243	0.5	1.04939	170.54	12.802	
244	0.5	1.06694	171.679	13.3354	
245	0.5	1.08032	172.846	13.8756	
246	0.5	1.09847	174.052	14.4248	
247	0.5	1.11232	175.29	14.981	
248	0.5	1.13113	176.569	15.5466	
249	0.5	1.1455	177.881	16.1193	
250	0.5	1.16505	179.239	16.7018	
251	0.5	1.18	180.631	17.2918	
252	0.5	1.20036	182.072	17.892	
253	0.5	1.21596	183.55	18.5	
254	0.5	1.23724	185.081	19.1186	
255	0.5	1.25357	186.653	19.7454	
256	0.5	1.27588	188.28	20.3833	
257	0.5	1.29303	189.952	21.0299	
258	0.5	1.31652	191.686	21.6881	
259	0.5	1.33462	193.467	22.3554	
260	0.5	1.35946	195.315	23.0352	
261	0.5	1.37866	197.216	23.7245	
262	0.5	1.40507	199.19	24.427	
263	0.5	1.42554	201.222	25.1398	
264	0.5	1.4538	203.336	25.8667	
265	0.5	1.47579	205.514	26.6046	
266	0.5	1.50626	207.782	27.3577	
267	0.5	1.53007	210.123	28.1228	
268	0.5	1.56322	212.567	28.9044	
269	0.5	1.58927	215.093	29.699	
270	0.5	1.62576	217.736	30.5119	
271	0.5	1.65463	220.474	31.3392	
272	0.5	1.6954	223.348	32.1869	
273	0.5	1.72793	226.334	33.0509	
274	0.5	1.77438	229.482	33.9381	
275	0.5	1.81191	232.765	34.844	
276	0.5	1.86629	236.248	35.7772	
277	0.5	1.91103	239.9	36.7327	
278	0.5	1.97737	243.81	37.7214	
279	0.5	2.03352	247.946	38.7381	
280	0.52	2.12007	252.44	39.8406	
281	3	2.19728	257.268	46.4324	
282	6	2.32634	262.68	60.3905	
283	8	2.45727	268.718	80.0486	
284	78	2.74777	276.269	294.374	

Data Set Standard Deviation = 4.64548
Numerator = 86656.3
Denominator = 1.68725e+006
W Statistic = 0.0513596 = 86656.3 / 1.68725e+006

5% Critical value of 0.976 exceeds 0.0513596
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0513596
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 = 0.233088
0.233088 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0		0.00350877	-2.7477739	348.683	
2	0		0.00701754	-2.4572739	334.497	
3	0.07		0.0105263	-2.3263439.4681	328.103	
4	0.07		0.0140351	-2.1972839.4681	321.801	
5	0.07		0.0175439	-2.1200739.4681	318.03	
6	0.07		0.0210526	-2.0335239.4681	313.804	
7	0.07		0.0245614	-1.9773739.4681	311.062	
8	0.07		0.0280702	-1.9110339.4681	307.822	
9	0.07		0.0315789	-1.8662939.4681	305.637	
10	0.07		0.0350877	-1.8119139.4681	302.982	
11	0.07		0.0385965	-1.7743839.4681	301.149	
12	0.07		0.0421053	-1.7279339.4681	298.881	
13	0.07		0.045614	-1.6954 39.4681	297.292	
14	0.07		0.0491228	-1.6546339.4681	295.301	
15	0.07		0.0526316	-1.6257639.4681	293.891	
16	0.07		0.0561404	-1.5892739.4681	292.109	
17	0.07		0.0596491	-1.5632239.4681	290.837	
18	0.07		0.0631579	-1.5300739.4681	289.218	
19	0.07		0.0666667	-1.5062639.4681	288.056	
20	0.07		0.0701754	-1.4757939.4681	286.568	
21	0.07		0.0736842	-1.4538 39.4681	285.494	
22	0.07		0.077193	-1.4255439.4681	284.114	
23	0.07		0.0807018	-1.4050739.4681	283.114	
24	0.07		0.0842105	-1.3786639.4681	281.824	
25	0.07		0.0877193	-1.3594639.4681	280.887	
26	0.07		0.0912281	-1.3346239.4681	279.674	
27	0.07		0.0947368	-1.3165239.4681	278.79	
28	0.07		0.0982456	-1.2930339.4681	277.643	
29	0.07		0.101754	-1.2758839.4681	276.805	
30	0.07		0.105263	-1.2535739.4681	275.716	
31	0.07		0.108772	-1.2372439.4681	274.918	
32	0.07		0.112281	-1.2159639.4681	273.879	
33	0.07		0.115789	-1.2003639.4681	273.118	
34	0.07		0.119298	-1.18 39.4681	272.123	
35	0.07		0.122807	-1.1650539.4681	271.393	
36	0.07		0.126316	-1.1455 39.4681	270.439	
37	0.07		0.129825	-1.1311339.4681	269.737	
38	0.07		0.133333	-1.1123239.4681	268.818	
39	0.07		0.136842	-1.0984739.4681	268.142	
40	0.07		0.140351	-1.0803239.4681	267.256	
41	0.07		0.14386	-1.0669439.4681	266.602	
42	0.07		0.147368	-1.0493939.4681	265.745	
43	0.07		0.150877	-1.0364339.4681	265.112	
44	0.07		0.154386	-1.0194339.4681	264.282	
45	0.07		0.157895	-1.0068739.4681	263.669	
46	0.07		0.161404	-0.990356	39.4681	262.862
47	0.07		0.164912	-0.9781539.4681	262.266	
48	0.07		0.168421	-0.9621 39.4681	261.483	

49	0.07	0.17193	-0.950222	39.4681	260.903
50	0.07	0.175439	-0.934593	39.4681	260.139
51	0.07	0.178947	-0.923014	39.4681	259.574
52	0.07	0.182456	-0.907769	39.4681	258.829
53	0.07	0.185965	-0.896473	39.4681	258.278
54	0.07	0.189474	-0.881587	39.4681	257.551
55	0.07	0.192982	-0.870553	39.4681	257.012
56	0.07	0.196491	-0.855996	39.4681	256.301
57	0.07	0.2	-0.841621	39.4681	255.599
58	0.07	0.203509	-0.830953	39.4681	255.078
59	0.07	0.207018	-0.816874	39.4681	254.391
60	0.07	0.210526	-0.806422	39.4681	253.88
61	0.07	0.214035	-0.792618	39.4681	253.206
62	0.07	0.217544	-0.782366	39.4681	252.706
63	0.07	0.221053	-0.768821	39.4681	252.044
64	0.07	0.224561	-0.758753	39.4681	251.552
65	0.07	0.22807	-0.745449	39.4681	250.903
66	0.07	0.231579	-0.735557	39.4681	250.42
67	0.07	0.235088	-0.722479	39.4681	249.781
68	0.07	0.238596	-0.712751	39.4681	249.306
69	0.07	0.242105	-0.699883	39.4681	248.678
70	0.07	0.245614	-0.690309	39.4681	248.21
71	0.07	0.249123	-0.677639	39.4681	247.591
72	0.07	0.252632	-0.668209	39.4681	247.131
73	0.07	0.25614	-0.655726	39.4681	246.521
74	0.07	0.259649	-0.646431	39.4681	246.067
75	0.07	0.263158	-0.634124	39.4681	245.466
76	0.07	0.266667	-0.624956	39.4681	245.019
77	0.07	0.270175	-0.612813	39.4681	244.426
78	0.07	0.273684	-0.603765	39.4681	243.984
79	0.07	0.277193	-0.591776	39.4681	243.398
80	0.07	0.280702	-0.582841	39.4681	242.962
81	0.07	0.284211	-0.570999	39.4681	242.384
82	0.07	0.287719	-0.562173	39.4681	241.953
83	0.07	0.291228	-0.550465	39.4681	241.381
84	0.07	0.294737	-0.541736	39.4681	240.955
85	0.07	0.298246	-0.530162	39.4681	240.39
86	0.07	0.301754	-0.521527	39.4681	239.968
87	0.07	0.305263	-0.510074	39.4681	239.409
88	0.07	0.308772	-0.501527	39.4681	238.991
89	0.07	0.312281	-0.490189	39.4681	238.438
90	0.07	0.315789	-0.481728	39.4681	238.024
91	0.07	0.319298	-0.470498	39.4681	237.476
92	0.07	0.322807	-0.462114	39.4681	237.067
93	0.14	0.326316	-0.450985	39.9363	236.523
94	0.2	0.329825	-0.442676	40.3375	236.117
95	0.23	0.333333	-0.431644	40.5381	235.579
96	0.25	0.336842	-0.423405	40.6719	235.176
97	0.31	0.340351	-0.412463	41.0731	234.642
98	0.33	0.34386	-0.404294	41.2069	234.243
99	0.4	0.347368	-0.393433	41.675	233.713
100	0.41	0.350877	-0.385321	41.7419	233.317
101	0.42	0.354386	-0.374544	41.8088	232.79
102	0.44	0.357895	-0.366494	41.9425	232.397
103	0.5	0.361404	-0.355788	42.3438	231.874
104	0.5	0.364912	-0.347787	42.3438	231.484
105	0.5	0.368421	-0.337155	42.3438	230.964
106	0.5	0.37193	-0.329206	42.3438	230.576
107	0.5	0.375439	-0.318639	42.3438	230.06
108	0.5	0.378947	-0.310738	42.3438	229.674
109	0.5	0.382456	-0.300232	42.3438	229.161
110	0.5	0.385965	-0.292375	42.3438	228.778

111	0.5	0.389474	-0.281926	42.3438	228.267
112	0.5	0.392982	-0.27411	42.3438	227.886
113	0.5	0.396491	-0.263715	42.3438	227.378
114	0.5	0.4	-0.253347	42.3438	226.872
115	0.5	0.403509	-0.24559	42.3438	226.493
116	0.5	0.407018	-0.235269	42.3438	225.989
117	0.5	0.410526	-0.227545	42.3438	225.612
118	0.5	0.414035	-0.217267	42.3438	225.11
119	0.5	0.417544	-0.209575	42.3438	224.734
120	0.5	0.421053	-0.199336	42.3438	224.234
121	0.5	0.424561	-0.191671	42.3438	223.86
122	0.5	0.42807	-0.181468	42.3438	223.362
123	0.5	0.431579	-0.173829	42.3438	222.989
124	0.5	0.435088	-0.163659	42.3438	222.492
125	0.5	0.438596	-0.156042	42.3438	222.12
126	0.5	0.442105	-0.1459	42.3438	221.625
127	0.5	0.445614	-0.138305	42.3438	221.254
128	0.5	0.449123	-0.128189	42.3438	220.76
129	0.5	0.452632	-0.12061	42.3438	220.39
130	0.5	0.45614	-0.110516	42.3438	219.897
131	0.5	0.459649	-0.102953	42.3438	219.528
132	0.5	0.463158	-0.0928787	42.3438	219.036
133	0.5	0.466667	-0.0853288	42.3438	218.667
134	0.5	0.470175	-0.0752698	42.3438	218.176
135	0.5	0.473684	-0.0677301	42.3438	217.807
136	0.5	0.477193	-0.0576847	42.3438	217.317
137	0.5	0.480702	-0.0501541	42.3438	216.949
138	0.5	0.484211	-0.0401167	42.3438	216.459
139	0.5	0.487719	-0.0325917	42.3438	216.092
140	0.5	0.491228	-0.0225612	42.3438	215.602
141	0.5	0.494737	-0.0150408	42.3438	215.234
142	0.5	0.498246	-0.00501359	42.3438	214.745
143	0.5	0.501754	0.00501359	42.3438	214.255
144	0.5	0.505263	0.0150408	42.3438	213.766
145	0.5	0.508772	0.0225612	42.3438	213.398
146	0.5	0.512281	0.0325917	42.3438	212.908
147	0.5	0.515789	0.0401167	42.3438	212.541
148	0.5	0.519298	0.0501541	42.3438	212.051
149	0.5	0.522807	0.0576847	42.3438	211.683
150	0.5	0.526316	0.0677301	42.3438	211.193
151	0.5	0.529825	0.0752698	42.3438	210.824
152	0.5	0.533333	0.0853288	42.3438	210.333
153	0.5	0.536842	0.0928787	42.3438	209.964
154	0.5	0.540351	0.102953	42.3438	209.472
155	0.5	0.54386	0.110516	42.3438	209.103
156	0.5	0.547368	0.12061	42.3438	208.61
157	0.5	0.550877	0.128189	42.3438	208.24
158	0.5	0.554386	0.138305	42.3438	207.746
159	0.5	0.557895	0.1459	42.3438	207.375
160	0.5	0.561404	0.156042	42.3438	206.88
161	0.5	0.564912	0.163659	42.3438	206.508
162	0.5	0.568421	0.173829	42.3438	206.011
163	0.5	0.57193	0.181468	42.3438	205.638
164	0.5	0.575439	0.191671	42.3438	205.14
165	0.5	0.578947	0.199336	42.3438	204.766
166	0.5	0.582456	0.209575	42.3438	204.266
167	0.5	0.585965	0.217267	42.3438	203.89
168	0.5	0.589474	0.227545	42.3438	203.388
169	0.5	0.592982	0.235269	42.3438	203.011
170	0.5	0.596491	0.24559	42.3438	202.507
171	0.5	0.6	0.253347	42.3438	202.128
172	0.5	0.603509	0.263715	42.3438	201.622

173	0.5	0.607018	0.27411	42.3438	201.114
174	0.5	0.610526	0.281926	42.3438	200.733
175	0.5	0.614035	0.292375	42.3438	200.222
176	0.5	0.617544	0.300232	42.3438	199.839
177	0.5	0.621053	0.310738	42.3438	199.326
178	0.5	0.624561	0.318639	42.3438	198.94
179	0.5	0.62807	0.329206	42.3438	198.424
180	0.5	0.631579	0.337155	42.3438	198.036
181	0.5	0.635088	0.347787	42.3438	197.516
182	0.5	0.638596	0.355788	42.3438	197.126
183	0.5	0.642105	0.36649	42.3438	196.603
184	0.5	0.645614	0.374544	42.3438	196.21
185	0.5	0.649123	0.385321	42.3438	195.683
186	0.5	0.652632	0.393433	42.3438	195.287
187	0.5	0.65614	0.40429	42.3438	194.757
188	0.5	0.659649	0.412463	42.3438	194.358
189	0.5	0.663158	0.423405	42.3438	193.824
190	0.5	0.666667	0.431644	42.3438	193.421
191	0.5	0.670175	0.442676	42.3438	192.883
192	0.5	0.673684	0.450985	42.3438	192.477
193	0.5	0.677193	0.462114	42.3438	191.933
194	0.5	0.680702	0.470498	42.3438	191.524
195	0.5	0.684211	0.481728	42.3438	190.976
196	0.5	0.687719	0.490189	42.3438	190.562
197	0.5	0.691228	0.501527	42.3438	190.009
198	0.5	0.694737	0.510074	42.3438	189.591
199	0.5	0.698246	0.521527	42.3438	189.032
200	0.5	0.701754	0.530162	42.3438	188.61
201	0.5	0.705263	0.541736	42.3438	188.045
202	0.5	0.708772	0.550465	42.3438	187.619
203	0.5	0.712281	0.56217	42.3438	187.047
204	0.5	0.715789	0.570999	42.3438	186.616
205	0.5	0.719298	0.582841	42.3438	186.038
206	0.5	0.722807	0.591776	42.3438	185.602
207	0.5	0.726316	0.603765	42.3438	185.016
208	0.5	0.729825	0.612813	42.3438	184.574
209	0.5	0.733333	0.624956	42.3438	183.981
210	0.5	0.736842	0.634124	42.3438	183.534
211	0.5	0.740351	0.646431	42.3438	182.933
212	0.5	0.74386	0.655726	42.3438	182.479
213	0.5	0.747368	0.668209	42.3438	181.869
214	0.5	0.750877	0.677639	42.3438	181.409
215	0.5	0.754386	0.690309	42.3438	180.79
216	0.5	0.757895	0.699883	42.3438	180.322
217	0.5	0.761404	0.712751	42.3438	179.694
218	0.5	0.764912	0.722479	42.3438	179.219
219	0.5	0.768421	0.735557	42.3438	178.58
220	0.5	0.77193	0.745449	42.3438	178.097
221	0.5	0.775439	0.758753	42.3438	177.448
222	0.5	0.778947	0.768821	42.3438	176.956
223	0.5	0.782456	0.782366	42.3438	176.294
224	0.5	0.785965	0.792618	42.3438	175.794
225	0.5	0.789474	0.806422	42.3438	175.12
226	0.5	0.792982	0.816874	42.3438	174.609
227	0.5	0.796491	0.830953	42.3438	173.922
228	0.5	0.8	0.841621	42.3438	173.401
229	0.5	0.803509	0.855996	42.3438	172.699
230	0.5	0.807018	0.87055	42.3438	171.988
231	0.5	0.810526	0.881587	42.3438	171.449
232	0.5	0.814035	0.896473	42.3438	170.722
233	0.5	0.817544	0.907769	42.3438	170.171
234	0.5	0.821053	0.923014	42.3438	169.426

235	0.5	0.824561	0.93459	42.3438	168.861	
236	0.5	0.82807	0.950222	42.3438	168.097	
237	0.5	0.831579	0.9621	42.3438	167.517	
238	0.5	0.835088	0.97815	42.3438	166.734	
239	0.5	0.838596	0.990356	42.3438	166.138	
240	0.5	0.842105	1.00687	42.3438	165.331	
241	0.5	0.845614	1.01943	42.3438	164.718	
242	0.5	0.849123	1.03643	42.3438	163.888	
243	0.5	0.852632	1.04939	42.3438	163.255	
244	0.5	0.85614	1.06694	42.3438	162.398	
245	0.5	0.859649	1.08032	42.3438	161.744	
246	0.5	0.863158	1.09847	42.3438	160.858	
247	0.5	0.866667	1.11232	42.3438	160.182	
248	0.5	0.870175	1.13113	42.3438	159.263	
249	0.5	0.873684	1.1455	42.3438	158.561	
250	0.5	0.877193	1.16505	42.3438	157.607	
251	0.5	0.880702	1.18	42.3438	156.877	
252	0.5	0.884211	1.20036	42.3438	155.882	
253	0.5	0.887719	1.21596	42.3438	155.121	
254	0.5	0.891228	1.23724	42.3438	154.082	
255	0.5	0.894737	1.25357	42.3438	153.284	
256	0.5	0.898246	1.27588	42.3438	152.195	
257	0.5	0.901754	1.29303	42.3438	151.357	
258	0.5	0.905263	1.31652	42.3438	150.21	
259	0.5	0.908772	1.33462	42.3438	149.326	
260	0.5	0.912281	1.35946	42.3438	148.113	
261	0.5	0.915789	1.37866	42.3438	147.176	
262	0.5	0.919298	1.40507	42.3438	145.886	
263	0.5	0.922807	1.42554	42.3438	144.886	
264	0.5	0.926316	1.4538	42.3438	143.506	
265	0.5	0.929825	1.47579	42.3438	142.432	
266	0.5	0.933333	1.50626	42.3438	140.944	
267	0.5	0.936842	1.53007	42.3438	139.782	
268	0.5	0.940351	1.56322	42.3438	138.163	
269	0.5	0.94386	1.58927	42.3438	136.891	
270	0.5	0.947368	1.62576	42.3438	135.109	
271	0.5	0.950877	1.65463	42.3438	133.699	
272	0.5	0.954386	1.6954	42.3438	131.708	
273	0.5	0.957895	1.72793	42.3438	130.119	
274	0.5	0.961404	1.77438	42.3438	127.851	
275	0.5	0.964912	1.81191	42.3438	126.018	
276	0.5	0.968421	1.86629	42.3438	123.363	
277	0.5	0.97193	1.91103	42.3438	121.178	
278	0.5	0.975439	1.97737	42.3438	117.938	
279	0.5	0.978947	2.03352	42.3438	115.196	
280	0.52	0.982456	2.12007	42.4775	110.97	
281	3	0.985965	2.19728	59.0625	107.199	
282	6	0.989474	2.32634	79.125	100.897	
283	8	0.992982	2.45727	92.5	94.5032	
284	78	0.996491	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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.65926	-2.74777	7.55021	7.30702
2	-2.65926	-2.45727	13.5884	13.8416
3	-2.65926	-2.32634	19.0003	20.0279
4	-2.65926	-2.19728	23.8283	25.871
5	-2.65926	-2.12007	28.323	31.5089
6	-2.65926	-2.03352	32.4582	36.9165
7	-2.65926	-1.97737	36.3682	42.1749
8	-2.65926	-1.91103	40.0203	47.2568
9	-2.65926	-1.86629	43.5033	52.2197
10	-2.65926	-1.81191	46.7863	57.0381
11	-2.65926	-1.77438	49.9348	61.7566
12	-2.65926	-1.72793	52.9205	66.3516
13	-2.65926	-1.6954	55.7949	70.8602
14	-2.65926	-1.65463	58.5327	75.2602
15	-2.65926	-1.62576	61.1758	79.5836
16	-2.65926	-1.58927	63.7015	83.8098
17	-2.65926	-1.56322	66.1452	87.9668
18	-2.65926	-1.53007	68.4863	92.0357
19	-2.65926	-1.50626	70.7551	96.0412
20	-2.65926	-1.47579	72.9331	99.9657
21	-2.65926	-1.4538	75.0466	103.832
22	-2.65926	-1.42554	77.0788	107.623
23	-2.65926	-1.40507	79.053	111.359
24	-2.65926	-1.37866	80.9537	115.025
25	-2.65926	-1.35946	82.8019	118.641
26	-2.65926	-1.33462	84.5831	122.19
27	-2.65926	-1.31652	86.3163	125.691
28	-2.65926	-1.29303	87.9883	129.129
29	-2.65926	-1.27588	89.6161	132.522
30	-2.65926	-1.25357	91.1875	135.856
31	-2.65926	-1.23724	92.7183	139.146
32	-2.65926	-1.21596	94.1969	142.379
33	-2.65926	-1.20036	95.6377	145.571
34	-2.65926	-1.18	97.0301	148.709
35	-2.65926	-1.16505	98.3875	151.807
36	-2.65926	-1.1455	99.6996	154.854
37	-2.65926	-1.13113	100.979	157.862
38	-2.65926	-1.11232	102.216	160.82
39	-2.65926	-1.09847	103.423	163.741
40	-2.65926	-1.08032	104.59	166.613
41	-2.65926	-1.06694	105.728	169.451
42	-2.65926	-1.04939	106.83	172.241
43	-2.65926	-1.03643	107.904	174.997
44	-2.65926	-1.01943	108.943	177.708
45	-2.65926	-1.00687	109.957	180.386
46	-2.65926	-0.990356	110.938	183.02
47	-2.65926	-0.97815	111.894	185.621
48	-2.65926	-0.9621	112.82	188.179
49	-2.65926	-0.950222	113.723	190.706
50	-2.65926	-0.93459	114.596	193.191
51	-2.65926	-0.923014	115.448	195.646

52	-2.65926	-0.907769	116.272	198.06
53	-2.65926	-0.896473	117.076	200.444
54	-2.65926	-0.881587	117.853	202.788
55	-2.65926	-0.87055	118.611	205.103
56	-2.65926	-0.855996	119.344	207.38
57	-2.65926	-0.841621	120.052	209.618
58	-2.65926	-0.830953	120.743	211.827
59	-2.65926	-0.816874	121.41	214
60	-2.65926	-0.806422	122.06	216.144
61	-2.65926	-0.792618	122.689	218.252
62	-2.65926	-0.782366	123.301	220.332
63	-2.65926	-0.768821	123.892	222.377
64	-2.65926	-0.758753	124.467	224.395
65	-2.65926	-0.745449	125.023	226.377
66	-2.65926	-0.735557	125.564	228.333
67	-2.65926	-0.722479	126.086	230.254
68	-2.65926	-0.712751	126.594	232.15
69	-2.65926	-0.699883	127.084	234.011
70	-2.65926	-0.690309	127.561	235.847
71	-2.65926	-0.677639	128.02	237.649
72	-2.65926	-0.668209	128.466	239.426
73	-2.65926	-0.655726	128.896	241.169
74	-2.65926	-0.646431	129.314	242.888
75	-2.65926	-0.634124	129.716	244.575
76	-2.65926	-0.624956	130.107	246.237
77	-2.65926	-0.612813	130.482	247.866
78	-2.65926	-0.603765	130.847	249.472
79	-2.65926	-0.591776	131.197	251.045
80	-2.65926	-0.582841	131.537	252.595
81	-2.65926	-0.570999	131.863	254.114
82	-2.65926	-0.56217	132.179	255.609
83	-2.65926	-0.550465	132.482	257.073
84	-2.65926	-0.541736	132.775	258.513
85	-2.65926	-0.530162	133.056	259.923
86	-2.65926	-0.521527	133.328	261.31
87	-2.65926	-0.510074	133.589	262.666
88	-2.65926	-0.501527	133.84	264
89	-2.65926	-0.490189	134.08	265.304
90	-2.65926	-0.481728	134.312	266.585
91	-1.96611	-0.470498	134.534	267.51
92	-1.60944	-0.462114	134.747	268.253
93	-1.46968	-0.450985	134.951	268.916
94	-1.38629	-0.442676	135.147	269.53
95	-1.17118	-0.431644	135.333	270.035
96	-1.10866	-0.423405	135.512	270.505
97	-0.916291	-0.412463	135.682	270.883
98	-0.891598	-0.40429	135.846	271.243
99	-0.867501	-0.393433	136.001	271.584
100	-0.820981	-0.385321	136.149	271.901
101	-0.693147	-0.374544	136.289	272.16
102	-0.693147	-0.36649	136.424	272.414
103	-0.693147	-0.355788	136.55	272.661
104	-0.693147	-0.347787	136.671	272.902
105	-0.693147	-0.337155	136.785	273.136
106	-0.693147	-0.329206	136.893	273.364
107	-0.693147	-0.318639	136.995	273.585
108	-0.693147	-0.310738	137.091	273.8
109	-0.693147	-0.300232	137.182	274.008
110	-0.693147	-0.292375	137.267	274.211
111	-0.693147	-0.281926	137.346	274.406
112	-0.693147	-0.27411	137.422	274.596
113	-0.693147	-0.263715	137.491	274.779

114	-0.693147	-0.253347	137.555	274.955
115	-0.693147	-0.24559	137.616	275.125
116	-0.693147	-0.235269	137.671	275.288
117	-0.693147	-0.227545	137.723	275.446
118	-0.693147	-0.217267	137.77	275.596
119	-0.693147	-0.209575	137.814	275.742
120	-0.693147	-0.199336	137.854	275.88
121	-0.693147	-0.191671	137.89	276.013
122	-0.693147	-0.181468	137.923	276.139
123	-0.693147	-0.173829	137.954	276.259
124	-0.693147	-0.163659	137.98	276.372
125	-0.693147	-0.156042	138.005	276.481
126	-0.693147	-0.1459	138.026	276.582
127	-0.693147	-0.138305	138.045	276.678
128	-0.693147	-0.128189	138.062	276.767
129	-0.693147	-0.12061	138.076	276.85
130	-0.693147	-0.110516	138.088	276.927
131	-0.693147	-0.102953	138.099	276.998
132	-0.693147	-0.0928787	138.108	277.062
133	-0.693147	-0.0853288	138.115	277.122
134	-0.693147	-0.0752698	138.12	277.174
135	-0.693147	-0.0677301	138.125	277.221
136	-0.693147	-0.0576847	138.128	277.261
137	-0.693147	-0.0501541	138.131	277.295
138	-0.693147	-0.0401167	138.132	277.323
139	-0.693147	-0.0325917	138.134	277.346
140	-0.693147	-0.0225612	138.134	277.361
141	-0.693147	-0.0150408	138.134	277.372
142	-0.693147	-0.00501359	138.134	277.375
143	-0.693147	0.00501359	138.134	277.372
144	-0.693147	0.0150408	138.135	277.361
145	-0.693147	0.0225612	138.135	277.346
146	-0.693147	0.0325917	138.136	277.323
147	-0.693147	0.0401167	138.138	277.295
148	-0.693147	0.0501541	138.14	277.261
149	-0.693147	0.0576847	138.144	277.221
150	-0.693147	0.0677301	138.148	277.174
151	-0.693147	0.0752698	138.154	277.122
152	-0.693147	0.0853288	138.161	277.062
153	-0.693147	0.0928787	138.17	276.998
154	-0.693147	0.102953	138.18	276.927
155	-0.693147	0.110516	138.193	276.85
156	-0.693147	0.12061	138.207	276.767
157	-0.693147	0.128189	138.224	276.678
158	-0.693147	0.138305	138.243	276.582
159	-0.693147	0.1459	138.264	276.481
160	-0.693147	0.156042	138.288	276.372
161	-0.693147	0.163659	138.315	276.259
162	-0.693147	0.173829	138.345	276.139
163	-0.693147	0.181468	138.378	276.013
164	-0.693147	0.191671	138.415	275.88
165	-0.693147	0.199336	138.455	275.742
166	-0.693147	0.209575	138.499	275.596
167	-0.693147	0.217267	138.546	275.446
168	-0.693147	0.227545	138.598	275.288
169	-0.693147	0.235269	138.653	275.125
170	-0.693147	0.24559	138.713	274.955
171	-0.693147	0.253347	138.777	274.779
172	-0.693147	0.263715	138.847	274.596
173	-0.693147	0.27411	138.922	274.406
174	-0.693147	0.281926	139.002	274.211
175	-0.693147	0.292375	139.087	274.008

176	-0.693147	0.300232	139.177	273.8
177	-0.693147	0.310738	139.274	273.585
178	-0.693147	0.318639	139.375	273.364
179	-0.693147	0.329206	139.484	273.136
180	-0.693147	0.337155	139.597	272.902
181	-0.693147	0.347787	139.718	272.661
182	-0.693147	0.355788	139.845	272.414
183	-0.693147	0.36649	139.979	272.16
184	-0.693147	0.374544	140.12	271.901
185	-0.693147	0.385321	140.268	271.634
186	-0.693147	0.393433	140.423	271.361
187	-0.693147	0.40429	140.586	271.081
188	-0.693147	0.412463	140.756	270.795
189	-0.693147	0.423405	140.936	270.501
190	-0.693147	0.431644	141.122	270.202
191	-0.693147	0.442676	141.318	269.895
192	-0.693147	0.450985	141.521	269.583
193	-0.693147	0.462114	141.735	269.262
194	-0.693147	0.470498	141.956	268.936
195	-0.693147	0.481728	142.188	268.602
196	-0.693147	0.490189	142.429	268.263
197	-0.693147	0.501527	142.68	267.915
198	-0.693147	0.510074	142.94	267.561
199	-0.693147	0.521527	143.212	267.2
200	-0.693147	0.530162	143.493	266.833
201	-0.693147	0.541736	143.787	266.457
202	-0.693147	0.550465	144.09	266.075
203	-0.693147	0.56217	144.406	265.686
204	-0.693147	0.570999	144.732	265.29
205	-0.693147	0.582841	145.072	264.886
206	-0.693147	0.591776	145.422	264.476
207	-0.693147	0.603765	145.786	264.057
208	-0.693147	0.612813	146.162	263.633
209	-0.693147	0.624956	146.552	263.199
210	-0.693147	0.634124	146.955	262.76
211	-0.693147	0.646431	147.372	262.312
212	-0.693147	0.655726	147.802	261.857
213	-0.693147	0.668209	148.249	261.394
214	-0.693147	0.677639	148.708	260.924
215	-0.693147	0.690309	149.185	260.446
216	-0.693147	0.699883	149.674	259.961
217	-0.693147	0.712751	150.182	259.467
218	-0.693147	0.722479	150.704	258.966
219	-0.693147	0.735557	151.245	258.456
220	-0.693147	0.745449	151.801	257.939
221	-0.693147	0.758753	152.377	257.413
222	-0.693147	0.768821	152.968	256.881
223	-0.693147	0.782366	153.58	256.338
224	-0.693147	0.792618	154.208	255.789
225	-0.693147	0.806422	154.859	255.23
226	-0.693147	0.816874	155.526	254.664
227	-0.693147	0.830953	156.216	254.088
228	-0.693147	0.841621	156.925	253.504
229	-0.693147	0.855996	157.657	252.911
230	-0.693147	0.87055	158.415	252.308
231	-0.693147	0.881587	159.193	251.697
232	-0.693147	0.896473	159.996	251.075
233	-0.693147	0.907769	160.82	250.446
234	-0.693147	0.923014	161.672	249.806
235	-0.693147	0.93459	162.546	249.158
236	-0.693147	0.950222	163.449	248.5
237	-0.693147	0.9621	164.374	247.833

238	-0.693147		0.97815	165.331	247.155
239	-0.693147		0.990356		166.312 246.468
240	-0.693147		1.00687	167.326	245.77
241	-0.693147		1.01943	168.365	245.064
242	-0.693147		1.03643	169.439	244.345
243	-0.693147		1.04939	170.54	243.618
244	-0.693147		1.06694	171.679	242.878
245	-0.693147		1.08032	172.846	242.13
246	-0.693147		1.09847	174.052	241.368
247	-0.693147		1.11232	175.29	240.597
248	-0.693147		1.13113	176.569	239.813
249	-0.693147		1.1455	177.881	239.019
250	-0.693147		1.16505	179.239	238.212
251	-0.693147		1.18	180.631	237.394
252	-0.693147		1.20036	182.072	236.562
253	-0.693147		1.21596	183.55	235.719
254	-0.693147		1.23724	185.081	234.861
255	-0.693147		1.25357	186.653	233.992
256	-0.693147		1.27588	188.28	233.108
257	-0.693147		1.29303	189.952	232.212
258	-0.693147		1.31652	191.686	231.299
259	-0.693147		1.33462	193.467	230.374
260	-0.693147		1.35946	195.315	229.432
261	-0.693147		1.37866	197.216	228.476
262	-0.693147		1.40507	199.19	227.502
263	-0.693147		1.42554	201.222	226.514
264	-0.693147		1.4538	203.336	225.506
265	-0.693147		1.47579	205.514	224.484
266	-0.693147		1.50626	207.782	223.439
267	-0.693147		1.53007	210.123	222.379
268	-0.693147		1.56322	212.567	221.295
269	-0.693147		1.58927	215.093	220.194
270	-0.693147		1.62576	217.736	219.067
271	-0.693147		1.65463	220.474	217.92
272	-0.693147		1.6954	223.348	216.745
273	-0.693147		1.72793	226.334	215.547
274	-0.693147		1.77438	229.482	214.317
275	-0.693147		1.81191	232.765	213.061
276	-0.693147		1.86629	236.248	211.768
277	-0.693147		1.91103	239.9	210.443
278	-0.653926		1.97737	243.81	209.15
279	0	2.03352	247.946	209.15	
280	0	2.12007	252.44	209.15	
281	1.09861	2.19728	257.268	211.564	
282	1.79176	2.32634	262.68	215.732	
283	2.07944	2.45727	268.718	220.842	
284	4.35671	2.74777	276.269	232.813	

Data Set Standard Deviation = 1.02151
Numerator = 54202
Denominator = 81584.4
W Statistic = 0.664367 = 54202 / 81584.4

5% Critical value of 0.976 exceeds 0.664367
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.664367
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 = 0.815859
0.815859 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.659260	0.00350877	-2.747776	1.787	348.683
2	-2.659260	0.00701754	-2.457276	1.787	334.497
3	-2.659260	0.0105263	-2.326346	1.787	328.103
4	-2.659260	0.0140351	-2.197286	1.787	321.801
5	-2.659260	0.0175439	-2.120076	1.787	318.03
6	-2.659260	0.0210526	-2.033526	1.787	313.804
7	-2.659260	0.0245614	-1.977376	1.787	311.062
8	-2.659260	0.0280702	-1.911036	1.787	307.822
9	-2.659260	0.0315789	-1.866296	1.787	305.637
10	-2.659260	0.0350877	-1.811916	1.787	302.982
11	-2.659260	0.0385965	-1.774386	1.787	301.149
12	-2.659260	0.0421053	-1.727936	1.787	298.881
13	-2.659260	0.045614	-1.6954	61.787	297.292
14	-2.659260	0.0491228	-1.654636	1.787	295.301
15	-2.659260	0.0526316	-1.625766	1.787	293.891
16	-2.659260	0.0561404	-1.589276	1.787	292.109
17	-2.659260	0.0596491	-1.563226	1.787	290.837
18	-2.659260	0.0631579	-1.530076	1.787	289.218
19	-2.659260	0.0666667	-1.506266	1.787	288.056
20	-2.659260	0.0701754	-1.475796	1.787	286.568
21	-2.659260	0.0736842	-1.4538	61.787	285.494
22	-2.659260	0.077193	-1.425546	1.787	284.114
23	-2.659260	0.0807018	-1.405076	1.787	283.114
24	-2.659260	0.0842105	-1.378666	1.787	281.824
25	-2.659260	0.0877193	-1.359466	1.787	280.887
26	-2.659260	0.0912281	-1.334626	1.787	279.674
27	-2.659260	0.0947368	-1.316526	1.787	278.79
28	-2.659260	0.0982456	-1.293036	1.787	277.643
29	-2.659260	0.101754	-1.275886	1.787	276.805
30	-2.659260	0.105263	-1.253576	1.787	275.716
31	-2.659260	0.108772	-1.237246	1.787	274.918
32	-2.659260	0.112281	-1.215966	1.787	273.879
33	-2.659260	0.115789	-1.200366	1.787	273.118
34	-2.659260	0.119298	-1.18	61.787	272.123
35	-2.659260	0.122807	-1.165056	1.787	271.393
36	-2.659260	0.126316	-1.1455	61.787	270.439
37	-2.659260	0.129825	-1.131136	1.787	269.737
38	-2.659260	0.133333	-1.112326	1.787	268.818
39	-2.659260	0.136842	-1.098476	1.787	268.142
40	-2.659260	0.140351	-1.080326	1.787	267.256
41	-2.659260	0.14386	-1.066946	1.787	266.602
42	-2.659260	0.147368	-1.049396	1.787	265.745
43	-2.659260	0.150877	-1.036436	1.787	265.112
44	-2.659260	0.154386	-1.019436	1.787	264.282
45	-2.659260	0.157895	-1.006876	1.787	263.669
46	-2.659260	0.161404	-0.990356	61.787	262.862
47	-2.659260	0.164912	-0.978156	1.787	262.266
48	-2.659260	0.168421	-0.9621	61.787	261.483

49	-2.659260.17193	-0.950222	61.787	260.903	
50	-2.659260.175439	-0.9345961.787	260.139		
51	-2.659260.178947	-0.923014	61.787	259.574	
52	-2.659260.182456	-0.907769	61.787	258.829	
53	-2.659260.185965	-0.896473	61.787	258.278	
54	-2.659260.189474	-0.881587	61.787	257.551	
55	-2.659260.192982	-0.8705561.787	257.012		
56	-2.659260.196491	-0.855996	61.787	256.301	
57	-2.659260.2	-0.841621	61.787	255.599	
58	-2.659260.203509	-0.830953	61.787	255.078	
59	-2.659260.207018	-0.816874	61.787	254.391	
60	-2.659260.210526	-0.806422	61.787	253.88	
61	-2.659260.214035	-0.792618	61.787	253.206	
62	-2.659260.217544	-0.782366	61.787	252.706	
63	-2.659260.221053	-0.768821	61.787	252.044	
64	-2.659260.224561	-0.758753	61.787	251.552	
65	-2.659260.22807	-0.745449	61.787	250.903	
66	-2.659260.231579	-0.735557	61.787	250.42	
67	-2.659260.235088	-0.722479	61.787	249.781	
68	-2.659260.238596	-0.712751	61.787	249.306	
69	-2.659260.242105	-0.699883	61.787	248.678	
70	-2.659260.245614	-0.690309	61.787	248.21	
71	-2.659260.249123	-0.677639	61.787	247.591	
72	-2.659260.252632	-0.668209	61.787	247.131	
73	-2.659260.25614	-0.655726	61.787	246.521	
74	-2.659260.259649	-0.646431	61.787	246.067	
75	-2.659260.263158	-0.634124	61.787	245.466	
76	-2.659260.266667	-0.624956	61.787	245.019	
77	-2.659260.270175	-0.612813	61.787	244.426	
78	-2.659260.273684	-0.603765	61.787	243.984	
79	-2.659260.277193	-0.591776	61.787	243.398	
80	-2.659260.280702	-0.582841	61.787	242.962	
81	-2.659260.284211	-0.570999	61.787	242.384	
82	-2.659260.287719	-0.5621761.787	241.953		
83	-2.659260.291228	-0.550465	61.787	241.381	
84	-2.659260.294737	-0.541736	61.787	240.955	
85	-2.659260.298246	-0.530162	61.787	240.39	
86	-2.659260.301754	-0.521527	61.787	239.968	
87	-2.659260.305263	-0.510074	61.787	239.409	
88	-2.659260.308772	-0.501527	61.787	238.991	
89	-2.659260.312281	-0.490189	61.787	238.438	
90	-2.659260.315789	-0.481728	61.787	238.024	
91	-1.966110.319298	-0.470498	108.141	237.476	
92	-1.609440.322807	-0.462114	131.994	237.067	
93	-1.469680.326316	-0.450985	141.34	236.523	
94	-1.386290.329825	-0.442676	146.917	236.117	
95	-1.171180.333333	-0.431644	161.302	235.579	
96	-1.108660.336842	-0.423405	165.483	235.176	
97	-0.916291	0.340351	-0.412463	178.348	234.642
98	-0.891598	0.34386	-0.40429179.999	234.243	
99	-0.867501	0.347368	-0.393433	181.611	233.713
100	-0.820981	0.350877	-0.385321	184.722	233.317
101	-0.693147	0.354386	-0.374544	193.271	232.79
102	-0.693147	0.357895	-0.36649193.271	232.397	
103	-0.693147	0.361404	-0.355788	193.271	231.874
104	-0.693147	0.364912	-0.347787	193.271	231.484
105	-0.693147	0.368421	-0.337155	193.271	230.964
106	-0.693147	0.37193	-0.329206	193.271	230.576
107	-0.693147	0.375439	-0.318639	193.271	230.06
108	-0.693147	0.378947	-0.310738	193.271	229.674
109	-0.693147	0.382456	-0.300232	193.271	229.161
110	-0.693147	0.385965	-0.292375	193.271	228.778

111	-0.693147	0.389474	-0.281926	193.271	228.267
112	-0.693147	0.392982	-0.27411	193.271	227.886
113	-0.693147	0.396491	-0.263715	193.271	227.378
114	-0.693147	0.4	-0.253347	193.271	226.872
115	-0.693147	0.403509	-0.24559	193.271	226.493
116	-0.693147	0.407018	-0.235269	193.271	225.989
117	-0.693147	0.410526	-0.227545	193.271	225.612
118	-0.693147	0.414035	-0.217267	193.271	225.11
119	-0.693147	0.417544	-0.209575	193.271	224.734
120	-0.693147	0.421053	-0.199336	193.271	224.234
121	-0.693147	0.424561	-0.191671	193.271	223.86
122	-0.693147	0.42807	-0.181468	193.271	223.362
123	-0.693147	0.431579	-0.173829	193.271	222.989
124	-0.693147	0.435088	-0.163659	193.271	222.492
125	-0.693147	0.438596	-0.156042	193.271	222.12
126	-0.693147	0.442105	-0.1459	193.271	221.625
127	-0.693147	0.445614	-0.138305	193.271	221.254
128	-0.693147	0.449123	-0.128189	193.271	220.76
129	-0.693147	0.452632	-0.12061	193.271	220.39
130	-0.693147	0.45614	-0.110516	193.271	219.897
131	-0.693147	0.459649	-0.102953	193.271	219.528
132	-0.693147	0.463158	-0.0928787	193.271	219.036
133	-0.693147	0.466667	-0.0853288	193.271	218.667
134	-0.693147	0.470175	-0.0752698	193.271	218.176
135	-0.693147	0.473684	-0.0677301	193.271	217.807
136	-0.693147	0.477193	-0.0576847	193.271	217.317
137	-0.693147	0.480702	-0.0501541	193.271	216.949
138	-0.693147	0.484211	-0.0401167	193.271	216.459
139	-0.693147	0.487719	-0.0325917	193.271	216.092
140	-0.693147	0.491228	-0.0225612	193.271	215.602
141	-0.693147	0.494737	-0.0150408	193.271	215.234
142	-0.693147	0.498246	-0.00501359	193.271	214.745
143	-0.693147	0.501754	0.00501359	193.271	214.255
144	-0.693147	0.505263	0.0150408	193.271	213.766
145	-0.693147	0.508772	0.0225612	193.271	213.398
146	-0.693147	0.512281	0.0325917	193.271	212.908
147	-0.693147	0.515789	0.0401167	193.271	212.541
148	-0.693147	0.519298	0.0501541	193.271	212.051
149	-0.693147	0.522807	0.0576847	193.271	211.683
150	-0.693147	0.526316	0.0677301	193.271	211.193
151	-0.693147	0.529825	0.0752698	193.271	210.824
152	-0.693147	0.533333	0.0853288	193.271	210.333
153	-0.693147	0.536842	0.0928787	193.271	209.964
154	-0.693147	0.540351	0.102953	193.271	209.472
155	-0.693147	0.54386	0.110516	193.271	209.103
156	-0.693147	0.547368	0.12061	193.271	208.61
157	-0.693147	0.550877	0.128189	193.271	208.24
158	-0.693147	0.554386	0.138305	193.271	207.746
159	-0.693147	0.557895	0.1459	193.271	207.375
160	-0.693147	0.561404	0.156042	193.271	206.88
161	-0.693147	0.564912	0.163659	193.271	206.508
162	-0.693147	0.568421	0.173829	193.271	206.011
163	-0.693147	0.57193	0.181468	193.271	205.638
164	-0.693147	0.575439	0.191671	193.271	205.14
165	-0.693147	0.578947	0.199336	193.271	204.766
166	-0.693147	0.582456	0.209575	193.271	204.266
167	-0.693147	0.585965	0.217267	193.271	203.89
168	-0.693147	0.589474	0.227545	193.271	203.388
169	-0.693147	0.592982	0.235269	193.271	203.011
170	-0.693147	0.596491	0.24559	193.271	202.507
171	-0.693147	0.6	0.253347	193.271	202.128
172	-0.693147	0.603509	0.263715	193.271	201.622

173	-0.693147	0.607018	0.27411	193.271	201.114
174	-0.693147	0.610526	0.281926	193.271	200.733
175	-0.693147	0.614035	0.292375	193.271	200.222
176	-0.693147	0.617544	0.300232	193.271	199.839
177	-0.693147	0.621053	0.310738	193.271	199.326
178	-0.693147	0.624561	0.318639	193.271	198.94
179	-0.693147	0.62807	0.329206	193.271	198.424
180	-0.693147	0.631579	0.337155	193.271	198.036
181	-0.693147	0.635088	0.347787	193.271	197.516
182	-0.693147	0.638596	0.355788	193.271	197.126
183	-0.693147	0.642105	0.36649	193.271	196.603
184	-0.693147	0.645614	0.374544	193.271	196.21
185	-0.693147	0.649123	0.385321	193.271	195.683
186	-0.693147	0.652632	0.393433	193.271	195.287
187	-0.693147	0.65614	0.40429	193.271	194.757
188	-0.693147	0.659649	0.412463	193.271	194.358
189	-0.693147	0.663158	0.423405	193.271	193.824
190	-0.693147	0.666667	0.431644	193.271	193.421
191	-0.693147	0.670175	0.442676	193.271	192.883
192	-0.693147	0.673684	0.450985	193.271	192.477
193	-0.693147	0.677193	0.462114	193.271	191.933
194	-0.693147	0.680702	0.470498	193.271	191.524
195	-0.693147	0.684211	0.481728	193.271	190.976
196	-0.693147	0.687719	0.490189	193.271	190.562
197	-0.693147	0.691228	0.501527	193.271	190.009
198	-0.693147	0.694737	0.510074	193.271	189.591
199	-0.693147	0.698246	0.521527	193.271	189.032
200	-0.693147	0.701754	0.530162	193.271	188.61
201	-0.693147	0.705263	0.541736	193.271	188.045
202	-0.693147	0.708772	0.550465	193.271	187.619
203	-0.693147	0.712281	0.56217	193.271	187.047
204	-0.693147	0.715789	0.570999	193.271	186.616
205	-0.693147	0.719298	0.582841	193.271	186.038
206	-0.693147	0.722807	0.591776	193.271	185.602
207	-0.693147	0.726316	0.603765	193.271	185.016
208	-0.693147	0.729825	0.612813	193.271	184.574
209	-0.693147	0.733333	0.624956	193.271	183.981
210	-0.693147	0.736842	0.634124	193.271	183.534
211	-0.693147	0.740351	0.646431	193.271	182.933
212	-0.693147	0.74386	0.655726	193.271	182.479
213	-0.693147	0.747368	0.668209	193.271	181.869
214	-0.693147	0.750877	0.677639	193.271	181.409
215	-0.693147	0.754386	0.690309	193.271	180.79
216	-0.693147	0.757895	0.699883	193.271	180.322
217	-0.693147	0.761404	0.712751	193.271	179.694
218	-0.693147	0.764912	0.722479	193.271	179.219
219	-0.693147	0.768421	0.735557	193.271	178.58
220	-0.693147	0.77193	0.745449	193.271	178.097
221	-0.693147	0.775439	0.758753	193.271	177.448
222	-0.693147	0.778947	0.768821	193.271	176.956
223	-0.693147	0.782456	0.782366	193.271	176.294
224	-0.693147	0.785965	0.792618	193.271	175.794
225	-0.693147	0.789474	0.806422	193.271	175.12
226	-0.693147	0.792982	0.816874	193.271	174.609
227	-0.693147	0.796491	0.830953	193.271	173.922
228	-0.693147	0.8	0.841621	193.271	173.401
229	-0.693147	0.803509	0.855996	193.271	172.699
230	-0.693147	0.807018	0.87055	193.271	171.988
231	-0.693147	0.810526	0.881587	193.271	171.449
232	-0.693147	0.814035	0.896473	193.271	170.722
233	-0.693147	0.817544	0.907769	193.271	170.171
234	-0.693147	0.821053	0.923014	193.271	169.426

235	-0.693147	0.824561	0.93459	193.271	168.861	
236	-0.693147	0.82807	0.950222	193.271	168.097	
237	-0.693147	0.831579	0.9621	193.271	167.517	
238	-0.693147	0.835088	0.97815	193.271	166.734	
239	-0.693147	0.838596	0.990356	193.271	166.138	
240	-0.693147	0.842105	1.00687	193.271	165.331	
241	-0.693147	0.845614	1.01943	193.271	164.718	
242	-0.693147	0.849123	1.03643	193.271	163.888	
243	-0.693147	0.852632	1.04939	193.271	163.255	
244	-0.693147	0.85614	1.06694	193.271	162.398	
245	-0.693147	0.859649	1.08032	193.271	161.744	
246	-0.693147	0.863158	1.09847	193.271	160.858	
247	-0.693147	0.866667	1.11232	193.271	160.182	
248	-0.693147	0.870175	1.13113	193.271	159.263	
249	-0.693147	0.873684	1.1455	193.271	158.561	
250	-0.693147	0.877193	1.16505	193.271	157.607	
251	-0.693147	0.880702	1.18	193.271	156.877	
252	-0.693147	0.884211	1.20036	193.271	155.882	
253	-0.693147	0.887719	1.21596	193.271	155.121	
254	-0.693147	0.891228	1.23724	193.271	154.082	
255	-0.693147	0.894737	1.25357	193.271	153.284	
256	-0.693147	0.898246	1.27588	193.271	152.195	
257	-0.693147	0.901754	1.29303	193.271	151.357	
258	-0.693147	0.905263	1.31652	193.271	150.21	
259	-0.693147	0.908772	1.33462	193.271	149.326	
260	-0.693147	0.912281	1.35946	193.271	148.113	
261	-0.693147	0.915789	1.37866	193.271	147.176	
262	-0.693147	0.919298	1.40507	193.271	145.886	
263	-0.693147	0.922807	1.42554	193.271	144.886	
264	-0.693147	0.926316	1.4538	193.271	143.506	
265	-0.693147	0.929825	1.47579	193.271	142.432	
266	-0.693147	0.933333	1.50626	193.271	140.944	
267	-0.693147	0.936842	1.53007	193.271	139.782	
268	-0.693147	0.940351	1.56322	193.271	138.163	
269	-0.693147	0.94386	1.58927	193.271	136.891	
270	-0.693147	0.947368	1.62576	193.271	135.109	
271	-0.693147	0.950877	1.65463	193.271	133.699	
272	-0.693147	0.954386	1.6954	193.271	131.708	
273	-0.693147	0.957895	1.72793	193.271	130.119	
274	-0.693147	0.961404	1.77438	193.271	127.851	
275	-0.693147	0.964912	1.81191	193.271	126.018	
276	-0.693147	0.968421	1.86629	193.271	123.363	
277	-0.693147	0.97193	1.91103	193.271	121.178	
278	-0.653926	0.975439	1.97737	195.894	117.938	
279	0	0.978947	2.03352	239.625	115.196	
280	0	0.982456	2.12007	239.625	110.97	
281	1.09861	0.985965	2.19728	313.095	107.199	
282	1.79176	0.989474	2.32634	359.449	100.897	
283	2.07944	0.992982	2.45727	378.688	94.5032	
284	4.35671	0.996491	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 = 94.3662%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 23
Maximum Background Value = 4.35671
Confidence Level = 74.2%
False Positive Rate = 25.8%

Location	Date	Count	Mean	Significant
LMW-10	11/16/2012	1	-1.38629	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
LMW-14R	11/16/2012	1	-2.65926	FALSE
LMW-15R	11/16/2012	1	-2.65926	FALSE
LMW-16	11/16/2012	1	-2.65926	FALSE
LMW-3	11/16/2012	1	-0.653926	FALSE
LMW-3S	11/16/2012	1	-2.65926	FALSE
LMW-6	11/16/2012	1	-2.65926	FALSE
LMW-7	11/16/2012	1	-2.65926	FALSE
LMW-8	11/16/2012	1	-2.65926	FALSE
LMW-9	11/16/2012	1	-2.65926	FALSE
LMW-9D	11/16/2012	1	-2.65926	FALSE
LMW-9S	11/16/2012	1	-2.65926	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE

Concentrations (ppb)

Parameter: Chromium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 166
Percent Non-Detects: 58.4507%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	11 (47.8261%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	9 (45%)	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

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		
LMW-14R	11	4 (36.3636%)	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		
LMW-15R	18	10 (55.5556%)	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	0.44 J B	0.44 J B		
		11/16/2009	0.16 J B	0.16 J B		
		11/16/2009	0.53 J B	0.53 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	
LMW-16	13	7 (53.8462%)	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	
LMW-3	25	20 (80%)	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	
LMW-3S	13	7 (53.8462%)	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
LMW-6	23	14 (60.8696%)	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
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-8	23	15 (65.2174%)	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
LMW-9	23	10 (43.4783%)	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	
LMW-9D	13	4 (30.7692%)	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	
LMW-9S	12	8 (66.6667%)	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
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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.08	-2.747777	55021	-0.219821
2	0.08	-2.457271	3.5884	-0.416403
3	0.08	-2.326341	9.0003	-0.60251
4	0.08	-2.197282	3.8283	-0.778293
5	0.08	-2.120072	8.323	-0.947899
6	0.08	-2.033523	2.4582	-1.11058
7	0.08	-1.977373	6.3682	-1.26877
8	0.08	-1.911034	0.0203	-1.42165
9	0.08	-1.866294	3.5033	-1.57096
10	0.08	-1.811914	6.7863	-1.71591
11	0.08	-1.774384	9.9348	-1.85786
12	0.08	-1.727935	2.9205	-1.99609
13	0.08	-1.6954	55.7949	-2.13173
14	0.08	-1.654635	8.5327	-2.2641
15	0.08	-1.625766	1.1758	-2.39416
16	0.08	-1.589276	3.7015	-2.5213
17	0.08	-1.563226	6.1452	-2.64636
18	0.08	-1.530076	8.4863	-2.76876
19	0.08	-1.506267	0.7551	-2.88926
20	0.08	-1.475797	2.9331	-3.00732
21	0.08	-1.4538	75.0466	-3.12363
22	0.08	-1.425547	7.0788	-3.23767
23	0.08	-1.405077	9.053	-3.35008
24	0.08	-1.378668	0.9537	-3.46037
25	0.08	-1.359468	2.8019	-3.56913
26	0.16	-1.334628	4.5831	-3.78267
27	0.16	-1.316528	6.3163	-3.99331
28	0.16	-1.293038	7.9883	-4.2002
29	0.18	-1.275888	9.6161	-4.42985
30	0.18	-1.253579	1.1875	-4.6555
31	0.18	-1.237249	2.7183	-4.8782
32	0.2	-1.215969	4.1969	-5.12139
33	0.23	-1.200369	5.6377	-5.39747
34	0.24	-1.18	97.0301	-5.68067
35	0.24	-1.165059	8.3875	-5.96029
36	0.24	-1.1455	99.6996	-6.23521
37	0.25	-1.131131	00.979	-6.51799
38	0.26	-1.112321	02.216	-6.80719
39	0.27	-1.098471	03.423	-7.10378
40	0.28	-1.080321	04.59	-7.40627
41	0.3	-1.066941	05.728	-7.72635
42	0.32	-1.049391	06.83	-8.06215
43	0.32	-1.036431	07.904	-8.39381
44	0.33	-1.019431	08.943	-8.73022
45	0.35	-1.006871	09.957	-9.08263
46	0.35	-0.990356	110.938	-9.42925
47	0.35	-0.978151	11.894	-9.7716
48	0.36	-0.9621	112.82	-10.118
49	0.36	-0.950222	113.723	-10.46
50	0.37	-0.934591	14.596	-10.8058
51	0.37	-0.923014	115.448	-11.1474

52	0.37	-0.907769	116.272	-11.4832
53	0.44	-0.896473	117.076	-11.8777
54	0.44	-0.881587	117.853	-12.2656
55	0.44	-0.87055	118.611	-12.6486
56	0.44	-0.855996	119.344	-13.0253
57	0.48	-0.841621	120.052	-13.4292
58	0.49	-0.830953	120.743	-13.8364
59	0.5	-0.816874	121.41	-14.2448
60	0.51	-0.806422	122.06	-14.6561
61	0.53	-0.792618	122.689	-15.0762
62	0.53	-0.782366	123.301	-15.4909
63	0.54	-0.768821	123.892	-15.906
64	0.55	-0.758753	124.467	-16.3233
65	0.56	-0.745449	125.023	-16.7408
66	0.56	-0.735557	125.564	-17.1527
67	0.57	-0.722479	126.086	-17.5645
68	0.58	-0.712751	126.594	-17.9779
69	0.58	-0.699883	127.084	-18.3838
70	0.6	-0.690309	127.561	-18.798
71	0.61	-0.677639	128.02	-19.2114
72	0.61	-0.668209	128.466	-19.619
73	0.62	-0.655726	128.896	-20.0255
74	0.69	-0.646431	129.314	-20.4716
75	0.7	-0.634124	129.716	-20.9155
76	0.72	-0.624956	130.107	-21.3654
77	0.76	-0.612813	130.482	-21.8312
78	0.83	-0.603765	130.847	-22.3323
79	0.84	-0.591776	131.197	-22.8294
80	0.94	-0.582841	131.537	-23.3773
81	0.94	-0.570999	131.863	-23.914
82	0.98	-0.56217	132.179	-24.4649
83	1	-0.550465	132.482	-25.0154
84	1	-0.541736	132.775	-25.5571
85	1	-0.530162	133.056	-26.0873
86	1	-0.521527	133.328	-26.6088
87	1.1	-0.510074	133.589	-27.1699
88	1.1	-0.501527	133.84	-27.7216
89	1.2	-0.490189	134.08	-28.3098
90	1.2	-0.481728	134.312	-28.8879
91	1.6	-0.470498	134.534	-29.6407
92	1.6	-0.462114	134.747	-30.38
93	1.7	-0.450985	134.951	-31.1467
94	1.7	-0.442676	135.147	-31.8993
95	2	-0.431644	135.333	-32.7626
96	2.1	-0.423405	135.512	-33.6517
97	3	-0.412463	135.682	-34.8891
98	3.1	-0.40429	135.846	-36.1424
99	3.3	-0.393433	136.001	-37.4407
100	4	-0.385321	136.149	-38.982
101	4.1	-0.374544	136.289	-40.5176
102	4.4	-0.36649	136.424	-42.1302
103	5	-0.355788	136.55	-43.9091
104	5	-0.347787	136.671	-45.6481
105	5	-0.337155	136.785	-47.3338
106	5.5	-0.329206	136.893	-49.1445
107	5.8	-0.318639	136.995	-50.9926
108	6	-0.310738	137.091	-52.857
109	6	-0.300232	137.182	-54.6584
110	6	-0.292375	137.267	-56.4127
111	7	-0.281926	137.346	-58.3861
112	7	-0.27411	137.422	-60.3049
113	7	-0.263715	137.491	-62.1509

114	10	-0.253347	137.555	-64.6844
115	10	-0.24559	137.616	-67.1403
116	10	-0.235269	137.671	-69.493
117	10	-0.227545	137.723	-71.7684
118	10	-0.217267	137.77	-73.9411
119	10	-0.209575	137.814	-76.0368
120	10	-0.199336	137.854	-78.0302
121	10	-0.191671	137.89	-79.9469
122	10	-0.181468	137.923	-81.7616
123	10	-0.173829	137.954	-83.4999
124	10	-0.163659	137.98	-85.1365
125	10	-0.156042	138.005	-86.6969
126	10	-0.1459	138.026	-88.1559
127	10	-0.138305	138.045	-89.539
128	10	-0.128189	138.062	-90.8208
129	10	-0.12061	138.076	-92.0269
130	10	-0.110516	138.088	-93.1321
131	10	-0.102953	138.099	-94.1616
132	10	-0.0928787	138.108	-95.0904
133	10	-0.0853288	138.115	-95.9437
134	10	-0.0752698	138.12	-96.6964
135	10	-0.0677301	138.125	-97.3737
136	10	-0.0576847	138.128	-97.9506
137	10	-0.0501541	138.131	-98.4521
138	10	-0.0401167	138.132	-98.8533
139	10	-0.0325917	138.134	-99.1792
140	10	-0.0225612	138.134	-99.4048
141	10	-0.0150408	138.134	-99.5552
142	10	-0.00501359	138.134	-99.6053
143	10	0.00501359	138.134	-99.5552
144	10	0.0150408	138.135	-99.4048
145	10	0.0225612	138.135	-99.1792
146	10	0.0325917	138.136	-98.8533
147	10	0.0401167	138.138	-98.4521
148	10	0.0501541	138.14	-97.9506
149	10	0.0576847	138.144	-97.3737
150	10	0.0677301	138.148	-96.6964
151	10	0.0752698	138.154	-95.9437
152	10	0.0853288	138.161	-95.0904
153	10	0.0928787	138.17	-94.1616
154	10	0.102953	138.18	-93.1321
155	10	0.110516	138.193	-92.0269
156	10	0.12061	138.207	-90.8208
157	10	0.128189	138.224	-89.539
158	10	0.138305	138.243	-88.1559
159	10	0.1459	138.264	-86.6969
160	10	0.156042	138.288	-85.1365
161	10	0.163659	138.315	-83.4999
162	10	0.173829	138.345	-81.7616
163	10	0.181468	138.378	-79.9469
164	10	0.191671	138.415	-78.0302
165	10	0.199336	138.455	-76.0368
166	10	0.209575	138.499	-73.9411
167	10	0.217267	138.546	-71.7684
168	10	0.227545	138.598	-69.493
169	10	0.235269	138.653	-67.1403
170	10	0.24559	138.713	-64.6844
171	10	0.253347	138.777	-62.1509
172	10	0.263715	138.847	-59.5138
173	10	0.27411	138.922	-56.7727
174	10	0.281926	139.002	-53.9534
175	10	0.292375	139.087	-51.0297

176	10	0.300232	139.177	-48.0273
177	10	0.310738	139.274	-44.92
178	10	0.318639	139.375	-41.7336
179	10	0.329206	139.484	-38.4415
180	10	0.337155	139.597	-35.0699
181	10	0.347787	139.718	-31.5921
182	10	0.355788	139.845	-28.0342
183	10	0.36649	139.979	-24.3693
184	10	0.374544	140.12	-20.6239
185	10	0.385321	140.268	-16.7706
186	10	0.393433	140.423	-12.8363
187	10	0.40429	140.586	-8.79343
188	10	0.412463	140.756	-4.6688
189	10	0.423405	140.936	-0.434748
190	10	0.431644	141.122	3.88169
191	10	0.442676	141.318	8.30845
192	10	0.450985	141.521	12.8183
193	10	0.462114	141.735	17.4394
194	10	0.470498	141.956	22.1444
195	10	0.481728	142.188	26.9617
196	10	0.490189	142.429	31.8636
197	10	0.501527	142.68	36.8789
198	10	0.510074	142.94	41.9796
199	10	0.521527	143.212	47.1949
200	10	0.530162	143.493	52.4965
201	10	0.541736	143.787	57.9139
202	10	0.550465	144.09	63.4185
203	10	0.56217	144.406	69.0402
204	10	0.570999	144.732	74.7502
205	10	0.582841	145.072	80.5786
206	10	0.591776	145.422	86.4964
207	10	0.603765	145.786	92.534
208	10	0.612813	146.162	98.6621
209	10	0.624956	146.552	104.912
210	10	0.634124	146.955	111.253
211	10	0.646431	147.372	117.717
212	10	0.655726	147.802	124.275
213	10	0.668209	148.249	130.957
214	10	0.677639	148.708	137.733
215	10	0.690309	149.185	144.636
216	10	0.699883	149.674	151.635
217	10	0.712751	150.182	158.762
218	10	0.722479	150.704	165.987
219	10	0.735557	151.245	173.343
220	10	0.745449	151.801	180.797
221	10	0.758753	152.377	188.385
222	10	0.768821	152.968	196.073
223	10	0.782366	153.58	203.897
224	10	0.792618	154.208	211.823
225	10	0.806422	154.859	219.887
226	10	0.816874	155.526	228.056
227	10	0.830953	156.216	236.365
228	10	0.841621	156.925	244.782
229	10	0.855996	157.657	253.342
230	10	0.87055	158.415	262.047
231	10	0.881587	159.193	270.863
232	10	0.896473	159.996	279.828
233	10	0.907769	160.82	288.905
234	10	0.923014	161.672	298.135
235	10	0.93459	162.546	307.481
236	10	0.950222	163.449	316.984
237	10	0.9621	164.374	326.605

238	10	0.97815	165.331	336.386	
239	10	0.990356		166.312	346.29
240	10	1.00687	167.326	356.358	
241	10	1.01943	168.365	366.553	
242	10	1.03643	169.439	376.917	
243	10	1.04939	170.54	387.411	
244	10	1.06694	171.679	398.08	
245	10	1.08032	172.846	408.883	
246	10	1.09847	174.052	419.868	
247	10	1.11232	175.29	430.991	
248	10	1.13113	176.569	442.303	
249	10	1.1455	177.881	453.758	
250	10	1.16505	179.239	465.408	
251	10	1.18	180.631	477.208	
252	10	1.20036	182.072	489.212	
253	10	1.21596	183.55	501.371	
254	10	1.23724	185.081	513.744	
255	10	1.25357	186.653	526.279	
256	10	1.27588	188.28	539.038	
257	10	1.29303	189.952	551.968	
258	11	1.31652	191.686	566.45	
259	12	1.33462	193.467	582.466	
260	13	1.35946	195.315	600.139	
261	13	1.37866	197.216	618.061	
262	17	1.40507	199.19	641.947	
263	19	1.42554	201.222	669.033	
264	19	1.4538	203.336	696.655	
265	20	1.47579	205.514	726.171	
266	20	1.50626	207.782	756.296	
267	21	1.53007	210.123	788.427	
268	21	1.56322	212.567	821.255	
269	22	1.58927	215.093	856.219	
270	23	1.62576	217.736	893.612	
271	23	1.65463	220.474	931.668	
272	24	1.6954	223.348	972.357	
273	27	1.72793	226.334	1019.01	
274	28	1.77438	229.482	1068.69	
275	34	1.81191	232.765	1130.3	
276	34	1.86629	236.248	1193.75	
277	36	1.91103	239.9	1262.55	
278	40	1.97737	243.81	1341.65	
279	79	2.03352	247.946	1502.29	
280	84	2.12007	252.44	1680.38	
281	87	2.19728	257.268	1871.54	
282	93	2.32634	262.68	2087.89	
283	120	2.45727	268.718	2382.77	
284	345	2.74777	276.269	3330.74	

Data Set Standard Deviation = 23.8668
Numerator = 1.10939e+007
Denominator = 4.45354e+007
W Statistic = 0.249102 = 1.10939e+007 / 4.45354e+007

5% Critical value of 0.976 exceeds 0.249102
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.249102
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 = 0.505556
0.505556 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.08	0.00350877	-2.747	739.107	348.683	
2	0.08	0.00701754	-2.457	239.107	334.497	
3	0.08	0.0105263	-2.326	439.107	328.103	
4	0.08	0.0140351	-2.197	239.107	321.801	
5	0.08	0.0175439	-2.120	739.107	318.03	
6	0.08	0.0210526	-2.033	523 9.107	313.804	
7	0.08	0.0245614	-1.977	339.107	311.062	
8	0.08	0.0280702	-1.911	039.107	307.822	
9	0.08	0.0315789	-1.866	239.107	305.637	
10	0.08	0.0350877	-1.811	939.107	302.982	
11	0.08	0.0385965	-1.774	339.107	301.149	
12	0.08	0.0421053	-1.727	939.107	298.881	
13	0.08	0.045614	-1.695	4 39.107	297.292	
14	0.08	0.0491228	-1.654	639.107	295.301	
15	0.08	0.0526316	-1.625	739.107	293.891	
16	0.08	0.0561404	-1.589	239.107	292.109	
17	0.08	0.0596491	-1.563	239.107	290.837	
18	0.08	0.0631579	-1.530	039.107	289.218	
19	0.08	0.0666667	-1.506	239.107	288.056	
20	0.08	0.0701754	-1.475	739.107	286.568	
21	0.08	0.0736842	-1.453	8 39.107	285.494	
22	0.08	0.077193	-1.425	539.107	284.114	
23	0.08	0.0807018	-1.405	039.107	283.114	
24	0.08	0.0842105	-1.378	639.107	281.824	
25	0.08	0.0877193	-1.359	439.107	280.887	
26	0.16	0.0912281	-1.334	623 9.214	279.674	
27	0.16	0.0947368	-1.316	523 9.214	278.79	
28	0.16	0.0982456	-1.293	039.214	277.643	
29	0.18	0.101754	-1.275	839.2407	276.805	
30	0.18	0.105263	-1.253	539.2407	275.716	
31	0.18	0.108772	-1.237	239.2407	274.918	
32	0.2	0.112281	-1.215	939.2675	273.879	
33	0.23	0.115789	-1.200	339.3076	273.118	
34	0.24	0.119298	-1.18	39.321	272.123	
35	0.24	0.122807	-1.165	039.321	271.393	
36	0.24	0.126316	-1.145	5 39.321	270.439	
37	0.25	0.129825	-1.131	139.3344	269.737	
38	0.26	0.133333	-1.112	339.3477	268.818	
39	0.27	0.136842	-1.098	439.3611	268.142	
40	0.28	0.140351	-1.080	339.3745	267.256	
41	0.3	0.14386	-1.066	9439.4012	266.602	
42	0.32	0.147368	-1.049	339.428	265.745	
43	0.32	0.150877	-1.036	439.428	265.112	
44	0.33	0.154386	-1.019	439.4414	264.282	
45	0.35	0.157895	-1.006	8739.4681	263.669	
46	0.35	0.161404	-0.990	356	39.4681	262.862
47	0.35	0.164912	-0.978	1539.4681	262.266	
48	0.36	0.168421	-0.962	1 39.4815	261.483	

49	0.36	0.17193	-0.950222	39.4815	260.903
50	0.37	0.175439	-0.934593	39.4949	260.139
51	0.37	0.178947	-0.923014	39.4949	259.574
52	0.37	0.182456	-0.907769	39.4949	258.829
53	0.44	0.185965	-0.896473	39.5885	258.278
54	0.44	0.189474	-0.881587	39.5885	257.551
55	0.44	0.192982	-0.870553	39.5885	257.012
56	0.44	0.196491	-0.855996	39.5885	256.301
57	0.48	0.2	-0.841621	39.642	255.599
58	0.49	0.203509	-0.830953	39.6554	255.078
59	0.5	0.207018	-0.816874	39.6688	254.391
60	0.51	0.210526	-0.806422	39.6821	253.88
61	0.53	0.214035	-0.792618	39.7089	253.206
62	0.53	0.217544	-0.782366	39.7089	252.706
63	0.54	0.221053	-0.768821	39.7223	252.044
64	0.55	0.224561	-0.758753	39.7356	251.552
65	0.56	0.22807	-0.745449	39.749	250.903
66	0.56	0.231579	-0.735557	39.749	250.42
67	0.57	0.235088	-0.722479	39.7624	249.781
68	0.58	0.238596	-0.712751	39.7758	249.306
69	0.58	0.242105	-0.699883	39.7758	248.678
70	0.6	0.245614	-0.690309	39.8025	248.21
71	0.61	0.249123	-0.677639	39.8159	247.591
72	0.61	0.252632	-0.668209	39.8159	247.131
73	0.62	0.25614	-0.655726	39.8293	246.521
74	0.69	0.259649	-0.646431	39.9229	246.067
75	0.7	0.263158	-0.634124	39.9363	245.466
76	0.72	0.266667	-0.624956	39.963	245.019
77	0.76	0.270175	-0.612813	40.0165	244.426
78	0.83	0.273684	-0.603765	40.1101	243.984
79	0.84	0.277193	-0.591776	40.1235	243.398
80	0.94	0.280702	-0.582841	40.2572	242.962
81	0.94	0.284211	-0.570999	40.2572	242.384
82	0.98	0.287719	-0.562174	40.3107	241.953
83	1	0.291228	-0.550465	40.3375	241.381
84	1	0.294737	-0.541736	40.3375	240.955
85	1	0.298246	-0.530162	40.3375	240.39
86	1	0.301754	-0.521527	40.3375	239.968
87	1.1	0.305263	-0.510074	40.4712	239.409
88	1.1	0.308772	-0.501527	40.4712	238.991
89	1.2	0.312281	-0.490189	40.605	238.438
90	1.2	0.315789	-0.481728	40.605	238.024
91	1.6	0.319298	-0.470498	41.14	237.476
92	1.6	0.322807	-0.462114	41.14	237.067
93	1.7	0.326316	-0.450985	41.2738	236.523
94	1.7	0.329825	-0.442676	41.2738	236.117
95	2	0.333333	-0.431644	41.675	235.579
96	2.1	0.336842	-0.423405	41.8088	235.176
97	3	0.340351	-0.412463	43.0125	234.642
98	3.1	0.34386	-0.404294	43.1463	234.243
99	3.3	0.347368	-0.393433	43.4138	233.713
100	4	0.350877	-0.385321	44.35	233.317
101	4.1	0.354386	-0.374544	44.4838	232.79
102	4.4	0.357895	-0.366494	44.885	232.397
103	5	0.361404	-0.355788	45.6875	231.874
104	5	0.364912	-0.347787	45.6875	231.484
105	5	0.368421	-0.337155	45.6875	230.964
106	5.5	0.37193	-0.329206	46.3563	230.576
107	5.8	0.375439	-0.318639	46.7575	230.06
108	6	0.378947	-0.310738	47.025	229.674
109	6	0.382456	-0.300232	47.025	229.161
110	6	0.385965	-0.292375	47.025	228.778

111	7	0.389474	-0.281926	48.3625	228.267
112	7	0.392982	-0.274114	48.3625	227.886
113	7	0.396491	-0.263715	48.3625	227.378
114	10	0.4	-0.253347	52.375	226.872
115	10	0.403509	-0.245595	52.375	226.493
116	10	0.407018	-0.235269	52.375	225.989
117	10	0.410526	-0.227545	52.375	225.612
118	10	0.414035	-0.217267	52.375	225.11
119	10	0.417544	-0.209575	52.375	224.734
120	10	0.421053	-0.199336	52.375	224.234
121	10	0.424561	-0.191671	52.375	223.86
122	10	0.42807	-0.181468	52.375	223.362
123	10	0.431579	-0.173829	52.375	222.989
124	10	0.435088	-0.163659	52.375	222.492
125	10	0.438596	-0.156042	52.375	222.12
126	10	0.442105	-0.1459	52.375	221.625
127	10	0.445614	-0.138305	52.375	221.254
128	10	0.449123	-0.128189	52.375	220.76
129	10	0.452632	-0.120615	52.375	220.39
130	10	0.45614	-0.110516	52.375	219.897
131	10	0.459649	-0.102953	52.375	219.528
132	10	0.463158	-0.0928787	52.375	219.036
133	10	0.466667	-0.0853288	52.375	218.667
134	10	0.470175	-0.0752698	52.375	218.176
135	10	0.473684	-0.0677301	52.375	217.807
136	10	0.477193	-0.0576847	52.375	217.317
137	10	0.480702	-0.0501541	52.375	216.949
138	10	0.484211	-0.0401167	52.375	216.459
139	10	0.487719	-0.0325917	52.375	216.092
140	10	0.491228	-0.0225612	52.375	215.602
141	10	0.494737	-0.0150408	52.375	215.234
142	10	0.498246	-0.00501359	52.375	214.745
143	10	0.501754	0.00501359	52.375	214.255
144	10	0.505263	0.0150408	52.375	213.766
145	10	0.508772	0.0225612	52.375	213.398
146	10	0.512281	0.0325917	52.375	212.908
147	10	0.515789	0.0401167	52.375	212.541
148	10	0.519298	0.0501541	52.375	212.051
149	10	0.522807	0.0576847	52.375	211.683
150	10	0.526316	0.0677301	52.375	211.193
151	10	0.529825	0.0752698	52.375	210.824
152	10	0.533333	0.0853288	52.375	210.333
153	10	0.536842	0.0928787	52.375	209.964
154	10	0.540351	0.102953	52.375	209.472
155	10	0.54386	0.110516	52.375	209.103
156	10	0.547368	0.12061	52.375	208.61
157	10	0.550877	0.128189	52.375	208.24
158	10	0.554386	0.138305	52.375	207.746
159	10	0.557895	0.1459	52.375	207.375
160	10	0.561404	0.156042	52.375	206.88
161	10	0.564912	0.163659	52.375	206.508
162	10	0.568421	0.173829	52.375	206.011
163	10	0.57193	0.181468	52.375	205.638
164	10	0.575439	0.191671	52.375	205.14
165	10	0.578947	0.199336	52.375	204.766
166	10	0.582456	0.209575	52.375	204.266
167	10	0.585965	0.217267	52.375	203.89
168	10	0.589474	0.227545	52.375	203.388
169	10	0.592982	0.235269	52.375	203.011
170	10	0.596491	0.24559	52.375	202.507
171	10	0.6	0.253347	52.375	202.128
172	10	0.603509	0.263715	52.375	201.622

173	10	0.607018	0.27411	52.375	201.114
174	10	0.610526	0.281926	52.375	200.733
175	10	0.614035	0.292375	52.375	200.222
176	10	0.617544	0.300232	52.375	199.839
177	10	0.621053	0.310738	52.375	199.326
178	10	0.624561	0.318639	52.375	198.94
179	10	0.62807	0.329206	52.375	198.424
180	10	0.631579	0.337155	52.375	198.036
181	10	0.635088	0.347787	52.375	197.516
182	10	0.638596	0.355788	52.375	197.126
183	10	0.642105	0.36649	52.375	196.603
184	10	0.645614	0.374544	52.375	196.21
185	10	0.649123	0.385321	52.375	195.683
186	10	0.652632	0.393433	52.375	195.287
187	10	0.65614	0.40429	52.375	194.757
188	10	0.659649	0.412463	52.375	194.358
189	10	0.663158	0.423405	52.375	193.824
190	10	0.666667	0.431644	52.375	193.421
191	10	0.670175	0.442676	52.375	192.883
192	10	0.673684	0.450985	52.375	192.477
193	10	0.677193	0.462114	52.375	191.933
194	10	0.680702	0.470498	52.375	191.524
195	10	0.684211	0.481728	52.375	190.976
196	10	0.687719	0.490189	52.375	190.562
197	10	0.691228	0.501527	52.375	190.009
198	10	0.694737	0.510074	52.375	189.591
199	10	0.698246	0.521527	52.375	189.032
200	10	0.701754	0.530162	52.375	188.61
201	10	0.705263	0.541736	52.375	188.045
202	10	0.708772	0.550465	52.375	187.619
203	10	0.712281	0.56217	52.375	187.047
204	10	0.715789	0.570999	52.375	186.616
205	10	0.719298	0.582841	52.375	186.038
206	10	0.722807	0.591776	52.375	185.602
207	10	0.726316	0.603765	52.375	185.016
208	10	0.729825	0.612813	52.375	184.574
209	10	0.733333	0.624956	52.375	183.981
210	10	0.736842	0.634124	52.375	183.534
211	10	0.740351	0.646431	52.375	182.933
212	10	0.74386	0.655726	52.375	182.479
213	10	0.747368	0.668209	52.375	181.869
214	10	0.750877	0.677639	52.375	181.409
215	10	0.754386	0.690309	52.375	180.79
216	10	0.757895	0.699883	52.375	180.322
217	10	0.761404	0.712751	52.375	179.694
218	10	0.764912	0.722479	52.375	179.219
219	10	0.768421	0.735557	52.375	178.58
220	10	0.77193	0.745449	52.375	178.097
221	10	0.775439	0.758753	52.375	177.448
222	10	0.778947	0.768821	52.375	176.956
223	10	0.782456	0.782366	52.375	176.294
224	10	0.785965	0.792618	52.375	175.794
225	10	0.789474	0.806422	52.375	175.12
226	10	0.792982	0.816874	52.375	174.609
227	10	0.796491	0.830953	52.375	173.922
228	10	0.8	0.841621	52.375	173.401
229	10	0.803509	0.855996	52.375	172.699
230	10	0.807018	0.87055	52.375	171.988
231	10	0.810526	0.881587	52.375	171.449
232	10	0.814035	0.896473	52.375	170.722
233	10	0.817544	0.907769	52.375	170.171
234	10	0.821053	0.923014	52.375	169.426

235	10	0.824561	0.93459	52.375	168.861	
236	10	0.82807	0.950222	52.375	168.097	
237	10	0.831579	0.9621	52.375	167.517	
238	10	0.835088	0.97815	52.375	166.734	
239	10	0.838596	0.990356	52.375	166.138	
240	10	0.842105	1.00687	52.375	165.331	
241	10	0.845614	1.01943	52.375	164.718	
242	10	0.849123	1.03643	52.375	163.888	
243	10	0.852632	1.04939	52.375	163.255	
244	10	0.85614	1.06694	52.375	162.398	
245	10	0.859649	1.08032	52.375	161.744	
246	10	0.863158	1.09847	52.375	160.858	
247	10	0.866667	1.11232	52.375	160.182	
248	10	0.870175	1.13113	52.375	159.263	
249	10	0.873684	1.1455	52.375	158.561	
250	10	0.877193	1.16505	52.375	157.607	
251	10	0.880702	1.18	52.375	156.877	
252	10	0.884211	1.20036	52.375	155.882	
253	10	0.887719	1.21596	52.375	155.121	
254	10	0.891228	1.23724	52.375	154.082	
255	10	0.894737	1.25357	52.375	153.284	
256	10	0.898246	1.27588	52.375	152.195	
257	10	0.901754	1.29303	52.375	151.357	
258	11	0.905263	1.31652	53.7125	150.21	
259	12	0.908772	1.33462	55.05	149.326	
260	13	0.912281	1.35946	56.3875	148.113	
261	13	0.915789	1.37866	56.3875	147.176	
262	17	0.919298	1.40507	61.7375	145.886	
263	19	0.922807	1.42554	64.4125	144.886	
264	19	0.926316	1.4538	64.4125	143.506	
265	20	0.929825	1.47579	65.75	142.432	
266	20	0.933333	1.50626	65.75	140.944	
267	21	0.936842	1.53007	67.0875	139.782	
268	21	0.940351	1.56322	67.0875	138.163	
269	22	0.94386	1.58927	68.425	136.891	
270	23	0.947368	1.62576	69.7625	135.109	
271	23	0.950877	1.65463	69.7625	133.699	
272	24	0.954386	1.6954	71.1	131.708	
273	27	0.957895	1.72793	75.1125	130.119	
274	28	0.961404	1.77438	76.45	127.851	
275	34	0.964912	1.81191	84.475	126.018	
276	34	0.968421	1.86629	84.475	123.363	
277	36	0.97193	1.91103	87.15	121.178	
278	40	0.975439	1.97737	92.5	117.938	
279	79	0.978947	2.03352	144.663	115.196	
280	84	0.982456	2.12007	151.35	110.97	
281	87	0.985965	2.19728	155.363	107.199	
282	93	0.989474	2.32634	163.387	100.897	
283	120	0.992982	2.45727	199.5	94.5032	
284	345	0.996491	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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.52573	-2.74777	7.55021	6.94011
2	-2.52573	-2.45727	13.5884	13.1465
3	-2.52573	-2.32634	19.0003	19.0222
4	-2.52573	-2.19728	23.8283	24.572
5	-2.52573	-2.12007	28.323	29.9267
6	-2.52573	-2.03352	32.4582	35.0628
7	-2.52573	-1.97737	36.3682	40.0571
8	-2.52573	-1.91103	40.0203	44.8838
9	-2.52573	-1.86629	43.5033	49.5976
10	-2.52573	-1.81191	46.7863	54.174
11	-2.52573	-1.77438	49.9348	58.6556
12	-2.52573	-1.72793	52.9205	63.0199
13	-2.52573	-1.6954	55.7949	67.302
14	-2.52573	-1.65463	58.5327	71.4811
15	-2.52573	-1.62576	61.1758	75.5874
16	-2.52573	-1.58927	63.7015	79.6014
17	-2.52573	-1.56322	66.1452	83.5497
18	-2.52573	-1.53007	68.4863	87.4142
19	-2.52573	-1.50626	70.7551	91.2186
20	-2.52573	-1.47579	72.9331	94.9461
21	-2.52573	-1.4538	75.0466	98.618
22	-2.52573	-1.42554	77.0788	102.219
23	-2.52573	-1.40507	79.053	105.767
24	-2.52573	-1.37866	80.9537	109.249
25	-2.52573	-1.35946	82.8019	112.683
26	-1.83258	-1.33462	84.5831	115.129
27	-1.83258	-1.31652	86.3163	117.542
28	-1.83258	-1.29303	87.9883	119.911
29	-1.7148	-1.27588	89.6161	122.099
30	-1.7148	-1.25357	91.1875	124.249
31	-1.7148	-1.23724	92.7183	126.37
32	-1.60944	-1.21596	94.1969	128.327
33	-1.46968	-1.20036	95.6377	130.091
34	-1.42712	-1.18	97.0301	131.775
35	-1.42712	-1.16505	98.3875	133.438
36	-1.42712	-1.1455	99.6996	135.073
37	-1.38629	-1.13113	100.979	136.641
38	-1.34707	-1.11232	102.216	138.139
39	-1.30933	-1.09847	103.423	139.578
40	-1.27297	-1.08032	104.59	140.953
41	-1.20397	-1.06694	105.728	142.237
42	-1.13943	-1.04939	106.83	143.433
43	-1.13943	-1.03643	107.904	144.614
44	-1.10866	-1.01943	108.943	145.744
45	-1.04982	-1.00687	109.957	146.801
46	-1.04982	-0.990356	110.938	147.841
47	-1.04982	-0.97815	111.894	148.868
48	-1.02165	-0.9621	112.82	149.851
49	-1.02165	-0.950222	113.723	150.822
50	-0.994252	-0.93459	114.596	151.751
51	-0.994252	-0.923014	115.448	152.668

52	-0.994252	-0.907769	116.272	153.571
53	-0.820981	-0.896473	117.076	154.307
54	-0.820981	-0.881587	117.853	155.031
55	-0.820981	-0.87055	118.611	155.745
56	-0.820981	-0.855996	119.344	156.448
57	-0.733969	-0.841621	120.052	157.066
58	-0.71335	-0.830953	120.743	157.659
59	-0.693147	-0.816874	121.41	158.225
60	-0.673345	-0.806422	122.06	158.768
61	-0.634878	-0.792618	122.689	159.271
62	-0.634878	-0.782366	123.301	159.768
63	-0.616186	-0.768821	123.892	160.242
64	-0.597837	-0.758753	124.467	160.695
65	-0.579818	-0.745449	125.023	161.127
66	-0.579818	-0.735557	125.564	161.554
67	-0.562119	-0.722479	126.086	161.96
68	-0.544727	-0.712751	126.594	162.348
69	-0.544727	-0.699883	127.084	162.73
70	-0.510826	-0.690309	127.561	163.082
71	-0.494296	-0.677639	128.02	163.417
72	-0.494296	-0.668209	128.466	163.747
73	-0.478036	-0.655726	128.896	164.061
74	-0.371064	-0.646431	129.314	164.301
75	-0.356675	-0.634124	129.716	164.527
76	-0.328504	-0.624956	130.107	164.732
77	-0.274437	-0.612813	130.482	164.9
78	-0.18633	-0.603765	130.847	165.013
79	-0.174353	-0.591776	131.197	165.116
80	-0.0618754	-0.582841	131.537	165.152
81	-0.0618754	-0.570999	131.863	165.187
82	-0.0202027	-0.56217	132.179	165.199
83	0	-0.550465	132.482	165.199
84	0	-0.541736	132.775	165.199
85	0	-0.530162	133.056	165.199
86	0	-0.521527	133.328	165.199
87	0.0953102	-0.510074	133.589	165.15
88	0.0953102	-0.501527	133.84	165.102
89	0.182322	-0.490189	134.08	165.013
90	0.182322	-0.481728	134.312	164.925
91	0.470004	-0.470498	134.534	164.704
92	0.470004	-0.462114	134.747	164.487
93	0.530628	-0.450985	134.951	164.248
94	0.530628	-0.442676	135.147	164.013
95	0.693147	-0.431644	135.333	163.713
96	0.741937	-0.423405	135.512	163.399
97	1.09861	-0.412463	135.682	162.946
98	1.1314	-0.40429	135.846	162.489
99	1.19392	-0.393433	136.001	162.019
100	1.38629	-0.385321	136.149	161.485
101	1.41099	-0.374544	136.289	160.956
102	1.4816	-0.36649	136.424	160.413
103	1.60944	-0.355788	136.55	159.841
104	1.60944	-0.347787	136.671	159.281
105	1.60944	-0.337155	136.785	158.738
106	1.70475	-0.329206	136.893	158.177
107	1.75786	-0.318639	136.995	157.617
108	1.79176	-0.310738	137.091	157.06
109	1.79176	-0.300232	137.182	156.522
110	1.79176	-0.292375	137.267	155.998
111	1.94591	-0.281926	137.346	155.45
112	1.94591	-0.27411	137.422	154.916
113	1.94591	-0.263715	137.491	154.403

114	2.30259	-0.253347	137.555	153.82
115	2.30259	-0.24559	137.616	153.254
116	2.30259	-0.235269	137.671	152.713
117	2.30259	-0.227545	137.723	152.189
118	2.30259	-0.217267	137.77	151.689
119	2.30259	-0.209575	137.814	151.206
120	2.30259	-0.199336	137.854	150.747
121	2.30259	-0.191671	137.89	150.306
122	2.30259	-0.181468	137.923	149.888
123	2.30259	-0.173829	137.954	149.488
124	2.30259	-0.163659	137.98	149.111
125	2.30259	-0.156042	138.005	148.751
126	2.30259	-0.1459	138.026	148.415
127	2.30259	-0.138305	138.045	148.097
128	2.30259	-0.128189	138.062	147.802
129	2.30259	-0.12061	138.076	147.524
130	2.30259	-0.110516	138.088	147.27
131	2.30259	-0.102953	138.099	147.033
132	2.30259	-0.0928787	138.108	146.819
133	2.30259	-0.0853288	138.115	146.622
134	2.30259	-0.0752698	138.12	146.449
135	2.30259	-0.0677301	138.125	146.293
136	2.30259	-0.0576847	138.128	146.16
137	2.30259	-0.0501541	138.131	146.045
138	2.30259	-0.0401167	138.132	145.952
139	2.30259	-0.0325917	138.134	145.877
140	2.30259	-0.0225612	138.134	145.825
141	2.30259	-0.0150408	138.134	145.791
142	2.30259	-0.00501359	138.134	145.779
143	2.30259	0.00501359	138.134	145.791
144	2.30259	0.0150408	138.135	145.825
145	2.30259	0.0225612	138.135	145.877
146	2.30259	0.0325917	138.136	145.952
147	2.30259	0.0401167	138.138	146.045
148	2.30259	0.0501541	138.14	146.16
149	2.30259	0.0576847	138.144	146.293
150	2.30259	0.0677301	138.148	146.449
151	2.30259	0.0752698	138.154	146.622
152	2.30259	0.0853288	138.161	146.819
153	2.30259	0.0928787	138.17	147.033
154	2.30259	0.102953	138.18	147.27
155	2.30259	0.110516	138.193	147.524
156	2.30259	0.12061	138.207	147.802
157	2.30259	0.128189	138.224	148.097
158	2.30259	0.138305	138.243	148.415
159	2.30259	0.1459	138.264	148.751
160	2.30259	0.156042	138.288	149.111
161	2.30259	0.163659	138.315	149.488
162	2.30259	0.173829	138.345	149.888
163	2.30259	0.181468	138.378	150.306
164	2.30259	0.191671	138.415	150.747
165	2.30259	0.199336	138.455	151.206
166	2.30259	0.209575	138.499	151.689
167	2.30259	0.217267	138.546	152.189
168	2.30259	0.227545	138.598	152.713
169	2.30259	0.235269	138.653	153.254
170	2.30259	0.24559	138.713	153.82
171	2.30259	0.253347	138.777	154.403
172	2.30259	0.263715	138.847	155.011
173	2.30259	0.27411	138.922	155.642
174	2.30259	0.281926	139.002	156.291
175	2.30259	0.292375	139.087	156.964

176	2.30259	0.300232		139.177	157.655
177	2.30259	0.310738		139.274	158.371
178	2.30259	0.318639		139.375	159.105
179	2.30259	0.329206		139.484	159.863
180	2.30259	0.337155		139.597	160.639
181	2.30259	0.347787		139.718	161.44
182	2.30259	0.355788		139.845	162.259
183	2.30259	0.36649	139.979	163.103	
184	2.30259	0.374544		140.12	163.965
185	2.30259	0.385321		140.268	164.853
186	2.30259	0.393433		140.423	165.758
187	2.30259	0.40429	140.586	166.689	
188	2.30259	0.412463		140.756	167.639
189	2.30259	0.423405		140.936	168.614
190	2.30259	0.431644		141.122	169.608
191	2.30259	0.442676		141.318	170.627
192	2.30259	0.450985		141.521	171.666
193	2.30259	0.462114		141.735	172.73
194	2.30259	0.470498		141.956	173.813
195	2.30259	0.481728		142.188	174.922
196	2.30259	0.490189		142.429	176.051
197	2.30259	0.501527		142.68	177.206
198	2.30259	0.510074		142.94	178.38
199	2.30259	0.521527		143.212	179.581
200	2.30259	0.530162		143.493	180.802
201	2.30259	0.541736		143.787	182.049
202	2.30259	0.550465		144.09	183.317
203	2.30259	0.56217	144.406	184.611	
204	2.30259	0.570999		144.732	185.926
205	2.30259	0.582841		145.072	187.268
206	2.30259	0.591776		145.422	188.631
207	2.30259	0.603765		145.786	190.021
208	2.30259	0.612813		146.162	191.432
209	2.30259	0.624956		146.552	192.871
210	2.30259	0.634124		146.955	194.331
211	2.30259	0.646431		147.372	195.819
212	2.30259	0.655726		147.802	197.329
213	2.30259	0.668209		148.249	198.868
214	2.30259	0.677639		148.708	200.428
215	2.30259	0.690309		149.185	202.018
216	2.30259	0.699883		149.674	203.629
217	2.30259	0.712751		150.182	205.27
218	2.30259	0.722479		150.704	206.934
219	2.30259	0.735557		151.245	208.628
220	2.30259	0.745449		151.801	210.344
221	2.30259	0.758753		152.377	212.091
222	2.30259	0.768821		152.968	213.862
223	2.30259	0.782366		153.58	215.663
224	2.30259	0.792618		154.208	217.488
225	2.30259	0.806422		154.859	219.345
226	2.30259	0.816874		155.526	221.226
227	2.30259	0.830953		156.216	223.139
228	2.30259	0.841621		156.925	225.077
229	2.30259	0.855996		157.657	227.048
230	2.30259	0.87055	158.415	229.053	
231	2.30259	0.881587		159.193	231.083
232	2.30259	0.896473		159.996	233.147
233	2.30259	0.907769		160.82	235.237
234	2.30259	0.923014		161.672	237.362
235	2.30259	0.93459	162.546	239.514	
236	2.30259	0.950222		163.449	241.702
237	2.30259	0.9621	164.374	243.918	

238	2.30259	0.97815	165.331	246.17	
239	2.30259	0.990356		166.312	248.45
240	2.30259	1.00687	167.326	250.769	
241	2.30259	1.01943	168.365	253.116	
242	2.30259	1.03643	169.439	255.502	
243	2.30259	1.04939	170.54	257.919	
244	2.30259	1.06694	171.679	260.375	
245	2.30259	1.08032	172.846	262.863	
246	2.30259	1.09847	174.052	265.392	
247	2.30259	1.11232	175.29	267.953	
248	2.30259	1.13113	176.569	270.558	
249	2.30259	1.1455	177.881	273.196	
250	2.30259	1.16505	179.239	275.878	
251	2.30259	1.18	180.631	278.595	
252	2.30259	1.20036	182.072	281.359	
253	2.30259	1.21596	183.55	284.159	
254	2.30259	1.23724	185.081	287.008	
255	2.30259	1.25357	186.653	289.894	
256	2.30259	1.27588	188.28	292.832	
257	2.30259	1.29303	189.952	295.81	
258	2.3979	1.31652	191.686	298.966	
259	2.48491	1.33462	193.467	302.283	
260	2.56495	1.35946	195.315	305.77	
261	2.56495	1.37866	197.216	309.306	
262	2.83321	1.40507	199.19	313.287	
263	2.94444	1.42554	201.222	317.484	
264	2.94444	1.4538	203.336	321.765	
265	2.99573	1.47579	205.514	326.186	
266	2.99573	1.50626	207.782	330.698	
267	3.04452	1.53007	210.123	335.357	
268	3.04452	1.56322	212.567	340.116	
269	3.09104	1.58927	215.093	345.028	
270	3.13549	1.62576	217.736	350.126	
271	3.13549	1.65463	220.474	355.314	
272	3.17805	1.6954	223.348	360.702	
273	3.29584	1.72793	226.334	366.397	
274	3.3322	1.77438	229.482	372.31	
275	3.52636	1.81191	232.765	378.699	
276	3.52636	1.86629	236.248	385.28	
277	3.58352	1.91103	239.9	392.129	
278	3.68888	1.97737	243.81	399.423	
279	4.36945	2.03352	247.946	408.308	
280	4.43082	2.12007	252.44	417.702	
281	4.46591	2.19728	257.268	427.515	
282	4.5326	2.32634	262.68	438.059	
283	4.78749	2.45727	268.718	449.823	
284	5.84354	2.74777	276.269	465.88	

Data Set Standard Deviation = 1.83778
Numerator = 217044
Denominator = 264063
W Statistic = 0.821941 = 217044 / 264063

5% Critical value of 0.976 exceeds 0.821941
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.821941
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 = 0.906012
0.906012 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.52573	0.00350877	-2.74777	67.1928	348.683
2	-2.52573	0.00701754	-2.45727	67.1928	334.497
3	-2.52573	0.0105263	-2.32634	67.1928	328.103
4	-2.52573	0.0140351	-2.19728	67.1928	321.801
5	-2.52573	0.0175439	-2.12007	67.1928	318.03
6	-2.52573	0.0210526	-2.03352	67.1928	313.804
7	-2.52573	0.0245614	-1.97737	67.1928	311.062
8	-2.52573	0.0280702	-1.91103	67.1928	307.822
9	-2.52573	0.0315789	-1.86629	67.1928	305.637
10	-2.52573	0.0350877	-1.81191	67.1928	302.982
11	-2.52573	0.0385965	-1.77438	67.1928	301.149
12	-2.52573	0.0421053	-1.72793	67.1928	298.881
13	-2.52573	0.045614	-1.6954	67.1928	297.292
14	-2.52573	0.0491228	-1.65463	67.1928	295.301
15	-2.52573	0.0526316	-1.62576	67.1928	293.891
16	-2.52573	0.0561404	-1.58927	67.1928	292.109
17	-2.52573	0.0596491	-1.56322	67.1928	290.837
18	-2.52573	0.0631579	-1.53007	67.1928	289.218
19	-2.52573	0.0666667	-1.50626	67.1928	288.056
20	-2.52573	0.0701754	-1.47579	67.1928	286.568
21	-2.52573	0.0736842	-1.4538	67.1928	285.494
22	-2.52573	0.077193	-1.42554	67.1928	284.114
23	-2.52573	0.0807018	-1.40507	67.1928	283.114
24	-2.52573	0.0842105	-1.37866	67.1928	281.824
25	-2.52573	0.0877193	-1.35946	67.1928	280.887
26	-1.83258	0.0912281	-1.33462	108.397	279.674
27	-1.83258	0.0947368	-1.31652	108.397	278.79
28	-1.83258	0.0982456	-1.29303	108.397	277.643
29	-1.7148	0.101754	-1.27588	115.398	276.805
30	-1.7148	0.105263	-1.25357	115.398	275.716
31	-1.7148	0.108772	-1.23724	115.398	274.918
32	-1.60944	0.112281	-1.21596	121.661	273.879
33	-1.46968	0.115789	-1.20036	129.969	273.118
34	-1.42712	0.119298	-1.18	132.499	272.123
35	-1.42712	0.122807	-1.16505	132.499	271.393
36	-1.42712	0.126316	-1.1455	132.499	270.439
37	-1.38629	0.129825	-1.13113	134.926	269.737
38	-1.34707	0.133333	-1.11232	137.257	268.818
39	-1.30933	0.136842	-1.09847	139.501	268.142
40	-1.27297	0.140351	-1.08032	141.663	267.256
41	-1.20397	0.14386	-1.06694	145.764	266.602
42	-1.13943	0.147368	-1.04939	149.6	265.745
43	-1.13943	0.150877	-1.03643	149.6	265.112
44	-1.10866	0.154386	-1.01943	151.429	264.282
45	-1.04982	0.157895	-1.00687	154.927	263.669
46	-1.04982	0.161404	-0.990356	154.927	262.862
47	-1.04982	0.164912	-0.97815	154.927	262.266
48	-1.02165	0.168421	-0.9621	156.602	261.483

49	-1.021650	0.17193	-0.950222	156.602	260.903
50	-0.994252	0.175439	-0.93459	158.231	260.139
51	-0.994252	0.178947	-0.923014	158.231	259.574
52	-0.994252	0.182456	-0.907769	158.231	258.829
53	-0.820981	0.185965	-0.896473	168.531	258.278
54	-0.820981	0.189474	-0.881587	168.531	257.551
55	-0.820981	0.192982	-0.87055	168.531	257.012
56	-0.820981	0.196491	-0.855996	168.531	256.301
57	-0.733969	0.2	-0.841621	173.703	255.599
58	-0.713350	0.203509	-0.830953	174.929	255.078
59	-0.693147	0.207018	-0.816874	176.13	254.391
60	-0.673345	0.210526	-0.806422	177.307	253.88
61	-0.634878	0.214035	-0.792618	179.593	253.206
62	-0.634878	0.217544	-0.782366	179.593	252.706
63	-0.616186	0.221053	-0.768821	180.704	252.044
64	-0.597837	0.224561	-0.758753	181.795	251.552
65	-0.579818	0.22807	-0.745449	182.866	250.903
66	-0.579818	0.231579	-0.735557	182.866	250.42
67	-0.562119	0.235088	-0.722479	183.918	249.781
68	-0.544727	0.238596	-0.712751	184.952	249.306
69	-0.544727	0.242105	-0.699883	184.952	248.678
70	-0.510826	0.245614	-0.690309	186.968	248.21
71	-0.494296	0.249123	-0.677639	187.95	247.591
72	-0.494296	0.252632	-0.668209	187.95	247.131
73	-0.478036	0.25614	-0.655726	188.917	246.521
74	-0.371064	0.259649	-0.646431	195.276	246.067
75	-0.356675	0.263158	-0.634124	196.131	245.466
76	-0.328504	0.266667	-0.624956	197.806	245.019
77	-0.274437	0.270175	-0.612813	201.02	244.426
78	-0.186330	0.273684	-0.603765	206.257	243.984
79	-0.174353	0.277193	-0.591776	206.969	243.398
80	-0.0618754	0.280702	-0.582841	213.655	242.962
81	-0.0618754	0.284211	-0.570999	213.655	242.384
82	-0.0202027	0.287719	-0.56217	216.132	241.953
83	0	0.291228	-0.550465	217.333	241.381
84	0	0.294737	-0.541736	217.333	240.955
85	0	0.298246	-0.530162	217.333	240.39
86	0	0.301754	-0.521527	217.333	239.968
87	0.0953102	0.305263	-0.510074	222.999	239.409
88	0.0953102	0.308772	-0.501527	222.999	238.991
89	0.182322	0.312281	-0.490189	228.171	238.438
90	0.182322	0.315789	-0.481728	228.171	238.024
91	0.470004	0.319298	-0.470498	245.272	237.476
92	0.470004	0.322807	-0.462114	245.272	237.067
93	0.530628	0.326316	-0.450985	248.876	236.523
94	0.530628	0.329825	-0.442676	248.876	236.117
95	0.693147	0.333333	-0.431644	258.537	235.579
96	0.741937	0.336842	-0.423405	261.437	235.176
97	1.09861	0.340351	-0.412463	282.64	234.642
98	1.1314	0.34386	-0.40429	284.589	234.243
99	1.19392	0.347368	-0.393433	288.305	233.713
100	1.38629	0.350877	-0.385321	299.741	233.317
101	1.41099	0.354386	-0.374544	301.209	232.79
102	1.4816	0.357895	-0.36649	305.406	232.397
103	1.60944	0.361404	-0.355788	313.005	231.874
104	1.60944	0.364912	-0.347787	313.005	231.484
105	1.60944	0.368421	-0.337155	313.005	230.964
106	1.70475	0.37193	-0.329206	318.671	230.576
107	1.75786	0.375439	-0.318639	321.828	230.06
108	1.79176	0.378947	-0.310738	323.843	229.674
109	1.79176	0.382456	-0.300232	323.843	229.161
110	1.79176	0.385965	-0.292375	323.843	228.778

111	1.94591	0.389474	-0.281926	333.007	228.267
112	1.94591	0.392982	-0.27411	333.007	227.886
113	1.94591	0.396491	-0.263715	333.007	227.378
114	2.30259	0.4	-0.253347	354.209	226.872
115	2.30259	0.403509	-0.24559	354.209	226.493
116	2.30259	0.407018	-0.235269	354.209	225.989
117	2.30259	0.410526	-0.227545	354.209	225.612
118	2.30259	0.414035	-0.217267	354.209	225.11
119	2.30259	0.417544	-0.209575	354.209	224.734
120	2.30259	0.421053	-0.199336	354.209	224.234
121	2.30259	0.424561	-0.191671	354.209	223.86
122	2.30259	0.42807	-0.181468	354.209	223.362
123	2.30259	0.431579	-0.173829	354.209	222.989
124	2.30259	0.435088	-0.163659	354.209	222.492
125	2.30259	0.438596	-0.156042	354.209	222.12
126	2.30259	0.442105	-0.1459	354.209	221.625
127	2.30259	0.445614	-0.138305	354.209	221.254
128	2.30259	0.449123	-0.128189	354.209	220.76
129	2.30259	0.452632	-0.12061	354.209	220.39
130	2.30259	0.45614	-0.110516	354.209	219.897
131	2.30259	0.459649	-0.102953	354.209	219.528
132	2.30259	0.463158	-0.0928787	354.209	219.036
133	2.30259	0.466667	-0.0853288	354.209	218.667
134	2.30259	0.470175	-0.0752698	354.209	218.176
135	2.30259	0.473684	-0.0677301	354.209	217.807
136	2.30259	0.477193	-0.0576847	354.209	217.317
137	2.30259	0.480702	-0.0501541	354.209	216.949
138	2.30259	0.484211	-0.0401167	354.209	216.459
139	2.30259	0.487719	-0.0325917	354.209	216.092
140	2.30259	0.491228	-0.0225612	354.209	215.602
141	2.30259	0.494737	-0.0150408	354.209	215.234
142	2.30259	0.498246	-0.00501359	354.209	214.745
143	2.30259	0.501754	0.00501359	354.209	214.255
144	2.30259	0.505263	0.0150408	354.209	213.766
145	2.30259	0.508772	0.0225612	354.209	213.398
146	2.30259	0.512281	0.0325917	354.209	212.908
147	2.30259	0.515789	0.0401167	354.209	212.541
148	2.30259	0.519298	0.0501541	354.209	212.051
149	2.30259	0.522807	0.0576847	354.209	211.683
150	2.30259	0.526316	0.0677301	354.209	211.193
151	2.30259	0.529825	0.0752698	354.209	210.824
152	2.30259	0.533333	0.0853288	354.209	210.333
153	2.30259	0.536842	0.0928787	354.209	209.964
154	2.30259	0.540351	0.102953	354.209	209.472
155	2.30259	0.54386	0.110516	354.209	209.103
156	2.30259	0.547368	0.12061	354.209	208.61
157	2.30259	0.550877	0.128189	354.209	208.24
158	2.30259	0.554386	0.138305	354.209	207.746
159	2.30259	0.557895	0.1459	354.209	207.375
160	2.30259	0.561404	0.156042	354.209	206.88
161	2.30259	0.564912	0.163659	354.209	206.508
162	2.30259	0.568421	0.173829	354.209	206.011
163	2.30259	0.57193	0.181468	354.209	205.638
164	2.30259	0.575439	0.191671	354.209	205.14
165	2.30259	0.578947	0.199336	354.209	204.766
166	2.30259	0.582456	0.209575	354.209	204.266
167	2.30259	0.585965	0.217267	354.209	203.89
168	2.30259	0.589474	0.227545	354.209	203.388
169	2.30259	0.592982	0.235269	354.209	203.011
170	2.30259	0.596491	0.24559	354.209	202.507
171	2.30259	0.6	0.253347	354.209	202.128
172	2.30259	0.603509	0.263715	354.209	201.622

173	2.30259	0.607018	0.27411	354.209	201.114
174	2.30259	0.610526	0.281926	354.209	200.733
175	2.30259	0.614035	0.292375	354.209	200.222
176	2.30259	0.617544	0.300232	354.209	199.839
177	2.30259	0.621053	0.310738	354.209	199.326
178	2.30259	0.624561	0.318639	354.209	198.94
179	2.30259	0.62807	0.329206	354.209	198.424
180	2.30259	0.631579	0.337155	354.209	198.036
181	2.30259	0.635088	0.347787	354.209	197.516
182	2.30259	0.638596	0.355788	354.209	197.126
183	2.30259	0.642105	0.36649	354.209	196.603
184	2.30259	0.645614	0.374544	354.209	196.21
185	2.30259	0.649123	0.385321	354.209	195.683
186	2.30259	0.652632	0.393433	354.209	195.287
187	2.30259	0.65614	0.40429	354.209	194.757
188	2.30259	0.659649	0.412463	354.209	194.358
189	2.30259	0.663158	0.423405	354.209	193.824
190	2.30259	0.666667	0.431644	354.209	193.421
191	2.30259	0.670175	0.442676	354.209	192.883
192	2.30259	0.673684	0.450985	354.209	192.477
193	2.30259	0.677193	0.462114	354.209	191.933
194	2.30259	0.680702	0.470498	354.209	191.524
195	2.30259	0.684211	0.481728	354.209	190.976
196	2.30259	0.687719	0.490189	354.209	190.562
197	2.30259	0.691228	0.501527	354.209	190.009
198	2.30259	0.694737	0.510074	354.209	189.591
199	2.30259	0.698246	0.521527	354.209	189.032
200	2.30259	0.701754	0.530162	354.209	188.61
201	2.30259	0.705263	0.541736	354.209	188.045
202	2.30259	0.708772	0.550465	354.209	187.619
203	2.30259	0.712281	0.56217	354.209	187.047
204	2.30259	0.715789	0.570999	354.209	186.616
205	2.30259	0.719298	0.582841	354.209	186.038
206	2.30259	0.722807	0.591776	354.209	185.602
207	2.30259	0.726316	0.603765	354.209	185.016
208	2.30259	0.729825	0.612813	354.209	184.574
209	2.30259	0.733333	0.624956	354.209	183.981
210	2.30259	0.736842	0.634124	354.209	183.534
211	2.30259	0.740351	0.646431	354.209	182.933
212	2.30259	0.74386	0.655726	354.209	182.479
213	2.30259	0.747368	0.668209	354.209	181.869
214	2.30259	0.750877	0.677639	354.209	181.409
215	2.30259	0.754386	0.690309	354.209	180.79
216	2.30259	0.757895	0.699883	354.209	180.322
217	2.30259	0.761404	0.712751	354.209	179.694
218	2.30259	0.764912	0.722479	354.209	179.219
219	2.30259	0.768421	0.735557	354.209	178.58
220	2.30259	0.77193	0.745449	354.209	178.097
221	2.30259	0.775439	0.758753	354.209	177.448
222	2.30259	0.778947	0.768821	354.209	176.956
223	2.30259	0.782456	0.782366	354.209	176.294
224	2.30259	0.785965	0.792618	354.209	175.794
225	2.30259	0.789474	0.806422	354.209	175.12
226	2.30259	0.792982	0.816874	354.209	174.609
227	2.30259	0.796491	0.830953	354.209	173.922
228	2.30259	0.8	0.841621	354.209	173.401
229	2.30259	0.803509	0.855996	354.209	172.699
230	2.30259	0.807018	0.87055	354.209	171.988
231	2.30259	0.810526	0.881587	354.209	171.449
232	2.30259	0.814035	0.896473	354.209	170.722
233	2.30259	0.817544	0.907769	354.209	170.171
234	2.30259	0.821053	0.923014	354.209	169.426

235	2.30259	0.824561	0.93459	354.209	168.861	
236	2.30259	0.82807	0.950222	354.209	168.097	
237	2.30259	0.831579	0.9621	354.209	167.517	
238	2.30259	0.835088	0.97815	354.209	166.734	
239	2.30259	0.838596	0.990356	354.209	166.138	
240	2.30259	0.842105	1.00687	354.209	165.331	
241	2.30259	0.845614	1.01943	354.209	164.718	
242	2.30259	0.849123	1.03643	354.209	163.888	
243	2.30259	0.852632	1.04939	354.209	163.255	
244	2.30259	0.85614	1.06694	354.209	162.398	
245	2.30259	0.859649	1.08032	354.209	161.744	
246	2.30259	0.863158	1.09847	354.209	160.858	
247	2.30259	0.866667	1.11232	354.209	160.182	
248	2.30259	0.870175	1.13113	354.209	159.263	
249	2.30259	0.873684	1.1455	354.209	158.561	
250	2.30259	0.877193	1.16505	354.209	157.607	
251	2.30259	0.880702	1.18	354.209	156.877	
252	2.30259	0.884211	1.20036	354.209	155.882	
253	2.30259	0.887719	1.21596	354.209	155.121	
254	2.30259	0.891228	1.23724	354.209	154.082	
255	2.30259	0.894737	1.25357	354.209	153.284	
256	2.30259	0.898246	1.27588	354.209	152.195	
257	2.30259	0.901754	1.29303	354.209	151.357	
258	2.3979	0.905263	1.31652	359.875	150.21	
259	2.48491	0.908772	1.33462	365.047	149.326	
260	2.56495	0.912281	1.35946	369.805	148.113	
261	2.56495	0.915789	1.37866	369.805	147.176	
262	2.83321	0.919298	1.40507	385.752	145.886	
263	2.94444	0.922807	1.42554	392.364	144.886	
264	2.94444	0.926316	1.4538	392.364	143.506	
265	2.99573	0.929825	1.47579	395.413	142.432	
266	2.99573	0.933333	1.50626	395.413	140.944	
267	3.04452	0.936842	1.53007	398.313	139.782	
268	3.04452	0.940351	1.56322	398.313	138.163	
269	3.09104	0.94386	1.58927	401.079	136.891	
270	3.13549	0.947368	1.62576	403.721	135.109	
271	3.13549	0.950877	1.65463	403.721	133.699	
272	3.17805	0.954386	1.6954	406.251	131.708	
273	3.29584	0.957895	1.72793	413.253	130.119	
274	3.3322	0.961404	1.77438	415.414	127.851	
275	3.52636	0.964912	1.81191	426.956	126.018	
276	3.52636	0.968421	1.86629	426.956	123.363	
277	3.58352	0.97193	1.91103	430.354	121.178	
278	3.68888	0.975439	1.97737	436.617	117.938	
279	4.36945	0.978947	2.03352	477.073	115.196	
280	4.43082	0.982456	2.12007	480.721	110.97	
281	4.46591	0.985965	2.19728	482.807	107.199	
282	4.5326	0.989474	2.32634	486.771	100.897	
283	4.78749	0.992982	2.45727	501.923	94.5032	
284	5.84354	0.996491	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-4	1/16/1998	5.84354	284
	3/16/1999	ND<2.30259	83.5
	9/23/1999	ND<2.30259	83.5
	3/14/2000	4.46591	281
	9/23/2003	ND<2.30259	83.5
	3/10/2004	4.78749	283
	10/12/2004	ND<2.30259	83.5
	4/1/2005	2.30259 J	255
	10/26/2005	ND<2.30259	83.5
	6/19/2006	ND<2.30259	83.5
	11/18/2006	ND<2.30259	83.5
	6/2/2007	3.04452	267
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5
	6/11/2009	-0.174353 J	220
	11/16/2009	0 B	224
	6/30/2010	-0.328504 J	217
	11/17/2010	0	225
	7/6/2011	0.530628	234
	11/22/2011	ND<-2.52573 U	83.5
	5/16/2012	-1.46968 J	174
	11/16/2012	-1.42712 J	175

Rank Sum = 3757.5
Rank Mean = 163.37

Background Rank Sum = 3757.5
Background Rank Mean = 163.37

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	3/14/2000	3.3322	274
	9/23/2003	ND<2.30259	83.5
	3/10/2004	3.58352	277
	10/12/2004	ND<2.30259	83.5
	4/1/2005	ND<2.30259	83.5
	10/26/2005	ND<2.30259	83.5
	6/19/2006	ND<2.30259	83.5
	11/18/2006	ND<2.30259	83.5
	6/2/2007	0.693147	236
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5
	6/11/2009	-1.02165 J	189
	11/16/2009	-1.34707 J	179
	6/30/2010	-1.02165 J	190
	11/17/2010	-1.20397 J	182
	7/6/2011	-0.494296 J	212

	11/22/2011	-1.10866 J	185
	5/16/2012	-0.820981 J	194
	11/16/2012	-0.597837 J	205

Rank Sum = 3074.5
Rank Mean = 153.725

LMW-11	3/14/2000	2.99573	265
	9/23/2003	ND<2.30259	83.5
	3/10/2004	3.68888	278
	10/12/2004	ND<2.30259	83.5
	4/1/2005	ND<2.30259	83.5
	10/26/2005	ND<2.30259	83.5
	6/19/2006	ND<2.30259	83.5
	6/2/2007	ND<2.30259	83.5
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5

Rank Sum = 1294.5
Rank Mean = 117.682

LMW-12	3/14/2000	4.5326	282
	9/23/2003	ND<2.30259	83.5
	3/10/2004	ND<2.30259	83.5
	10/12/2004	ND<2.30259	83.5
	4/1/2005	ND<2.30259	83.5
	10/26/2005	ND<2.30259	83.5
	6/19/2006	ND<2.30259	83.5
	6/2/2007	ND<2.30259	83.5
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5

Rank Sum = 1117
Rank Mean = 101.545

LMW-13	3/14/2000	3.29584	273
	9/23/2003	ND<2.30259	83.5
	3/10/2004	ND<2.30259	83.5
	10/12/2004	ND<2.30259	83.5
	4/1/2005	ND<2.30259	83.5
	10/26/2005	ND<2.30259	83.5
	6/19/2006	ND<2.30259	83.5
	6/2/2007	ND<2.30259	83.5
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5

Rank Sum = 1108
Rank Mean = 100.727

LMW-14R	6/2/2007	ND<2.30259	83.5
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5
	6/11/2009	0.470004	232
	6/30/2010	-0.71335 J	199
	11/17/2010	-0.510826 J	211
	7/6/2011	0.182322	230
	11/22/2011	-1.7148 J	170
	5/16/2012	-1.04982 J	186
	11/16/2012	-0.994252 J	191

Rank Sum = 1753
Rank Mean = 159.364

LMW-15R	11/18/2006	ND<2.30259	83.5
	6/2/2007	ND<2.30259	83.5
	11/15/2007	ND<2.30259	83.5
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5
	6/11/2009	1.70475	247
	11/16/2009	-0.820981 J B	195
	11/16/2009	-1.83258 J B	167
	11/16/2009	-0.634878 J B	202
	6/30/2010	-0.673345 J	201
	11/17/2010	-1.42712 J	176
	7/6/2011	-1.60944 J	173
	11/22/2011	ND<-2.52573 U	83.5
	5/16/2012	ND<-2.52573 U	83.5
	11/16/2012	-1.83258 J	168

Rank Sum = 2364
Rank Mean = 131.333

LMW-16	11/18/2006	ND<2.30259	83.5
	6/2/2007	2.99573	266
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5
	6/11/2009	-0.18633 J	219
	11/16/2009	-0.634878 J B	203
	6/30/2010	-0.579818 J	206
	11/17/2010	ND<-2.52573 U	83.5
	7/6/2011	-0.356675 J	216
	11/22/2011	ND<-2.52573 U	83.5
	5/16/2012	ND<-2.52573 U	83.5
	11/16/2012	-0.0618754 J	221

Rank Sum = 1915.5
Rank Mean = 147.346

LMW-3	11/19/1996	ND<2.30259	83.5
	3/24/1997	ND<2.30259	83.5
	1/16/1998	ND<2.30259	83.5
	3/16/1999	ND<2.30259	83.5
	9/23/1999	ND<2.30259	83.5
	3/14/2000	ND<2.30259	83.5
	9/23/2003	ND<2.30259	83.5
	3/10/2004	ND<2.30259	83.5
	10/12/2004	ND<2.30259	83.5
	4/1/2005	ND<2.30259	83.5
	10/26/2005	ND<2.30259	83.5
	6/19/2006	ND<2.30259	83.5
	11/18/2006	ND<2.30259	83.5
	6/2/2007	ND<2.30259	83.5
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5
	6/11/2009	-1.13943 J	183
	11/16/2009	0.0953102 B	228
	6/30/2010	-0.274437 J	218
	11/17/2010	-0.0618754 J	222
	7/6/2011	ND<-2.52573 U	83.5
	11/22/2011	ND<-2.52573 U	83.5
	5/16/2012	ND<-2.52573 U	83.5
	11/16/2012	-0.494296 J	213

Rank Sum = 2734
Rank Mean = 109.36

LMW-3S	11/18/2006	ND<2.30259	83.5
	6/2/2007	2.3979	258
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5
	6/11/2009	0.530628	235
	11/16/2009	-0.616186 J	204
	6/30/2010	-0.994252 J	192
	11/17/2010	1.41099	242
	7/6/2011	1.19392	240
	11/22/2011	ND<-2.52573 U	83.5
	5/16/2012	ND<-2.52573 U	83.5
	11/16/2012	ND<-2.52573 U	83.5

Rank Sum = 1955.5
Rank Mean = 150.423

LMW-6	1/16/1998	2.56495 J	260
	3/16/1999	ND<2.30259	83.5
	9/23/1999	1.79176 J	249
	3/14/2000	3.52636	275
	9/23/2003	ND<2.30259	83.5
	3/10/2004	ND<2.30259	83.5
	10/12/2004	ND<2.30259	83.5
	4/1/2005	ND<2.30259	83.5
	10/26/2005	ND<2.30259	83.5
	6/19/2006	ND<2.30259	83.5
	11/18/2006	ND<2.30259	83.5
	6/2/2007	1.38629 J	241
	11/15/2007	ND<2.30259	83.5
	5/20/2008	1.94591 J	252
	11/20/2008	ND<2.30259	83.5
	6/11/2009	-0.733969 J	198
	11/16/2009	ND<-2.52573 U	83.5
	6/30/2010	-0.562119 J	208
	11/17/2010	-1.42712 J	177
	7/6/2011	-1.7148 J	171
	11/22/2011	ND<-2.52573 U	83.5
	5/16/2012	ND<-2.52573 U	83.5
	11/16/2012	ND<-2.52573 U	83.5

Rank Sum = 3200
Rank Mean = 139.13

LMW-7	1/16/1998	2.30259 J	256
	3/16/1999	ND<2.30259	83.5
	9/23/1999	1.60944 J	244
	3/14/2000	3.52636	276
	9/23/2003	ND<2.30259	83.5
	3/10/2004	ND<2.30259	83.5
	10/12/2004	ND<2.30259	83.5
	4/1/2005	2.94444 J	263
	10/26/2005	3.13549	270
	6/19/2006	ND<2.30259	83.5
	11/18/2006	1.60944 J	245
	6/2/2007	3.17805	272
	11/15/2007	ND<2.30259	83.5
	5/20/2008	1.94591 J	253
	11/20/2008	ND<2.30259	83.5
	6/11/2009	1.75786	248
	11/17/2010	-1.38629 J	178

	7/6/2011	2.48491	259
	11/22/2011	-1.30933 J	180
	5/16/2012	-0.994252 J	193
	11/16/2012	0.470004	233

Rank Sum = 3954.5
Rank Mean = 188.31

LMW-8	1/16/1998	ND<2.30259	83.5
	3/16/1999	1.79176 J	250
	9/23/1999	2.56495 J	261
	3/14/2000	3.04452	268
	9/23/2003	ND<2.30259	83.5
	3/10/2004	ND<2.30259	83.5
	10/12/2004	ND<2.30259	83.5
	4/1/2005	ND<2.30259	83.5
	10/26/2005	ND<2.30259	83.5
	6/19/2006	ND<2.30259	83.5
	11/18/2006	ND<2.30259	83.5
	6/2/2007	ND<2.30259	83.5
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5
	6/11/2009	-1.27297 J	181
	11/16/2009	-0.371064 J	215
	6/30/2010	-1.04982 J	187
	11/17/2010	-1.83258 J	169
	7/6/2011	-1.7148 J	172
	11/22/2011	ND<-2.52573 U	83.5
	5/16/2012	ND<-2.52573 U	83.5
	11/16/2012	ND<-2.52573 U	83.5

Rank Sum = 2955.5
Rank Mean = 128.5

LMW-9	1/16/1998	3.13549	271
	3/16/1999	ND<2.30259	83.5
	9/23/1999	3.09104	269
	3/14/2000	2.83321 J	262
	9/23/2003	ND<2.30259	83.5
	3/10/2004	2.94444 J	264
	10/12/2004	ND<2.30259	83.5
	4/1/2005	ND<2.30259	83.5
	10/26/2005	ND<2.30259	83.5
	6/19/2006	2.30259 J	257
	11/18/2006	ND<2.30259	83.5
	6/2/2007	1.94591	254
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5
	6/11/2009	0.182322	231
	11/16/2009	-0.478036 J	214
	6/30/2010	-0.820981 J	196
	11/17/2010	0.741937	237
	7/6/2011	-0.579818 J	207
	11/22/2011	ND<-2.52573 U	83.5
	5/16/2012	-1.13943 J	184
	11/16/2012	-0.820981 J	197

Rank Sum = 3878
Rank Mean = 168.609

LMW-9D	11/18/2006	1.79176 J	251
	6/2/2007	ND<2.30259	83.5
	11/15/2007	ND<2.30259	83.5

	5/20/2008	1.09861 J	238
	11/20/2008	ND<2.30259	83.5
	6/11/2009	0	226
	11/16/2009	0.0953102	229
	6/30/2010	-0.693147 J	200
	11/17/2010	-0.544727 J	209
	7/6/2011	1.1314	239
	11/22/2011	ND<-2.52573 U	83.5
	5/16/2012	-1.04982 J	188
	11/16/2012	-0.0202027 J	223

Rank Sum = 2337
Rank Mean = 179.769

LMW-9S	11/18/2006	ND<2.30259	83.5
	6/2/2007	1.60944	246
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5
	6/11/2009	0	227
	6/30/2010	-0.544727 J	210
	11/17/2010	1.4816	243
	7/6/2011	ND<-2.52573 U	83.5
	11/22/2011	ND<-2.52573 U	83.5
	5/16/2012	ND<-2.52573 U	83.5
	11/16/2012	ND<-2.52573 U	83.5

Rank Sum = 1594
Rank Mean = 132.833

MW-5	1/16/1998	ND<2.30259	83.5
	3/16/1999	ND<2.30259	83.5
	9/23/1999	ND<2.30259	83.5
	3/14/2000	4.36945	279
	9/23/2003	ND<2.30259	83.5
	3/10/2004	4.43082	280
	10/12/2004	ND<2.30259	83.5
	4/1/2005	ND<2.30259	83.5
	10/26/2005	ND<2.30259	83.5
	6/19/2006	ND<2.30259	83.5
	11/15/2007	ND<2.30259	83.5
	5/20/2008	ND<2.30259	83.5
	11/20/2008	ND<2.30259	83.5

Rank Sum = 1477.5
Rank Mean = 113.654

Calculation Results:

Kruskal-Wallis H Statistic = 27.4899
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 34.3492
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
27.4899 > 26.2962 indicating a significant group difference at 5% significance level
34.3492 > 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 163.37

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**153.725**	**-9.6445**	**58.4144**
LMW-11	**117.682**	**-45.6877**	**70.0396**
LMW-12	**101.545**	**-61.8241**	**70.0396**
LMW-13	**100.727**	**-62.6423**	**70.0396**

LMW-14R	159.364	-4.00593	70.0396
LMW-15R	131.333	-32.0362	60.1252
LMW-16	147.346	-16.0234	66.2949
LMW-3	109.36	-54.0096	55.2015
LMW-3S	150.423	-12.9465	66.2949
LMW-6	139.13	-24.2391	56.3398
LMW-7	188.31	24.94	57.6657
LMW-8	128.5	-34.8696	56.3398
LMW-9	168.609	5.23913	56.3398
LMW-9D	179.769	16.3997	66.2949
LMW-9S	132.833	-30.5362	68.0368
MW-5	113.654	-49.7157	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 163.37

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	153.725	-9.64457	68.9963
LMW-11	117.682	-45.6877	82.7275
LMW-12	101.545	-61.8241	82.7275
LMW-13	100.727	-62.6423	82.7275
LMW-14R	159.364	-4.00593	82.7275
LMW-15R	131.333	-32.0362	71.017
LMW-16	147.346	-16.0234	78.3044
LMW-3	109.36	-54.0096	65.2015
LMW-3S	150.423	-12.9465	78.3044
LMW-6	139.13	-24.2391	66.546
LMW-7	188.31	24.94	68.112
LMW-8	128.5	-34.8696	66.546
LMW-9	168.609	5.23913	66.546
LMW-9D	179.769	16.3997	78.3044
LMW-9S	132.833	-30.5362	80.3619
MW-5	113.654	-49.7157	78.3044

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Chromium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 58.4507%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 23
Maximum Background Value = 5.84354
Confidence Level = 74.2%
False Positive Rate = 25.8%

Location	Date	Count	Mean	Significant
LMW-10	11/16/2012	1	-0.597837	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
LMW-14R	11/16/2012	1	-0.994252	FALSE
LMW-15R	11/16/2012	1	-1.83258	FALSE
LMW-16	11/16/2012	1	-0.0618754	FALSE
LMW-3	11/16/2012	1	-0.494296	FALSE
LMW-3S	11/16/2012	1	-2.52573	FALSE
LMW-6	11/16/2012	1	-2.52573	FALSE
LMW-7	11/16/2012	1	0.470004	FALSE
LMW-8	11/16/2012	1	-2.52573	FALSE
LMW-9	11/16/2012	1	-0.820981	FALSE
LMW-9D	11/16/2012	1	-0.0202027	FALSE
LMW-9S	11/16/2012	1	-2.52573	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: 284
Total Non-Detect: 183
Percent Non-Detects: 64.4366%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	15 (65.2174%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	12 (60%)	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

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		
LMW-14R	11	4 (36.3636%)	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		
LMW-15R	18	8 (44.4444%)	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	0.26	0.26		
		11/16/2009	0.25	0.25		
		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	
LMW-16	13	7 (53.8462%)	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	
LMW-3	25	17 (68%)	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	
LMW-3S	13	5 (38.4615%)	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	
LMW-6	23	14 (60.8696%)	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	
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-8	23	15 (65.2174%)	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	
LMW-9	23	14 (60.8696%)	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	
LMW-9D	13	10 (76.9231%)	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	
LMW-9S	12	2 (16.6667%)	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	
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: Cobalt

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	-2.120072	8.323	0
6	0	-2.033523	2.4582	0
7	0.039	-1.977373	6.3682	-0.0771174
8	0.039	-1.911034	0.0203	-0.151648
9	0.039	-1.866294	3.5033	-0.224433
10	0.039	-1.811914	6.7863	-0.295098
11	0.039	-1.774384	9.9348	-0.364298
12	0.039	-1.727935	2.9205	-0.431688
13	0.039	-1.6954	55.7949	-0.497808
14	0.039	-1.654635	8.5327	-0.562339
15	0.078	-1.625766	1.1758	-0.689148
16	0.08	-1.589276	3.7015	-0.81629
17	0.081	-1.563226	6.1452	-0.942911
18	0.098	-1.530076	8.4863	-1.09286
19	0.11	-1.506267	0.7551	-1.25855
20	0.11	-1.475797	2.9331	-1.42088
21	0.13	-1.4538	75.0466	-1.60988
22	0.13	-1.425547	7.0788	-1.7952
23	0.13	-1.405077	9.053	-1.97786
24	0.13	-1.378668	0.9537	-2.15708
25	0.13	-1.359468	2.8019	-2.33381
26	0.13	-1.334628	4.5831	-2.50731
27	0.13	-1.316528	6.3163	-2.67846
28	0.14	-1.293038	7.9883	-2.85949
29	0.15	-1.275888	9.6161	-3.05087
30	0.15	-1.253579	1.1875	-3.2389
31	0.15	-1.237249	2.7183	-3.42449
32	0.16	-1.215969	4.1969	-3.61904
33	0.16	-1.200369	5.6377	-3.8111
34	0.16	-1.18	97.0301	-3.9999
35	0.16	-1.165059	8.3875	-4.18631
36	0.16	-1.1455	99.6996	-4.36959
37	0.16	-1.131131	00.979	-4.55057
38	0.17	-1.112321	02.216	-4.73966
39	0.17	-1.098471	03.423	-4.9264
40	0.18	-1.080321	04.59	-5.12086
41	0.18	-1.066941	05.728	-5.31291
42	0.18	-1.049391	06.83	-5.5018
43	0.19	-1.036431	07.904	-5.69872
44	0.19	-1.019431	08.943	-5.89241
45	0.19	-1.006871	09.957	-6.08372
46	0.2	-0.990356	110.938	-6.28179
47	0.2	-0.978151	11.894	-6.47742
48	0.2	-0.9621	112.82	-6.66984
49	0.21	-0.950222	113.723	-6.86938
50	0.23	-0.934591	14.596	-7.08434
51	0.23	-0.923014	115.448	-7.29663

52	0.24	-0.907769	116.272	-7.5145
53	0.24	-0.896473	117.076	-7.72965
54	0.24	-0.881587	117.853	-7.94123
55	0.25	-0.87055	118.611	-8.15887
56	0.25	-0.855996	119.344	-8.37287
57	0.25	-0.841621	120.052	-8.58327
58	0.26	-0.830953	120.743	-8.79932
59	0.26	-0.816874	121.41	-9.01171
60	0.26	-0.806422	122.06	-9.22138
61	0.26	-0.792618	122.689	-9.42746
62	0.27	-0.782366	123.301	-9.6387
63	0.27	-0.768821	123.892	-9.84628
64	0.29	-0.758753	124.467	-10.0663
65	0.29	-0.745449	125.023	-10.2825
66	0.3	-0.735557	125.564	-10.5032
67	0.41	-0.722479	126.086	-10.7994
68	0.41	-0.712751	126.594	-11.0916
69	0.42	-0.699883	127.084	-11.3856
70	0.42	-0.690309	127.561	-11.6755
71	0.43	-0.677639	128.02	-11.9669
72	0.44	-0.668209	128.466	-12.2609
73	0.45	-0.655726	128.896	-12.556
74	0.46	-0.646431	129.314	-12.8533
75	0.47	-0.634124	129.716	-13.1514
76	0.51	-0.624956	130.107	-13.4701
77	0.52	-0.612813	130.482	-13.7888
78	0.52	-0.603765	130.847	-14.1027
79	0.53	-0.591776	131.197	-14.4164
80	0.57	-0.582841	131.537	-14.7486
81	0.57	-0.570999	131.863	-15.074
82	0.58	-0.56217	132.179	-15.4001
83	0.58	-0.550465	132.482	-15.7194
84	0.6	-0.541736	132.775	-16.0444
85	0.61	-0.530162	133.056	-16.3678
86	0.63	-0.521527	133.328	-16.6964
87	0.7	-0.510074	133.589	-17.0534
88	0.71	-0.501527	133.84	-17.4095
89	0.71	-0.490189	134.08	-17.7575
90	0.72	-0.481728	134.312	-18.1044
91	0.75	-0.470498	134.534	-18.4573
92	0.78	-0.462114	134.747	-18.8177
93	0.83	-0.450985	134.951	-19.192
94	0.87	-0.442676	135.147	-19.5772
95	0.89	-0.431644	135.333	-19.9613
96	0.98	-0.423405	135.512	-20.3763
97	1	-0.412463	135.682	-20.7887
98	1	-0.40429	135.846	-21.193
99	1	-0.393433	136.001	-21.5864
100	1	-0.385321	136.149	-21.9718
101	1	-0.374544	136.289	-22.3463
102	1.1	-0.36649	136.424	-22.7494
103	1.1	-0.355788	136.55	-23.1408
104	1.2	-0.347787	136.671	-23.5582
105	1.2	-0.337155	136.785	-23.9627
106	1.2	-0.329206	136.893	-24.3578
107	1.3	-0.318639	136.995	-24.772
108	1.4	-0.310738	137.091	-25.2071
109	1.4	-0.300232	137.182	-25.6274
110	1.5	-0.292375	137.267	-26.0659
111	1.8	-0.281926	137.346	-26.5734
112	2.7	-0.27411	137.422	-27.3135
113	3	-0.263715	137.491	-28.1046

114	10	-0.253347	137.555	-30.6381
115	10	-0.24559	137.616	-33.094
116	10	-0.235269	137.671	-35.4467
117	10	-0.227545	137.723	-37.7222
118	10	-0.217267	137.77	-39.8948
119	10	-0.209575	137.814	-41.9906
120	10	-0.199336	137.854	-43.9839
121	10	-0.191671	137.89	-45.9007
122	10	-0.181468	137.923	-47.7153
123	10	-0.173829	137.954	-49.4536
124	10	-0.163659	137.98	-51.0902
125	10	-0.156042	138.005	-52.6506
126	10	-0.1459	138.026	-54.1096
127	10	-0.138305	138.045	-55.4927
128	10	-0.128189	138.062	-56.7746
129	10	-0.12061	138.076	-57.9807
130	10	-0.110516	138.088	-59.0858
131	10	-0.102953	138.099	-60.1154
132	10	-0.0928787	138.108	-61.0441
133	10	-0.0853288	138.115	-61.8974
134	10	-0.0752698	138.12	-62.6501
135	10	-0.0677301	138.125	-63.3274
136	10	-0.0576847	138.128	-63.9043
137	10	-0.0501541	138.131	-64.4058
138	10	-0.0401167	138.132	-64.807
139	10	-0.0325917	138.134	-65.1329
140	10	-0.0225612	138.134	-65.3585
141	10	-0.0150408	138.134	-65.5089
142	10	-0.00501359	138.134	-65.5591
143	10	0.00501359	138.134	-65.5089
144	10	0.0150408	138.135	-65.3585
145	10	0.0225612	138.135	-65.1329
146	10	0.0325917	138.136	-64.807
147	10	0.0401167	138.138	-64.4058
148	10	0.0501541	138.14	-63.9043
149	10	0.0576847	138.144	-63.3274
150	10	0.0677301	138.148	-62.6501
151	10	0.0752698	138.154	-61.8974
152	10	0.0853288	138.161	-61.0441
153	10	0.0928787	138.17	-60.1154
154	10	0.102953	138.18	-59.0858
155	10	0.110516	138.193	-57.9807
156	10	0.12061	138.207	-56.7746
157	10	0.128189	138.224	-55.4927
158	10	0.138305	138.243	-54.1096
159	10	0.1459	138.264	-52.6506
160	10	0.156042	138.288	-51.0902
161	10	0.163659	138.315	-49.4536
162	10	0.173829	138.345	-47.7153
163	10	0.181468	138.378	-45.9007
164	10	0.191671	138.415	-43.9839
165	10	0.199336	138.455	-41.9906
166	10	0.209575	138.499	-39.8948
167	10	0.217267	138.546	-37.7222
168	10	0.227545	138.598	-35.4467
169	10	0.235269	138.653	-33.094
170	10	0.24559	138.713	-30.6381
171	10	0.253347	138.777	-28.1046
172	10	0.263715	138.847	-25.4675
173	10	0.27411	138.922	-22.7264
174	10	0.281926	139.002	-19.9071
175	10	0.292375	139.087	-16.9834

176	10	0.300232	139.177	-13.9811
177	10	0.310738	139.274	-10.8737
178	10	0.318639	139.375	-7.68729
179	10	0.329206	139.484	-4.39522
180	10	0.337155	139.597	-1.02367
181	10	0.347787	139.718	2.4542
182	10	0.355788	139.845	6.01208
183	10	0.36649	139.979	9.67698
184	10	0.374544	140.12	13.4224
185	10	0.385321	140.268	17.2756
186	10	0.393433	140.423	21.21
187	10	0.40429	140.586	25.2528
188	10	0.412463	140.756	29.3775
189	10	0.423405	140.936	33.6115
190	10	0.431644	141.122	37.928
191	10	0.442676	141.318	42.3547
192	10	0.450985	141.521	46.8646
193	10	0.462114	141.735	51.4857
194	10	0.470498	141.956	56.1907
195	10	0.481728	142.188	61.008
196	10	0.490189	142.429	65.9099
197	10	0.501527	142.68	70.9251
198	10	0.510074	142.94	76.0259
199	10	0.521527	143.212	81.2411
200	10	0.530162	143.493	86.5428
201	10	0.541736	143.787	91.9601
202	10	0.550465	144.09	97.4648
203	10	0.56217	144.406	103.086
204	10	0.570999	144.732	108.796
205	10	0.582841	145.072	114.625
206	10	0.591776	145.422	120.543
207	10	0.603765	145.786	126.58
208	10	0.612813	146.162	132.708
209	10	0.624956	146.552	138.958
210	10	0.634124	146.955	145.299
211	10	0.646431	147.372	151.764
212	10	0.655726	147.802	158.321
213	10	0.668209	148.249	165.003
214	10	0.677639	148.708	171.779
215	10	0.690309	149.185	178.682
216	10	0.699883	149.674	185.681
217	10	0.712751	150.182	192.809
218	10	0.722479	150.704	200.033
219	10	0.735557	151.245	207.389
220	10	0.745449	151.801	214.844
221	10	0.758753	152.377	222.431
222	10	0.768821	152.968	230.119
223	10	0.782366	153.58	237.943
224	10	0.792618	154.208	245.869
225	10	0.806422	154.859	253.933
226	10	0.816874	155.526	262.102
227	10	0.830953	156.216	270.412
228	10	0.841621	156.925	278.828
229	10	0.855996	157.657	287.388
230	10	0.87055	158.415	296.093
231	10	0.881587	159.193	304.909
232	10	0.896473	159.996	313.874
233	10	0.907769	160.82	322.952
234	10	0.923014	161.672	332.182
235	10	0.93459	162.546	341.528
236	10	0.950222	163.449	351.03
237	10	0.9621	164.374	360.651

238	10	0.97815	165.331	370.432	
239	10	0.990356		166.312	380.336
240	10	1.00687	167.326	390.405	
241	10	1.01943	168.365	400.599	
242	10	1.03643	169.439	410.963	
243	10	1.04939	170.54	421.457	
244	10	1.06694	171.679	432.126	
245	10	1.08032	172.846	442.93	
246	10	1.09847	174.052	453.914	
247	10	1.11232	175.29	465.037	
248	10	1.13113	176.569	476.349	
249	10	1.1455	177.881	487.804	
250	10	1.16505	179.239	499.454	
251	10	1.18	180.631	511.254	
252	10	1.20036	182.072	523.258	
253	10	1.21596	183.55	535.418	
254	10	1.23724	185.081	547.79	
255	10	1.25357	186.653	560.326	
256	10	1.27588	188.28	573.084	
257	10	1.29303	189.952	586.015	
258	10	1.31652	191.686	599.18	
259	10	1.33462	193.467	612.526	
260	10	1.35946	195.315	626.121	
261	10	1.37866	197.216	639.907	
262	10	1.40507	199.19	653.958	
263	10	1.42554	201.222	668.213	
264	10	1.4538	203.336	682.752	
265	10	1.47579	205.514	697.509	
266	10	1.50626	207.782	712.572	
267	10	1.53007	210.123	727.873	
268	10	1.56322	212.567	743.505	
269	10	1.58927	215.093	759.398	
270	10	1.62576	217.736	775.655	
271	10	1.65463	220.474	792.201	
272	10	1.6954	223.348	809.155	
273	10	1.72793	226.334	826.435	
274	10	1.77438	229.482	844.179	
275	10	1.81191	232.765	862.298	
276	10	1.86629	236.248	880.961	
277	10	1.91103	239.9	900.071	
278	10	1.97737	243.81	919.845	
279	10	2.03352	247.946	940.18	
280	10	2.12007	252.44	961.38	
281	10	2.19728	257.268	983.353	
282	10	2.32634	262.68	1006.62	
283	10	2.45727	268.718	1031.19	
284	11	2.74777	276.269	1061.41	

Data Set Standard Deviation = 4.69197
Numerator = 1.1266e+006
Denominator = 1.72119e+006
W Statistic = 0.654549 = 1.1266e+006 / 1.72119e+006

5% Critical value of 0.976 exceeds 0.654549
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.654549
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 = 0.806265
0.806265 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value Prob.	Quantile.	x	y
1	0	0.00350877	-2.7477739	348.683	
2	0	0.00701754	-2.4572739	334.497	
3	0	0.0105263	-2.3263439	328.103	
4	0	0.0140351	-2.1972839	321.801	
5	0	0.0175439	-2.1200739	318.03	
6	0	0.0210526	-2.0335239	313.804	
7	0.039	0.0245614	-1.9773740.0433	311.062	
8	0.039	0.0280702	-1.9110340.0433	307.822	
9	0.039	0.0315789	-1.8662940.0433	305.637	
10	0.039	0.0350877	-1.8119140.0433	302.982	
11	0.039	0.0385965	-1.7743840.0433	301.149	
12	0.039	0.0421053	-1.7279340.0433	298.881	
13	0.039	0.045614	-1.6954 40.0433	297.292	
14	0.039	0.0491228	-1.6546340.0433	295.301	
15	0.078	0.0526316	-1.6257641.0865	293.891	
16	0.08	0.0561404	-1.5892741.14	292.109	
17	0.081	0.0596491	-1.5632241.1668	290.837	
18	0.098	0.0631579	-1.5300741.6215	289.218	
19	0.11	0.0666667	-1.5062641.9425	288.056	
20	0.11	0.0701754	-1.4757941.9425	286.568	
21	0.13	0.0736842	-1.4538 42.4775	285.494	
22	0.13	0.077193	-1.4255442.4775	284.114	
23	0.13	0.0807018	-1.4050742.4775	283.114	
24	0.13	0.0842105	-1.3786642.4775	281.824	
25	0.13	0.0877193	-1.3594642.4775	280.887	
26	0.13	0.0912281	-1.3346242.4775	279.674	
27	0.13	0.0947368	-1.3165242.4775	278.79	
28	0.14	0.0982456	-1.2930342.745	277.643	
29	0.15	0.101754	-1.2758843.0125	276.805	
30	0.15	0.105263	-1.2535743.0125	275.716	
31	0.15	0.108772	-1.2372443.0125	274.918	
32	0.16	0.112281	-1.2159643.28	273.879	
33	0.16	0.115789	-1.2003643.28	273.118	
34	0.16	0.119298	-1.18 43.28	272.123	
35	0.16	0.122807	-1.1650543.28	271.393	
36	0.16	0.126316	-1.1455 43.28	270.439	
37	0.16	0.129825	-1.1311343.28	269.737	
38	0.17	0.133333	-1.1123243.5475	268.818	
39	0.17	0.136842	-1.0984743.5475	268.142	
40	0.18	0.140351	-1.0803243.815	267.256	
41	0.18	0.14386 -1.0669443.815	266.602		
42	0.18	0.147368	-1.0493943.815	265.745	
43	0.19	0.150877	-1.0364344.0825	265.112	
44	0.19	0.154386	-1.0194344.0825	264.282	
45	0.19	0.157895	-1.0068744.0825	263.669	
46	0.2	0.161404	-0.990356	44.35	262.862
47	0.2	0.164912	-0.9781544.35	262.266	
48	0.2	0.168421	-0.9621 44.35	261.483	

49	0.21	0.17193	-0.950222	44.6175	260.903
50	0.23	0.175439	-0.934594	5.1525	260.139
51	0.23	0.178947	-0.923014	45.1525	259.574
52	0.24	0.182456	-0.907769	45.42	258.829
53	0.24	0.185965	-0.896473	45.42	258.278
54	0.24	0.189474	-0.881587	45.42	257.551
55	0.25	0.192982	-0.870554	5.6875	257.012
56	0.25	0.196491	-0.855996	45.6875	256.301
57	0.25	0.2	-0.841621	45.6875	255.599
58	0.26	0.203509	-0.830953	45.955	255.078
59	0.26	0.207018	-0.816874	45.955	254.391
60	0.26	0.210526	-0.806422	45.955	253.88
61	0.26	0.214035	-0.792618	45.955	253.206
62	0.27	0.217544	-0.782366	46.2225	252.706
63	0.27	0.221053	-0.768821	46.2225	252.044
64	0.29	0.224561	-0.758753	46.7575	251.552
65	0.29	0.22807	-0.745449	46.7575	250.903
66	0.3	0.231579	-0.735557	47.025	250.42
67	0.41	0.235088	-0.722479	49.9675	249.781
68	0.41	0.238596	-0.712751	49.9675	249.306
69	0.42	0.242105	-0.699883	50.235	248.678
70	0.42	0.245614	-0.690309	50.235	248.21
71	0.43	0.249123	-0.677639	50.5025	247.591
72	0.44	0.252632	-0.668209	50.77	247.131
73	0.45	0.25614	-0.655726	51.0375	246.521
74	0.46	0.259649	-0.646431	51.305	246.067
75	0.47	0.263158	-0.634124	51.5725	245.466
76	0.51	0.266667	-0.624956	52.6425	245.019
77	0.52	0.270175	-0.612813	52.91	244.426
78	0.52	0.273684	-0.603765	52.91	243.984
79	0.53	0.277193	-0.591776	53.1775	243.398
80	0.57	0.280702	-0.582841	54.2475	242.962
81	0.57	0.284211	-0.570999	54.2475	242.384
82	0.58	0.287719	-0.562175	4.515	241.953
83	0.58	0.291228	-0.550465	54.515	241.381
84	0.6	0.294737	-0.541736	55.05	240.955
85	0.61	0.298246	-0.530162	55.3175	240.39
86	0.63	0.301754	-0.521527	55.8525	239.968
87	0.7	0.305263	-0.510074	57.725	239.409
88	0.71	0.308772	-0.501527	57.9925	238.991
89	0.71	0.312281	-0.490189	57.9925	238.438
90	0.72	0.315789	-0.481728	58.26	238.024
91	0.75	0.319298	-0.470498	59.0625	237.476
92	0.78	0.322807	-0.462114	59.865	237.067
93	0.83	0.326316	-0.450985	61.2025	236.523
94	0.87	0.329825	-0.442676	62.2725	236.117
95	0.89	0.333333	-0.431644	62.8075	235.579
96	0.98	0.336842	-0.423405	65.215	235.176
97	1	0.340351	-0.412463	65.75	234.642
98	1	0.34386	-0.404296	5.75	234.243
99	1	0.347368	-0.393433	65.75	233.713
100	1	0.350877	-0.385321	65.75	233.317
101	1	0.354386	-0.374544	65.75	232.79
102	1.1	0.357895	-0.366496	8.425	232.397
103	1.1	0.361404	-0.355788	68.425	231.874
104	1.2	0.364912	-0.347787	71.1	231.484
105	1.2	0.368421	-0.337155	71.1	230.964
106	1.2	0.37193	-0.329206	71.1	230.576
107	1.3	0.375439	-0.318639	73.775	230.06
108	1.4	0.378947	-0.310738	76.45	229.674
109	1.4	0.382456	-0.300232	76.45	229.161
110	1.5	0.385965	-0.292375	79.125	228.778

111	1.8	0.389474	-0.281926	87.15	228.267
112	2.7	0.392982	-0.27411	111.225	227.886
113	3	0.396491	-0.263715	119.25	227.378
114	10	0.4	-0.253347	306.5	226.872
115	10	0.403509	-0.24559	306.5	226.493
116	10	0.407018	-0.235269	306.5	225.989
117	10	0.410526	-0.227545	306.5	225.612
118	10	0.414035	-0.217267	306.5	225.11
119	10	0.417544	-0.209575	306.5	224.734
120	10	0.421053	-0.199336	306.5	224.234
121	10	0.424561	-0.191671	306.5	223.86
122	10	0.42807	-0.181468	306.5	223.362
123	10	0.431579	-0.173829	306.5	222.989
124	10	0.435088	-0.163659	306.5	222.492
125	10	0.438596	-0.156042	306.5	222.12
126	10	0.442105	-0.1459	306.5	221.625
127	10	0.445614	-0.138305	306.5	221.254
128	10	0.449123	-0.128189	306.5	220.76
129	10	0.452632	-0.12061	306.5	220.39
130	10	0.45614	-0.110516	306.5	219.897
131	10	0.459649	-0.102953	306.5	219.528
132	10	0.463158	-0.0928787	306.5	219.036
133	10	0.466667	-0.0853288	306.5	218.667
134	10	0.470175	-0.0752698	306.5	218.176
135	10	0.473684	-0.0677301	306.5	217.807
136	10	0.477193	-0.0576847	306.5	217.317
137	10	0.480702	-0.0501541	306.5	216.949
138	10	0.484211	-0.0401167	306.5	216.459
139	10	0.487719	-0.0325917	306.5	216.092
140	10	0.491228	-0.0225612	306.5	215.602
141	10	0.494737	-0.0150408	306.5	215.234
142	10	0.498246	-0.00501359	306.5	214.745
143	10	0.501754	0.00501359	306.5	214.255
144	10	0.505263	0.0150408	306.5	213.766
145	10	0.508772	0.0225612	306.5	213.398
146	10	0.512281	0.0325917	306.5	212.908
147	10	0.515789	0.0401167	306.5	212.541
148	10	0.519298	0.0501541	306.5	212.051
149	10	0.522807	0.0576847	306.5	211.683
150	10	0.526316	0.0677301	306.5	211.193
151	10	0.529825	0.0752698	306.5	210.824
152	10	0.533333	0.0853288	306.5	210.333
153	10	0.536842	0.0928787	306.5	209.964
154	10	0.540351	0.102953	306.5	209.472
155	10	0.54386	0.110516	306.5	209.103
156	10	0.547368	0.12061	306.5	208.61
157	10	0.550877	0.128189	306.5	208.24
158	10	0.554386	0.138305	306.5	207.746
159	10	0.557895	0.1459	306.5	207.375
160	10	0.561404	0.156042	306.5	206.88
161	10	0.564912	0.163659	306.5	206.508
162	10	0.568421	0.173829	306.5	206.011
163	10	0.57193	0.181468	306.5	205.638
164	10	0.575439	0.191671	306.5	205.14
165	10	0.578947	0.199336	306.5	204.766
166	10	0.582456	0.209575	306.5	204.266
167	10	0.585965	0.217267	306.5	203.89
168	10	0.589474	0.227545	306.5	203.388
169	10	0.592982	0.235269	306.5	203.011
170	10	0.596491	0.24559	306.5	202.507
171	10	0.6	0.253347	306.5	202.128
172	10	0.603509	0.263715	306.5	201.622

173	10	0.607018	0.27411	306.5	201.114
174	10	0.610526	0.281926	306.5	200.733
175	10	0.614035	0.292375	306.5	200.222
176	10	0.617544	0.300232	306.5	199.839
177	10	0.621053	0.310738	306.5	199.326
178	10	0.624561	0.318639	306.5	198.94
179	10	0.62807	0.329206	306.5	198.424
180	10	0.631579	0.337155	306.5	198.036
181	10	0.635088	0.347787	306.5	197.516
182	10	0.638596	0.355788	306.5	197.126
183	10	0.642105	0.36649	306.5	196.603
184	10	0.645614	0.374544	306.5	196.21
185	10	0.649123	0.385321	306.5	195.683
186	10	0.652632	0.393433	306.5	195.287
187	10	0.65614	0.40429	306.5	194.757
188	10	0.659649	0.412463	306.5	194.358
189	10	0.663158	0.423405	306.5	193.824
190	10	0.666667	0.431644	306.5	193.421
191	10	0.670175	0.442676	306.5	192.883
192	10	0.673684	0.450985	306.5	192.477
193	10	0.677193	0.462114	306.5	191.933
194	10	0.680702	0.470498	306.5	191.524
195	10	0.684211	0.481728	306.5	190.976
196	10	0.687719	0.490189	306.5	190.562
197	10	0.691228	0.501527	306.5	190.009
198	10	0.694737	0.510074	306.5	189.591
199	10	0.698246	0.521527	306.5	189.032
200	10	0.701754	0.530162	306.5	188.61
201	10	0.705263	0.541736	306.5	188.045
202	10	0.708772	0.550465	306.5	187.619
203	10	0.712281	0.56217	306.5	187.047
204	10	0.715789	0.570999	306.5	186.616
205	10	0.719298	0.582841	306.5	186.038
206	10	0.722807	0.591776	306.5	185.602
207	10	0.726316	0.603765	306.5	185.016
208	10	0.729825	0.612813	306.5	184.574
209	10	0.733333	0.624956	306.5	183.981
210	10	0.736842	0.634124	306.5	183.534
211	10	0.740351	0.646431	306.5	182.933
212	10	0.74386	0.655726	306.5	182.479
213	10	0.747368	0.668209	306.5	181.869
214	10	0.750877	0.677639	306.5	181.409
215	10	0.754386	0.690309	306.5	180.79
216	10	0.757895	0.699883	306.5	180.322
217	10	0.761404	0.712751	306.5	179.694
218	10	0.764912	0.722479	306.5	179.219
219	10	0.768421	0.735557	306.5	178.58
220	10	0.77193	0.745449	306.5	178.097
221	10	0.775439	0.758753	306.5	177.448
222	10	0.778947	0.768821	306.5	176.956
223	10	0.782456	0.782366	306.5	176.294
224	10	0.785965	0.792618	306.5	175.794
225	10	0.789474	0.806422	306.5	175.12
226	10	0.792982	0.816874	306.5	174.609
227	10	0.796491	0.830953	306.5	173.922
228	10	0.8	0.841621	306.5	173.401
229	10	0.803509	0.855996	306.5	172.699
230	10	0.807018	0.87055	306.5	171.988
231	10	0.810526	0.881587	306.5	171.449
232	10	0.814035	0.896473	306.5	170.722
233	10	0.817544	0.907769	306.5	170.171
234	10	0.821053	0.923014	306.5	169.426

235	10	0.824561	0.93459	306.5	168.861	
236	10	0.82807	0.950222	306.5	168.097	
237	10	0.831579	0.9621	306.5	167.517	
238	10	0.835088	0.97815	306.5	166.734	
239	10	0.838596	0.990356	306.5	166.138	
240	10	0.842105	1.00687	306.5	165.331	
241	10	0.845614	1.01943	306.5	164.718	
242	10	0.849123	1.03643	306.5	163.888	
243	10	0.852632	1.04939	306.5	163.255	
244	10	0.85614	1.06694	306.5	162.398	
245	10	0.859649	1.08032	306.5	161.744	
246	10	0.863158	1.09847	306.5	160.858	
247	10	0.866667	1.11232	306.5	160.182	
248	10	0.870175	1.13113	306.5	159.263	
249	10	0.873684	1.1455	306.5	158.561	
250	10	0.877193	1.16505	306.5	157.607	
251	10	0.880702	1.18	306.5	156.877	
252	10	0.884211	1.20036	306.5	155.882	
253	10	0.887719	1.21596	306.5	155.121	
254	10	0.891228	1.23724	306.5	154.082	
255	10	0.894737	1.25357	306.5	153.284	
256	10	0.898246	1.27588	306.5	152.195	
257	10	0.901754	1.29303	306.5	151.357	
258	10	0.905263	1.31652	306.5	150.21	
259	10	0.908772	1.33462	306.5	149.326	
260	10	0.912281	1.35946	306.5	148.113	
261	10	0.915789	1.37866	306.5	147.176	
262	10	0.919298	1.40507	306.5	145.886	
263	10	0.922807	1.42554	306.5	144.886	
264	10	0.926316	1.4538	306.5	143.506	
265	10	0.929825	1.47579	306.5	142.432	
266	10	0.933333	1.50626	306.5	140.944	
267	10	0.936842	1.53007	306.5	139.782	
268	10	0.940351	1.56322	306.5	138.163	
269	10	0.94386	1.58927	306.5	136.891	
270	10	0.947368	1.62576	306.5	135.109	
271	10	0.950877	1.65463	306.5	133.699	
272	10	0.954386	1.6954	306.5	131.708	
273	10	0.957895	1.72793	306.5	130.119	
274	10	0.961404	1.77438	306.5	127.851	
275	10	0.964912	1.81191	306.5	126.018	
276	10	0.968421	1.86629	306.5	123.363	
277	10	0.97193	1.91103	306.5	121.178	
278	10	0.975439	1.97737	306.5	117.938	
279	10	0.978947	2.03352	306.5	115.196	
280	10	0.982456	2.12007	306.5	110.97	
281	10	0.985965	2.19728	306.5	107.199	
282	10	0.989474	2.32634	306.5	100.897	
283	10	0.992982	2.45727	306.5	94.5032	
284	11	0.996491	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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.24419	-2.74777	7.55021	8.91428
2	-3.24419	-2.45727	13.5884	16.8862
3	-3.24419	-2.32634	19.0003	24.4333
4	-3.24419	-2.19728	23.8283	31.5617
5	-3.24419	-2.12007	28.323	38.4396
6	-3.24419	-2.03352	32.4582	45.0367
7	-3.24419	-1.97737	36.3682	51.4517
8	-3.24419	-1.91103	40.0203	57.6514
9	-2.55105	-1.86629	43.5033	62.4124
10	-2.52573	-1.81191	46.7863	66.9888
11	-2.51331	-1.77438	49.9348	71.4484
12	-2.32279	-1.72793	52.9205	75.462
13	-2.20727	-1.6954	55.7949	79.2042
14	-2.20727	-1.65463	58.5327	82.8564
15	-2.04022	-1.62576	61.1758	86.1734
16	-2.04022	-1.58927	63.7015	89.4158
17	-2.04022	-1.56322	66.1452	92.6051
18	-2.04022	-1.53007	68.4863	95.7268
19	-2.04022	-1.50626	70.7551	98.7999
20	-2.04022	-1.47579	72.9331	101.811
21	-2.04022	-1.4538	75.0466	104.777
22	-1.96611	-1.42554	77.0788	107.58
23	-1.89712	-1.40507	79.053	110.245
24	-1.89712	-1.37866	80.9537	112.861
25	-1.89712	-1.35946	82.8019	115.44
26	-1.83258	-1.33462	84.5831	117.886
27	-1.83258	-1.31652	86.3163	120.298
28	-1.83258	-1.29303	87.9883	122.668
29	-1.83258	-1.27588	89.6161	125.006
30	-1.83258	-1.25357	91.1875	127.303
31	-1.83258	-1.23724	92.7183	129.571
32	-1.77196	-1.21596	94.1969	131.725
33	-1.77196	-1.20036	95.6377	133.852
34	-1.7148	-1.18	97.0301	135.876
35	-1.7148	-1.16505	98.3875	137.874
36	-1.7148	-1.1455	99.6996	139.838
37	-1.66073	-1.13113	100.979	141.716
38	-1.66073	-1.11232	102.216	143.564
39	-1.66073	-1.09847	103.423	145.388
40	-1.60944	-1.08032	104.59	147.127
41	-1.60944	-1.06694	105.728	148.844
42	-1.60944	-1.04939	106.83	150.533
43	-1.56065	-1.03643	107.904	152.15
44	-1.46968	-1.01943	108.943	153.648
45	-1.46968	-1.00687	109.957	155.128
46	-1.42712	-0.990356	110.938	156.542
47	-1.42712	-0.97815	111.894	157.937
48	-1.42712	-0.9621	112.82	159.31
49	-1.38629	-0.950222	113.723	160.628
50	-1.38629	-0.93459	114.596	161.923
51	-1.38629	-0.923014	115.448	163.203

52	-1.34707	-0.907769	116.272	164.426
53	-1.34707	-0.896473	117.076	165.633
54	-1.34707	-0.881587	117.853	166.821
55	-1.34707	-0.87055	118.611	167.994
56	-1.30933	-0.855996	119.344	169.114
57	-1.30933	-0.841621	120.052	170.216
58	-1.23787	-0.830953	120.743	171.245
59	-1.23787	-0.816874	121.41	172.256
60	-1.20397	-0.806422	122.06	173.227
61	-0.891598	-0.792618	122.689	173.934
62	-0.891598	-0.782366	123.301	174.631
63	-0.867501	-0.768821	123.892	175.298
64	-0.867501	-0.758753	124.467	175.957
65	-0.84397	-0.745449	125.023	176.586
66	-0.820981	-0.735557	125.564	177.19
67	-0.798508	-0.722479	126.086	177.766
68	-0.776529	-0.712751	126.594	178.32
69	-0.755023	-0.699883	127.084	178.848
70	-0.673345	-0.690309	127.561	179.313
71	-0.653926	-0.677639	128.02	179.756
72	-0.653926	-0.668209	128.466	180.193
73	-0.634878	-0.655726	128.896	180.61
74	-0.562119	-0.646431	129.314	180.973
75	-0.562119	-0.634124	129.716	181.329
76	-0.544727	-0.624956	130.107	181.67
77	-0.544727	-0.612813	130.482	182.004
78	-0.510826	-0.603765	130.847	182.312
79	-0.494296	-0.591776	131.197	182.605
80	-0.462035	-0.582841	131.537	182.874
81	-0.356675	-0.570999	131.863	183.078
82	-0.34249	-0.56217	132.179	183.27
83	-0.34249	-0.550465	132.482	183.459
84	-0.328504	-0.541736	132.775	183.637
85	-0.287682	-0.530162	133.056	183.789
86	-0.248461	-0.521527	133.328	183.919
87	-0.18633	-0.510074	133.589	184.014
88	-0.139262	-0.501527	133.84	184.084
89	-0.116534	-0.490189	134.08	184.141
90	-0.0202027	-0.481728	134.312	184.15
91	0	-0.470498	134.534	184.15
92	0	-0.462114	134.747	184.15
93	0	-0.450985	134.951	184.15
94	0	-0.442676	135.147	184.15
95	0	-0.431644	135.333	184.15
96	0	-0.423405	135.512	184.15
97	0	-0.412463	135.682	184.15
98	0	-0.40429	135.846	184.15
99	0	-0.393433	136.001	184.15
100	0	-0.385321	136.149	184.15
101	0	-0.374544	136.289	184.15
102	0.0953102	-0.36649	136.424	184.115
103	0.0953102	-0.355788	136.55	184.082
104	0.182322	-0.347787	136.671	184.018
105	0.182322	-0.337155	136.785	183.957
106	0.182322	-0.329206	136.893	183.897
107	0.262364	-0.318639	136.995	183.813
108	0.336472	-0.310738	137.091	183.708
109	0.336472	-0.300232	137.182	183.607
110	0.405465	-0.292375	137.267	183.489
111	0.587787	-0.281926	137.346	183.323
112	0.993252	-0.27411	137.422	183.051
113	1.09861	-0.263715	137.491	182.761

114	2.30259	-0.253347	137.555	182.178
115	2.30259	-0.24559	137.616	181.612
116	2.30259	-0.235269	137.671	181.071
117	2.30259	-0.227545	137.723	180.547
118	2.30259	-0.217267	137.77	180.046
119	2.30259	-0.209575	137.814	179.564
120	2.30259	-0.199336	137.854	179.105
121	2.30259	-0.191671	137.89	178.664
122	2.30259	-0.181468	137.923	178.246
123	2.30259	-0.173829	137.954	177.845
124	2.30259	-0.163659	137.98	177.469
125	2.30259	-0.156042	138.005	177.109
126	2.30259	-0.1459	138.026	176.773
127	2.30259	-0.138305	138.045	176.455
128	2.30259	-0.128189	138.062	176.16
129	2.30259	-0.12061	138.076	175.882
130	2.30259	-0.110516	138.088	175.628
131	2.30259	-0.102953	138.099	175.39
132	2.30259	-0.0928787	138.108	175.177
133	2.30259	-0.0853288	138.115	174.98
134	2.30259	-0.0752698	138.12	174.807
135	2.30259	-0.0677301	138.125	174.651
136	2.30259	-0.0576847	138.128	174.518
137	2.30259	-0.0501541	138.131	174.403
138	2.30259	-0.0401167	138.132	174.31
139	2.30259	-0.0325917	138.134	174.235
140	2.30259	-0.0225612	138.134	174.183
141	2.30259	-0.0150408	138.134	174.149
142	2.30259	-0.00501359	138.134	174.137
143	2.30259	0.00501359	138.134	174.149
144	2.30259	0.0150408	138.135	174.183
145	2.30259	0.0225612	138.135	174.235
146	2.30259	0.0325917	138.136	174.31
147	2.30259	0.0401167	138.138	174.403
148	2.30259	0.0501541	138.14	174.518
149	2.30259	0.0576847	138.144	174.651
150	2.30259	0.0677301	138.148	174.807
151	2.30259	0.0752698	138.154	174.98
152	2.30259	0.0853288	138.161	175.177
153	2.30259	0.0928787	138.17	175.39
154	2.30259	0.102953	138.18	175.628
155	2.30259	0.110516	138.193	175.882
156	2.30259	0.12061	138.207	176.16
157	2.30259	0.128189	138.224	176.455
158	2.30259	0.138305	138.243	176.773
159	2.30259	0.1459	138.264	177.109
160	2.30259	0.156042	138.288	177.469
161	2.30259	0.163659	138.315	177.845
162	2.30259	0.173829	138.345	178.246
163	2.30259	0.181468	138.378	178.664
164	2.30259	0.191671	138.415	179.105
165	2.30259	0.199336	138.455	179.564
166	2.30259	0.209575	138.499	180.046
167	2.30259	0.217267	138.546	180.547
168	2.30259	0.227545	138.598	181.071
169	2.30259	0.235269	138.653	181.612
170	2.30259	0.24559	138.713	182.178
171	2.30259	0.253347	138.777	182.761
172	2.30259	0.263715	138.847	183.368
173	2.30259	0.27411	138.922	184
174	2.30259	0.281926	139.002	184.649
175	2.30259	0.292375	139.087	185.322

176	2.30259	0.300232		139.177	186.013
177	2.30259	0.310738		139.274	186.729
178	2.30259	0.318639		139.375	187.462
179	2.30259	0.329206		139.484	188.221
180	2.30259	0.337155		139.597	188.997
181	2.30259	0.347787		139.718	189.798
182	2.30259	0.355788		139.845	190.617
183	2.30259	0.36649	139.979	191.461	
184	2.30259	0.374544		140.12	192.323
185	2.30259	0.385321		140.268	193.21
186	2.30259	0.393433		140.423	194.116
187	2.30259	0.40429	140.586	195.047	
188	2.30259	0.412463		140.756	195.997
189	2.30259	0.423405		140.936	196.972
190	2.30259	0.431644		141.122	197.966
191	2.30259	0.442676		141.318	198.985
192	2.30259	0.450985		141.521	200.024
193	2.30259	0.462114		141.735	201.088
194	2.30259	0.470498		141.956	202.171
195	2.30259	0.481728		142.188	203.28
196	2.30259	0.490189		142.429	204.409
197	2.30259	0.501527		142.68	205.564
198	2.30259	0.510074		142.94	206.738
199	2.30259	0.521527		143.212	207.939
200	2.30259	0.530162		143.493	209.16
201	2.30259	0.541736		143.787	210.407
202	2.30259	0.550465		144.09	211.675
203	2.30259	0.56217	144.406	212.969	
204	2.30259	0.570999		144.732	214.284
205	2.30259	0.582841		145.072	215.626
206	2.30259	0.591776		145.422	216.989
207	2.30259	0.603765		145.786	218.379
208	2.30259	0.612813		146.162	219.79
209	2.30259	0.624956		146.552	221.229
210	2.30259	0.634124		146.955	222.689
211	2.30259	0.646431		147.372	224.177
212	2.30259	0.655726		147.802	225.687
213	2.30259	0.668209		148.249	227.226
214	2.30259	0.677639		148.708	228.786
215	2.30259	0.690309		149.185	230.376
216	2.30259	0.699883		149.674	231.987
217	2.30259	0.712751		150.182	233.628
218	2.30259	0.722479		150.704	235.292
219	2.30259	0.735557		151.245	236.986
220	2.30259	0.745449		151.801	238.702
221	2.30259	0.758753		152.377	240.449
222	2.30259	0.768821		152.968	242.219
223	2.30259	0.782366		153.58	244.021
224	2.30259	0.792618		154.208	245.846
225	2.30259	0.806422		154.859	247.703
226	2.30259	0.816874		155.526	249.584
227	2.30259	0.830953		156.216	251.497
228	2.30259	0.841621		156.925	253.435
229	2.30259	0.855996		157.657	255.406
230	2.30259	0.87055	158.415	257.411	
231	2.30259	0.881587		159.193	259.44
232	2.30259	0.896473		159.996	261.505
233	2.30259	0.907769		160.82	263.595
234	2.30259	0.923014		161.672	265.72
235	2.30259	0.93459	162.546	267.872	
236	2.30259	0.950222		163.449	270.06
237	2.30259	0.9621	164.374	272.275	

238	2.30259	0.97815	165.331	274.528	
239	2.30259	0.990356		166.312	276.808
240	2.30259	1.00687	167.326	279.127	
241	2.30259	1.01943	168.365	281.474	
242	2.30259	1.03643	169.439	283.86	
243	2.30259	1.04939	170.54	286.277	
244	2.30259	1.06694	171.679	288.733	
245	2.30259	1.08032	172.846	291.221	
246	2.30259	1.09847	174.052	293.75	
247	2.30259	1.11232	175.29	296.311	
248	2.30259	1.13113	176.569	298.916	
249	2.30259	1.1455	177.881	301.554	
250	2.30259	1.16505	179.239	304.236	
251	2.30259	1.18	180.631	306.953	
252	2.30259	1.20036	182.072	309.717	
253	2.30259	1.21596	183.55	312.517	
254	2.30259	1.23724	185.081	315.366	
255	2.30259	1.25357	186.653	318.252	
256	2.30259	1.27588	188.28	321.19	
257	2.30259	1.29303	189.952	324.167	
258	2.30259	1.31652	191.686	327.199	
259	2.30259	1.33462	193.467	330.272	
260	2.30259	1.35946	195.315	333.402	
261	2.30259	1.37866	197.216	336.577	
262	2.30259	1.40507	199.19	339.812	
263	2.30259	1.42554	201.222	343.094	
264	2.30259	1.4538	203.336	346.442	
265	2.30259	1.47579	205.514	349.84	
266	2.30259	1.50626	207.782	353.308	
267	2.30259	1.53007	210.123	356.831	
268	2.30259	1.56322	212.567	360.431	
269	2.30259	1.58927	215.093	364.09	
270	2.30259	1.62576	217.736	367.834	
271	2.30259	1.65463	220.474	371.644	
272	2.30259	1.6954	223.348	375.547	
273	2.30259	1.72793	226.334	379.526	
274	2.30259	1.77438	229.482	383.612	
275	2.30259	1.81191	232.765	387.784	
276	2.30259	1.86629	236.248	392.081	
277	2.30259	1.91103	239.9	396.482	
278	2.30259	1.97737	243.81	401.035	
279	2.30259	2.03352	247.946	405.717	
280	2.30259	2.12007	252.44	410.599	
281	2.30259	2.19728	257.268	415.658	
282	2.30259	2.32634	262.68	421.015	
283	2.30259	2.45727	268.718	426.673	
284	2.3979	2.74777	276.269	433.262	

Data Set Standard Deviation = 1.80205
Numerator = 187716
Denominator = 253893
W Statistic = 0.739349 = 187716 / 253893

5% Critical value of 0.976 exceeds 0.739349
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.739349
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 = 0.858084
0.858084 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-3.24419	0.00350877	-2.74777	96.7652	348.683
2	-3.24419	0.00701754	-2.45727	96.7652	334.497
3	-3.24419	0.0105263	-2.32634	96.7652	328.103
4	-3.24419	0.0140351	-2.19728	96.7652	321.801
5	-3.24419	0.0175439	-2.12007	96.7652	318.03
6	-3.24419	0.0210526	-2.03352	96.7652	313.804
7	-3.24419	0.0245614	-1.97737	96.7652	311.062
8	-3.24419	0.0280702	-1.91103	96.7652	307.822
9	-2.55105	0.0315789	-1.86629	149.741	305.637
10	-2.52573	0.0350877	-1.81191	151.676	302.982
11	-2.51331	0.0385965	-1.77438	152.626	301.149
12	-2.32279	0.0421053	-1.72793	167.187	298.881
13	-2.20727	0.045614	-1.6954	176.015	297.292
14	-2.20727	0.0491228	-1.65463	176.015	295.301
15	-2.04022	0.0526316	-1.62576	188.783	293.891
16	-2.04022	0.0561404	-1.58927	188.783	292.109
17	-2.04022	0.0596491	-1.56322	188.783	290.837
18	-2.04022	0.0631579	-1.53007	188.783	289.218
19	-2.04022	0.0666667	-1.50626	188.783	288.056
20	-2.04022	0.0701754	-1.47579	188.783	286.568
21	-2.04022	0.0736842	-1.4538	188.783	285.494
22	-1.96611	0.077193	-1.42554	194.447	284.114
23	-1.89712	0.0807018	-1.40507	199.72	283.114
24	-1.89712	0.0842105	-1.37866	199.72	281.824
25	-1.89712	0.0877193	-1.35946	199.72	280.887
26	-1.83258	0.0912281	-1.33462	204.653	279.674
27	-1.83258	0.0947368	-1.31652	204.653	278.79
28	-1.83258	0.0982456	-1.29303	204.653	277.643
29	-1.83258	0.101754	-1.27588	204.653	276.805
30	-1.83258	0.105263	-1.25357	204.653	275.716
31	-1.83258	0.108772	-1.23724	204.653	274.918
32	-1.77196	0.112281	-1.21596	209.286	273.879
33	-1.77196	0.115789	-1.20036	209.286	273.118
34	-1.7148	0.119298	-1.18	213.655	272.123
35	-1.7148	0.122807	-1.16505	213.655	271.393
36	-1.7148	0.126316	-1.1455	213.655	270.439
37	-1.66073	0.129825	-1.13113	217.787	269.737
38	-1.66073	0.133333	-1.11232	217.787	268.818
39	-1.66073	0.136842	-1.09847	217.787	268.142
40	-1.60944	0.140351	-1.08032	221.707	267.256
41	-1.60944	0.14386	-1.06694	221.707	266.602
42	-1.60944	0.147368	-1.04939	221.707	265.745
43	-1.56065	0.150877	-1.03643	225.436	265.112
44	-1.46968	0.154386	-1.01943	232.389	264.282
45	-1.46968	0.157895	-1.00687	232.389	263.669
46	-1.42712	0.161404	-0.990356	235.642	262.862
47	-1.42712	0.164912	-0.97815	235.642	262.266
48	-1.42712	0.168421	-0.9621	235.642	261.483

49	-1.386290.17193	-0.950222	238.762	260.903	
50	-1.386290.175439	-0.93459238.762	260.139		
51	-1.386290.178947	-0.923014	238.762	259.574	
52	-1.347070.182456	-0.907769	241.759	258.829	
53	-1.347070.185965	-0.896473	241.759	258.278	
54	-1.347070.189474	-0.881587	241.759	257.551	
55	-1.347070.192982	-0.87055241.759	257.012		
56	-1.309330.196491	-0.855996	244.644	256.301	
57	-1.309330.2	-0.841621	244.644	255.599	
58	-1.237870.203509	-0.830953	250.105	255.078	
59	-1.237870.207018	-0.816874	250.105	254.391	
60	-1.203970.210526	-0.806422	252.696	253.88	
61	-0.891598	0.214035	-0.792618	276.571	253.206
62	-0.891598	0.217544	-0.782366	276.571	252.706
63	-0.867501	0.221053	-0.768821	278.412	252.044
64	-0.867501	0.224561	-0.758753	278.412	251.552
65	-0.843970.22807	-0.745449	280.211	250.903	
66	-0.820981	0.231579	-0.735557	281.968	250.42
67	-0.798508	0.235088	-0.722479	283.685	249.781
68	-0.776529	0.238596	-0.712751	285.365	249.306
69	-0.755023	0.242105	-0.699883	287.009	248.678
70	-0.673345	0.245614	-0.690309	293.252	248.21
71	-0.653926	0.249123	-0.677639	294.736	247.591
72	-0.653926	0.252632	-0.668209	294.736	247.131
73	-0.634878	0.25614	-0.655726	296.191	246.521
74	-0.562119	0.259649	-0.646431	301.752	246.067
75	-0.562119	0.263158	-0.634124	301.752	245.466
76	-0.544727	0.266667	-0.624956	303.082	245.019
77	-0.544727	0.270175	-0.612813	303.082	244.426
78	-0.510826	0.273684	-0.603765	305.673	243.984
79	-0.494296	0.277193	-0.591776	306.936	243.398
80	-0.462035	0.280702	-0.582841	309.402	242.962
81	-0.356675	0.284211	-0.570999	317.454	242.384
82	-0.342490.287719	-0.56217318.538	241.953		
83	-0.342490.291228	-0.550465	318.538	241.381	
84	-0.328504	0.294737	-0.541736	319.607	240.955
85	-0.287682	0.298246	-0.530162	322.727	240.39
86	-0.248461	0.301754	-0.521527	325.725	239.968
87	-0.186330.305263	-0.510074	330.473	239.409	
88	-0.139262	0.308772	-0.501527	334.071	238.991
89	-0.116534	0.312281	-0.490189	335.808	238.438
90	-0.0202027	0.315789	-0.481728	343.17	238.024
91	0	0.319298	-0.470498	344.714	237.476
92	0	0.322807	-0.462114	344.714	237.067
93	0	0.326316	-0.450985	344.714	236.523
94	0	0.329825	-0.442676	344.714	236.117
95	0	0.333333	-0.431644	344.714	235.579
96	0	0.336842	-0.423405	344.714	235.176
97	0	0.340351	-0.412463	344.714	234.642
98	0	0.34386	-0.40429344.714	234.243	
99	0	0.347368	-0.393433	344.714	233.713
100	0	0.350877	-0.385321	344.714	233.317
101	0	0.354386	-0.374544	344.714	232.79
102	0.0953102	0.357895	-0.36649351.999	232.397	
103	0.0953102	0.361404	-0.355788	351.999	231.874
104	0.182322	0.364912	-0.347787	358.649	231.484
105	0.182322	0.368421	-0.337155	358.649	230.964
106	0.182322	0.37193	-0.329206	358.649	230.576
107	0.262364	0.375439	-0.318639	364.766	230.06
108	0.336472	0.378947	-0.310738	370.43	229.674
109	0.336472	0.382456	-0.300232	370.43	229.161
110	0.405465	0.385965	-0.292375	375.703	228.778

111	0.587787	0.389474	-0.281926	389.638	228.267
112	0.993252	0.392982	-0.27411	420.627	227.886
113	1.09861	0.396491	-0.263715	428.68	227.378
114	2.30259	0.4	-0.253347	520.698	226.872
115	2.30259	0.403509	-0.24559	520.698	226.493
116	2.30259	0.407018	-0.235269	520.698	225.989
117	2.30259	0.410526	-0.227545	520.698	225.612
118	2.30259	0.414035	-0.217267	520.698	225.11
119	2.30259	0.417544	-0.209575	520.698	224.734
120	2.30259	0.421053	-0.199336	520.698	224.234
121	2.30259	0.424561	-0.191671	520.698	223.86
122	2.30259	0.42807	-0.181468	520.698	223.362
123	2.30259	0.431579	-0.173829	520.698	222.989
124	2.30259	0.435088	-0.163659	520.698	222.492
125	2.30259	0.438596	-0.156042	520.698	222.12
126	2.30259	0.442105	-0.1459	520.698	221.625
127	2.30259	0.445614	-0.138305	520.698	221.254
128	2.30259	0.449123	-0.128189	520.698	220.76
129	2.30259	0.452632	-0.12061	520.698	220.39
130	2.30259	0.45614	-0.110516	520.698	219.897
131	2.30259	0.459649	-0.102953	520.698	219.528
132	2.30259	0.463158	-0.0928787	520.698	219.036
133	2.30259	0.466667	-0.0853288	520.698	218.667
134	2.30259	0.470175	-0.0752698	520.698	218.176
135	2.30259	0.473684	-0.0677301	520.698	217.807
136	2.30259	0.477193	-0.0576847	520.698	217.317
137	2.30259	0.480702	-0.0501541	520.698	216.949
138	2.30259	0.484211	-0.0401167	520.698	216.459
139	2.30259	0.487719	-0.0325917	520.698	216.092
140	2.30259	0.491228	-0.0225612	520.698	215.602
141	2.30259	0.494737	-0.0150408	520.698	215.234
142	2.30259	0.498246	-0.00501359	520.698	214.745
143	2.30259	0.501754	0.00501359	520.698	214.255
144	2.30259	0.505263	0.0150408	520.698	213.766
145	2.30259	0.508772	0.0225612	520.698	213.398
146	2.30259	0.512281	0.0325917	520.698	212.908
147	2.30259	0.515789	0.0401167	520.698	212.541
148	2.30259	0.519298	0.0501541	520.698	212.051
149	2.30259	0.522807	0.0576847	520.698	211.683
150	2.30259	0.526316	0.0677301	520.698	211.193
151	2.30259	0.529825	0.0752698	520.698	210.824
152	2.30259	0.533333	0.0853288	520.698	210.333
153	2.30259	0.536842	0.0928787	520.698	209.964
154	2.30259	0.540351	0.102953	520.698	209.472
155	2.30259	0.54386	0.110516	520.698	209.103
156	2.30259	0.547368	0.12061	520.698	208.61
157	2.30259	0.550877	0.128189	520.698	208.24
158	2.30259	0.554386	0.138305	520.698	207.746
159	2.30259	0.557895	0.1459	520.698	207.375
160	2.30259	0.561404	0.156042	520.698	206.88
161	2.30259	0.564912	0.163659	520.698	206.508
162	2.30259	0.568421	0.173829	520.698	206.011
163	2.30259	0.57193	0.181468	520.698	205.638
164	2.30259	0.575439	0.191671	520.698	205.14
165	2.30259	0.578947	0.199336	520.698	204.766
166	2.30259	0.582456	0.209575	520.698	204.266
167	2.30259	0.585965	0.217267	520.698	203.89
168	2.30259	0.589474	0.227545	520.698	203.388
169	2.30259	0.592982	0.235269	520.698	203.011
170	2.30259	0.596491	0.24559	520.698	202.507
171	2.30259	0.6	0.253347	520.698	202.128
172	2.30259	0.603509	0.263715	520.698	201.622

173	2.30259	0.607018	0.27411	520.698	201.114
174	2.30259	0.610526	0.281926	520.698	200.733
175	2.30259	0.614035	0.292375	520.698	200.222
176	2.30259	0.617544	0.300232	520.698	199.839
177	2.30259	0.621053	0.310738	520.698	199.326
178	2.30259	0.624561	0.318639	520.698	198.94
179	2.30259	0.62807	0.329206	520.698	198.424
180	2.30259	0.631579	0.337155	520.698	198.036
181	2.30259	0.635088	0.347787	520.698	197.516
182	2.30259	0.638596	0.355788	520.698	197.126
183	2.30259	0.642105	0.36649	520.698	196.603
184	2.30259	0.645614	0.374544	520.698	196.21
185	2.30259	0.649123	0.385321	520.698	195.683
186	2.30259	0.652632	0.393433	520.698	195.287
187	2.30259	0.65614	0.40429	520.698	194.757
188	2.30259	0.659649	0.412463	520.698	194.358
189	2.30259	0.663158	0.423405	520.698	193.824
190	2.30259	0.666667	0.431644	520.698	193.421
191	2.30259	0.670175	0.442676	520.698	192.883
192	2.30259	0.673684	0.450985	520.698	192.477
193	2.30259	0.677193	0.462114	520.698	191.933
194	2.30259	0.680702	0.470498	520.698	191.524
195	2.30259	0.684211	0.481728	520.698	190.976
196	2.30259	0.687719	0.490189	520.698	190.562
197	2.30259	0.691228	0.501527	520.698	190.009
198	2.30259	0.694737	0.510074	520.698	189.591
199	2.30259	0.698246	0.521527	520.698	189.032
200	2.30259	0.701754	0.530162	520.698	188.61
201	2.30259	0.705263	0.541736	520.698	188.045
202	2.30259	0.708772	0.550465	520.698	187.619
203	2.30259	0.712281	0.56217	520.698	187.047
204	2.30259	0.715789	0.570999	520.698	186.616
205	2.30259	0.719298	0.582841	520.698	186.038
206	2.30259	0.722807	0.591776	520.698	185.602
207	2.30259	0.726316	0.603765	520.698	185.016
208	2.30259	0.729825	0.612813	520.698	184.574
209	2.30259	0.733333	0.624956	520.698	183.981
210	2.30259	0.736842	0.634124	520.698	183.534
211	2.30259	0.740351	0.646431	520.698	182.933
212	2.30259	0.74386	0.655726	520.698	182.479
213	2.30259	0.747368	0.668209	520.698	181.869
214	2.30259	0.750877	0.677639	520.698	181.409
215	2.30259	0.754386	0.690309	520.698	180.79
216	2.30259	0.757895	0.699883	520.698	180.322
217	2.30259	0.761404	0.712751	520.698	179.694
218	2.30259	0.764912	0.722479	520.698	179.219
219	2.30259	0.768421	0.735557	520.698	178.58
220	2.30259	0.77193	0.745449	520.698	178.097
221	2.30259	0.775439	0.758753	520.698	177.448
222	2.30259	0.778947	0.768821	520.698	176.956
223	2.30259	0.782456	0.782366	520.698	176.294
224	2.30259	0.785965	0.792618	520.698	175.794
225	2.30259	0.789474	0.806422	520.698	175.12
226	2.30259	0.792982	0.816874	520.698	174.609
227	2.30259	0.796491	0.830953	520.698	173.922
228	2.30259	0.8	0.841621	520.698	173.401
229	2.30259	0.803509	0.855996	520.698	172.699
230	2.30259	0.807018	0.87055	520.698	171.988
231	2.30259	0.810526	0.881587	520.698	171.449
232	2.30259	0.814035	0.896473	520.698	170.722
233	2.30259	0.817544	0.907769	520.698	170.171
234	2.30259	0.821053	0.923014	520.698	169.426

235	2.30259	0.824561	0.93459	520.698	168.861	
236	2.30259	0.82807	0.950222	520.698	168.097	
237	2.30259	0.831579	0.9621	520.698	167.517	
238	2.30259	0.835088	0.97815	520.698	166.734	
239	2.30259	0.838596	0.990356	520.698	166.138	
240	2.30259	0.842105	1.00687	520.698	165.331	
241	2.30259	0.845614	1.01943	520.698	164.718	
242	2.30259	0.849123	1.03643	520.698	163.888	
243	2.30259	0.852632	1.04939	520.698	163.255	
244	2.30259	0.85614	1.06694	520.698	162.398	
245	2.30259	0.859649	1.08032	520.698	161.744	
246	2.30259	0.863158	1.09847	520.698	160.858	
247	2.30259	0.866667	1.11232	520.698	160.182	
248	2.30259	0.870175	1.13113	520.698	159.263	
249	2.30259	0.873684	1.1455	520.698	158.561	
250	2.30259	0.877193	1.16505	520.698	157.607	
251	2.30259	0.880702	1.18	520.698	156.877	
252	2.30259	0.884211	1.20036	520.698	155.882	
253	2.30259	0.887719	1.21596	520.698	155.121	
254	2.30259	0.891228	1.23724	520.698	154.082	
255	2.30259	0.894737	1.25357	520.698	153.284	
256	2.30259	0.898246	1.27588	520.698	152.195	
257	2.30259	0.901754	1.29303	520.698	151.357	
258	2.30259	0.905263	1.31652	520.698	150.21	
259	2.30259	0.908772	1.33462	520.698	149.326	
260	2.30259	0.912281	1.35946	520.698	148.113	
261	2.30259	0.915789	1.37866	520.698	147.176	
262	2.30259	0.919298	1.40507	520.698	145.886	
263	2.30259	0.922807	1.42554	520.698	144.886	
264	2.30259	0.926316	1.4538	520.698	143.506	
265	2.30259	0.929825	1.47579	520.698	142.432	
266	2.30259	0.933333	1.50626	520.698	140.944	
267	2.30259	0.936842	1.53007	520.698	139.782	
268	2.30259	0.940351	1.56322	520.698	138.163	
269	2.30259	0.94386	1.58927	520.698	136.891	
270	2.30259	0.947368	1.62576	520.698	135.109	
271	2.30259	0.950877	1.65463	520.698	133.699	
272	2.30259	0.954386	1.6954	520.698	131.708	
273	2.30259	0.957895	1.72793	520.698	130.119	
274	2.30259	0.961404	1.77438	520.698	127.851	
275	2.30259	0.964912	1.81191	520.698	126.018	
276	2.30259	0.968421	1.86629	520.698	123.363	
277	2.30259	0.97193	1.91103	520.698	121.178	
278	2.30259	0.975439	1.97737	520.698	117.938	
279	2.30259	0.978947	2.03352	520.698	115.196	
280	2.30259	0.982456	2.12007	520.698	110.97	
281	2.30259	0.985965	2.19728	520.698	107.199	
282	2.30259	0.989474	2.32634	520.698	100.897	
283	2.30259	0.992982	2.45727	520.698	94.5032	
284	2.3979	0.996491	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-4	1/16/1998	ND<2.30259	92
	3/16/1999	ND<2.30259	92
	9/23/1999	ND<2.30259	92
	3/14/2000	ND<2.30259	92
	9/23/2003	ND<2.30259	92
	3/10/2004	ND<2.30259	92
	10/12/2004	ND<2.30259	92
	4/1/2005	ND<2.30259	92
	10/26/2005	ND<2.30259	92
	6/19/2006	ND<2.30259	92
	11/18/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92
	6/11/2009	-1.42712	221
	11/16/2009	-1.42712	222
	6/30/2010	-1.30933	231
	11/17/2010	-1.23787	233
	7/6/2011	-1.30933	232
	11/22/2011	-1.38629	224
	5/16/2012	-1.34707	227
	11/16/2012	-1.34707	228

Rank Sum = 3198
Rank Mean = 139.043

Background Rank Sum = 3198
Background Rank Mean = 139.043

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	3/14/2000	ND<2.30259	92
	9/23/2003	ND<2.30259	92
	3/10/2004	ND<2.30259	92
	10/12/2004	ND<2.30259	92
	4/1/2005	ND<2.30259	92
	10/26/2005	ND<2.30259	92
	6/19/2006	ND<2.30259	92
	11/18/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92
	6/11/2009	-2.04022 J	190
	11/16/2009	-1.89712 J	198
	6/30/2010	-1.60944	215
	11/17/2010	-1.83258 J	201
	7/6/2011	-1.46968	219

	11/22/2011	-1.66073 J	212
	5/16/2012	-1.38629	225
	11/16/2012	-1.46968	220

Rank Sum = 2784
Rank Mean = 139.2

LMW-11	3/14/2000	ND<2.30259	92
	9/23/2003	ND<2.30259	92
	3/10/2004	ND<2.30259	92
	10/12/2004	ND<2.30259	92
	4/1/2005	ND<2.30259	92
	10/26/2005	ND<2.30259	92
	6/19/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92

Rank Sum = 1012
Rank Mean = 92

LMW-12	3/14/2000	ND<2.30259	92
	9/23/2003	ND<2.30259	92
	3/10/2004	ND<2.30259	92
	10/12/2004	ND<2.30259	92
	4/1/2005	ND<2.30259	92
	10/26/2005	ND<2.30259	92
	6/19/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92

Rank Sum = 1012
Rank Mean = 92

LMW-13	3/14/2000	ND<2.30259	92
	9/23/2003	ND<2.30259	92
	3/10/2004	ND<2.30259	92
	10/12/2004	ND<2.30259	92
	4/1/2005	ND<2.30259	92
	10/26/2005	ND<2.30259	92
	6/19/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92

Rank Sum = 1012
Rank Mean = 92

LMW-14R	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<0 J	92
	11/20/2008	ND<2.30259	92
	6/11/2009	-1.42712	223
	6/30/2010	-1.77196 J	207
	11/17/2010	-1.56065	218
	7/6/2011	-1.60944	216
	11/22/2011	-1.7148 J	209
	5/16/2012	-1.89712 J	199
	11/16/2012	-1.66073 J	213

Rank Sum = 1853
Rank Mean = 168.455

LMW-15R	11/18/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<2.30259	92
	5/20/2008	ND<0 J	92
	11/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92
	6/11/2009	-0.18633	262
	11/16/2009	-1.34707	229
	11/16/2009	-1.38629	226
	11/16/2009	-1.20397	235
	6/30/2010	-0.356675	256
	11/17/2010	-0.544727	251
	7/6/2011	-0.287682	260
	11/22/2011	-0.510826	253
	5/16/2012	-0.544727	252
	11/16/2012	-0.562119	249

Rank Sum = 3209
Rank Mean = 178.278

LMW-16	11/18/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92
	6/11/2009	ND<-3.24419 U	92
	11/16/2009	-2.52573 J	185
	6/30/2010	-2.32279 J	187
	11/17/2010	-2.55105 J	184
	7/6/2011	-2.04022 J	191
	11/22/2011	ND<-3.24419 U	92
	5/16/2012	-1.96611 J	197
	11/16/2012	-2.20727 J	188

Rank Sum = 1776
Rank Mean = 136.615

LMW-3	11/19/1996	ND<2.30259	92
	3/24/1997	ND<2.30259	92
	1/16/1998	ND<2.30259	92
	3/16/1999	ND<2.30259	92
	9/23/1999	ND<2.30259	92
	3/14/2000	ND<2.30259	92
	9/23/2003	ND<2.30259	92
	3/10/2004	ND<2.30259	92
	10/12/2004	ND<2.30259	92
	4/1/2005	ND<2.30259	92
	10/26/2005	ND<2.30259	92
	6/19/2006	ND<2.30259	92
	11/18/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92
	6/11/2009	-1.83258 J	202
	11/16/2009	-1.83258 J	203
	6/30/2010	-1.77196 J	208
	11/17/2010	-0.673345	245
	7/6/2011	-1.83258 J	204
	11/22/2011	-0.84397	240
	5/16/2012	-1.7148 J	210
	11/16/2012	-1.7148 J	211

Rank Sum = 3287
Rank Mean = 131.48

LMW-3S	11/18/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<0 J	92
	11/20/2008	ND<2.30259	92
	6/11/2009	-0.867501	238
	11/16/2009	-0.867501	239
	6/30/2010	-0.562119	250
	11/17/2010	-0.634878	248
	7/6/2011	-0.798508	242
	11/22/2011	-1.60944	217
	5/16/2012	-0.653926	246
	11/16/2012	-0.494296	254

Rank Sum = 2394
Rank Mean = 184.154

LMW-6	1/16/1998	ND<2.30259	92
	3/16/1999	ND<2.30259	92
	9/23/1999	2.3979 J	284
	3/14/2000	ND<2.30259	92
	9/23/2003	ND<2.30259	92
	3/10/2004	ND<2.30259	92
	10/12/2004	ND<2.30259	92
	4/1/2005	ND<2.30259	92
	10/26/2005	ND<2.30259	92
	6/19/2006	ND<2.30259	92
	11/18/2006	ND<0 J	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<0 J	92
	11/20/2008	ND<2.30259	92
	6/11/2009	0.336472	277
	11/16/2009	0.182322	273
	6/30/2010	0.182322	274
	11/17/2010	0.0953102	271
	7/6/2011	-0.328504	259
	11/22/2011	-0.653926	247
	5/16/2012	-0.776529	243
	11/16/2012	-0.891598	236

Rank Sum = 3652
Rank Mean = 158.783

LMW-7	1/16/1998	ND<2.30259	92
	3/16/1999	ND<2.30259	92
	9/23/1999	ND<2.30259	92
	3/14/2000	ND<2.30259	92
	9/23/2003	ND<2.30259	92
	3/10/2004	ND<2.30259	92
	10/12/2004	ND<2.30259	92
	4/1/2005	ND<2.30259	92
	10/26/2005	ND<2.30259	92
	6/19/2006	ND<2.30259	92
	11/18/2006	0 J	266
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92
	6/11/2009	-0.462035	255
	11/17/2010	-1.66073 J	214

	7/6/2011	0.993252	281
	11/22/2011	-0.820981	241
	5/16/2012	-1.23787	234
	11/16/2012	-0.891598	237

Rank Sum = 3016
Rank Mean = 143.619

LMW-8	1/16/1998	ND<2.30259	92
	3/16/1999	ND<2.30259	92
	9/23/1999	ND<2.30259	92
	3/14/2000	ND<2.30259	92
	9/23/2003	ND<2.30259	92
	3/10/2004	ND<2.30259	92
	10/12/2004	ND<2.30259	92
	4/1/2005	ND<2.30259	92
	10/26/2005	ND<2.30259	92
	6/19/2006	ND<2.30259	92
	11/18/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<0 J	92
	11/20/2008	ND<2.30259	92
	6/11/2009	-0.755023	244
	11/16/2009	-0.34249	257
	6/30/2010	-0.248461	261
	11/17/2010	-0.34249	258
	7/6/2011	0.405465	279
	11/22/2011	0.336472	278
	5/16/2012	0.182322	275
	11/16/2012	-0.0202027	265

Rank Sum = 3497
Rank Mean = 152.043

LMW-9	1/16/1998	ND<2.30259	92
	3/16/1999	ND<2.30259	92
	9/23/1999	ND<2.30259	92
	3/14/2000	ND<2.30259	92
	9/23/2003	ND<2.30259	92
	3/10/2004	ND<2.30259	92
	10/12/2004	ND<2.30259	92
	4/1/2005	ND<2.30259	92
	10/26/2005	ND<2.30259	92
	6/19/2006	2.30259 J	283
	11/18/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92
	6/11/2009	-1.89712 J	200
	11/16/2009	-2.04022 J	192
	6/30/2010	-2.04022 J	193
	11/17/2010	-1.83258 J	205
	7/6/2011	-2.04022 J	194
	11/22/2011	-2.20727 J	189
	5/16/2012	0.262364	276
	11/16/2012	0.587787	280

Rank Sum = 3300
Rank Mean = 143.478

LMW-9D	11/18/2006	ND<2.30259	92
	6/2/2007	ND<2.30259	92
	11/15/2007	1.09861 J	282

	5/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92
	6/11/2009	ND<-3.24419 U	92
	11/16/2009	ND<-3.24419 U	92
	6/30/2010	ND<-3.24419 U	92
	11/17/2010	-2.51331 J	186
	7/6/2011	-2.04022 J	195
	11/22/2011	ND<-3.24419 U	92
	5/16/2012	ND<-3.24419 U	92
	11/16/2012	ND<-3.24419 U	92

Rank Sum = 1583
Rank Mean = 121.769

LMW-9S	11/18/2006	0 J	267
	6/2/2007	0 J	268
	11/15/2007	ND<2.30259	92
	5/20/2008	0 J	269
	11/20/2008	ND<2.30259	92
	6/11/2009	-2.04022 J	196
	6/30/2010	-1.83258 J	206
	11/17/2010	-1.34707	230
	7/6/2011	-0.139262	263
	11/22/2011	0.0953102	272
	5/16/2012	0	270
	11/16/2012	-0.116534	264

Rank Sum = 2689
Rank Mean = 224.083

MW-5	1/16/1998	ND<2.30259	92
	3/16/1999	ND<2.30259	92
	9/23/1999	ND<2.30259	92
	3/14/2000	ND<2.30259	92
	9/23/2003	ND<2.30259	92
	3/10/2004	ND<2.30259	92
	10/12/2004	ND<2.30259	92
	4/1/2005	ND<2.30259	92
	10/26/2005	ND<2.30259	92
	6/19/2006	ND<2.30259	92
	11/15/2007	ND<2.30259	92
	5/20/2008	ND<2.30259	92
	11/20/2008	ND<2.30259	92

Rank Sum = 1196
Rank Mean = 92

Calculation Results:

Kruskal-Wallis H Statistic = 39.7324
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 54.2452
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
39.7324 > 26.2962 indicating a significant group difference at 5% significance level
54.2452 > 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 139.043

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**139.2**	**0.156522**	**58.4144**
LMW-11	**92**	**-47.04357**	**0.0396**
LMW-12	**92**	**-47.04357**	**0.0396**
LMW-13	**92**	**-47.04357**	**0.0396**

LMW-14R		168.455	29.4111	70.0396
LMW-15R		178.278	39.2343	60.1252
LMW-16	136.615	-2.4280	9	66.2949
LMW-3	131.48	-7.5634	8	55.2015
LMW-3S	184.154	45.1104		66.2949
LMW-6	158.783	19.7391		56.3398
LMW-7	143.619	4.57557		57.6657
LMW-8	152.043	13		56.3398
LMW-9	143.478	4.43478		56.3398
LMW-9D	121.769	-17.274	2	66.2949
LMW-9S	224.083	85.0399		68.0368
MW-5	92	-47.043	5	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 139.043

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	139.2	0.156522	68.9963
LMW-11	92	-47.043	5 82.7275
LMW-12	92	-47.043	5 82.7275
LMW-13	92	-47.043	5 82.7275
LMW-14R		168.455	29.4111 82.7275
LMW-15R		178.278	39.2343 71.017
LMW-16	136.615	-2.4280	9 78.3044
LMW-3	131.48	-7.5634	8 65.2015
LMW-3S	184.154	45.1104	78.3044
LMW-6	158.783	19.7391	66.546
LMW-7	143.619	4.57557	68.112
LMW-8	152.043	13	66.546
LMW-9	143.478	4.43478	66.546
LMW-9D	121.769	-17.274	2 78.3044
LMW-9S	224.083	85.0399	80.3619
MW-5	92	-47.043	5 78.3044

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	
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
ND<2.30259	0 J	2.30259	4	5
0 J	0 J	0	4	5
ND<2.30259	0 J	2.30259	5	5
-2.04022 J	0 J	-2.04022	5	6
-1.83258 J	0 J	-1.83258	5	7
-1.34707	0 J	-1.34707	5	8
-0.139262	0 J	-0.139262	5	9
0.0953102	0 J	0.0953102	6	9
0	0 J	0	6	9
-0.116534	0 J	-0.116534	6	10
0 J	ND<2.30259	-2.30259	6	11
ND<2.30259	ND<2.30259	0	6	11
-2.04022 J	ND<2.30259	-4.34281	6	12
-1.83258 J	ND<2.30259	-4.13517	6	13
-1.34707	ND<2.30259	-3.64966	6	14
-0.139262	ND<2.30259	-2.44185	6	15
0.0953102	ND<2.30259	-2.20727	6	16
0	ND<2.30259	-2.30259	6	17
-0.116534	ND<2.30259	-2.41912	6	18
ND<2.30259	0 J	2.30259	7	18
-2.04022 J	0 J	-2.04022	7	19
-1.83258 J	0 J	-1.83258	7	20
-1.34707	0 J	-1.34707	7	21
-0.139262	0 J	-0.139262	7	22
0.0953102	0 J	0.0953102	8	22
0	0 J	0	8	22
-0.116534	0 J	-0.116534	8	23
-2.04022 J	ND<2.30259	-4.34281	8	24
-1.83258 J	ND<2.30259	-4.13517	8	25
-1.34707	ND<2.30259	-3.64966	8	26
-0.139262	ND<2.30259	-2.44185	8	27
0.0953102	ND<2.30259	-2.20727	8	28
0	ND<2.30259	-2.30259	8	29
-0.116534	ND<2.30259	-2.41912	8	30

-1.83258	J	-2.04022	J	0.207639	9	30
-1.34707		-2.04022	J	0.693147	10	30
-0.139262		-2.04022	J	1.90096	11	30
0.0953102		-2.04022	J	2.13553	12	30
0	-2.04022	J	2.04022	13	30	
-0.116534		-2.04022	J	1.92369	14	30
-1.34707		-1.83258	J	0.485508	15	30
-0.139262		-1.83258	J	1.69332	16	30
0.0953102		-1.83258	J	1.92789	17	30
0	-1.83258	J	1.83258	18	30	
-0.116534		-1.83258	J	1.71605	19	30
-0.139262		-1.34707		1.20781	20	30
0.0953102		-1.34707		1.44238	21	30
0	-1.34707		1.34707	22	30	
-0.116534		-1.34707		1.23054	23	30
0.0953102		-0.139262		0.234572	24	30
0	-0.139262		0.139262	25	30	
-0.116534		-0.139262		0.0227283	26	30
0	0.0953102		-0.0953102	26	31	
-0.116534		0.0953102		-0.211844	26	32
-0.116534		0	-0.116534	26	33	

S Statistic = 26 - 33 = -7

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

There are 0 time periods with multiple data

A = 174
B = 0
C = 24
D = 0
E = 14
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 203
Z-Score = -0.421117

Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.421117| <= 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 = 1.0325
Baseline Std Dev = 1.77859
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	0	0	-0.580517
11/18/2006	0	0	-0.580517
6/2/2007	0	0	-0.580517
6/2/2007	0	0	-0.580517
11/15/2007	2.30259	0	0.714095
11/15/2007	2.30259	0	0.714095
5/20/2008	0	0	-0.580517
5/20/2008	0	0	-0.580517
11/20/2008	2.30259	0	0.714095
11/20/2008	2.30259	0	0.714095
6/11/2009	-2.04022	0	-1.72762
6/11/2009	-2.04022	0	-1.72762
6/30/2010	-1.83258	0	-1.61087
6/30/2010	-1.83258	0	-1.61087
11/17/2010	-1.34707	0	-1.3379
11/17/2010	-1.34707	0	-1.3379
7/6/2011	-0.139262	0	-0.658817
7/6/2011	-0.139262	0	-0.658817
11/22/2011	0.0953102	0	-0.52693
11/22/2011	0.0953102	0	-0.52693
5/16/2012	0	0	-0.580517
5/16/2012	0	0	-0.580517
11/16/2012	-0.116534	0	-0.646038
11/16/2012	-0.116534	0	-0.646038

Concentrations (ppb)

Parameter: Copper

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 279
Total Non-Detect: 149
Percent Non-Detects: 53.405%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	11 (47.8261%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	14 (70%)	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

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	
LMW-14R	10	5 (50%)	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	
LMW-15R	17	5 (29.4118%)	11/18/2006	3 J	3 J	
			6/2/2007	5 J	5 J	
			11/15/2007	5 J	5 J	
			11/15/2007	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			5/20/2008	ND<20	ND<20	
			11/20/2008	5 J	5 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	3.7	3.7	
			11/16/2009	0.92 J	0.92 J	
			11/16/2009	0.57 J	0.57 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
LMW-16	12	2 (16.6667%)	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	
LMW-3	24	15 (62.5%)	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	
LMW-3S	12	3 (25%)	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	
LMW-6	23	12 (52.1739%)	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
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-8	23	13 (56.5217%)	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

LMW-9	23	11 (47.8261%)	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	
LMW-9D	13	2 (15.3846%)	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	
LMW-9S	12	5 (41.6667%)	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
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 = 279

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.105	-2.747777	55021	-0.288515
2	0.105	-2.457271	3.5884	-0.546529
3	0.105	-2.326341	9.0003	-0.790795
4	0.105	-2.197282	3.8283	-1.02151
5	0.105	-2.120072	8.323	-1.24412
6	0.105	-2.033523	2.4582	-1.45764
7	0.105	-1.959963	6.2997	-1.66343
8	0.23	-1.911033	9.9517	-2.10297
9	0.23	-1.852184	3.3823	-2.52897
10	0.27	-1.811914	6.6653	-3.01819
11	0.3	-1.762414	9.7714	-3.54691
12	0.35	-1.727935	2.7571	-4.15169
13	0.36	-1.684945	5.5962	-4.75826
14	0.39	-1.644855	8.3017	-5.39976
15	0.4	-1.616446	0.9146	-6.04633
16	0.41	-1.580476	3.4124	-6.69432
17	0.46	-1.554776	5.8297	-7.40952
18	0.46	-1.522036	8.1463	-8.10965
19	0.48	-1.498527	0.3919	-8.82894
20	0.49	-1.468387	2.548	-9.54845
21	0.49	-1.439537	4.6203	-10.2538
22	0.51	-1.418657	6.6329	-10.9773
23	0.51	-1.391757	8.5698	-11.6871
24	0.53	-1.3722	80.4528	-12.4144
25	0.55	-1.346948	2.267	-13.1552
26	0.57	-1.328548	4.032	-13.9125
27	0.57	-1.304698	5.7342	-14.6561
28	0.59	-1.281558	7.3766	-15.4123
29	0.59	-1.264648	8.9759	-16.1584
30	0.59	-1.242649	0.5201	-16.8916
31	0.63	-1.226539	2.0245	-17.6643
32	0.65	-1.205539	3.4777	-18.4479
33	0.65	-1.190129	4.8941	-19.2214
34	0.66	-1.17	96.263	-19.9936
35	0.67	-1.150359	7.5863	-20.7644
36	0.69	-1.1359	98.8766	-21.5481
37	0.7	-1.11699	100.124	-22.33
38	0.72	-1.10306	101.341	-23.1242
39	0.74	-1.08482	102.518	-23.927
40	0.74	-1.07138	103.666	-24.7198
41	0.75	-1.05375	104.776	-25.5101
42	0.75	-1.03643	105.85	-26.2875
43	0.75	-1.02365	106.898	-27.0552
44	0.76	-1.00687	107.912	-27.8204
45	0.78	-0.994457	108.901	-28.5961
46	0.78	-0.97815	109.858	-29.359
47	0.78	-0.966088	110.791	-30.1126
48	0.78	-0.950222	111.694	-30.8538
49	0.79	-0.93459	112.567	-31.5921
50	0.81	-0.923014	113.419	-32.3397
51	0.81	-0.907769	114.243	-33.075

52	0.82	-0.896473	115.047	-33.8101
53	0.83	-0.881587	115.824	-34.5419
54	0.84	-0.87055	116.582	-35.2731
55	0.87	-0.855996	117.315	-36.0178
56	0.87	-0.841621	118.023	-36.75
57	0.88	-0.830953	118.714	-37.4813
58	0.9	-0.816874	119.381	-38.2165
59	0.92	-0.806422	120.031	-38.9584
60	0.94	-0.792618	120.659	-39.7034
61	0.95	-0.782366	121.272	-40.4467
62	0.96	-0.768821	121.863	-41.1848
63	0.99	-0.755415	122.433	-41.9326
64	1	-0.745449	122.989	-42.6781
65	1.1	-0.732275	123.525	-43.4836
66	1.1	-0.722479	124.047	-44.2783
67	1.1	-0.709522	124.551	-45.0588
68	1.1	-0.699883	125.04	-45.8286
69	1.2	-0.687131	125.513	-46.6532
70	1.3	-0.67449	125.968	-47.53
71	1.3	-0.665079	126.41	-48.3946
72	1.3	-0.652622	126.836	-49.243
73	1.4	-0.643345	127.25	-50.1437
74	1.5	-0.631062	127.648	-51.0903
75	1.6	-0.621911	128.035	-52.0854
76	1.6	-0.609791	128.406	-53.061
77	1.7	-0.597761	128.764	-54.0772
78	1.7	-0.588793	129.11	-55.0782
79	1.7	-0.576911	129.443	-56.0589
80	1.7	-0.568052	129.766	-57.0246
81	1.7	-0.556308	130.075	-57.9703
82	1.9	-0.547551	130.375	-59.0107
83	2	-0.53594	130.663	-60.0826
84	2	-0.524401	130.938	-61.1314
85	2	-0.515791	131.204	-62.163
86	2	-0.504372	131.458	-63.1717
87	2	-0.49585	131.704	-64.1634
88	2	-0.484544	131.939	-65.1325
89	2.1	-0.476105	132.165	-66.1323
90	2.1	-0.464904	132.381	-67.1086
91	2.2	-0.453763	132.587	-68.1069
92	2.3	-0.445443	132.786	-69.1314
93	2.4	-0.434397	132.974	-70.174
94	3	-0.426148	133.156	-71.4524
95	3	-0.415193	133.328	-72.698
96	3	-0.40701	133.494	-73.919
97	3.5	-0.396142	133.651	-75.3055
98	3.7	-0.385321	133.799	-76.7312
99	3.8	-0.377233	133.942	-78.1647
100	4	-0.36649	134.076	-79.6306
101	4	-0.358459	134.205	-81.0645
102	4.2	-0.347787	134.326	-82.5252
103	5	-0.33981	134.441	-84.2242
104	5	-0.329206	134.549	-85.8703
105	5	-0.318639	134.651	-87.4635
106	5	-0.310738	134.747	-89.0172
107	5	-0.300232	134.838	-90.5183
108	5	-0.292375	134.923	-91.9802
109	5	-0.281926	135.003	-93.3898
110	5	-0.27411	135.078	-94.7604
111	5	-0.263715	135.147	-96.079
112	5	-0.253347	135.211	-97.3457
113	5	-0.24559	135.272	-98.5736

114	6	-0.235269	135.327	-99.9853
115	6	-0.227545	135.379	-101.351
116	6	-0.217267	135.426	-102.654
117	6	-0.209575	135.47	-103.912
118	6	-0.199336	135.51	-105.108
119	7	-0.189118	135.546	-106.431
120	7	-0.181468	135.578	-107.702
121	7	-0.171285	135.608	-108.901
122	7	-0.163659	135.635	-110.046
123	7	-0.153505	135.658	-111.121
124	8	-0.1459	135.679	-112.288
125	8	-0.135774	135.698	-113.374
126	8	-0.125661	135.714	-114.38
127	9	-0.118085	135.728	-115.442
128	9	-0.107995	135.739	-116.414
129	9	-0.100433	135.749	-117.318
130	10	-0.0903606	135.758	-118.222
131	10	-0.0828129	135.764	-119.05
132	10	-0.0727562	135.77	-119.777
133	10	-0.0627062	135.774	-120.404
134	10	-0.0551734	135.777	-120.956
135	10	-0.0451348	135.779	-121.408
136	10	-0.0376076	135.78	-121.784
137	10	-0.0275759	135.781	-122.059
138	10	-0.0200544	135.781	-122.26
139	10	-0.0100272	135.781	-122.36
140	10	0	135.781	-122.36
141	10	0.0100272	135.781	-122.26
142	10	0.0200544	135.782	-122.059
143	10	0.0275759	135.783	-121.784
144	10	0.0376076	135.784	-121.408
145	10	0.0451348	135.786	-120.956
146	10	0.0551734	135.789	-120.404
147	10	0.0627062	135.793	-119.777
148	10	0.0727562	135.798	-119.05
149	10	0.0828129	135.805	-118.222
150	10	0.0903606	135.813	-117.318
151	10	0.100433	135.823	-116.314
152	10	0.107995	135.835	-115.234
153	10	0.118085	135.849	-114.053
154	10	0.125661	135.865	-112.796
155	10	0.135774	135.883	-111.439
156	10	0.1459	135.905	-109.98
157	10	0.153505	135.928	-108.445
158	10	0.163659	135.955	-106.808
159	10	0.171285	135.984	-105.095
160	10	0.181468	136.017	-103.28
161	10	0.189118	136.053	-101.389
162	10	0.199336	136.093	-99.3959
163	10	0.209575	136.137	-97.3002
164	10	0.217267	136.184	-95.1275
165	10	0.227545	136.236	-92.8521
166	10	0.235269	136.291	-90.4994
167	10	0.24559	136.351	-88.0435
168	10	0.253347	136.415	-85.51
169	10	0.263715	136.485	-82.8729
170	10	0.27411	136.56	-80.1318
171	10	0.281926	136.64	-77.3125
172	10	0.292375	136.725	-74.3887
173	10	0.300232	136.815	-71.3864
174	10	0.310738	136.912	-68.279
175	10	0.318639	137.013	-65.0927

176	10	0.329206	137.122	-61.8006
177	10	0.33981	137.237	-58.4025
178	10	0.347787	137.358	-54.9246
179	10	0.358459	137.487	-51.34
180	10	0.36649	137.621	-47.6751
181	10	0.377233	137.763	-43.9028
182	10	0.385321	137.912	-40.0496
183	10	0.396142	138.069	-36.0882
184	10	0.40701	138.234	-32.0181
185	10	0.415193	138.407	-27.8661
186	10	0.426148	138.588	-23.6046
187	10	0.434397	138.777	-19.2607
188	10	0.445443	138.975	-14.8062
189	10	0.453763	139.181	-10.2686
190	10	0.464904	139.397	-5.61957
191	10	0.476105	139.624	-0.858521
192	10	0.484544	139.859	3.98691
193	10	0.49585	140.105	8.94541
194	10	0.504372	140.359	13.9891
195	10	0.515791	140.625	19.147
196	10	0.524401	140.9	24.3911
197	10	0.53594	141.187	29.7505
198	10	0.547551	141.487	35.226
199	10	0.556308	141.797	40.789
200	10	0.568052	142.119	46.4696
201	10	0.576911	142.452	52.2387
202	10	0.588793	142.799	58.1266
203	10	0.597761	143.156	64.1042
204	10	0.609791	143.528	70.2021
205	10	0.621911	143.915	76.4212
206	10	0.631062	144.313	82.7319
207	10	0.643345	144.727	89.1653
208	10	0.652622	145.153	95.6915
209	10	0.665079	145.595	102.342
210	10	0.67449	146.05	109.087
211	10	0.687131	146.522	115.959
212	10	0.699883	147.012	122.957
213	10	0.709522	147.516	130.053
214	10	0.722479	148.038	137.277
215	10	0.732275	148.574	144.6
216	10	0.745449	149.129	152.055
217	10	0.755415	149.7	159.609
218	10	0.768821	150.291	167.297
219	10	0.782366	150.903	175.121
220	10	0.792618	151.532	183.047
221	10	0.806422	152.182	191.111
222	10	0.816874	152.849	199.28
223	10	0.830953	153.54	207.589
224	10	0.841621	154.248	216.006
225	10	0.855996	154.981	224.565
226	10	0.87055	155.739	233.271
227	10	0.881587	156.516	242.087
228	10	0.896473	157.319	251.052
229	10	0.907769	158.143	260.129
230	10	0.923014	158.995	269.359
231	10	0.93459	159.869	278.705
232	10	0.950222	160.772	288.208
233	10	0.966088	161.705	297.868
234	10	0.97815	162.662	307.65
235	10	0.994457	163.651	317.594
236	10	1.00687	164.665	327.663
237	10	1.02365	165.712	337.9

238	10	1.03643	166.787	348.264
239	10	1.05375	167.897	358.801
240	10	1.07138	169.045	369.515
241	10	1.08482	170.222	380.363
242	10	1.10306	171.438	391.394
243	10	1.11699	172.686	402.564
244	10	1.1359	173.976	413.923
245	10	1.15035	175.3	425.426
246	10	1.17	176.669	437.126
247	10	1.19012	178.085	449.028
248	10	1.20553	179.538	461.083
249	10	1.22653	181.043	473.348
250	10	1.24264	182.587	485.775
251	10	1.26464	184.186	498.421
252	10	1.28155	185.828	511.236
253	10	1.30469	187.531	524.283
254	10	1.32854	189.296	537.569
255	10	1.34694	191.11	551.038
256	10	1.3722	192.993	564.76
257	10	1.39175	194.93	578.678
258	10	1.41865	196.942	592.864
259	10	1.43953	199.015	607.259
260	10	1.46838	201.171	621.943
261	10	1.49852	203.416	636.928
262	10	1.52203	205.733	652.149
263	10	1.55477	208.15	667.697
264	10	1.58047	210.648	683.501
265	10	1.61644	213.261	699.666
266	10	1.64485	215.967	716.114
267	10	1.68494	218.806	732.963
268	10	1.72793	221.791	750.243
269	10	1.76241	224.897	767.867
270	10	1.81191	228.18	785.986
271	10	1.85218	231.611	804.508
272	10	1.91103	235.263	823.618
273	10	1.95996	239.104	843.218
274	11	2.03352	243.24	865.586
275	12	2.12007	247.734	891.027
276	13	2.19728	252.562	919.592
277	18	2.32634	257.974	961.466
278	20	2.45727	264.013	1010.61
279	73	2.74777	271.563	1211.2

Data Set Standard Deviation = 5.88216
Numerator = 1.467e+006
Denominator = 2.61209e+006
W Statistic = 0.561619 = 1.467e+006 / 2.61209e+006

5% Critical value of 0.976 exceeds 0.561619
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.561619
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 = 0.752189
0.752189 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	0.105	0.00357143	-2.747773	9.7022	348.683
2	0.105	0.00714286	-2.457273	9.7022	334.497
3	0.105	0.0107143	-2.326343	9.7022	328.103
4	0.105	0.0142857	-2.197283	9.7022	321.801
5	0.105	0.0178571	-2.120073	9.7022	318.03
6	0.105	0.0214286	-2.033523	9.7022	313.804
7	0.105	0.025	-1.959963	9.7022	310.211
8	0.23	0.0285714	-1.911034	0.5381	307.822
9	0.23	0.0321429	-1.852184	0.5381	304.948
10	0.27	0.0357143	-1.811914	0.8056	302.982
11	0.3	0.0392857	-1.762414	1.0063	300.564
12	0.35	0.0428571	-1.727934	1.3406	298.881
13	0.36	0.0464286	-1.684944	1.4075	296.781
14	0.39	0.05	-1.644854	1.6081	294.824
15	0.4	0.0535714	-1.616444	1.675	293.436
16	0.41	0.0571429	-1.580474	1.7419	291.679
17	0.46	0.0607143	-1.554774	2.0763	290.425
18	0.46	0.0642857	-1.522034	2.0763	288.826
19	0.48	0.0678571	-1.498524	2.21	287.677
20	0.49	0.0714286	-1.468384	2.2769	286.206
21	0.49	0.075	-1.439534	2.2769	284.797
22	0.51	0.0785714	-1.418654	2.4106	283.778
23	0.51	0.0821429	-1.391754	2.4106	282.464
24	0.53	0.0857143	-1.3722	42.5444	281.509
25	0.55	0.0892857	-1.346944	2.6781	280.276
26	0.57	0.0928571	-1.328544	2.8119	279.377
27	0.57	0.0964286	-1.304694	2.8119	278.212
28	0.59	0.1	-1.281554	2.9456	277.082
29	0.59	0.103571	-1.264644	2.9456	276.257
30	0.59	0.107143	-1.242644	2.9456	275.182
31	0.63	0.110714	-1.226534	3.2131	274.395
32	0.65	0.114286	-1.205534	3.3469	273.37
33	0.65	0.117857	-1.190124	3.3469	272.617
34	0.66	0.121429	-1.17	43.4138	271.635
35	0.67	0.125	-1.150354	3.4806	270.675
36	0.69	0.128571	-1.1359	43.6144	269.97
37	0.7	0.132143	-1.116994	3.6812	269.046
38	0.72	0.135714	-1.103064	3.815	268.366
39	0.74	0.139286	-1.084824	3.9487	267.476
40	0.74	0.142857	-1.071384	3.9487	266.819
41	0.75	0.146429	-1.053754	4.0156	265.958
42	0.75	0.15	-1.036434	4.0156	265.112
43	0.75	0.153571	-1.023654	4.0156	264.488
44	0.76	0.157143	-1.006874	4.0825	263.669
45	0.78	0.160714	-0.994457	44.2163	263.063
46	0.78	0.164286	-0.978154	4.2163	262.266
47	0.78	0.167857	-0.966088	44.2163	261.677
48	0.78	0.171429	-0.950222	44.2163	260.903

49	0.79	0.175	-0.934594	4.2831	260.139
50	0.81	0.178571	-0.923014	44.4169	259.574
51	0.81	0.182143	-0.907769	44.4169	258.829
52	0.82	0.185714	-0.896473	44.4838	258.278
53	0.83	0.189286	-0.881587	44.5506	257.551
54	0.84	0.192857	-0.870554	4.6175	257.012
55	0.87	0.196429	-0.855996	44.8181	256.301
56	0.87	0.2	-0.841621	44.8181	255.599
57	0.88	0.203571	-0.830953	44.885	255.078
58	0.9	0.207143	-0.816874	45.0187	254.391
59	0.92	0.210714	-0.806422	45.1525	253.88
60	0.94	0.214286	-0.792618	45.2863	253.206
61	0.95	0.217857	-0.782366	45.3531	252.706
62	0.96	0.221429	-0.768821	45.42	252.044
63	0.99	0.225	-0.755415	45.6206	251.389
64	1	0.228571	-0.745449	45.6875	250.903
65	1.1	0.232143	-0.732275	46.3563	250.259
66	1.1	0.235714	-0.722479	46.3563	249.781
67	1.1	0.239286	-0.709522	46.3563	249.148
68	1.1	0.242857	-0.699883	46.3563	248.678
69	1.2	0.246429	-0.687131	47.025	248.055
70	1.3	0.25	-0.674494	7.6938	247.438
71	1.3	0.253571	-0.665079	47.6938	246.978
72	1.3	0.257143	-0.652622	47.6938	246.37
73	1.4	0.260714	-0.643345	48.3625	245.917
74	1.5	0.264286	-0.631062	49.0313	245.317
75	1.6	0.267857	-0.621911	49.7	244.87
76	1.6	0.271429	-0.609791	49.7	244.278
77	1.7	0.275	-0.597761	50.3687	243.691
78	1.7	0.278571	-0.588793	50.3687	243.253
79	1.7	0.282143	-0.576911	50.3687	242.672
80	1.7	0.285714	-0.568052	50.3687	242.24
81	1.7	0.289286	-0.556308	50.3687	241.666
82	1.9	0.292857	-0.547551	51.7062	241.239
83	2	0.296429	-0.535945	2.375	240.672
84	2	0.3	-0.524401	52.375	240.108
85	2	0.303571	-0.515791	52.375	239.688
86	2	0.307143	-0.504372	52.375	239.13
87	2	0.310714	-0.495855	2.375	238.714
88	2	0.314286	-0.484544	52.375	238.162
89	2.1	0.317857	-0.476105	53.0438	237.75
90	2.1	0.321429	-0.464904	53.0438	237.203
91	2.2	0.325	-0.453763	53.7125	236.659
92	2.3	0.328571	-0.445443	54.3813	236.252
93	2.4	0.332143	-0.434397	55.05	235.713
94	3	0.335714	-0.426148	59.0625	235.31
95	3	0.339286	-0.415193	59.0625	234.775
96	3	0.342857	-0.407015	9.0625	234.376
97	3.5	0.346429	-0.396142	62.4063	233.845
98	3.7	0.35	-0.385321	63.7437	233.317
99	3.8	0.353571	-0.377233	64.4125	232.922
100	4	0.357143	-0.366496	5.75	232.397
101	4	0.360714	-0.358459	65.75	232.005
102	4.2	0.364286	-0.347787	67.0875	231.484
103	5	0.367857	-0.339817	2.4375	231.094
104	5	0.371429	-0.329206	72.4375	230.576
105	5	0.375	-0.318639	72.4375	230.06
106	5	0.378571	-0.310738	72.4375	229.674
107	5	0.382143	-0.300232	72.4375	229.161
108	5	0.385714	-0.292375	72.4375	228.778
109	5	0.389286	-0.281926	72.4375	228.267
110	5	0.392857	-0.274117	2.4375	227.886

111	5	0.396429	-0.263715	72.4375	227.378
112	5	0.4	-0.253347	72.4375	226.872
113	5	0.403571	-0.24559	72.4375	226.493
114	6	0.407143	-0.235269	79.125	225.989
115	6	0.410714	-0.227545	79.125	225.612
116	6	0.414286	-0.217267	79.125	225.11
117	6	0.417857	-0.209575	79.125	224.734
118	6	0.421429	-0.199336	79.125	224.234
119	7	0.425	-0.189118	85.8125	223.735
120	7	0.428571	-0.181468	85.8125	223.362
121	7	0.432143	-0.171285	85.8125	222.864
122	7	0.435714	-0.163659	85.8125	222.492
123	7	0.439286	-0.153505	85.8125	221.996
124	8	0.442857	-0.1459	92.5	221.625
125	8	0.446429	-0.135774	92.5	221.13
126	8	0.45	-0.125661	92.5	220.636
127	9	0.453571	-0.118085	99.1875	220.267
128	9	0.457143	-0.107995	99.1875	219.774
129	9	0.460714	-0.100433	99.1875	219.404
130	10	0.464286	-0.0903606	105.875	218.913
131	10	0.467857	-0.0828129	105.875	218.544
132	10	0.471429	-0.0727562	105.875	218.053
133	10	0.475	-0.0627062	105.875	217.562
134	10	0.478571	-0.0551734	105.875	217.194
135	10	0.482143	-0.0451348	105.875	216.704
136	10	0.485714	-0.0376076	105.875	216.337
137	10	0.489286	-0.0275759	105.875	215.847
138	10	0.492857	-0.0200544	105.875	215.479
139	10	0.496429	-0.0100272	105.875	214.99
140	10	0.5	0	105.875	214.5
141	10	0.503571	0.0100272	105.875	214.01
142	10	0.507143	0.0200544	105.875	213.521
143	10	0.510714	0.0275759	105.875	213.153
144	10	0.514286	0.0376076	105.875	212.663
145	10	0.517857	0.0451348	105.875	212.296
146	10	0.521429	0.0551734	105.875	211.806
147	10	0.525	0.0627062	105.875	211.438
148	10	0.528571	0.0727562	105.875	210.947
149	10	0.532143	0.0828129	105.875	210.456
150	10	0.535714	0.0903606	105.875	210.087
151	10	0.539286	0.100433	105.875	209.596
152	10	0.542857	0.107995	105.875	209.226
153	10	0.546429	0.118085	105.875	208.733
154	10	0.55	0.125661	105.875	208.364
155	10	0.553571	0.135774	105.875	207.87
156	10	0.557143	0.1459	105.875	207.375
157	10	0.560714	0.153505	105.875	207.004
158	10	0.564286	0.163659	105.875	206.508
159	10	0.567857	0.171285	105.875	206.136
160	10	0.571429	0.181468	105.875	205.638
161	10	0.575	0.189118	105.875	205.265
162	10	0.578571	0.199336	105.875	204.766
163	10	0.582143	0.209575	105.875	204.266
164	10	0.585714	0.217267	105.875	203.89
165	10	0.589286	0.227545	105.875	203.388
166	10	0.592857	0.235269	105.875	203.011
167	10	0.596429	0.24559	105.875	202.507
168	10	0.6	0.253347	105.875	202.128
169	10	0.603571	0.263715	105.875	201.622
170	10	0.607143	0.27411	105.875	201.114
171	10	0.610714	0.281926	105.875	200.733
172	10	0.614286	0.292375	105.875	200.222

173	10	0.617857	0.300232	105.875	199.839
174	10	0.621429	0.310738	105.875	199.326
175	10	0.625	0.318639	105.875	198.94
176	10	0.628571	0.329206	105.875	198.424
177	10	0.632143	0.33981	105.875	197.906
178	10	0.635714	0.347787	105.875	197.516
179	10	0.639286	0.358459	105.875	196.995
180	10	0.642857	0.36649	105.875	196.603
181	10	0.646429	0.377233	105.875	196.078
182	10	0.65	0.385321	105.875	195.683
183	10	0.653571	0.396142	105.875	195.155
184	10	0.657143	0.40701	105.875	194.624
185	10	0.660714	0.415193	105.875	194.225
186	10	0.664286	0.426148	105.875	193.69
187	10	0.667857	0.434397	105.875	193.287
188	10	0.671429	0.445443	105.875	192.748
189	10	0.675	0.453763	105.875	192.341
190	10	0.678571	0.464904	105.875	191.797
191	10	0.682143	0.476105	105.875	191.25
192	10	0.685714	0.484544	105.875	190.838
193	10	0.689286	0.49585	105.875	190.286
194	10	0.692857	0.504372	105.875	189.87
195	10	0.696429	0.515791	105.875	189.312
196	10	0.7	0.524401	105.875	188.892
197	10	0.703571	0.53594	105.875	188.328
198	10	0.707143	0.547551	105.875	187.761
199	10	0.710714	0.556308	105.875	187.334
200	10	0.714286	0.568052	105.875	186.76
201	10	0.717857	0.576911	105.875	186.328
202	10	0.721429	0.588793	105.875	185.747
203	10	0.725	0.597761	105.875	185.309
204	10	0.728571	0.609791	105.875	184.722
205	10	0.732143	0.621911	105.875	184.13
206	10	0.735714	0.631062	105.875	183.683
207	10	0.739286	0.643345	105.875	183.083
208	10	0.742857	0.652622	105.875	182.63
209	10	0.746429	0.665079	105.875	182.022
210	10	0.75	0.67449	105.875	181.562
211	10	0.753571	0.687131	105.875	180.945
212	10	0.757143	0.699883	105.875	180.322
213	10	0.760714	0.709522	105.875	179.852
214	10	0.764286	0.722479	105.875	179.219
215	10	0.767857	0.732275	105.875	178.741
216	10	0.771429	0.745449	105.875	178.097
217	10	0.775	0.755415	105.875	177.611
218	10	0.778571	0.768821	105.875	176.956
219	10	0.782143	0.782366	105.875	176.294
220	10	0.785714	0.792618	105.875	175.794
221	10	0.789286	0.806422	105.875	175.12
222	10	0.792857	0.816874	105.875	174.609
223	10	0.796429	0.830953	105.875	173.922
224	10	0.8	0.841621	105.875	173.401
225	10	0.803571	0.855996	105.875	172.699
226	10	0.807143	0.87055	105.875	171.988
227	10	0.810714	0.881587	105.875	171.449
228	10	0.814286	0.896473	105.875	170.722
229	10	0.817857	0.907769	105.875	170.171
230	10	0.821429	0.923014	105.875	169.426
231	10	0.825	0.93459	105.875	168.861
232	10	0.828571	0.950222	105.875	168.097
233	10	0.832143	0.966088	105.875	167.323
234	10	0.835714	0.97815	105.875	166.734

235	10	0.839286		0.994457	105.875	165.937
236	10	0.842857		1.00687	105.875	165.331
237	10	0.846429		1.02365	105.875	164.512
238	10	0.85	1.03643	105.875	163.888	
239	10	0.853571		1.05375	105.875	163.042
240	10	0.857143		1.07138	105.875	162.181
241	10	0.860714		1.08482	105.875	161.524
242	10	0.864286		1.10306	105.875	160.634
243	10	0.867857		1.11699	105.875	159.954
244	10	0.871429		1.1359	105.875	159.03
245	10	0.875	1.15035	105.875	158.325	
246	10	0.878571		1.17	105.875	157.365
247	10	0.882143		1.19012	105.875	156.383
248	10	0.885714		1.20553	105.875	155.63
249	10	0.889286		1.22653	105.875	154.605
250	10	0.892857		1.24264	105.875	153.818
251	10	0.896429		1.26464	105.875	152.743
252	10	0.9	1.28155	105.875	151.918	
253	10	0.903571		1.30469	105.875	150.788
254	10	0.907143		1.32854	105.875	149.623
255	10	0.910714		1.34694	105.875	148.724
256	10	0.914286		1.3722	105.875	147.491
257	10	0.917857		1.39175	105.875	146.536
258	10	0.921429		1.41865	105.875	145.222
259	10	0.925	1.43953	105.875	144.203	
260	10	0.928571		1.46838	105.875	142.794
261	10	0.932143		1.49852	105.875	141.323
262	10	0.935714		1.52203	105.875	140.174
263	10	0.939286		1.55477	105.875	138.575
264	10	0.942857		1.58047	105.875	137.321
265	10	0.946429		1.61644	105.875	135.564
266	10	0.95	1.64485	105.875	134.176	
267	10	0.953571		1.68494	105.875	132.219
268	10	0.957143		1.72793	105.875	130.119
269	10	0.960714		1.76241	105.875	128.436
270	10	0.964286		1.81191	105.875	126.018
271	10	0.967857		1.85218	105.875	124.052
272	10	0.971429		1.91103	105.875	121.178
273	10	0.975	1.95996	105.875	118.789	
274	11	0.978571		2.03352	112.563	115.196
275	12	0.982143		2.12007	119.25	110.97
276	13	0.985714		2.19728	125.938	107.199
277	18	0.989286		2.32634	159.375	100.897
278	20	0.992857		2.45727	172.75	94.5032
279	73	0.996429		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 = 279

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.25379	-2.74777	7.55021	6.1929
2	-2.25379	-2.45727	13.5884	11.7311
3	-2.25379	-2.32634	19.0003	16.9742
4	-2.25379	-2.19728	23.8283	21.9264
5	-2.25379	-2.12007	28.323	26.7046
6	-2.25379	-2.03352	32.4582	31.2878
7	-2.25379	-1.95996	36.2997	35.7051
8	-1.46968	-1.91103	39.9517	38.5137
9	-1.46968	-1.85218	43.3823	41.2358
10	-1.30933	-1.81191	46.6653	43.6082
11	-1.20397	-1.76241	49.7714	45.7301
12	-1.04982	-1.72793	52.7571	47.5441
13	-1.02165	-1.68494	55.5962	49.2655
14	-0.941609	-1.64485	58.3017	50.8143
15	-0.916291	-1.61644	60.9146	52.2955
16	-0.891598	-1.58047	63.4124	53.7046
17	-0.776529	-1.55477	65.8297	54.9119
18	-0.776529	-1.52203	68.1463	56.0938
19	-0.733969	-1.49852	70.3919	57.1937
20	-0.71335	-1.46838	72.548	58.2412
21	-0.71335	-1.43953	74.6203	59.2681
22	-0.673345	-1.41865	76.6329	60.2233
23	-0.673345	-1.39175	78.5698	61.1604
24	-0.634878	-1.3722	80.4528	62.0316
25	-0.597837	-1.34694	82.267	62.8369
26	-0.562119	-1.32854	84.032	63.5837
27	-0.562119	-1.30469	85.7342	64.317
28	-0.527633	-1.28155	87.3766	64.9932
29	-0.527633	-1.26464	88.9759	65.6605
30	-0.527633	-1.24264	90.5201	66.3162
31	-0.462035	-1.22653	92.0245	66.8829
32	-0.430783	-1.20553	93.4777	67.4022
33	-0.430783	-1.19012	94.8941	67.9149
34	-0.415515	-1.17	96.263	68.401
35	-0.400478	-1.15035	97.5863	68.8617
36	-0.371064	-1.1359	98.8766	69.2832
37	-0.356675	-1.11699	100.124	69.6816
38	-0.328504	-1.10306	101.341	70.044
39	-0.301105	-1.08482	102.518	70.3706
40	-0.301105	-1.07138	103.666	70.6932
41	-0.287682	-1.05375	104.776	70.9963
42	-0.287682	-1.03643	105.85	71.2945
43	-0.287682	-1.02365	106.898	71.589
44	-0.274437	-1.00687	107.912	71.8653
45	-0.248461	-0.994457	108.901	72.1124
46	-0.248461	-0.97815	109.858	72.3554
47	-0.248461	-0.966088	110.791	72.5955
48	-0.248461	-0.950222	111.694	72.8316
49	-0.235722	-0.93459	112.567	73.0519
50	-0.210721	-0.923014	113.419	73.2464
51	-0.210721	-0.907769	114.243	73.4376

52	-0.198451	-0.896473	115.047	73.6155
53	-0.18633	-0.881587	115.824	73.7798
54	-0.174353	-0.87055	116.582	73.9316
55	-0.139262	-0.855996	117.315	74.0508
56	-0.139262	-0.841621	118.023	74.168
57	-0.127833	-0.830953	118.714	74.2742
58	-0.105361	-0.816874	119.381	74.3603
59	-0.0833816	-0.806422	120.031	74.4275
60	-0.0618754	-0.792618	120.659	74.4766
61	-0.0512933	-0.782366	121.272	74.5167
62	-0.040822	-0.768821	121.863	74.5481
63	-0.0100503	-0.755415	122.433	74.5557
64	0	-0.745449	122.989	74.5557
65	0.0953102	-0.732275	123.525	74.4859
66	0.0953102	-0.722479	124.047	74.417
67	0.0953102	-0.709522	124.551	74.3494
68	0.0953102	-0.699883	125.04	74.2827
69	0.182322	-0.687131	125.513	74.1574
70	0.262364	-0.67449	125.968	73.9805
71	0.262364	-0.665079	126.41	73.806
72	0.262364	-0.652622	126.836	73.6348
73	0.336472	-0.643345	127.25	73.4183
74	0.405465	-0.631062	127.648	73.1624
75	0.470004	-0.621911	128.035	72.8701
76	0.470004	-0.609791	128.406	72.5835
77	0.530628	-0.597761	128.764	72.2663
78	0.530628	-0.588793	129.11	71.9539
79	0.530628	-0.576911	129.443	71.6478
80	0.530628	-0.568052	129.766	71.3463
81	0.530628	-0.556308	130.075	71.0511
82	0.641854	-0.547551	130.375	70.6997
83	0.693147	-0.53594	130.663	70.3282
84	0.693147	-0.524401	130.938	69.9647
85	0.693147	-0.515791	131.204	69.6072
86	0.693147	-0.504372	131.458	69.2576
87	0.693147	-0.49585	131.704	68.9139
88	0.693147	-0.484544	131.939	68.578
89	0.741937	-0.476105	132.165	68.2248
90	0.741937	-0.464904	132.381	67.8799
91	0.788457	-0.453763	132.587	67.5221
92	0.832909	-0.445443	132.786	67.1511
93	0.875469	-0.434397	132.974	66.7708
94	1.09861	-0.426148	133.156	66.3026
95	1.09861	-0.415193	133.328	65.8465
96	1.09861	-0.40701	133.494	65.3993
97	1.25276	-0.396142	133.651	64.9031
98	1.30833	-0.385321	133.799	64.3989
99	1.335	-0.377233	133.942	63.8953
100	1.38629	-0.36649	134.076	63.3873
101	1.38629	-0.358459	134.205	62.8903
102	1.43508	-0.347787	134.326	62.3912
103	1.60944	-0.33981	134.441	61.8443
104	1.60944	-0.329206	134.549	61.3145
105	1.60944	-0.318639	134.651	60.8017
106	1.60944	-0.310738	134.747	60.3015
107	1.60944	-0.300232	134.838	59.8183
108	1.60944	-0.292375	134.923	59.3478
109	1.60944	-0.281926	135.003	58.894
110	1.60944	-0.27411	135.078	58.4529
111	1.60944	-0.263715	135.147	58.0284
112	1.60944	-0.253347	135.211	57.6207
113	1.60944	-0.24559	135.272	57.2254

114	1.79176	-0.235269	135.327	56.8039
115	1.79176	-0.227545	135.379	56.3962
116	1.79176	-0.217267	135.426	56.0069
117	1.79176	-0.209575	135.47	55.6314
118	1.79176	-0.199336	135.51	55.2742
119	1.94591	-0.189118	135.546	54.9062
120	1.94591	-0.181468	135.578	54.5531
121	1.94591	-0.171285	135.608	54.2198
122	1.94591	-0.163659	135.635	53.9013
123	1.94591	-0.153505	135.658	53.6026
124	2.07944	-0.1459	135.679	53.2992
125	2.07944	-0.135774	135.698	53.0169
126	2.07944	-0.125661	135.714	52.7556
127	2.19722	-0.118085	135.728	52.4961
128	2.19722	-0.107995	135.739	52.2588
129	2.19722	-0.100433	135.749	52.0382
130	2.30259	-0.0903606	135.758	51.8301
131	2.30259	-0.0828129	135.764	51.6394
132	2.30259	-0.0727562	135.77	51.4719
133	2.30259	-0.0627062	135.774	51.3275
134	2.30259	-0.0551734	135.777	51.2005
135	2.30259	-0.0451348	135.779	51.0965
136	2.30259	-0.0376076	135.78	51.0099
137	2.30259	-0.0275759	135.781	50.9464
138	2.30259	-0.0200544	135.781	50.9003
139	2.30259	-0.0100272	135.781	50.8772
140	2.30259	0	135.781	50.8772
141	2.30259	0.0100272	135.781	50.9003
142	2.30259	0.0200544	135.782	50.9464
143	2.30259	0.0275759	135.783	51.0099
144	2.30259	0.0376076	135.784	51.0965
145	2.30259	0.0451348	135.786	51.2005
146	2.30259	0.0551734	135.789	51.3275
147	2.30259	0.0627062	135.793	51.4719
148	2.30259	0.0727562	135.798	51.6394
149	2.30259	0.0828129	135.805	51.8301
150	2.30259	0.0903606	135.813	52.0382
151	2.30259	0.100433	135.823	52.2694
152	2.30259	0.107995	135.835	52.5181
153	2.30259	0.118085	135.849	52.79
154	2.30259	0.125661	135.865	53.0793
155	2.30259	0.135774	135.883	53.392
156	2.30259	0.1459	135.905	53.7279
157	2.30259	0.153505	135.928	54.0814
158	2.30259	0.163659	135.955	54.4582
159	2.30259	0.171285	135.984	54.8526
160	2.30259	0.181468	136.017	55.2705
161	2.30259	0.189118	136.053	55.7059
162	2.30259	0.199336	136.093	56.1649
163	2.30259	0.209575	136.137	56.6475
164	2.30259	0.217267	136.184	57.1477
165	2.30259	0.227545	136.236	57.6717
166	2.30259	0.235269	136.291	58.2134
167	2.30259	0.24559	136.351	58.7789
168	2.30259	0.253347	136.415	59.3623
169	2.30259	0.263715	136.485	59.9695
170	2.30259	0.27411	136.56	60.6006
171	2.30259	0.281926	136.64	61.2498
172	2.30259	0.292375	136.725	61.923
173	2.30259	0.300232	136.815	62.6143
174	2.30259	0.310738	136.912	63.3298
175	2.30259	0.318639	137.013	64.0635

176	2.30259	0.329206		137.122	64.8215
177	2.30259	0.33981	137.237	65.604	
178	2.30259	0.347787		137.358	66.4048
179	2.30259	0.358459		137.487	67.2302
180	2.30259	0.36649	137.621	68.0741	
181	2.30259	0.377233		137.763	68.9427
182	2.30259	0.385321		137.912	69.8299
183	2.30259	0.396142		138.069	70.7421
184	2.30259	0.40701	138.234	71.6792	
185	2.30259	0.415193		138.407	72.6352
186	2.30259	0.426148		138.588	73.6165
187	2.30259	0.434397		138.777	74.6167
188	2.30259	0.445443		138.975	75.6424
189	2.30259	0.453763		139.181	76.6872
190	2.30259	0.464904		139.397	77.7577
191	2.30259	0.476105		139.624	78.854
192	2.30259	0.484544		139.859	79.9697
193	2.30259	0.49585	140.105	81.1114	
194	2.30259	0.504372		140.359	82.2728
195	2.30259	0.515791		140.625	83.4604
196	2.30259	0.524401		140.9	84.6679
197	2.30259	0.53594	141.187	85.902	
198	2.30259	0.547551		141.487	87.1627
199	2.30259	0.556308		141.797	88.4437
200	2.30259	0.568052		142.119	89.7517
201	2.30259	0.576911		142.452	91.0801
202	2.30259	0.588793		142.799	92.4358
203	2.30259	0.597761		143.156	93.8122
204	2.30259	0.609791		143.528	95.2163
205	2.30259	0.621911		143.915	96.6483
206	2.30259	0.631062		144.313	98.1014
207	2.30259	0.643345		144.727	99.5827
208	2.30259	0.652622		145.153	101.085
209	2.30259	0.665079		145.595	102.617
210	2.30259	0.67449	146.05	104.17	
211	2.30259	0.687131		146.522	105.752
212	2.30259	0.699883		147.012	107.364
213	2.30259	0.709522		147.516	108.997
214	2.30259	0.722479		148.038	110.661
215	2.30259	0.732275		148.574	112.347
216	2.30259	0.745449		149.129	114.064
217	2.30259	0.755415		149.7	115.803
218	2.30259	0.768821		150.291	117.573
219	2.30259	0.782366		150.903	119.375
220	2.30259	0.792618		151.532	121.2
221	2.30259	0.806422		152.182	123.057
222	2.30259	0.816874		152.849	124.938
223	2.30259	0.830953		153.54	126.851
224	2.30259	0.841621		154.248	128.789
225	2.30259	0.855996		154.981	130.76
226	2.30259	0.87055	155.739	132.764	
227	2.30259	0.881587		156.516	134.794
228	2.30259	0.896473		157.319	136.858
229	2.30259	0.907769		158.143	138.949
230	2.30259	0.923014		158.995	141.074
231	2.30259	0.93459	159.869	143.226	
232	2.30259	0.950222		160.772	145.414
233	2.30259	0.966088		161.705	147.638
234	2.30259	0.97815	162.662	149.891	
235	2.30259	0.994457		163.651	152.18
236	2.30259	1.00687	164.665	154.499	
237	2.30259	1.02365	165.712	156.856	

238	2.30259	1.03643	166.787	159.242
239	2.30259	1.05375	167.897	161.669
240	2.30259	1.07138	169.045	164.136
241	2.30259	1.08482	170.222	166.634
242	2.30259	1.10306	171.438	169.173
243	2.30259	1.11699	172.686	171.745
244	2.30259	1.1359	173.976	174.361
245	2.30259	1.15035	175.3	177.01
246	2.30259	1.17	176.669	179.704
247	2.30259	1.19012	178.085	182.444
248	2.30259	1.20553	179.538	185.22
249	2.30259	1.22653	181.043	188.044
250	2.30259	1.24264	182.587	190.905
251	2.30259	1.26464	184.186	193.817
252	2.30259	1.28155	185.828	196.768
253	2.30259	1.30469	187.531	199.772
254	2.30259	1.32854	189.296	202.831
255	2.30259	1.34694	191.11	205.933
256	2.30259	1.3722	192.993	209.092
257	2.30259	1.39175	194.93	212.297
258	2.30259	1.41865	196.942	215.564
259	2.30259	1.43953	199.015	218.878
260	2.30259	1.46838	201.171	222.259
261	2.30259	1.49852	203.416	225.71
262	2.30259	1.52203	205.733	229.214
263	2.30259	1.55477	208.15	232.794
264	2.30259	1.58047	210.648	236.434
265	2.30259	1.61644	213.261	240.156
266	2.30259	1.64485	215.967	243.943
267	2.30259	1.68494	218.806	247.823
268	2.30259	1.72793	221.791	251.801
269	2.30259	1.76241	224.897	255.86
270	2.30259	1.81191	228.18	260.032
271	2.30259	1.85218	231.611	264.296
272	2.30259	1.91103	235.263	268.697
273	2.30259	1.95996	239.104	273.21
274	2.3979	2.03352	243.24	278.086
275	2.48491	2.12007	247.734	283.354
276	2.56495	2.19728	252.562	288.99
277	2.89037	2.32634	257.974	295.714
278	2.99573	2.45727	264.013	303.075
279	4.29046	2.74777	271.563	314.864

Data Set Standard Deviation = 1.29595
Numerator = 99139.6
Denominator = 126793
W Statistic = 0.781903 = 99139.6 / 126793

5% Critical value of 0.976 exceeds 0.781903
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.781903
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 = 0.884019
0.884019 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.25379	0.00357143	-2.74777	88.9025	348.683
2	-2.25379	0.00714286	-2.45727	88.9025	334.497
3	-2.25379	0.0107143	-2.32634	88.9025	328.103
4	-2.25379	0.0142857	-2.19728	88.9025	321.801
5	-2.25379	0.0178571	-2.12007	88.9025	318.03
6	-2.25379	0.0214286	-2.03352	88.9025	313.804
7	-2.25379	0.025	-1.95996	88.9025	310.211
8	-1.46968	0.0285714	-1.91103	141.34	307.822
9	-1.46968	0.0321429	-1.85218	141.34	304.948
10	-1.30933	0.0357143	-1.81191	152.063	302.982
11	-1.20397	0.0392857	-1.76241	159.109	300.564
12	-1.04982	0.0428571	-1.72793	169.418	298.881
13	-1.02165	0.0464286	-1.68494	171.302	296.781
14	-0.941609	0.05	-1.64485	176.655	294.824
15	-0.916291	0.0535714	-1.61644	178.348	293.436
16	-0.891598	0.0571429	-1.58047	179.999	291.679
17	-0.776529	0.0607143	-1.55477	187.695	290.425
18	-0.776529	0.0642857	-1.52203	187.695	288.826
19	-0.733969	0.0678571	-1.49852	190.541	287.677
20	-0.71335	0.0714286	-1.46838	191.92	286.206
21	-0.71335	0.075	-1.43953	191.92	284.797
22	-0.673345	0.0785714	-1.41865	194.595	283.778
23	-0.673345	0.0821429	-1.39175	194.595	282.464
24	-0.634878	0.0857143	-1.3722	197.168	281.509
25	-0.597837	0.0892857	-1.34694	199.645	280.276
26	-0.562119	0.0928571	-1.32854	202.033	279.377
27	-0.562119	0.0964286	-1.30469	202.033	278.212
28	-0.527633	0.1	-1.28155	204.34	277.082
29	-0.527633	0.103571	-1.26464	204.34	276.257
30	-0.527633	0.107143	-1.24264	204.34	275.182
31	-0.462035	0.110714	-1.22653	208.726	274.395
32	-0.430783	0.114286	-1.20553	210.816	273.37
33	-0.430783	0.117857	-1.19012	210.816	272.617
34	-0.415515	0.121429	-1.17	211.837	271.635
35	-0.400478	0.125	-1.15035	212.843	270.675
36	-0.371064	0.128571	-1.1359	214.81	269.97
37	-0.356675	0.132143	-1.11699	215.772	269.046
38	-0.328504	0.135714	-1.10306	217.656	268.366
39	-0.301105	0.139286	-1.08482	219.489	267.476
40	-0.301105	0.142857	-1.07138	219.489	266.819
41	-0.287682	0.146429	-1.05375	220.386	265.958
42	-0.287682	0.15	-1.03643	220.386	265.112
43	-0.287682	0.153571	-1.02365	220.386	264.488
44	-0.274437	0.157143	-1.00687	221.272	263.669
45	-0.248461	0.160714	-0.994457	223.009	263.063
46	-0.248461	0.164286	-0.97815	223.009	262.266
47	-0.248461	0.167857	-0.966088	223.009	261.677
48	-0.248461	0.171429	-0.950222	223.009	260.903

49	-0.235722	0.175	-0.93459	223.861	260.139
50	-0.210721	0.178571	-0.923014	225.533	259.574
51	-0.210721	0.182143	-0.907769	225.533	258.829
52	-0.198451	0.185714	-0.896473	226.354	258.278
53	-0.186330	0.189286	-0.881587	227.164	257.551
54	-0.174353	0.192857	-0.87055	227.965	257.012
55	-0.139262	0.196429	-0.855996	230.312	256.301
56	-0.139262	0.2	-0.841621	230.312	255.599
57	-0.127833	0.203571	-0.830953	231.076	255.078
58	-0.105361	0.207143	-0.816874	232.579	254.391
59	-0.0833816	0.210714	-0.806422	234.049	253.88
60	-0.0618754	0.214286	-0.792618	235.487	253.206
61	-0.0512933	0.217857	-0.782366	236.195	252.706
62	-0.040822	0.221429	-0.768821	236.895	252.044
63	-0.0100503	0.225	-0.755415	238.953	251.389
64	0	0.228571	-0.745449	239.625	250.903
65	0.0953102	0.232143	-0.732275	245.999	250.259
66	0.0953102	0.235714	-0.722479	245.999	249.781
67	0.0953102	0.239286	-0.709522	245.999	249.148
68	0.0953102	0.242857	-0.699883	245.999	248.678
69	0.182322	0.246429	-0.687131	251.818	248.055
70	0.262364	0.25	-0.67449	257.171	247.438
71	0.262364	0.253571	-0.665079	257.171	246.978
72	0.262364	0.257143	-0.652622	257.171	246.37
73	0.336472	0.260714	-0.643345	262.127	245.917
74	0.405465	0.264286	-0.631062	266.74	245.317
75	0.470004	0.267857	-0.621911	271.056	244.87
76	0.470004	0.271429	-0.609791	271.056	244.278
77	0.530628	0.275	-0.597761	275.111	243.691
78	0.530628	0.278571	-0.588793	275.111	243.253
79	0.530628	0.282143	-0.576911	275.111	242.672
80	0.530628	0.285714	-0.568052	275.111	242.24
81	0.530628	0.289286	-0.556308	275.111	241.666
82	0.641854	0.292857	-0.547551	282.549	241.239
83	0.693147	0.296429	-0.53594	285.979	240.672
84	0.693147	0.3	-0.524401	285.979	240.108
85	0.693147	0.303571	-0.515791	285.979	239.688
86	0.693147	0.307143	-0.504372	285.979	239.13
87	0.693147	0.310714	-0.49585	285.979	238.714
88	0.693147	0.314286	-0.484544	285.979	238.162
89	0.741937	0.317857	-0.476105	289.242	237.75
90	0.741937	0.321429	-0.464904	289.242	237.203
91	0.788457	0.325	-0.453763	292.353	236.659
92	0.832909	0.328571	-0.445443	295.326	236.252
93	0.875469	0.332143	-0.434397	298.172	235.713
94	1.09861	0.335714	-0.426148	313.095	235.31
95	1.09861	0.339286	-0.415193	313.095	234.775
96	1.09861	0.342857	-0.40701	313.095	234.376
97	1.25276	0.346429	-0.396142	323.404	233.845
98	1.30833	0.35	-0.385321	327.12	233.317
99	1.335	0.353571	-0.377233	328.903	232.922
100	1.38629	0.357143	-0.36649	332.333	232.397
101	1.38629	0.360714	-0.358459	332.333	232.005
102	1.43508	0.364286	-0.347787	335.596	231.484
103	1.60944	0.367857	-0.33981	347.256	231.094
104	1.60944	0.371429	-0.329206	347.256	230.576
105	1.60944	0.375	-0.318639	347.256	230.06
106	1.60944	0.378571	-0.310738	347.256	229.674
107	1.60944	0.382143	-0.300232	347.256	229.161
108	1.60944	0.385714	-0.292375	347.256	228.778
109	1.60944	0.389286	-0.281926	347.256	228.267
110	1.60944	0.392857	-0.27411	347.256	227.886

111	1.60944	0.396429	-0.263715	347.256	227.378
112	1.60944	0.4	-0.253347	347.256	226.872
113	1.60944	0.403571	-0.24559	347.256	226.493
114	1.79176	0.407143	-0.235269	359.449	225.989
115	1.79176	0.410714	-0.227545	359.449	225.612
116	1.79176	0.414286	-0.217267	359.449	225.11
117	1.79176	0.417857	-0.209575	359.449	224.734
118	1.79176	0.421429	-0.199336	359.449	224.234
119	1.94591	0.425	-0.189118	369.758	223.735
120	1.94591	0.428571	-0.181468	369.758	223.362
121	1.94591	0.432143	-0.171285	369.758	222.864
122	1.94591	0.435714	-0.163659	369.758	222.492
123	1.94591	0.439286	-0.153505	369.758	221.996
124	2.07944	0.442857	-0.1459	378.688	221.625
125	2.07944	0.446429	-0.135774	378.688	221.13
126	2.07944	0.45	-0.125661	378.688	220.636
127	2.19722	0.453571	-0.118085	386.564	220.267
128	2.19722	0.457143	-0.107995	386.564	219.774
129	2.19722	0.460714	-0.100433	386.564	219.404
130	2.30259	0.464286	-0.0903606	393.61	218.913
131	2.30259	0.467857	-0.0828129	393.61	218.544
132	2.30259	0.471429	-0.0727562	393.61	218.053
133	2.30259	0.475	-0.0627062	393.61	217.562
134	2.30259	0.478571	-0.0551734	393.61	217.194
135	2.30259	0.482143	-0.0451348	393.61	216.704
136	2.30259	0.485714	-0.0376076	393.61	216.337
137	2.30259	0.489286	-0.0275759	393.61	215.847
138	2.30259	0.492857	-0.0200544	393.61	215.479
139	2.30259	0.496429	-0.0100272	393.61	214.99
140	2.30259	0.5	0	393.61	214.5
141	2.30259	0.503571	0.0100272	393.61	214.01
142	2.30259	0.507143	0.0200544	393.61	213.521
143	2.30259	0.510714	0.0275759	393.61	213.153
144	2.30259	0.514286	0.0376076	393.61	212.663
145	2.30259	0.517857	0.0451348	393.61	212.296
146	2.30259	0.521429	0.0551734	393.61	211.806
147	2.30259	0.525	0.0627062	393.61	211.438
148	2.30259	0.528571	0.0727562	393.61	210.947
149	2.30259	0.532143	0.0828129	393.61	210.456
150	2.30259	0.535714	0.0903606	393.61	210.087
151	2.30259	0.539286	0.100433	393.61	209.596
152	2.30259	0.542857	0.107995	393.61	209.226
153	2.30259	0.546429	0.118085	393.61	208.733
154	2.30259	0.55	0.125661	393.61	208.364
155	2.30259	0.553571	0.135774	393.61	207.87
156	2.30259	0.557143	0.1459	393.61	207.375
157	2.30259	0.560714	0.153505	393.61	207.004
158	2.30259	0.564286	0.163659	393.61	206.508
159	2.30259	0.567857	0.171285	393.61	206.136
160	2.30259	0.571429	0.181468	393.61	205.638
161	2.30259	0.575	0.189118	393.61	205.265
162	2.30259	0.578571	0.199336	393.61	204.766
163	2.30259	0.582143	0.209575	393.61	204.266
164	2.30259	0.585714	0.217267	393.61	203.89
165	2.30259	0.589286	0.227545	393.61	203.388
166	2.30259	0.592857	0.235269	393.61	203.011
167	2.30259	0.596429	0.24559	393.61	202.507
168	2.30259	0.6	0.253347	393.61	202.128
169	2.30259	0.603571	0.263715	393.61	201.622
170	2.30259	0.607143	0.27411	393.61	201.114
171	2.30259	0.610714	0.281926	393.61	200.733
172	2.30259	0.614286	0.292375	393.61	200.222

173	2.30259	0.617857	0.300232	393.61	199.839
174	2.30259	0.621429	0.310738	393.61	199.326
175	2.30259	0.625	0.318639	393.61	198.94
176	2.30259	0.628571	0.329206	393.61	198.424
177	2.30259	0.632143	0.33981	393.61	197.906
178	2.30259	0.635714	0.347787	393.61	197.516
179	2.30259	0.639286	0.358459	393.61	196.995
180	2.30259	0.642857	0.36649	393.61	196.603
181	2.30259	0.646429	0.377233	393.61	196.078
182	2.30259	0.65	0.385321	393.61	195.683
183	2.30259	0.653571	0.396142	393.61	195.155
184	2.30259	0.657143	0.40701	393.61	194.624
185	2.30259	0.660714	0.415193	393.61	194.225
186	2.30259	0.664286	0.426148	393.61	193.69
187	2.30259	0.667857	0.434397	393.61	193.287
188	2.30259	0.671429	0.445443	393.61	192.748
189	2.30259	0.675	0.453763	393.61	192.341
190	2.30259	0.678571	0.464904	393.61	191.797
191	2.30259	0.682143	0.476105	393.61	191.25
192	2.30259	0.685714	0.484544	393.61	190.838
193	2.30259	0.689286	0.49585	393.61	190.286
194	2.30259	0.692857	0.504372	393.61	189.87
195	2.30259	0.696429	0.515791	393.61	189.312
196	2.30259	0.7	0.524401	393.61	188.892
197	2.30259	0.703571	0.53594	393.61	188.328
198	2.30259	0.707143	0.547551	393.61	187.761
199	2.30259	0.710714	0.556308	393.61	187.334
200	2.30259	0.714286	0.568052	393.61	186.76
201	2.30259	0.717857	0.576911	393.61	186.328
202	2.30259	0.721429	0.588793	393.61	185.747
203	2.30259	0.725	0.597761	393.61	185.309
204	2.30259	0.728571	0.609791	393.61	184.722
205	2.30259	0.732143	0.621911	393.61	184.13
206	2.30259	0.735714	0.631062	393.61	183.683
207	2.30259	0.739286	0.643345	393.61	183.083
208	2.30259	0.742857	0.652622	393.61	182.63
209	2.30259	0.746429	0.665079	393.61	182.022
210	2.30259	0.75	0.67449	393.61	181.562
211	2.30259	0.753571	0.687131	393.61	180.945
212	2.30259	0.757143	0.699883	393.61	180.322
213	2.30259	0.760714	0.709522	393.61	179.852
214	2.30259	0.764286	0.722479	393.61	179.219
215	2.30259	0.767857	0.732275	393.61	178.741
216	2.30259	0.771429	0.745449	393.61	178.097
217	2.30259	0.775	0.755415	393.61	177.611
218	2.30259	0.778571	0.768821	393.61	176.956
219	2.30259	0.782143	0.782366	393.61	176.294
220	2.30259	0.785714	0.792618	393.61	175.794
221	2.30259	0.789286	0.806422	393.61	175.12
222	2.30259	0.792857	0.816874	393.61	174.609
223	2.30259	0.796429	0.830953	393.61	173.922
224	2.30259	0.8	0.841621	393.61	173.401
225	2.30259	0.803571	0.855996	393.61	172.699
226	2.30259	0.807143	0.87055	393.61	171.988
227	2.30259	0.810714	0.881587	393.61	171.449
228	2.30259	0.814286	0.896473	393.61	170.722
229	2.30259	0.817857	0.907769	393.61	170.171
230	2.30259	0.821429	0.923014	393.61	169.426
231	2.30259	0.825	0.93459	393.61	168.861
232	2.30259	0.828571	0.950222	393.61	168.097
233	2.30259	0.832143	0.966088	393.61	167.323
234	2.30259	0.835714	0.97815	393.61	166.734

235	2.30259	0.839286		0.994457	393.61	165.937
236	2.30259	0.842857		1.00687	393.61	165.331
237	2.30259	0.846429		1.02365	393.61	164.512
238	2.30259	0.85	1.03643	393.61	163.888	
239	2.30259	0.853571		1.05375	393.61	163.042
240	2.30259	0.857143		1.07138	393.61	162.181
241	2.30259	0.860714		1.08482	393.61	161.524
242	2.30259	0.864286		1.10306	393.61	160.634
243	2.30259	0.867857		1.11699	393.61	159.954
244	2.30259	0.871429		1.1359	393.61	159.03
245	2.30259	0.875	1.15035	393.61	158.325	
246	2.30259	0.878571		1.17	393.61	157.365
247	2.30259	0.882143		1.19012	393.61	156.383
248	2.30259	0.885714		1.20553	393.61	155.63
249	2.30259	0.889286		1.22653	393.61	154.605
250	2.30259	0.892857		1.24264	393.61	153.818
251	2.30259	0.896429		1.26464	393.61	152.743
252	2.30259	0.9	1.28155	393.61	151.918	
253	2.30259	0.903571		1.30469	393.61	150.788
254	2.30259	0.907143		1.32854	393.61	149.623
255	2.30259	0.910714		1.34694	393.61	148.724
256	2.30259	0.914286		1.3722	393.61	147.491
257	2.30259	0.917857		1.39175	393.61	146.536
258	2.30259	0.921429		1.41865	393.61	145.222
259	2.30259	0.925	1.43953	393.61	144.203	
260	2.30259	0.928571		1.46838	393.61	142.794
261	2.30259	0.932143		1.49852	393.61	141.323
262	2.30259	0.935714		1.52203	393.61	140.174
263	2.30259	0.939286		1.55477	393.61	138.575
264	2.30259	0.942857		1.58047	393.61	137.321
265	2.30259	0.946429		1.61644	393.61	135.564
266	2.30259	0.95	1.64485	393.61	134.176	
267	2.30259	0.953571		1.68494	393.61	132.219
268	2.30259	0.957143		1.72793	393.61	130.119
269	2.30259	0.960714		1.76241	393.61	128.436
270	2.30259	0.964286		1.81191	393.61	126.018
271	2.30259	0.967857		1.85218	393.61	124.052
272	2.30259	0.971429		1.91103	393.61	121.178
273	2.30259	0.975	1.95996	393.61	118.789	
274	2.3979	0.978571		2.03352	399.984	115.196
275	2.48491	0.982143		2.12007	405.803	110.97
276	2.56495	0.985714		2.19728	411.156	107.199
277	2.89037	0.989286		2.32634	432.919	100.897
278	2.99573	0.992857		2.45727	439.965	94.5032
279	4.29046	0.996429		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-4	1/16/1998	4.29046	279
	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	266
	11/15/2007	1.60944 J	245
	5/20/2008	2.07944 J	267
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.301105 J	181
	11/16/2009	-0.248461 J	187
	6/30/2010	0.262364	212
	11/17/2010	-0.139262 J	197
	7/6/2011	0.0953102	207
	11/22/2011	-0.235722 J	191
	5/16/2012	-0.139262 J	198
	11/16/2012	-1.46968 J	150

Rank Sum = 3405
Rank Mean = 148.043

Background Rank Sum = 3405
Background Rank Mean = 148.043

Compliance Locations

Loc. ID	Date	Value	Rank
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	225
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.673345 J	164
	11/16/2009	ND<-2.25379 U	75
	6/30/2010	0.641854	224
	11/17/2010	-0.941609 J	156
	7/6/2011	-1.04982 J	154

	11/22/2011	-0.562119 J	168
	5/16/2012	ND<-2.25379 U	75
	11/16/2012	ND<-2.25379 U	75

Rank Sum = 2141
Rank Mean = 107.05

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-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-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

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	192
	11/17/2010	-0.040822 J	204
	7/6/2011	0.693147	226
	11/22/2011	-0.328504 J	180
	5/16/2012	-0.891598 J	158
	11/16/2012	ND<-2.25379 U	75

Rank Sum = 1335
Rank Mean = 133.5

LMW-15R	11/18/2006	1.09861 J	236

	6/2/2007	1.60944 J	246
	11/15/2007	1.60944 J	247
	11/15/2007	ND<2.30259	75
	5/20/2008	ND<2.30259	75
	5/20/2008	ND<2.30259	75
	11/20/2008	1.60944 J	248
	11/20/2008	ND<2.30259	75
	6/11/2009	1.30833	240
	11/16/2009	-0.0833816 J	201
	11/16/2009	-0.562119 J	169
	11/16/2009	0.530628	219
	11/17/2010	0.832909	234
	7/6/2011	-0.527633 J	170
	11/22/2011	-0.301105 J	182
	5/16/2012	-0.673345 J	165
	11/16/2012	ND<-2.25379 U	75

Rank Sum = 2932
Rank Mean = 172.471

LMW-16	11/18/2006	ND<2.30259	75
	6/2/2007	1.94591 J	261
	11/15/2007	1.79176 J	256
	5/20/2008	ND<2.30259	75
	11/20/2008	1.60944 J	249
	6/11/2009	-1.02165 J	155
	11/16/2009	-0.527633 J	171
	11/17/2010	-0.776529 J	159
	7/6/2011	-0.400478 J	177
	11/22/2011	-0.0512933 J	203
	5/16/2012	-1.30933 J	152
	11/16/2012	-1.20397 J	153

Rank Sum = 2086
Rank Mean = 173.833

LMW-3	11/19/1996	ND<2.30259	75
	3/24/1997	ND<2.30259	75
	1/16/1998	1.38629 J	242
	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	269
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.356675 J	179
	11/16/2009	0.0953102	208
	11/17/2010	0.470004	217
	7/6/2011	0	206
	11/22/2011	-0.174353 J	196
	5/16/2012	-0.248461 J	188
	11/16/2012	-0.916291 J	157

Rank Sum = 2987
Rank Mean = 124.458

LMW-3S	11/18/2006	0.693147 J	227

	6/2/2007	ND<2.30259	75
	11/15/2007	1.79176 J	257
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	6/11/2009	0.336472	215
	11/16/2009	-0.198451 J	194
	11/17/2010	0.530628	220
	7/6/2011	0.262364	213
	11/22/2011	0.0953102	209
	5/16/2012	-0.210721 J	193
	11/16/2012	-0.0100503 J	205

Rank Sum = 2158
Rank Mean = 179.833

LMW-6	1/16/1998	2.89037 J	277
	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	262
	11/15/2007	1.94591 J	263
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	6/11/2009	0.530628	221
	11/16/2009	0.182322	211
	6/30/2010	1.09861	237
	11/17/2010	0.788457	233
	7/6/2011	0.0953102	210
	11/22/2011	-0.597837 J	167
	5/16/2012	-0.71335 J	162
	11/16/2012	-0.248461 J	189

Rank Sum = 3332
Rank Mean = 144.87

LMW-7	1/16/1998	2.99573	278
	3/16/1999	1.60944 J	250
	9/23/1999	1.60944 J	251
	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	272
	10/26/2005	2.3979 J	274
	6/19/2006	2.30259 J	273
	11/18/2006	ND<2.30259	75
	6/2/2007	1.79176 J	258
	11/15/2007	2.07944 J	268
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	6/11/2009	1.38629	243
	11/17/2010	1.335	241
	7/6/2011	2.56495	276
	11/22/2011	1.25276	239
	5/16/2012	0.741937	231
	11/16/2012	0.405465	216

Rank Sum = 4095

Rank Mean = 195

LMW-8	1/16/1998	0.693147 J	228
	3/16/1999	1.60944 J	252
	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	259
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.287682 J	183
	11/16/2009	-0.430783 J	174
	6/30/2010	0.262364	214
	11/17/2010	-0.287682 J	184
	7/6/2011	-0.733969 J	161
	11/22/2011	0.741937	232
	5/16/2012	-0.776529 J	160
	11/16/2012	ND<-2.25379 U	75

Rank Sum = 3022
Rank Mean = 131.391

LMW-9	1/16/1998	2.19722 J	270
	3/16/1999	ND<2.30259	75
	9/23/1999	2.48491 J	275
	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	253
	11/15/2007	1.94591 J	264
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.127833 J	199
	11/16/2009	-0.527633 J	172
	6/30/2010	0.875469	235
	11/17/2010	0.530628	222
	7/6/2011	-0.430783 J	175
	11/22/2011	-0.248461 J	190
	5/16/2012	1.43508	244
	11/16/2012	1.60944	254

Rank Sum = 3578
Rank Mean = 155.565

LMW-9D	11/18/2006	1.79176 J	260
	6/2/2007	ND<2.30259	75
	11/15/2007	2.19722 J	271
	5/20/2008	0.693147 J	229
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.371064 J	178
	11/16/2009	-0.287682 J	185
	6/30/2010	-0.105361 J	200

	11/17/2010	-0.634878 J	166
	7/6/2011	0.693147	230
	11/22/2011	-0.0618754 J	202
	5/16/2012	-0.462035 J	173
	11/16/2012	-0.415515 J	176

Rank Sum = 2420
Rank Mean = 186.154

LMW-9S	11/18/2006	ND<2.30259	75
	6/2/2007	ND<2.30259	75
	11/15/2007	1.94591 J	265
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75
	6/11/2009	-0.18633 J	195
	6/30/2010	0.530628	223
	11/17/2010	0.470004	218
	7/6/2011	-0.71335 J	163
	11/22/2011	-0.274437 J	186
	5/16/2012	-1.46968 J	151
	11/16/2012	ND<-2.25379 U	75

Rank Sum = 1776
Rank Mean = 148

MW-5	1/16/1998	1.09861 J	238
	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	255
	5/20/2008	ND<2.30259	75
	11/20/2008	ND<2.30259	75

Rank Sum = 1318
Rank Mean = 101.385

Calculation Results:

Kruskal-Wallis H Statistic = 52.0337
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 61.3831
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
52.0337 > 26.2962 indicating a significant group difference at 5% significance level
61.3831 > 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 148.043

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**107.05**	**-40.9935**	**57.3878**
LMW-11	**75**	**-73.0435**	**68.8087**
LMW-12	**75**	**-73.0435**	**68.8087**
LMW-13	**75**	**-73.0435**	**68.8087**
LMW-14R	**133.5**	**-14.5435**	**71.098**
LMW-15R	**172.471**	**24.4271**	**60.0352**
LMW-16	**173.833**	**25.7899**	**66.8411**
LMW-3	**124.458**	**-23.5851**	**54.7701**
LMW-3S	**179.833**	**31.7899**	**66.8411**

LMW-6	**144.87**	**-3.17391**	**55.3497**
LMW-7	**195**	**46.9565**	**56.6522**
LMW-8	**131.391**	**-16.652**	**55.3497**
LMW-9	**155.565**	**7.52174**	**55.3497**
LMW-9D	**186.154**	**38.1104**	**65.1298**
LMW-9S	**148**	**-0.0434783**	**66.8411**
MW-5	**101.385**	**-46.658**	**65.1298**

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 148.043

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**107.05**	**-40.993**	**67.7837**
LMW-11	**75**	**-73.043**	**81.2736**
LMW-12	**75**	**-73.043**	**81.2736**
LMW-13	**75**	**-73.043**	**81.2736**
LMW-14R	**133.5**	**-14.543**	**83.9775**
LMW-15R	**172.471**	**24.4271**	**70.9107**
LMW-16	**173.833**	**25.7899**	**78.9495**
LMW-3	**124.458**	**-23.585**	**64.6918**
LMW-3S	**179.833**	**31.7899**	**78.9495**
LMW-6	**144.87**	**-3.17391**	**65.3764**
LMW-7	**195**	**46.9565**	**66.9149**
LMW-8	**131.391**	**-16.652**	**65.3764**
LMW-9	**155.565**	**7.52174**	**65.3764**
LMW-9D	**186.154**	**38.1104**	**76.9282**
LMW-9S	**148**	**-0.0434783**	**78.9495**
MW-5	**101.385**	**-46.658**	**76.9282**

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Copper

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 53.405%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 23
Maximum Background Value = 4.29046
Confidence Level = 74.2%
False Positive Rate = 25.8%

Location	Date	Count	Mean	Significant
LMW-10	11/16/2012	1	-2.25379	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
LMW-14R	11/16/2012	1	-2.25379	FALSE
LMW-15R	11/16/2012	1	-2.25379	FALSE
LMW-16	11/16/2012	1	-1.20397	FALSE
LMW-3	11/16/2012	1	-0.916291	FALSE
LMW-3S	11/16/2012	1	-0.0100503	FALSE
LMW-6	11/16/2012	1	-0.248461	FALSE
LMW-7	11/16/2012	1	0.405465	FALSE
LMW-8	11/16/2012	1	-2.25379	FALSE
LMW-9	11/16/2012	1	1.60944	FALSE
LMW-9D	11/16/2012	1	-0.415515	FALSE
LMW-9S	11/16/2012	1	-2.25379	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: 271
Total Non-Detect: 240
Percent Non-Detects: 88.5609%
Total Background Measurements: 22
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	22	16 (72.7273%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	19	10 (52.6316%)	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
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	
LMW-14R	10	10 (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	
LMW-15R	17	17 (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
LMW-16	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	
			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
LMW-3	24	21 (87.5%)	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	
LMW-3S	12	3 (25%)	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	
LMW-6	22	19 (86.3636%)	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
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
LMW-8	22	22 (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
LMW-9	22	22 (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	
LMW-9D	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	
			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	
LMW-9S	11	11 (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	
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	

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 = 271

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.747777.55021	0	
2	0	-2.4572713.5884	0	
3	0	-2.2903618.8342	0	
4	0	-2.1972823.6622	0	
5	0	-2.0969328.0593	0	
6	0	-2.0140932.1159	0	
7	0	-1.9599635.9574	0	
8	0	-1.8957 39.551	0	
9	0	-1.8384342.9308	0	
10	0.125	-1.7991246.1677	-0.22489	
11	0.125	-1.7506949.2326	-0.443725	
12	0.125	-1.7060452.1431	-0.656981	
13	0.125	-1.6746654.9476	-0.866314	
14	0.125	-1.6352457.6216	-1.07072	
15	0.125	-1.5981960.1758	-1.27049	
16	0.125	-1.5717962.6464	-1.46697	
17	0.125	-1.5382 65.0124	-1.65924	
18	0.125	-1.5062667.2812	-1.84752	
19	0.125	-1.4832869.4814	-2.03293	
20	0.125	-1.4538 71.5949	-2.21466	
21	0.125	-1.4255473.6271	-2.39285	
22	0.125	-1.4050775.6013	-2.56849	
23	0.125	-1.3786677.502	-2.74082	
24	0.125	-1.3531779.3331	-2.90996	
25	0.125	-1.3346281.1143	-3.07679	
26	0.125	-1.3105882.8319	-3.24062	
27	0.125	-1.2872784.489	-3.40152	
28	0.125	-1.2702486.1025	-3.5603	
29	0.125	-1.2480987.6602	-3.71631	
30	0.125	-1.2265389.1646	-3.86963	
31	0.125	-1.2107390.6305	-4.02097	
32	0.125	-1.1901292.0469	-4.16974	
33	0.125	-1.17 93.4158	-4.31599	
34	0.125	-1.1503594.7391	-4.45978	
35	0.125	-1.1359 96.0293	-4.60177	
36	0.125	-1.1169997.277	-4.74139	
37	0.125	-1.0984798.4836	-4.8787	
38	0.125	-1.0848299.6605	-5.0143	
39	0.125	-1.06694100.799	-5.14767	
40	0.125	-1.04939101.9	-5.27884	
41	0.125	-1.03643102.974	-5.4084	
42	0.125	-1.01943104.013	-5.53583	
43	0.125	-1.00271105.019	-5.66116	
44	0.125	-0.990356	106	-5.78496
45	0.125	-0.974114	106.949	-5.90672
46	0.125	-0.958125	107.867	-6.02649
47	0.125	-0.946291	108.762	-6.14477
48	0.125	-0.930718	109.628	-6.26111
49	0.125	-0.915365	110.466	-6.37554
50	0.125	-0.903992	111.283	-6.48853
51	0.125	-0.889006	112.074	-6.59966

52	0.125	-0.874218	112.838	-6.70894
53	0.125	-0.863249	113.583	-6.81684
54	0.125	-0.848786	114.304	-6.92294
55	0.125	-0.834498	115	-7.02725
56	0.125	-0.823893	115.679	-7.13024
57	0.125	-0.809896	116.335	-7.23148
58	0.125	-0.796056	116.968	-7.33098
59	0.125	-0.785774	117.586	-7.42921
60	0.125	-0.772193	118.182	-7.52573
61	0.125	-0.758753	118.758	-7.62057
62	0.125	-0.748762	119.318	-7.71417
63	0.125	-0.735557	119.86	-7.80611
64	0.125	-0.722479	120.382	-7.89642
65	0.125	-0.712751	120.89	-7.98552
66	0.125	-0.699883	121.379	-8.073
67	0.125	-0.687131	121.852	-8.15889
68	0.125	-0.67449	122.306	-8.24321
69	0.125	-0.665079	122.749	-8.32634
70	0.125	-0.652622	123.175	-8.40792
71	0.125	-0.640266	123.585	-8.48795
72	0.125	-0.631062	123.983	-8.56683
73	0.125	-0.618872	124.366	-8.64419
74	0.125	-0.606775	124.734	-8.72004
75	0.125	-0.597761	125.091	-8.79476
76	0.125	-0.585815	125.435	-8.86799
77	0.125	-0.573953	125.764	-8.93973
78	0.125	-0.565108	126.083	-9.01037
79	0.31	-0.553384	126.39	-9.18192
80	0.41	-0.541736	126.683	-9.40403
81	0.47	-0.533048	126.967	-9.65456
82	0.5	-0.521527	127.239	-9.91533
83	0.5	-0.510074	127.499	-10.1704
84	0.5	-0.501527	127.751	-10.4211
85	0.5	-0.490189	127.991	-10.6662
86	0.5	-0.478914	128.221	-10.9057
87	0.5	-0.470498	128.442	-11.1409
88	0.5	-0.459327	128.653	-11.3706
89	0.5	-0.448213	128.854	-11.5947
90	0.5	-0.439913	129.047	-11.8147
91	0.5	-0.428895	129.231	-12.0291
92	0.5	-0.417928	129.406	-12.2381
93	0.5	-0.409735	129.574	-12.4429
94	0.5	-0.398855	129.733	-12.6424
95	0.5	-0.388022	129.883	-12.8364
96	0.5	-0.379927	130.028	-13.0263
97	0.5	-0.369171	130.164	-13.2109
98	0.5	-0.358459	130.293	-13.3902
99	0.5	-0.350451	130.415	-13.5654
100	0.5	-0.33981	130.531	-13.7353
101	0.5	-0.329206	130.639	-13.8999
102	0.5	-0.318639	130.741	-14.0592
103	0.5	-0.310738	130.837	-14.2146
104	0.5	-0.300232	130.927	-14.3647
105	0.5	-0.28976	131.011	-14.5096
106	0.5	-0.281926	131.091	-14.6505
107	0.5	-0.271509	131.165	-14.7863
108	0.5	-0.26112	131.233	-14.9168
109	0.5	-0.253347	131.297	-15.0435
110	0.5	-0.243007	131.356	-15.165
111	0.5	-0.232693	131.41	-15.2814
112	0.5	-0.224974	131.461	-15.3939
113	0.5	-0.214702	131.507	-15.5012

114	0.5	-0.204452	131.549	-15.6034
115	0.5	-0.196779	131.587	-15.7018
116	0.5	-0.186567	131.622	-15.7951
117	0.5	-0.176374	131.653	-15.8833
118	0.5	-0.168741	131.682	-15.9677
119	0.5	-0.158579	131.707	-16.047
120	0.5	-0.148434	131.729	-16.1212
121	0.5	-0.140835	131.749	-16.1916
122	0.5	-0.130716	131.766	-16.2569
123	0.5	-0.12061	131.78	-16.3173
124	0.5	-0.113039	131.793	-16.3738
125	0.5	-0.102953	131.804	-16.4252
126	0.5	-0.0928787	131.812	-16.4717
127	0.5	-0.0853288	131.82	-16.5144
128	0.5	-0.0752698	131.825	-16.552
129	0.5	-0.0652187	131.83	-16.5846
130	0.5	-0.0576847	131.833	-16.6134
131	0.5	-0.0476439	131.835	-16.6373
132	0.5	-0.0376076	131.837	-16.6561
133	0.5	-0.0300838	131.838	-16.6711
134	0.5	-0.0200544	131.838	-16.6811
135	0.5	-0.0100272	131.838	-16.6861
136	0.5	0	131.838	-16.6861
137	0.5	0.0100272	131.838	-16.6811
138	0.5	0.0200544	131.839	-16.6711
139	0.5	0.0300838	131.839	-16.6561
140	0.5	0.0376076	131.841	-16.6373
141	0.5	0.0476439	131.843	-16.6134
142	0.5	0.0576847	131.846	-16.5846
143	0.5	0.0652187	131.851	-16.552
144	0.5	0.0752698	131.856	-16.5144
145	0.5	0.0853288	131.864	-16.4717
146	0.5	0.0928787	131.872	-16.4252
147	0.5	0.102953	131.883	-16.3738
148	0.5	0.113039	131.896	-16.3173
149	0.5	0.12061	131.91	-16.2569
150	0.5	0.130716	131.927	-16.1916
151	0.5	0.140835	131.947	-16.1212
152	0.5	0.148434	131.969	-16.047
153	0.5	0.158579	131.994	-15.9677
154	0.5	0.168741	132.023	-15.8833
155	0.5	0.176374	132.054	-15.7951
156	0.5	0.186567	132.089	-15.7018
157	0.5	0.196779	132.127	-15.6034
158	0.5	0.204452	132.169	-15.5012
159	0.5	0.214702	132.215	-15.3939
160	0.5	0.224974	132.266	-15.2814
161	0.5	0.232693	132.32	-15.165
162	0.5	0.243007	132.379	-15.0435
163	0.5	0.253347	132.443	-14.9168
164	0.5	0.26112	132.512	-14.7863
165	0.5	0.271509	132.585	-14.6505
166	0.5	0.281926	132.665	-14.5096
167	0.5	0.28976	132.749	-14.3647
168	0.5	0.300232	132.839	-14.2146
169	0.5	0.310738	132.935	-14.0592
170	0.5	0.318639	133.037	-13.8999
171	0.5	0.329206	133.145	-13.7353
172	0.5	0.33981	133.261	-13.5654
173	0.5	0.350451	133.384	-13.3902
174	0.5	0.358459	133.512	-13.2109
175	0.5	0.369171	133.648	-13.0263

176	0.5	0.379927	133.793	-12.8364
177	0.5	0.388022	133.943	-12.6424
178	0.5	0.398855	134.102	-12.4429
179	0.5	0.409735	134.27	-12.2381
180	0.5	0.417928	134.445	-12.0291
181	0.5	0.428895	134.629	-11.8147
182	0.5	0.439913	134.822	-11.5947
183	0.5	0.448213	135.023	-11.3706
184	0.5	0.459327	135.234	-11.1409
185	0.5	0.470498	135.456	-10.9057
186	0.5	0.478914	135.685	-10.6662
187	0.5	0.490189	135.925	-10.4211
188	0.5	0.501527	136.177	-10.1704
189	0.5	0.510074	136.437	-9.91533
190	0.5	0.521527	136.709	-9.65456
191	0.5	0.533048	136.993	-9.38804
192	0.5	0.541736	137.287	-9.11717
193	0.5	0.553384	137.593	-8.84048
194	0.5	0.565108	137.912	-8.55793
195	0.5	0.573953	138.242	-8.27095
196	0.5	0.585815	138.585	-7.97804
197	0.5	0.597761	138.942	-7.67916
198	0.5	0.606775	139.31	-7.37577
199	0.5	0.618872	139.693	-7.06634
200	0.5	0.631062	140.091	-6.75081
201	0.5	0.640266	140.501	-6.43067
202	0.5	0.652622	140.927	-6.10436
203	0.5	0.665079	141.37	-5.77182
204	0.5	0.67449	141.825	-5.43458
205	0.5	0.687131	142.297	-5.09101
206	0.5	0.699883	142.787	-4.74107
207	0.5	0.712751	143.295	-4.3847
208	0.5	0.722479	143.817	-4.02346
209	0.5	0.735557	144.358	-3.65568
210	0.5	0.748762	144.918	-3.2813
211	0.5	0.758753	145.494	-2.90192
212	0.5	0.772193	146.09	-2.51582
213	0.5	0.785774	146.708	-2.12294
214	0.5	0.796056	147.341	-1.72491
215	0.5	0.809896	147.997	-1.31996
216	0.5	0.823893	148.676	-0.908015
217	0.5	0.834498	149.373	-0.490766
218	0.5	0.848786	150.093	-0.0663727
219	0.5	0.863249	150.838	0.365252
220	0.5	0.874218	151.602	0.802361
221	0.5	0.889006	152.393	1.24686
222	0.5	0.903992	153.21	1.69886
223	0.5	0.915365	154.048	2.15654
224	0.5	0.930718	154.914	2.6219
225	0.5	0.946291	155.81	3.09505
226	0.5	0.958125	156.728	3.57411
227	0.5	0.974114	157.676	4.06117
228	0.5	0.990356	158.657	4.55634
229	0.5	1.00271	159.663	5.0577
230	0.5	1.01943	160.702	5.56741
231	0.5	1.03643	161.776	6.08563
232	0.5	1.04939	162.877	6.61032
233	0.5	1.06694	164.016	7.14379
234	0.5	1.08482	165.193	7.6862
235	0.5	1.09847	166.399	8.23544
236	0.5	1.11699	167.647	8.79393
237	0.5	1.1359	168.937	9.36188

238	0.5	1.15035	170.26	9.93705
239	0.5	1.17	171.629	10.5221
240	0.5	1.19012	173.046	11.1171
241	0.5	1.21073	174.512	11.7225
242	0.5	1.22653	176.016	12.3357
243	0.5	1.24809	177.574	12.9598
244	0.51	1.27024	179.187	13.6076
245	0.6	1.28727	180.844	14.38
246	0.66	1.31058	182.562	15.245
247	0.69	1.33462	184.343	16.1658
248	0.76	1.35317	186.174	17.1943
249	0.81	1.37866	188.075	18.311
250	1	1.40507	190.049	19.716
251	1	1.42554	192.081	21.1416
252	1.1	1.4538	194.195	22.7408
253	2	1.48328	196.395	25.7073
254	2	1.50626	198.664	28.7199
255	2	1.5382	201.03	31.7963
256	2	1.57179	203.5	34.9398
257	2	1.59819	206.054	38.1362
258	2	1.63524	208.728	41.4067
259	2.1	1.67466	211.533	44.9235
260	2.2	1.70604	214.444	48.6768
261	2.3	1.75069	217.508	52.7033
262	3	1.79912	220.745	58.1007
263	3.2	1.83843	224.125	63.9837
264	4	1.8957	227.719	71.5664
265	4	1.95996	231.56	79.4063
266	4.9	2.01409	235.617	89.2754
267	6.2	2.09693	240.014	102.276
268	6.7	2.19728	244.842	116.998
269	9	2.29036	250.088	137.611
270	10	2.45727	256.126	162.184
271	12	2.74777	263.676	195.157

Data Set Standard Deviation = 1.29272
Numerator = 38086.4
Denominator = 118972
W Statistic = 0.320129 = 38086.4 / 118972

5% Critical value of 0.976 exceeds 0.320129
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.320129
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 = 0.571024
0.571024 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.00367647		-2.7477739	348.683	
2	0	0.00735294		-2.4572739	334.497	
3	0	0.0110294		-2.2903639	326.346	
4	0	0.0147059		-2.1972839	321.801	
5	0	0.0183824		-2.0969339	316.9	
6	0	0.0220588		-2.0140939	312.855	
7	0	0.0257353		-1.9599639	310.211	
8	0	0.0294118		-1.8957 39	307.073	
9	0	0.0330882		-1.8384339	304.276	
10	0.125	0.0367647		-1.7991242.3438	302.357	
11	0.125	0.0404412		-1.7506942.3438	299.992	
12	0.125	0.0441176		-1.7060442.3438	297.812	
13	0.125	0.0477941		-1.6746642.3438	296.279	
14	0.125	0.0514706		-1.6352442.3438	294.354	
15	0.125	0.0551471		-1.5981942.3438	292.545	
16	0.125	0.0588235		-1.5717942.3438	291.256	
17	0.125	0.0625	-1.5382	42.3438	289.615	
18	0.125	0.0661765		-1.5062642.3438	288.056	
19	0.125	0.0698529		-1.4832842.3438	286.934	
20	0.125	0.0735294		-1.4538 42.3438	285.494	
21	0.125	0.0772059		-1.4255442.3438	284.114	
22	0.125	0.0808824		-1.4050742.3438	283.114	
23	0.125	0.0845588		-1.3786642.3438	281.824	
24	0.125	0.0882353		-1.3531742.3438	280.58	
25	0.125	0.0919118		-1.3346242.3438	279.674	
26	0.125	0.0955882		-1.3105842.3438	278.5	
27	0.125	0.0992647		-1.2872742.3438	277.362	
28	0.125	0.102941		-1.2702442.3438	276.53	
29	0.125	0.106618		-1.2480942.3438	275.448	
30	0.125	0.110294		-1.2265342.3438	274.395	
31	0.125	0.113971		-1.2107342.3438	273.624	
32	0.125	0.117647		-1.1901242.3438	272.617	
33	0.125	0.121324		-1.17 42.3438	271.635	
34	0.125	0.125	-1.1503542.3438		270.675	
35	0.125	0.128676		-1.1359 42.3438	269.97	
36	0.125	0.132353		-1.1169942.3438	269.046	
37	0.125	0.136029		-1.0984742.3438	268.142	
38	0.125	0.139706		-1.0848242.3438	267.476	
39	0.125	0.143382		-1.0669442.3438	266.602	
40	0.125	0.147059		-1.0493942.3438	265.745	
41	0.125	0.150735		-1.0364342.3438	265.112	
42	0.125	0.154412		-1.0194342.3438	264.282	
43	0.125	0.158088		-1.0027142.3438	263.466	
44	0.125	0.161765		-0.990356	42.3438	262.862
45	0.125	0.165441		-0.974114	42.3438	262.069
46	0.125	0.169118		-0.958125	42.3438	261.288
47	0.125	0.172794		-0.946291	42.3438	260.711
48	0.125	0.176471		-0.930718	42.3438	259.95

49	0.125	0.180147	-0.915365	42.3438	259.2
50	0.125	0.183824	-0.903992	42.3438	258.645
51	0.125	0.1875	-0.889006	42.3438	257.913
52	0.125	0.191176	-0.874218	42.3438	257.191
53	0.125	0.194853	-0.863249	42.3438	256.655
54	0.125	0.198529	-0.848786	42.3438	255.949
55	0.125	0.202206	-0.834498	42.3438	255.251
56	0.125	0.205882	-0.823893	42.3438	254.733
57	0.125	0.209559	-0.809896	42.3438	254.05
58	0.125	0.213235	-0.796056	42.3438	253.374
59	0.125	0.216912	-0.785774	42.3438	252.872
60	0.125	0.220588	-0.772193	42.3438	252.209
61	0.125	0.224265	-0.758753	42.3438	251.552
62	0.125	0.227941	-0.748762	42.3438	251.065
63	0.125	0.231618	-0.735557	42.3438	250.42
64	0.125	0.235294	-0.722479	42.3438	249.781
65	0.125	0.238971	-0.712751	42.3438	249.306
66	0.125	0.242647	-0.699883	42.3438	248.678
67	0.125	0.246324	-0.687131	42.3438	248.055
68	0.125	0.25	-0.674494	42.3438	247.438
69	0.125	0.253676	-0.665079	42.3438	246.978
70	0.125	0.257353	-0.652622	42.3438	246.37
71	0.125	0.261029	-0.640266	42.3438	245.766
72	0.125	0.264706	-0.631062	42.3438	245.317
73	0.125	0.268382	-0.618872	42.3438	244.722
74	0.125	0.272059	-0.606775	42.3438	244.131
75	0.125	0.275735	-0.597761	42.3438	243.691
76	0.125	0.279412	-0.585815	42.3438	243.107
77	0.125	0.283088	-0.573953	42.3438	242.528
78	0.125	0.286765	-0.565108	42.3438	242.096
79	0.31	0.290441	-0.553384	47.2925	241.524
80	0.41	0.294118	-0.541736	49.9675	240.955
81	0.47	0.297794	-0.533048	51.5725	240.531
82	0.5	0.301471	-0.521527	52.375	239.968
83	0.5	0.305147	-0.510074	52.375	239.409
84	0.5	0.308824	-0.501527	52.375	238.991
85	0.5	0.3125	-0.490189	52.375	238.438
86	0.5	0.316176	-0.478914	52.375	237.887
87	0.5	0.319853	-0.470498	52.375	237.476
88	0.5	0.323529	-0.459327	52.375	236.93
89	0.5	0.327206	-0.448213	52.375	236.388
90	0.5	0.330882	-0.439913	52.375	235.982
91	0.5	0.334559	-0.428895	52.375	235.444
92	0.5	0.338235	-0.417928	52.375	234.909
93	0.5	0.341912	-0.409735	52.375	234.509
94	0.5	0.345588	-0.398855	52.375	233.977
95	0.5	0.349265	-0.388022	52.375	233.448
96	0.5	0.352941	-0.379927	52.375	233.053
97	0.5	0.356618	-0.369171	52.375	232.528
98	0.5	0.360294	-0.358459	52.375	232.005
99	0.5	0.363971	-0.350451	52.375	231.614
100	0.5	0.367647	-0.339815	52.375	231.094
101	0.5	0.371324	-0.329206	52.375	230.576
102	0.5	0.375	-0.318639	52.375	230.06
103	0.5	0.378676	-0.310738	52.375	229.674
104	0.5	0.382353	-0.300232	52.375	229.161
105	0.5	0.386029	-0.289765	52.375	228.65
106	0.5	0.389706	-0.281926	52.375	228.267
107	0.5	0.393382	-0.271509	52.375	227.759
108	0.5	0.397059	-0.261125	52.375	227.251
109	0.5	0.400735	-0.253347	52.375	226.872
110	0.5	0.404412	-0.243007	52.375	226.367

111	0.5	0.408088	-0.232693	52.375	225.863
112	0.5	0.411765	-0.224974	52.375	225.486
113	0.5	0.415441	-0.214702	52.375	224.985
114	0.5	0.419118	-0.204452	52.375	224.484
115	0.5	0.422794	-0.196779	52.375	224.109
116	0.5	0.426471	-0.186567	52.375	223.611
117	0.5	0.430147	-0.176374	52.375	223.113
118	0.5	0.433824	-0.168741	52.375	222.74
119	0.5	0.4375	-0.158579	52.375	222.244
120	0.5	0.441176	-0.148434	52.375	221.749
121	0.5	0.444853	-0.140835	52.375	221.377
122	0.5	0.448529	-0.130716	52.375	220.883
123	0.5	0.452206	-0.120615	52.375	220.39
124	0.5	0.455882	-0.113039	52.375	220.02
125	0.5	0.459559	-0.102953	52.375	219.528
126	0.5	0.463235	-0.0928787	52.375	219.036
127	0.5	0.466912	-0.0853288	52.375	218.667
128	0.5	0.470588	-0.0752698	52.375	218.176
129	0.5	0.474265	-0.0652187	52.375	217.685
130	0.5	0.477941	-0.0576847	52.375	217.317
131	0.5	0.481618	-0.0476439	52.375	216.827
132	0.5	0.485294	-0.0376076	52.375	216.337
133	0.5	0.488971	-0.0300838	52.375	215.969
134	0.5	0.492647	-0.0200544	52.375	215.479
135	0.5	0.496324	-0.0100272	52.375	214.99
136	0.5	0.5	0	52.375	214.5
137	0.5	0.503676	0.0100272	52.375	214.01
138	0.5	0.507353	0.0200544	52.375	213.521
139	0.5	0.511029	0.0300838	52.375	213.031
140	0.5	0.514706	0.0376076	52.375	212.663
141	0.5	0.518382	0.0476439	52.375	212.173
142	0.5	0.522059	0.0576847	52.375	211.683
143	0.5	0.525735	0.0652187	52.375	211.315
144	0.5	0.529412	0.0752698	52.375	210.824
145	0.5	0.533088	0.0853288	52.375	210.333
146	0.5	0.536765	0.0928787	52.375	209.964
147	0.5	0.540441	0.102953	52.375	209.472
148	0.5	0.544118	0.113039	52.375	208.98
149	0.5	0.547794	0.12061	52.375	208.61
150	0.5	0.551471	0.130716	52.375	208.117
151	0.5	0.555147	0.140835	52.375	207.623
152	0.5	0.558824	0.148434	52.375	207.251
153	0.5	0.5625	0.158579	52.375	206.756
154	0.5	0.566176	0.168741	52.375	206.26
155	0.5	0.569853	0.176374	52.375	205.887
156	0.5	0.573529	0.186567	52.375	205.389
157	0.5	0.577206	0.196779	52.375	204.891
158	0.5	0.580882	0.204452	52.375	204.516
159	0.5	0.584559	0.214702	52.375	204.015
160	0.5	0.588235	0.224974	52.375	203.514
161	0.5	0.591912	0.232693	52.375	203.137
162	0.5	0.595588	0.243007	52.375	202.633
163	0.5	0.599265	0.253347	52.375	202.128
164	0.5	0.602941	0.26112	52.375	201.749
165	0.5	0.606618	0.271509	52.375	201.241
166	0.5	0.610294	0.281926	52.375	200.733
167	0.5	0.613971	0.28976	52.375	200.35
168	0.5	0.617647	0.300232	52.375	199.839
169	0.5	0.621324	0.310738	52.375	199.326
170	0.5	0.625	0.318639	52.375	198.94
171	0.5	0.628676	0.329206	52.375	198.424
172	0.5	0.632353	0.33981	52.375	197.906

173	0.5	0.636029	0.350451	52.375	197.386
174	0.5	0.639706	0.358459	52.375	196.995
175	0.5	0.643382	0.369171	52.375	196.472
176	0.5	0.647059	0.379927	52.375	195.947
177	0.5	0.650735	0.388022	52.375	195.552
178	0.5	0.654412	0.398855	52.375	195.023
179	0.5	0.658088	0.409735	52.375	194.491
180	0.5	0.661765	0.417928	52.375	194.091
181	0.5	0.665441	0.428895	52.375	193.556
182	0.5	0.669118	0.439913	52.375	193.018
183	0.5	0.672794	0.448213	52.375	192.612
184	0.5	0.676471	0.459327	52.375	192.07
185	0.5	0.680147	0.470498	52.375	191.524
186	0.5	0.683824	0.478914	52.375	191.113
187	0.5	0.6875	0.490189	52.375	190.562
188	0.5	0.691176	0.501527	52.375	190.009
189	0.5	0.694853	0.510074	52.375	189.591
190	0.5	0.698529	0.521527	52.375	189.032
191	0.5	0.702206	0.533048	52.375	188.469
192	0.5	0.705882	0.541736	52.375	188.045
193	0.5	0.709559	0.553384	52.375	187.476
194	0.5	0.713235	0.565108	52.375	186.904
195	0.5	0.716912	0.573953	52.375	186.472
196	0.5	0.720588	0.585815	52.375	185.893
197	0.5	0.724265	0.597761	52.375	185.309
198	0.5	0.727941	0.606775	52.375	184.869
199	0.5	0.731618	0.618872	52.375	184.278
200	0.5	0.735294	0.631062	52.375	183.683
201	0.5	0.738971	0.640266	52.375	183.234
202	0.5	0.742647	0.652622	52.375	182.63
203	0.5	0.746324	0.665079	52.375	182.022
204	0.5	0.75	0.67449	52.375	181.562
205	0.5	0.753676	0.687131	52.375	180.945
206	0.5	0.757353	0.699883	52.375	180.322
207	0.5	0.761029	0.712751	52.375	179.694
208	0.5	0.764706	0.722479	52.375	179.219
209	0.5	0.768382	0.735557	52.375	178.58
210	0.5	0.772059	0.748762	52.375	177.935
211	0.5	0.775735	0.758753	52.375	177.448
212	0.5	0.779412	0.772193	52.375	176.791
213	0.5	0.783088	0.785774	52.375	176.128
214	0.5	0.786765	0.796056	52.375	175.626
215	0.5	0.790441	0.809896	52.375	174.95
216	0.5	0.794118	0.823893	52.375	174.267
217	0.5	0.797794	0.834498	52.375	173.749
218	0.5	0.801471	0.848786	52.375	173.051
219	0.5	0.805147	0.863249	52.375	172.345
220	0.5	0.808824	0.874218	52.375	171.809
221	0.5	0.8125	0.889006	52.375	171.087
222	0.5	0.816176	0.903992	52.375	170.355
223	0.5	0.819853	0.915365	52.375	169.8
224	0.5	0.823529	0.930718	52.375	169.05
225	0.5	0.827206	0.946291	52.375	168.289
226	0.5	0.830882	0.958125	52.375	167.712
227	0.5	0.834559	0.974114	52.375	166.931
228	0.5	0.838235	0.990356	52.375	166.138
229	0.5	0.841912	1.00271	52.375	165.534
230	0.5	0.845588	1.01943	52.375	164.718
231	0.5	0.849265	1.03643	52.375	163.888
232	0.5	0.852941	1.04939	52.375	163.255
233	0.5	0.856618	1.06694	52.375	162.398
234	0.5	0.860294	1.08482	52.375	161.524

235	0.5	0.863971		1.09847	52.375	160.858
236	0.5	0.867647		1.11699	52.375	159.954
237	0.5	0.871324		1.1359	52.375	159.03
238	0.5	0.875	1.15035	52.375	158.325	
239	0.5	0.878676		1.17	52.375	157.365
240	0.5	0.882353		1.19012	52.375	156.383
241	0.5	0.886029		1.21073	52.375	155.376
242	0.5	0.889706		1.22653	52.375	154.605
243	0.5	0.893382		1.24809	52.375	153.552
244	0.51	0.897059		1.27024	52.6425	152.47
245	0.6	0.900735		1.28727	55.05	151.638
246	0.66	0.904412		1.31058	56.655	150.5
247	0.69	0.908088		1.33462	57.4575	149.326
248	0.76	0.911765		1.35317	59.33	148.42
249	0.81	0.915441		1.37866	60.6675	147.176
250	1	0.919118		1.40507	65.75	145.886
251	1	0.922794		1.42554	65.75	144.886
252	1.1	0.926471		1.4538	68.425	143.506
253	2	0.930147		1.48328	92.5	142.066
254	2	0.933824		1.50626	92.5	140.944
255	2	0.9375	1.5382	92.5	139.385	
256	2	0.941176		1.57179	92.5	137.744
257	2	0.944853		1.59819	92.5	136.455
258	2	0.948529		1.63524	92.5	134.646
259	2.1	0.952206		1.67466	95.175	132.721
260	2.2	0.955882		1.70604	97.85	131.188
261	2.3	0.959559		1.75069	100.525	129.008
262	3	0.963235		1.79912	119.25	126.643
263	3.2	0.966912		1.83843	124.6	124.724
264	4	0.970588		1.8957	146	121.927
265	4	0.974265		1.95996	146	118.789
266	4.9	0.977941		2.01409	170.075	116.145
267	6.2	0.981618		2.09693	204.85	112.1
268	6.7	0.985294		2.19728	218.225	107.199
269	9	0.988971		2.29036	279.75	102.654
270	10	0.992647		2.45727	306.5	94.5032
271	12	0.996324		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 = 271

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	-2.29036	18.8342	15.5862
4	-2.07944	-2.19728	23.6622	20.1554
5	-2.07944	-2.09693	28.0593	24.5158
6	-2.07944	-2.01409	32.1159	28.704
7	-2.07944	-1.95996	35.9574	32.7796
8	-2.07944	-1.8957	39.551	36.7216
9	-2.07944	-1.83843	42.9308	40.5445
10	-2.07944	-1.79912	46.1677	44.2857
11	-2.07944	-1.75069	49.2326	47.9261
12	-2.07944	-1.70604	52.1431	51.4737
13	-2.07944	-1.67466	54.9476	54.9561
14	-2.07944	-1.63524	57.6216	58.3565
15	-2.07944	-1.59819	60.1758	61.6798
16	-2.07944	-1.57179	62.6464	64.9483
17	-2.07944	-1.5382	65.0124	68.1469
18	-2.07944	-1.50626	67.2812	71.2791
19	-2.07944	-1.48328	69.4814	74.3634
20	-2.07944	-1.4538	71.5949	77.3865
21	-2.07944	-1.42554	73.6271	80.3509
22	-2.07944	-1.40507	75.6013	83.2727
23	-2.07944	-1.37866	77.502	86.1395
24	-2.07944	-1.35317	79.3331	88.9533
25	-2.07944	-1.33462	81.1143	91.7286
26	-2.07944	-1.31058	82.8319	94.4539
27	-2.07944	-1.28727	84.489	97.1307
28	-2.07944	-1.27024	86.1025	99.7721
29	-2.07944	-1.24809	87.6602	102.367
30	-2.07944	-1.22653	89.1646	104.918
31	-2.07944	-1.21073	90.6305	107.436
32	-2.07944	-1.19012	92.0469	109.91
33	-2.07944	-1.17	93.4158	112.343
34	-2.07944	-1.15035	94.7391	114.735
35	-2.07944	-1.1359	96.0293	117.097
36	-2.07944	-1.11699	97.277	119.42
37	-2.07944	-1.09847	98.4836	121.704
38	-2.07944	-1.08482	99.6605	123.96
39	-2.07944	-1.06694	100.799	126.179
40	-2.07944	-1.04939	101.9	128.361
41	-2.07944	-1.03643	102.974	130.516
42	-2.07944	-1.01943	104.013	132.636
43	-2.07944	-1.00271	105.019	134.721
44	-2.07944	-0.990356	106	136.78
45	-2.07944	-0.974114	106.949	138.806
46	-2.07944	-0.958125	107.867	140.798
47	-2.07944	-0.946291	108.762	142.766
48	-2.07944	-0.930718	109.628	144.701
49	-2.07944	-0.915365	110.466	146.605
50	-2.07944	-0.903992	111.283	148.485
51	-2.07944	-0.889006	112.074	150.333

52	-2.07944	-0.874218	112.838	152.151
53	-2.07944	-0.863249	113.583	153.946
54	-2.07944	-0.848786	114.304	155.711
55	-2.07944	-0.834498	115	157.447
56	-2.07944	-0.823893	115.679	159.16
57	-2.07944	-0.809896	116.335	160.844
58	-2.07944	-0.796056	116.968	162.499
59	-2.07944	-0.785774	117.586	164.133
60	-2.07944	-0.772193	118.182	165.739
61	-2.07944	-0.758753	118.758	167.317
62	-2.07944	-0.748762	119.318	168.874
63	-2.07944	-0.735557	119.86	170.403
64	-2.07944	-0.722479	120.382	171.906
65	-2.07944	-0.712751	120.89	173.388
66	-2.07944	-0.699883	121.379	174.843
67	-2.07944	-0.687131	121.852	176.272
68	-2.07944	-0.67449	122.306	177.675
69	-2.07944	-0.665079	122.749	179.058
70	-1.17118	-0.652622	123.175	179.822
71	-0.891598	-0.640266	123.585	180.393
72	-0.755023	-0.631062	123.983	180.869
73	-0.693147	-0.618872	124.366	181.298
74	-0.693147	-0.606775	124.734	181.719
75	-0.693147	-0.597761	125.091	182.133
76	-0.693147	-0.585815	125.435	182.539
77	-0.693147	-0.573953	125.764	182.937
78	-0.693147	-0.565108	126.083	183.329
79	-0.693147	-0.553384	126.39	183.712
80	-0.693147	-0.541736	126.683	184.088
81	-0.693147	-0.533048	126.967	184.457
82	-0.693147	-0.521527	127.239	184.819
83	-0.693147	-0.510074	127.499	185.172
84	-0.693147	-0.501527	127.751	185.52
85	-0.693147	-0.490189	127.991	185.86
86	-0.693147	-0.478914	128.221	186.192
87	-0.693147	-0.470498	128.442	186.518
88	-0.693147	-0.459327	128.653	186.836
89	-0.693147	-0.448213	128.854	187.147
90	-0.693147	-0.439913	129.047	187.452
91	-0.693147	-0.428895	129.231	187.749
92	-0.693147	-0.417928	129.406	188.039
93	-0.693147	-0.409735	129.574	188.323
94	-0.693147	-0.398855	129.733	188.599
95	-0.693147	-0.388022	129.883	188.868
96	-0.693147	-0.379927	130.028	189.132
97	-0.693147	-0.369171	130.164	189.388
98	-0.693147	-0.358459	130.293	189.636
99	-0.693147	-0.350451	130.415	189.879
100	-0.693147	-0.33981	130.531	190.114
101	-0.693147	-0.329206	130.639	190.343
102	-0.693147	-0.318639	130.741	190.563
103	-0.693147	-0.310738	130.837	190.779
104	-0.693147	-0.300232	130.927	190.987
105	-0.693147	-0.28976	131.011	191.188
106	-0.693147	-0.281926	131.091	191.383
107	-0.693147	-0.271509	131.165	191.571
108	-0.693147	-0.26112	131.233	191.752
109	-0.693147	-0.253347	131.297	191.928
110	-0.693147	-0.243007	131.356	192.096
111	-0.693147	-0.232693	131.41	192.258
112	-0.693147	-0.224974	131.461	192.414
113	-0.693147	-0.214702	131.507	192.563

114	-0.693147	-0.204452	131.549	192.704
115	-0.693147	-0.196779	131.587	192.841
116	-0.693147	-0.186567	131.622	192.97
117	-0.693147	-0.176374	131.653	193.092
118	-0.693147	-0.168741	131.682	193.209
119	-0.693147	-0.158579	131.707	193.319
120	-0.693147	-0.148434	131.729	193.422
121	-0.693147	-0.140835	131.749	193.52
122	-0.693147	-0.130716	131.766	193.61
123	-0.693147	-0.12061	131.78	193.694
124	-0.693147	-0.113039	131.793	193.772
125	-0.693147	-0.102953	131.804	193.844
126	-0.693147	-0.0928787	131.812	193.908
127	-0.693147	-0.0853288	131.82	193.967
128	-0.693147	-0.0752698	131.825	194.019
129	-0.693147	-0.0652187	131.83	194.064
130	-0.693147	-0.0576847	131.833	194.104
131	-0.693147	-0.0476439	131.835	194.137
132	-0.693147	-0.0376076	131.837	194.163
133	-0.693147	-0.0300838	131.838	194.184
134	-0.693147	-0.0200544	131.838	194.198
135	-0.693147	-0.0100272	131.838	194.205
136	-0.693147	0	131.838	194.205
137	-0.693147	0.0100272	131.838	194.198
138	-0.693147	0.0200544	131.839	194.184
139	-0.693147	0.0300838	131.839	194.163
140	-0.693147	0.0376076	131.841	194.137
141	-0.693147	0.0476439	131.843	194.104
142	-0.693147	0.0576847	131.846	194.064
143	-0.693147	0.0652187	131.851	194.019
144	-0.693147	0.0752698	131.856	193.967
145	-0.693147	0.0853288	131.864	193.908
146	-0.693147	0.0928787	131.872	193.844
147	-0.693147	0.102953	131.883	193.772
148	-0.693147	0.113039	131.896	193.694
149	-0.693147	0.12061	131.91	193.61
150	-0.693147	0.130716	131.927	193.52
151	-0.693147	0.140835	131.947	193.422
152	-0.693147	0.148434	131.969	193.319
153	-0.693147	0.158579	131.994	193.209
154	-0.693147	0.168741	132.023	193.092
155	-0.693147	0.176374	132.054	192.97
156	-0.693147	0.186567	132.089	192.841
157	-0.693147	0.196779	132.127	192.704
158	-0.693147	0.204452	132.169	192.563
159	-0.693147	0.214702	132.215	192.414
160	-0.693147	0.224974	132.266	192.258
161	-0.693147	0.232693	132.32	192.096
162	-0.693147	0.243007	132.379	191.928
163	-0.693147	0.253347	132.443	191.752
164	-0.693147	0.26112	132.512	191.571
165	-0.693147	0.271509	132.585	191.383
166	-0.693147	0.281926	132.665	191.188
167	-0.693147	0.28976	132.749	190.987
168	-0.693147	0.300232	132.839	190.779
169	-0.693147	0.310738	132.935	190.563
170	-0.693147	0.318639	133.037	190.343
171	-0.693147	0.329206	133.145	190.114
172	-0.693147	0.33981	133.261	189.879
173	-0.693147	0.350451	133.384	189.636
174	-0.693147	0.358459	133.512	189.388
175	-0.693147	0.369171	133.648	189.132

176	-0.693147	0.379927		133.793	188.868
177	-0.693147	0.388022		133.943	188.599
178	-0.693147	0.398855		134.102	188.323
179	-0.693147	0.409735		134.27	188.039
180	-0.693147	0.417928		134.445	187.749
181	-0.693147	0.428895		134.629	187.452
182	-0.693147	0.439913		134.822	187.147
183	-0.693147	0.448213		135.023	186.836
184	-0.693147	0.459327		135.234	186.518
185	-0.693147	0.470498		135.456	186.192
186	-0.693147	0.478914		135.685	185.86
187	-0.693147	0.490189		135.925	185.52
188	-0.693147	0.501527		136.177	185.172
189	-0.693147	0.510074		136.437	184.819
190	-0.693147	0.521527		136.709	184.457
191	-0.693147	0.533048		136.993	184.088
192	-0.693147	0.541736		137.287	183.712
193	-0.693147	0.553384		137.593	183.329
194	-0.693147	0.565108		137.912	182.937
195	-0.693147	0.573953		138.242	182.539
196	-0.693147	0.585815		138.585	182.133
197	-0.693147	0.597761		138.942	181.719
198	-0.693147	0.606775		139.31	181.298
199	-0.693147	0.618872		139.693	180.869
200	-0.693147	0.631062		140.091	180.432
201	-0.693147	0.640266		140.501	179.988
202	-0.693147	0.652622		140.927	179.536
203	-0.693147	0.665079		141.37	179.075
204	-0.693147	0.67449	141.825	178.607	
205	-0.693147	0.687131		142.297	178.131
206	-0.693147	0.699883		142.787	177.646
207	-0.693147	0.712751		143.295	177.152
208	-0.693147	0.722479		143.817	176.651
209	-0.693147	0.735557		144.358	176.141
210	-0.693147	0.748762		144.918	175.622
211	-0.693147	0.758753		145.494	175.096
212	-0.693147	0.772193		146.09	174.561
213	-0.693147	0.785774		146.708	174.016
214	-0.693147	0.796056		147.341	173.465
215	-0.693147	0.809896		147.997	172.903
216	-0.693147	0.823893		148.676	172.332
217	-0.693147	0.834498		149.373	171.754
218	-0.693147	0.848786		150.093	171.165
219	-0.693147	0.863249		150.838	170.567
220	-0.693147	0.874218		151.602	169.961
221	-0.693147	0.889006		152.393	169.345
222	-0.693147	0.903992		153.21	168.718
223	-0.693147	0.915365		154.048	168.084
224	-0.693147	0.930718		154.914	167.439
225	-0.693147	0.946291		155.81	166.783
226	-0.693147	0.958125		156.728	166.119
227	-0.693147	0.974114		157.676	165.443
228	-0.693147	0.990356		158.657	164.757
229	-0.693147	1.00271	159.663	164.062	
230	-0.693147	1.01943	160.702	163.355	
231	-0.693147	1.03643	161.776	162.637	
232	-0.693147	1.04939	162.877	161.909	
233	-0.693147	1.06694	164.016	161.17	
234	-0.693147	1.08482	165.193	160.418	
235	-0.673345	1.09847	166.399	159.678	
236	-0.510826	1.11699	167.647	159.108	
237	-0.415515	1.1359	168.937	158.636	

238	-0.371064		1.15035	170.26	158.209
239	-0.274437		1.17	171.629	157.888
240	-0.210721		1.19012	173.046	157.637
241	0	1.21073	174.512	157.637	
242	0	1.22653	176.016	157.637	
243	0	1.24809	177.574	157.637	
244	0	1.27024	179.187	157.637	
245	0	1.28727	180.844	157.637	
246	0	1.31058	182.562	157.637	
247	0	1.33462	184.343	157.637	
248	0	1.35317	186.174	157.637	
249	0	1.37866	188.075	157.637	
250	0	1.40507	190.049	157.637	
251	0	1.42554	192.081	157.637	
252	0.0953102		1.4538	194.195	157.776
253	0.693147		1.48328	196.395	158.804
254	0.693147		1.50626	198.664	159.848
255	0.693147		1.5382	201.03	160.914
256	0.693147		1.57179	203.5	162.003
257	0.693147		1.59819	206.054	163.111
258	0.693147		1.63524	208.728	164.245
259	0.741937		1.67466	211.533	165.487
260	0.788457		1.70604	214.444	166.832
261	0.832909		1.75069	217.508	168.29
262	1.09861	1.79912	220.745	170.267	
263	1.16315	1.83843	224.125	172.405	
264	1.38629	1.8957	227.719	175.033	
265	1.38629	1.95996	231.56	177.75	
266	1.58924	2.01409	235.617	180.951	
267	1.82455	2.09693	240.014	184.777	
268	1.90211	2.19728	244.842	188.957	
269	2.19722	2.29036	250.088	193.989	
270	2.30259	2.45727	256.126	199.647	
271	2.48491	2.74777	263.676	206.475	

Data Set Standard Deviation = 0.881048
Numerator = 42632
Denominator = 55262.9
W Statistic = 0.771439 = 42632 / 55262.9

5% Critical value of 0.976 exceeds 0.771439
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.771439
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 = 0.878986
0.878986 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.079440	.00367647	-2.74777	121.083	348.683
2	-2.079440	.00735294	-2.45727	121.083	334.497
3	-2.079440	.0110294	-2.29036	121.083	326.346
4	-2.079440	.0147059	-2.19728	121.083	321.801
5	-2.079440	.0183824	-2.09693	121.083	316.9
6	-2.079440	.0220588	-2.01409	121.083	312.855
7	-2.079440	.0257353	-1.95996	121.083	310.211
8	-2.079440	.0294118	-1.8957	121.083	307.073
9	-2.079440	.0330882	-1.83843	121.083	304.276
10	-2.079440	.0367647	-1.79912	121.083	302.357
11	-2.079440	.0404412	-1.75069	121.083	299.992
12	-2.079440	.0441176	-1.70604	121.083	297.812
13	-2.079440	.0477941	-1.67466	121.083	296.279
14	-2.079440	.0514706	-1.63524	121.083	294.354
15	-2.079440	.0551471	-1.59819	121.083	292.545
16	-2.079440	.0588235	-1.57179	121.083	291.256
17	-2.079440	.0625	-1.5382	121.083	289.615
18	-2.079440	.0661765	-1.50626	121.083	288.056
19	-2.079440	.0698529	-1.48328	121.083	286.934
20	-2.079440	.0735294	-1.4538	121.083	285.494
21	-2.079440	.0772059	-1.42554	121.083	284.114
22	-2.079440	.0808824	-1.40507	121.083	283.114
23	-2.079440	.0845588	-1.37866	121.083	281.824
24	-2.079440	.0882353	-1.35317	121.083	280.58
25	-2.079440	.0919118	-1.33462	121.083	279.674
26	-2.079440	.0955882	-1.31058	121.083	278.5
27	-2.079440	.0992647	-1.28727	121.083	277.362
28	-2.079440	.102941	-1.27024	121.083	276.53
29	-2.079440	.106618	-1.24809	121.083	275.448
30	-2.079440	.110294	-1.22653	121.083	274.395
31	-2.079440	.113971	-1.21073	121.083	273.624
32	-2.079440	.117647	-1.19012	121.083	272.617
33	-2.079440	.121324	-1.17	121.083	271.635
34	-2.079440	.125	-1.15035	121.083	270.675
35	-2.079440	.128676	-1.1359	121.083	269.97
36	-2.079440	.132353	-1.11699	121.083	269.046
37	-2.079440	.136029	-1.09847	121.083	268.142
38	-2.079440	.139706	-1.08482	121.083	267.476
39	-2.079440	.143382	-1.06694	121.083	266.602
40	-2.079440	.147059	-1.04939	121.083	265.745
41	-2.079440	.150735	-1.03643	121.083	265.112
42	-2.079440	.154412	-1.01943	121.083	264.282
43	-2.079440	.158088	-1.00271	121.083	263.466
44	-2.079440	.161765	-0.990356	121.083	262.862
45	-2.079440	.165441	-0.974114	121.083	262.069
46	-2.079440	.169118	-0.958125	121.083	261.288
47	-2.079440	.172794	-0.946291	121.083	260.711
48	-2.079440	.176471	-0.930718	121.083	259.95

49	-2.079440.180147	-0.915365	121.083	259.2	
50	-2.079440.183824	-0.903992	121.083	258.645	
51	-2.079440.1875	-0.889006	121.083	257.913	
52	-2.079440.191176	-0.874218	121.083	257.191	
53	-2.079440.194853	-0.863249	121.083	256.655	
54	-2.079440.198529	-0.848786	121.083	255.949	
55	-2.079440.202206	-0.834498	121.083	255.251	
56	-2.079440.205882	-0.823893	121.083	254.733	
57	-2.079440.209559	-0.809896	121.083	254.05	
58	-2.079440.213235	-0.796056	121.083	253.374	
59	-2.079440.216912	-0.785774	121.083	252.872	
60	-2.079440.220588	-0.772193	121.083	252.209	
61	-2.079440.224265	-0.758753	121.083	251.552	
62	-2.079440.227941	-0.748762	121.083	251.065	
63	-2.079440.231618	-0.735557	121.083	250.42	
64	-2.079440.235294	-0.722479	121.083	249.781	
65	-2.079440.238971	-0.712751	121.083	249.306	
66	-2.079440.242647	-0.699883	121.083	248.678	
67	-2.079440.246324	-0.687131	121.083	248.055	
68	-2.079440.25	-0.67449	121.083	247.438	
69	-2.079440.253676	-0.665079	121.083	246.978	
70	-1.171180.257353	-0.652622	202.07	246.37	
71	-0.891598	0.261029	-0.640266	226.999	245.766
72	-0.755023	0.264706	-0.631062	239.177	245.317
73	-0.693147	0.268382	-0.618872	244.694	244.722
74	-0.693147	0.272059	-0.606775	244.694	244.131
75	-0.693147	0.275735	-0.597761	244.694	243.691
76	-0.693147	0.279412	-0.585815	244.694	243.107
77	-0.693147	0.283088	-0.573953	244.694	242.528
78	-0.693147	0.286765	-0.565108	244.694	242.096
79	-0.693147	0.290441	-0.553384	244.694	241.524
80	-0.693147	0.294118	-0.541736	244.694	240.955
81	-0.693147	0.297794	-0.533048	244.694	240.531
82	-0.693147	0.301471	-0.521527	244.694	239.968
83	-0.693147	0.305147	-0.510074	244.694	239.409
84	-0.693147	0.308824	-0.501527	244.694	238.991
85	-0.693147	0.3125	-0.490189	244.694	238.438
86	-0.693147	0.316176	-0.478914	244.694	237.887
87	-0.693147	0.319853	-0.470498	244.694	237.476
88	-0.693147	0.323529	-0.459327	244.694	236.93
89	-0.693147	0.327206	-0.448213	244.694	236.388
90	-0.693147	0.330882	-0.439913	244.694	235.982
91	-0.693147	0.334559	-0.428895	244.694	235.444
92	-0.693147	0.338235	-0.417928	244.694	234.909
93	-0.693147	0.341912	-0.409735	244.694	234.509
94	-0.693147	0.345588	-0.398855	244.694	233.977
95	-0.693147	0.349265	-0.388022	244.694	233.448
96	-0.693147	0.352941	-0.379927	244.694	233.053
97	-0.693147	0.356618	-0.369171	244.694	232.528
98	-0.693147	0.360294	-0.358459	244.694	232.005
99	-0.693147	0.363971	-0.350451	244.694	231.614
100	-0.693147	0.367647	-0.33981	244.694	231.094
101	-0.693147	0.371324	-0.329206	244.694	230.576
102	-0.693147	0.375	-0.318639	244.694	230.06
103	-0.693147	0.378676	-0.310738	244.694	229.674
104	-0.693147	0.382353	-0.300232	244.694	229.161
105	-0.693147	0.386029	-0.28976	244.694	228.65
106	-0.693147	0.389706	-0.281926	244.694	228.267
107	-0.693147	0.393382	-0.271509	244.694	227.759
108	-0.693147	0.397059	-0.26112	244.694	227.251
109	-0.693147	0.400735	-0.253347	244.694	226.872
110	-0.693147	0.404412	-0.243007	244.694	226.367

111	-0.693147	0.408088	-0.232693	244.694	225.863
112	-0.693147	0.411765	-0.224974	244.694	225.486
113	-0.693147	0.415441	-0.214702	244.694	224.985
114	-0.693147	0.419118	-0.204452	244.694	224.484
115	-0.693147	0.422794	-0.196779	244.694	224.109
116	-0.693147	0.426471	-0.186567	244.694	223.611
117	-0.693147	0.430147	-0.176374	244.694	223.113
118	-0.693147	0.433824	-0.168741	244.694	222.74
119	-0.693147	0.4375	-0.158579	244.694	222.244
120	-0.693147	0.441176	-0.148434	244.694	221.749
121	-0.693147	0.444853	-0.140835	244.694	221.377
122	-0.693147	0.448529	-0.130716	244.694	220.883
123	-0.693147	0.452206	-0.12061	244.694	220.39
124	-0.693147	0.455882	-0.113039	244.694	220.02
125	-0.693147	0.459559	-0.102953	244.694	219.528
126	-0.693147	0.463235	-0.0928787	244.694	219.036
127	-0.693147	0.466912	-0.0853288	244.694	218.667
128	-0.693147	0.470588	-0.0752698	244.694	218.176
129	-0.693147	0.474265	-0.0652187	244.694	217.685
130	-0.693147	0.477941	-0.0576847	244.694	217.317
131	-0.693147	0.481618	-0.0476439	244.694	216.827
132	-0.693147	0.485294	-0.0376076	244.694	216.337
133	-0.693147	0.488971	-0.0300838	244.694	215.969
134	-0.693147	0.492647	-0.0200544	244.694	215.479
135	-0.693147	0.496324	-0.0100272	244.694	214.99
136	-0.693147	0.5	0	244.694	214.5
137	-0.693147	0.503676	0.0100272	244.694	214.01
138	-0.693147	0.507353	0.0200544	244.694	213.521
139	-0.693147	0.511029	0.0300838	244.694	213.031
140	-0.693147	0.514706	0.0376076	244.694	212.663
141	-0.693147	0.518382	0.0476439	244.694	212.173
142	-0.693147	0.522059	0.0576847	244.694	211.683
143	-0.693147	0.525735	0.0652187	244.694	211.315
144	-0.693147	0.529412	0.0752698	244.694	210.824
145	-0.693147	0.533088	0.0853288	244.694	210.333
146	-0.693147	0.536765	0.0928787	244.694	209.964
147	-0.693147	0.540441	0.102953	244.694	209.472
148	-0.693147	0.544118	0.113039	244.694	208.98
149	-0.693147	0.547794	0.12061	244.694	208.61
150	-0.693147	0.551471	0.130716	244.694	208.117
151	-0.693147	0.555147	0.140835	244.694	207.623
152	-0.693147	0.558824	0.148434	244.694	207.251
153	-0.693147	0.5625	0.158579	244.694	206.756
154	-0.693147	0.566176	0.168741	244.694	206.26
155	-0.693147	0.569853	0.176374	244.694	205.887
156	-0.693147	0.573529	0.186567	244.694	205.389
157	-0.693147	0.577206	0.196779	244.694	204.891
158	-0.693147	0.580882	0.204452	244.694	204.516
159	-0.693147	0.584559	0.214702	244.694	204.015
160	-0.693147	0.588235	0.224974	244.694	203.514
161	-0.693147	0.591912	0.232693	244.694	203.137
162	-0.693147	0.595588	0.243007	244.694	202.633
163	-0.693147	0.599265	0.253347	244.694	202.128
164	-0.693147	0.602941	0.26112	244.694	201.749
165	-0.693147	0.606618	0.271509	244.694	201.241
166	-0.693147	0.610294	0.281926	244.694	200.733
167	-0.693147	0.613971	0.28976	244.694	200.35
168	-0.693147	0.617647	0.300232	244.694	199.839
169	-0.693147	0.621324	0.310738	244.694	199.326
170	-0.693147	0.625	0.318639	244.694	198.94
171	-0.693147	0.628676	0.329206	244.694	198.424
172	-0.693147	0.632353	0.33981	244.694	197.906

173	-0.693147	0.636029	0.350451	244.694	197.386
174	-0.693147	0.639706	0.358459	244.694	196.995
175	-0.693147	0.643382	0.369171	244.694	196.472
176	-0.693147	0.647059	0.379927	244.694	195.947
177	-0.693147	0.650735	0.388022	244.694	195.552
178	-0.693147	0.654412	0.398855	244.694	195.023
179	-0.693147	0.658088	0.409735	244.694	194.491
180	-0.693147	0.661765	0.417928	244.694	194.091
181	-0.693147	0.665441	0.428895	244.694	193.556
182	-0.693147	0.669118	0.439913	244.694	193.018
183	-0.693147	0.672794	0.448213	244.694	192.612
184	-0.693147	0.676471	0.459327	244.694	192.07
185	-0.693147	0.680147	0.470498	244.694	191.524
186	-0.693147	0.683824	0.478914	244.694	191.113
187	-0.693147	0.6875	0.490189	244.694	190.562
188	-0.693147	0.691176	0.501527	244.694	190.009
189	-0.693147	0.694853	0.510074	244.694	189.591
190	-0.693147	0.698529	0.521527	244.694	189.032
191	-0.693147	0.702206	0.533048	244.694	188.469
192	-0.693147	0.705882	0.541736	244.694	188.045
193	-0.693147	0.709559	0.553384	244.694	187.476
194	-0.693147	0.713235	0.565108	244.694	186.904
195	-0.693147	0.716912	0.573953	244.694	186.472
196	-0.693147	0.720588	0.585815	244.694	185.893
197	-0.693147	0.724265	0.597761	244.694	185.309
198	-0.693147	0.727941	0.606775	244.694	184.869
199	-0.693147	0.731618	0.618872	244.694	184.278
200	-0.693147	0.735294	0.631062	244.694	183.683
201	-0.693147	0.738971	0.640266	244.694	183.234
202	-0.693147	0.742647	0.652622	244.694	182.63
203	-0.693147	0.746324	0.665079	244.694	182.022
204	-0.693147	0.75	0.67449	244.694	181.562
205	-0.693147	0.753676	0.687131	244.694	180.945
206	-0.693147	0.757353	0.699883	244.694	180.322
207	-0.693147	0.761029	0.712751	244.694	179.694
208	-0.693147	0.764706	0.722479	244.694	179.219
209	-0.693147	0.768382	0.735557	244.694	178.58
210	-0.693147	0.772059	0.748762	244.694	177.935
211	-0.693147	0.775735	0.758753	244.694	177.448
212	-0.693147	0.779412	0.772193	244.694	176.791
213	-0.693147	0.783088	0.785774	244.694	176.128
214	-0.693147	0.786765	0.796056	244.694	175.626
215	-0.693147	0.790441	0.809896	244.694	174.95
216	-0.693147	0.794118	0.823893	244.694	174.267
217	-0.693147	0.797794	0.834498	244.694	173.749
218	-0.693147	0.801471	0.848786	244.694	173.051
219	-0.693147	0.805147	0.863249	244.694	172.345
220	-0.693147	0.808824	0.874218	244.694	171.809
221	-0.693147	0.8125	0.889006	244.694	171.087
222	-0.693147	0.816176	0.903992	244.694	170.355
223	-0.693147	0.819853	0.915365	244.694	169.8
224	-0.693147	0.823529	0.930718	244.694	169.05
225	-0.693147	0.827206	0.946291	244.694	168.289
226	-0.693147	0.830882	0.958125	244.694	167.712
227	-0.693147	0.834559	0.974114	244.694	166.931
228	-0.693147	0.838235	0.990356	244.694	166.138
229	-0.693147	0.841912	1.00271	244.694	165.534
230	-0.693147	0.845588	1.01943	244.694	164.718
231	-0.693147	0.849265	1.03643	244.694	163.888
232	-0.693147	0.852941	1.04939	244.694	163.255
233	-0.693147	0.856618	1.06694	244.694	162.398
234	-0.693147	0.860294	1.08482	244.694	161.524

235	-0.673345	0.863971	1.09847	246.46	160.858
236	-0.510826	0.867647	1.11699	260.951	159.954
237	-0.415515	0.871324	1.1359	269.45	159.03
238	-0.371064	0.875	1.15035	273.413	158.325
239	-0.274437	0.878676	1.17	282.029	157.365
240	-0.210721	0.882353	1.19012	287.711	156.383
241	0	0.886029	1.21073	306.5	155.376
242	0	0.889706	1.22653	306.5	154.605
243	0	0.893382	1.24809	306.5	153.552
244	0	0.897059	1.27024	306.5	152.47
245	0	0.900735	1.28727	306.5	151.638
246	0	0.904412	1.31058	306.5	150.5
247	0	0.908088	1.33462	306.5	149.326
248	0	0.911765	1.35317	306.5	148.42
249	0	0.915441	1.37866	306.5	147.176
250	0	0.919118	1.40507	306.5	145.886
251	0	0.922794	1.42554	306.5	144.886
252	0.0953102	0.926471	1.4538	314.998	143.506
253	0.693147	0.930147	1.48328	368.306	142.066
254	0.693147	0.933824	1.50626	368.306	140.944
255	0.693147	0.9375	1.5382	368.306	139.385
256	0.693147	0.941176	1.57179	368.306	137.744
257	0.693147	0.944853	1.59819	368.306	136.455
258	0.693147	0.948529	1.63524	368.306	134.646
259	0.741937	0.952206	1.67466	372.656	132.721
260	0.788457	0.955882	1.70604	376.804	131.188
261	0.832909	0.959559	1.75069	380.768	129.008
262	1.09861	0.963235	1.79912	404.46	126.643
263	1.16315	0.966912	1.83843	410.214	124.724
264	1.38629	0.970588	1.8957	430.111	121.927
265	1.38629	0.974265	1.95996	430.111	118.789
266	1.58924	0.977941	2.01409	448.207	116.145
267	1.82455	0.981618	2.09693	469.189	112.1
268	1.90211	0.985294	2.19728	476.105	107.199
269	2.19722	0.988971	2.29036	502.419	102.654
270	2.30259	0.992647	2.45727	511.814	94.5032
271	2.48491	0.996324	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-4	1/16/1998	ND<-0.693147	120.5
	3/16/1999	ND<-0.693147	120.5
	9/23/1999	ND<-0.693147	120.5
	3/14/2000	ND<-0.693147	120.5
	9/23/2003	ND<-0.693147	120.5
	3/10/2004	ND<-0.693147	120.5
	10/12/2004	ND<-0.693147	120.5
	4/1/2005	ND<-0.693147	120.5
	10/26/2005	ND<-0.693147	120.5
	6/19/2006	ND<0 J	120.5
	11/18/2006	ND<0 J	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<0 J	120.5
	11/20/2008	0	250
	11/16/2009	0.0953102	252
	6/30/2010	ND<-2.07944 U	120.5
	11/17/2010	-0.210721 J	249
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	0	251
	5/16/2012	-0.415515 J	246
	11/16/2012	-0.510826 J	245

Rank Sum = 3421
Rank Mean = 155.5

Background Rank Sum = 3421
Background Rank Mean = 155.5

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	3/14/2000	ND<-0.693147	120.5
	9/23/2003	ND<-0.693147	120.5
	3/10/2004	ND<-0.693147	120.5
	10/12/2004	ND<-0.693147	120.5
	4/1/2005	ND<-0.693147	120.5
	10/26/2005	ND<-0.693147	120.5
	6/19/2006	0.693147	253
	11/18/2006	2.19722	269
	6/2/2007	0.693147	254
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	1.38629	264
	11/20/2008	0.693147	255
	11/16/2009	1.58924	266
	6/30/2010	ND<-2.07944 U	120.5
	11/17/2010	ND<-2.07944 U	120.5
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	2.30259	270
	5/16/2012	1.90211	268

	11/16/2012	1.82455	267

Rank Sum = 3571
Rank Mean = 187.947

LMW-11	3/14/2000	ND<-0.693147	120.5
	9/23/2003	ND<-0.693147	120.5
	3/10/2004	ND<-0.693147	120.5
	10/12/2004	ND<-0.693147	120.5
	4/1/2005	ND<-0.693147	120.5
	10/26/2005	ND<-0.693147	120.5
	6/19/2006	ND<-0.693147	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5

Rank Sum = 1325.5
Rank Mean = 120.5

LMW-12	3/14/2000	ND<-0.693147	120.5
	9/23/2003	ND<-0.693147	120.5
	3/10/2004	ND<-0.693147	120.5
	10/12/2004	ND<-0.693147	120.5
	4/1/2005	ND<-0.693147	120.5
	10/26/2005	ND<-0.693147	120.5
	6/19/2006	ND<-0.693147	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5

Rank Sum = 1325.5
Rank Mean = 120.5

LMW-13	3/14/2000	ND<-0.693147	120.5
	9/23/2003	ND<-0.693147	120.5
	3/10/2004	ND<-0.693147	120.5
	10/12/2004	ND<-0.693147	120.5
	4/1/2005	ND<-0.693147	120.5
	10/26/2005	ND<-0.693147	120.5
	6/19/2006	ND<-0.693147	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5

Rank Sum = 1325.5
Rank Mean = 120.5

LMW-14R	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5
	6/30/2010	ND<-2.07944 U	120.5
	11/17/2010	ND<-2.07944 U	120.5
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	ND<-2.07944 U	120.5
	5/16/2012	ND<-2.07944 U	120.5
	11/16/2012	ND<-2.07944 U	120.5

Rank Sum = 1205
Rank Mean = 120.5

LMW-15R	11/18/2006	ND<-0.693147	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5

	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5
	11/16/2009	ND<-2.07944 U	120.5
	11/16/2009	ND<-2.07944 U	120.5
	11/16/2009	ND<-2.07944 U	120.5
	6/30/2010	ND<-2.07944 U	120.5
	11/17/2010	ND<-2.07944 U	120.5
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	ND<-2.07944 U	120.5
	5/16/2012	ND<-2.07944 U	120.5
	11/16/2012	ND<-2.07944 U	120.5

Rank Sum = 2048.5
Rank Mean = 120.5

LMW-16	11/18/2006	ND<-0.693147	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5
	11/16/2009	ND<-2.07944 U	120.5
	6/30/2010	ND<-2.07944 U	120.5
	11/17/2010	ND<-2.07944 U	120.5
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	ND<-2.07944 U	120.5
	5/16/2012	ND<-2.07944 U	120.5
	11/16/2012	ND<-2.07944 U	120.5

Rank Sum = 1446
Rank Mean = 120.5

LMW-3	11/19/1996	ND<-0.693147	120.5
	3/24/1997	ND<-0.693147	120.5
	1/16/1998	ND<-0.693147	120.5
	3/16/1999	ND<-0.693147	120.5
	9/23/1999	ND<-0.693147	120.5
	3/14/2000	ND<-0.693147	120.5
	9/23/2003	ND<-0.693147	120.5
	3/10/2004	ND<-0.693147	120.5
	10/12/2004	ND<-0.693147	120.5
	4/1/2005	ND<-0.693147	120.5
	10/26/2005	ND<-0.693147	120.5
	6/19/2006	ND<-0.693147	120.5
	11/18/2006	ND<-0.693147	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<0 J	120.5
	11/20/2008	ND<0 J	120.5
	11/16/2009	-0.891598 J	242
	6/30/2010	ND<-2.07944 U	120.5
	11/17/2010	ND<-2.07944 U	120.5
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	ND<-2.07944 U	120.5
	5/16/2012	-1.17118 J	241
	11/16/2012	-0.673345 J	244

Rank Sum = 3257.5
Rank Mean = 135.729

LMW-3S	11/18/2006	2.48491	271
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	0.693147	256

	5/20/2008	ND<0 J	120.5
	11/20/2008	0.693147	257
	11/16/2009	0.788457	260
	6/30/2010	1.38629	265
	11/17/2010	0.832909	261
	7/6/2011	-0.274437 J	248
	11/22/2011	ND<-2.07944 U	120.5
	5/16/2012	0.741937	259
	11/16/2012	1.16315	263

Rank Sum = 2701.5
Rank Mean = 225.125

LMW-6	1/16/1998	ND<-0.693147	120.5
	3/16/1999	ND<-0.693147	120.5
	9/23/1999	ND<-0.693147	120.5
	3/14/2000	ND<-0.693147	120.5
	9/23/2003	ND<-0.693147	120.5
	3/10/2004	ND<-0.693147	120.5
	10/12/2004	ND<-0.693147	120.5
	4/1/2005	ND<-0.693147	120.5
	10/26/2005	ND<-0.693147	120.5
	6/19/2006	ND<0 J	120.5
	11/18/2006	0.693147	258
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<0 J	120.5
	11/20/2008	ND<0 J	120.5
	11/16/2009	ND<-2.07944 U	120.5
	6/30/2010	ND<-2.07944 U	120.5
	11/17/2010	ND<-2.07944 U	120.5
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	ND<-2.07944 U	120.5
	5/16/2012	-0.371064 J	247
	11/16/2012	-0.755023 J	243

Rank Sum = 3037.5
Rank Mean = 138.068

LMW-7	1/16/1998	ND<-0.693147	120.5
	3/16/1999	ND<-0.693147	120.5
	9/23/1999	ND<-0.693147	120.5
	3/14/2000	ND<-0.693147	120.5
	9/23/2003	ND<-0.693147	120.5
	3/10/2004	ND<-0.693147	120.5
	10/12/2004	ND<-0.693147	120.5
	4/1/2005	ND<-0.693147	120.5
	10/26/2005	ND<-0.693147	120.5
	6/19/2006	ND<-0.693147	120.5
	11/18/2006	ND<-0.693147	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5
	11/17/2010	ND<-2.07944 U	120.5
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	ND<-2.07944 U	120.5
	5/16/2012	ND<-2.07944 U	120.5
	11/16/2012	ND<-2.07944 U	120.5

Rank Sum = 2410
Rank Mean = 120.5

LMW-8	1/16/1998	ND<-0.693147	120.5
	3/16/1999	ND<-0.693147	120.5

	9/23/1999	ND<-0.693147	120.5
	3/14/2000	ND<-0.693147	120.5
	9/23/2003	ND<-0.693147	120.5
	3/10/2004	ND<-0.693147	120.5
	10/12/2004	ND<-0.693147	120.5
	4/1/2005	ND<-0.693147	120.5
	10/26/2005	ND<-0.693147	120.5
	6/19/2006	ND<-0.693147	120.5
	11/18/2006	ND<-0.693147	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5
	11/16/2009	ND<-2.07944 U	120.5
	6/30/2010	ND<-2.07944 U	120.5
	11/17/2010	ND<-2.07944 U	120.5
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	ND<-2.07944 U	120.5
	5/16/2012	ND<-2.07944 U	120.5
	11/16/2012	ND<-2.07944 U	120.5

Rank Sum = 2651
Rank Mean = 120.5

LMW-9	1/16/1998	ND<-0.693147	120.5
	3/16/1999	ND<-0.693147	120.5
	9/23/1999	ND<-0.693147	120.5
	3/14/2000	ND<-0.693147	120.5
	9/23/2003	ND<-0.693147	120.5
	3/10/2004	ND<-0.693147	120.5
	10/12/2004	ND<-0.693147	120.5
	4/1/2005	ND<-0.693147	120.5
	10/26/2005	ND<-0.693147	120.5
	6/19/2006	ND<-0.693147	120.5
	11/18/2006	ND<-0.693147	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5
	11/16/2009	ND<-2.07944 U	120.5
	6/30/2010	ND<-2.07944 U	120.5
	11/17/2010	ND<-2.07944 U	120.5
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	ND<-2.07944 U	120.5
	5/16/2012	ND<-2.07944 U	120.5
	11/16/2012	ND<-2.07944 U	120.5

Rank Sum = 2651
Rank Mean = 120.5

LMW-9D	11/18/2006	ND<-0.693147	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5
	11/16/2009	ND<-2.07944 U	120.5
	6/30/2010	ND<-2.07944 U	120.5
	11/17/2010	ND<-2.07944 U	120.5
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	ND<-2.07944 U	120.5
	5/16/2012	ND<-2.07944 U	120.5
	11/16/2012	ND<-2.07944 U	120.5

Rank Sum = 1446
Rank Mean = 120.5

LMW-9S	11/18/2006	ND<-0.693147	120.5
	6/2/2007	ND<-0.693147	120.5
	11/15/2007	ND<-0.693147	120.5
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5
	6/30/2010	ND<-2.07944 U	120.5
	11/17/2010	ND<-2.07944 U	120.5
	7/6/2011	ND<-2.07944 U	120.5
	11/22/2011	ND<-2.07944 U	120.5
	5/16/2012	ND<-2.07944 U	120.5
	11/16/2012	ND<-2.07944 U	120.5

Rank Sum = 1325.5
Rank Mean = 120.5

MW-5	1/16/1998	ND<-0.693147	120.5
	3/16/1999	ND<-0.693147	120.5
	9/23/1999	ND<-0.693147	120.5
	3/14/2000	ND<-0.693147	120.5
	9/23/2003	ND<-0.693147	120.5
	3/10/2004	ND<-0.693147	120.5
	10/12/2004	ND<-0.693147	120.5
	4/1/2005	ND<-0.693147	120.5
	10/26/2005	ND<-0.693147	120.5
	6/19/2006	ND<-0.693147	120.5
	11/15/2007	1.09861	262
	5/20/2008	ND<-0.693147	120.5
	11/20/2008	ND<-0.693147	120.5

Rank Sum = 1708
Rank Mean = 131.385

Calculation Results:

Kruskal-Wallis H Statistic = 31.5057
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 103.157
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
31.5057 > 26.2962 indicating a significant group difference at 5% significance level
103.157 > 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 155.5

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**187.947**	**32.4474**	**57.1026**
LMW-11	**120.5**	**-35**	**67.3289**
LMW-12	**120.5**	**-35**	**67.3289**
LMW-13	**120.5**	**-35**	**67.3289**
LMW-14R	**120.5**	**-35**	**69.537**
LMW-15R	**120.5**	**-35**	**58.8774**
LMW-16	**120.5**	**-35**	**65.4319**
LMW-3	**135.729**	**-19.7708**	**53.8163**
LMW-3S	**225.125**	**69.625**	**65.4319**
LMW-6	**138.068**	**-17.4318**	**54.9738**
LMW-7	**120.5**	**-35**	**56.3314**
LMW-8	**120.5**	**-35**	**54.9738**
LMW-9	**120.5**	**-35**	**54.9738**
LMW-9D	**120.5**	**-35**	**65.4319**
LMW-9S	**120.5**	**-35**	**67.3289**
MW-5	**131.385**	**-24.1154**	**63.7827**

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 155.5

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	187.947	32.4474	67.4469
LMW-11	120.5	-35	79.5257
LMW-12	120.5	-35	79.5257
LMW-13	120.5	-35	79.5257
LMW-14R	120.5	-35	82.1338
LMW-15R	120.5	-35	69.5432
LMW-16	120.5	-35	77.2851
LMW-3	135.729	-19.7708	63.5653
LMW-3S	225.125	69.625	77.2851
LMW-6	138.068	-17.4318	64.9324
LMW-7	120.5	-35	66.536
LMW-8	120.5	-35	64.9324
LMW-9	120.5	-35	64.9324
LMW-9D	120.5	-35	77.2851
LMW-9S	120.5	-35	79.5257
MW-5	131.385	-24.1154	75.3371

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		
0.693147	ND<-0.693147	1.38629 1	11		
ND<0 J	ND<-0.693147	0.693147 2	11		
0.693147	ND<-0.693147	1.38629 3	11		
0.788457	ND<-0.693147	1.4816 4	11		
1.38629	ND<-0.693147	2.07944 5	11		
0.832909	ND<-0.693147	1.52606 6	11		
-0.274437 J	ND<-0.693147	0.41871 7	11		
ND<-2.07944 U	ND<-0.693147	-1.386297	12		
0.741937	ND<-0.693147	1.43508 8	12		
1.16315	ND<-0.693147	1.8563 9	12		
ND<0 J	0.693147	-0.693147 9	13		
0.693147	0.693147	0 9	13		
0.788457	0.693147	0.0953102	10	13	
1.38629	0.693147	0.693147	11	13	
0.832909	0.693147	0.139762	12	13	
-0.274437 J	0.693147	-0.967584	12	14	
ND<-2.07944 U	0.693147	-2.7725912	15		
0.741937	0.693147	0.0487902	13	15	
1.16315	0.693147	0.470004	14	15	
0.693147	ND<0 J	0.693147 15	15		
0.788457	ND<0 J	0.788457 16	15		
1.38629	ND<0 J	1.38629 17	15		
0.832909	ND<0 J	0.832909 18	15		
-0.274437 J	ND<0 J	-0.274437 18	16		
ND<-2.07944 U	ND<0 J	-2.0794418	17		
0.741937	ND<0 J	0.741937 19	17		
1.16315	ND<0 J	1.16315 20	17		
0.788457	0.693147	0.0953102	21	17	
1.38629	0.693147	0.693147	22	17	
0.832909	0.693147	0.139762	23	17	
-0.274437 J	0.693147	-0.967584	23	18	
ND<-2.07944 U	0.693147	-2.7725923	19		
0.741937	0.693147	0.0487902	24	19	
1.16315	0.693147	0.470004	25	19	

1.38629	0.788457	0.597837	26	19
0.832909	0.788457	0.0444518	27	19
-0.274437 J	0.788457	-1.0628927	20	
ND<-2.07944 U	0.788457	-2.8679 27	21	
0.741937	0.788457	-0.0465227	22	
1.16315	0.788457	0.374693	28	22
0.832909	1.38629	-0.553385	28	23
-0.274437 J	1.38629	-1.6607328	24	
ND<-2.07944 U	1.38629	-3.4657428	25	
0.741937	1.38629	-0.644357	28	26
1.16315	1.38629	-0.223144	28	27
-0.274437 J	0.832909	-1.1073528	28	
ND<-2.07944 U	0.832909	-2.9123528	29	
0.741937	0.832909	-0.0909718	28	30
1.16315	0.832909	0.330242	29	30
ND<-2.07944 U	-0.274437 J	-1.805 29	31	
0.741937	-0.274437 J	1.01637 30	31	
1.16315	-0.274437 J	1.43759 31	31	
0.741937	ND<-2.07944 U	2.82138 32	31	
1.16315	ND<-2.07944 U	3.24259 33	31	
1.16315	0.741937	0.421213	34	31

S Statistic = 34 - 31 = 3

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

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 211.667
Z-Score = 0.137469
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)

|0.137469| <= 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 = -0.582966
Baseline Std Dev = 0.575017
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean	
11/18/2006	2.48491	4.33527	5.33527	
11/18/2006	2.48491	4.33527	5.33527	
6/2/2007	-0.693147	3.14366	-0.191614	
6/2/2007	-0.693147	3.14366	-0.191614	
11/15/2007	0.693147	4.36292	2.21926	
11/15/2007	0.693147	4.36292	2.21926	
5/20/2008	0	4.37675	1.01382	
5/20/2008	0	4.37675	1.01382	
11/20/2008	0.693147	5.59601	2.21926	
11/20/2008	0.693147	5.59601	2.21926	
11/16/2009	0.788457	6.98102	2.38501	
11/16/2009	0.788457	6.98102	2.38501	
6/30/2010	1.38629	9.40572	3.4247	
6/30/2010	1.38629	9.40572	3.4247	
11/17/2010	0.832909	10.868	2.46232	
11/17/2010	0.832909	10.868	2.46232	
7/6/2011	-0.274437	10.4046	0.536557	
7/6/2011	-0.274437	10.4046	0.536557	
11/22/2011	-2.07944	6.80211	-2.60249	
11/22/2011	-2.07944	6.80211	-2.60249	
5/16/2012	0.741937	8.10622	2.30411	
5/16/2012	0.741937	8.10622	2.30411	
11/16/2012	1.16315	10.1429	3.03664	
11/16/2012	1.16315	10.1429	3.03664	

Concentrations (ppb)

Parameter: Lead

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 183
Percent Non-Detects: 64.4366%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	12 (52.1739%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	15 (75%)	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

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-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		
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		
LMW-14R	11	5 (45.4545%)	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	
LMW-15R	18	10 (55.5556%)	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	ND<0.08 U		ND<0.08 U	
		11/16/2009	0.14 J	0.14 J		
		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
LMW-16	13	8 (61.5385%)	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
LMW-3	25	18 (72%)	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
LMW-3S	13	7 (53.8462%)	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
LMW-6	23	17 (73.913%)	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	
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-8	23	22 (95.6522%)	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
LMW-9	23	14 (60.8696%)	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
LMW-9D	13	2 (15.3846%)	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
LMW-9S	12	8 (66.6667%)	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
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

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 = 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	-2.120072	8.323	0
6	0	-2.033523	2.4582	0
7	0	-1.977373	6.3682	0
8	0	-1.911034	0.0203	0
9	0	-1.866294	3.5033	0
10	0	-1.811914	6.7863	0
11	0	-1.774384	9.9348	0
12	0.04	-1.727935	2.9205	-0.0691172
13	0.04	-1.6954	55.7949	-0.136933
14	0.04	-1.654635	8.5327	-0.203118
15	0.04	-1.625766	1.1758	-0.268149
16	0.04	-1.589276	3.7015	-0.331719
17	0.04	-1.563226	6.1452	-0.394248
18	0.04	-1.530076	8.4863	-0.455451
19	0.04	-1.506267	0.7551	-0.515701
20	0.04	-1.475797	2.9331	-0.574733
21	0.04	-1.4538	75.0466	-0.632885
22	0.04	-1.425547	7.0788	-0.689907
23	0.04	-1.405077	9.053	-0.74611
24	0.04	-1.378668	0.9537	-0.801256
25	0.04	-1.359468	2.8019	-0.855635
26	0.04	-1.334628	4.5831	-0.90902
27	0.04	-1.316528	6.3163	-0.961681
28	0.04	-1.293038	7.9883	-1.0134
29	0.04	-1.275888	9.6161	-1.06444
30	0.04	-1.253579	1.1875	-1.11458
31	0.04	-1.237249	2.7183	-1.16407
32	0.04	-1.215969	4.1969	-1.21271
33	0.04	-1.200369	5.6377	-1.26072
34	0.04	-1.18	97.0301	-1.30792
35	0.04	-1.165059	8.3875	-1.35452
36	0.04	-1.1455	99.6996	-1.40034
37	0.04	-1.131131	00.979	-1.44559
38	0.04	-1.112321	02.216	-1.49008
39	0.04	-1.098471	03.423	-1.53402
40	0.04	-1.080321	04.59	-1.57723
41	0.04	-1.066941	05.728	-1.61991
42	0.04	-1.049391	06.83	-1.66189
43	0.04	-1.036431	07.904	-1.70334
44	0.04	-1.019431	08.943	-1.74412
45	0.04	-1.006871	09.957	-1.7844
46	0.04	-0.990356	110.938	-1.82401
47	0.04	-0.978151	11.894	-1.86314
48	0.04	-0.9621	112.82	-1.90162
49	0.04	-0.950222	113.723	-1.93963
50	0.04	-0.934591	14.596	-1.97701
51	0.04	-0.923014	115.448	-2.01393

52	0.04	-0.907769	116.272	-2.05024
53	0.04	-0.896473	117.076	-2.0861
54	0.04	-0.881587	117.853	-2.12137
55	0.04	-0.87055	118.611	-2.15619
56	0.08	-0.855996	119.344	-2.22467
57	0.084	-0.841621	120.052	-2.29536
58	0.093	-0.830953	120.743	-2.37264
59	0.094	-0.816874	121.41	-2.44943
60	0.097	-0.806422	122.06	-2.52765
61	0.099	-0.792618	122.689	-2.60612
62	0.099	-0.782366	123.301	-2.68357
63	0.1	-0.768821	123.892	-2.76046
64	0.11	-0.758753	124.467	-2.84392
65	0.11	-0.745449	125.023	-2.92592
66	0.11	-0.735557	125.564	-3.00683
67	0.11	-0.722479	126.086	-3.0863
68	0.12	-0.712751	126.594	-3.17183
69	0.12	-0.699883	127.084	-3.25582
70	0.12	-0.690309	127.561	-3.33866
71	0.13	-0.677639	128.02	-3.42675
72	0.13	-0.668209	128.466	-3.51362
73	0.14	-0.655726	128.896	-3.60542
74	0.14	-0.646431	129.314	-3.69592
75	0.15	-0.634124	129.716	-3.79104
76	0.16	-0.624956	130.107	-3.89103
77	0.16	-0.612813	130.482	-3.98908
78	0.16	-0.603765	130.847	-4.08568
79	0.16	-0.591776	131.197	-4.18037
80	0.17	-0.582841	131.537	-4.27945
81	0.17	-0.570999	131.863	-4.37652
82	0.17	-0.56217	132.179	-4.47209
83	0.19	-0.550465	132.482	-4.57668
84	0.21	-0.541736	132.775	-4.69044
85	0.22	-0.530162	133.056	-4.80708
86	0.23	-0.521527	133.328	-4.92703
87	0.25	-0.510074	133.589	-5.05455
88	0.26	-0.501527	133.84	-5.18494
89	0.26	-0.490189	134.08	-5.31239
90	0.26	-0.481728	134.312	-5.43764
91	0.29	-0.470498	134.534	-5.57409
92	0.3	-0.462114	134.747	-5.71272
93	0.3	-0.450985	134.951	-5.84802
94	0.3	-0.442676	135.147	-5.98082
95	0.31	-0.431644	135.333	-6.11463
96	0.36	-0.423405	135.512	-6.26705
97	0.37	-0.412463	135.682	-6.41967
98	0.4	-0.40429	135.846	-6.58138
99	0.44	-0.393433	136.001	-6.75449
100	0.46	-0.385321	136.149	-6.93174
101	0.48	-0.374544	136.289	-7.11152
102	0.49	-0.36649	136.424	-7.2911
103	0.5	-0.355788	136.55	-7.46899
104	0.5	-0.347787	136.671	-7.64289
105	0.5	-0.337155	136.785	-7.81147
106	0.5	-0.329206	136.893	-7.97607
107	0.5	-0.318639	136.995	-8.13539
108	0.5	-0.310738	137.091	-8.29076
109	0.5	-0.300232	137.182	-8.44087
110	0.5	-0.292375	137.267	-8.58706
111	0.5	-0.281926	137.346	-8.72802
112	0.5	-0.27411	137.422	-8.86508
113	0.5	-0.263715	137.491	-8.99694

114	0.5	-0.253347	137.555	-9.12361
115	0.5	-0.24559	137.616	-9.24641
116	0.5	-0.235269	137.671	-9.36404
117	0.5	-0.227545	137.723	-9.47781
118	0.5	-0.217267	137.77	-9.58645
119	0.5	-0.209575	137.814	-9.69123
120	0.5	-0.199336	137.854	-9.7909
121	0.5	-0.191671	137.89	-9.88674
122	0.5	-0.181468	137.923	-9.97747
123	0.5	-0.173829	137.954	-10.0644
124	0.5	-0.163659	137.98	-10.1462
125	0.5	-0.156042	138.005	-10.2242
126	0.5	-0.1459	138.026	-10.2972
127	0.5	-0.138305	138.045	-10.3663
128	0.5	-0.128189	138.062	-10.4304
129	0.5	-0.12061	138.076	-10.4907
130	0.5	-0.110516	138.088	-10.546
131	0.5	-0.102953	138.099	-10.5975
132	0.5	-0.0928787	138.108	-10.6439
133	0.5	-0.0853288	138.115	-10.6866
134	0.5	-0.0752698	138.12	-10.7242
135	0.5	-0.0677301	138.125	-10.7581
136	0.5	-0.0576847	138.128	-10.7869
137	0.5	-0.0501541	138.131	-10.812
138	0.5	-0.0401167	138.132	-10.8321
139	0.5	-0.0325917	138.134	-10.8483
140	0.5	-0.0225612	138.134	-10.8596
141	0.5	-0.0150408	138.134	-10.8672
142	0.5	-0.00501359	138.134	-10.8697
143	0.5	0.00501359	138.134	-10.8672
144	0.5	0.0150408	138.135	-10.8596
145	0.5	0.0225612	138.135	-10.8483
146	0.5	0.0325917	138.136	-10.8321
147	0.5	0.0401167	138.138	-10.812
148	0.5	0.0501541	138.14	-10.7869
149	0.5	0.0576847	138.144	-10.7581
150	0.5	0.0677301	138.148	-10.7242
151	0.5	0.0752698	138.154	-10.6866
152	0.5	0.0853288	138.161	-10.6439
153	0.5	0.0928787	138.17	-10.5975
154	0.5	0.102953	138.18	-10.546
155	0.5	0.110516	138.193	-10.4907
156	0.5	0.12061	138.207	-10.4304
157	0.5	0.128189	138.224	-10.3663
158	0.5	0.138305	138.243	-10.2972
159	0.5	0.1459	138.264	-10.2242
160	0.5	0.156042	138.288	-10.1462
161	0.5	0.163659	138.315	-10.0644
162	0.5	0.173829	138.345	-9.97747
163	0.5	0.181468	138.378	-9.88674
164	0.5	0.191671	138.415	-9.7909
165	0.5	0.199336	138.455	-9.69123
166	0.5	0.209575	138.499	-9.58645
167	0.5	0.217267	138.546	-9.47781
168	0.5	0.227545	138.598	-9.36404
169	0.5	0.235269	138.653	-9.24641
170	0.5	0.24559	138.713	-9.12361
171	0.5	0.253347	138.777	-8.99694
172	0.5	0.263715	138.847	-8.86508
173	0.5	0.27411	138.922	-8.72802
174	0.5	0.281926	139.002	-8.58706
175	0.5	0.292375	139.087	-8.44087

176	0.5	0.300232	139.177	-8.29076
177	0.5	0.310738	139.274	-8.13539
178	0.5	0.318639	139.375	-7.97607
179	0.5	0.329206	139.484	-7.81147
180	0.5	0.337155	139.597	-7.64289
181	0.5	0.347787	139.718	-7.46899
182	0.5	0.355788	139.845	-7.2911
183	0.5	0.36649	139.979	-7.10786
184	0.5	0.374544	140.12	-6.92058
185	0.5	0.385321	140.268	-6.72792
186	0.5	0.393433	140.423	-6.53121
187	0.5	0.40429	140.586	-6.32906
188	0.5	0.412463	140.756	-6.12283
189	0.5	0.423405	140.936	-5.91113
190	0.5	0.431644	141.122	-5.69531
191	0.5	0.442676	141.318	-5.47397
192	0.5	0.450985	141.521	-5.24848
193	0.5	0.462114	141.735	-5.01742
194	0.5	0.470498	141.956	-4.78217
195	0.5	0.481728	142.188	-4.54131
196	0.5	0.490189	142.429	-4.29621
197	0.5	0.501527	142.68	-4.04545
198	0.5	0.510074	142.94	-3.79041
199	0.5	0.521527	143.212	-3.52965
200	0.5	0.530162	143.493	-3.26457
201	0.5	0.541736	143.787	-2.9937
202	0.5	0.550465	144.09	-2.71847
203	0.5	0.56217	144.406	-2.43738
204	0.5	0.570999	144.732	-2.15188
205	0.5	0.582841	145.072	-1.86046
206	0.5	0.591776	145.422	-1.56457
207	0.5	0.603765	145.786	-1.26269
208	0.5	0.612813	146.162	-0.956284
209	0.5	0.624956	146.552	-0.643806
210	0.5	0.634124	146.955	-0.326744
211	0.5	0.646431	147.372	-0.00352868
212	0.5	0.655726	147.802	0.324335
213	0.5	0.668209	148.249	0.658439
214	0.5	0.677639	148.708	0.997259
215	0.5	0.690309	149.185	1.34241
216	0.5	0.699883	149.674	1.69235
217	0.5	0.712751	150.182	2.04873
218	0.5	0.722479	150.704	2.40997
219	0.5	0.735557	151.245	2.77775
220	0.5	0.745449	151.801	3.15047
221	0.5	0.758753	152.377	3.52985
222	0.5	0.768821	152.968	3.91426
223	0.5	0.782366	153.58	4.30544
224	0.5	0.792618	154.208	4.70175
225	0.5	0.806422	154.859	5.10496
226	0.5	0.816874	155.526	5.5134
227	0.5	0.830953	156.216	5.92888
228	0.5	0.841621	156.925	6.34969
229	0.5	0.855996	157.657	6.77768
230	0.5	0.87055	158.415	7.21296
231	0.51	0.881587	159.193	7.66257
232	0.55	0.896473	159.996	8.15563
233	0.57	0.907769	160.82	8.67306
234	0.58	0.923014	161.672	9.20841
235	0.71	0.93459	162.546	9.87196
236	0.86	0.950222	163.449	10.6892
237	0.88	0.9621	164.374	11.5358

238	0.89	0.97815	165.331	12.4064	
239	1	0.990356		166.312	13.3967
240	1	1.00687	167.326	14.4036	
241	1	1.01943	168.365	15.423	
242	1	1.03643	169.439	16.4594	
243	1	1.04939	170.54	17.5088	
244	1	1.06694	171.679	18.5758	
245	1	1.08032	172.846	19.6561	
246	1.7	1.09847	174.052	21.5235	
247	1.7	1.11232	175.29	23.4144	
248	2	1.13113	176.569	25.6767	
249	2	1.1455	177.881	27.9677	
250	2.5	1.16505	179.239	30.8803	
251	3	1.18	180.631	34.4203	
252	3	1.20036	182.072	38.0214	
253	3	1.21596	183.55	41.6693	
254	3	1.23724	185.081	45.381	
255	3	1.25357	186.653	49.1417	
256	3	1.27588	188.28	52.9693	
257	3	1.29303	189.952	56.8484	
258	3	1.31652	191.686	60.798	
259	3	1.33462	193.467	64.8018	
260	4	1.35946	195.315	70.2397	
261	4	1.37866	197.216	75.7543	
262	5	1.40507	199.19	82.7797	
263	8	1.42554	201.222	94.184	
264	9	1.4538	203.336	107.268	
265	11	1.47579	205.514	123.502	
266	13	1.50626	207.782	143.083	
267	14	1.53007	210.123	164.504	
268	16	1.56322	212.567	189.516	
269	16	1.58927	215.093	214.944	
270	17	1.62576	217.736	242.582	
271	18	1.65463	220.474	272.365	
272	18	1.6954	223.348	302.883	
273	19	1.72793	226.334	335.713	
274	21	1.77438	229.482	372.975	
275	22	1.81191	232.765	412.837	
276	25	1.86629	236.248	459.495	
277	27	1.91103	239.9	511.092	
278	35	1.97737	243.81	580.3	
279	44	2.03352	247.946	669.775	
280	46	2.12007	252.44	767.298	
281	49	2.19728	257.268	874.965	
282	50	2.32634	262.68	991.282	
283	52	2.45727	268.718	1119.06	
284	130	2.74777	276.269	1476.27	

Data Set Standard Deviation = 10.7104
Numerator = 2.17937e+006
Denominator = 8.96869e+006
W Statistic = 0.242998 = 2.17937e+006 / 8.96869e+006

5% Critical value of 0.976 exceeds 0.242998
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.242998
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 = 0.499052
0.499052 < 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		0.0175439	-2.120073	9	318.03
6	0		0.0210526	-2.033523	9	313.804
7	0		0.0245614	-1.977373	9	311.062
8	0		0.0280702	-1.911033	9	307.822
9	0		0.0315789	-1.866293	9	305.637
10	0		0.0350877	-1.811913	9	302.982
11	0		0.0385965	-1.774383	9	301.149
12	0.04		0.0421053	-1.727933	9.107	298.881
13	0.04		0.045614	-1.6954	39.107	297.292
14	0.04		0.0491228	-1.654633	9.107	295.301
15	0.04		0.0526316	-1.625763	9.107	293.891
16	0.04		0.0561404	-1.589273	9.107	292.109
17	0.04		0.0596491	-1.563223	9.107	290.837
18	0.04		0.0631579	-1.530073	9.107	289.218
19	0.04		0.0666667	-1.506263	9.107	288.056
20	0.04		0.0701754	-1.475793	9.107	286.568
21	0.04		0.0736842	-1.4538	39.107	285.494
22	0.04		0.077193	-1.425543	9.107	284.114
23	0.04		0.0807018	-1.405073	9.107	283.114
24	0.04		0.0842105	-1.378663	9.107	281.824
25	0.04		0.0877193	-1.359463	9.107	280.887
26	0.04		0.0912281	-1.334623	9.107	279.674
27	0.04		0.0947368	-1.316523	9.107	278.79
28	0.04		0.0982456	-1.293033	9.107	277.643
29	0.04		0.101754	-1.275883	9.107	276.805
30	0.04		0.105263	-1.253573	9.107	275.716
31	0.04		0.108772	-1.237243	9.107	274.918
32	0.04		0.112281	-1.215963	9.107	273.879
33	0.04		0.115789	-1.200363	9.107	273.118
34	0.04		0.119298	-1.18	39.107	272.123
35	0.04		0.122807	-1.165053	9.107	271.393
36	0.04		0.126316	-1.1455	39.107	270.439
37	0.04		0.129825	-1.131133	9.107	269.737
38	0.04		0.133333	-1.112323	9.107	268.818
39	0.04		0.136842	-1.098473	9.107	268.142
40	0.04		0.140351	-1.080323	9.107	267.256
41	0.04	0.14386	-1.066943	9.107	266.602	
42	0.04		0.147368	-1.049393	9.107	265.745
43	0.04		0.150877	-1.036433	9.107	265.112
44	0.04		0.154386	-1.019433	9.107	264.282
45	0.04		0.157895	-1.006873	9.107	263.669
46	0.04		0.161404	-0.990356	39.107	262.862
47	0.04		0.164912	-0.978153	9.107	262.266
48	0.04		0.168421	-0.9621	39.107	261.483

49	0.04	0.17193	-0.950222	39.107	260.903
50	0.04	0.175439	-0.934539	39.107	260.139
51	0.04	0.178947	-0.923014	39.107	259.574
52	0.04	0.182456	-0.907769	39.107	258.829
53	0.04	0.185965	-0.896473	39.107	258.278
54	0.04	0.189474	-0.881587	39.107	257.551
55	0.04	0.192982	-0.870553	39.107	257.012
56	0.08	0.196491	-0.855996	39.214	256.301
57	0.084	0.2	-0.841621	39.2247	255.599
58	0.093	0.203509	-0.830953	39.2488	255.078
59	0.094	0.207018	-0.816874	39.2514	254.391
60	0.097	0.210526	-0.806422	39.2595	253.88
61	0.099	0.214035	-0.792618	39.2648	253.206
62	0.099	0.217544	-0.782366	39.2648	252.706
63	0.1	0.221053	-0.768821	39.2675	252.044
64	0.11	0.224561	-0.758753	39.2942	251.552
65	0.11	0.22807	-0.745449	39.2942	250.903
66	0.11	0.231579	-0.735557	39.2942	250.42
67	0.11	0.235088	-0.722479	39.2942	249.781
68	0.12	0.238596	-0.712751	39.321	249.306
69	0.12	0.242105	-0.699883	39.321	248.678
70	0.12	0.245614	-0.690309	39.321	248.21
71	0.13	0.249123	-0.677639	39.3477	247.591
72	0.13	0.252632	-0.668209	39.3477	247.131
73	0.14	0.25614	-0.655726	39.3745	246.521
74	0.14	0.259649	-0.646431	39.3745	246.067
75	0.15	0.263158	-0.634124	39.4012	245.466
76	0.16	0.266667	-0.624956	39.428	245.019
77	0.16	0.270175	-0.612813	39.428	244.426
78	0.16	0.273684	-0.603765	39.428	243.984
79	0.16	0.277193	-0.591776	39.428	243.398
80	0.17	0.280702	-0.582841	39.4547	242.962
81	0.17	0.284211	-0.570999	39.4547	242.384
82	0.17	0.287719	-0.562173	39.4547	241.953
83	0.19	0.291228	-0.550465	39.5082	241.381
84	0.21	0.294737	-0.541736	39.5618	240.955
85	0.22	0.298246	-0.530162	39.5885	240.39
86	0.23	0.301754	-0.521527	39.6153	239.968
87	0.25	0.305263	-0.510074	39.6688	239.409
88	0.26	0.308772	-0.501527	39.6955	238.991
89	0.26	0.312281	-0.490189	39.6955	238.438
90	0.26	0.315789	-0.481728	39.6955	238.024
91	0.29	0.319298	-0.470498	39.7758	237.476
92	0.3	0.322807	-0.462114	39.8025	237.067
93	0.3	0.326316	-0.450985	39.8025	236.523
94	0.3	0.329825	-0.442676	39.8025	236.117
95	0.31	0.333333	-0.431644	39.8293	235.579
96	0.36	0.336842	-0.423405	39.963	235.176
97	0.37	0.340351	-0.412463	39.9898	234.642
98	0.4	0.34386	-0.404294	40.07	234.243
99	0.44	0.347368	-0.393433	40.177	233.713
100	0.46	0.350877	-0.385321	40.2305	233.317
101	0.48	0.354386	-0.374544	40.284	232.79
102	0.49	0.357895	-0.366494	40.3107	232.397
103	0.5	0.361404	-0.355788	40.3375	231.874
104	0.5	0.364912	-0.347787	40.3375	231.484
105	0.5	0.368421	-0.337155	40.3375	230.964
106	0.5	0.37193	-0.329206	40.3375	230.576
107	0.5	0.375439	-0.318639	40.3375	230.06
108	0.5	0.378947	-0.310738	40.3375	229.674
109	0.5	0.382456	-0.300232	40.3375	229.161
110	0.5	0.385965	-0.292375	40.3375	228.778

111	0.5	0.389474	-0.281926	40.3375	228.267
112	0.5	0.392982	-0.27411	40.3375	227.886
113	0.5	0.396491	-0.263715	40.3375	227.378
114	0.5	0.4	-0.253347	40.3375	226.872
115	0.5	0.403509	-0.24559	40.3375	226.493
116	0.5	0.407018	-0.235269	40.3375	225.989
117	0.5	0.410526	-0.227545	40.3375	225.612
118	0.5	0.414035	-0.217267	40.3375	225.11
119	0.5	0.417544	-0.209575	40.3375	224.734
120	0.5	0.421053	-0.199336	40.3375	224.234
121	0.5	0.424561	-0.191671	40.3375	223.86
122	0.5	0.42807	-0.181468	40.3375	223.362
123	0.5	0.431579	-0.173829	40.3375	222.989
124	0.5	0.435088	-0.163659	40.3375	222.492
125	0.5	0.438596	-0.156042	40.3375	222.12
126	0.5	0.442105	-0.1459	40.3375	221.625
127	0.5	0.445614	-0.138305	40.3375	221.254
128	0.5	0.449123	-0.128189	40.3375	220.76
129	0.5	0.452632	-0.12061	40.3375	220.39
130	0.5	0.45614	-0.110516	40.3375	219.897
131	0.5	0.459649	-0.102953	40.3375	219.528
132	0.5	0.463158	-0.0928787	40.3375	219.036
133	0.5	0.466667	-0.0853288	40.3375	218.667
134	0.5	0.470175	-0.0752698	40.3375	218.176
135	0.5	0.473684	-0.0677301	40.3375	217.807
136	0.5	0.477193	-0.0576847	40.3375	217.317
137	0.5	0.480702	-0.0501541	40.3375	216.949
138	0.5	0.484211	-0.0401167	40.3375	216.459
139	0.5	0.487719	-0.0325917	40.3375	216.092
140	0.5	0.491228	-0.0225612	40.3375	215.602
141	0.5	0.494737	-0.0150408	40.3375	215.234
142	0.5	0.498246	-0.00501359	40.3375	214.745
143	0.5	0.501754	0.00501359	40.3375	214.255
144	0.5	0.505263	0.0150408	40.3375	213.766
145	0.5	0.508772	0.0225612	40.3375	213.398
146	0.5	0.512281	0.0325917	40.3375	212.908
147	0.5	0.515789	0.0401167	40.3375	212.541
148	0.5	0.519298	0.0501541	40.3375	212.051
149	0.5	0.522807	0.0576847	40.3375	211.683
150	0.5	0.526316	0.0677301	40.3375	211.193
151	0.5	0.529825	0.0752698	40.3375	210.824
152	0.5	0.533333	0.0853288	40.3375	210.333
153	0.5	0.536842	0.0928787	40.3375	209.964
154	0.5	0.540351	0.102953	40.3375	209.472
155	0.5	0.54386	0.110516	40.3375	209.103
156	0.5	0.547368	0.12061	40.3375	208.61
157	0.5	0.550877	0.128189	40.3375	208.24
158	0.5	0.554386	0.138305	40.3375	207.746
159	0.5	0.557895	0.1459	40.3375	207.375
160	0.5	0.561404	0.156042	40.3375	206.88
161	0.5	0.564912	0.163659	40.3375	206.508
162	0.5	0.568421	0.173829	40.3375	206.011
163	0.5	0.57193	0.181468	40.3375	205.638
164	0.5	0.575439	0.191671	40.3375	205.14
165	0.5	0.578947	0.199336	40.3375	204.766
166	0.5	0.582456	0.209575	40.3375	204.266
167	0.5	0.585965	0.217267	40.3375	203.89
168	0.5	0.589474	0.227545	40.3375	203.388
169	0.5	0.592982	0.235269	40.3375	203.011
170	0.5	0.596491	0.24559	40.3375	202.507
171	0.5	0.6	0.253347	40.3375	202.128
172	0.5	0.603509	0.263715	40.3375	201.622

173	0.5	0.607018	0.27411	40.3375	201.114
174	0.5	0.610526	0.281926	40.3375	200.733
175	0.5	0.614035	0.292375	40.3375	200.222
176	0.5	0.617544	0.300232	40.3375	199.839
177	0.5	0.621053	0.310738	40.3375	199.326
178	0.5	0.624561	0.318639	40.3375	198.94
179	0.5	0.62807	0.329206	40.3375	198.424
180	0.5	0.631579	0.337155	40.3375	198.036
181	0.5	0.635088	0.347787	40.3375	197.516
182	0.5	0.638596	0.355788	40.3375	197.126
183	0.5	0.642105	0.36649	40.3375	196.603
184	0.5	0.645614	0.374544	40.3375	196.21
185	0.5	0.649123	0.385321	40.3375	195.683
186	0.5	0.652632	0.393433	40.3375	195.287
187	0.5	0.65614	0.40429	40.3375	194.757
188	0.5	0.659649	0.412463	40.3375	194.358
189	0.5	0.663158	0.423405	40.3375	193.824
190	0.5	0.666667	0.431644	40.3375	193.421
191	0.5	0.670175	0.442676	40.3375	192.883
192	0.5	0.673684	0.450985	40.3375	192.477
193	0.5	0.677193	0.462114	40.3375	191.933
194	0.5	0.680702	0.470498	40.3375	191.524
195	0.5	0.684211	0.481728	40.3375	190.976
196	0.5	0.687719	0.490189	40.3375	190.562
197	0.5	0.691228	0.501527	40.3375	190.009
198	0.5	0.694737	0.510074	40.3375	189.591
199	0.5	0.698246	0.521527	40.3375	189.032
200	0.5	0.701754	0.530162	40.3375	188.61
201	0.5	0.705263	0.541736	40.3375	188.045
202	0.5	0.708772	0.550465	40.3375	187.619
203	0.5	0.712281	0.56217	40.3375	187.047
204	0.5	0.715789	0.570999	40.3375	186.616
205	0.5	0.719298	0.582841	40.3375	186.038
206	0.5	0.722807	0.591776	40.3375	185.602
207	0.5	0.726316	0.603765	40.3375	185.016
208	0.5	0.729825	0.612813	40.3375	184.574
209	0.5	0.733333	0.624956	40.3375	183.981
210	0.5	0.736842	0.634124	40.3375	183.534
211	0.5	0.740351	0.646431	40.3375	182.933
212	0.5	0.74386	0.655726	40.3375	182.479
213	0.5	0.747368	0.668209	40.3375	181.869
214	0.5	0.750877	0.677639	40.3375	181.409
215	0.5	0.754386	0.690309	40.3375	180.79
216	0.5	0.757895	0.699883	40.3375	180.322
217	0.5	0.761404	0.712751	40.3375	179.694
218	0.5	0.764912	0.722479	40.3375	179.219
219	0.5	0.768421	0.735557	40.3375	178.58
220	0.5	0.77193	0.745449	40.3375	178.097
221	0.5	0.775439	0.758753	40.3375	177.448
222	0.5	0.778947	0.768821	40.3375	176.956
223	0.5	0.782456	0.782366	40.3375	176.294
224	0.5	0.785965	0.792618	40.3375	175.794
225	0.5	0.789474	0.806422	40.3375	175.12
226	0.5	0.792982	0.816874	40.3375	174.609
227	0.5	0.796491	0.830953	40.3375	173.922
228	0.5	0.8	0.841621	40.3375	173.401
229	0.5	0.803509	0.855996	40.3375	172.699
230	0.5	0.807018	0.87055	40.3375	171.988
231	0.51	0.810526	0.881587	40.3642	171.449
232	0.55	0.814035	0.896473	40.4712	170.722
233	0.57	0.817544	0.907769	40.5247	170.171
234	0.58	0.821053	0.923014	40.5515	169.426

235	0.71	0.824561	0.93459	40.8993	168.861	
236	0.86	0.82807	0.950222	41.3005	168.097	
237	0.88	0.831579	0.9621	41.354	167.517	
238	0.89	0.835088	0.97815	41.3807	166.734	
239	1	0.838596	0.990356	41.675	166.138	
240	1	0.842105	1.00687	41.675	165.331	
241	1	0.845614	1.01943	41.675	164.718	
242	1	0.849123	1.03643	41.675	163.888	
243	1	0.852632	1.04939	41.675	163.255	
244	1	0.85614	1.06694	41.675	162.398	
245	1	0.859649	1.08032	41.675	161.744	
246	1.7	0.863158	1.09847	43.5475	160.858	
247	1.7	0.866667	1.11232	43.5475	160.182	
248	2	0.870175	1.13113	44.35	159.263	
249	2	0.873684	1.1455	44.35	158.561	
250	2.5	0.877193	1.16505	45.6875	157.607	
251	3	0.880702	1.18	47.025	156.877	
252	3	0.884211	1.20036	47.025	155.882	
253	3	0.887719	1.21596	47.025	155.121	
254	3	0.891228	1.23724	47.025	154.082	
255	3	0.894737	1.25357	47.025	153.284	
256	3	0.898246	1.27588	47.025	152.195	
257	3	0.901754	1.29303	47.025	151.357	
258	3	0.905263	1.31652	47.025	150.21	
259	3	0.908772	1.33462	47.025	149.326	
260	4	0.912281	1.35946	49.7	148.113	
261	4	0.915789	1.37866	49.7	147.176	
262	5	0.919298	1.40507	52.375	145.886	
263	8	0.922807	1.42554	60.4	144.886	
264	9	0.926316	1.4538	63.075	143.506	
265	11	0.929825	1.47579	68.425	142.432	
266	13	0.933333	1.50626	73.775	140.944	
267	14	0.936842	1.53007	76.45	139.782	
268	16	0.940351	1.56322	81.8	138.163	
269	16	0.94386	1.58927	81.8	136.891	
270	17	0.947368	1.62576	84.475	135.109	
271	18	0.950877	1.65463	87.15	133.699	
272	18	0.954386	1.6954	87.15	131.708	
273	19	0.957895	1.72793	89.825	130.119	
274	21	0.961404	1.77438	95.175	127.851	
275	22	0.964912	1.81191	97.85	126.018	
276	25	0.968421	1.86629	105.875	123.363	
277	27	0.97193	1.91103	111.225	121.178	
278	35	0.975439	1.97737	132.625	117.938	
279	44	0.978947	2.03352	156.7	115.196	
280	46	0.982456	2.12007	162.05	110.97	
281	49	0.985965	2.19728	170.075	107.199	
282	50	0.989474	2.32634	172.75	100.897	
283	52	0.992982	2.45727	178.1	94.5032	
284	130	0.996491	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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.21888	-2.74777	7.55021	8.84472
2	-3.21888	-2.45727	13.5884	16.7544
3	-3.21888	-2.32634	19.0003	24.2426
4	-3.21888	-2.19728	23.8283	31.3154
5	-3.21888	-2.12007	28.323	38.1396
6	-3.21888	-2.03352	32.4582	44.6853
7	-3.21888	-1.97737	36.3682	51.0502
8	-3.21888	-1.91103	40.0203	57.2015
9	-3.21888	-1.86629	43.5033	63.2089
10	-3.21888	-1.81191	46.7863	69.0412
11	-3.21888	-1.77438	49.9348	74.7527
12	-3.21888	-1.72793	52.9205	80.3147
13	-3.21888	-1.6954	55.7949	85.772
14	-3.21888	-1.65463	58.5327	91.098
15	-3.21888	-1.62576	61.1758	96.3312
16	-3.21888	-1.58927	63.7015	101.447
17	-3.21888	-1.56322	66.1452	106.479
18	-3.21888	-1.53007	68.4863	111.404
19	-3.21888	-1.50626	70.7551	116.252
20	-3.21888	-1.47579	72.9331	121.003
21	-3.21888	-1.4538	75.0466	125.682
22	-3.21888	-1.42554	77.0788	130.271
23	-3.21888	-1.40507	79.053	134.794
24	-3.21888	-1.37866	80.9537	139.231
25	-3.21888	-1.35946	82.8019	143.607
26	-3.21888	-1.33462	84.5831	147.903
27	-3.21888	-1.31652	86.3163	152.141
28	-3.21888	-1.29303	87.9883	156.303
29	-3.21888	-1.27588	89.6161	160.41
30	-3.21888	-1.25357	91.1875	164.445
31	-3.21888	-1.23724	92.7183	168.428
32	-3.21888	-1.21596	94.1969	172.342
33	-3.21888	-1.20036	95.6377	176.205
34	-3.21888	-1.18	97.0301	180.004
35	-3.21888	-1.16505	98.3875	183.754
36	-3.21888	-1.1455	99.6996	187.441
37	-3.21888	-1.13113	100.979	191.082
38	-3.21888	-1.11232	102.216	194.662
39	-3.21888	-1.09847	103.423	198.198
40	-3.21888	-1.08032	104.59	201.676
41	-3.21888	-1.06694	105.728	205.11
42	-3.21888	-1.04939	106.83	208.488
43	-3.21888	-1.03643	107.904	211.824
44	-3.21888	-1.01943	108.943	215.105
45	-2.52573	-1.00687	109.957	217.649
46	-2.47694	-0.990356	110.938	220.102
47	-2.37516	-0.97815	111.894	222.425
48	-2.36446	-0.9621	112.82	224.7
49	-2.33304	-0.950222	113.723	226.917
50	-2.31264	-0.93459	114.596	229.078
51	-2.31264	-0.923014	115.448	231.213

52	-2.30259	-0.907769	116.272	233.303
53	-2.20727	-0.896473	117.076	235.282
54	-2.20727	-0.881587	117.853	237.227
55	-2.20727	-0.87055	118.611	239.149
56	-2.20727	-0.855996	119.344	241.038
57	-2.12026	-0.841621	120.052	242.823
58	-2.12026	-0.830953	120.743	244.585
59	-2.12026	-0.816874	121.41	246.317
60	-2.04022	-0.806422	122.06	247.962
61	-2.04022	-0.792618	122.689	249.579
62	-1.96611	-0.782366	123.301	251.117
63	-1.96611	-0.768821	123.892	252.629
64	-1.89712	-0.758753	124.467	254.068
65	-1.83258	-0.745449	125.023	255.434
66	-1.83258	-0.735557	125.564	256.782
67	-1.83258	-0.722479	126.086	258.106
68	-1.83258	-0.712751	126.594	259.413
69	-1.77196	-0.699883	127.084	260.653
70	-1.77196	-0.690309	127.561	261.876
71	-1.77196	-0.677639	128.02	263.077
72	-1.66073	-0.668209	128.466	264.186
73	-1.56065	-0.655726	128.896	265.21
74	-1.51413	-0.646431	129.314	266.189
75	-1.46968	-0.634124	129.716	267.12
76	-1.38629	-0.624956	130.107	267.987
77	-1.34707	-0.612813	130.482	268.812
78	-1.34707	-0.603765	130.847	269.626
79	-1.34707	-0.591776	131.197	270.423
80	-1.23787	-0.582841	131.537	271.144
81	-1.20397	-0.570999	131.863	271.832
82	-1.20397	-0.56217	132.179	272.509
83	-1.20397	-0.550465	132.482	273.171
84	-1.17118	-0.541736	132.775	273.806
85	-1.02165	-0.530162	133.056	274.347
86	-0.994252	-0.521527	133.328	274.866
87	-0.916291	-0.510074	133.589	275.333
88	-0.820981	-0.501527	133.84	275.745
89	-0.776529	-0.490189	134.08	276.126
90	-0.733969	-0.481728	134.312	276.479
91	-0.71335	-0.470498	134.534	276.815
92	-0.693147	-0.462114	134.747	277.135
93	-0.693147	-0.450985	134.951	277.448
94	-0.693147	-0.442676	135.147	277.755
95	-0.693147	-0.431644	135.333	278.054
96	-0.693147	-0.423405	135.512	278.347
97	-0.693147	-0.412463	135.682	278.633
98	-0.693147	-0.40429	135.846	278.914
99	-0.693147	-0.393433	136.001	279.186
100	-0.693147	-0.385321	136.149	279.453
101	-0.693147	-0.374544	136.289	279.713
102	-0.693147	-0.36649	136.424	279.967
103	-0.693147	-0.355788	136.55	280.214
104	-0.693147	-0.347787	136.671	280.455
105	-0.693147	-0.337155	136.785	280.688
106	-0.693147	-0.329206	136.893	280.917
107	-0.693147	-0.318639	136.995	281.137
108	-0.693147	-0.310738	137.091	281.353
109	-0.693147	-0.300232	137.182	281.561
110	-0.693147	-0.292375	137.267	281.764
111	-0.693147	-0.281926	137.346	281.959
112	-0.693147	-0.27411	137.422	282.149
113	-0.693147	-0.263715	137.491	282.332

114	-0.693147	-0.253347	137.555	282.507
115	-0.693147	-0.24559	137.616	282.678
116	-0.693147	-0.235269	137.671	282.841
117	-0.693147	-0.227545	137.723	282.998
118	-0.693147	-0.217267	137.77	283.149
119	-0.693147	-0.209575	137.814	283.294
120	-0.693147	-0.199336	137.854	283.432
121	-0.693147	-0.191671	137.89	283.565
122	-0.693147	-0.181468	137.923	283.691
123	-0.693147	-0.173829	137.954	283.812
124	-0.693147	-0.163659	137.98	283.925
125	-0.693147	-0.156042	138.005	284.033
126	-0.693147	-0.1459	138.026	284.134
127	-0.693147	-0.138305	138.045	284.23
128	-0.693147	-0.128189	138.062	284.319
129	-0.693147	-0.12061	138.076	284.403
130	-0.693147	-0.110516	138.088	284.479
131	-0.693147	-0.102953	138.099	284.551
132	-0.693147	-0.0928787	138.108	284.615
133	-0.693147	-0.0853288	138.115	284.674
134	-0.693147	-0.0752698	138.12	284.726
135	-0.693147	-0.0677301	138.125	284.773
136	-0.693147	-0.0576847	138.128	284.813
137	-0.693147	-0.0501541	138.131	284.848
138	-0.693147	-0.0401167	138.132	284.876
139	-0.693147	-0.0325917	138.134	284.898
140	-0.693147	-0.0225612	138.134	284.914
141	-0.693147	-0.0150408	138.134	284.924
142	-0.693147	-0.00501359	138.134	284.928
143	-0.693147	0.00501359	138.134	284.924
144	-0.693147	0.0150408	138.135	284.914
145	-0.693147	0.0225612	138.135	284.898
146	-0.693147	0.0325917	138.136	284.876
147	-0.693147	0.0401167	138.138	284.848
148	-0.693147	0.0501541	138.14	284.813
149	-0.693147	0.0576847	138.144	284.773
150	-0.693147	0.0677301	138.148	284.726
151	-0.693147	0.0752698	138.154	284.674
152	-0.693147	0.0853288	138.161	284.615
153	-0.693147	0.0928787	138.17	284.551
154	-0.693147	0.102953	138.18	284.479
155	-0.693147	0.110516	138.193	284.403
156	-0.693147	0.12061	138.207	284.319
157	-0.693147	0.128189	138.224	284.23
158	-0.693147	0.138305	138.243	284.134
159	-0.693147	0.1459	138.264	284.033
160	-0.693147	0.156042	138.288	283.925
161	-0.693147	0.163659	138.315	283.812
162	-0.693147	0.173829	138.345	283.691
163	-0.693147	0.181468	138.378	283.565
164	-0.693147	0.191671	138.415	283.432
165	-0.693147	0.199336	138.455	283.294
166	-0.693147	0.209575	138.499	283.149
167	-0.693147	0.217267	138.546	282.998
168	-0.693147	0.227545	138.598	282.841
169	-0.693147	0.235269	138.653	282.678
170	-0.693147	0.24559	138.713	282.507
171	-0.693147	0.253347	138.777	282.332
172	-0.693147	0.263715	138.847	282.149
173	-0.693147	0.27411	138.922	281.959
174	-0.693147	0.281926	139.002	281.764
175	-0.693147	0.292375	139.087	281.561

176	-0.693147	0.300232	139.177	281.353
177	-0.693147	0.310738	139.274	281.137
178	-0.693147	0.318639	139.375	280.917
179	-0.693147	0.329206	139.484	280.688
180	-0.693147	0.337155	139.597	280.455
181	-0.693147	0.347787	139.718	280.214
182	-0.693147	0.355788	139.845	279.967
183	-0.693147	0.36649	139.979	279.713
184	-0.693147	0.374544	140.12	279.453
185	-0.693147	0.385321	140.268	279.186
186	-0.693147	0.393433	140.423	278.914
187	-0.693147	0.40429	140.586	278.633
188	-0.693147	0.412463	140.756	278.347
189	-0.693147	0.423405	140.936	278.054
190	-0.693147	0.431644	141.122	277.755
191	-0.693147	0.442676	141.318	277.448
192	-0.693147	0.450985	141.521	277.135
193	-0.693147	0.462114	141.735	276.815
194	-0.693147	0.470498	141.956	276.489
195	-0.693147	0.481728	142.188	276.155
196	-0.693147	0.490189	142.429	275.815
197	-0.693147	0.501527	142.68	275.468
198	-0.693147	0.510074	142.94	275.114
199	-0.693147	0.521527	143.212	274.752
200	-0.693147	0.530162	143.493	274.385
201	-0.693147	0.541736	143.787	274.009
202	-0.693147	0.550465	144.09	273.628
203	-0.693147	0.56217	144.406	273.238
204	-0.693147	0.570999	144.732	272.842
205	-0.693147	0.582841	145.072	272.438
206	-0.693147	0.591776	145.422	272.028
207	-0.693147	0.603765	145.786	271.61
208	-0.693147	0.612813	146.162	271.185
209	-0.693147	0.624956	146.552	270.752
210	-0.693147	0.634124	146.955	270.312
211	-0.693147	0.646431	147.372	269.864
212	-0.693147	0.655726	147.802	269.41
213	-0.693147	0.668209	148.249	268.947
214	-0.693147	0.677639	148.708	268.477
215	-0.693147	0.690309	149.185	267.998
216	-0.693147	0.699883	149.674	267.513
217	-0.693147	0.712751	150.182	267.019
218	-0.693147	0.722479	150.704	266.518
219	-0.693147	0.735557	151.245	266.009
220	-0.673345	0.745449	151.801	265.507
221	-0.597837	0.758753	152.377	265.053
222	-0.562119	0.768821	152.968	264.621
223	-0.544727	0.782366	153.58	264.195
224	-0.342490	0.792618	154.208	263.923
225	-0.150823	0.806422	154.859	263.802
226	-0.127833	0.816874	155.526	263.697
227	-0.116534	0.830953	156.216	263.6
228	0	0.841621	156.925	263.6
229	0	0.855996	157.657	263.6
230	0	0.87055	158.415	263.6
231	0	0.881587	159.193	263.6
232	0	0.896473	159.996	263.6
233	0	0.907769	160.82	263.6
234	0	0.923014	161.672	263.6
235	0	0.93459	162.546	263.6
236	0	0.950222	163.449	263.6
237	0	0.9621	164.374	263.6

238	0	0.97815	165.331	263.6	
239	0	0.990356		166.312	263.6
240	0	1.00687	167.326	263.6	
241	0	1.01943	168.365	263.6	
242	0	1.03643	169.439	263.6	
243	0	1.04939	170.54	263.6	
244	0	1.06694	171.679	263.6	
245	0	1.08032	172.846	263.6	
246	0.530628		1.09847	174.052	264.183
247	0.530628		1.11232	175.29	264.773
248	0.693147		1.13113	176.569	265.557
249	0.693147		1.1455	177.881	266.351
250	0.916291		1.16505	179.239	267.419
251	1.09861	1.18	180.631	268.715	
252	1.09861	1.20036	182.072	270.034	
253	1.09861	1.21596	183.55	271.37	
254	1.09861	1.23724	185.081	272.729	
255	1.09861	1.25357	186.653	274.106	
256	1.09861	1.27588	188.28	275.508	
257	1.09861	1.29303	189.952	276.929	
258	1.09861	1.31652	191.686	278.375	
259	1.09861	1.33462	193.467	279.841	
260	1.38629	1.35946	195.315	281.726	
261	1.38629	1.37866	197.216	283.637	
262	1.60944	1.40507	199.19	285.898	
263	2.07944	1.42554	201.222	288.863	
264	2.19722	1.4538	203.336	292.057	
265	2.3979	1.47579	205.514	295.596	
266	2.56495	1.50626	207.782	299.459	
267	2.63906	1.53007	210.123	303.497	
268	2.77259	1.56322	212.567	307.831	
269	2.77259	1.58927	215.093	312.238	
270	2.83321	1.62576	217.736	316.844	
271	2.89037	1.65463	220.474	321.626	
272	2.89037	1.6954	223.348	326.527	
273	2.94444	1.72793	226.334	331.615	
274	3.04452	1.77438	229.482	337.017	
275	3.09104	1.81191	232.765	342.617	
276	3.21888	1.86629	236.248	348.625	
277	3.29584	1.91103	239.9	354.923	
278	3.55535	1.97737	243.81	361.953	
279	3.78419	2.03352	247.946	369.649	
280	3.82864	2.12007	252.44	377.766	
281	3.89182	2.19728	257.268	386.317	
282	3.91202	2.32634	262.68	395.418	
283	3.95124	2.45727	268.718	405.127	
284	4.86753	2.74777	276.269	418.502	

Data Set Standard Deviation = 1.61301
Numerator = 175144
Denominator = 203420
W Statistic = 0.860995 = 175144 / 203420

5% Critical value of 0.976 exceeds 0.860995
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.860995
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 = 0.92808
0.92808 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-3.218880	0.00350877	-2.747778	5.4335	348.683
2	-3.218880	0.00701754	-2.457278	5.4335	334.497
3	-3.218880	0.0105263	-2.326348	5.4335	328.103
4	-3.218880	0.0140351	-2.197288	5.4335	321.801
5	-3.218880	0.0175439	-2.120078	5.4335	318.03
6	-3.218880	0.0210526	-2.033528	5.4335	313.804
7	-3.218880	0.0245614	-1.977378	5.4335	311.062
8	-3.218880	0.0280702	-1.911038	5.4335	307.822
9	-3.218880	0.0315789	-1.866298	5.4335	305.637
10	-3.218880	0.0350877	-1.811918	5.4335	302.982
11	-3.218880	0.0385965	-1.774388	5.4335	301.149
12	-3.218880	0.0421053	-1.727938	5.4335	298.881
13	-3.218880	0.045614	-1.6954	85.4335	297.292
14	-3.218880	0.0491228	-1.654638	5.4335	295.301
15	-3.218880	0.0526316	-1.625768	5.4335	293.891
16	-3.218880	0.0561404	-1.589278	5.4335	292.109
17	-3.218880	0.0596491	-1.563228	5.4335	290.837
18	-3.218880	0.0631579	-1.530078	5.4335	289.218
19	-3.218880	0.0666667	-1.506268	5.4335	288.056
20	-3.218880	0.0701754	-1.475798	5.4335	286.568
21	-3.218880	0.0736842	-1.4538	85.4335	285.494
22	-3.218880	0.077193	-1.425548	5.4335	284.114
23	-3.218880	0.0807018	-1.405078	5.4335	283.114
24	-3.218880	0.0842105	-1.378668	5.4335	281.824
25	-3.218880	0.0877193	-1.359468	5.4335	280.887
26	-3.218880	0.0912281	-1.334628	5.4335	279.674
27	-3.218880	0.0947368	-1.316528	5.4335	278.79
28	-3.218880	0.0982456	-1.293038	5.4335	277.643
29	-3.218880	0.101754	-1.275888	5.4335	276.805
30	-3.218880	0.105263	-1.253578	5.4335	275.716
31	-3.218880	0.108772	-1.237248	5.4335	274.918
32	-3.218880	0.112281	-1.215968	5.4335	273.879
33	-3.218880	0.115789	-1.200368	5.4335	273.118
34	-3.218880	0.119298	-1.18	85.4335	272.123
35	-3.218880	0.122807	-1.165058	5.4335	271.393
36	-3.218880	0.126316	-1.1455	85.4335	270.439
37	-3.218880	0.129825	-1.131138	5.4335	269.737
38	-3.218880	0.133333	-1.112328	5.4335	268.818
39	-3.218880	0.136842	-1.098478	5.4335	268.142
40	-3.218880	0.140351	-1.080328	5.4335	267.256
41	-3.218880	0.14386	-1.066948	5.4335	266.602
42	-3.218880	0.147368	-1.049398	5.4335	265.745
43	-3.218880	0.150877	-1.036438	5.4335	265.112
44	-3.218880	0.154386	-1.019438	5.4335	264.282
45	-2.525730	0.157895	-1.00687	126.637	263.669
46	-2.476940	0.161404	-0.990356	129.538	262.862
47	-2.375160	0.164912	-0.97815	135.588	262.266
48	-2.364460	0.168421	-0.9621	136.224	261.483

49	-2.33304	0.17193	-0.950222	138.091	260.903
50	-2.31264	0.175439	-0.93459	139.304	260.139
51	-2.31264	0.178947	-0.923014	139.304	259.574
52	-2.30259	0.182456	-0.907769	139.902	258.829
53	-2.20727	0.185965	-0.896473	145.568	258.278
54	-2.20727	0.189474	-0.881587	145.568	257.551
55	-2.20727	0.192982	-0.87055	145.568	257.012
56	-2.20727	0.196491	-0.855996	145.568	256.301
57	-2.12026	0.2	-0.841621	150.74	255.599
58	-2.12026	0.203509	-0.830953	150.74	255.078
59	-2.12026	0.207018	-0.816874	150.74	254.391
60	-2.04022	0.210526	-0.806422	155.498	253.88
61	-2.04022	0.214035	-0.792618	155.498	253.206
62	-1.96611	0.217544	-0.782366	159.903	252.706
63	-1.96611	0.221053	-0.768821	159.903	252.044
64	-1.89712	0.224561	-0.758753	164.005	251.552
65	-1.83258	0.22807	-0.745449	167.841	250.903
66	-1.83258	0.231579	-0.735557	167.841	250.42
67	-1.83258	0.235088	-0.722479	167.841	249.781
68	-1.83258	0.238596	-0.712751	167.841	249.306
69	-1.77196	0.242105	-0.699883	171.445	248.678
70	-1.77196	0.245614	-0.690309	171.445	248.21
71	-1.77196	0.249123	-0.677639	171.445	247.591
72	-1.66073	0.252632	-0.668209	178.057	247.131
73	-1.56065	0.25614	-0.655726	184.006	246.521
74	-1.51413	0.259649	-0.646431	186.771	246.067
75	-1.46968	0.263158	-0.634124	189.414	245.466
76	-1.38629	0.266667	-0.624956	194.37	245.019
77	-1.34707	0.270175	-0.612813	196.702	244.426
78	-1.34707	0.273684	-0.603765	196.702	243.984
79	-1.34707	0.277193	-0.591776	196.702	243.398
80	-1.23787	0.280702	-0.582841	203.193	242.962
81	-1.20397	0.284211	-0.570999	205.208	242.384
82	-1.20397	0.287719	-0.56217	205.208	241.953
83	-1.20397	0.291228	-0.550465	205.208	241.381
84	-1.17118	0.294737	-0.541736	207.157	240.955
85	-1.02165	0.298246	-0.530162	216.046	240.39
86	-0.994252	0.301754	-0.521527	217.675	239.968
87	-0.916291	0.305263	-0.510074	222.309	239.409
88	-0.820981	0.308772	-0.501527	227.975	238.991
89	-0.776529	0.312281	-0.490189	230.617	238.438
90	-0.733969	0.315789	-0.481728	233.147	238.024
91	-0.71335	0.319298	-0.470498	234.373	237.476
92	-0.693147	0.322807	-0.462114	235.574	237.067
93	-0.693147	0.326316	-0.450985	235.574	236.523
94	-0.693147	0.329825	-0.442676	235.574	236.117
95	-0.693147	0.333333	-0.431644	235.574	235.579
96	-0.693147	0.336842	-0.423405	235.574	235.176
97	-0.693147	0.340351	-0.412463	235.574	234.642
98	-0.693147	0.34386	-0.40429	235.574	234.243
99	-0.693147	0.347368	-0.393433	235.574	233.713
100	-0.693147	0.350877	-0.385321	235.574	233.317
101	-0.693147	0.354386	-0.374544	235.574	232.79
102	-0.693147	0.357895	-0.36649	235.574	232.397
103	-0.693147	0.361404	-0.355788	235.574	231.874
104	-0.693147	0.364912	-0.347787	235.574	231.484
105	-0.693147	0.368421	-0.337155	235.574	230.964
106	-0.693147	0.37193	-0.329206	235.574	230.576
107	-0.693147	0.375439	-0.318639	235.574	230.06
108	-0.693147	0.378947	-0.310738	235.574	229.674
109	-0.693147	0.382456	-0.300232	235.574	229.161
110	-0.693147	0.385965	-0.292375	235.574	228.778

111	-0.693147	0.389474	-0.281926	235.574	228.267
112	-0.693147	0.392982	-0.27411	235.574	227.886
113	-0.693147	0.396491	-0.263715	235.574	227.378
114	-0.693147	0.4	-0.253347	235.574	226.872
115	-0.693147	0.403509	-0.24559	235.574	226.493
116	-0.693147	0.407018	-0.235269	235.574	225.989
117	-0.693147	0.410526	-0.227545	235.574	225.612
118	-0.693147	0.414035	-0.217267	235.574	225.11
119	-0.693147	0.417544	-0.209575	235.574	224.734
120	-0.693147	0.421053	-0.199336	235.574	224.234
121	-0.693147	0.424561	-0.191671	235.574	223.86
122	-0.693147	0.42807	-0.181468	235.574	223.362
123	-0.693147	0.431579	-0.173829	235.574	222.989
124	-0.693147	0.435088	-0.163659	235.574	222.492
125	-0.693147	0.438596	-0.156042	235.574	222.12
126	-0.693147	0.442105	-0.1459	235.574	221.625
127	-0.693147	0.445614	-0.138305	235.574	221.254
128	-0.693147	0.449123	-0.128189	235.574	220.76
129	-0.693147	0.452632	-0.12061	235.574	220.39
130	-0.693147	0.45614	-0.110516	235.574	219.897
131	-0.693147	0.459649	-0.102953	235.574	219.528
132	-0.693147	0.463158	-0.0928787	235.574	219.036
133	-0.693147	0.466667	-0.0853288	235.574	218.667
134	-0.693147	0.470175	-0.0752698	235.574	218.176
135	-0.693147	0.473684	-0.0677301	235.574	217.807
136	-0.693147	0.477193	-0.0576847	235.574	217.317
137	-0.693147	0.480702	-0.0501541	235.574	216.949
138	-0.693147	0.484211	-0.0401167	235.574	216.459
139	-0.693147	0.487719	-0.0325917	235.574	216.092
140	-0.693147	0.491228	-0.0225612	235.574	215.602
141	-0.693147	0.494737	-0.0150408	235.574	215.234
142	-0.693147	0.498246	-0.00501359	235.574	214.745
143	-0.693147	0.501754	0.00501359	235.574	214.255
144	-0.693147	0.505263	0.0150408	235.574	213.766
145	-0.693147	0.508772	0.0225612	235.574	213.398
146	-0.693147	0.512281	0.0325917	235.574	212.908
147	-0.693147	0.515789	0.0401167	235.574	212.541
148	-0.693147	0.519298	0.0501541	235.574	212.051
149	-0.693147	0.522807	0.0576847	235.574	211.683
150	-0.693147	0.526316	0.0677301	235.574	211.193
151	-0.693147	0.529825	0.0752698	235.574	210.824
152	-0.693147	0.533333	0.0853288	235.574	210.333
153	-0.693147	0.536842	0.0928787	235.574	209.964
154	-0.693147	0.540351	0.102953	235.574	209.472
155	-0.693147	0.54386	0.110516	235.574	209.103
156	-0.693147	0.547368	0.12061	235.574	208.61
157	-0.693147	0.550877	0.128189	235.574	208.24
158	-0.693147	0.554386	0.138305	235.574	207.746
159	-0.693147	0.557895	0.1459	235.574	207.375
160	-0.693147	0.561404	0.156042	235.574	206.88
161	-0.693147	0.564912	0.163659	235.574	206.508
162	-0.693147	0.568421	0.173829	235.574	206.011
163	-0.693147	0.57193	0.181468	235.574	205.638
164	-0.693147	0.575439	0.191671	235.574	205.14
165	-0.693147	0.578947	0.199336	235.574	204.766
166	-0.693147	0.582456	0.209575	235.574	204.266
167	-0.693147	0.585965	0.217267	235.574	203.89
168	-0.693147	0.589474	0.227545	235.574	203.388
169	-0.693147	0.592982	0.235269	235.574	203.011
170	-0.693147	0.596491	0.24559	235.574	202.507
171	-0.693147	0.6	0.253347	235.574	202.128
172	-0.693147	0.603509	0.263715	235.574	201.622

173	-0.693147	0.607018	0.27411	235.574	201.114
174	-0.693147	0.610526	0.281926	235.574	200.733
175	-0.693147	0.614035	0.292375	235.574	200.222
176	-0.693147	0.617544	0.300232	235.574	199.839
177	-0.693147	0.621053	0.310738	235.574	199.326
178	-0.693147	0.624561	0.318639	235.574	198.94
179	-0.693147	0.62807	0.329206	235.574	198.424
180	-0.693147	0.631579	0.337155	235.574	198.036
181	-0.693147	0.635088	0.347787	235.574	197.516
182	-0.693147	0.638596	0.355788	235.574	197.126
183	-0.693147	0.642105	0.36649	235.574	196.603
184	-0.693147	0.645614	0.374544	235.574	196.21
185	-0.693147	0.649123	0.385321	235.574	195.683
186	-0.693147	0.652632	0.393433	235.574	195.287
187	-0.693147	0.65614	0.40429	235.574	194.757
188	-0.693147	0.659649	0.412463	235.574	194.358
189	-0.693147	0.663158	0.423405	235.574	193.824
190	-0.693147	0.666667	0.431644	235.574	193.421
191	-0.693147	0.670175	0.442676	235.574	192.883
192	-0.693147	0.673684	0.450985	235.574	192.477
193	-0.693147	0.677193	0.462114	235.574	191.933
194	-0.693147	0.680702	0.470498	235.574	191.524
195	-0.693147	0.684211	0.481728	235.574	190.976
196	-0.693147	0.687719	0.490189	235.574	190.562
197	-0.693147	0.691228	0.501527	235.574	190.009
198	-0.693147	0.694737	0.510074	235.574	189.591
199	-0.693147	0.698246	0.521527	235.574	189.032
200	-0.693147	0.701754	0.530162	235.574	188.61
201	-0.693147	0.705263	0.541736	235.574	188.045
202	-0.693147	0.708772	0.550465	235.574	187.619
203	-0.693147	0.712281	0.56217	235.574	187.047
204	-0.693147	0.715789	0.570999	235.574	186.616
205	-0.693147	0.719298	0.582841	235.574	186.038
206	-0.693147	0.722807	0.591776	235.574	185.602
207	-0.693147	0.726316	0.603765	235.574	185.016
208	-0.693147	0.729825	0.612813	235.574	184.574
209	-0.693147	0.733333	0.624956	235.574	183.981
210	-0.693147	0.736842	0.634124	235.574	183.534
211	-0.693147	0.740351	0.646431	235.574	182.933
212	-0.693147	0.74386	0.655726	235.574	182.479
213	-0.693147	0.747368	0.668209	235.574	181.869
214	-0.693147	0.750877	0.677639	235.574	181.409
215	-0.693147	0.754386	0.690309	235.574	180.79
216	-0.693147	0.757895	0.699883	235.574	180.322
217	-0.693147	0.761404	0.712751	235.574	179.694
218	-0.693147	0.764912	0.722479	235.574	179.219
219	-0.693147	0.768421	0.735557	235.574	178.58
220	-0.673345	0.77193	0.745449	236.751	178.097
221	-0.597837	0.775439	0.758753	241.24	177.448
222	-0.562119	0.778947	0.768821	243.363	176.956
223	-0.544727	0.782456	0.782366	244.397	176.294
224	-0.342490	0.785965	0.792618	256.419	175.794
225	-0.150823	0.789474	0.806422	267.812	175.12
226	-0.127833	0.792982	0.816874	269.179	174.609
227	-0.116534	0.796491	0.830953	269.85	173.922
228	0	0.8	0.841621	276.778	173.401
229	0	0.803509	0.855996	276.778	172.699
230	0	0.807018	0.87055	276.778	171.988
231	0	0.810526	0.881587	276.778	171.449
232	0	0.814035	0.896473	276.778	170.722
233	0	0.817544	0.907769	276.778	170.171
234	0	0.821053	0.923014	276.778	169.426

235	0	0.824561		0.93459	276.778	168.861
236	0	0.82807	0.950222		276.778	168.097
237	0	0.831579		0.9621	276.778	167.517
238	0	0.835088		0.97815	276.778	166.734
239	0	0.838596		0.990356		276.778 166.138
240	0	0.842105		1.00687	276.778	165.331
241	0	0.845614		1.01943	276.778	164.718
242	0	0.849123		1.03643	276.778	163.888
243	0	0.852632		1.04939	276.778	163.255
244	0	0.85614	1.06694	276.778	162.398	
245	0	0.859649		1.08032	276.778	161.744
246	0.530628		0.863158		1.09847	308.321 160.858
247	0.530628		0.866667		1.11232	308.321 160.182
248	0.693147		0.870175		1.13113	317.982 159.263
249	0.693147		0.873684		1.1455	317.982 158.561
250	0.916291		0.877193		1.16505	331.246 157.607
251	1.09861	0.880702		1.18	342.084	156.877
252	1.09861	0.884211		1.20036	342.084	155.882
253	1.09861	0.887719		1.21596	342.084	155.121
254	1.09861	0.891228		1.23724	342.084	154.082
255	1.09861	0.894737		1.25357	342.084	153.284
256	1.09861	0.898246		1.27588	342.084	152.195
257	1.09861	0.901754		1.29303	342.084	151.357
258	1.09861	0.905263		1.31652	342.084	150.21
259	1.09861	0.908772		1.33462	342.084	149.326
260	1.38629	0.912281		1.35946	359.185	148.113
261	1.38629	0.915789		1.37866	359.185	147.176
262	1.60944	0.919298		1.40507	372.45	145.886
263	2.07944	0.922807		1.42554	400.389	144.886
264	2.19722	0.926316		1.4538	407.391	143.506
265	2.3979	0.929825		1.47579	419.319	142.432
266	2.56495	0.933333		1.50626	429.25	140.944
267	2.63906	0.936842		1.53007	433.655	139.782
268	2.77259	0.940351		1.56322	441.593	138.163
269	2.77259	0.94386	1.58927	441.593	136.891	
270	2.83321	0.947368		1.62576	445.197	135.109
271	2.89037	0.950877		1.65463	448.594	133.699
272	2.89037	0.954386		1.6954	448.594	131.708
273	2.94444	0.957895		1.72793	451.808	130.119
274	3.04452	0.961404		1.77438	457.758	127.851
275	3.09104	0.964912		1.81191	460.523	126.018
276	3.21888	0.968421		1.86629	468.122	123.363
277	3.29584	0.97193	1.91103	472.697	121.178	
278	3.55535	0.975439		1.97737	488.123	117.938
279	3.78419	0.978947		2.03352	501.727	115.196
280	3.82864	0.982456		2.12007	504.369	110.97
281	3.89182	0.985965		2.19728	508.125	107.199
282	3.91202	0.989474		2.32634	509.326	100.897
283	3.95124	0.992982		2.45727	511.657	94.5032
284	4.86753	0.996491		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-4	1/16/1998	2.83321	270
	3/16/1999	ND<-0.693147	92
	9/23/1999	2.19722	264
	3/14/2000	ND<-0.693147	92
	9/23/2003	ND<-0.693147	92
	3/10/2004	3.21888	276
	10/12/2004	ND<-0.693147	92
	4/1/2005	ND<-0.693147	92
	10/26/2005	ND<-0.693147	92
	6/19/2006	ND<-0.693147	92
	11/18/2006	ND<0 J	92
	6/2/2007	1.09861	251
	11/15/2007	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92
	6/11/2009	-2.04022 J	199
	11/16/2009	-1.20397 J	220
	6/30/2010	-1.66073 J	211
	11/17/2010	-1.83258 J	204
	7/6/2011	-1.34707 J	216
	11/22/2011	-2.04022 J	200
	5/16/2012	-1.20397	221
	11/16/2012	ND<-3.21888 U	92

Rank Sum = 3636
Rank Mean = 158.087

Background Rank Sum = 3636
Background Rank Mean = 158.087

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	3/14/2000	3.91202	282
	9/23/2003	ND<-0.693147	92
	3/10/2004	4.86753	284
	10/12/2004	ND<-0.693147	92
	4/1/2005	ND<-0.693147	92
	10/26/2005	ND<-0.693147	92
	6/19/2006	ND<0 J	92
	11/18/2006	ND<-0.693147	92
	6/2/2007	1.38629	260
	11/15/2007	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<0 J	92
	6/11/2009	ND<-3.21888 U	92
	11/16/2009	ND<-3.21888 U	92
	6/30/2010	-2.20727 J	192
	11/17/2010	ND<-3.21888 U	92
	7/6/2011	ND<-3.21888 U	92

	11/22/2011	ND<-3.21888 U	92
	5/16/2012	-1.38629 J	215
	11/16/2012	ND<-3.21888 U	92

Rank Sum = 2613
Rank Mean = 130.65

LMW-11	3/14/2000	2.94444	273
	9/23/2003	ND<-0.693147	92
	3/10/2004	3.82864	280
	10/12/2004	ND<-0.693147	92
	4/1/2005	ND<-0.693147	92
	10/26/2005	ND<-0.693147	92
	6/19/2006	ND<-0.693147	92
	6/2/2007	ND<-0.693147	92
	11/15/2007	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92

Rank Sum = 1381
Rank Mean = 125.545

LMW-12	3/14/2000	3.89182	281
	9/23/2003	ND<-0.693147	92
	3/10/2004	2.89037	271
	10/12/2004	ND<-0.693147	92
	4/1/2005	ND<-0.693147	92
	10/26/2005	ND<-0.693147	92
	6/19/2006	ND<-0.693147	92
	6/2/2007	ND<-0.693147	92
	11/15/2007	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92

Rank Sum = 1380
Rank Mean = 125.455

LMW-13	3/14/2000	3.78419	279
	9/23/2003	ND<-0.693147	92
	3/10/2004	3.55535	278
	10/12/2004	ND<-0.693147	92
	4/1/2005	ND<-0.693147	92
	10/26/2005	ND<-0.693147	92
	6/19/2006	ND<-0.693147	92
	6/2/2007	ND<-0.693147	92
	11/15/2007	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92

Rank Sum = 1385
Rank Mean = 125.909

LMW-14R	6/2/2007	1.38629	261
	11/15/2007	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92
	6/11/2009	-1.51413 J	213
	6/30/2010	-2.30259 J	191
	11/17/2010	-2.20727 J	193
	7/6/2011	-1.20397	222
	11/22/2011	ND<-3.21888 U	92
	5/16/2012	-2.12026 J	196
	11/16/2012	ND<-3.21888 U	92

Rank Sum = 1736
Rank Mean = 157.818

LMW-15R	11/18/2006	ND<0 J	92
	6/2/2007	ND<-0.693147	92
	11/15/2007	ND<-0.693147	92
	11/15/2007	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92
	11/20/2008	0	239
	6/11/2009	-0.116534	238
	11/16/2009	-1.56065 J	212
	11/16/2009	ND<-3.21888 U	92
	11/16/2009	-1.96611 J	201
	6/30/2010	-2.52573 J	184
	11/17/2010	-1.83258 J	205
	7/6/2011	-0.733969	229
	11/22/2011	ND<-3.21888 U	92
	5/16/2012	-1.89712 J	203
	11/16/2012	ND<-3.21888 U	92

Rank Sum = 2631
Rank Mean = 146.167

LMW-16	11/18/2006	ND<0 J	92
	6/2/2007	1.60944	262
	11/15/2007	0.693147	248
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92
	6/11/2009	ND<-3.21888 U	92
	11/16/2009	-2.31264 J	189
	6/30/2010	-1.34707 J	217
	11/17/2010	ND<-3.21888 U	92
	7/6/2011	-1.83258 J	206
	11/22/2011	ND<-3.21888 U	92
	5/16/2012	ND<-3.21888 U	92
	11/16/2012	ND<-3.21888 U	92

Rank Sum = 1858
Rank Mean = 142.923

LMW-3	11/19/1996	ND<-0.693147	92
	3/24/1997	2.3979	265
	1/16/1998	ND<-0.693147	92
	3/16/1999	ND<-0.693147	92
	9/23/1999	2.07944	263
	3/14/2000	ND<-0.693147	92
	9/23/2003	ND<-0.693147	92
	3/10/2004	ND<-0.693147	92
	10/12/2004	ND<-0.693147	92
	4/1/2005	ND<-0.693147	92
	10/26/2005	ND<-0.693147	92
	6/19/2006	ND<-0.693147	92
	11/18/2006	ND<-0.693147	92
	6/2/2007	ND<-0.693147	92
	11/15/2007	0	240
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92
	6/11/2009	ND<-3.21888 U	92
	11/16/2009	-0.994252	225
	6/30/2010	-1.77196 J	208
	11/17/2010	-0.673345	231
	7/6/2011	-2.12026 J	197
	11/22/2011	ND<-3.21888 U	92
	5/16/2012	ND<-3.21888 U	92
	11/16/2012	ND<-3.21888 U	92

Rank Sum = 3285
Rank Mean = 131.4

LMW-3S	11/18/2006	ND<-0.693147	92
	6/2/2007	1.09861	252
	11/15/2007	0	241
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92
	6/11/2009	-0.544727	234
	11/16/2009	ND<-3.21888 U	92
	6/30/2010	-2.37516 J	186
	11/17/2010	0.530628	246
	7/6/2011	0.530628	247
	11/22/2011	ND<-3.21888 U	92
	5/16/2012	ND<-3.21888 U	92
	11/16/2012	ND<-3.21888 U	92

Rank Sum = 2050
Rank Mean = 157.692

LMW-6	1/16/1998	ND<-0.693147	92
	3/16/1999	ND<-0.693147	92
	9/23/1999	2.77259	268
	3/14/2000	ND<-0.693147	92
	9/23/2003	ND<-0.693147	92
	3/10/2004	ND<-0.693147	92
	10/12/2004	ND<-0.693147	92
	4/1/2005	ND<-0.693147	92
	10/26/2005	ND<-0.693147	92
	6/19/2006	ND<-0.693147	92
	11/18/2006	ND<-0.693147	92
	6/2/2007	ND<0 J	92
	11/15/2007	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92
	6/11/2009	-2.47694 J	185
	11/16/2009	ND<-3.21888 U	92
	6/30/2010	-1.96611 J	202
	11/17/2010	-1.77196 J	209
	7/6/2011	-2.31264 J	190
	11/22/2011	ND<-3.21888 U	92
	5/16/2012	ND<-3.21888 U	92
	11/16/2012	-2.20727 J	194

Rank Sum = 2812
Rank Mean = 122.261

LMW-7	1/16/1998	ND<-0.693147	92
	3/16/1999	ND<-0.693147	92
	9/23/1999	2.89037	272
	3/14/2000	2.77259	269
	9/23/2003	ND<-0.693147	92
	3/10/2004	ND<-0.693147	92
	10/12/2004	ND<-0.693147	92
	4/1/2005	1.09861	253
	10/26/2005	1.09861	254
	6/19/2006	1.09861	255
	11/18/2006	0	242
	6/2/2007	1.09861	256
	11/15/2007	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92
	6/11/2009	-0.127833	237
	11/17/2010	-0.150823	236

	7/6/2011	0.916291	250
	11/22/2011	-1.02165	224
	5/16/2012	-0.916291	226
	11/16/2012	-1.34707 J	218

Rank Sum = 3928
Rank Mean = 187.048

LMW-8	1/16/1998	ND<-0.693147	92
	3/16/1999	ND<-0.693147	92
	9/23/1999	3.04452	274
	3/14/2000	ND<-0.693147	92
	9/23/2003	ND<-0.693147	92
	3/10/2004	ND<-0.693147	92
	10/12/2004	ND<-0.693147	92
	4/1/2005	ND<-0.693147	92
	10/26/2005	ND<-0.693147	92
	6/19/2006	ND<-0.693147	92
	11/18/2006	ND<-0.693147	92
	6/2/2007	ND<-0.693147	92
	11/15/2007	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92
	6/11/2009	ND<-3.21888 U	92
	11/16/2009	ND<-3.21888 U	92
	6/30/2010	ND<-3.21888 U	92
	11/17/2010	ND<-3.21888 U	92
	7/6/2011	ND<-3.21888 U	92
	11/22/2011	ND<-3.21888 U	92
	5/16/2012	ND<-3.21888 U	92
	11/16/2012	ND<-3.21888 U	92

Rank Sum = 2298
Rank Mean = 99.913

LMW-9	1/16/1998	ND<-0.693147	92
	3/16/1999	ND<-0.693147	92
	9/23/1999	3.29584	277
	3/14/2000	ND<-0.693147	92
	9/23/2003	ND<-0.693147	92
	3/10/2004	2.56495	266
	10/12/2004	ND<-0.693147	92
	4/1/2005	ND<0 J	92
	10/26/2005	ND<-0.693147	92
	6/19/2006	ND<0 J	92
	11/18/2006	ND<0 J	92
	6/2/2007	0	243
	11/15/2007	ND<-0.693147	92
	5/20/2008	0	244
	11/20/2008	ND<-0.693147	92
	6/11/2009	-1.77196 J	210
	11/16/2009	ND<-3.21888 U	92
	6/30/2010	-1.83258 J	207
	11/17/2010	-0.562119	233
	7/6/2011	ND<-3.21888 U	92
	11/22/2011	ND<-3.21888 U	92
	5/16/2012	-2.33304 J	188
	11/16/2012	-2.36446 J	187

Rank Sum = 3343
Rank Mean = 145.348

LMW-9D	11/18/2006	1.09861	257
	6/2/2007	1.09861	258
	11/15/2007	ND<0 J	92

	5/20/2008	1.09861	259
	11/20/2008	ND<-0.693147	92
	6/11/2009	-0.34249	235
	11/16/2009	-1.17118	223
	6/30/2010	-1.46968 J	214
	11/17/2010	-0.820981	227
	7/6/2011	-0.776529	228
	11/22/2011	-2.12026 J	198
	5/16/2012	-0.71335	230
	11/16/2012	-1.23787 J	219

Rank Sum = 2732
Rank Mean = 210.154

LMW-9S	11/18/2006	ND<-0.693147	92
	6/2/2007	0.693147	249
	11/15/2007	0	245
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<0 J	92
	6/11/2009	ND<-3.21888 U	92
	6/30/2010	-2.20727 J	195
	11/17/2010	-0.597837	232
	7/6/2011	ND<-3.21888 U	92
	11/22/2011	ND<-3.21888 U	92
	5/16/2012	ND<-3.21888 U	92
	11/16/2012	ND<-3.21888 U	92

Rank Sum = 1657
Rank Mean = 138.083

MW-5	1/16/1998	ND<-0.693147	92
	3/16/1999	ND<-0.693147	92
	9/23/1999	2.63906	267
	3/14/2000	3.09104	275
	9/23/2003	ND<-0.693147	92
	3/10/2004	3.95124	283
	10/12/2004	ND<-0.693147	92
	4/1/2005	ND<-0.693147	92
	10/26/2005	ND<-0.693147	92
	6/19/2006	ND<-0.693147	92
	11/15/2007	ND<-0.693147	92
	5/20/2008	ND<-0.693147	92
	11/20/2008	ND<-0.693147	92

Rank Sum = 1745
Rank Mean = 134.231

Calculation Results:

Kruskal-Wallis H Statistic = 26.7323
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 36.4966
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
26.7323 > 26.2962 indicating a significant group difference at 5% significance level
36.4966 > 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 158.087

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**130.65**	**-27.437**	**58.4144**
LMW-11	**125.545**	**-32.541**	**57 0.0396**
LMW-12	**125.455**	**-32.632**	**47 0.0396**
LMW-13	**125.909**	**-32.177**	**97 0.0396**

LMW-14R	157.818	-0.268775	70.0396	
LMW-15R	146.167	-11.920360.1252		
LMW-16	142.923	-15.163966.2949		
LMW-3	131.4	-26.687	55.2015	
LMW-3S	157.692	-0.394649	66.2949	
LMW-6	122.261	-35.826156.3398		
LMW-7	187.048	28.9607	57.6657	
LMW-8	99.913	-58.173956.3398		
LMW-9	145.348	-12.739156.3398		
LMW-9D	210.154	52.0669	66.2949	
LMW-9S	138.083	-20.003668.0368		
MW-5	134.231	-23.856266.2949		

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 158.087

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	130.65	-27.437	68.9963
LMW-11	125.545	-32.541582.7275	
LMW-12	125.455	-32.632482.7275	
LMW-13	125.909	-32.177982.7275	
LMW-14R	157.818	-0.268775	82.7275
LMW-15R	146.167	-11.920371.017	
LMW-16	142.923	-15.163978.3044	
LMW-3	131.4	-26.687	65.2015
LMW-3S	157.692	-0.394649	78.3044
LMW-6	122.261	-35.826166.546	
LMW-7	187.048	28.9607	68.112
LMW-8	99.913	-58.173966.546	
LMW-9	145.348	-12.739166.546	
LMW-9D	210.154	52.0669	78.3044
LMW-9S	138.083	-20.003680.3619	
MW-5	134.231	-23.856278.3044	

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Lead

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 64.4366%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 23
Maximum Background Value = 3.21888
Confidence Level = 74.2%
False Positive Rate = 25.8%

Location	Date	Count	Mean	Significant
LMW-10	11/16/2012	1	-3.21888	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
LMW-14R	11/16/2012	1	-3.21888	FALSE
LMW-15R	11/16/2012	1	-3.21888	FALSE
LMW-16	11/16/2012	1	-3.21888	FALSE
LMW-3	11/16/2012	1	-3.21888	FALSE
LMW-3S	11/16/2012	1	-3.21888	FALSE
LMW-6	11/16/2012	1	-2.20727	FALSE
LMW-7	11/16/2012	1	-1.34707	FALSE
LMW-8	11/16/2012	1	-3.21888	FALSE
LMW-9	11/16/2012	1	-2.36446	FALSE
LMW-9D	11/16/2012	1	-1.23787	FALSE
LMW-9S	11/16/2012	1	-3.21888	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE

Concentrations (ppb)

Parameter: Methyl Isobutyl Ketone (4-methyl-2-pentanone)

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 283
Percent Non-Detects: 99.6479%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	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<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<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		
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-14R	14	13 (92.8571%)	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<1 U	ND<1 U		
		11/16/2009	ND<1 U	ND<1 U		
		11/16/2009	ND<1 U	ND<1 U		
		11/16/2009	ND<1 U	ND<1 U		
		6/30/2010	ND<1 U	ND<1 U		
		11/17/2010	ND<1 U	ND<1 U		
		7/6/2011	ND<1 U	ND<1 U		
		11/22/2011	ND<1 U	ND<1 U		
		5/16/2012	ND<1 U	ND<1 U		
		11/16/2012	1 J	1 J		
LMW-15R	15	15 (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<1 U	ND<1 U		
		6/30/2010	ND<1 U	ND<1 U		

			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 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<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 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<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 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<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 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<1 U	ND<1 U	
			11/16/2009	ND<1 U	ND<1 U	
			6/30/2010	ND<1 U	ND<1 U	
			11/17/2010	ND<1 U	ND<1 U	
			7/6/2011	ND<1 U	ND<1 U	
			11/22/2011	ND<1 U	ND<1 U	
			5/16/2012	ND<1 U	ND<1 U	
			11/16/2012	ND<1 U	ND<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<1 U	ND<1 U	
			11/17/2010	ND<1 U	ND<1 U	
			7/6/2011	ND<1 U	ND<1 U	
			11/22/2011	ND<1 U	ND<1 U	
			5/16/2012	ND<1 U	ND<1 U	
			11/16/2012	ND<1 U	ND<1 U	
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	
			6/11/2009	ND<1 U	ND<1 U	
			11/16/2009	ND<1 U	ND<1 U	
			6/30/2010	ND<1 U	ND<1 U	

			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 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
			6/11/2009	ND<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 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<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 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
			6/11/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 U
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: Methyl Isobutyl Ketone (4-methyl-2-pentanone)

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	0.5	-2.74777	7.55021	-1.37388
2	0.5	-2.45727	13.5884	-2.60252
3	0.5	-2.32634	19.0003	-3.76569
4	0.5	-2.19728	23.8283	-4.86433
5	0.5	-2.12007	28.323	-5.92437
6	0.5	-2.03352	32.4582	-6.94113
7	0.5	-1.97737	36.3682	-7.92981
8	0.5	-1.91103	40.0203	-8.88533
9	0.5	-1.86629	43.5033	-9.81847
10	0.5	-1.81191	46.7863	-10.7244
11	0.5	-1.77438	49.9348	-11.6116
12	0.5	-1.72793	52.9205	-12.4756
13	0.5	-1.6954	55.7949	-13.3233
14	0.5	-1.65463	58.5327	-14.1506
15	0.5	-1.62576	61.1758	-14.9635
16	0.5	-1.58927	63.7015	-15.7581
17	0.5	-1.56322	66.1452	-16.5397
18	0.5	-1.53007	68.4863	-17.3048
19	0.5	-1.50626	70.7551	-18.0579
20	0.5	-1.47579	72.9331	-18.7958
21	0.5	-1.4538	75.0466	-19.5227
22	0.5	-1.42554	77.0788	-20.2355
23	0.5	-1.40507	79.053	-20.938
24	0.5	-1.37866	80.9537	-21.6273
25	0.5	-1.35946	82.8019	-22.3071
26	0.5	-1.33462	84.5831	-22.9744
27	0.5	-1.31652	86.3163	-23.6326
28	0.5	-1.29303	87.9883	-24.2791
29	0.5	-1.27588	89.6161	-24.9171
30	0.5	-1.25357	91.1875	-25.5439
31	0.5	-1.23724	92.7183	-26.1625
32	0.5	-1.21596	94.1969	-26.7705
33	0.5	-1.20036	95.6377	-27.3706
34	0.5	-1.18	97.0301	-27.9606
35	0.5	-1.16505	98.3875	-28.5432
36	0.5	-1.1455	99.6996	-29.1159
37	0.5	-1.13113	100.979	-29.6815
38	0.5	-1.11232	102.216	-30.2376
39	0.5	-1.09847	103.423	-30.7869
40	0.5	-1.08032	104.59	-31.327
41	0.5	-1.06694	105.728	-31.8605
42	0.5	-1.04939	106.83	-32.3852
43	0.5	-1.03643	107.904	-32.9034
44	0.5	-1.01943	108.943	-33.4131
45	0.5	-1.00687	109.957	-33.9166
46	0.5	-0.990356	110.938	-34.4117
47	0.5	-0.97815	111.894	-34.9008
48	0.5	-0.9621	112.82	-35.3819
49	0.5	-0.950222	113.723	-35.857
50	0.5	-0.93459	114.596	-36.3243
51	0.5	-0.923014	115.448	-36.7858

52	0.5	-0.907769	116.272	-37.2397
53	0.5	-0.896473	117.076	-37.6879
54	0.5	-0.881587	117.853	-38.1287
55	0.5	-0.87055	118.611	-38.564
56	0.5	-0.855996	119.344	-38.992
57	0.5	-0.841621	120.052	-39.4128
58	0.5	-0.830953	120.743	-39.8283
59	0.5	-0.816874	121.41	-40.2367
60	0.5	-0.806422	122.06	-40.6399
61	0.5	-0.792618	122.689	-41.0362
62	0.5	-0.782366	123.301	-41.4274
63	0.5	-0.768821	123.892	-41.8118
64	0.5	-0.758753	124.467	-42.1912
65	0.5	-0.745449	125.023	-42.5639
66	0.5	-0.735557	125.564	-42.9317
67	0.5	-0.722479	126.086	-43.2929
68	0.5	-0.712751	126.594	-43.6493
69	0.5	-0.699883	127.084	-43.9992
70	0.5	-0.690309	127.561	-44.3444
71	0.5	-0.677639	128.02	-44.6832
72	0.5	-0.668209	128.466	-45.0173
73	0.5	-0.655726	128.896	-45.3452
74	0.5	-0.646431	129.314	-45.6684
75	0.5	-0.634124	129.716	-45.9855
76	0.5	-0.624956	130.107	-46.2979
77	0.5	-0.612813	130.482	-46.6043
78	0.5	-0.603765	130.847	-46.9062
79	0.5	-0.591776	131.197	-47.2021
80	0.5	-0.582841	131.537	-47.4935
81	0.5	-0.570999	131.863	-47.779
82	0.5	-0.56217	132.179	-48.0601
83	0.5	-0.550465	132.482	-48.3354
84	0.5	-0.541736	132.775	-48.6062
85	0.5	-0.530162	133.056	-48.8713
86	0.5	-0.521527	133.328	-49.1321
87	0.5	-0.510074	133.589	-49.3871
88	0.5	-0.501527	133.84	-49.6379
89	0.5	-0.490189	134.08	-49.883
90	0.5	-0.481728	134.312	-50.1238
91	0.5	-0.470498	134.534	-50.3591
92	0.5	-0.462114	134.747	-50.5901
93	0.5	-0.450985	134.951	-50.8156
94	0.5	-0.442676	135.147	-51.037
95	0.5	-0.431644	135.333	-51.2528
96	0.5	-0.423405	135.512	-51.4645
97	0.5	-0.412463	135.682	-51.6707
98	0.5	-0.40429	135.846	-51.8729
99	0.5	-0.393433	136.001	-52.0696
100	0.5	-0.385321	136.149	-52.2622
101	0.5	-0.374544	136.289	-52.4495
102	0.5	-0.36649	136.424	-52.6328
103	0.5	-0.355788	136.55	-52.8106
104	0.5	-0.347787	136.671	-52.9845
105	0.5	-0.337155	136.785	-53.1531
106	0.5	-0.329206	136.893	-53.3177
107	0.5	-0.318639	136.995	-53.477
108	0.5	-0.310738	137.091	-53.6324
109	0.5	-0.300232	137.182	-53.7825
110	0.5	-0.292375	137.267	-53.9287
111	0.5	-0.281926	137.346	-54.0697
112	0.5	-0.27411	137.422	-54.2067
113	0.5	-0.263715	137.491	-54.3386

114	0.5	-0.253347	137.555	-54.4653
115	0.5	-0.24559	137.616	-54.5881
116	0.5	-0.235269	137.671	-54.7057
117	0.5	-0.227545	137.723	-54.8195
118	0.5	-0.217267	137.77	-54.9281
119	0.5	-0.209575	137.814	-55.0329
120	0.5	-0.199336	137.854	-55.1326
121	0.5	-0.191671	137.89	-55.2284
122	0.5	-0.181468	137.923	-55.3191
123	0.5	-0.173829	137.954	-55.406
124	0.5	-0.163659	137.98	-55.4879
125	0.5	-0.156042	138.005	-55.5659
126	0.5	-0.1459	138.026	-55.6388
127	0.5	-0.138305	138.045	-55.708
128	0.5	-0.128189	138.062	-55.7721
129	0.5	-0.12061	138.076	-55.8324
130	0.5	-0.110516	138.088	-55.8876
131	0.5	-0.102953	138.099	-55.9391
132	0.5	-0.0928787	138.108	-55.9856
133	0.5	-0.0853288	138.115	-56.0282
134	0.5	-0.0752698	138.12	-56.0659
135	0.5	-0.0677301	138.125	-56.0997
136	0.5	-0.0576847	138.128	-56.1286
137	0.5	-0.0501541	138.131	-56.1536
138	0.5	-0.0401167	138.132	-56.1737
139	0.5	-0.0325917	138.134	-56.19
140	0.5	-0.0225612	138.134	-56.2013
141	0.5	-0.0150408	138.134	-56.2088
142	0.5	-0.00501359	138.134	-56.2113
143	0.5	0.00501359	138.134	-56.2088
144	0.5	0.0150408	138.135	-56.2013
145	0.5	0.0225612	138.135	-56.19
146	0.5	0.0325917	138.136	-56.1737
147	0.5	0.0401167	138.138	-56.1536
148	0.5	0.0501541	138.14	-56.1286
149	0.5	0.0576847	138.144	-56.0997
150	0.5	0.0677301	138.148	-56.0659
151	0.5	0.0752698	138.154	-56.0282
152	0.5	0.0853288	138.161	-55.9856
153	0.5	0.0928787	138.17	-55.9391
154	0.5	0.102953	138.18	-55.8876
155	0.5	0.110516	138.193	-55.8324
156	0.5	0.12061	138.207	-55.7721
157	0.5	0.128189	138.224	-55.708
158	0.5	0.138305	138.243	-55.6388
159	0.5	0.1459	138.264	-55.5659
160	0.5	0.156042	138.288	-55.4879
161	0.5	0.163659	138.315	-55.406
162	0.5	0.173829	138.345	-55.3191
163	0.5	0.181468	138.378	-55.2284
164	0.5	0.191671	138.415	-55.1326
165	0.5	0.199336	138.455	-55.0329
166	0.5	0.209575	138.499	-54.9281
167	0.5	0.217267	138.546	-54.8195
168	0.5	0.227545	138.598	-54.7057
169	0.5	0.235269	138.653	-54.5881
170	0.5	0.24559	138.713	-54.4653
171	0.5	0.253347	138.777	-54.3386
172	0.5	0.263715	138.847	-54.2067
173	0.5	0.27411	138.922	-54.0697
174	0.5	0.281926	139.002	-53.9287
175	0.5	0.292375	139.087	-53.7825

176	0.5	0.300232	139.177	-53.6324
177	0.5	0.310738	139.274	-53.477
178	0.5	0.318639	139.375	-53.3177
179	0.5	0.329206	139.484	-53.1531
180	0.5	0.337155	139.597	-52.9845
181	0.5	0.347787	139.718	-52.8106
182	0.5	0.355788	139.845	-52.6328
183	0.5	0.36649	139.979	-52.4495
184	0.5	0.374544	140.12	-52.2622
185	0.5	0.385321	140.268	-52.0696
186	0.5	0.393433	140.423	-51.8729
187	0.5	0.40429	140.586	-51.6707
188	0.5	0.412463	140.756	-51.4645
189	0.5	0.423405	140.936	-51.2528
190	0.5	0.431644	141.122	-51.037
191	0.5	0.442676	141.318	-50.8156
192	0.5	0.450985	141.521	-50.5901
193	0.5	0.462114	141.735	-50.3591
194	0.5	0.470498	141.956	-50.1238
195	0.5	0.481728	142.188	-49.883
196	0.5	0.490189	142.429	-49.6379
197	0.5	0.501527	142.68	-49.3871
198	0.5	0.510074	142.94	-49.1321
199	0.5	0.521527	143.212	-48.8713
200	0.5	0.530162	143.493	-48.6062
201	0.5	0.541736	143.787	-48.3354
202	0.5	0.550465	144.09	-48.0601
203	0.5	0.56217	144.406	-47.779
204	0.5	0.570999	144.732	-47.4935
205	0.5	0.582841	145.072	-47.2021
206	0.5	0.591776	145.422	-46.9062
207	0.5	0.603765	145.786	-46.6043
208	0.5	0.612813	146.162	-46.2979
209	0.5	0.624956	146.552	-45.9855
210	0.5	0.634124	146.955	-45.6684
211	0.5	0.646431	147.372	-45.3452
212	0.5	0.655726	147.802	-45.0173
213	0.5	0.668209	148.249	-44.6832
214	0.5	0.677639	148.708	-44.3444
215	0.5	0.690309	149.185	-43.9992
216	0.5	0.699883	149.674	-43.6493
217	0.5	0.712751	150.182	-43.2929
218	0.5	0.722479	150.704	-42.9317
219	0.5	0.735557	151.245	-42.5639
220	0.5	0.745449	151.801	-42.1912
221	0.5	0.758753	152.377	-41.8118
222	0.5	0.768821	152.968	-41.4274
223	0.5	0.782366	153.58	-41.0362
224	0.5	0.792618	154.208	-40.6399
225	0.5	0.806422	154.859	-40.2367
226	0.5	0.816874	155.526	-39.8283
227	0.5	0.830953	156.216	-39.4128
228	0.5	0.841621	156.925	-38.992
229	0.5	0.855996	157.657	-38.564
230	0.5	0.87055	158.415	-38.1287
231	0.5	0.881587	159.193	-37.6879
232	0.5	0.896473	159.996	-37.2397
233	0.5	0.907769	160.82	-36.7858
234	0.5	0.923014	161.672	-36.3243
235	0.5	0.93459	162.546	-35.857
236	0.5	0.950222	163.449	-35.3819
237	0.5	0.9621	164.374	-34.9008

238	0.5	0.97815	165.331	-34.4117
239	0.5	0.990356	166.312	-33.9166
240	0.5	1.00687	167.326	-33.4131
241	0.5	1.01943	168.365	-32.9034
242	0.5	1.03643	169.439	-32.3852
243	0.5	1.04939	170.54	-31.8605
244	0.5	1.06694	171.679	-31.327
245	0.5	1.08032	172.846	-30.7869
246	0.5	1.09847	174.052	-30.2376
247	0.5	1.11232	175.29	-29.6815
248	0.5	1.13113	176.569	-29.1159
249	0.5	1.1455	177.881	-28.5432
250	0.5	1.16505	179.239	-27.9606
251	0.5	1.18	180.631	-27.3706
252	0.5	1.20036	182.072	-26.7705
253	0.5	1.21596	183.55	-26.1625
254	0.5	1.23724	185.081	-25.5439
255	0.5	1.25357	186.653	-24.9171
256	0.5	1.27588	188.28	-24.2791
257	0.5	1.29303	189.952	-23.6326
258	0.5	1.31652	191.686	-22.9744
259	0.5	1.33462	193.467	-22.3071
260	0.5	1.35946	195.315	-21.6273
261	0.5	1.37866	197.216	-20.938
262	0.5	1.40507	199.19	-20.2355
263	0.5	1.42554	201.222	-19.5227
264	0.5	1.4538	203.336	-18.7958
265	0.5	1.47579	205.514	-18.0579
266	0.5	1.50626	207.782	-17.3048
267	0.5	1.53007	210.123	-16.5397
268	0.5	1.56322	212.567	-15.7581
269	0.5	1.58927	215.093	-14.9635
270	0.5	1.62576	217.736	-14.1506
271	0.5	1.65463	220.474	-13.3233
272	0.5	1.6954	223.348	-12.4756
273	0.5	1.72793	226.334	-11.6116
274	0.5	1.77438	229.482	-10.7244
275	0.5	1.81191	232.765	-9.81847
276	0.5	1.86629	236.248	-8.88533
277	0.5	1.91103	239.9	-7.92981
278	0.5	1.97737	243.81	-6.94113
279	0.5	2.03352	247.946	-5.92437
280	0.5	2.12007	252.44	-4.86433
281	0.5	2.19728	257.268	-3.76569
282	0.5	2.32634	262.68	-2.60252
283	0.5	2.45727	268.718	-1.37388
284	1	2.74777	276.269	1.37388

Data Set Standard Deviation = 0.0296695
Numerator = 1.88755
Denominator = 68.824
W Statistic = 0.0274258 = 1.88755 / 68.824

5% Critical value of 0.976 exceeds 0.0274258
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0274258
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Methyl Isobutyl Ketone (4-methyl-2-pentanone)

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.171583
0.171583 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.5	0.00350877	-2.74777	306.5	348.683	
2	0.5	0.00701754	-2.45727	306.5	334.497	
3	0.5	0.0105263	-2.32634	306.5	328.103	
4	0.5	0.0140351	-2.19728	306.5	321.801	
5	0.5	0.0175439	-2.12007	306.5	318.03	
6	0.5	0.0210526	-2.03352	306.5	313.804	
7	0.5	0.0245614	-1.97737	306.5	311.062	
8	0.5	0.0280702	-1.91103	306.5	307.822	
9	0.5	0.0315789	-1.86629	306.5	305.637	
10	0.5	0.0350877	-1.81191	306.5	302.982	
11	0.5	0.0385965	-1.77438	306.5	301.149	
12	0.5	0.0421053	-1.72793	306.5	298.881	
13	0.5	0.045614	-1.6954	306.5	297.292	
14	0.5	0.0491228	-1.65463	306.5	295.301	
15	0.5	0.0526316	-1.62576	306.5	293.891	
16	0.5	0.0561404	-1.58927	306.5	292.109	
17	0.5	0.0596491	-1.56322	306.5	290.837	
18	0.5	0.0631579	-1.53007	306.5	289.218	
19	0.5	0.0666667	-1.50626	306.5	288.056	
20	0.5	0.0701754	-1.47579	306.5	286.568	
21	0.5	0.0736842	-1.4538	306.5	285.494	
22	0.5	0.077193	-1.42554	306.5	284.114	
23	0.5	0.0807018	-1.40507	306.5	283.114	
24	0.5	0.0842105	-1.37866	306.5	281.824	
25	0.5	0.0877193	-1.35946	306.5	280.887	
26	0.5	0.0912281	-1.33462	306.5	279.674	
27	0.5	0.0947368	-1.31652	306.5	278.79	
28	0.5	0.0982456	-1.29303	306.5	277.643	
29	0.5	0.101754	-1.27588	306.5	276.805	
30	0.5	0.105263	-1.25357	306.5	275.716	
31	0.5	0.108772	-1.23724	306.5	274.918	
32	0.5	0.112281	-1.21596	306.5	273.879	
33	0.5	0.115789	-1.20036	306.5	273.118	
34	0.5	0.119298	-1.18	306.5	272.123	
35	0.5	0.122807	-1.16505	306.5	271.393	
36	0.5	0.126316	-1.1455	306.5	270.439	
37	0.5	0.129825	-1.13113	306.5	269.737	
38	0.5	0.133333	-1.11232	306.5	268.818	
39	0.5	0.136842	-1.09847	306.5	268.142	
40	0.5	0.140351	-1.08032	306.5	267.256	
41	0.5	0.14386	-1.06694	306.5	266.602	
42	0.5	0.147368	-1.04939	306.5	265.745	
43	0.5	0.150877	-1.03643	306.5	265.112	
44	0.5	0.154386	-1.01943	306.5	264.282	
45	0.5	0.157895	-1.00687	306.5	263.669	
46	0.5	0.161404	-0.990356	306.5	262.862	
47	0.5	0.164912	-0.97815	306.5	262.266	
48	0.5	0.168421	-0.9621	306.5	261.483	

49	0.5	0.17193	-0.950222	306.5	260.903
50	0.5	0.175439	-0.93459	306.5	260.139
51	0.5	0.178947	-0.923014	306.5	259.574
52	0.5	0.182456	-0.907769	306.5	258.829
53	0.5	0.185965	-0.896473	306.5	258.278
54	0.5	0.189474	-0.881587	306.5	257.551
55	0.5	0.192982	-0.87055	306.5	257.012
56	0.5	0.196491	-0.855996	306.5	256.301
57	0.5	0.2	-0.841621	306.5	255.599
58	0.5	0.203509	-0.830953	306.5	255.078
59	0.5	0.207018	-0.816874	306.5	254.391
60	0.5	0.210526	-0.806422	306.5	253.88
61	0.5	0.214035	-0.792618	306.5	253.206
62	0.5	0.217544	-0.782366	306.5	252.706
63	0.5	0.221053	-0.768821	306.5	252.044
64	0.5	0.224561	-0.758753	306.5	251.552
65	0.5	0.22807	-0.745449	306.5	250.903
66	0.5	0.231579	-0.735557	306.5	250.42
67	0.5	0.235088	-0.722479	306.5	249.781
68	0.5	0.238596	-0.712751	306.5	249.306
69	0.5	0.242105	-0.699883	306.5	248.678
70	0.5	0.245614	-0.690309	306.5	248.21
71	0.5	0.249123	-0.677639	306.5	247.591
72	0.5	0.252632	-0.668209	306.5	247.131
73	0.5	0.25614	-0.655726	306.5	246.521
74	0.5	0.259649	-0.646431	306.5	246.067
75	0.5	0.263158	-0.634124	306.5	245.466
76	0.5	0.266667	-0.624956	306.5	245.019
77	0.5	0.270175	-0.612813	306.5	244.426
78	0.5	0.273684	-0.603765	306.5	243.984
79	0.5	0.277193	-0.591776	306.5	243.398
80	0.5	0.280702	-0.582841	306.5	242.962
81	0.5	0.284211	-0.570999	306.5	242.384
82	0.5	0.287719	-0.56217	306.5	241.953
83	0.5	0.291228	-0.550465	306.5	241.381
84	0.5	0.294737	-0.541736	306.5	240.955
85	0.5	0.298246	-0.530162	306.5	240.39
86	0.5	0.301754	-0.521527	306.5	239.968
87	0.5	0.305263	-0.510074	306.5	239.409
88	0.5	0.308772	-0.501527	306.5	238.991
89	0.5	0.312281	-0.490189	306.5	238.438
90	0.5	0.315789	-0.481728	306.5	238.024
91	0.5	0.319298	-0.470498	306.5	237.476
92	0.5	0.322807	-0.462114	306.5	237.067
93	0.5	0.326316	-0.450985	306.5	236.523
94	0.5	0.329825	-0.442676	306.5	236.117
95	0.5	0.333333	-0.431644	306.5	235.579
96	0.5	0.336842	-0.423405	306.5	235.176
97	0.5	0.340351	-0.412463	306.5	234.642
98	0.5	0.34386	-0.40429	306.5	234.243
99	0.5	0.347368	-0.393433	306.5	233.713
100	0.5	0.350877	-0.385321	306.5	233.317
101	0.5	0.354386	-0.374544	306.5	232.79
102	0.5	0.357895	-0.36649	306.5	232.397
103	0.5	0.361404	-0.355788	306.5	231.874
104	0.5	0.364912	-0.347787	306.5	231.484
105	0.5	0.368421	-0.337155	306.5	230.964
106	0.5	0.37193	-0.329206	306.5	230.576
107	0.5	0.375439	-0.318639	306.5	230.06
108	0.5	0.378947	-0.310738	306.5	229.674
109	0.5	0.382456	-0.300232	306.5	229.161
110	0.5	0.385965	-0.292375	306.5	228.778

111	0.5	0.389474	-0.281926	306.5	228.267
112	0.5	0.392982	-0.27411	306.5	227.886
113	0.5	0.396491	-0.263715	306.5	227.378
114	0.5	0.4	-0.253347	306.5	226.872
115	0.5	0.403509	-0.24559	306.5	226.493
116	0.5	0.407018	-0.235269	306.5	225.989
117	0.5	0.410526	-0.227545	306.5	225.612
118	0.5	0.414035	-0.217267	306.5	225.11
119	0.5	0.417544	-0.209575	306.5	224.734
120	0.5	0.421053	-0.199336	306.5	224.234
121	0.5	0.424561	-0.191671	306.5	223.86
122	0.5	0.42807	-0.181468	306.5	223.362
123	0.5	0.431579	-0.173829	306.5	222.989
124	0.5	0.435088	-0.163659	306.5	222.492
125	0.5	0.438596	-0.156042	306.5	222.12
126	0.5	0.442105	-0.1459	306.5	221.625
127	0.5	0.445614	-0.138305	306.5	221.254
128	0.5	0.449123	-0.128189	306.5	220.76
129	0.5	0.452632	-0.12061	306.5	220.39
130	0.5	0.45614	-0.110516	306.5	219.897
131	0.5	0.459649	-0.102953	306.5	219.528
132	0.5	0.463158	-0.0928787	306.5	219.036
133	0.5	0.466667	-0.0853288	306.5	218.667
134	0.5	0.470175	-0.0752698	306.5	218.176
135	0.5	0.473684	-0.0677301	306.5	217.807
136	0.5	0.477193	-0.0576847	306.5	217.317
137	0.5	0.480702	-0.0501541	306.5	216.949
138	0.5	0.484211	-0.0401167	306.5	216.459
139	0.5	0.487719	-0.0325917	306.5	216.092
140	0.5	0.491228	-0.0225612	306.5	215.602
141	0.5	0.494737	-0.0150408	306.5	215.234
142	0.5	0.498246	-0.00501359	306.5	214.745
143	0.5	0.501754	0.00501359	306.5	214.255
144	0.5	0.505263	0.0150408	306.5	213.766
145	0.5	0.508772	0.0225612	306.5	213.398
146	0.5	0.512281	0.0325917	306.5	212.908
147	0.5	0.515789	0.0401167	306.5	212.541
148	0.5	0.519298	0.0501541	306.5	212.051
149	0.5	0.522807	0.0576847	306.5	211.683
150	0.5	0.526316	0.0677301	306.5	211.193
151	0.5	0.529825	0.0752698	306.5	210.824
152	0.5	0.533333	0.0853288	306.5	210.333
153	0.5	0.536842	0.0928787	306.5	209.964
154	0.5	0.540351	0.102953	306.5	209.472
155	0.5	0.54386	0.110516	306.5	209.103
156	0.5	0.547368	0.12061	306.5	208.61
157	0.5	0.550877	0.128189	306.5	208.24
158	0.5	0.554386	0.138305	306.5	207.746
159	0.5	0.557895	0.1459	306.5	207.375
160	0.5	0.561404	0.156042	306.5	206.88
161	0.5	0.564912	0.163659	306.5	206.508
162	0.5	0.568421	0.173829	306.5	206.011
163	0.5	0.57193	0.181468	306.5	205.638
164	0.5	0.575439	0.191671	306.5	205.14
165	0.5	0.578947	0.199336	306.5	204.766
166	0.5	0.582456	0.209575	306.5	204.266
167	0.5	0.585965	0.217267	306.5	203.89
168	0.5	0.589474	0.227545	306.5	203.388
169	0.5	0.592982	0.235269	306.5	203.011
170	0.5	0.596491	0.24559	306.5	202.507
171	0.5	0.6	0.253347	306.5	202.128
172	0.5	0.603509	0.263715	306.5	201.622

173	0.5	0.607018	0.27411	306.5	201.114
174	0.5	0.610526	0.281926	306.5	200.733
175	0.5	0.614035	0.292375	306.5	200.222
176	0.5	0.617544	0.300232	306.5	199.839
177	0.5	0.621053	0.310738	306.5	199.326
178	0.5	0.624561	0.318639	306.5	198.94
179	0.5	0.62807	0.329206	306.5	198.424
180	0.5	0.631579	0.337155	306.5	198.036
181	0.5	0.635088	0.347787	306.5	197.516
182	0.5	0.638596	0.355788	306.5	197.126
183	0.5	0.642105	0.36649	306.5	196.603
184	0.5	0.645614	0.374544	306.5	196.21
185	0.5	0.649123	0.385321	306.5	195.683
186	0.5	0.652632	0.393433	306.5	195.287
187	0.5	0.65614	0.40429	306.5	194.757
188	0.5	0.659649	0.412463	306.5	194.358
189	0.5	0.663158	0.423405	306.5	193.824
190	0.5	0.666667	0.431644	306.5	193.421
191	0.5	0.670175	0.442676	306.5	192.883
192	0.5	0.673684	0.450985	306.5	192.477
193	0.5	0.677193	0.462114	306.5	191.933
194	0.5	0.680702	0.470498	306.5	191.524
195	0.5	0.684211	0.481728	306.5	190.976
196	0.5	0.687719	0.490189	306.5	190.562
197	0.5	0.691228	0.501527	306.5	190.009
198	0.5	0.694737	0.510074	306.5	189.591
199	0.5	0.698246	0.521527	306.5	189.032
200	0.5	0.701754	0.530162	306.5	188.61
201	0.5	0.705263	0.541736	306.5	188.045
202	0.5	0.708772	0.550465	306.5	187.619
203	0.5	0.712281	0.56217	306.5	187.047
204	0.5	0.715789	0.570999	306.5	186.616
205	0.5	0.719298	0.582841	306.5	186.038
206	0.5	0.722807	0.591776	306.5	185.602
207	0.5	0.726316	0.603765	306.5	185.016
208	0.5	0.729825	0.612813	306.5	184.574
209	0.5	0.733333	0.624956	306.5	183.981
210	0.5	0.736842	0.634124	306.5	183.534
211	0.5	0.740351	0.646431	306.5	182.933
212	0.5	0.74386	0.655726	306.5	182.479
213	0.5	0.747368	0.668209	306.5	181.869
214	0.5	0.750877	0.677639	306.5	181.409
215	0.5	0.754386	0.690309	306.5	180.79
216	0.5	0.757895	0.699883	306.5	180.322
217	0.5	0.761404	0.712751	306.5	179.694
218	0.5	0.764912	0.722479	306.5	179.219
219	0.5	0.768421	0.735557	306.5	178.58
220	0.5	0.77193	0.745449	306.5	178.097
221	0.5	0.775439	0.758753	306.5	177.448
222	0.5	0.778947	0.768821	306.5	176.956
223	0.5	0.782456	0.782366	306.5	176.294
224	0.5	0.785965	0.792618	306.5	175.794
225	0.5	0.789474	0.806422	306.5	175.12
226	0.5	0.792982	0.816874	306.5	174.609
227	0.5	0.796491	0.830953	306.5	173.922
228	0.5	0.8	0.841621	306.5	173.401
229	0.5	0.803509	0.855996	306.5	172.699
230	0.5	0.807018	0.87055	306.5	171.988
231	0.5	0.810526	0.881587	306.5	171.449
232	0.5	0.814035	0.896473	306.5	170.722
233	0.5	0.817544	0.907769	306.5	170.171
234	0.5	0.821053	0.923014	306.5	169.426

235	0.5	0.824561	0.93459	306.5	168.861	
236	0.5	0.82807	0.950222	306.5	168.097	
237	0.5	0.831579	0.9621	306.5	167.517	
238	0.5	0.835088	0.97815	306.5	166.734	
239	0.5	0.838596	0.990356	306.5	166.138	
240	0.5	0.842105	1.00687	306.5	165.331	
241	0.5	0.845614	1.01943	306.5	164.718	
242	0.5	0.849123	1.03643	306.5	163.888	
243	0.5	0.852632	1.04939	306.5	163.255	
244	0.5	0.85614	1.06694	306.5	162.398	
245	0.5	0.859649	1.08032	306.5	161.744	
246	0.5	0.863158	1.09847	306.5	160.858	
247	0.5	0.866667	1.11232	306.5	160.182	
248	0.5	0.870175	1.13113	306.5	159.263	
249	0.5	0.873684	1.1455	306.5	158.561	
250	0.5	0.877193	1.16505	306.5	157.607	
251	0.5	0.880702	1.18	306.5	156.877	
252	0.5	0.884211	1.20036	306.5	155.882	
253	0.5	0.887719	1.21596	306.5	155.121	
254	0.5	0.891228	1.23724	306.5	154.082	
255	0.5	0.894737	1.25357	306.5	153.284	
256	0.5	0.898246	1.27588	306.5	152.195	
257	0.5	0.901754	1.29303	306.5	151.357	
258	0.5	0.905263	1.31652	306.5	150.21	
259	0.5	0.908772	1.33462	306.5	149.326	
260	0.5	0.912281	1.35946	306.5	148.113	
261	0.5	0.915789	1.37866	306.5	147.176	
262	0.5	0.919298	1.40507	306.5	145.886	
263	0.5	0.922807	1.42554	306.5	144.886	
264	0.5	0.926316	1.4538	306.5	143.506	
265	0.5	0.929825	1.47579	306.5	142.432	
266	0.5	0.933333	1.50626	306.5	140.944	
267	0.5	0.936842	1.53007	306.5	139.782	
268	0.5	0.940351	1.56322	306.5	138.163	
269	0.5	0.94386	1.58927	306.5	136.891	
270	0.5	0.947368	1.62576	306.5	135.109	
271	0.5	0.950877	1.65463	306.5	133.699	
272	0.5	0.954386	1.6954	306.5	131.708	
273	0.5	0.957895	1.72793	306.5	130.119	
274	0.5	0.961404	1.77438	306.5	127.851	
275	0.5	0.964912	1.81191	306.5	126.018	
276	0.5	0.968421	1.86629	306.5	123.363	
277	0.5	0.97193	1.91103	306.5	121.178	
278	0.5	0.975439	1.97737	306.5	117.938	
279	0.5	0.978947	2.03352	306.5	115.196	
280	0.5	0.982456	2.12007	306.5	110.97	
281	0.5	0.985965	2.19728	306.5	107.199	
282	0.5	0.989474	2.32634	306.5	100.897	
283	0.5	0.992982	2.45727	306.5	94.5032	
284	1	0.996491	2.74777	574	80.3175	

Shapiro-Francia Test of Normality

Parameter: Methyl Isobutyl Ketone (4-methyl-2-pentanone)

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	-0.693147	-2.747777.55021	1.90461		
2	-0.693147	-2.4572713.5884	3.60786		
3	-0.693147	-2.3263419.0003	5.22035		
4	-0.693147	-2.1972823.8283	6.7434		
5	-0.693147	-2.1200728.323	8.21292		
6	-0.693147	-2.0335232.4582	9.62245		
7	-0.693147	-1.9773736.3682	10.9931		
8	-0.693147	-1.9110340.0203	12.3177		
9	-0.693147	-1.8662943.5033	13.6113		
10	-0.693147	-1.8119146.7863	14.8672		
11	-0.693147	-1.7743849.9348	16.0971		
12	-0.693147	-1.7279352.9205	17.2948		
13	-0.693147	-1.6954 55.7949	18.47		
14	-0.693147	-1.6546358.5327	19.6169		
15	-0.693147	-1.6257661.1758	20.7438		
16	-0.693147	-1.5892763.7015	21.8454		
17	-0.693147	-1.5632266.1452	22.9289		
18	-0.693147	-1.5300768.4863	23.9895		
19	-0.693147	-1.5062670.7551	25.0335		
20	-0.693147	-1.4757972.9331	26.0565		
21	-0.693147	-1.4538 75.0466	27.0642		
22	-0.693147	-1.4255477.0788	28.0523		
23	-0.693147	-1.4050779.053	29.0262		
24	-0.693147	-1.3786680.9537	29.9818		
25	-0.693147	-1.3594682.8019	30.9241		
26	-0.693147	-1.3346284.5831	31.8492		
27	-0.693147	-1.3165286.3163	32.7618		
28	-0.693147	-1.2930387.9883	33.658		
29	-0.693147	-1.2758889.6161	34.5424		
30	-0.693147	-1.2535791.1875	35.4113		
31	-0.693147	-1.2372492.7183	36.2689		
32	-0.693147	-1.2159694.1969	37.1117		
33	-0.693147	-1.2003695.6377	37.9438		
34	-0.693147	-1.18 97.0301	38.7617		
35	-0.693147	-1.1650598.3875	39.5692		
36	-0.693147	-1.1455 99.6996	40.3632		
37	-0.693147	-1.13113100.979	41.1473		
38	-0.693147	-1.11232102.216	41.9183		
39	-0.693147	-1.09847103.423	42.6797		
40	-0.693147	-1.08032104.59	43.4285		
41	-0.693147	-1.06694105.728	44.168		
42	-0.693147	-1.04939106.83	44.8954		
43	-0.693147	-1.03643107.904	45.6138		
44	-0.693147	-1.01943108.943	46.3204		
45	-0.693147	-1.00687109.957	47.0183		
46	-0.693147	-0.990356	110.938	47.7048	
47	-0.693147	-0.97815111.894	48.3828		
48	-0.693147	-0.9621 112.82	49.0497		
49	-0.693147	-0.950222	113.723	49.7083	
50	-0.693147	-0.93459114.596	50.3561		
51	-0.693147	-0.923014	115.448	50.9959	

52	-0.693147	-0.907769	116.272	51.6251
53	-0.693147	-0.896473	117.076	52.2465
54	-0.693147	-0.881587	117.853	52.8576
55	-0.693147	-0.87055	118.611	53.461
56	-0.693147	-0.855996	119.344	54.0543
57	-0.693147	-0.841621	120.052	54.6377
58	-0.693147	-0.830953	120.743	55.2137
59	-0.693147	-0.816874	121.41	55.7799
60	-0.693147	-0.806422	122.06	56.3389
61	-0.693147	-0.792618	122.689	56.8883
62	-0.693147	-0.782366	123.301	57.4306
63	-0.693147	-0.768821	123.892	57.9635
64	-0.693147	-0.758753	124.467	58.4894
65	-0.693147	-0.745449	125.023	59.0061
66	-0.693147	-0.735557	125.564	59.5159
67	-0.693147	-0.722479	126.086	60.0167
68	-0.693147	-0.712751	126.594	60.5108
69	-0.693147	-0.699883	127.084	60.9959
70	-0.693147	-0.690309	127.561	61.4744
71	-0.693147	-0.677639	128.02	61.9441
72	-0.693147	-0.668209	128.466	62.4073
73	-0.693147	-0.655726	128.896	62.8618
74	-0.693147	-0.646431	129.314	63.3098
75	-0.693147	-0.634124	129.716	63.7494
76	-0.693147	-0.624956	130.107	64.1826
77	-0.693147	-0.612813	130.482	64.6073
78	-0.693147	-0.603765	130.847	65.0258
79	-0.693147	-0.591776	131.197	65.436
80	-0.693147	-0.582841	131.537	65.84
81	-0.693147	-0.570999	131.863	66.2358
82	-0.693147	-0.56217	132.179	66.6255
83	-0.693147	-0.550465	132.482	67.007
84	-0.693147	-0.541736	132.775	67.3825
85	-0.693147	-0.530162	133.056	67.75
86	-0.693147	-0.521527	133.328	68.1115
87	-0.693147	-0.510074	133.589	68.4651
88	-0.693147	-0.501527	133.84	68.8127
89	-0.693147	-0.490189	134.08	69.1525
90	-0.693147	-0.481728	134.312	69.4864
91	-0.693147	-0.470498	134.534	69.8125
92	-0.693147	-0.462114	134.747	70.1328
93	-0.693147	-0.450985	134.951	70.4454
94	-0.693147	-0.442676	135.147	70.7522
95	-0.693147	-0.431644	135.333	71.0514
96	-0.693147	-0.423405	135.512	71.3449
97	-0.693147	-0.412463	135.682	71.6308
98	-0.693147	-0.40429	135.846	71.9111
99	-0.693147	-0.393433	136.001	72.1838
100	-0.693147	-0.385321	136.149	72.4508
101	-0.693147	-0.374544	136.289	72.7105
102	-0.693147	-0.36649	136.424	72.9645
103	-0.693147	-0.355788	136.55	73.2111
104	-0.693147	-0.347787	136.671	73.4522
105	-0.693147	-0.337155	136.785	73.6859
106	-0.693147	-0.329206	136.893	73.9141
107	-0.693147	-0.318639	136.995	74.1349
108	-0.693147	-0.310738	137.091	74.3503
109	-0.693147	-0.300232	137.182	74.5584
110	-0.693147	-0.292375	137.267	74.7611
111	-0.693147	-0.281926	137.346	74.9565
112	-0.693147	-0.27411	137.422	75.1465
113	-0.693147	-0.263715	137.491	75.3293

114	-0.693147	-0.253347	137.555	75.5049
115	-0.693147	-0.24559	137.616	75.6751
116	-0.693147	-0.235269	137.671	75.8382
117	-0.693147	-0.227545	137.723	75.9959
118	-0.693147	-0.217267	137.77	76.1465
119	-0.693147	-0.209575	137.814	76.2918
120	-0.693147	-0.199336	137.854	76.4299
121	-0.693147	-0.191671	137.89	76.5628
122	-0.693147	-0.181468	137.923	76.6886
123	-0.693147	-0.173829	137.954	76.8091
124	-0.693147	-0.163659	137.98	76.9225
125	-0.693147	-0.156042	138.005	77.0307
126	-0.693147	-0.1459	138.026	77.1318
127	-0.693147	-0.138305	138.045	77.2277
128	-0.693147	-0.128189	138.062	77.3165
129	-0.693147	-0.12061	138.076	77.4001
130	-0.693147	-0.110516	138.088	77.4767
131	-0.693147	-0.102953	138.099	77.5481
132	-0.693147	-0.0928787	138.108	77.6125
133	-0.693147	-0.0853288	138.115	77.6716
134	-0.693147	-0.0752698	138.12	77.7238
135	-0.693147	-0.0677301	138.125	77.7707
136	-0.693147	-0.0576847	138.128	77.8107
137	-0.693147	-0.0501541	138.131	77.8455
138	-0.693147	-0.0401167	138.132	77.8733
139	-0.693147	-0.0325917	138.134	77.8959
140	-0.693147	-0.0225612	138.134	77.9115
141	-0.693147	-0.0150408	138.134	77.9219
142	-0.693147	-0.00501359	138.134	77.9254
143	-0.693147	0.00501359	138.134	77.9219
144	-0.693147	0.0150408	138.135	77.9115
145	-0.693147	0.0225612	138.135	77.8959
146	-0.693147	0.0325917	138.136	77.8733
147	-0.693147	0.0401167	138.138	77.8455
148	-0.693147	0.0501541	138.14	77.8107
149	-0.693147	0.0576847	138.144	77.7707
150	-0.693147	0.0677301	138.148	77.7238
151	-0.693147	0.0752698	138.154	77.6716
152	-0.693147	0.0853288	138.161	77.6125
153	-0.693147	0.0928787	138.17	77.5481
154	-0.693147	0.102953	138.18	77.4767
155	-0.693147	0.110516	138.193	77.4001
156	-0.693147	0.12061	138.207	77.3165
157	-0.693147	0.128189	138.224	77.2277
158	-0.693147	0.138305	138.243	77.1318
159	-0.693147	0.1459	138.264	77.0307
160	-0.693147	0.156042	138.288	76.9225
161	-0.693147	0.163659	138.315	76.8091
162	-0.693147	0.173829	138.345	76.6886
163	-0.693147	0.181468	138.378	76.5628
164	-0.693147	0.191671	138.415	76.4299
165	-0.693147	0.199336	138.455	76.2918
166	-0.693147	0.209575	138.499	76.1465
167	-0.693147	0.217267	138.546	75.9959
168	-0.693147	0.227545	138.598	75.8382
169	-0.693147	0.235269	138.653	75.6751
170	-0.693147	0.24559	138.713	75.5049
171	-0.693147	0.253347	138.777	75.3293
172	-0.693147	0.263715	138.847	75.1465
173	-0.693147	0.27411	138.922	74.9565
174	-0.693147	0.281926	139.002	74.7611
175	-0.693147	0.292375	139.087	74.5584

176	-0.693147	0.300232	139.177	74.3503
177	-0.693147	0.310738	139.274	74.1349
178	-0.693147	0.318639	139.375	73.9141
179	-0.693147	0.329206	139.484	73.6859
180	-0.693147	0.337155	139.597	73.4522
181	-0.693147	0.347787	139.718	73.2111
182	-0.693147	0.355788	139.845	72.9645
183	-0.693147	0.36649	139.979	72.7105
184	-0.693147	0.374544	140.12	72.4508
185	-0.693147	0.385321	140.268	72.1838
186	-0.693147	0.393433	140.423	71.9111
187	-0.693147	0.40429	140.586	71.6308
188	-0.693147	0.412463	140.756	71.3449
189	-0.693147	0.423405	140.936	71.0514
190	-0.693147	0.431644	141.122	70.7522
191	-0.693147	0.442676	141.318	70.4454
192	-0.693147	0.450985	141.521	70.1328
193	-0.693147	0.462114	141.735	69.8125
194	-0.693147	0.470498	141.956	69.4864
195	-0.693147	0.481728	142.188	69.1525
196	-0.693147	0.490189	142.429	68.8127
197	-0.693147	0.501527	142.68	68.4651
198	-0.693147	0.510074	142.94	68.1115
199	-0.693147	0.521527	143.212	67.75
200	-0.693147	0.530162	143.493	67.3825
201	-0.693147	0.541736	143.787	67.007
202	-0.693147	0.550465	144.09	66.6255
203	-0.693147	0.56217	144.406	66.2358
204	-0.693147	0.570999	144.732	65.84
205	-0.693147	0.582841	145.072	65.436
206	-0.693147	0.591776	145.422	65.0258
207	-0.693147	0.603765	145.786	64.6073
208	-0.693147	0.612813	146.162	64.1826
209	-0.693147	0.624956	146.552	63.7494
210	-0.693147	0.634124	146.955	63.3098
211	-0.693147	0.646431	147.372	62.8618
212	-0.693147	0.655726	147.802	62.4073
213	-0.693147	0.668209	148.249	61.9441
214	-0.693147	0.677639	148.708	61.4744
215	-0.693147	0.690309	149.185	60.9959
216	-0.693147	0.699883	149.674	60.5108
217	-0.693147	0.712751	150.182	60.0167
218	-0.693147	0.722479	150.704	59.5159
219	-0.693147	0.735557	151.245	59.0061
220	-0.693147	0.745449	151.801	58.4894
221	-0.693147	0.758753	152.377	57.9635
222	-0.693147	0.768821	152.968	57.4306
223	-0.693147	0.782366	153.58	56.8883
224	-0.693147	0.792618	154.208	56.3389
225	-0.693147	0.806422	154.859	55.7799
226	-0.693147	0.816874	155.526	55.2137
227	-0.693147	0.830953	156.216	54.6377
228	-0.693147	0.841621	156.925	54.0543
229	-0.693147	0.855996	157.657	53.461
230	-0.693147	0.87055	158.415	52.8576
231	-0.693147	0.881587	159.193	52.2465
232	-0.693147	0.896473	159.996	51.6251
233	-0.693147	0.907769	160.82	50.9959
234	-0.693147	0.923014	161.672	50.3561
235	-0.693147	0.93459	162.546	49.7083
236	-0.693147	0.950222	163.449	49.0497
237	-0.693147	0.9621	164.374	48.3828

238	-0.693147		0.97815	165.331	47.7048
239	-0.693147		0.990356		166.312 47.0183
240	-0.693147		1.00687	167.326	46.3204
241	-0.693147		1.01943	168.365	45.6138
242	-0.693147		1.03643	169.439	44.8954
243	-0.693147		1.04939	170.54	44.168
244	-0.693147		1.06694	171.679	43.4285
245	-0.693147		1.08032	172.846	42.6797
246	-0.693147		1.09847	174.052	41.9183
247	-0.693147		1.11232	175.29	41.1473
248	-0.693147		1.13113	176.569	40.3632
249	-0.693147		1.1455	177.881	39.5692
250	-0.693147		1.16505	179.239	38.7617
251	-0.693147		1.18	180.631	37.9438
252	-0.693147		1.20036	182.072	37.1117
253	-0.693147		1.21596	183.55	36.2689
254	-0.693147		1.23724	185.081	35.4113
255	-0.693147		1.25357	186.653	34.5424
256	-0.693147		1.27588	188.28	33.658
257	-0.693147		1.29303	189.952	32.7618
258	-0.693147		1.31652	191.686	31.8492
259	-0.693147		1.33462	193.467	30.9241
260	-0.693147		1.35946	195.315	29.9818
261	-0.693147		1.37866	197.216	29.0262
262	-0.693147		1.40507	199.19	28.0523
263	-0.693147		1.42554	201.222	27.0642
264	-0.693147		1.4538	203.336	26.0565
265	-0.693147		1.47579	205.514	25.0335
266	-0.693147		1.50626	207.782	23.9895
267	-0.693147		1.53007	210.123	22.9289
268	-0.693147		1.56322	212.567	21.8454
269	-0.693147		1.58927	215.093	20.7438
270	-0.693147		1.62576	217.736	19.6169
271	-0.693147		1.65463	220.474	18.47
272	-0.693147		1.6954	223.348	17.2948
273	-0.693147		1.72793	226.334	16.0971
274	-0.693147		1.77438	229.482	14.8672
275	-0.693147		1.81191	232.765	13.6113
276	-0.693147		1.86629	236.248	12.3177
277	-0.693147		1.91103	239.9	10.9931
278	-0.693147		1.97737	243.81	9.62245
279	-0.693147		2.03352	247.946	8.21292
280	-0.693147		2.12007	252.44	6.7434
281	-0.693147		2.19728	257.268	5.22035
282	-0.693147		2.32634	262.68	3.60786
283	-0.693147		2.45727	268.718	1.90461
284	0	2.74777	276.269	1.90461	

Data Set Standard Deviation = 0.0411307
Numerator = 3.62752
Denominator = 132.267
W Statistic = 0.0274258 = 3.62752 / 132.267

5% Critical value of 0.976 exceeds 0.0274258
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0274258
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Methyl Isobutyl Ketone (4-methyl-2-pentanone)

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.171583
0.171583 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-0.693147	0.00350877	-2.747	44.2375	348.683
2	-0.693147	0.00701754	-2.457	44.2375	334.497
3	-0.693147	0.0105263	-2.326	44.2375	328.103
4	-0.693147	0.0140351	-2.197	44.2375	321.801
5	-0.693147	0.0175439	-2.120	44.2375	318.03
6	-0.693147	0.0210526	-2.033	44.2375	313.804
7	-0.693147	0.0245614	-1.977	44.2375	311.062
8	-0.693147	0.0280702	-1.911	44.2375	307.822
9	-0.693147	0.0315789	-1.866	44.2375	305.637
10	-0.693147	0.0350877	-1.811	44.2375	302.982
11	-0.693147	0.0385965	-1.774	44.2375	301.149
12	-0.693147	0.0421053	-1.727	44.2375	298.881
13	-0.693147	0.045614	-1.695	44.2375	297.292
14	-0.693147	0.0491228	-1.654	44.2375	295.301
15	-0.693147	0.0526316	-1.625	44.2375	293.891
16	-0.693147	0.0561404	-1.589	44.2375	292.109
17	-0.693147	0.0596491	-1.563	44.2375	290.837
18	-0.693147	0.0631579	-1.530	44.2375	289.218
19	-0.693147	0.0666667	-1.506	44.2375	288.056
20	-0.693147	0.0701754	-1.475	44.2375	286.568
21	-0.693147	0.0736842	-1.453	44.2375	285.494
22	-0.693147	0.077193	-1.425	44.2375	284.114
23	-0.693147	0.0807018	-1.405	44.2375	283.114
24	-0.693147	0.0842105	-1.378	44.2375	281.824
25	-0.693147	0.0877193	-1.359	44.2375	280.887
26	-0.693147	0.0912281	-1.334	44.2375	279.674
27	-0.693147	0.0947368	-1.316	44.2375	278.79
28	-0.693147	0.0982456	-1.293	44.2375	277.643
29	-0.693147	0.101754	-1.275	44.2375	276.805
30	-0.693147	0.105263	-1.253	44.2375	275.716
31	-0.693147	0.108772	-1.237	44.2375	274.918
32	-0.693147	0.112281	-1.215	44.2375	273.879
33	-0.693147	0.115789	-1.200	44.2375	273.118
34	-0.693147	0.119298	-1.18	44.2375	272.123
35	-0.693147	0.122807	-1.165	44.2375	271.393
36	-0.693147	0.126316	-1.145	44.2375	270.439
37	-0.693147	0.129825	-1.131	44.2375	269.737
38	-0.693147	0.133333	-1.112	44.2375	268.818
39	-0.693147	0.136842	-1.098	44.2375	268.142
40	-0.693147	0.140351	-1.080	44.2375	267.256
41	-0.693147	0.14386	-1.066	44.2375	266.602
42	-0.693147	0.147368	-1.049	44.2375	265.745
43	-0.693147	0.150877	-1.036	44.2375	265.112
44	-0.693147	0.154386	-1.019	44.2375	264.282
45	-0.693147	0.157895	-1.006	44.2375	263.669
46	-0.693147	0.161404	-0.990356	44.2375	262.862
47	-0.693147	0.164912	-0.978	44.2375	262.266
48	-0.693147	0.168421	-0.962	44.2375	261.483

49	-0.693147	0.17193	-0.950222	44.2375	260.903
50	-0.693147	0.175439	-0.934594	44.2375	260.139
51	-0.693147	0.178947	-0.923014	44.2375	259.574
52	-0.693147	0.182456	-0.907769	44.2375	258.829
53	-0.693147	0.185965	-0.896473	44.2375	258.278
54	-0.693147	0.189474	-0.881587	44.2375	257.551
55	-0.693147	0.192982	-0.870554	44.2375	257.012
56	-0.693147	0.196491	-0.855996	44.2375	256.301
57	-0.693147	0.2	-0.841621	44.2375	255.599
58	-0.693147	0.203509	-0.830953	44.2375	255.078
59	-0.693147	0.207018	-0.816874	44.2375	254.391
60	-0.693147	0.210526	-0.806422	44.2375	253.88
61	-0.693147	0.214035	-0.792618	44.2375	253.206
62	-0.693147	0.217544	-0.782366	44.2375	252.706
63	-0.693147	0.221053	-0.768821	44.2375	252.044
64	-0.693147	0.224561	-0.758753	44.2375	251.552
65	-0.693147	0.22807	-0.745449	44.2375	250.903
66	-0.693147	0.231579	-0.735557	44.2375	250.42
67	-0.693147	0.235088	-0.722479	44.2375	249.781
68	-0.693147	0.238596	-0.712751	44.2375	249.306
69	-0.693147	0.242105	-0.699883	44.2375	248.678
70	-0.693147	0.245614	-0.690309	44.2375	248.21
71	-0.693147	0.249123	-0.677639	44.2375	247.591
72	-0.693147	0.252632	-0.668209	44.2375	247.131
73	-0.693147	0.25614	-0.655726	44.2375	246.521
74	-0.693147	0.259649	-0.646431	44.2375	246.067
75	-0.693147	0.263158	-0.634124	44.2375	245.466
76	-0.693147	0.266667	-0.624956	44.2375	245.019
77	-0.693147	0.270175	-0.612813	44.2375	244.426
78	-0.693147	0.273684	-0.603765	44.2375	243.984
79	-0.693147	0.277193	-0.591776	44.2375	243.398
80	-0.693147	0.280702	-0.582841	44.2375	242.962
81	-0.693147	0.284211	-0.570999	44.2375	242.384
82	-0.693147	0.287719	-0.562174	44.2375	241.953
83	-0.693147	0.291228	-0.550465	44.2375	241.381
84	-0.693147	0.294737	-0.541736	44.2375	240.955
85	-0.693147	0.298246	-0.530162	44.2375	240.39
86	-0.693147	0.301754	-0.521527	44.2375	239.968
87	-0.693147	0.305263	-0.510074	44.2375	239.409
88	-0.693147	0.308772	-0.501527	44.2375	238.991
89	-0.693147	0.312281	-0.490189	44.2375	238.438
90	-0.693147	0.315789	-0.481728	44.2375	238.024
91	-0.693147	0.319298	-0.470498	44.2375	237.476
92	-0.693147	0.322807	-0.462114	44.2375	237.067
93	-0.693147	0.326316	-0.450985	44.2375	236.523
94	-0.693147	0.329825	-0.442676	44.2375	236.117
95	-0.693147	0.333333	-0.431644	44.2375	235.579
96	-0.693147	0.336842	-0.423405	44.2375	235.176
97	-0.693147	0.340351	-0.412463	44.2375	234.642
98	-0.693147	0.34386	-0.404294	44.2375	234.243
99	-0.693147	0.347368	-0.393433	44.2375	233.713
100	-0.693147	0.350877	-0.385321	44.2375	233.317
101	-0.693147	0.354386	-0.374544	44.2375	232.79
102	-0.693147	0.357895	-0.366494	44.2375	232.397
103	-0.693147	0.361404	-0.355788	44.2375	231.874
104	-0.693147	0.364912	-0.347787	44.2375	231.484
105	-0.693147	0.368421	-0.337155	44.2375	230.964
106	-0.693147	0.37193	-0.329206	44.2375	230.576
107	-0.693147	0.375439	-0.318639	44.2375	230.06
108	-0.693147	0.378947	-0.310738	44.2375	229.674
109	-0.693147	0.382456	-0.300232	44.2375	229.161
110	-0.693147	0.385965	-0.292375	44.2375	228.778

111	-0.693147	0.389474	-0.281926	44.2375	228.267
112	-0.693147	0.392982	-0.274114	44.2375	227.886
113	-0.693147	0.396491	-0.263715	44.2375	227.378
114	-0.693147	0.4	-0.253347	44.2375	226.872
115	-0.693147	0.403509	-0.245594	44.2375	226.493
116	-0.693147	0.407018	-0.235269	44.2375	225.989
117	-0.693147	0.410526	-0.227545	44.2375	225.612
118	-0.693147	0.414035	-0.217267	44.2375	225.11
119	-0.693147	0.417544	-0.209575	44.2375	224.734
120	-0.693147	0.421053	-0.199336	44.2375	224.234
121	-0.693147	0.424561	-0.191671	44.2375	223.86
122	-0.693147	0.42807	-0.181468	44.2375	223.362
123	-0.693147	0.431579	-0.173829	44.2375	222.989
124	-0.693147	0.435088	-0.163659	44.2375	222.492
125	-0.693147	0.438596	-0.156042	44.2375	222.12
126	-0.693147	0.442105	-0.1459	44.2375	221.625
127	-0.693147	0.445614	-0.138305	44.2375	221.254
128	-0.693147	0.449123	-0.128189	44.2375	220.76
129	-0.693147	0.452632	-0.120614	44.2375	220.39
130	-0.693147	0.45614	-0.110516	44.2375	219.897
131	-0.693147	0.459649	-0.102953	44.2375	219.528
132	-0.693147	0.463158	-0.0928787	44.2375	219.036
133	-0.693147	0.466667	-0.0853288	44.2375	218.667
134	-0.693147	0.470175	-0.0752698	44.2375	218.176
135	-0.693147	0.473684	-0.0677301	44.2375	217.807
136	-0.693147	0.477193	-0.0576847	44.2375	217.317
137	-0.693147	0.480702	-0.0501541	44.2375	216.949
138	-0.693147	0.484211	-0.0401167	44.2375	216.459
139	-0.693147	0.487719	-0.0325917	44.2375	216.092
140	-0.693147	0.491228	-0.0225612	44.2375	215.602
141	-0.693147	0.494737	-0.0150408	44.2375	215.234
142	-0.693147	0.498246	-0.00501359	44.2375	214.745
143	-0.693147	0.501754	0.00501359	44.2375	214.255
144	-0.693147	0.505263	0.0150408	44.2375	213.766
145	-0.693147	0.508772	0.0225612	44.2375	213.398
146	-0.693147	0.512281	0.0325917	44.2375	212.908
147	-0.693147	0.515789	0.0401167	44.2375	212.541
148	-0.693147	0.519298	0.0501541	44.2375	212.051
149	-0.693147	0.522807	0.0576847	44.2375	211.683
150	-0.693147	0.526316	0.0677301	44.2375	211.193
151	-0.693147	0.529825	0.0752698	44.2375	210.824
152	-0.693147	0.533333	0.0853288	44.2375	210.333
153	-0.693147	0.536842	0.0928787	44.2375	209.964
154	-0.693147	0.540351	0.102953	44.2375	209.472
155	-0.693147	0.54386	0.110516	44.2375	209.103
156	-0.693147	0.547368	0.12061	44.2375	208.61
157	-0.693147	0.550877	0.128189	44.2375	208.24
158	-0.693147	0.554386	0.138305	44.2375	207.746
159	-0.693147	0.557895	0.1459	44.2375	207.375
160	-0.693147	0.561404	0.156042	44.2375	206.88
161	-0.693147	0.564912	0.163659	44.2375	206.508
162	-0.693147	0.568421	0.173829	44.2375	206.011
163	-0.693147	0.57193	0.181468	44.2375	205.638
164	-0.693147	0.575439	0.191671	44.2375	205.14
165	-0.693147	0.578947	0.199336	44.2375	204.766
166	-0.693147	0.582456	0.209575	44.2375	204.266
167	-0.693147	0.585965	0.217267	44.2375	203.89
168	-0.693147	0.589474	0.227545	44.2375	203.388
169	-0.693147	0.592982	0.235269	44.2375	203.011
170	-0.693147	0.596491	0.24559	44.2375	202.507
171	-0.693147	0.6	0.253347	44.2375	202.128
172	-0.693147	0.603509	0.263715	44.2375	201.622

173	-0.693147	0.607018	0.27411	44.2375	201.114
174	-0.693147	0.610526	0.281926	44.2375	200.733
175	-0.693147	0.614035	0.292375	44.2375	200.222
176	-0.693147	0.617544	0.300232	44.2375	199.839
177	-0.693147	0.621053	0.310738	44.2375	199.326
178	-0.693147	0.624561	0.318639	44.2375	198.94
179	-0.693147	0.62807	0.329206	44.2375	198.424
180	-0.693147	0.631579	0.337155	44.2375	198.036
181	-0.693147	0.635088	0.347787	44.2375	197.516
182	-0.693147	0.638596	0.355788	44.2375	197.126
183	-0.693147	0.642105	0.36649	44.2375	196.603
184	-0.693147	0.645614	0.374544	44.2375	196.21
185	-0.693147	0.649123	0.385321	44.2375	195.683
186	-0.693147	0.652632	0.393433	44.2375	195.287
187	-0.693147	0.65614	0.40429	44.2375	194.757
188	-0.693147	0.659649	0.412463	44.2375	194.358
189	-0.693147	0.663158	0.423405	44.2375	193.824
190	-0.693147	0.666667	0.431644	44.2375	193.421
191	-0.693147	0.670175	0.442676	44.2375	192.883
192	-0.693147	0.673684	0.450985	44.2375	192.477
193	-0.693147	0.677193	0.462114	44.2375	191.933
194	-0.693147	0.680702	0.470498	44.2375	191.524
195	-0.693147	0.684211	0.481728	44.2375	190.976
196	-0.693147	0.687719	0.490189	44.2375	190.562
197	-0.693147	0.691228	0.501527	44.2375	190.009
198	-0.693147	0.694737	0.510074	44.2375	189.591
199	-0.693147	0.698246	0.521527	44.2375	189.032
200	-0.693147	0.701754	0.530162	44.2375	188.61
201	-0.693147	0.705263	0.541736	44.2375	188.045
202	-0.693147	0.708772	0.550465	44.2375	187.619
203	-0.693147	0.712281	0.56217	44.2375	187.047
204	-0.693147	0.715789	0.570999	44.2375	186.616
205	-0.693147	0.719298	0.582841	44.2375	186.038
206	-0.693147	0.722807	0.591776	44.2375	185.602
207	-0.693147	0.726316	0.603765	44.2375	185.016
208	-0.693147	0.729825	0.612813	44.2375	184.574
209	-0.693147	0.733333	0.624956	44.2375	183.981
210	-0.693147	0.736842	0.634124	44.2375	183.534
211	-0.693147	0.740351	0.646431	44.2375	182.933
212	-0.693147	0.74386	0.655726	44.2375	182.479
213	-0.693147	0.747368	0.668209	44.2375	181.869
214	-0.693147	0.750877	0.677639	44.2375	181.409
215	-0.693147	0.754386	0.690309	44.2375	180.79
216	-0.693147	0.757895	0.699883	44.2375	180.322
217	-0.693147	0.761404	0.712751	44.2375	179.694
218	-0.693147	0.764912	0.722479	44.2375	179.219
219	-0.693147	0.768421	0.735557	44.2375	178.58
220	-0.693147	0.77193	0.745449	44.2375	178.097
221	-0.693147	0.775439	0.758753	44.2375	177.448
222	-0.693147	0.778947	0.768821	44.2375	176.956
223	-0.693147	0.782456	0.782366	44.2375	176.294
224	-0.693147	0.785965	0.792618	44.2375	175.794
225	-0.693147	0.789474	0.806422	44.2375	175.12
226	-0.693147	0.792982	0.816874	44.2375	174.609
227	-0.693147	0.796491	0.830953	44.2375	173.922
228	-0.693147	0.8	0.841621	44.2375	173.401
229	-0.693147	0.803509	0.855996	44.2375	172.699
230	-0.693147	0.807018	0.87055	44.2375	171.988
231	-0.693147	0.810526	0.881587	44.2375	171.449
232	-0.693147	0.814035	0.896473	44.2375	170.722
233	-0.693147	0.817544	0.907769	44.2375	170.171
234	-0.693147	0.821053	0.923014	44.2375	169.426

235	-0.693147	0.824561	0.93459	44.2375	168.861	
236	-0.693147	0.82807	0.950222	44.2375	168.097	
237	-0.693147	0.831579	0.9621	44.2375	167.517	
238	-0.693147	0.835088	0.97815	44.2375	166.734	
239	-0.693147	0.838596	0.990356	44.2375	166.138	
240	-0.693147	0.842105	1.00687	44.2375	165.331	
241	-0.693147	0.845614	1.01943	44.2375	164.718	
242	-0.693147	0.849123	1.03643	44.2375	163.888	
243	-0.693147	0.852632	1.04939	44.2375	163.255	
244	-0.693147	0.85614	1.06694	44.2375	162.398	
245	-0.693147	0.859649	1.08032	44.2375	161.744	
246	-0.693147	0.863158	1.09847	44.2375	160.858	
247	-0.693147	0.866667	1.11232	44.2375	160.182	
248	-0.693147	0.870175	1.13113	44.2375	159.263	
249	-0.693147	0.873684	1.1455	44.2375	158.561	
250	-0.693147	0.877193	1.16505	44.2375	157.607	
251	-0.693147	0.880702	1.18	44.2375	156.877	
252	-0.693147	0.884211	1.20036	44.2375	155.882	
253	-0.693147	0.887719	1.21596	44.2375	155.121	
254	-0.693147	0.891228	1.23724	44.2375	154.082	
255	-0.693147	0.894737	1.25357	44.2375	153.284	
256	-0.693147	0.898246	1.27588	44.2375	152.195	
257	-0.693147	0.901754	1.29303	44.2375	151.357	
258	-0.693147	0.905263	1.31652	44.2375	150.21	
259	-0.693147	0.908772	1.33462	44.2375	149.326	
260	-0.693147	0.912281	1.35946	44.2375	148.113	
261	-0.693147	0.915789	1.37866	44.2375	147.176	
262	-0.693147	0.919298	1.40507	44.2375	145.886	
263	-0.693147	0.922807	1.42554	44.2375	144.886	
264	-0.693147	0.926316	1.4538	44.2375	143.506	
265	-0.693147	0.929825	1.47579	44.2375	142.432	
266	-0.693147	0.933333	1.50626	44.2375	140.944	
267	-0.693147	0.936842	1.53007	44.2375	139.782	
268	-0.693147	0.940351	1.56322	44.2375	138.163	
269	-0.693147	0.94386	1.58927	44.2375	136.891	
270	-0.693147	0.947368	1.62576	44.2375	135.109	
271	-0.693147	0.950877	1.65463	44.2375	133.699	
272	-0.693147	0.954386	1.6954	44.2375	131.708	
273	-0.693147	0.957895	1.72793	44.2375	130.119	
274	-0.693147	0.961404	1.77438	44.2375	127.851	
275	-0.693147	0.964912	1.81191	44.2375	126.018	
276	-0.693147	0.968421	1.86629	44.2375	123.363	
277	-0.693147	0.97193	1.91103	44.2375	121.178	
278	-0.693147	0.975439	1.97737	44.2375	117.938	
279	-0.693147	0.978947	2.03352	44.2375	115.196	
280	-0.693147	0.982456	2.12007	44.2375	110.97	
281	-0.693147	0.985965	2.19728	44.2375	107.199	
282	-0.693147	0.989474	2.32634	44.2375	100.897	
283	-0.693147	0.992982	2.45727	44.2375	94.5032	
284	0	0.996491	2.74777	574	80.3175	

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Methyl Isobutyl Ketone (4-methyl-2-pentanone)

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 99.6479%
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-10	11/16/2012	1	-0.693147	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
LMW-14R	11/16/2012	1	0	FALSE
LMW-15R	11/16/2012	1	-0.693147	FALSE
LMW-16	11/16/2012	1	-0.693147	FALSE
LMW-3	11/16/2012	1	-0.693147	FALSE
LMW-3S	11/16/2012	1	-0.693147	FALSE
LMW-6	11/16/2012	1	-0.693147	FALSE
LMW-7	11/16/2012	1	-0.693147	FALSE
LMW-8	11/16/2012	1	-0.693147	FALSE
LMW-9	11/16/2012	1	-0.693147	FALSE
LMW-9D	11/16/2012	1	-0.693147	FALSE
LMW-9S	11/16/2012	1	-0.693147	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE

Concentrations (ppb)

Parameter: Methylene Chloride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 273
Percent Non-Detects: 96.1268%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	22 (95.6522%)	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<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	3.7 J B	3.7 J B
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 U

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	16 (80%)	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	ND<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	2.4 J	2.4 J
			11/22/2011	2.2 J	2.2 J
			5/16/2012	1.8 J	1.8 J
			11/16/2012	1.9 J	1.9 J

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		
LMW-14R	11	10 (90.9091%)	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<1 U	ND<1 U		
		6/30/2010	ND<1 U	ND<1 U		
		11/17/2010	ND<1 U	ND<1 U		
		7/6/2011	3.1 J B	3.1 J B		
		11/22/2011	ND<1 U	ND<1 U		
		5/16/2012	ND<1 U	ND<1 U		
		11/16/2012	ND<1 U	ND<1 U		
LMW-15R	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		
		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<1 U	ND<1 U		
		6/30/2010	ND<1 U	ND<1 U		
		11/17/2010	ND<1 U	ND<1 U		
		7/6/2011	3.1 J B	3.1 J B		
		11/22/2011	ND<1 U	ND<1 U		

			5/16/2012	ND<1 U	ND<1 U	
			11/16/2012	ND<1 U	ND<1 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<1 U	ND<1 U	
			11/16/2009	ND<1 U	ND<1 U	
			6/30/2010	ND<1 U	ND<1 U	
			11/17/2010	ND<1 U	ND<1 U	
			7/6/2011	ND<1 U	ND<1 U	
			11/22/2011	ND<1 U	ND<1 U	
			5/16/2012	ND<1 U	ND<1 U	
			11/16/2012	ND<1 U	ND<1 U	
LMW-3	25	24 (96%)	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<1 U	ND<1 U	
			11/16/2009	ND<1 U	ND<1 U	
			6/30/2010	ND<1 U	ND<1 U	
			11/17/2010	ND<1 U	ND<1 U	
			7/6/2011	3.1 J B	3.1 J B	
			11/22/2011	ND<1 U	ND<1 U	
			5/16/2012	ND<1 U	ND<1 U	
			11/16/2012	ND<1 U	ND<1 U	
LMW-3S	13	12 (92.3077%)	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<1 U	ND<1 U	
			11/16/2009	ND<1 U	ND<1 U	
			6/30/2010	ND<1 U	ND<1 U	
			11/17/2010	ND<1 U	ND<1 U	
			7/6/2011	3.2 J B	3.2 J B	
			11/22/2011	ND<1 U	ND<1 U	
			5/16/2012	ND<1 U	ND<1 U	
			11/16/2012	ND<1 U	ND<1 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<1 U	ND<1 U	
			11/16/2009	ND<1 U	ND<1 U	
			6/30/2010	ND<1 U	ND<1 U	
			11/17/2010	ND<1 U	ND<1 U	
			7/6/2011	ND<1 U	ND<1 U	
			11/22/2011	ND<1 U	ND<1 U	
			5/16/2012	ND<1 U	ND<1 U	
			11/16/2012	ND<1 U	ND<1 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<1 U	ND<1 U	
			11/17/2010	ND<1 U	ND<1 U	
			7/6/2011	3 J B	3 J B	
			11/22/2011	ND<1 U	ND<1 U	
			5/16/2012	ND<1 U	ND<1 U	
			11/16/2012	ND<1 U	ND<1 U	
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	
			6/11/2009	ND<1 U	ND<1 U	
			11/16/2009	ND<1 U	ND<1 U	
			6/30/2010	ND<1 U	ND<1 U	
			11/17/2010	ND<1 U	ND<1 U	
			7/6/2011	ND<1 U	ND<1 U	
			11/22/2011	ND<1 U	ND<1 U	

			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 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
			6/11/2009	ND<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 U
LMW-9D	13	12 (92.3077%)	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<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	3.4 J B	3.4 J B
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 U
LMW-9S	15	15 (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<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			11/16/2009	ND<1 U	ND<1 U
			6/30/2010	ND<1 U	ND<1 U
			11/17/2010	ND<1 U	ND<1 U
			7/6/2011	ND<1 U	ND<1 U
			11/22/2011	ND<1 U	ND<1 U
			5/16/2012	ND<1 U	ND<1 U
			11/16/2012	ND<1 U	ND<1 U
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: Methylene Chloride

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	0.5	-2.197282	3.8283	-1.09864
5	0.5	-2.120072	8.323	-2.15868
6	0.5	-2.033523	2.4582	-3.17544
7	0.5	-1.977373	6.3682	-4.16412
8	0.5	-1.911034	0.0203	-5.11964
9	0.5	-1.866294	3.5033	-6.05278
10	0.5	-1.811914	6.7863	-6.95874
11	0.5	-1.774384	9.9348	-7.84593
12	0.5	-1.727935	2.9205	-8.70989
13	0.5	-1.6954	55.7949	-9.55759
14	0.5	-1.654635	8.5327	-10.3849
15	0.5	-1.625766	1.1758	-11.1978
16	0.5	-1.589276	3.7015	-11.9924
17	0.5	-1.563226	6.1452	-12.774
18	0.5	-1.530076	8.4863	-13.5391
19	0.5	-1.506267	0.7551	-14.2922
20	0.5	-1.475797	2.9331	-15.0301
21	0.5	-1.4538	75.0466	-15.757
22	0.5	-1.425547	7.0788	-16.4698
23	0.5	-1.405077	9.053	-17.1723
24	0.5	-1.378668	0.9537	-17.8616
25	0.5	-1.359468	2.8019	-18.5414
26	0.5	-1.334628	4.5831	-19.2087
27	0.5	-1.316528	6.3163	-19.8669
28	0.5	-1.293038	7.9883	-20.5135
29	0.5	-1.275888	9.6161	-21.1514
30	0.5	-1.253579	1.1875	-21.7782
31	0.5	-1.237249	2.7183	-22.3968
32	0.5	-1.215969	4.1969	-23.0048
33	0.5	-1.200369	5.6377	-23.605
34	0.5	-1.18	97.0301	-24.195
35	0.5	-1.165059	8.3875	-24.7775
36	0.5	-1.1455	99.6996	-25.3502
37	0.5	-1.131131	00.979	-25.9158
38	0.5	-1.112321	02.216	-26.472
39	0.5	-1.098471	03.423	-27.0212
40	0.5	-1.080321	04.59	-27.5613
41	0.5	-1.066941	05.728	-28.0948
42	0.5	-1.049391	06.83	-28.6195
43	0.5	-1.036431	07.904	-29.1377
44	0.5	-1.019431	08.943	-29.6474
45	0.5	-1.006871	09.957	-30.1509
46	0.5	-0.990356	110.938	-30.6461
47	0.5	-0.978151	11.894	-31.1351
48	0.5	-0.9621	112.82	-31.6162
49	0.5	-0.950222	113.723	-32.0913
50	0.5	-0.934591	14.596	-32.5586
51	0.5	-0.923014	115.448	-33.0201

52	0.5	-0.907769	116.272	-33.474
53	0.5	-0.896473	117.076	-33.9222
54	0.5	-0.881587	117.853	-34.363
55	0.5	-0.87055	118.611	-34.7983
56	0.5	-0.855996	119.344	-35.2263
57	0.5	-0.841621	120.052	-35.6471
58	0.5	-0.830953	120.743	-36.0626
59	0.5	-0.816874	121.41	-36.471
60	0.5	-0.806422	122.06	-36.8742
61	0.5	-0.792618	122.689	-37.2705
62	0.5	-0.782366	123.301	-37.6617
63	0.5	-0.768821	123.892	-38.0461
64	0.5	-0.758753	124.467	-38.4255
65	0.5	-0.745449	125.023	-38.7982
66	0.5	-0.735557	125.564	-39.166
67	0.5	-0.722479	126.086	-39.5272
68	0.5	-0.712751	126.594	-39.8836
69	0.5	-0.699883	127.084	-40.2335
70	0.5	-0.690309	127.561	-40.5787
71	0.5	-0.677639	128.02	-40.9175
72	0.5	-0.668209	128.466	-41.2516
73	0.5	-0.655726	128.896	-41.5795
74	0.5	-0.646431	129.314	-41.9027
75	0.5	-0.634124	129.716	-42.2198
76	0.5	-0.624956	130.107	-42.5322
77	0.5	-0.612813	130.482	-42.8387
78	0.5	-0.603765	130.847	-43.1405
79	0.5	-0.591776	131.197	-43.4364
80	0.5	-0.582841	131.537	-43.7278
81	0.5	-0.570999	131.863	-44.0133
82	0.5	-0.56217	132.179	-44.2944
83	0.5	-0.550465	132.482	-44.5697
84	0.5	-0.541736	132.775	-44.8405
85	0.5	-0.530162	133.056	-45.1056
86	0.5	-0.521527	133.328	-45.3664
87	0.5	-0.510074	133.589	-45.6214
88	0.5	-0.501527	133.84	-45.8722
89	0.5	-0.490189	134.08	-46.1173
90	0.5	-0.481728	134.312	-46.3581
91	0.5	-0.470498	134.534	-46.5934
92	0.5	-0.462114	134.747	-46.8244
93	0.5	-0.450985	134.951	-47.0499
94	0.5	-0.442676	135.147	-47.2713
95	0.5	-0.431644	135.333	-47.4871
96	0.5	-0.423405	135.512	-47.6988
97	0.5	-0.412463	135.682	-47.905
98	0.5	-0.40429	135.846	-48.1072
99	0.5	-0.393433	136.001	-48.3039
100	0.5	-0.385321	136.149	-48.4965
101	0.5	-0.374544	136.289	-48.6838
102	0.5	-0.36649	136.424	-48.8671
103	0.5	-0.355788	136.55	-49.045
104	0.5	-0.347787	136.671	-49.2189
105	0.5	-0.337155	136.785	-49.3874
106	0.5	-0.329206	136.893	-49.552
107	0.5	-0.318639	136.995	-49.7114
108	0.5	-0.310738	137.091	-49.8667
109	0.5	-0.300232	137.182	-50.0168
110	0.5	-0.292375	137.267	-50.163
111	0.5	-0.281926	137.346	-50.304
112	0.5	-0.27411	137.422	-50.441
113	0.5	-0.263715	137.491	-50.5729

114	0.5	-0.253347	137.555	-50.6996
115	0.5	-0.24559	137.616	-50.8224
116	0.5	-0.235269	137.671	-50.94
117	0.5	-0.227545	137.723	-51.0538
118	0.5	-0.217267	137.77	-51.1624
119	0.5	-0.209575	137.814	-51.2672
120	0.5	-0.199336	137.854	-51.3669
121	0.5	-0.191671	137.89	-51.4627
122	0.5	-0.181468	137.923	-51.5534
123	0.5	-0.173829	137.954	-51.6403
124	0.5	-0.163659	137.98	-51.7222
125	0.5	-0.156042	138.005	-51.8002
126	0.5	-0.1459	138.026	-51.8731
127	0.5	-0.138305	138.045	-51.9423
128	0.5	-0.128189	138.062	-52.0064
129	0.5	-0.12061	138.076	-52.0667
130	0.5	-0.110516	138.088	-52.122
131	0.5	-0.102953	138.099	-52.1734
132	0.5	-0.0928787	138.108	-52.2199
133	0.5	-0.0853288	138.115	-52.2625
134	0.5	-0.0752698	138.12	-52.3002
135	0.5	-0.0677301	138.125	-52.334
136	0.5	-0.0576847	138.128	-52.3629
137	0.5	-0.0501541	138.131	-52.388
138	0.5	-0.0401167	138.132	-52.408
139	0.5	-0.0325917	138.134	-52.4243
140	0.5	-0.0225612	138.134	-52.4356
141	0.5	-0.0150408	138.134	-52.4431
142	0.5	-0.00501359	138.134	-52.4456
143	0.5	0.00501359	138.134	-52.4431
144	0.5	0.0150408	138.135	-52.4356
145	0.5	0.0225612	138.135	-52.4243
146	0.5	0.0325917	138.136	-52.408
147	0.5	0.0401167	138.138	-52.388
148	0.5	0.0501541	138.14	-52.3629
149	0.5	0.0576847	138.144	-52.334
150	0.5	0.0677301	138.148	-52.3002
151	0.5	0.0752698	138.154	-52.2625
152	0.5	0.0853288	138.161	-52.2199
153	0.5	0.0928787	138.17	-52.1734
154	0.5	0.102953	138.18	-52.122
155	0.5	0.110516	138.193	-52.0667
156	0.5	0.12061	138.207	-52.0064
157	0.5	0.128189	138.224	-51.9423
158	0.5	0.138305	138.243	-51.8731
159	0.5	0.1459	138.264	-51.8002
160	0.5	0.156042	138.288	-51.7222
161	0.5	0.163659	138.315	-51.6403
162	0.5	0.173829	138.345	-51.5534
163	0.5	0.181468	138.378	-51.4627
164	0.5	0.191671	138.415	-51.3669
165	0.5	0.199336	138.455	-51.2672
166	0.5	0.209575	138.499	-51.1624
167	0.5	0.217267	138.546	-51.0538
168	0.5	0.227545	138.598	-50.94
169	0.5	0.235269	138.653	-50.8224
170	0.5	0.24559	138.713	-50.6996
171	0.5	0.253347	138.777	-50.5729
172	0.5	0.263715	138.847	-50.441
173	0.5	0.27411	138.922	-50.304
174	0.5	0.281926	139.002	-50.163
175	0.5	0.292375	139.087	-50.0168

176	0.5	0.300232	139.177	-49.8667
177	0.5	0.310738	139.274	-49.7114
178	0.5	0.318639	139.375	-49.552
179	0.5	0.329206	139.484	-49.3874
180	0.5	0.337155	139.597	-49.2189
181	0.5	0.347787	139.718	-49.045
182	0.5	0.355788	139.845	-48.8671
183	0.5	0.36649	139.979	-48.6838
184	0.5	0.374544	140.12	-48.4965
185	0.5	0.385321	140.268	-48.3039
186	0.5	0.393433	140.423	-48.1072
187	0.5	0.40429	140.586	-47.905
188	0.5	0.412463	140.756	-47.6988
189	0.5	0.423405	140.936	-47.4871
190	0.5	0.431644	141.122	-47.2713
191	0.5	0.442676	141.318	-47.0499
192	0.5	0.450985	141.521	-46.8244
193	0.5	0.462114	141.735	-46.5934
194	0.5	0.470498	141.956	-46.3581
195	0.5	0.481728	142.188	-46.1173
196	0.5	0.490189	142.429	-45.8722
197	0.5	0.501527	142.68	-45.6214
198	0.5	0.510074	142.94	-45.3664
199	0.5	0.521527	143.212	-45.1056
200	0.5	0.530162	143.493	-44.8405
201	0.5	0.541736	143.787	-44.5697
202	0.5	0.550465	144.09	-44.2944
203	0.5	0.56217	144.406	-44.0133
204	0.5	0.570999	144.732	-43.7278
205	0.5	0.582841	145.072	-43.4364
206	0.5	0.591776	145.422	-43.1405
207	0.5	0.603765	145.786	-42.8387
208	0.5	0.612813	146.162	-42.5322
209	0.5	0.624956	146.552	-42.2198
210	0.5	0.634124	146.955	-41.9027
211	0.5	0.646431	147.372	-41.5795
212	0.5	0.655726	147.802	-41.2516
213	0.5	0.668209	148.249	-40.9175
214	0.5	0.677639	148.708	-40.5787
215	0.5	0.690309	149.185	-40.2335
216	0.5	0.699883	149.674	-39.8836
217	0.5	0.712751	150.182	-39.5272
218	0.5	0.722479	150.704	-39.166
219	0.5	0.735557	151.245	-38.7982
220	0.5	0.745449	151.801	-38.4255
221	0.5	0.758753	152.377	-38.0461
222	0.5	0.768821	152.968	-37.6617
223	0.5	0.782366	153.58	-37.2705
224	0.5	0.792618	154.208	-36.8742
225	0.5	0.806422	154.859	-36.471
226	0.5	0.816874	155.526	-36.0626
227	0.5	0.830953	156.216	-35.6471
228	0.5	0.841621	156.925	-35.2263
229	0.5	0.855996	157.657	-34.7983
230	0.5	0.87055	158.415	-34.363
231	0.5	0.881587	159.193	-33.9222
232	0.5	0.896473	159.996	-33.474
233	0.5	0.907769	160.82	-33.0201
234	0.5	0.923014	161.672	-32.5586
235	0.5	0.93459	162.546	-32.0913
236	0.5	0.950222	163.449	-31.6162
237	0.5	0.9621	164.374	-31.1351

238	0.5	0.97815	165.331	-30.6461
239	0.5	0.990356	166.312	-30.1509
240	0.5	1.00687	167.326	-29.6474
241	0.5	1.01943	168.365	-29.1377
242	0.5	1.03643	169.439	-28.6195
243	0.5	1.04939	170.54	-28.0948
244	0.5	1.06694	171.679	-27.5613
245	0.5	1.08032	172.846	-27.0212
246	0.5	1.09847	174.052	-26.472
247	0.5	1.11232	175.29	-25.9158
248	0.5	1.13113	176.569	-25.3502
249	0.5	1.1455	177.881	-24.7775
250	0.5	1.16505	179.239	-24.195
251	0.5	1.18	180.631	-23.605
252	0.5	1.20036	182.072	-23.0048
253	0.5	1.21596	183.55	-22.3968
254	0.5	1.23724	185.081	-21.7782
255	0.5	1.25357	186.653	-21.1514
256	0.5	1.27588	188.28	-20.5135
257	0.5	1.29303	189.952	-19.8669
258	0.5	1.31652	191.686	-19.2087
259	0.5	1.33462	193.467	-18.5414
260	0.5	1.35946	195.315	-17.8616
261	0.5	1.37866	197.216	-17.1723
262	0.5	1.40507	199.19	-16.4698
263	0.5	1.42554	201.222	-15.757
264	0.5	1.4538	203.336	-15.0301
265	0.5	1.47579	205.514	-14.2922
266	0.5	1.50626	207.782	-13.5391
267	0.5	1.53007	210.123	-12.774
268	0.5	1.56322	212.567	-11.9924
269	0.5	1.58927	215.093	-11.1978
270	0.5	1.62576	217.736	-10.3849
271	0.5	1.65463	220.474	-9.55759
272	0.5	1.6954	223.348	-8.70989
273	0.5	1.72793	226.334	-7.84593
274	1.8	1.77438	229.482	-4.65205
275	1.9	1.81191	232.765	-1.20941
276	2.2	1.86629	236.248	2.89643
277	2.4	1.91103	239.9	7.4829
278	3	1.97737	243.81	13.415
279	3.1	2.03352	247.946	19.7189
280	3.1	2.12007	252.44	26.2911
281	3.1	2.19728	257.268	33.1027
282	3.2	2.32634	262.68	40.547
283	3.4	2.45727	268.718	48.9017
284	3.7	2.74777	276.269	59.0685

Data Set Standard Deviation = 0.465634
Numerator = 3489.08
Denominator = 16951.5
W Statistic = 0.205828 = 3489.08 / 16951.5

5% Critical value of 0.976 exceeds 0.205828
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.205828
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Methylene Chloride

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.459936
0.459936 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0	0.00350877		-2.7477739	348.683	
2	0	0.00701754		-2.4572739	334.497	
3	0	0.0105263		-2.3263439	328.103	
4	0.5	0.0140351		-2.19728	105.875	321.801
5	0.5	0.0175439		-2.12007	105.875	318.03
6	0.5	0.0210526		-2.03352	105.875	313.804
7	0.5	0.0245614		-1.97737	105.875	311.062
8	0.5	0.0280702		-1.91103	105.875	307.822
9	0.5	0.0315789		-1.86629	105.875	305.637
10	0.5	0.0350877		-1.81191	105.875	302.982
11	0.5	0.0385965		-1.77438	105.875	301.149
12	0.5	0.0421053		-1.72793	105.875	298.881
13	0.5	0.045614		-1.6954	105.875	297.292
14	0.5	0.0491228		-1.65463	105.875	295.301
15	0.5	0.0526316		-1.62576	105.875	293.891
16	0.5	0.0561404		-1.58927	105.875	292.109
17	0.5	0.0596491		-1.56322	105.875	290.837
18	0.5	0.0631579		-1.53007	105.875	289.218
19	0.5	0.0666667		-1.50626	105.875	288.056
20	0.5	0.0701754		-1.47579	105.875	286.568
21	0.5	0.0736842		-1.4538	105.875	285.494
22	0.5	0.077193		-1.42554	105.875	284.114
23	0.5	0.0807018		-1.40507	105.875	283.114
24	0.5	0.0842105		-1.37866	105.875	281.824
25	0.5	0.0877193		-1.35946	105.875	280.887
26	0.5	0.0912281		-1.33462	105.875	279.674
27	0.5	0.0947368		-1.31652	105.875	278.79
28	0.5	0.0982456		-1.29303	105.875	277.643
29	0.5	0.101754		-1.27588	105.875	276.805
30	0.5	0.105263		-1.25357	105.875	275.716
31	0.5	0.108772		-1.23724	105.875	274.918
32	0.5	0.112281		-1.21596	105.875	273.879
33	0.5	0.115789		-1.20036	105.875	273.118
34	0.5	0.119298		-1.18	105.875	272.123
35	0.5	0.122807		-1.16505	105.875	271.393
36	0.5	0.126316		-1.1455	105.875	270.439
37	0.5	0.129825		-1.13113	105.875	269.737
38	0.5	0.133333		-1.11232	105.875	268.818
39	0.5	0.136842		-1.09847	105.875	268.142
40	0.5	0.140351		-1.08032	105.875	267.256
41	0.5	0.14386	-1.06694	105.875	266.602	
42	0.5	0.147368		-1.04939	105.875	265.745
43	0.5	0.150877		-1.03643	105.875	265.112
44	0.5	0.154386		-1.01943	105.875	264.282
45	0.5	0.157895		-1.00687	105.875	263.669
46	0.5	0.161404		-0.990356	105.875	262.862
47	0.5	0.164912		-0.97815	105.875	262.266
48	0.5	0.168421		-0.9621	105.875	261.483

49	0.5	0.17193	-0.950222	105.875	260.903
50	0.5	0.175439	-0.93459	105.875	260.139
51	0.5	0.178947	-0.923014	105.875	259.574
52	0.5	0.182456	-0.907769	105.875	258.829
53	0.5	0.185965	-0.896473	105.875	258.278
54	0.5	0.189474	-0.881587	105.875	257.551
55	0.5	0.192982	-0.87055	105.875	257.012
56	0.5	0.196491	-0.855996	105.875	256.301
57	0.5	0.2	-0.841621	105.875	255.599
58	0.5	0.203509	-0.830953	105.875	255.078
59	0.5	0.207018	-0.816874	105.875	254.391
60	0.5	0.210526	-0.806422	105.875	253.88
61	0.5	0.214035	-0.792618	105.875	253.206
62	0.5	0.217544	-0.782366	105.875	252.706
63	0.5	0.221053	-0.768821	105.875	252.044
64	0.5	0.224561	-0.758753	105.875	251.552
65	0.5	0.22807	-0.745449	105.875	250.903
66	0.5	0.231579	-0.735557	105.875	250.42
67	0.5	0.235088	-0.722479	105.875	249.781
68	0.5	0.238596	-0.712751	105.875	249.306
69	0.5	0.242105	-0.699883	105.875	248.678
70	0.5	0.245614	-0.690309	105.875	248.21
71	0.5	0.249123	-0.677639	105.875	247.591
72	0.5	0.252632	-0.668209	105.875	247.131
73	0.5	0.25614	-0.655726	105.875	246.521
74	0.5	0.259649	-0.646431	105.875	246.067
75	0.5	0.263158	-0.634124	105.875	245.466
76	0.5	0.266667	-0.624956	105.875	245.019
77	0.5	0.270175	-0.612813	105.875	244.426
78	0.5	0.273684	-0.603765	105.875	243.984
79	0.5	0.277193	-0.591776	105.875	243.398
80	0.5	0.280702	-0.582841	105.875	242.962
81	0.5	0.284211	-0.570999	105.875	242.384
82	0.5	0.287719	-0.56217	105.875	241.953
83	0.5	0.291228	-0.550465	105.875	241.381
84	0.5	0.294737	-0.541736	105.875	240.955
85	0.5	0.298246	-0.530162	105.875	240.39
86	0.5	0.301754	-0.521527	105.875	239.968
87	0.5	0.305263	-0.510074	105.875	239.409
88	0.5	0.308772	-0.501527	105.875	238.991
89	0.5	0.312281	-0.490189	105.875	238.438
90	0.5	0.315789	-0.481728	105.875	238.024
91	0.5	0.319298	-0.470498	105.875	237.476
92	0.5	0.322807	-0.462114	105.875	237.067
93	0.5	0.326316	-0.450985	105.875	236.523
94	0.5	0.329825	-0.442676	105.875	236.117
95	0.5	0.333333	-0.431644	105.875	235.579
96	0.5	0.336842	-0.423405	105.875	235.176
97	0.5	0.340351	-0.412463	105.875	234.642
98	0.5	0.34386	-0.40429	105.875	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	1.8	0.961404	1.77438	279.75	127.851	
275	1.9	0.964912	1.81191	293.125	126.018	
276	2.2	0.968421	1.86629	333.25	123.363	
277	2.4	0.97193	1.91103	360	121.178	
278	3	0.975439	1.97737	440.25	117.938	
279	3.1	0.978947	2.03352	453.625	115.196	
280	3.1	0.982456	2.12007	453.625	110.97	
281	3.1	0.985965	2.19728	453.625	107.199	
282	3.2	0.989474	2.32634	467	100.897	
283	3.4	0.992982	2.45727	493.75	94.5032	
284	3.7	0.996491	2.74777	533.875	80.3175	

Shapiro-Francia Test of Normality

Parameter: Methylene Chloride

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	-0.693147	-2.747777.55021	1.90461		
2	-0.693147	-2.4572713.5884	3.60786		
3	-0.693147	-2.3263419.0003	5.22035		
4	-0.693147	-2.1972823.8283	6.7434		
5	-0.693147	-2.1200728.323	8.21292		
6	-0.693147	-2.0335232.4582	9.62245		
7	-0.693147	-1.9773736.3682	10.9931		
8	-0.693147	-1.9110340.0203	12.3177		
9	-0.693147	-1.8662943.5033	13.6113		
10	-0.693147	-1.8119146.7863	14.8672		
11	-0.693147	-1.7743849.9348	16.0971		
12	-0.693147	-1.7279352.9205	17.2948		
13	-0.693147	-1.6954 55.7949	18.47		
14	-0.693147	-1.6546358.5327	19.6169		
15	-0.693147	-1.6257661.1758	20.7438		
16	-0.693147	-1.5892763.7015	21.8454		
17	-0.693147	-1.5632266.1452	22.9289		
18	-0.693147	-1.5300768.4863	23.9895		
19	-0.693147	-1.5062670.7551	25.0335		
20	-0.693147	-1.4757972.9331	26.0565		
21	-0.693147	-1.4538 75.0466	27.0642		
22	-0.693147	-1.4255477.0788	28.0523		
23	-0.693147	-1.4050779.053	29.0262		
24	-0.693147	-1.3786680.9537	29.9818		
25	-0.693147	-1.3594682.8019	30.9241		
26	-0.693147	-1.3346284.5831	31.8492		
27	-0.693147	-1.3165286.3163	32.7618		
28	-0.693147	-1.2930387.9883	33.658		
29	-0.693147	-1.2758889.6161	34.5424		
30	-0.693147	-1.2535791.1875	35.4113		
31	-0.693147	-1.2372492.7183	36.2689		
32	-0.693147	-1.2159694.1969	37.1117		
33	-0.693147	-1.2003695.6377	37.9438		
34	-0.693147	-1.18 97.0301	38.7617		
35	-0.693147	-1.1650598.3875	39.5692		
36	-0.693147	-1.1455 99.6996	40.3632		
37	-0.693147	-1.13113100.979	41.1473		
38	-0.693147	-1.11232102.216	41.9183		
39	-0.693147	-1.09847103.423	42.6797		
40	-0.693147	-1.08032104.59	43.4285		
41	-0.693147	-1.06694105.728	44.168		
42	-0.693147	-1.04939106.83	44.8954		
43	-0.693147	-1.03643107.904	45.6138		
44	-0.693147	-1.01943108.943	46.3204		
45	-0.693147	-1.00687109.957	47.0183		
46	-0.693147	-0.990356	110.938	47.7048	
47	-0.693147	-0.97815111.894	48.3828		
48	-0.693147	-0.9621 112.82	49.0497		
49	-0.693147	-0.950222	113.723	49.7083	
50	-0.693147	-0.93459114.596	50.3561		
51	-0.693147	-0.923014	115.448	50.9959	

52	-0.693147	-0.907769	116.272	51.6251
53	-0.693147	-0.896473	117.076	52.2465
54	-0.693147	-0.881587	117.853	52.8576
55	-0.693147	-0.87055	118.611	53.461
56	-0.693147	-0.855996	119.344	54.0543
57	-0.693147	-0.841621	120.052	54.6377
58	-0.693147	-0.830953	120.743	55.2137
59	-0.693147	-0.816874	121.41	55.7799
60	-0.693147	-0.806422	122.06	56.3389
61	-0.693147	-0.792618	122.689	56.8883
62	-0.693147	-0.782366	123.301	57.4306
63	-0.693147	-0.768821	123.892	57.9635
64	-0.693147	-0.758753	124.467	58.4894
65	-0.693147	-0.745449	125.023	59.0061
66	-0.693147	-0.735557	125.564	59.5159
67	-0.693147	-0.722479	126.086	60.0167
68	-0.693147	-0.712751	126.594	60.5108
69	-0.693147	-0.699883	127.084	60.9959
70	-0.693147	-0.690309	127.561	61.4744
71	-0.693147	-0.677639	128.02	61.9441
72	-0.693147	-0.668209	128.466	62.4073
73	-0.693147	-0.655726	128.896	62.8618
74	-0.693147	-0.646431	129.314	63.3098
75	-0.693147	-0.634124	129.716	63.7494
76	-0.693147	-0.624956	130.107	64.1826
77	-0.693147	-0.612813	130.482	64.6073
78	-0.693147	-0.603765	130.847	65.0258
79	-0.693147	-0.591776	131.197	65.436
80	-0.693147	-0.582841	131.537	65.84
81	-0.693147	-0.570999	131.863	66.2358
82	-0.693147	-0.56217	132.179	66.6255
83	-0.693147	-0.550465	132.482	67.007
84	-0.693147	-0.541736	132.775	67.3825
85	-0.693147	-0.530162	133.056	67.75
86	-0.693147	-0.521527	133.328	68.1115
87	-0.693147	-0.510074	133.589	68.4651
88	-0.693147	-0.501527	133.84	68.8127
89	-0.693147	-0.490189	134.08	69.1525
90	-0.693147	-0.481728	134.312	69.4864
91	-0.693147	-0.470498	134.534	69.8125
92	-0.693147	-0.462114	134.747	70.1328
93	-0.693147	-0.450985	134.951	70.4454
94	-0.693147	-0.442676	135.147	70.7522
95	-0.693147	-0.431644	135.333	71.0514
96	-0.693147	-0.423405	135.512	71.3449
97	-0.693147	-0.412463	135.682	71.6308
98	-0.693147	-0.40429	135.846	71.9111
99	-0.693147	-0.393433	136.001	72.1838
100	-0.693147	-0.385321	136.149	72.4508
101	-0.693147	-0.374544	136.289	72.7105
102	-0.693147	-0.36649	136.424	72.9645
103	-0.693147	-0.355788	136.55	73.2111
104	-0.693147	-0.347787	136.671	73.4522
105	-0.693147	-0.337155	136.785	73.6859
106	-0.693147	-0.329206	136.893	73.9141
107	-0.693147	-0.318639	136.995	74.1349
108	-0.693147	-0.310738	137.091	74.3503
109	-0.693147	-0.300232	137.182	74.5584
110	-0.693147	-0.292375	137.267	74.7611
111	-0.693147	-0.281926	137.346	74.9565
112	-0.693147	-0.27411	137.422	75.1465
113	-0.693147	-0.263715	137.491	75.3293

114	-0.693147	-0.253347	137.555	75.5049
115	-0.693147	-0.24559	137.616	75.6751
116	-0.693147	-0.235269	137.671	75.8382
117	-0.693147	-0.227545	137.723	75.9959
118	-0.693147	-0.217267	137.77	76.1465
119	-0.693147	-0.209575	137.814	76.2918
120	-0.693147	-0.199336	137.854	76.4299
121	-0.693147	-0.191671	137.89	76.5628
122	-0.693147	-0.181468	137.923	76.6886
123	-0.693147	-0.173829	137.954	76.8091
124	-0.693147	-0.163659	137.98	76.9225
125	-0.693147	-0.156042	138.005	77.0307
126	-0.693147	-0.1459	138.026	77.1318
127	-0.693147	-0.138305	138.045	77.2277
128	-0.693147	-0.128189	138.062	77.3165
129	-0.693147	-0.12061	138.076	77.4001
130	-0.693147	-0.110516	138.088	77.4767
131	-0.693147	-0.102953	138.099	77.5481
132	-0.693147	-0.0928787	138.108	77.6125
133	-0.693147	-0.0853288	138.115	77.6716
134	-0.693147	-0.0752698	138.12	77.7238
135	-0.693147	-0.0677301	138.125	77.7707
136	-0.693147	-0.0576847	138.128	77.8107
137	-0.693147	-0.0501541	138.131	77.8455
138	-0.693147	-0.0401167	138.132	77.8733
139	-0.693147	-0.0325917	138.134	77.8959
140	-0.693147	-0.0225612	138.134	77.9115
141	-0.693147	-0.0150408	138.134	77.9219
142	-0.693147	-0.00501359	138.134	77.9254
143	-0.693147	0.00501359	138.134	77.9219
144	-0.693147	0.0150408	138.135	77.9115
145	-0.693147	0.0225612	138.135	77.8959
146	-0.693147	0.0325917	138.136	77.8733
147	-0.693147	0.0401167	138.138	77.8455
148	-0.693147	0.0501541	138.14	77.8107
149	-0.693147	0.0576847	138.144	77.7707
150	-0.693147	0.0677301	138.148	77.7238
151	-0.693147	0.0752698	138.154	77.6716
152	-0.693147	0.0853288	138.161	77.6125
153	-0.693147	0.0928787	138.17	77.5481
154	-0.693147	0.102953	138.18	77.4767
155	-0.693147	0.110516	138.193	77.4001
156	-0.693147	0.12061	138.207	77.3165
157	-0.693147	0.128189	138.224	77.2277
158	-0.693147	0.138305	138.243	77.1318
159	-0.693147	0.1459	138.264	77.0307
160	-0.693147	0.156042	138.288	76.9225
161	-0.693147	0.163659	138.315	76.8091
162	-0.693147	0.173829	138.345	76.6886
163	-0.693147	0.181468	138.378	76.5628
164	-0.693147	0.191671	138.415	76.4299
165	-0.693147	0.199336	138.455	76.2918
166	-0.693147	0.209575	138.499	76.1465
167	-0.693147	0.217267	138.546	75.9959
168	-0.693147	0.227545	138.598	75.8382
169	-0.693147	0.235269	138.653	75.6751
170	-0.693147	0.24559	138.713	75.5049
171	-0.693147	0.253347	138.777	75.3293
172	-0.693147	0.263715	138.847	75.1465
173	-0.693147	0.27411	138.922	74.9565
174	-0.693147	0.281926	139.002	74.7611
175	-0.693147	0.292375	139.087	74.5584

176	-0.693147	0.300232	139.177	74.3503
177	-0.693147	0.310738	139.274	74.1349
178	-0.693147	0.318639	139.375	73.9141
179	-0.693147	0.329206	139.484	73.6859
180	-0.693147	0.337155	139.597	73.4522
181	-0.693147	0.347787	139.718	73.2111
182	-0.693147	0.355788	139.845	72.9645
183	-0.693147	0.36649	139.979	72.7105
184	-0.693147	0.374544	140.12	72.4508
185	-0.693147	0.385321	140.268	72.1838
186	-0.693147	0.393433	140.423	71.9111
187	-0.693147	0.40429	140.586	71.6308
188	-0.693147	0.412463	140.756	71.3449
189	-0.693147	0.423405	140.936	71.0514
190	-0.693147	0.431644	141.122	70.7522
191	-0.693147	0.442676	141.318	70.4454
192	-0.693147	0.450985	141.521	70.1328
193	-0.693147	0.462114	141.735	69.8125
194	-0.693147	0.470498	141.956	69.4864
195	-0.693147	0.481728	142.188	69.1525
196	-0.693147	0.490189	142.429	68.8127
197	-0.693147	0.501527	142.68	68.4651
198	-0.693147	0.510074	142.94	68.1115
199	-0.693147	0.521527	143.212	67.75
200	-0.693147	0.530162	143.493	67.3825
201	-0.693147	0.541736	143.787	67.007
202	-0.693147	0.550465	144.09	66.6255
203	-0.693147	0.56217	144.406	66.2358
204	-0.693147	0.570999	144.732	65.84
205	-0.693147	0.582841	145.072	65.436
206	-0.693147	0.591776	145.422	65.0258
207	-0.693147	0.603765	145.786	64.6073
208	-0.693147	0.612813	146.162	64.1826
209	-0.693147	0.624956	146.552	63.7494
210	-0.693147	0.634124	146.955	63.3098
211	-0.693147	0.646431	147.372	62.8618
212	-0.693147	0.655726	147.802	62.4073
213	-0.693147	0.668209	148.249	61.9441
214	-0.693147	0.677639	148.708	61.4744
215	-0.693147	0.690309	149.185	60.9959
216	-0.693147	0.699883	149.674	60.5108
217	-0.693147	0.712751	150.182	60.0167
218	-0.693147	0.722479	150.704	59.5159
219	-0.693147	0.735557	151.245	59.0061
220	-0.693147	0.745449	151.801	58.4894
221	-0.693147	0.758753	152.377	57.9635
222	-0.693147	0.768821	152.968	57.4306
223	-0.693147	0.782366	153.58	56.8883
224	-0.693147	0.792618	154.208	56.3389
225	-0.693147	0.806422	154.859	55.7799
226	-0.693147	0.816874	155.526	55.2137
227	-0.693147	0.830953	156.216	54.6377
228	-0.693147	0.841621	156.925	54.0543
229	-0.693147	0.855996	157.657	53.461
230	-0.693147	0.87055	158.415	52.8576
231	-0.693147	0.881587	159.193	52.2465
232	-0.693147	0.896473	159.996	51.6251
233	-0.693147	0.907769	160.82	50.9959
234	-0.693147	0.923014	161.672	50.3561
235	-0.693147	0.93459	162.546	49.7083
236	-0.693147	0.950222	163.449	49.0497
237	-0.693147	0.9621	164.374	48.3828

238	-0.693147		0.97815	165.331	47.7048
239	-0.693147		0.990356		166.312 47.0183
240	-0.693147		1.00687	167.326	46.3204
241	-0.693147		1.01943	168.365	45.6138
242	-0.693147		1.03643	169.439	44.8954
243	-0.693147		1.04939	170.54	44.168
244	-0.693147		1.06694	171.679	43.4285
245	-0.693147		1.08032	172.846	42.6797
246	-0.693147		1.09847	174.052	41.9183
247	-0.693147		1.11232	175.29	41.1473
248	-0.693147		1.13113	176.569	40.3632
249	-0.693147		1.1455	177.881	39.5692
250	-0.693147		1.16505	179.239	38.7617
251	-0.693147		1.18	180.631	37.9438
252	-0.693147		1.20036	182.072	37.1117
253	-0.693147		1.21596	183.55	36.2689
254	-0.693147		1.23724	185.081	35.4113
255	-0.693147		1.25357	186.653	34.5424
256	-0.693147		1.27588	188.28	33.658
257	-0.693147		1.29303	189.952	32.7618
258	-0.693147		1.31652	191.686	31.8492
259	-0.693147		1.33462	193.467	30.9241
260	-0.693147		1.35946	195.315	29.9818
261	-0.693147		1.37866	197.216	29.0262
262	-0.693147		1.40507	199.19	28.0523
263	-0.693147		1.42554	201.222	27.0642
264	-0.693147		1.4538	203.336	26.0565
265	-0.693147		1.47579	205.514	25.0335
266	-0.693147		1.50626	207.782	23.9895
267	-0.693147		1.53007	210.123	22.9289
268	-0.693147		1.56322	212.567	21.8454
269	-0.693147		1.58927	215.093	20.7438
270	-0.693147		1.62576	217.736	19.6169
271	0	1.65463	220.474	19.6169	
272	0	1.6954	223.348	19.6169	
273	0	1.72793	226.334	19.6169	
274	0.587787		1.77438	229.482	20.6598
275	0.641854		1.81191	232.765	21.8228
276	0.788457		1.86629	236.248	23.2943
277	0.875469		1.91103	239.9	24.9674
278	1.09861	1.97737	243.81	27.1397	
279	1.1314	2.03352	247.946	29.4405	
280	1.1314	2.12007	252.44	31.8391	
281	1.1314	2.19728	257.268	34.3251	
282	1.16315	2.32634	262.68	37.031	
283	1.22378	2.45727	268.718	40.0382	
284	1.30833	2.74777	276.269	43.6332	

Data Set Standard Deviation = 0.337955
Numerator = 1903.85
Denominator = 8929.69
W Statistic = 0.213205 = 1903.85 / 8929.69

5% Critical value of 0.976 exceeds 0.213205
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.213205
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Methylene Chloride

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.466399
0.466399 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-0.693147	0.00350877	-2.74	77 93.7221	348.683
2	-0.693147	0.00701754	-2.45	72 93.7221	334.497
3	-0.693147	0.0105263	-2.32	63 93.7221	328.103
4	-0.693147	0.0140351	-2.19	72 93.7221	321.801
5	-0.693147	0.0175439	-2.12	00 93.7221	318.03
6	-0.693147	0.0210526	-2.03	35 93.7221	313.804
7	-0.693147	0.0245614	-1.97	73 93.7221	311.062
8	-0.693147	0.0280702	-1.91	10 93.7221	307.822
9	-0.693147	0.0315789	-1.86	62 93.7221	305.637
10	-0.693147	0.0350877	-1.81	19 93.7221	302.982
11	-0.693147	0.0385965	-1.77	43 93.7221	301.149
12	-0.693147	0.0421053	-1.72	79 93.7221	298.881
13	-0.693147	0.045614	-1.6954	93.7221	297.292
14	-0.693147	0.0491228	-1.65	46 93.7221	295.301
15	-0.693147	0.0526316	-1.62	57 93.7221	293.891
16	-0.693147	0.0561404	-1.58	92 93.7221	292.109
17	-0.693147	0.0596491	-1.56	32 93.7221	290.837
18	-0.693147	0.0631579	-1.53	00 93.7221	289.218
19	-0.693147	0.0666667	-1.50	62 93.7221	288.056
20	-0.693147	0.0701754	-1.47	57 93.7221	286.568
21	-0.693147	0.0736842	-1.4538	93.7221	285.494
22	-0.693147	0.077193	-1.42	55 93.7221	284.114
23	-0.693147	0.0807018	-1.40	50 93.7221	283.114
24	-0.693147	0.0842105	-1.37	86 93.7221	281.824
25	-0.693147	0.0877193	-1.35	94 93.7221	280.887
26	-0.693147	0.0912281	-1.33	46 93.7221	279.674
27	-0.693147	0.0947368	-1.31	65 93.7221	278.79
28	-0.693147	0.0982456	-1.29	30 93.7221	277.643
29	-0.693147	0.101754	-1.27	58 93.7221	276.805
30	-0.693147	0.105263	-1.25	35 93.7221	275.716
31	-0.693147	0.108772	-1.23	72 93.7221	274.918
32	-0.693147	0.112281	-1.21	59 93.7221	273.879
33	-0.693147	0.115789	-1.20	03 93.7221	273.118
34	-0.693147	0.119298	-1.18	93.7221	272.123
35	-0.693147	0.122807	-1.16	50 93.7221	271.393
36	-0.693147	0.126316	-1.1455	93.7221	270.439
37	-0.693147	0.129825	-1.13	11 93.7221	269.737
38	-0.693147	0.133333	-1.11	23 93.7221	268.818
39	-0.693147	0.136842	-1.09	84 93.7221	268.142
40	-0.693147	0.140351	-1.08	03 93.7221	267.256
41	-0.693147	0.14386	-1.0669	49 93.7221	266.602
42	-0.693147	0.147368	-1.04	93 93.7221	265.745
43	-0.693147	0.150877	-1.03	64 93.7221	265.112
44	-0.693147	0.154386	-1.01	94 93.7221	264.282
45	-0.693147	0.157895	-1.00	68 93.7221	263.669
46	-0.693147	0.161404	-0.990356	93.7221	262.862
47	-0.693147	0.164912	-0.97	81 93.7221	262.266
48	-0.693147	0.168421	-0.9621	93.7221	261.483

49	-0.693147	0.17193	-0.950222	93.7221	260.903
50	-0.693147	0.175439	-0.934599	93.7221	260.139
51	-0.693147	0.178947	-0.923014	93.7221	259.574
52	-0.693147	0.182456	-0.907769	93.7221	258.829
53	-0.693147	0.185965	-0.896473	93.7221	258.278
54	-0.693147	0.189474	-0.881587	93.7221	257.551
55	-0.693147	0.192982	-0.870559	93.7221	257.012
56	-0.693147	0.196491	-0.855996	93.7221	256.301
57	-0.693147	0.2	-0.841621	93.7221	255.599
58	-0.693147	0.203509	-0.830953	93.7221	255.078
59	-0.693147	0.207018	-0.816874	93.7221	254.391
60	-0.693147	0.210526	-0.806422	93.7221	253.88
61	-0.693147	0.214035	-0.792618	93.7221	253.206
62	-0.693147	0.217544	-0.782366	93.7221	252.706
63	-0.693147	0.221053	-0.768821	93.7221	252.044
64	-0.693147	0.224561	-0.758753	93.7221	251.552
65	-0.693147	0.22807	-0.745449	93.7221	250.903
66	-0.693147	0.231579	-0.735557	93.7221	250.42
67	-0.693147	0.235088	-0.722479	93.7221	249.781
68	-0.693147	0.238596	-0.712751	93.7221	249.306
69	-0.693147	0.242105	-0.699883	93.7221	248.678
70	-0.693147	0.245614	-0.690309	93.7221	248.21
71	-0.693147	0.249123	-0.677639	93.7221	247.591
72	-0.693147	0.252632	-0.668209	93.7221	247.131
73	-0.693147	0.25614	-0.655726	93.7221	246.521
74	-0.693147	0.259649	-0.646431	93.7221	246.067
75	-0.693147	0.263158	-0.634124	93.7221	245.466
76	-0.693147	0.266667	-0.624956	93.7221	245.019
77	-0.693147	0.270175	-0.612813	93.7221	244.426
78	-0.693147	0.273684	-0.603765	93.7221	243.984
79	-0.693147	0.277193	-0.591776	93.7221	243.398
80	-0.693147	0.280702	-0.582841	93.7221	242.962
81	-0.693147	0.284211	-0.570999	93.7221	242.384
82	-0.693147	0.287719	-0.562179	93.7221	241.953
83	-0.693147	0.291228	-0.550465	93.7221	241.381
84	-0.693147	0.294737	-0.541736	93.7221	240.955
85	-0.693147	0.298246	-0.530162	93.7221	240.39
86	-0.693147	0.301754	-0.521527	93.7221	239.968
87	-0.693147	0.305263	-0.510074	93.7221	239.409
88	-0.693147	0.308772	-0.501527	93.7221	238.991
89	-0.693147	0.312281	-0.490189	93.7221	238.438
90	-0.693147	0.315789	-0.481728	93.7221	238.024
91	-0.693147	0.319298	-0.470498	93.7221	237.476
92	-0.693147	0.322807	-0.462114	93.7221	237.067
93	-0.693147	0.326316	-0.450985	93.7221	236.523
94	-0.693147	0.329825	-0.442676	93.7221	236.117
95	-0.693147	0.333333	-0.431644	93.7221	235.579
96	-0.693147	0.336842	-0.423405	93.7221	235.176
97	-0.693147	0.340351	-0.412463	93.7221	234.642
98	-0.693147	0.34386	-0.404299	93.7221	234.243
99	-0.693147	0.347368	-0.393433	93.7221	233.713
100	-0.693147	0.350877	-0.385321	93.7221	233.317
101	-0.693147	0.354386	-0.374544	93.7221	232.79
102	-0.693147	0.357895	-0.366499	93.7221	232.397
103	-0.693147	0.361404	-0.355788	93.7221	231.874
104	-0.693147	0.364912	-0.347787	93.7221	231.484
105	-0.693147	0.368421	-0.337155	93.7221	230.964
106	-0.693147	0.37193	-0.329206	93.7221	230.576
107	-0.693147	0.375439	-0.318639	93.7221	230.06
108	-0.693147	0.378947	-0.310738	93.7221	229.674
109	-0.693147	0.382456	-0.300232	93.7221	229.161
110	-0.693147	0.385965	-0.292375	93.7221	228.778

111	-0.693147	0.389474	-0.281926	93.7221	228.267
112	-0.693147	0.392982	-0.274119	93.7221	227.886
113	-0.693147	0.396491	-0.263715	93.7221	227.378
114	-0.693147	0.4	-0.253347	93.7221	226.872
115	-0.693147	0.403509	-0.245599	93.7221	226.493
116	-0.693147	0.407018	-0.235269	93.7221	225.989
117	-0.693147	0.410526	-0.227545	93.7221	225.612
118	-0.693147	0.414035	-0.217267	93.7221	225.11
119	-0.693147	0.417544	-0.209575	93.7221	224.734
120	-0.693147	0.421053	-0.199336	93.7221	224.234
121	-0.693147	0.424561	-0.191671	93.7221	223.86
122	-0.693147	0.42807	-0.181468	93.7221	223.362
123	-0.693147	0.431579	-0.173829	93.7221	222.989
124	-0.693147	0.435088	-0.163659	93.7221	222.492
125	-0.693147	0.438596	-0.156042	93.7221	222.12
126	-0.693147	0.442105	-0.1459	93.7221	221.625
127	-0.693147	0.445614	-0.138305	93.7221	221.254
128	-0.693147	0.449123	-0.128189	93.7221	220.76
129	-0.693147	0.452632	-0.120619	93.7221	220.39
130	-0.693147	0.45614	-0.110516	93.7221	219.897
131	-0.693147	0.459649	-0.102953	93.7221	219.528
132	-0.693147	0.463158	-0.0928787	93.7221	219.036
133	-0.693147	0.466667	-0.0853288	93.7221	218.667
134	-0.693147	0.470175	-0.0752698	93.7221	218.176
135	-0.693147	0.473684	-0.0677301	93.7221	217.807
136	-0.693147	0.477193	-0.0576847	93.7221	217.317
137	-0.693147	0.480702	-0.0501541	93.7221	216.949
138	-0.693147	0.484211	-0.0401167	93.7221	216.459
139	-0.693147	0.487719	-0.0325917	93.7221	216.092
140	-0.693147	0.491228	-0.0225612	93.7221	215.602
141	-0.693147	0.494737	-0.0150408	93.7221	215.234
142	-0.693147	0.498246	-0.00501359	93.7221	214.745
143	-0.693147	0.501754	0.00501359	93.7221	214.255
144	-0.693147	0.505263	0.0150408	93.7221	213.766
145	-0.693147	0.508772	0.0225612	93.7221	213.398
146	-0.693147	0.512281	0.0325917	93.7221	212.908
147	-0.693147	0.515789	0.0401167	93.7221	212.541
148	-0.693147	0.519298	0.0501541	93.7221	212.051
149	-0.693147	0.522807	0.0576847	93.7221	211.683
150	-0.693147	0.526316	0.0677301	93.7221	211.193
151	-0.693147	0.529825	0.0752698	93.7221	210.824
152	-0.693147	0.533333	0.0853288	93.7221	210.333
153	-0.693147	0.536842	0.0928787	93.7221	209.964
154	-0.693147	0.540351	0.102953	93.7221	209.472
155	-0.693147	0.54386	0.110516	93.7221	209.103
156	-0.693147	0.547368	0.12061	93.7221	208.61
157	-0.693147	0.550877	0.128189	93.7221	208.24
158	-0.693147	0.554386	0.138305	93.7221	207.746
159	-0.693147	0.557895	0.1459	93.7221	207.375
160	-0.693147	0.561404	0.156042	93.7221	206.88
161	-0.693147	0.564912	0.163659	93.7221	206.508
162	-0.693147	0.568421	0.173829	93.7221	206.011
163	-0.693147	0.57193	0.181468	93.7221	205.638
164	-0.693147	0.575439	0.191671	93.7221	205.14
165	-0.693147	0.578947	0.199336	93.7221	204.766
166	-0.693147	0.582456	0.209575	93.7221	204.266
167	-0.693147	0.585965	0.217267	93.7221	203.89
168	-0.693147	0.589474	0.227545	93.7221	203.388
169	-0.693147	0.592982	0.235269	93.7221	203.011
170	-0.693147	0.596491	0.24559	93.7221	202.507
171	-0.693147	0.6	0.253347	93.7221	202.128
172	-0.693147	0.603509	0.263715	93.7221	201.622

173	-0.693147	0.607018	0.27411	93.7221	201.114
174	-0.693147	0.610526	0.281926	93.7221	200.733
175	-0.693147	0.614035	0.292375	93.7221	200.222
176	-0.693147	0.617544	0.300232	93.7221	199.839
177	-0.693147	0.621053	0.310738	93.7221	199.326
178	-0.693147	0.624561	0.318639	93.7221	198.94
179	-0.693147	0.62807	0.329206	93.7221	198.424
180	-0.693147	0.631579	0.337155	93.7221	198.036
181	-0.693147	0.635088	0.347787	93.7221	197.516
182	-0.693147	0.638596	0.355788	93.7221	197.126
183	-0.693147	0.642105	0.36649	93.7221	196.603
184	-0.693147	0.645614	0.374544	93.7221	196.21
185	-0.693147	0.649123	0.385321	93.7221	195.683
186	-0.693147	0.652632	0.393433	93.7221	195.287
187	-0.693147	0.65614	0.40429	93.7221	194.757
188	-0.693147	0.659649	0.412463	93.7221	194.358
189	-0.693147	0.663158	0.423405	93.7221	193.824
190	-0.693147	0.666667	0.431644	93.7221	193.421
191	-0.693147	0.670175	0.442676	93.7221	192.883
192	-0.693147	0.673684	0.450985	93.7221	192.477
193	-0.693147	0.677193	0.462114	93.7221	191.933
194	-0.693147	0.680702	0.470498	93.7221	191.524
195	-0.693147	0.684211	0.481728	93.7221	190.976
196	-0.693147	0.687719	0.490189	93.7221	190.562
197	-0.693147	0.691228	0.501527	93.7221	190.009
198	-0.693147	0.694737	0.510074	93.7221	189.591
199	-0.693147	0.698246	0.521527	93.7221	189.032
200	-0.693147	0.701754	0.530162	93.7221	188.61
201	-0.693147	0.705263	0.541736	93.7221	188.045
202	-0.693147	0.708772	0.550465	93.7221	187.619
203	-0.693147	0.712281	0.56217	93.7221	187.047
204	-0.693147	0.715789	0.570999	93.7221	186.616
205	-0.693147	0.719298	0.582841	93.7221	186.038
206	-0.693147	0.722807	0.591776	93.7221	185.602
207	-0.693147	0.726316	0.603765	93.7221	185.016
208	-0.693147	0.729825	0.612813	93.7221	184.574
209	-0.693147	0.733333	0.624956	93.7221	183.981
210	-0.693147	0.736842	0.634124	93.7221	183.534
211	-0.693147	0.740351	0.646431	93.7221	182.933
212	-0.693147	0.74386	0.655726	93.7221	182.479
213	-0.693147	0.747368	0.668209	93.7221	181.869
214	-0.693147	0.750877	0.677639	93.7221	181.409
215	-0.693147	0.754386	0.690309	93.7221	180.79
216	-0.693147	0.757895	0.699883	93.7221	180.322
217	-0.693147	0.761404	0.712751	93.7221	179.694
218	-0.693147	0.764912	0.722479	93.7221	179.219
219	-0.693147	0.768421	0.735557	93.7221	178.58
220	-0.693147	0.77193	0.745449	93.7221	178.097
221	-0.693147	0.775439	0.758753	93.7221	177.448
222	-0.693147	0.778947	0.768821	93.7221	176.956
223	-0.693147	0.782456	0.782366	93.7221	176.294
224	-0.693147	0.785965	0.792618	93.7221	175.794
225	-0.693147	0.789474	0.806422	93.7221	175.12
226	-0.693147	0.792982	0.816874	93.7221	174.609
227	-0.693147	0.796491	0.830953	93.7221	173.922
228	-0.693147	0.8	0.841621	93.7221	173.401
229	-0.693147	0.803509	0.855996	93.7221	172.699
230	-0.693147	0.807018	0.87055	93.7221	171.988
231	-0.693147	0.810526	0.881587	93.7221	171.449
232	-0.693147	0.814035	0.896473	93.7221	170.722
233	-0.693147	0.817544	0.907769	93.7221	170.171
234	-0.693147	0.821053	0.923014	93.7221	169.426

235	-0.693147	0.824561	0.93459	93.7221	168.861	
236	-0.693147	0.82807	0.950222	93.7221	168.097	
237	-0.693147	0.831579	0.9621	93.7221	167.517	
238	-0.693147	0.835088	0.97815	93.7221	166.734	
239	-0.693147	0.838596	0.990356	93.7221	166.138	
240	-0.693147	0.842105	1.00687	93.7221	165.331	
241	-0.693147	0.845614	1.01943	93.7221	164.718	
242	-0.693147	0.849123	1.03643	93.7221	163.888	
243	-0.693147	0.852632	1.04939	93.7221	163.255	
244	-0.693147	0.85614	1.06694	93.7221	162.398	
245	-0.693147	0.859649	1.08032	93.7221	161.744	
246	-0.693147	0.863158	1.09847	93.7221	160.858	
247	-0.693147	0.866667	1.11232	93.7221	160.182	
248	-0.693147	0.870175	1.13113	93.7221	159.263	
249	-0.693147	0.873684	1.1455	93.7221	158.561	
250	-0.693147	0.877193	1.16505	93.7221	157.607	
251	-0.693147	0.880702	1.18	93.7221	156.877	
252	-0.693147	0.884211	1.20036	93.7221	155.882	
253	-0.693147	0.887719	1.21596	93.7221	155.121	
254	-0.693147	0.891228	1.23724	93.7221	154.082	
255	-0.693147	0.894737	1.25357	93.7221	153.284	
256	-0.693147	0.898246	1.27588	93.7221	152.195	
257	-0.693147	0.901754	1.29303	93.7221	151.357	
258	-0.693147	0.905263	1.31652	93.7221	150.21	
259	-0.693147	0.908772	1.33462	93.7221	149.326	
260	-0.693147	0.912281	1.35946	93.7221	148.113	
261	-0.693147	0.915789	1.37866	93.7221	147.176	
262	-0.693147	0.919298	1.40507	93.7221	145.886	
263	-0.693147	0.922807	1.42554	93.7221	144.886	
264	-0.693147	0.926316	1.4538	93.7221	143.506	
265	-0.693147	0.929825	1.47579	93.7221	142.432	
266	-0.693147	0.933333	1.50626	93.7221	140.944	
267	-0.693147	0.936842	1.53007	93.7221	139.782	
268	-0.693147	0.940351	1.56322	93.7221	138.163	
269	-0.693147	0.94386	1.58927	93.7221	136.891	
270	-0.693147	0.947368	1.62576	93.7221	135.109	
271	0	0.950877	1.65463	217.333	133.699	
272	0	0.954386	1.6954	217.333	131.708	
273	0	0.957895	1.72793	217.333	130.119	
274	0.587787	0.961404	1.77438	322.155	127.851	
275	0.641854	0.964912	1.81191	331.797	126.018	
276	0.788457	0.968421	1.86629	357.942	123.363	
277	0.875469	0.97193	1.91103	373.459	121.178	
278	1.09861	0.975439	1.97737	413.253	117.938	
279	1.1314	0.978947	2.03352	419.1	115.196	
280	1.1314	0.982456	2.12007	419.1	110.97	
281	1.1314	0.985965	2.19728	419.1	107.199	
282	1.16315	0.989474	2.32634	424.762	100.897	
283	1.22378	0.992982	2.45727	435.573	94.5032	
284	1.30833	0.996491	2.74777	450.653	80.3175	

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Methylene Chloride

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 96.1268%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 23
Maximum Background Value = 1.30833
Confidence Level = 74.2%
False Positive Rate = 25.8%

Location	Date	Count	Mean	Significant
LMW-10	11/16/2012	1	0.641854	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
LMW-14R	11/16/2012	1	-0.693147	FALSE
LMW-15R	11/16/2012	1	-0.693147	FALSE
LMW-16	11/16/2012	1	-0.693147	FALSE
LMW-3	11/16/2012	1	-0.693147	FALSE
LMW-3S	11/16/2012	1	-0.693147	FALSE
LMW-6	11/16/2012	1	-0.693147	FALSE
LMW-7	11/16/2012	1	-0.693147	FALSE
LMW-8	11/16/2012	1	-0.693147	FALSE
LMW-9	11/16/2012	1	-0.693147	FALSE
LMW-9D	11/16/2012	1	-0.693147	FALSE
LMW-9S	11/16/2012	1	-0.693147	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE

Concentrations (ppb)

Parameter: Nickel

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 152
Percent Non-Detects: 53.5211%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	11 (47.8261%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	14 (70%)	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

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	
LMW-14R	11	2 (18.1818%)	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	
LMW-15R	15	6 (40%)	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	1 J	1 J	
			5/20/2008	ND<30	ND<30	
			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	
LMW-16	13	5 (38.4615%)	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	
LMW-3	25	16 (64%)	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	
LMW-3S	13	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	
LMW-6	23	12 (52.1739%)	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	
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	
LMW-8	23	12 (52.1739%)	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	
LMW-9	23	12 (52.1739%)	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	
LMW-9D	13	4 (30.7692%)	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	
LMW-9S	15	5 (33.3333%)	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	1.6 J B	1.6 J B	
			11/16/2009	0.8 J B	0.8 J B	
			11/16/2009	0.97 J B	0.97 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	
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

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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.2	-2.74777	7.55021	-0.549553
2	0.2	-2.45727	13.5884	-1.04101
3	0.2	-2.32634	19.0003	-1.50628
4	0.2	-2.19728	23.8283	-1.94573
5	0.2	-2.12007	28.323	-2.36975
6	0.2	-2.03352	32.4582	-2.77645
7	0.2	-1.97737	36.3682	-3.17192
8	0.2	-1.91103	40.0203	-3.55413
9	0.33	-1.86629	43.5033	-4.17001
10	0.38	-1.81191	46.7863	-4.85853
11	0.44	-1.77438	49.9348	-5.63926
12	0.46	-1.72793	52.9205	-6.43411
13	0.5	-1.6954	55.7949	-7.28181
14	0.51	-1.65463	58.5327	-8.12567
15	0.53	-1.62576	61.1758	-8.98732
16	0.54	-1.58927	63.7015	-9.84553
17	0.55	-1.56322	66.1452	-10.7053
18	0.55	-1.53007	68.4863	-11.5468
19	0.55	-1.50626	70.7551	-12.3753
20	0.55	-1.47579	72.9331	-13.187
21	0.6	-1.4538	75.0466	-14.0592
22	0.6	-1.42554	77.0788	-14.9146
23	0.61	-1.40507	79.053	-15.7717
24	0.62	-1.37866	80.9537	-16.6264
25	0.63	-1.35946	82.8019	-17.4829
26	0.64	-1.33462	84.5831	-18.3371
27	0.64	-1.31652	86.3163	-19.1796
28	0.64	-1.29303	87.9883	-20.0072
29	0.65	-1.27588	89.6161	-20.8365
30	0.65	-1.25357	91.1875	-21.6513
31	0.65	-1.23724	92.7183	-22.4555
32	0.66	-1.21596	94.1969	-23.258
33	0.67	-1.20036	95.6377	-24.0623
34	0.69	-1.18	97.0301	-24.8765
35	0.69	-1.16505	98.3875	-25.6804
36	0.7	-1.1455	99.6996	-26.4822
37	0.71	-1.13113	100.979	-27.2853
38	0.71	-1.11232	102.216	-28.0751
39	0.72	-1.09847	103.423	-28.866
40	0.72	-1.08032	104.59	-29.6438
41	0.73	-1.06694	105.728	-30.4227
42	0.75	-1.04939	106.83	-31.2097
43	0.76	-1.03643	107.904	-31.9974
44	0.78	-1.01943	108.943	-32.7925
45	0.79	-1.00687	109.957	-33.588
46	0.8	-0.990356	110.938	-34.3803
47	0.84	-0.97815	111.894	-35.2019
48	0.85	-0.9621	112.82	-36.0197
49	0.85	-0.950222	113.723	-36.8274
50	0.89	-0.93459	114.596	-37.6592
51	0.9	-0.923014	115.448	-38.4899

52	0.9	-0.907769	116.272	-39.3069
53	0.93	-0.896473	117.076	-40.1406
54	0.95	-0.881587	117.853	-40.9781
55	0.95	-0.87055	118.611	-41.8051
56	0.95	-0.855996	119.344	-42.6183
57	0.97	-0.841621	120.052	-43.4347
58	0.97	-0.830953	120.743	-44.2407
59	0.98	-0.816874	121.41	-45.0412
60	0.98	-0.806422	122.06	-45.8315
61	0.99	-0.792618	122.689	-46.6162
62	1	-0.782366	123.301	-47.3986
63	1	-0.768821	123.892	-48.1674
64	1	-0.758753	124.467	-48.9262
65	1	-0.745449	125.023	-49.6716
66	1	-0.735557	125.564	-50.4072
67	1	-0.722479	126.086	-51.1297
68	1	-0.712751	126.594	-51.8424
69	1	-0.699883	127.084	-52.5423
70	1	-0.690309	127.561	-53.2326
71	1	-0.677639	128.02	-53.9102
72	1	-0.668209	128.466	-54.5784
73	1	-0.655726	128.896	-55.2342
74	1	-0.646431	129.314	-55.8806
75	1	-0.634124	129.716	-56.5147
76	1	-0.624956	130.107	-57.1397
77	1.1	-0.612813	130.482	-57.8138
78	1.1	-0.603765	130.847	-58.4779
79	1.1	-0.591776	131.197	-59.1289
80	1.1	-0.582841	131.537	-59.77
81	1.1	-0.570999	131.863	-60.3981
82	1.1	-0.56217	132.179	-61.0165
83	1.2	-0.550465	132.482	-61.677
84	1.2	-0.541736	132.775	-62.3271
85	1.2	-0.530162	133.056	-62.9633
86	1.3	-0.521527	133.328	-63.6413
87	1.3	-0.510074	133.589	-64.3044
88	1.5	-0.501527	133.84	-65.0567
89	1.6	-0.490189	134.08	-65.841
90	1.6	-0.481728	134.312	-66.6118
91	1.7	-0.470498	134.534	-67.4116
92	1.8	-0.462114	134.747	-68.2434
93	1.8	-0.450985	134.951	-69.0552
94	1.9	-0.442676	135.147	-69.8963
95	1.9	-0.431644	135.333	-70.7164
96	1.9	-0.423405	135.512	-71.5209
97	2	-0.412463	135.682	-72.3458
98	2	-0.40429	135.846	-73.1544
99	2	-0.393433	136.001	-73.9412
100	2	-0.385321	136.149	-74.7119
101	2	-0.374544	136.289	-75.461
102	2.1	-0.36649	136.424	-76.2306
103	2.2	-0.355788	136.55	-77.0133
104	2.2	-0.347787	136.671	-77.7785
105	2.4	-0.337155	136.785	-78.5876
106	2.5	-0.329206	136.893	-79.4106
107	2.6	-0.318639	136.995	-80.2391
108	2.8	-0.310738	137.091	-81.1092
109	2.8	-0.300232	137.182	-81.9498
110	3	-0.292375	137.267	-82.8269
111	3	-0.281926	137.346	-83.6727
112	3	-0.27411	137.422	-84.4951
113	3	-0.263715	137.491	-85.2862

114	3	-0.253347	137.555	-86.0462
115	3	-0.24559	137.616	-86.783
116	3	-0.235269	137.671	-87.4888
117	3	-0.227545	137.723	-88.1715
118	3	-0.217267	137.77	-88.8233
119	3	-0.209575	137.814	-89.452
120	3	-0.199336	137.854	-90.05
121	3.1	-0.191671	137.89	-90.6442
122	3.1	-0.181468	137.923	-91.2067
123	3.5	-0.173829	137.954	-91.8151
124	4	-0.163659	137.98	-92.4698
125	4	-0.156042	138.005	-93.0939
126	4.1	-0.1459	138.026	-93.6921
127	4.2	-0.138305	138.045	-94.273
128	5	-0.128189	138.062	-94.9139
129	5	-0.12061	138.076	-95.517
130	5	-0.110516	138.088	-96.0696
131	5	-0.102953	138.099	-96.5843
132	5.5	-0.0928787	138.108	-97.0952
133	6	-0.0853288	138.115	-97.6071
134	6	-0.0752698	138.12	-98.0588
135	6	-0.0677301	138.125	-98.4651
136	6	-0.0576847	138.128	-98.8112
137	7	-0.0501541	138.131	-99.1623
138	7.5	-0.0401167	138.132	-99.4632
139	9	-0.0325917	138.134	-99.7565
140	15	-0.0225612	138.134	-100.095
141	15	-0.0150408	138.134	-100.321
142	15	-0.00501359	138.134	-100.396
143	15	0.00501359	138.134	-100.321
144	15	0.0150408	138.135	-100.095
145	15	0.0225612	138.135	-99.7565
146	15	0.0325917	138.136	-99.2677
147	15	0.0401167	138.138	-98.6659
148	15	0.0501541	138.14	-97.9136
149	15	0.0576847	138.144	-97.0483
150	15	0.0677301	138.148	-96.0324
151	15	0.0752698	138.154	-94.9033
152	15	0.0853288	138.161	-93.6234
153	15	0.0928787	138.17	-92.2302
154	15	0.102953	138.18	-90.6859
155	15	0.110516	138.193	-89.0282
156	15	0.12061	138.207	-87.219
157	15	0.128189	138.224	-85.2962
158	15	0.138305	138.243	-83.2216
159	15	0.1459	138.264	-81.0331
160	15	0.156042	138.288	-78.6925
161	15	0.163659	138.315	-76.2376
162	15	0.173829	138.345	-73.6302
163	15	0.181468	138.378	-70.9081
164	15	0.191671	138.415	-68.0331
165	15	0.199336	138.455	-65.043
166	15	0.209575	138.499	-61.8994
167	15	0.217267	138.546	-58.6404
168	15	0.227545	138.598	-55.2272
169	15	0.235269	138.653	-51.6982
170	15	0.24559	138.713	-48.0143
171	15	0.253347	138.777	-44.2141
172	15	0.263715	138.847	-40.2584
173	15	0.27411	138.922	-36.1468
174	15	0.281926	139.002	-31.9179
175	15	0.292375	139.087	-27.5322

176	15	0.300232	139.177	-23.0288
177	15	0.310738	139.274	-18.3677
178	15	0.318639	139.375	-13.5881
179	15	0.329206	139.484	-8.65
180	15	0.337155	139.597	-3.59267
181	15	0.347787	139.718	1.62414
182	15	0.355788	139.845	6.96095
183	15	0.36649	139.979	12.4583
184	15	0.374544	140.12	18.0765
185	15	0.385321	140.268	23.8563
186	15	0.393433	140.423	29.7578
187	15	0.40429	140.586	35.8221
188	15	0.412463	140.756	42.009
189	15	0.423405	140.936	48.3601
190	15	0.431644	141.122	54.8348
191	15	0.442676	141.318	61.4749
192	15	0.450985	141.521	68.2397
193	15	0.462114	141.735	75.1714
194	15	0.470498	141.956	82.2289
195	15	0.481728	142.188	89.4548
196	15	0.490189	142.429	96.8076
197	15	0.501527	142.68	104.331
198	15	0.510074	142.94	111.982
199	15	0.521527	143.212	119.805
200	15	0.530162	143.493	127.757
201	15	0.541736	143.787	135.883
202	15	0.550465	144.09	144.14
203	15	0.56217	144.406	152.573
204	15	0.570999	144.732	161.138
205	15	0.582841	145.072	169.88
206	15	0.591776	145.422	178.757
207	15	0.603765	145.786	187.813
208	15	0.612813	146.162	197.005
209	15	0.624956	146.552	206.38
210	15	0.634124	146.955	215.892
211	15	0.646431	147.372	225.588
212	15	0.655726	147.802	235.424
213	15	0.668209	148.249	245.447
214	15	0.677639	148.708	255.612
215	15	0.690309	149.185	265.966
216	15	0.699883	149.674	276.465
217	15	0.712751	150.182	287.156
218	15	0.722479	150.704	297.993
219	15	0.735557	151.245	309.026
220	15	0.745449	151.801	320.208
221	15	0.758753	152.377	331.589
222	15	0.768821	152.968	343.122
223	15	0.782366	153.58	354.857
224	15	0.792618	154.208	366.747
225	15	0.806422	154.859	378.843
226	15	0.816874	155.526	391.096
227	15	0.830953	156.216	403.56
228	15	0.841621	156.925	416.185
229	15	0.855996	157.657	429.024
230	15	0.87055	158.415	442.083
231	15	0.881587	159.193	455.307
232	15	0.896473	159.996	468.754
233	15	0.907769	160.82	482.37
234	15	0.923014	161.672	496.215
235	15	0.93459	162.546	510.234
236	15	0.950222	163.449	524.488
237	15	0.9621	164.374	538.919

238	15	0.97815	165.331	553.591	
239	15	0.990356		166.312	568.447
240	15	1.00687	167.326	583.55	
241	15	1.01943	168.365	598.841	
242	15	1.03643	169.439	614.388	
243	15	1.04939	170.54	630.128	
244	15	1.06694	171.679	646.132	
245	15	1.08032	172.846	662.337	
246	15	1.09847	174.052	678.814	
247	15	1.11232	175.29	695.499	
248	15	1.13113	176.569	712.466	
249	15	1.1455	177.881	729.649	
250	15	1.16505	179.239	747.124	
251	15	1.18	180.631	764.824	
252	15	1.20036	182.072	782.83	
253	15	1.21596	183.55	801.069	
254	15	1.23724	185.081	819.628	
255	15	1.25357	186.653	838.431	
256	15	1.27588	188.28	857.569	
257	15	1.29303	189.952	876.965	
258	15	1.31652	191.686	896.713	
259	15	1.33462	193.467	916.732	
260	15	1.35946	195.315	937.124	
261	15	1.37866	197.216	957.804	
262	15	1.40507	199.19	978.88	
263	15	1.42554	201.222	1000.26	
264	15	1.4538	203.336	1022.07	
265	15	1.47579	205.514	1044.21	
266	15	1.50626	207.782	1066.8	
267	15	1.53007	210.123	1089.75	
268	15	1.56322	212.567	1113.2	
269	15	1.58927	215.093	1137.04	
270	15	1.62576	217.736	1161.43	
271	15	1.65463	220.474	1186.25	
272	15	1.6954	223.348	1211.68	
273	15	1.72793	226.334	1237.59	
274	15	1.77438	229.482	1264.21	
275	15	1.81191	232.765	1291.39	
276	15	1.86629	236.248	1319.38	
277	15	1.91103	239.9	1348.05	
278	15	1.97737	243.81	1377.71	
279	15	2.03352	247.946	1408.21	
280	15	2.12007	252.44	1440.01	
281	15	2.19728	257.268	1472.97	
282	15	2.32634	262.68	1507.87	
283	15	2.45727	268.718	1544.73	
284	18	2.74777	276.269	1594.19	

Data Set Standard Deviation = 6.74514
Numerator = 2.54143e+006
Denominator = 3.55713e+006
W Statistic = 0.714461 = 2.54143e+006 / 3.55713e+006

5% Critical value of 0.976 exceeds 0.714461
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.714461
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 = 0.842437
0.842437 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.2	0.00350877	-2.747	7744.35	348.683	
2	0.2	0.00701754	-2.457	2744.35	334.497	
3	0.2	0.0105263	-2.326	3444.35	328.103	
4	0.2	0.0140351	-2.197	2844.35	321.801	
5	0.2	0.0175439	-2.120	0744.35	318.03	
6	0.2	0.0210526	-2.033	5244.35	313.804	
7	0.2	0.0245614	-1.977	3744.35	311.062	
8	0.2	0.0280702	-1.911	0344.35	307.822	
9	0.33	0.0315789	-1.866	2947.8275	305.637	
10	0.38	0.0350877	-1.811	9149.165	302.982	
11	0.44	0.0385965	-1.774	3850.77	301.149	
12	0.46	0.0421053	-1.727	9351.305	298.881	
13	0.5	0.045614	-1.695	4 52.375	297.292	
14	0.51	0.0491228	-1.654	6352.6425	295.301	
15	0.53	0.0526316	-1.625	7653.1775	293.891	
16	0.54	0.0561404	-1.589	2753.445	292.109	
17	0.55	0.0596491	-1.563	2253.7125	290.837	
18	0.55	0.0631579	-1.530	0753.7125	289.218	
19	0.55	0.0666667	-1.506	2653.7125	288.056	
20	0.55	0.0701754	-1.475	7953.7125	286.568	
21	0.6	0.0736842	-1.453	8 55.05	285.494	
22	0.6	0.077193	-1.425	5455.05	284.114	
23	0.61	0.0807018	-1.405	0755.3175	283.114	
24	0.62	0.0842105	-1.378	6655.585	281.824	
25	0.63	0.0877193	-1.359	4655.8525	280.887	
26	0.64	0.0912281	-1.334	6256.12	279.674	
27	0.64	0.0947368	-1.316	5256.12	278.79	
28	0.64	0.0982456	-1.293	0356.12	277.643	
29	0.65	0.101754	-1.275	8856.3875	276.805	
30	0.65	0.105263	-1.253	5756.3875	275.716	
31	0.65	0.108772	-1.237	2456.3875	274.918	
32	0.66	0.112281	-1.215	9656.655	273.879	
33	0.67	0.115789	-1.200	3656.9225	273.118	
34	0.69	0.119298	-1.18	57.4575	272.123	
35	0.69	0.122807	-1.165	0557.4575	271.393	
36	0.7	0.126316	-1.145	5 57.725	270.439	
37	0.71	0.129825	-1.131	1357.9925	269.737	
38	0.71	0.133333	-1.112	3257.9925	268.818	
39	0.72	0.136842	-1.098	4758.26	268.142	
40	0.72	0.140351	-1.080	3258.26	267.256	
41	0.73	0.14386	-1.066	9458.5275	266.602	
42	0.75	0.147368	-1.049	3959.0625	265.745	
43	0.76	0.150877	-1.036	4359.33	265.112	
44	0.78	0.154386	-1.019	4359.865	264.282	
45	0.79	0.157895	-1.006	8760.1325	263.669	
46	0.8	0.161404	-0.990	356	60.4	262.862
47	0.84	0.164912	-0.978	1561.47	262.266	
48	0.85	0.168421	-0.962	1 61.7375	261.483	

49	0.85	0.17193	-0.950222	61.7375	260.903
50	0.89	0.175439	-0.934596	2.8075	260.139
51	0.9	0.178947	-0.923014	63.075	259.574
52	0.9	0.182456	-0.907769	63.075	258.829
53	0.93	0.185965	-0.896473	63.8775	258.278
54	0.95	0.189474	-0.881587	64.4125	257.551
55	0.95	0.192982	-0.870556	4.4125	257.012
56	0.95	0.196491	-0.855996	64.4125	256.301
57	0.97	0.2	-0.841621	64.9475	255.599
58	0.97	0.203509	-0.830953	64.9475	255.078
59	0.98	0.207018	-0.816874	65.215	254.391
60	0.98	0.210526	-0.806422	65.215	253.88
61	0.99	0.214035	-0.792618	65.4825	253.206
62	1	0.217544	-0.782366	65.75	252.706
63	1	0.221053	-0.768821	65.75	252.044
64	1	0.224561	-0.758753	65.75	251.552
65	1	0.22807	-0.745449	65.75	250.903
66	1	0.231579	-0.735557	65.75	250.42
67	1	0.235088	-0.722479	65.75	249.781
68	1	0.238596	-0.712751	65.75	249.306
69	1	0.242105	-0.699883	65.75	248.678
70	1	0.245614	-0.690309	65.75	248.21
71	1	0.249123	-0.677639	65.75	247.591
72	1	0.252632	-0.668209	65.75	247.131
73	1	0.25614	-0.655726	65.75	246.521
74	1	0.259649	-0.646431	65.75	246.067
75	1	0.263158	-0.634124	65.75	245.466
76	1	0.266667	-0.624956	65.75	245.019
77	1.1	0.270175	-0.612813	68.425	244.426
78	1.1	0.273684	-0.603765	68.425	243.984
79	1.1	0.277193	-0.591776	68.425	243.398
80	1.1	0.280702	-0.582841	68.425	242.962
81	1.1	0.284211	-0.570999	68.425	242.384
82	1.1	0.287719	-0.562176	8.425	241.953
83	1.2	0.291228	-0.550465	71.1	241.381
84	1.2	0.294737	-0.541736	71.1	240.955
85	1.2	0.298246	-0.530162	71.1	240.39
86	1.3	0.301754	-0.521527	73.775	239.968
87	1.3	0.305263	-0.510074	73.775	239.409
88	1.5	0.308772	-0.501527	79.125	238.991
89	1.6	0.312281	-0.490189	81.8	238.438
90	1.6	0.315789	-0.481728	81.8	238.024
91	1.7	0.319298	-0.470498	84.475	237.476
92	1.8	0.322807	-0.462114	87.15	237.067
93	1.8	0.326316	-0.450985	87.15	236.523
94	1.9	0.329825	-0.442676	89.825	236.117
95	1.9	0.333333	-0.431644	89.825	235.579
96	1.9	0.336842	-0.423405	89.825	235.176
97	2	0.340351	-0.412463	92.5	234.642
98	2	0.34386	-0.404299	2.5	234.243
99	2	0.347368	-0.393433	92.5	233.713
100	2	0.350877	-0.385321	92.5	233.317
101	2	0.354386	-0.374544	92.5	232.79
102	2.1	0.357895	-0.366499	5.175	232.397
103	2.2	0.361404	-0.355788	97.85	231.874
104	2.2	0.364912	-0.347787	97.85	231.484
105	2.4	0.368421	-0.337155	103.2	230.964
106	2.5	0.37193	-0.329206	105.875	230.576
107	2.6	0.375439	-0.318639	108.55	230.06
108	2.8	0.378947	-0.310738	113.9	229.674
109	2.8	0.382456	-0.300232	113.9	229.161
110	3	0.385965	-0.292375	119.25	228.778

111	3	0.389474	-0.281926	119.25	228.267
112	3	0.392982	-0.27411	119.25	227.886
113	3	0.396491	-0.263715	119.25	227.378
114	3	0.4	-0.253347	119.25	226.872
115	3	0.403509	-0.24559	119.25	226.493
116	3	0.407018	-0.235269	119.25	225.989
117	3	0.410526	-0.227545	119.25	225.612
118	3	0.414035	-0.217267	119.25	225.11
119	3	0.417544	-0.209575	119.25	224.734
120	3	0.421053	-0.199336	119.25	224.234
121	3.1	0.424561	-0.191671	121.925	223.86
122	3.1	0.42807	-0.181468	121.925	223.362
123	3.5	0.431579	-0.173829	132.625	222.989
124	4	0.435088	-0.163659	146	222.492
125	4	0.438596	-0.156042	146	222.12
126	4.1	0.442105	-0.1459	148.675	221.625
127	4.2	0.445614	-0.138305	151.35	221.254
128	5	0.449123	-0.128189	172.75	220.76
129	5	0.452632	-0.12061	172.75	220.39
130	5	0.45614	-0.110516	172.75	219.897
131	5	0.459649	-0.102953	172.75	219.528
132	5.5	0.463158	-0.0928787	186.125	219.036
133	6	0.466667	-0.0853288	199.5	218.667
134	6	0.470175	-0.0752698	199.5	218.176
135	6	0.473684	-0.0677301	199.5	217.807
136	6	0.477193	-0.0576847	199.5	217.317
137	7	0.480702	-0.0501541	226.25	216.949
138	7.5	0.484211	-0.0401167	239.625	216.459
139	9	0.487719	-0.0325917	279.75	216.092
140	15	0.491228	-0.0225612	440.25	215.602
141	15	0.494737	-0.0150408	440.25	215.234
142	15	0.498246	-0.00501359	440.25	214.745
143	15	0.501754	0.00501359	440.25	214.255
144	15	0.505263	0.0150408	440.25	213.766
145	15	0.508772	0.0225612	440.25	213.398
146	15	0.512281	0.0325917	440.25	212.908
147	15	0.515789	0.0401167	440.25	212.541
148	15	0.519298	0.0501541	440.25	212.051
149	15	0.522807	0.0576847	440.25	211.683
150	15	0.526316	0.0677301	440.25	211.193
151	15	0.529825	0.0752698	440.25	210.824
152	15	0.533333	0.0853288	440.25	210.333
153	15	0.536842	0.0928787	440.25	209.964
154	15	0.540351	0.102953	440.25	209.472
155	15	0.54386	0.110516	440.25	209.103
156	15	0.547368	0.12061	440.25	208.61
157	15	0.550877	0.128189	440.25	208.24
158	15	0.554386	0.138305	440.25	207.746
159	15	0.557895	0.1459	440.25	207.375
160	15	0.561404	0.156042	440.25	206.88
161	15	0.564912	0.163659	440.25	206.508
162	15	0.568421	0.173829	440.25	206.011
163	15	0.57193	0.181468	440.25	205.638
164	15	0.575439	0.191671	440.25	205.14
165	15	0.578947	0.199336	440.25	204.766
166	15	0.582456	0.209575	440.25	204.266
167	15	0.585965	0.217267	440.25	203.89
168	15	0.589474	0.227545	440.25	203.388
169	15	0.592982	0.235269	440.25	203.011
170	15	0.596491	0.24559	440.25	202.507
171	15	0.6	0.253347	440.25	202.128
172	15	0.603509	0.263715	440.25	201.622

173	15	0.607018	0.27411	440.25	201.114
174	15	0.610526	0.281926	440.25	200.733
175	15	0.614035	0.292375	440.25	200.222
176	15	0.617544	0.300232	440.25	199.839
177	15	0.621053	0.310738	440.25	199.326
178	15	0.624561	0.318639	440.25	198.94
179	15	0.62807	0.329206	440.25	198.424
180	15	0.631579	0.337155	440.25	198.036
181	15	0.635088	0.347787	440.25	197.516
182	15	0.638596	0.355788	440.25	197.126
183	15	0.642105	0.36649	440.25	196.603
184	15	0.645614	0.374544	440.25	196.21
185	15	0.649123	0.385321	440.25	195.683
186	15	0.652632	0.393433	440.25	195.287
187	15	0.65614	0.40429	440.25	194.757
188	15	0.659649	0.412463	440.25	194.358
189	15	0.663158	0.423405	440.25	193.824
190	15	0.666667	0.431644	440.25	193.421
191	15	0.670175	0.442676	440.25	192.883
192	15	0.673684	0.450985	440.25	192.477
193	15	0.677193	0.462114	440.25	191.933
194	15	0.680702	0.470498	440.25	191.524
195	15	0.684211	0.481728	440.25	190.976
196	15	0.687719	0.490189	440.25	190.562
197	15	0.691228	0.501527	440.25	190.009
198	15	0.694737	0.510074	440.25	189.591
199	15	0.698246	0.521527	440.25	189.032
200	15	0.701754	0.530162	440.25	188.61
201	15	0.705263	0.541736	440.25	188.045
202	15	0.708772	0.550465	440.25	187.619
203	15	0.712281	0.56217	440.25	187.047
204	15	0.715789	0.570999	440.25	186.616
205	15	0.719298	0.582841	440.25	186.038
206	15	0.722807	0.591776	440.25	185.602
207	15	0.726316	0.603765	440.25	185.016
208	15	0.729825	0.612813	440.25	184.574
209	15	0.733333	0.624956	440.25	183.981
210	15	0.736842	0.634124	440.25	183.534
211	15	0.740351	0.646431	440.25	182.933
212	15	0.74386	0.655726	440.25	182.479
213	15	0.747368	0.668209	440.25	181.869
214	15	0.750877	0.677639	440.25	181.409
215	15	0.754386	0.690309	440.25	180.79
216	15	0.757895	0.699883	440.25	180.322
217	15	0.761404	0.712751	440.25	179.694
218	15	0.764912	0.722479	440.25	179.219
219	15	0.768421	0.735557	440.25	178.58
220	15	0.77193	0.745449	440.25	178.097
221	15	0.775439	0.758753	440.25	177.448
222	15	0.778947	0.768821	440.25	176.956
223	15	0.782456	0.782366	440.25	176.294
224	15	0.785965	0.792618	440.25	175.794
225	15	0.789474	0.806422	440.25	175.12
226	15	0.792982	0.816874	440.25	174.609
227	15	0.796491	0.830953	440.25	173.922
228	15	0.8	0.841621	440.25	173.401
229	15	0.803509	0.855996	440.25	172.699
230	15	0.807018	0.87055	440.25	171.988
231	15	0.810526	0.881587	440.25	171.449
232	15	0.814035	0.896473	440.25	170.722
233	15	0.817544	0.907769	440.25	170.171
234	15	0.821053	0.923014	440.25	169.426

235	15	0.824561	0.93459	440.25	168.861	
236	15	0.82807	0.950222	440.25	168.097	
237	15	0.831579	0.9621	440.25	167.517	
238	15	0.835088	0.97815	440.25	166.734	
239	15	0.838596	0.990356	440.25	166.138	
240	15	0.842105	1.00687	440.25	165.331	
241	15	0.845614	1.01943	440.25	164.718	
242	15	0.849123	1.03643	440.25	163.888	
243	15	0.852632	1.04939	440.25	163.255	
244	15	0.85614	1.06694	440.25	162.398	
245	15	0.859649	1.08032	440.25	161.744	
246	15	0.863158	1.09847	440.25	160.858	
247	15	0.866667	1.11232	440.25	160.182	
248	15	0.870175	1.13113	440.25	159.263	
249	15	0.873684	1.1455	440.25	158.561	
250	15	0.877193	1.16505	440.25	157.607	
251	15	0.880702	1.18	440.25	156.877	
252	15	0.884211	1.20036	440.25	155.882	
253	15	0.887719	1.21596	440.25	155.121	
254	15	0.891228	1.23724	440.25	154.082	
255	15	0.894737	1.25357	440.25	153.284	
256	15	0.898246	1.27588	440.25	152.195	
257	15	0.901754	1.29303	440.25	151.357	
258	15	0.905263	1.31652	440.25	150.21	
259	15	0.908772	1.33462	440.25	149.326	
260	15	0.912281	1.35946	440.25	148.113	
261	15	0.915789	1.37866	440.25	147.176	
262	15	0.919298	1.40507	440.25	145.886	
263	15	0.922807	1.42554	440.25	144.886	
264	15	0.926316	1.4538	440.25	143.506	
265	15	0.929825	1.47579	440.25	142.432	
266	15	0.933333	1.50626	440.25	140.944	
267	15	0.936842	1.53007	440.25	139.782	
268	15	0.940351	1.56322	440.25	138.163	
269	15	0.94386	1.58927	440.25	136.891	
270	15	0.947368	1.62576	440.25	135.109	
271	15	0.950877	1.65463	440.25	133.699	
272	15	0.954386	1.6954	440.25	131.708	
273	15	0.957895	1.72793	440.25	130.119	
274	15	0.961404	1.77438	440.25	127.851	
275	15	0.964912	1.81191	440.25	126.018	
276	15	0.968421	1.86629	440.25	123.363	
277	15	0.97193	1.91103	440.25	121.178	
278	15	0.975439	1.97737	440.25	117.938	
279	15	0.978947	2.03352	440.25	115.196	
280	15	0.982456	2.12007	440.25	110.97	
281	15	0.985965	2.19728	440.25	107.199	
282	15	0.989474	2.32634	440.25	100.897	
283	15	0.992982	2.45727	440.25	94.5032	
284	18	0.996491	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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)	
1	-1.60944	-2.74777	7.55021	4.42236	
2	-1.60944	-2.45727	13.5884	8.37719	
3	-1.60944	-2.32634	19.0003	12.1213	
4	-1.60944	-2.19728	23.8283	15.6577	
5	-1.60944	-2.12007	28.323	19.0698	
6	-1.60944	-2.03352	32.4582	22.3426	
7	-1.60944	-1.97737	36.3682	25.5251	
8	-1.60944	-1.91103	40.0203	28.6008	
9	-1.10866	-1.86629	43.5033	30.6699	
10	-0.967584	-1.81191	46.7863	32.423	
11	-0.820981	-1.77438	49.9348	33.8798	
12	-0.776529	-1.72793	52.9205	35.2215	
13	-0.693147	-1.6954	55.7949	36.3967	
14	-0.673345	-1.65463	58.5327	37.5108	
15	-0.634878	-1.62576	61.1758	38.543	
16	-0.616186	-1.58927	63.7015	39.5223	
17	-0.597837	-1.56322	66.1452	40.4568	
18	-0.597837	-1.53007	68.4863	41.3716	
19	-0.597837	-1.50626	70.7551	42.2721	
20	-0.597837	-1.47579	72.9331	43.1544	
21	-0.510826	-1.4538	75.0466	43.897	
22	-0.510826	-1.42554	77.0788	44.6252	
23	-0.494296	-1.40507	79.053	45.3197	
24	-0.478036	-1.37866	80.9537	45.9788	
25	-0.462035	-1.35946	82.8019	46.6069	
26	-0.446287	-1.33462	84.5831	47.2025	
27	-0.446287	-1.31652	86.3163	47.7901	
28	-0.446287	-1.29303	87.9883	48.3671	
29	-0.430783	-1.27588	89.6161	48.9167	
30	-0.430783	-1.25357	91.1875	49.4568	
31	-0.430783	-1.23724	92.7183	49.9897	
32	-0.415515	-1.21596	94.1969	50.495	
33	-0.400478	-1.20036	95.6377	50.9757	
34	-0.371064	-1.18	97.0301	51.4136	
35	-0.371064	-1.16505	98.3875	51.8459	
36	-0.356675	-1.1455	99.6996	52.2544	
37	-0.34249	-1.13113	100.979	52.6418	
38	-0.34249	-1.11232	102.216	53.0228	
39	-0.328504	-1.09847	103.423	53.3837	
40	-0.328504	-1.08032	104.59	53.7385	
41	-0.314711	-1.06694	105.728	54.0743	
42	-0.287682	-1.04939	106.83	54.3762	
43	-0.274437	-1.03643	107.904	54.6606	
44	-0.248461	-1.01943	108.943	54.9139	
45	-0.235722	-1.00687	109.957	55.1513	
46	-0.223144	-0.990356	110.938	55.3723	
47	-0.174353	-0.97815	111.894	55.5428	
48	-0.162519	-0.9621	112.82	55.6992	
49	-0.162519	-0.950222	113.723	55.8536	
50	-0.116534	-0.93459	114.596	55.9625	
51	-0.105361	-0.923014	115.448	56.0598	

52	-0.105361	-0.907769	116.272	56.1554
53	-0.0725707	-0.896473	117.076	56.2205
54	-0.0512933	-0.881587	117.853	56.2657
55	-0.0512933	-0.87055	118.611	56.3103
56	-0.0512933	-0.855996	119.344	56.3542
57	-0.0304592	-0.841621	120.052	56.3799
58	-0.0304592	-0.830953	120.743	56.4052
59	-0.0202027	-0.816874	121.41	56.4217
60	-0.0202027	-0.806422	122.06	56.438
61	-0.0100503	-0.792618	122.689	56.4459
62	0	-0.782366	123.301	56.4459
63	0	-0.768821	123.892	56.4459
64	0	-0.758753	124.467	56.4459
65	0	-0.745449	125.023	56.4459
66	0	-0.735557	125.564	56.4459
67	0	-0.722479	126.086	56.4459
68	0	-0.712751	126.594	56.4459
69	0	-0.699883	127.084	56.4459
70	0	-0.690309	127.561	56.4459
71	0	-0.677639	128.02	56.4459
72	0	-0.668209	128.466	56.4459
73	0	-0.655726	128.896	56.4459
74	0	-0.646431	129.314	56.4459
75	0	-0.634124	129.716	56.4459
76	0	-0.624956	130.107	56.4459
77	0.0953102	-0.612813	130.482	56.3875
78	0.0953102	-0.603765	130.847	56.33
79	0.0953102	-0.591776	131.197	56.2736
80	0.0953102	-0.582841	131.537	56.218
81	0.0953102	-0.570999	131.863	56.1636
82	0.0953102	-0.56217	132.179	56.11
83	0.182322	-0.550465	132.482	56.0097
84	0.182322	-0.541736	132.775	55.9109
85	0.182322	-0.530162	133.056	55.8142
86	0.262364	-0.521527	133.328	55.6774
87	0.262364	-0.510074	133.589	55.5436
88	0.405465	-0.501527	133.84	55.3402
89	0.470004	-0.490189	134.08	55.1099
90	0.470004	-0.481728	134.312	54.8834
91	0.530628	-0.470498	134.534	54.6338
92	0.587787	-0.462114	134.747	54.3622
93	0.587787	-0.450985	134.951	54.0971
94	0.641854	-0.442676	135.147	53.8129
95	0.641854	-0.431644	135.333	53.5359
96	0.641854	-0.423405	135.512	53.2641
97	0.693147	-0.412463	135.682	52.9782
98	0.693147	-0.40429	135.846	52.698
99	0.693147	-0.393433	136.001	52.4253
100	0.693147	-0.385321	136.149	52.1582
101	0.693147	-0.374544	136.289	51.8986
102	0.741937	-0.36649	136.424	51.6267
103	0.788457	-0.355788	136.55	51.3462
104	0.788457	-0.347787	136.671	51.0719
105	0.875469	-0.337155	136.785	50.7768
106	0.916291	-0.329206	136.893	50.4751
107	0.955511	-0.318639	136.995	50.1707
108	1.02962	-0.310738	137.091	49.8507
109	1.02962	-0.300232	137.182	49.5416
110	1.09861	-0.292375	137.267	49.2204
111	1.09861	-0.281926	137.346	48.9107
112	1.09861	-0.27411	137.422	48.6095
113	1.09861	-0.263715	137.491	48.3198

114	1.09861	-0.253347	137.555	48.0415
115	1.09861	-0.24559	137.616	47.7717
116	1.09861	-0.235269	137.671	47.5132
117	1.09861	-0.227545	137.723	47.2632
118	1.09861	-0.217267	137.77	47.0245
119	1.09861	-0.209575	137.814	46.7943
120	1.09861	-0.199336	137.854	46.5753
121	1.1314	-0.191671	137.89	46.3584
122	1.1314	-0.181468	137.923	46.1531
123	1.25276	-0.173829	137.954	45.9353
124	1.38629	-0.163659	137.98	45.7085
125	1.38629	-0.156042	138.005	45.4921
126	1.41099	-0.1459	138.026	45.2863
127	1.43508	-0.138305	138.045	45.0878
128	1.60944	-0.128189	138.062	44.8815
129	1.60944	-0.12061	138.076	44.6874
130	1.60944	-0.110516	138.088	44.5095
131	1.60944	-0.102953	138.099	44.3438
132	1.70475	-0.0928787	138.108	44.1855
133	1.79176	-0.0853288	138.115	44.0326
134	1.79176	-0.0752698	138.12	43.8977
135	1.79176	-0.0677301	138.125	43.7764
136	1.79176	-0.0576847	138.128	43.673
137	1.94591	-0.0501541	138.131	43.5754
138	2.0149	-0.0401167	138.132	43.4946
139	2.19722	-0.0325917	138.134	43.423
140	2.70805	-0.0225612	138.134	43.3619
141	2.70805	-0.0150408	138.134	43.3211
142	2.70805	-0.00501359	138.134	43.3076
143	2.70805	0.00501359	138.134	43.3211
144	2.70805	0.0150408	138.135	43.3619
145	2.70805	0.0225612	138.135	43.423
146	2.70805	0.0325917	138.136	43.5112
147	2.70805	0.0401167	138.138	43.6199
148	2.70805	0.0501541	138.14	43.7557
149	2.70805	0.0576847	138.144	43.9119
150	2.70805	0.0677301	138.148	44.0953
151	2.70805	0.0752698	138.154	44.2991
152	2.70805	0.0853288	138.161	44.5302
153	2.70805	0.0928787	138.17	44.7817
154	2.70805	0.102953	138.18	45.0605
155	2.70805	0.110516	138.193	45.3598
156	2.70805	0.12061	138.207	45.6864
157	2.70805	0.128189	138.224	46.0336
158	2.70805	0.138305	138.243	46.4081
159	2.70805	0.1459	138.264	46.8032
160	2.70805	0.156042	138.288	47.2258
161	2.70805	0.163659	138.315	47.669
162	2.70805	0.173829	138.345	48.1397
163	2.70805	0.181468	138.378	48.6312
164	2.70805	0.191671	138.415	49.1502
165	2.70805	0.199336	138.455	49.69
166	2.70805	0.209575	138.499	50.2576
167	2.70805	0.217267	138.546	50.8459
168	2.70805	0.227545	138.598	51.4621
169	2.70805	0.235269	138.653	52.0993
170	2.70805	0.24559	138.713	52.7643
171	2.70805	0.253347	138.777	53.4504
172	2.70805	0.263715	138.847	54.1646
173	2.70805	0.27411	138.922	54.9069
174	2.70805	0.281926	139.002	55.6703
175	2.70805	0.292375	139.087	56.4621

176	2.70805	0.300232		139.177	57.2751
177	2.70805	0.310738		139.274	58.1166
178	2.70805	0.318639		139.375	58.9795
179	2.70805	0.329206		139.484	59.871
180	2.70805	0.337155		139.597	60.7841
181	2.70805	0.347787		139.718	61.7259
182	2.70805	0.355788		139.845	62.6894
183	2.70805	0.36649	139.979	63.6819	
184	2.70805	0.374544		140.12	64.6961
185	2.70805	0.385321		140.268	65.7396
186	2.70805	0.393433		140.423	66.805
187	2.70805	0.40429	140.586	67.8999	
188	2.70805	0.412463		140.756	69.0168
189	2.70805	0.423405		140.936	70.1635
190	2.70805	0.431644		141.122	71.3324
191	2.70805	0.442676		141.318	72.5312
192	2.70805	0.450985		141.521	73.7524
193	2.70805	0.462114		141.735	75.0039
194	2.70805	0.470498		141.956	76.278
195	2.70805	0.481728		142.188	77.5825
196	2.70805	0.490189		142.429	78.91
197	2.70805	0.501527		142.68	80.2682
198	2.70805	0.510074		142.94	81.6495
199	2.70805	0.521527		143.212	83.0618
200	2.70805	0.530162		143.493	84.4975
201	2.70805	0.541736		143.787	85.9645
202	2.70805	0.550465		144.09	87.4552
203	2.70805	0.56217	144.406	88.9776	
204	2.70805	0.570999		144.732	90.5239
205	2.70805	0.582841		145.072	92.1023
206	2.70805	0.591776		145.422	93.7048
207	2.70805	0.603765		145.786	95.3399
208	2.70805	0.612813		146.162	96.9994
209	2.70805	0.624956		146.552	98.6918
210	2.70805	0.634124		146.955	100.409
211	2.70805	0.646431		147.372	102.16
212	2.70805	0.655726		147.802	103.935
213	2.70805	0.668209		148.249	105.745
214	2.70805	0.677639		148.708	107.58
215	2.70805	0.690309		149.185	109.449
216	2.70805	0.699883		149.674	111.345
217	2.70805	0.712751		150.182	113.275
218	2.70805	0.722479		150.704	115.231
219	2.70805	0.735557		151.245	117.223
220	2.70805	0.745449		151.801	119.242
221	2.70805	0.758753		152.377	121.297
222	2.70805	0.768821		152.968	123.379
223	2.70805	0.782366		153.58	125.497
224	2.70805	0.792618		154.208	127.644
225	2.70805	0.806422		154.859	129.828
226	2.70805	0.816874		155.526	132.04
227	2.70805	0.830953		156.216	134.29
228	2.70805	0.841621		156.925	136.569
229	2.70805	0.855996		157.657	138.887
230	2.70805	0.87055	158.415	141.245	
231	2.70805	0.881587		159.193	143.632
232	2.70805	0.896473		159.996	146.06
233	2.70805	0.907769		160.82	148.518
234	2.70805	0.923014		161.672	151.018
235	2.70805	0.93459	162.546	153.549	
236	2.70805	0.950222		163.449	156.122
237	2.70805	0.9621	164.374	158.727	

238	2.70805	0.97815	165.331	161.376	
239	2.70805	0.990356		166.312	164.058
240	2.70805	1.00687	167.326	166.785	
241	2.70805	1.01943	168.365	169.545	
242	2.70805	1.03643	169.439	172.352	
243	2.70805	1.04939	170.54	175.194	
244	2.70805	1.06694	171.679	178.083	
245	2.70805	1.08032	172.846	181.009	
246	2.70805	1.09847	174.052	183.984	
247	2.70805	1.11232	175.29	186.996	
248	2.70805	1.13113	176.569	190.059	
249	2.70805	1.1455	177.881	193.161	
250	2.70805	1.16505	179.239	196.316	
251	2.70805	1.18	180.631	199.512	
252	2.70805	1.20036	182.072	202.762	
253	2.70805	1.21596	183.55	206.055	
254	2.70805	1.23724	185.081	209.406	
255	2.70805	1.25357	186.653	212.8	
256	2.70805	1.27588	188.28	216.255	
257	2.70805	1.29303	189.952	219.757	
258	2.70805	1.31652	191.686	223.322	
259	2.70805	1.33462	193.467	226.936	
260	2.70805	1.35946	195.315	230.618	
261	2.70805	1.37866	197.216	234.351	
262	2.70805	1.40507	199.19	238.156	
263	2.70805	1.42554	201.222	242.017	
264	2.70805	1.4538	203.336	245.954	
265	2.70805	1.47579	205.514	249.95	
266	2.70805	1.50626	207.782	254.029	
267	2.70805	1.53007	210.123	258.173	
268	2.70805	1.56322	212.567	262.406	
269	2.70805	1.58927	215.093	266.71	
270	2.70805	1.62576	217.736	271.113	
271	2.70805	1.65463	220.474	275.593	
272	2.70805	1.6954	223.348	280.185	
273	2.70805	1.72793	226.334	284.864	
274	2.70805	1.77438	229.482	289.669	
275	2.70805	1.81191	232.765	294.576	
276	2.70805	1.86629	236.248	299.63	
277	2.70805	1.91103	239.9	304.805	
278	2.70805	1.97737	243.81	310.16	
279	2.70805	2.03352	247.946	315.667	
280	2.70805	2.12007	252.44	321.408	
281	2.70805	2.19728	257.268	327.358	
282	2.70805	2.32634	262.68	333.658	
283	2.70805	2.45727	268.718	340.313	
284	2.89037	2.74777	276.269	348.255	

Data Set Standard Deviation = 1.3946
Numerator = 121281
Denominator = 152062
W Statistic = 0.797579 = 121281 / 152062

5% Critical value of 0.976 exceeds 0.797579
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.797579
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 = 0.891102
0.891102 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y	
1	-1.60944	0.00350877	-2.74777	80.7901	348.683	
2	-1.60944	0.00701754	-2.45727	80.7901	334.497	
3	-1.60944	0.0105263	-2.32634	80.7901	328.103	
4	-1.60944	0.0140351	-2.19728	80.7901	321.801	
5	-1.60944	0.0175439	-2.12007	80.7901	318.03	
6	-1.60944	0.0210526	-2.03352	80.7901	313.804	
7	-1.60944	0.0245614	-1.97737	80.7901	311.062	
8	-1.60944	0.0280702	-1.91103	80.7901	307.822	
9	-1.10866	0.0315789	-1.86629	134.373	305.637	
10	-0.967584	0.0350877	-1.81191	149.469	302.982	
11	-0.820981	0.0385965	-1.77438	165.155	301.149	
12	-0.776529	0.0421053	-1.72793	169.911	298.881	
13	-0.693147	0.045614	-1.6954	178.833	297.292	
14	-0.673345	0.0491228	-1.65463	180.952	295.301	
15	-0.634878	0.0526316	-1.62576	185.068	293.891	
16	-0.616186	0.0561404	-1.58927	187.068	292.109	
17	-0.597837	0.0596491	-1.56322	189.031	290.837	
18	-0.597837	0.0631579	-1.53007	189.031	289.218	
19	-0.597837	0.0666667	-1.50626	189.031	288.056	
20	-0.597837	0.0701754	-1.47579	189.031	286.568	
21	-0.510826	0.0736842	-1.4538	198.342	285.494	
22	-0.510826	0.077193	-1.42554	198.342	284.114	
23	-0.494296	0.0807018	-1.40507	200.11	283.114	
24	-0.478036	0.0842105	-1.37866	201.85	281.824	
25	-0.462035	0.0877193	-1.35946	203.562	280.887	
26	-0.446287	0.0912281	-1.33462	205.247	279.674	
27	-0.446287	0.0947368	-1.31652	205.247	278.79	
28	-0.446287	0.0982456	-1.29303	205.247	277.643	
29	-0.430783	0.101754	-1.27588	206.906	276.805	
30	-0.430783	0.105263	-1.25357	206.906	275.716	
31	-0.430783	0.108772	-1.23724	206.906	274.918	
32	-0.415515	0.112281	-1.21596	208.54	273.879	
33	-0.400478	0.115789	-1.20036	210.149	273.118	
34	-0.371064	0.119298	-1.18	213.296	272.123	
35	-0.371064	0.122807	-1.16505	213.296	271.393	
36	-0.356675	0.126316	-1.1455	214.836	270.439	
37	-0.34249	0.129825	-1.13113	216.354	269.737	
38	-0.34249	0.133333	-1.11232	216.354	268.818	
39	-0.328504	0.136842	-1.09847	217.85	268.142	
40	-0.328504	0.140351	-1.08032	217.85	267.256	
41	-0.314711	0.14386	-1.06694	219.326	266.602	
42	-0.287682	0.147368	-1.04939	222.218	265.745	
43	-0.274437	0.150877	-1.03643	223.635	265.112	
44	-0.248461	0.154386	-1.01943	226.415	264.282	
45	-0.235722	0.157895	-1.00687	227.778	263.669	
46	-0.223144	0.161404	-0.990356	229.124	262.862	
47	-0.174353	0.164912	-0.97815	234.344	262.266	
48	-0.162519	0.168421	-0.9621	235.61	261.483	

49	-0.162519	0.17193	-0.950222	235.61	260.903	
50	-0.116534	0.175439	-0.93459	240.531	260.139	
51	-0.105361	0.178947	-0.923014	241.726	259.574	
52	-0.105361	0.182456	-0.907769	241.726	258.829	
53	-0.0725707	0.185965	-0.896473	245.235	258.278	
54	-0.0512933	0.189474	-0.881587	247.512	257.551	
55	-0.0512933	0.192982	-0.87055	247.512	257.012	
56	-0.0512933	0.196491	-0.855996	247.512	256.301	
57	-0.0304592	0.2	-0.841621	249.741	255.599	
58	-0.0304592	0.203509	-0.830953	249.741	255.078	
59	-0.0202027	0.207018	-0.816874	250.838	254.391	
60	-0.0202027	0.210526	-0.806422	250.838	253.88	
61	-0.0100503	0.214035	-0.792618	251.925	253.206	
62	0	0.217544	-0.782366	253	252.706	
63	0	0.221053	-0.768821	253	252.044	
64	0	0.224561	-0.758753	253	251.552	
65	0	0.22807	-0.745449	253	250.903	
66	0	0.231579	-0.735557	253	250.42	
67	0	0.235088	-0.722479	253	249.781	
68	0	0.238596	-0.712751	253	249.306	
69	0	0.242105	-0.699883	253	248.678	
70	0	0.245614	-0.690309	253	248.21	
71	0	0.249123	-0.677639	253	247.591	
72	0	0.252632	-0.668209	253	247.131	
73	0	0.25614	-0.655726	253	246.521	
74	0	0.259649	-0.646431	253	246.067	
75	0	0.263158	-0.634124	253	245.466	
76	0	0.266667	-0.624956	253	245.019	
77	0.0953102	0.270175	-0.612813	263.198	244.426	
78	0.0953102	0.273684	-0.603765	263.198	243.984	
79	0.0953102	0.277193	-0.591776	263.198	243.398	
80	0.0953102	0.280702	-0.582841	263.198	242.962	
81	0.0953102	0.284211	-0.570999	263.198	242.384	
82	0.0953102	0.287719	-0.56217	263.198	241.953	
83	0.182322	0.291228	-0.550465	272.508	241.381	
84	0.182322	0.294737	-0.541736	272.508	240.955	
85	0.182322	0.298246	-0.530162	272.508	240.39	
86	0.262364	0.301754	-0.521527	281.073	239.968	
87	0.262364	0.305263	-0.510074	281.073	239.409	
88	0.405465	0.308772	-0.501527	296.385	238.991	
89	0.470004	0.312281	-0.490189	303.29	238.438	
90	0.470004	0.315789	-0.481728	303.29	238.024	
91	0.530628	0.319298	-0.470498	309.777	237.476	
92	0.587787	0.322807	-0.462114	315.893	237.067	
93	0.587787	0.326316	-0.450985	315.893	236.523	
94	0.641854	0.329825	-0.442676	321.678	236.117	
95	0.641854	0.333333	-0.431644	321.678	235.579	
96	0.641854	0.336842	-0.423405	321.678	235.176	
97	0.693147	0.340351	-0.412463	327.167	234.642	
98	0.693147	0.34386	-0.40429	327.167	234.243	
99	0.693147	0.347368	-0.393433	327.167	233.713	
100	0.693147	0.350877	-0.385321	327.167	233.317	
101	0.693147	0.354386	-0.374544	327.167	232.79	
102	0.741937	0.357895	-0.36649	332.387	232.397	
103	0.788457	0.361404	-0.355788	337.365	231.874	
104	0.788457	0.364912	-0.347787	337.365	231.484	
105	0.875469	0.368421	-0.337155	346.675	230.964	
106	0.916291	0.37193	-0.329206	351.043	230.576	
107	0.955511	0.375439	-0.318639	355.24	230.06	
108	1.02962	0.378947	-0.310738	363.169	229.674	
109	1.02962	0.382456	-0.300232	363.169	229.161	
110	1.09861	0.385965	-0.292375	370.552	228.778	

111	1.09861	0.389474	-0.281926	370.552	228.267
112	1.09861	0.392982	-0.27411	370.552	227.886
113	1.09861	0.396491	-0.263715	370.552	227.378
114	1.09861	0.4	-0.253347	370.552	226.872
115	1.09861	0.403509	-0.24559	370.552	226.493
116	1.09861	0.407018	-0.235269	370.552	225.989
117	1.09861	0.410526	-0.227545	370.552	225.612
118	1.09861	0.414035	-0.217267	370.552	225.11
119	1.09861	0.417544	-0.209575	370.552	224.734
120	1.09861	0.421053	-0.199336	370.552	224.234
121	1.1314	0.424561	-0.191671	374.06	223.86
122	1.1314	0.42807	-0.181468	374.06	223.362
123	1.25276	0.431579	-0.173829	387.046	222.989
124	1.38629	0.435088	-0.163659	401.333	222.492
125	1.38629	0.438596	-0.156042	401.333	222.12
126	1.41099	0.442105	-0.1459	403.976	221.625
127	1.43508	0.445614	-0.138305	406.554	221.254
128	1.60944	0.449123	-0.128189	425.21	220.76
129	1.60944	0.452632	-0.12061	425.21	220.39
130	1.60944	0.45614	-0.110516	425.21	219.897
131	1.60944	0.459649	-0.102953	425.21	219.528
132	1.70475	0.463158	-0.0928787	435.408	219.036
133	1.79176	0.466667	-0.0853288	444.718	218.667
134	1.79176	0.470175	-0.0752698	444.718	218.176
135	1.79176	0.473684	-0.0677301	444.718	217.807
136	1.79176	0.477193	-0.0576847	444.718	217.317
137	1.94591	0.480702	-0.0501541	461.212	216.949
138	2.0149	0.484211	-0.0401167	468.595	216.459
139	2.19722	0.487719	-0.0325917	488.103	216.092
140	2.70805	0.491228	-0.0225612	542.761	215.602
141	2.70805	0.494737	-0.0150408	542.761	215.234
142	2.70805	0.498246	-0.00501359	542.761	214.745
143	2.70805	0.501754	0.00501359	542.761	214.255
144	2.70805	0.505263	0.0150408	542.761	213.766
145	2.70805	0.508772	0.0225612	542.761	213.398
146	2.70805	0.512281	0.0325917	542.761	212.908
147	2.70805	0.515789	0.0401167	542.761	212.541
148	2.70805	0.519298	0.0501541	542.761	212.051
149	2.70805	0.522807	0.0576847	542.761	211.683
150	2.70805	0.526316	0.0677301	542.761	211.193
151	2.70805	0.529825	0.0752698	542.761	210.824
152	2.70805	0.533333	0.0853288	542.761	210.333
153	2.70805	0.536842	0.0928787	542.761	209.964
154	2.70805	0.540351	0.102953	542.761	209.472
155	2.70805	0.54386	0.110516	542.761	209.103
156	2.70805	0.547368	0.12061	542.761	208.61
157	2.70805	0.550877	0.128189	542.761	208.24
158	2.70805	0.554386	0.138305	542.761	207.746
159	2.70805	0.557895	0.1459	542.761	207.375
160	2.70805	0.561404	0.156042	542.761	206.88
161	2.70805	0.564912	0.163659	542.761	206.508
162	2.70805	0.568421	0.173829	542.761	206.011
163	2.70805	0.57193	0.181468	542.761	205.638
164	2.70805	0.575439	0.191671	542.761	205.14
165	2.70805	0.578947	0.199336	542.761	204.766
166	2.70805	0.582456	0.209575	542.761	204.266
167	2.70805	0.585965	0.217267	542.761	203.89
168	2.70805	0.589474	0.227545	542.761	203.388
169	2.70805	0.592982	0.235269	542.761	203.011
170	2.70805	0.596491	0.24559	542.761	202.507
171	2.70805	0.6	0.253347	542.761	202.128
172	2.70805	0.603509	0.263715	542.761	201.622

173	2.70805	0.607018	0.27411	542.761	201.114
174	2.70805	0.610526	0.281926	542.761	200.733
175	2.70805	0.614035	0.292375	542.761	200.222
176	2.70805	0.617544	0.300232	542.761	199.839
177	2.70805	0.621053	0.310738	542.761	199.326
178	2.70805	0.624561	0.318639	542.761	198.94
179	2.70805	0.62807	0.329206	542.761	198.424
180	2.70805	0.631579	0.337155	542.761	198.036
181	2.70805	0.635088	0.347787	542.761	197.516
182	2.70805	0.638596	0.355788	542.761	197.126
183	2.70805	0.642105	0.36649	542.761	196.603
184	2.70805	0.645614	0.374544	542.761	196.21
185	2.70805	0.649123	0.385321	542.761	195.683
186	2.70805	0.652632	0.393433	542.761	195.287
187	2.70805	0.65614	0.40429	542.761	194.757
188	2.70805	0.659649	0.412463	542.761	194.358
189	2.70805	0.663158	0.423405	542.761	193.824
190	2.70805	0.666667	0.431644	542.761	193.421
191	2.70805	0.670175	0.442676	542.761	192.883
192	2.70805	0.673684	0.450985	542.761	192.477
193	2.70805	0.677193	0.462114	542.761	191.933
194	2.70805	0.680702	0.470498	542.761	191.524
195	2.70805	0.684211	0.481728	542.761	190.976
196	2.70805	0.687719	0.490189	542.761	190.562
197	2.70805	0.691228	0.501527	542.761	190.009
198	2.70805	0.694737	0.510074	542.761	189.591
199	2.70805	0.698246	0.521527	542.761	189.032
200	2.70805	0.701754	0.530162	542.761	188.61
201	2.70805	0.705263	0.541736	542.761	188.045
202	2.70805	0.708772	0.550465	542.761	187.619
203	2.70805	0.712281	0.56217	542.761	187.047
204	2.70805	0.715789	0.570999	542.761	186.616
205	2.70805	0.719298	0.582841	542.761	186.038
206	2.70805	0.722807	0.591776	542.761	185.602
207	2.70805	0.726316	0.603765	542.761	185.016
208	2.70805	0.729825	0.612813	542.761	184.574
209	2.70805	0.733333	0.624956	542.761	183.981
210	2.70805	0.736842	0.634124	542.761	183.534
211	2.70805	0.740351	0.646431	542.761	182.933
212	2.70805	0.74386	0.655726	542.761	182.479
213	2.70805	0.747368	0.668209	542.761	181.869
214	2.70805	0.750877	0.677639	542.761	181.409
215	2.70805	0.754386	0.690309	542.761	180.79
216	2.70805	0.757895	0.699883	542.761	180.322
217	2.70805	0.761404	0.712751	542.761	179.694
218	2.70805	0.764912	0.722479	542.761	179.219
219	2.70805	0.768421	0.735557	542.761	178.58
220	2.70805	0.77193	0.745449	542.761	178.097
221	2.70805	0.775439	0.758753	542.761	177.448
222	2.70805	0.778947	0.768821	542.761	176.956
223	2.70805	0.782456	0.782366	542.761	176.294
224	2.70805	0.785965	0.792618	542.761	175.794
225	2.70805	0.789474	0.806422	542.761	175.12
226	2.70805	0.792982	0.816874	542.761	174.609
227	2.70805	0.796491	0.830953	542.761	173.922
228	2.70805	0.8	0.841621	542.761	173.401
229	2.70805	0.803509	0.855996	542.761	172.699
230	2.70805	0.807018	0.87055	542.761	171.988
231	2.70805	0.810526	0.881587	542.761	171.449
232	2.70805	0.814035	0.896473	542.761	170.722
233	2.70805	0.817544	0.907769	542.761	170.171
234	2.70805	0.821053	0.923014	542.761	169.426

235	2.70805	0.824561	0.93459	542.761	168.861	
236	2.70805	0.82807	0.950222	542.761	168.097	
237	2.70805	0.831579	0.9621	542.761	167.517	
238	2.70805	0.835088	0.97815	542.761	166.734	
239	2.70805	0.838596	0.990356	542.761	166.138	
240	2.70805	0.842105	1.00687	542.761	165.331	
241	2.70805	0.845614	1.01943	542.761	164.718	
242	2.70805	0.849123	1.03643	542.761	163.888	
243	2.70805	0.852632	1.04939	542.761	163.255	
244	2.70805	0.85614	1.06694	542.761	162.398	
245	2.70805	0.859649	1.08032	542.761	161.744	
246	2.70805	0.863158	1.09847	542.761	160.858	
247	2.70805	0.866667	1.11232	542.761	160.182	
248	2.70805	0.870175	1.13113	542.761	159.263	
249	2.70805	0.873684	1.1455	542.761	158.561	
250	2.70805	0.877193	1.16505	542.761	157.607	
251	2.70805	0.880702	1.18	542.761	156.877	
252	2.70805	0.884211	1.20036	542.761	155.882	
253	2.70805	0.887719	1.21596	542.761	155.121	
254	2.70805	0.891228	1.23724	542.761	154.082	
255	2.70805	0.894737	1.25357	542.761	153.284	
256	2.70805	0.898246	1.27588	542.761	152.195	
257	2.70805	0.901754	1.29303	542.761	151.357	
258	2.70805	0.905263	1.31652	542.761	150.21	
259	2.70805	0.908772	1.33462	542.761	149.326	
260	2.70805	0.912281	1.35946	542.761	148.113	
261	2.70805	0.915789	1.37866	542.761	147.176	
262	2.70805	0.919298	1.40507	542.761	145.886	
263	2.70805	0.922807	1.42554	542.761	144.886	
264	2.70805	0.926316	1.4538	542.761	143.506	
265	2.70805	0.929825	1.47579	542.761	142.432	
266	2.70805	0.933333	1.50626	542.761	140.944	
267	2.70805	0.936842	1.53007	542.761	139.782	
268	2.70805	0.940351	1.56322	542.761	138.163	
269	2.70805	0.94386	1.58927	542.761	136.891	
270	2.70805	0.947368	1.62576	542.761	135.109	
271	2.70805	0.950877	1.65463	542.761	133.699	
272	2.70805	0.954386	1.6954	542.761	131.708	
273	2.70805	0.957895	1.72793	542.761	130.119	
274	2.70805	0.961404	1.77438	542.761	127.851	
275	2.70805	0.964912	1.81191	542.761	126.018	
276	2.70805	0.968421	1.86629	542.761	123.363	
277	2.70805	0.97193	1.91103	542.761	121.178	
278	2.70805	0.975439	1.97737	542.761	117.938	
279	2.70805	0.978947	2.03352	542.761	115.196	
280	2.70805	0.982456	2.12007	542.761	110.97	
281	2.70805	0.985965	2.19728	542.761	107.199	
282	2.70805	0.989474	2.32634	542.761	100.897	
283	2.70805	0.992982	2.45727	542.761	94.5032	
284	2.89037	0.996491	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-4	1/16/1998	ND<2.70805	76.5
	3/16/1999	ND<2.70805	76.5
	9/23/1999	ND<2.70805	76.5
	3/14/2000	ND<2.70805	76.5
	9/23/2003	ND<2.70805	76.5
	3/10/2004	ND<2.70805	76.5
	10/12/2004	ND<2.70805	76.5
	4/1/2005	ND<2.70805	76.5
	10/26/2005	ND<2.70805	76.5
	6/19/2006	ND<2.70805	76.5
	11/18/2006	0 J	206
	6/2/2007	1.79176	277
	11/15/2007	1.09861 J	254
	5/20/2008	1.60944 J	272
	11/20/2008	ND<2.70805	76.5
	6/11/2009	-0.235722	189
	11/16/2009	0.182322	227
	6/30/2010	-0.274437 J	187
	11/17/2010	0.0953102	221
	7/6/2011	0.182322	228
	11/22/2011	0.0953102	222
	5/16/2012	-0.478036 J	168
	11/16/2012	0.0953102	223

Rank Sum = 3515.5
Rank Mean = 152.848

Background Rank Sum = 3515.5
Background Rank Mean = 152.848

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	3/14/2000	ND<2.70805	76.5
	9/23/2003	ND<2.70805	76.5
	3/10/2004	ND<2.70805	76.5
	10/12/2004	ND<2.70805	76.5
	4/1/2005	ND<2.70805	76.5
	10/26/2005	ND<2.70805	76.5
	6/19/2006	ND<2.70805	76.5
	11/18/2006	ND<2.70805	76.5
	6/2/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	5/20/2008	0 J	207
	11/20/2008	ND<2.70805	76.5
	6/11/2009	-0.967584 J	154
	11/16/2009	-0.693147 J	157
	6/30/2010	ND<-1.60944 U	76.5
	11/17/2010	ND<-1.60944 U	76.5
	7/6/2011	-0.356675 J	180

	11/22/2011	-0.116534 J	194
	5/16/2012	ND<-1.60944 U	76.5
	11/16/2012	-0.34249 J	181

Rank Sum = 2144
Rank Mean = 107.2

LMW-11	3/14/2000	ND<2.70805	76.5
	9/23/2003	ND<2.70805	76.5
	3/10/2004	ND<2.70805	76.5
	10/12/2004	ND<2.70805	76.5
	4/1/2005	ND<2.70805	76.5
	10/26/2005	ND<2.70805	76.5
	6/19/2006	ND<2.70805	76.5
	6/2/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	5/20/2008	ND<2.70805	76.5
	11/20/2008	ND<2.70805	76.5

Rank Sum = 841.5
Rank Mean = 76.5

LMW-12	3/14/2000	ND<2.70805	76.5
	9/23/2003	ND<2.70805	76.5
	3/10/2004	ND<2.70805	76.5
	10/12/2004	ND<2.70805	76.5
	4/1/2005	ND<2.70805	76.5
	10/26/2005	ND<2.70805	76.5
	6/19/2006	ND<2.70805	76.5
	6/2/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	5/20/2008	ND<2.70805	76.5
	11/20/2008	ND<2.70805	76.5

Rank Sum = 841.5
Rank Mean = 76.5

LMW-13	3/14/2000	ND<2.70805	76.5
	9/23/2003	ND<2.70805	76.5
	3/10/2004	ND<2.70805	76.5
	10/12/2004	ND<2.70805	76.5
	4/1/2005	ND<2.70805	76.5
	10/26/2005	ND<2.70805	76.5
	6/19/2006	ND<2.70805	76.5
	6/2/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	5/20/2008	ND<2.70805	76.5
	11/20/2008	ND<2.70805	76.5

Rank Sum = 841.5
Rank Mean = 76.5

LMW-14R	6/2/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	5/20/2008	0.693147 J	241
	11/20/2008	1.09861 J	255
	6/11/2009	0.788457	247
	6/30/2010	-0.174353 J	191
	11/17/2010	0.641854	238
	7/6/2011	0.587787	236
	11/22/2011	0.470004	233
	5/16/2012	-0.430783 J	173
	11/16/2012	0.0953102	224

Rank Sum = 2191
Rank Mean = 199.182

LMW-15R	11/18/2006	0 J	208
	6/2/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	5/20/2008	0 J	209
	5/20/2008	ND<2.70805	76.5
	11/20/2008	ND<2.70805	76.5
	11/20/2008	ND<2.70805	76.5
	6/11/2009	1.09861	256
	6/30/2010	0	210
	11/17/2010	-0.0202027 J	203
	7/6/2011	-0.0725707 J	197
	11/22/2011	-0.105361 J	195
	5/16/2012	-0.510826 J	165
	11/16/2012	-0.248461 J	188

Rank Sum = 2290
Rank Mean = 152.667

LMW-16	11/18/2006	0 J	211
	6/2/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	5/20/2008	ND<2.70805	76.5
	11/20/2008	ND<2.70805	76.5
	6/11/2009	-0.328504	183
	11/16/2009	-0.415515	176
	6/30/2010	-0.0304592 J	201
	11/17/2010	ND<-1.60944 U	76.5
	7/6/2011	-0.430783 J	174
	11/22/2011	-0.105361 J	196
	5/16/2012	-0.597837 J	161
	11/16/2012	-0.0512933 J	198

Rank Sum = 1882.5
Rank Mean = 144.808

LMW-3	11/19/1996	ND<2.70805	76.5
	3/24/1997	ND<2.70805	76.5
	1/16/1998	ND<2.70805	76.5
	3/16/1999	ND<2.70805	76.5
	9/23/1999	ND<2.70805	76.5
	3/14/2000	ND<2.70805	76.5
	9/23/2003	ND<2.70805	76.5
	3/10/2004	ND<2.70805	76.5
	10/12/2004	ND<2.70805	76.5
	4/1/2005	ND<2.70805	76.5
	10/26/2005	ND<2.70805	76.5
	6/19/2006	ND<2.70805	76.5
	11/18/2006	ND<2.70805	76.5
	6/2/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	5/20/2008	0 J	212
	11/20/2008	ND<2.70805	76.5
	6/11/2009	-0.616186 J	160
	11/16/2009	0.0953102	225
	6/30/2010	0.262364	230
	11/17/2010	1.09861	257
	7/6/2011	-0.162519 J	192
	11/22/2011	1.09861	258
	5/16/2012	-0.673345 J	158
	11/16/2012	0	213

Rank Sum = 3129
Rank Mean = 125.16

LMW-3S	11/18/2006	0.693147 J	242
	6/2/2007	1.38629 J	268
	11/15/2007	1.60944 J	273
	5/20/2008	1.09861 J	259
	11/20/2008	1.09861 J	260
	6/11/2009	0.955511	251
	11/16/2009	1.02962	252
	6/30/2010	1.41099	270
	11/17/2010	1.1314	265
	7/6/2011	1.1314	266
	11/22/2011	-0.0512933 J	199
	5/16/2012	1.02962	253
	11/16/2012	1.09861	261

Rank Sum = 3319
Rank Mean = 255.308

LMW-6	1/16/1998	ND<2.70805	76.5
	3/16/1999	ND<2.70805	76.5
	9/23/1999	ND<2.70805	76.5
	3/14/2000	ND<2.70805	76.5
	9/23/2003	ND<2.70805	76.5
	3/10/2004	ND<2.70805	76.5
	10/12/2004	ND<2.70805	76.5
	4/1/2005	ND<2.70805	76.5
	10/26/2005	ND<2.70805	76.5
	6/19/2006	ND<2.70805	76.5
	11/18/2006	0 J	214
	6/2/2007	1.60944	274
	11/15/2007	ND<2.70805	76.5
	5/20/2008	0.693147 J	243
	11/20/2008	ND<2.70805	76.5
	6/11/2009	0.788457	248
	11/16/2009	0.587787 J	237
	6/30/2010	0.641854	239
	11/17/2010	0.641854	240
	7/6/2011	0.0953102	226
	11/22/2011	-0.0100503 J	205
	5/16/2012	-0.446287 J	170
	11/16/2012	-0.162519 J	193

Rank Sum = 3407
Rank Mean = 148.13

LMW-7	1/16/1998	ND<2.70805	76.5
	3/16/1999	ND<2.70805	76.5
	9/23/1999	ND<2.70805	76.5
	3/14/2000	ND<2.70805	76.5
	9/23/2003	ND<2.70805	76.5
	3/10/2004	ND<2.70805	76.5
	10/12/2004	ND<2.70805	76.5
	4/1/2005	2.89037 J	284
	10/26/2005	ND<2.70805	76.5
	6/19/2006	ND<2.70805	76.5
	11/18/2006	1.38629 J	269
	6/2/2007	1.94591	281
	11/15/2007	1.60944 J	275
	5/20/2008	0.693147 J	244
	11/20/2008	1.09861 J	262
	6/11/2009	1.70475	276
	11/17/2010	0.530628	235
	7/6/2011	2.0149	282
	11/22/2011	0.405465	232
	5/16/2012	1.43508	271

	11/16/2012	0.741937	246

Rank Sum = 3845.5
Rank Mean = 183.119

LMW-8	1/16/1998	ND<2.70805	76.5
	3/16/1999	1.79176 J	278
	9/23/1999	ND<2.70805	76.5
	3/14/2000	ND<2.70805	76.5
	9/23/2003	ND<2.70805	76.5
	3/10/2004	ND<2.70805	76.5
	10/12/2004	ND<2.70805	76.5
	4/1/2005	ND<2.70805	76.5
	10/26/2005	ND<2.70805	76.5
	6/19/2006	ND<2.70805	76.5
	11/18/2006	0 J	215
	6/2/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	5/20/2008	0 J	216
	11/20/2008	ND<2.70805	76.5
	6/11/2009	-0.494296	167
	11/16/2009	-0.446287	171
	6/30/2010	-0.371064 J	178
	11/17/2010	-0.430783 J	175
	7/6/2011	-0.0512933 J	200
	11/22/2011	0.262364	231
	5/16/2012	-0.597837 J	162
	11/16/2012	-0.446287 J	172

Rank Sum = 3083
Rank Mean = 134.043

LMW-9	1/16/1998	ND<2.70805	76.5
	3/16/1999	1.79176 J	279
	9/23/1999	ND<2.70805	76.5
	3/14/2000	ND<2.70805	76.5
	9/23/2003	ND<2.70805	76.5
	3/10/2004	ND<2.70805	76.5
	10/12/2004	ND<2.70805	76.5
	4/1/2005	ND<2.70805	76.5
	10/26/2005	ND<2.70805	76.5
	6/19/2006	ND<2.70805	76.5
	11/18/2006	ND<2.70805	76.5
	6/2/2007	1.09861 J	263
	11/15/2007	ND<2.70805	76.5
	5/20/2008	0 J	217
	11/20/2008	2.19722 J	283
	6/11/2009	-1.10866 J	153
	11/16/2009	-0.776529 J	156
	6/30/2010	ND<-1.60944 U	76.5
	11/17/2010	-0.462035 J	169
	7/6/2011	-0.0202027 J	204
	11/22/2011	-0.597837 J	163
	5/16/2012	0.875469	249
	11/16/2012	1.25276	267

Rank Sum = 3321
Rank Mean = 144.391

LMW-9D	11/18/2006	0.693147 J	245
	6/2/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	5/20/2008	0 J	218
	11/20/2008	ND<2.70805	76.5
	6/11/2009	-0.597837 J	164

	11/16/2009	-0.371064	179
	6/30/2010	-0.634878 J	159
	11/17/2010	-0.510826 J	166
	7/6/2011	0.916291	250
	11/22/2011	-0.287682 J	186
	5/16/2012	ND<-1.60944 U	76.5
	11/16/2012	-0.314711 J	185

Rank Sum = 2058
Rank Mean = 158.308

LMW-9S	11/18/2006	0 J	219
	6/2/2007	ND<2.70805	76.5
	11/15/2007	ND<2.70805	76.5
	5/20/2008	0 J	220
	11/20/2008	ND<2.70805	76.5
	6/11/2009	0.182322	229
	11/16/2009	0.470004 J B	234
	11/16/2009	-0.223144 J B	190
	11/16/2009	-0.0304592 J B	202
	6/30/2010	ND<-1.60944 U	76.5
	11/17/2010	-0.820981 J	155
	7/6/2011	-0.400478 J	177
	11/22/2011	-0.328504 J	184
	5/16/2012	ND<-1.60944 U	76.5
	11/16/2012	-0.34249 J	182

Rank Sum = 2374.5
Rank Mean = 158.3

MW-5	1/16/1998	ND<2.70805	76.5
	3/16/1999	1.79176 J	280
	9/23/1999	ND<2.70805	76.5
	3/14/2000	ND<2.70805	76.5
	9/23/2003	ND<2.70805	76.5
	3/10/2004	ND<2.70805	76.5
	10/12/2004	ND<2.70805	76.5
	4/1/2005	ND<2.70805	76.5
	10/26/2005	ND<2.70805	76.5
	6/19/2006	ND<2.70805	76.5
	11/15/2007	1.09861 J	264
	5/20/2008	ND<2.70805	76.5
	11/20/2008	ND<2.70805	76.5

Rank Sum = 1385.5
Rank Mean = 106.577

Calculation Results:

Kruskal-Wallis H Statistic = 65.5176
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 77.3806
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
65.5176 > 26.2962 indicating a significant group difference at 5% significance level
77.3806 > 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 152.848

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**107.2**	**-45.647**	**58.4144**
LMW-11	**76.5**	**-76.347**	**70.0396**
LMW-12	**76.5**	**-76.347**	**70.0396**
LMW-13	**76.5**	**-76.347**	**70.0396**

LMW-14R	199.182	46.334	70.0396	
LMW-15R	152.667	-0.181159		63.4084
LMW-16	144.808	-8.04013	66.2949	
LMW-3	125.16	-27.6878	55.2015	
LMW-3S	255.308	102.46	66.2949	
LMW-6	148.13	-4.71739	56.3398	
LMW-7	183.119	30.2712	57.6657	
LMW-8	134.043	-18.8043	56.3398	
LMW-9	144.391	-8.45652	56.3398	
LMW-9D	158.308	5.45987	66.2949	
LMW-9S	158.3	5.45217	63.4084	
MW-5	106.577	-46.2709	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 152.848

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	107.2	-45.6478	68.9963
LMW-11	76.5	-76.3478	82.7275
LMW-12	76.5	-76.3478	82.7275
LMW-13	76.5	-76.3478	82.7275
LMW-14R	199.182	46.334	82.7275
LMW-15R	152.667	-0.181159	74.895
LMW-16	144.808	-8.04013	78.3044
LMW-3	125.16	-27.6878	65.2015
LMW-3S	255.308	102.46	78.3044
LMW-6	148.13	-4.71739	66.546
LMW-7	183.119	30.2712	68.112
LMW-8	134.043	-18.8043	66.546
LMW-9	144.391	-8.45652	66.546
LMW-9D	158.308	5.45987	78.3044
LMW-9S	158.3	5.45217	74.895
MW-5	106.577	-46.2709	78.3044

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
1.60944 J	1.38629 J	0.223144	12	1
1.09861 J	1.38629 J	-0.287682	12	2
1.09861 J	1.38629 J	-0.287682	12	3
0.955511	1.38629 J	-0.430783	12	4
1.02962	1.38629 J	-0.356675	12	5
1.41099	1.38629 J	0.0246926	13	5
1.1314	1.38629 J	-0.254892	13	6
1.1314	1.38629 J	-0.254892	13	7
-0.0512933 J	1.38629 J	-1.437591	13	8
1.02962	1.38629 J	-0.356675	13	9
1.09861	1.38629 J	-0.287682	13	10
1.09861 J	1.60944 J	-0.510826	13	11
1.09861 J	1.60944 J	-0.510826	13	12
0.955511	1.60944 J	-0.653926	13	13
1.02962	1.60944 J	-0.579818	13	14
1.41099	1.60944 J	-0.198451	13	15
1.1314	1.60944 J	-0.478036	13	16
1.1314	1.60944 J	-0.478036	13	17
-0.0512933 J	1.60944 J	-1.660731	13	18
1.02962	1.60944 J	-0.579818	13	19
1.09861	1.60944 J	-0.510826	13	20
1.09861 J	1.09861 J	0	13	20
0.955511	1.09861 J	-0.143101	13	21
1.02962	1.09861 J	-0.0689929	13	22
1.41099	1.09861 J	0.312375	14	22
1.1314	1.09861 J	0.0327898	15	22
1.1314	1.09861 J	0.0327898	16	22
-0.0512933 J	1.09861 J	-1.149911	16	23
1.02962	1.09861 J	-0.0689929	16	24
1.09861	1.09861 J	0	16	24
0.955511	1.09861 J	-0.143101	16	25
1.02962	1.09861 J	-0.0689929	16	26
1.41099	1.09861 J	0.312375	17	26
1.1314	1.09861 J	0.0327898	18	26

1.1314	1.09861 J	0.0327898	19	26		
-0.0512933 J	1.09861 J	-1.1499	19	27		
1.02962	1.09861 J	-0.0689929	19	28		
1.09861	1.09861 J	0	19	28		
1.02962	0.955511	0.074108	20	28		
1.41099	0.955511	0.455476	21	28		
1.1314	0.955511	0.175891	22	28		
1.1314	0.955511	0.175891	23	28		
-0.0512933 J	0.955511	-1.0068	23	29		
1.02962	0.955511	0.074108	24	29		
1.09861	0.955511	0.143101	25	29		
1.41099	1.02962	0.381368	26	29		
1.1314	1.02962	0.101783	27	29		
1.1314	1.02962	0.101783	28	29		
-0.0512933 J	1.02962	-1.0809	28	30		
1.02962	1.02962	0	28	30		
1.09861	1.02962	0.0689929	29	30		
1.1314	1.41099	-0.279585	29	31		
1.1314	1.41099	-0.279585	29	32		
-0.0512933 J	1.41099	-1.4622	29	33		
1.02962	1.41099	-0.381368	29	34		
1.09861	1.41099	-0.312375	29	35		
1.1314	1.1314	0	29	35		
-0.0512933 J	1.1314	-1.1827	29	36		
1.02962	1.1314	-0.101783	29	37		
1.09861	1.1314	-0.0327898	29	38		
-0.0512933 J	1.1314	-1.1827	29	39		
1.02962	1.1314	-0.101783	29	40		
1.09861	1.1314	-0.0327898	29	41		
1.02962	-0.0512933 J	1.08091	30	41		
1.09861	-0.0512933 J	1.14991	31	41		
1.09861	1.02962	0.0689929	32	41		

S Statistic = 32 - 41 = -9

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

There are 0 time periods with multiple data

A = 102
B = 0
C = 6
D = 0
E = 10
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 263
Z-Score = -0.493301
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.493301| <= 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 = 1.47612
Baseline Std Dev = 1.31451
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std	Mean
11/18/2006	0.693147	0	-0.59564	
11/18/2006	0.693147	0	-0.59564	
6/2/2007	1.38629	0	-0.0683335	
6/2/2007	1.38629	0	-0.0683335	
11/15/2007	1.60944	0	0.101421	
11/15/2007	1.60944	0	0.101421	
5/20/2008	1.09861	0	-0.287186	
5/20/2008	1.09861	0	-0.287186	
11/20/2008	1.09861	0	-0.287186	
11/20/2008	1.09861	0	-0.287186	
6/11/2009	0.955511	0	-0.396048	
6/11/2009	0.955511	0	-0.396048	
11/16/2009	1.02962	0	-0.339671	
11/16/2009	1.02962	0	-0.339671	
6/30/2010	1.41099	0	-0.0495488	
6/30/2010	1.41099	0	-0.0495488	
11/17/2010	1.1314	0	-0.262241	
11/17/2010	1.1314	0	-0.262241	
7/6/2011	1.1314	0	-0.262241	
7/6/2011	1.1314	0	-0.262241	
11/22/2011	-0.0512933	0	-1.16197	
11/22/2011	-0.0512933	0	-1.16197	
5/16/2012	1.02962	0	-0.339671	
5/16/2012	1.02962	0	-0.339671	
11/16/2012	1.09861	0	-0.287186	
11/16/2012	1.09861	0	-0.287186	

Concentrations (ppb)

Parameter: Nitrate

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 171
Total Non-Detect: 73
Percent Non-Detects: 42.6901%
Total Background Measurements: 12
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	12	8 (66.6667%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	12	2 (16.6667%)	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
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-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-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
LMW-14R	10	5 (50%)	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
LMW-15R	14	6 (42.8571%)	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	
LMW-16	12	7 (58.3333%)	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
LMW-3	12	2 (16.6667%)	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	
LMW-3S	12	3 (25%)	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	

LMW-6	12	3 (25%)	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	
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	
LMW-8	12	5 (41.6667%)	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	
LMW-9	12	4 (33.3333%)	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	
LMW-9D	12	4 (33.3333%)	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	

LMW-9S	14	7 (50%)	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
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	

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 = 171

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.036	-2.57583	6.63492	-0.09273
2	0.036	-2.29036	11.8807	-0.175183
3	0.036	-2.12007	16.3754	-0.251506
4	0.0375	-1.99539	20.357	-0.326333
5	0.0375	-1.8957	23.9506	-0.397421
6	0.0375	-1.82501	27.2813	-0.465859
7	0.088	-1.75069	30.3462	-0.61992
8	0.094	-1.68494	33.1852	-0.778304
9	0.097	-1.62576	35.8283	-0.936003
10	0.18	-1.57179	38.2988	-1.21892
11	0.18	-1.53007	40.6399	-1.49434
12	0.18	-1.48328	42.8401	-1.76133
13	0.19	-1.43953	44.9123	-2.03484
14	0.21	-1.39838	46.8678	-2.3285
15	0.52	-1.35946	48.7159	-3.03542
16	0.56	-1.32251	50.4649	-3.77602
17	0.61	-1.29303	52.1368	-4.56477
18	1.4	-1.25908	53.7221	-6.32749
19	1.6	-1.22653	55.2265	-8.28993
20	5	-1.19522	56.6551	-14.266
21	5	-1.16505	58.0124	-20.0913
22	5	-1.14069	59.3136	-25.7947
23	5	-1.11232	60.5508	-31.3563
24	5	-1.08482	61.7277	-36.7804
25	5	-1.05812	62.8473	-42.071
26	5	-1.03215	63.9126	-47.2318
27	5	-1.01104	64.9348	-52.287
28	5	-0.986272	65.9076	-57.2184
29	5	-0.9621	66.8332	-62.0288
30	5	-0.938476	67.7139	-66.7212
31	5	-0.915365	68.5518	-71.2981
32	5	-0.892733	69.3488	-75.7617
33	5	-0.874218	70.1131	-80.1328
34	5	-0.852385	70.8396	-84.3947
35	5	-0.830953	71.5301	-88.5495
36	5	-0.809896	72.186	-92.599
37	5	-0.789191	72.8089	-96.5449
38	5	-0.772193	73.4051	-100.406
39	5	-0.752084	73.9708	-104.166
40	5	-0.732275	74.507	-107.828
41	5	-0.712751	75.015	-111.391
42	5	-0.693493	75.4959	-114.859
43	5	-0.674497	75.9509	-118.231
44	5	-0.658838	76.3849	-121.526
45	5	-0.640266	76.7949	-124.727
46	5	-0.621911	77.1817	-127.836
47	5	-0.603765	77.5462	-130.855
48	5	-0.585815	77.8894	-133.784
49	5	-0.570999	78.2154	-136.639
50	5	-0.553384	78.5216	-139.406
51	5	-0.535947	78.8089	-142.086

52	5	-0.518658	79.0779	-144.679
53	5	-0.501527	79.3294	-147.187
54	5	-0.487364	79.5669	-149.624
55	5	-0.470498	79.7883	-151.976
56	5	-0.453763	79.9942	-154.245
57	5	-0.437153	80.1853	-156.431
58	5	-0.420664	80.3623	-158.534
59	5	-0.404298	0.5257	-160.556
60	5	-0.390726	80.6784	-162.509
61	5	-0.374544	80.8187	-164.382
62	5	-0.358459	80.9472	-166.174
63	5	-0.342466	81.0644	-167.887
64	5	-0.326561	81.1711	-169.519
65	5	-0.313378	1.2693	-171.086
66	5	-0.297612	81.3579	-172.574
67	5	-0.281926	81.4373	-173.984
68	18	-0.266311	81.5083	-178.777
69	18	-0.250759	81.5711	-183.291
70	18	-0.237847	81.6277	-187.572
71	37.5	-0.222403	81.6772	-195.912
72	37.5	-0.207012	81.72	-203.675
73	45	-0.191671	81.7568	-212.301
74	45	-0.176374	81.7879	-220.237
75	50	-0.161119	81.8138	-228.293
76	52	-0.148434	81.8359	-236.012
77	58	-0.133244	81.8536	-243.74
78	60	-0.118085	81.8676	-250.825
79	78	-0.102953	81.8782	-258.856
80	84	-0.0878447	81.8859	-266.235
81	85	-0.0752698	81.8915	-272.632
82	86	-0.0601949	81.8952	-277.809
83	98	-0.0451348	81.8972	-282.232
84	99	-0.0300838	81.8981	-285.211
85	107	-0.0150408	81.8983	-286.82
86	109	0	81.8983	-286.82
87	110	0.0150408	81.8986	-285.166
88	119	0.0300838	81.8995	-281.586
89	120	0.0451348	81.9015	-276.169
90	120	0.0601949	81.9051	-268.946
91	128	0.0752698	81.9108	-259.312
92	130	0.0878447	81.9185	-247.892
93	150	0.102953	81.9291	-232.449
94	166	0.118085	81.9431	-212.847
95	180	0.133244	81.9608	-188.863
96	180	0.148434	81.9828	-162.145
97	180	0.161119	82.0088	-133.143
98	180	0.176374	82.0399	-101.396
99	180	0.191671	82.0766	-66.895
100	180	0.207012	82.1195	-29.6328
101	180	0.222403	82.169	10.3998
102	180	0.237847	82.2255	53.2122
103	180	0.250759	82.2884	98.3488
104	180	0.266311	82.3593	146.285
105	180	0.281926	82.4388	197.032
106	180	0.297612	82.5274	250.602
107	196	0.31337	82.6256	312.022
108	200	0.326561	82.7322	377.334
109	209	0.342466	82.8495	448.91
110	216	0.358459	82.978	526.337
111	240	0.374544	83.1183	616.227
112	240	0.390726	83.271	710.002
113	260	0.40429	83.4344	815.117

114	295	0.420664		83.6114	939.213
115	321	0.437153		83.8025	1079.54
116	326	0.453763		84.0084	1227.47
117	330	0.470498		84.2297	1382.73
118	333	0.487364		84.4673	1545.02
119	350	0.501527		84.7188	1720.56
120	360	0.518658		84.9878	1907.27
121	360	0.53594	85.275	2100.21	
122	369	0.553384		85.5813	2304.41
123	370	0.570999		85.9073	2515.68
124	371	0.585815		86.2505	2733.02
125	377	0.603765		86.615	2960.64
126	398	0.621911		87.0018	3208.16
127	406	0.640266		87.4117	3468.11
128	430	0.658838		87.8458	3751.41
129	450	0.67449	88.3007	4054.93	
130	455	0.693493		88.7817	4370.47
131	461	0.712751		89.2897	4699.04
132	510	0.732275		89.8259	5072.5
133	515	0.752084		90.3915	5459.83
134	546	0.772193		90.9878	5881.44
135	551	0.789191		91.6106	6316.29
136	570	0.809896		92.2666	6777.93
137	580	0.830953		92.9571	7259.88
138	660	0.852385		93.6836	7822.46
139	710	0.874218		94.4479	8443.15
140	730	0.892733		95.2448	9094.85
141	730	0.915365		96.0827	9763.06
142	740	0.938476		96.9635	10457.5
143	770	0.9621	97.8891	11198.4	
144	770	0.986272		98.8618	11957.8
145	790	1.01104	99.884	12756.5	
146	820	1.03215	100.949	13602.9	
147	870	1.05812	102.069	14523.4	
148	880	1.08482	103.246	15478.1	
149	1000	1.11232	104.483	16590.4	
150	1020	1.14069	105.784	17753.9	
151	1150	1.16505	107.142	19093.7	
152	1200	1.19522	108.57	20528	
153	1300	1.22653	110.075	22122.5	
154	1300	1.25908	111.66	23759.3	
155	1400	1.29303	113.332	25569.5	
156	1410	1.32251	115.081	27434.2	
157	1600	1.35946	116.929	29609.4	
158	1700	1.39838	118.884	31986.6	
159	1800	1.43953	120.957	34577.8	
160	2100	1.48328	123.157	37692.7	
161	2300	1.53007	125.498	41211.8	
162	2400	1.57179	127.968	44984.1	
163	4780	1.62576	130.611	52755.3	
164	5000	1.68494	133.45	61180	
165	5500	1.75069	136.515	70808.7	
166	5600	1.82501	139.846	81028.8	
167	7300	1.8957	143.44	94867.3	
168	7400	1.99539	147.421	109633	
169	17200	2.12007	151.916	146098	
170	68000	2.29036	157.162	301843	
171	643000	2.57583	163.797	1.9581e+006	

Data Set Standard Deviation = 49396.1
Numerator = 3.83417e+012

Denominator = 6.79422e+013
W Statistic = 0.0564329 = 3.83417e+012 / 6.79422e+013

5% Critical value of 0.976 exceeds 0.0564329
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0564329
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 = 0.241385
0.241385 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.036	0.00581395		-2.5758339	340.287	
2	0.036	0.0116279		-2.2903639	326.346	
3	0.036	0.0174419		-2.1200739	318.03	
4	0.0375	0.0232558		-1.9953939	311.942	
5	0.0375	0.0290698		-1.8957 39	307.073	
6	0.0375	0.0348837		-1.8250139	303.621	
7	0.088	0.0406977		-1.7506939.0001	299.992	
8	0.094	0.0465116		-1.6849439.0001	296.781	
9	0.097	0.0523256		-1.6257639.0001	293.891	
10	0.18	0.0581395		-1.5717939.0001	291.256	
11	0.18	0.0639535		-1.5300739.0001	289.218	
12	0.18	0.0697674		-1.4832839.0001	286.934	
13	0.19	0.0755814		-1.4395339.0001	284.797	
14	0.21	0.0813953		-1.3983839.0002	282.787	
15	0.52	0.0872093		-1.3594639.0004	280.887	
16	0.56	0.0930233		-1.3225139.0004	279.082	
17	0.61	0.0988372		-1.2930339.0005	277.643	
18	1.4	0.104651		-1.2590839.0011	275.985	
19	1.6	0.110465		-1.2265339.0012	274.395	
20	5	0.116279		-1.1952239.0038	272.867	
21	5	0.122093		-1.1650539.0038	271.393	
22	5	0.127907		-1.1406939.0038	270.204	
23	5	0.133721		-1.1123239.0038	268.818	
24	5	0.139535		-1.0848239.0038	267.476	
25	5	0.145349		-1.0581239.0038	266.172	
26	5	0.151163		-1.0321539.0038	264.904	
27	5	0.156977		-1.0110439.0038	263.872	
28	5	0.162791		-0.986272	39.0038	262.663
29	5	0.168605		-0.9621 39.0038	261.483	
30	5	0.174419		-0.938476	39.0038	260.329
31	5	0.180233		-0.915365	39.0038	259.2
32	5	0.186047		-0.892733	39.0038	258.095
33	5	0.19186	-0.874218	39.0038	257.191	
34	5	0.197674		-0.852385	39.0038	256.125
35	5	0.203488		-0.830953	39.0038	255.078
36	5	0.209302		-0.809896	39.0038	254.05
37	5	0.215116		-0.789191	39.0038	253.039
38	5	0.22093	-0.772193	39.0038	252.209	
39	5	0.226744		-0.752084	39.0038	251.227
40	5	0.232558		-0.732275	39.0038	250.259
41	5	0.238372		-0.712751	39.0038	249.306
42	5	0.244186		-0.693493	39.0038	248.366
43	5	0.25	-0.6744939.0038	247.438		
44	5	0.255814		-0.658838	39.0038	246.673
45	5	0.261628		-0.640266	39.0038	245.766
46	5	0.267442		-0.621911	39.0038	244.87
47	5	0.273256		-0.603765	39.0038	243.984
48	5	0.27907	-0.585815	39.0038	243.107	

49	5	0.284884	-0.570999	39.0038	242.384
50	5	0.290698	-0.553384	39.0038	241.524
51	5	0.296512	-0.535943	9.0038	240.672
52	5	0.302326	-0.518658	39.0038	239.828
53	5	0.30814	-0.501527	39.0038	238.991
54	5	0.313953	-0.487364	39.0038	238.3
55	5	0.319767	-0.470498	39.0038	237.476
56	5	0.325581	-0.453763	39.0038	236.659
57	5	0.331395	-0.437153	39.0038	235.848
58	5	0.337209	-0.420664	39.0038	235.042
59	5	0.343023	-0.404293	9.0038	234.243
60	5	0.348837	-0.390726	39.0038	233.58
61	5	0.354651	-0.374544	39.0038	232.79
62	5	0.360465	-0.358459	39.0038	232.005
63	5	0.366279	-0.342466	39.0038	231.224
64	5	0.372093	-0.326561	39.0038	230.447
65	5	0.377907	-0.313373	9.0038	229.803
66	5	0.383721	-0.297612	39.0038	229.033
67	5	0.389535	-0.281926	39.0038	228.267
68	18	0.395349	-0.266311	39.0138	227.505
69	18	0.401163	-0.250759	39.0138	226.745
70	18	0.406977	-0.237847	39.0138	226.115
71	37.5	0.412791	-0.222403	39.0287	225.361
72	37.5	0.418605	-0.207012	39.0287	224.609
73	45	0.424419	-0.191671	39.0344	223.86
74	45	0.430233	-0.176374	39.0344	223.113
75	50	0.436047	-0.161119	39.0382	222.368
76	52	0.44186	-0.148434	39.0397	221.749
77	58	0.447674	-0.133244	39.0443	221.007
78	60	0.453488	-0.118085	39.0459	220.267
79	78	0.459302	-0.102953	39.0596	219.528
80	84	0.465116	-0.0878447	39.0642	218.79
81	85	0.47093	-0.0752698	39.065	218.176
82	86	0.476744	-0.0601949	39.0657	217.44
83	98	0.482558	-0.0451348	39.0749	216.704
84	99	0.488372	-0.0300838	39.0757	215.969
85	107	0.494186	-0.0150408	39.0818	215.234
86	109	0.5	0	39.0833	214.5
87	110	0.505814	0.0150408	39.0841	213.766
88	119	0.511628	0.0300838	39.0909	213.031
89	120	0.517442	0.0451348	39.0917	212.296
90	120	0.523256	0.0601949	39.0917	211.56
91	128	0.52907	0.0752698	39.0978	210.824
92	130	0.534884	0.0878447	39.0994	210.21
93	150	0.540698	0.102953	39.1146	209.472
94	166	0.546512	0.118085	39.1269	208.733
95	180	0.552326	0.133244	39.1376	207.993
96	180	0.55814	0.148434	39.1376	207.251
97	180	0.563953	0.161119	39.1376	206.632
98	180	0.569767	0.176374	39.1376	205.887
99	180	0.575581	0.191671	39.1376	205.14
100	180	0.581395	0.207012	39.1376	204.391
101	180	0.587209	0.222403	39.1376	203.639
102	180	0.593023	0.237847	39.1376	202.885
103	180	0.598837	0.250759	39.1376	202.255
104	180	0.604651	0.266311	39.1376	201.495
105	180	0.610465	0.281926	39.1376	200.733
106	180	0.616279	0.297612	39.1376	199.967
107	196	0.622093	0.31337	39.1498	199.197
108	200	0.627907	0.326561	39.1529	198.553
109	209	0.633721	0.342466	39.1597	197.776
110	216	0.639535	0.358459	39.1651	196.995

111	240	0.645349	0.374544	39.1834	196.21
112	240	0.651163	0.390726	39.1834	195.42
113	260	0.656977	0.40429	39.1987	194.757
114	295	0.662791	0.420664	39.2255	193.958
115	321	0.668605	0.437153	39.2453	193.152
116	326	0.674419	0.453763	39.2492	192.341
117	330	0.680233	0.470498	39.2522	191.524
118	333	0.686047	0.487364	39.2545	190.7
119	350	0.69186	0.501527	39.2675	190.009
120	360	0.697674	0.518658	39.2751	189.172
121	360	0.703488	0.53594	39.2751	188.328
122	369	0.709302	0.553384	39.282	187.476
123	370	0.715116	0.570999	39.2828	186.616
124	371	0.72093	0.585815	39.2835	185.893
125	377	0.726744	0.603765	39.2881	185.016
126	398	0.732558	0.621911	39.3042	184.13
127	406	0.738372	0.640266	39.3103	183.234
128	430	0.744186	0.658838	39.3286	182.327
129	450	0.75	0.67449	39.3439	181.562
130	455	0.755814	0.693493	39.3477	180.634
131	461	0.761628	0.712751	39.3523	179.694
132	510	0.767442	0.732275	39.3898	178.741
133	515	0.773256	0.752084	39.3936	177.773
134	546	0.77907	0.772193	39.4173	176.791
135	551	0.784884	0.789191	39.4211	175.961
136	570	0.790698	0.809896	39.4356	174.95
137	580	0.796512	0.830953	39.4433	173.922
138	660	0.802326	0.852385	39.5044	172.875
139	710	0.80814	0.874218	39.5426	171.809
140	730	0.813953	0.892733	39.5579	170.905
141	730	0.819767	0.915365	39.5579	169.8
142	740	0.825581	0.938476	39.5656	168.671
143	770	0.831395	0.9621	39.5885	167.517
144	770	0.837209	0.986272	39.5885	166.337
145	790	0.843023	1.01104	39.6038	165.128
146	820	0.848837	1.03215	39.6267	164.096
147	870	0.854651	1.05812	39.6649	162.828
148	880	0.860465	1.08482	39.6726	161.524
149	1000	0.866279	1.11232	39.7643	160.182
150	1020	0.872093	1.14069	39.7796	158.796
151	1150	0.877907	1.16505	39.8789	157.607
152	1200	0.883721	1.19522	39.9171	156.133
153	1300	0.889535	1.22653	39.9936	154.605
154	1300	0.895349	1.25908	39.9936	153.015
155	1400	0.901163	1.29303	40.07	151.357
156	1410	0.906977	1.32251	40.0776	149.918
157	1600	0.912791	1.35946	40.2229	148.113
158	1700	0.918605	1.39838	40.2993	146.213
159	1800	0.924419	1.43953	40.3757	144.203
160	2100	0.930233	1.48328	40.605	142.066
161	2300	0.936047	1.53007	40.7579	139.782
162	2400	0.94186	1.57179	40.8343	137.744
163	4780	0.947674	1.62576	42.6533	135.109
164	5000	0.953488	1.68494	42.8214	132.219
165	5500	0.959302	1.75069	43.2036	129.008
166	5600	0.965116	1.82501	43.28	125.379
167	7300	0.97093	1.8957	44.5793	121.927
168	7400	0.976744	1.99539	44.6557	117.058
169	17200	0.982558	2.12007	52.1457	110.97
170	68000	0.988372	2.29036	90.9714	102.654
171	643000	0.994186	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 = 171

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.32424	-2.57583	6.63492	8.56268
2	-3.32424	-2.29036	11.8807	16.1764
3	-3.32424	-2.12007	16.3754	23.224
4	-3.28341	-1.99539	20.357	29.7757
5	-3.28341	-1.8957	23.9506	36.0001
6	-3.28341	-1.82501	27.2813	41.9923
7	-2.43042	-1.75069	30.3462	46.2472
8	-2.36446	-1.68494	33.1852	50.2312
9	-2.33304	-1.62576	35.8283	54.0242
10	-1.7148	-1.57179	38.2988	56.7195
11	-1.7148	-1.53007	40.6399	59.3432
12	-1.7148	-1.48328	42.8401	61.8867
13	-1.66073	-1.43953	44.9123	64.2774
14	-1.56065	-1.39838	46.8678	66.4598
15	-0.653926	-1.35946	48.7159	67.3488
16	-0.579818	-1.32251	50.4649	68.1156
17	-0.494296	-1.29303	52.1368	68.7547
18	0.336472	-1.25908	53.7221	68.3311
19	0.470004	-1.22653	55.2265	67.7546
20	1.60944	-1.19522	56.6551	65.831
21	1.60944	-1.16505	58.0124	63.9559
22	1.60944	-1.14069	59.3136	62.12
23	1.60944	-1.11232	60.5508	60.3298
24	1.60944	-1.08482	61.7277	58.5839
25	1.60944	-1.05812	62.8473	56.8809
26	1.60944	-1.03215	63.9126	55.2197
27	1.60944	-1.01104	64.9348	53.5925
28	1.60944	-0.986272	65.9076	52.0052
29	1.60944	-0.9621	66.8332	50.4567
30	1.60944	-0.938476	67.7139	48.9463
31	1.60944	-0.915365	68.5518	47.4731
32	1.60944	-0.892733	69.3488	46.0363
33	1.60944	-0.874218	70.1131	44.6293
34	1.60944	-0.852385	70.8396	43.2574
35	1.60944	-0.830953	71.5301	41.9201
36	1.60944	-0.809896	72.186	40.6166
37	1.60944	-0.789191	72.8089	39.3464
38	1.60944	-0.772193	73.4051	38.1036
39	1.60944	-0.752084	73.9708	36.8932
40	1.60944	-0.732275	74.507	35.7146
41	1.60944	-0.712751	75.015	34.5675
42	1.60944	-0.693493	75.4959	33.4514
43	1.60944	-0.674497	75.9509	32.3658
44	1.60944	-0.658838	76.3849	31.3055
45	1.60944	-0.640266	76.7949	30.275
46	1.60944	-0.621911	77.1817	29.2741
47	1.60944	-0.603765	77.5462	28.3024
48	1.60944	-0.585815	77.8894	27.3595
49	1.60944	-0.570999	78.2154	26.4405
50	1.60944	-0.553384	78.5216	25.5499
51	1.60944	-0.535947	78.8089	24.6873

52	1.60944	-0.518658	79.0779	23.8526
53	1.60944	-0.501527	79.3294	23.0454
54	1.60944	-0.487364	79.5669	22.261
55	1.60944	-0.470498	79.7883	21.5038
56	1.60944	-0.453763	79.9942	20.7735
57	1.60944	-0.437153	80.1853	20.0699
58	1.60944	-0.420664	80.3623	19.3929
59	1.60944	-0.404298	0.5257	18.7422
60	1.60944	-0.390726	80.6784	18.1134
61	1.60944	-0.374544	80.8187	17.5106
62	1.60944	-0.358459	80.9472	16.9336
63	1.60944	-0.342466	81.0644	16.3825
64	1.60944	-0.326561	81.1711	15.8569
65	1.60944	-0.313378	1.2693	15.3525
66	1.60944	-0.297612	81.3579	14.8735
67	1.60944	-0.281926	81.4373	14.4198
68	2.89037	-0.266311	81.5083	13.6501
69	2.89037	-0.250759	81.5711	12.9253
70	2.89037	-0.237847	81.6277	12.2378
71	3.62434	-0.222403	81.6772	11.4317
72	3.62434	-0.207012	81.72	10.6815
73	3.80666	-0.191671	81.7568	9.95183
74	3.80666	-0.176374	81.7879	9.28043
75	3.91202	-0.161119	81.8138	8.65013
76	3.95124	-0.148434	81.8359	8.06363
77	4.06044	-0.133244	81.8536	7.5226
78	4.09434	-0.118085	81.8676	7.03912
79	4.35671	-0.102953	81.8782	6.59058
80	4.43082	-0.0878447	81.8859	6.20136
81	4.44265	-0.0752698	81.8915	5.86696
82	4.45435	-0.0601949	81.8952	5.59883
83	4.58497	-0.0451348	81.8972	5.39189
84	4.59512	-0.0300838	81.8981	5.25365
85	4.67283	-0.0150408	81.8983	5.18337
86	4.69135	0	81.8983	5.18337
87	4.70048	0.0150408	81.8986	5.25407
88	4.77912	0.0300838	81.8995	5.39784
89	4.78749	0.0451348	81.9015	5.61393
90	4.78749	0.0601949	81.9051	5.90211
91	4.85203	0.0752698	81.9108	6.26732
92	4.86753	0.0878447	81.9185	6.69491
93	5.01064	0.102953	81.9291	7.21077
94	5.11199	0.118085	81.9431	7.81442
95	5.19296	0.133244	81.9608	8.50635
96	5.19296	0.148434	81.9828	9.27716
97	5.19296	0.161119	82.0088	10.1138
98	5.19296	0.176374	82.0399	11.0297
99	5.19296	0.191671	82.0766	12.0251
100	5.19296	0.207012	82.1195	13.1001
101	5.19296	0.222403	82.169	14.255
102	5.19296	0.237847	82.2255	15.4902
103	5.19296	0.250759	82.2884	16.7923
104	5.19296	0.266311	82.3593	18.1753
105	5.19296	0.281926	82.4388	19.6393
106	5.19296	0.297612	82.5274	21.1848
107	5.27811	0.31337	82.6256	22.8388
108	5.29832	0.326561	82.7322	24.569
109	5.34233	0.342466	82.8495	26.3986
110	5.37528	0.358459	82.978	28.3254
111	5.48064	0.374544	83.1183	30.3781
112	5.48064	0.390726	83.271	32.5196
113	5.56068	0.40429	83.4344	34.7677

114	5.68698	0.420664		83.6114	37.16
115	5.77144	0.437153		83.8025	39.683
116	5.7869	0.453763		84.0084	42.3089
117	5.79909	0.470498		84.2297	45.0373
118	5.80814	0.487364		84.4673	47.868
119	5.85793	0.501527		84.7188	50.8059
120	5.8861	0.518658		84.9878	53.8588
121	5.8861	0.53594	85.275	57.0134	
122	5.9108	0.553384		85.5813	60.2843
123	5.9135	0.570999		85.9073	63.661
124	5.9162	0.585815		86.2505	67.1267
125	5.93225	0.603765		86.615	70.7084
126	5.98645	0.621911		87.0018	74.4315
127	6.00635	0.640266		87.4117	78.2771
128	6.06379	0.658838		87.8458	82.2722
129	6.10925	0.67449	88.3007	86.3928	
130	6.1203	0.693493		88.7817	90.6372
131	6.1334	0.712751		89.2897	95.0088
132	6.23441	0.732275		89.8259	99.5741
133	6.24417	0.752084		90.3915	104.27
134	6.30262	0.772193		90.9878	109.137
135	6.31173	0.789191		91.6106	114.118
136	6.34564	0.809896		92.2666	119.258
137	6.36303	0.830953		92.9571	124.545
138	6.49224	0.852385		93.6836	130.079
139	6.56526	0.874218		94.4479	135.818
140	6.59304	0.892733		95.2448	141.704
141	6.59304	0.915365		96.0827	147.739
142	6.60665	0.938476		96.9635	153.939
143	6.64639	0.9621	97.8891	160.334	
144	6.64639	0.986272		98.8618	166.889
145	6.67203	1.01104	99.884	173.635	
146	6.7093	1.03215	100.949	180.56	
147	6.76849	1.05812	102.069	187.722	
148	6.77992	1.08482	103.246	195.077	
149	6.90776	1.11232	104.483	202.76	
150	6.92756	1.14069	105.784	210.662	
151	7.04752	1.16505	107.142	218.873	
152	7.09008	1.19522	108.57	227.347	
153	7.17012	1.22653	110.075	236.142	
154	7.17012	1.25908	111.66	245.169	
155	7.24423	1.29303	113.332	254.536	
156	7.25134	1.32251	115.081	264.126	
157	7.37776	1.35946	116.929	274.156	
158	7.43838	1.39838	118.884	284.558	
159	7.49554	1.43953	120.957	295.348	
160	7.64969	1.48328	123.157	306.695	
161	7.74066	1.53007	125.498	318.538	
162	7.78322	1.57179	127.968	330.772	
163	8.4722	1.62576	130.611	344.546	
164	8.51719	1.68494	133.45	358.897	
165	8.6125	1.75069	136.515	373.974	
166	8.63052	1.82501	139.846	389.725	
167	8.89563	1.8957	143.44	406.589	
168	8.90924	1.99539	147.421	424.366	
169	9.75266	2.12007	151.916	445.042	
170	11.1273	2.29036	157.162	470.528	
171	13.3739	2.57583	163.797	504.977	

Data Set Standard Deviation = 3.10502
Numerator = 255001

Denominator = 268462
W Statistic = 0.949861 = 255001 / 268462

5% Critical value of 0.976 exceeds 0.949861
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.949861
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 = 0.974711
0.974711 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-3.32424	0.00581395	-2.57583	158.051	340.287
2	-3.32424	0.0116279	-2.29036	158.051	326.346
3	-3.32424	0.0174419	-2.12007	158.051	318.03
4	-3.28341	0.0232558	-1.99539	158.779	311.942
5	-3.28341	0.0290698	-1.8957	158.779	307.073
6	-3.28341	0.0348837	-1.82501	158.779	303.621
7	-2.43042	0.0406977	-1.75069	173.991	299.992
8	-2.36446	0.0465116	-1.68494	175.167	296.781
9	-2.33304	0.0523256	-1.62576	175.727	293.891
10	-1.7148	0.0581395	-1.57179	186.753	291.256
11	-1.7148	0.0639535	-1.53007	186.753	289.218
12	-1.7148	0.0697674	-1.48328	186.753	286.934
13	-1.66073	0.0755814	-1.43953	187.717	284.797
14	-1.56065	0.0813953	-1.39838	189.502	282.787
15	-0.653926	0.0872093	-1.35946	205.672	280.887
16	-0.579818	0.0930233	-1.32251	206.993	279.082
17	-0.494296	0.0988372	-1.29303	208.518	277.643
18	0.336472	0.104651	-1.25908	223.334	275.985
19	0.470004	0.110465	-1.22653	225.715	274.395
20	1.60944	0.116279	-1.19522	246.035	272.867
21	1.60944	0.122093	-1.16505	246.035	271.393
22	1.60944	0.127907	-1.14069	246.035	270.204
23	1.60944	0.133721	-1.11232	246.035	268.818
24	1.60944	0.139535	-1.08482	246.035	267.476
25	1.60944	0.145349	-1.05812	246.035	266.172
26	1.60944	0.151163	-1.03215	246.035	264.904
27	1.60944	0.156977	-1.01104	246.035	263.872
28	1.60944	0.162791	-0.986272	246.035	262.663
29	1.60944	0.168605	-0.9621	246.035	261.483
30	1.60944	0.174419	-0.938476	246.035	260.329
31	1.60944	0.180233	-0.915365	246.035	259.2
32	1.60944	0.186047	-0.892733	246.035	258.095
33	1.60944	0.19186	-0.874218	246.035	257.191
34	1.60944	0.197674	-0.852385	246.035	256.125
35	1.60944	0.203488	-0.830953	246.035	255.078
36	1.60944	0.209302	-0.809896	246.035	254.05
37	1.60944	0.215116	-0.789191	246.035	253.039
38	1.60944	0.22093	-0.772193	246.035	252.209
39	1.60944	0.226744	-0.752084	246.035	251.227
40	1.60944	0.232558	-0.732275	246.035	250.259
41	1.60944	0.238372	-0.712751	246.035	249.306
42	1.60944	0.244186	-0.693493	246.035	248.366
43	1.60944	0.25	-0.67449	246.035	247.438
44	1.60944	0.255814	-0.658838	246.035	246.673
45	1.60944	0.261628	-0.640266	246.035	245.766
46	1.60944	0.267442	-0.621911	246.035	244.87
47	1.60944	0.273256	-0.603765	246.035	243.984
48	1.60944	0.27907	-0.585815	246.035	243.107

49	1.60944	0.284884	-0.570999	246.035	242.384
50	1.60944	0.290698	-0.553384	246.035	241.524
51	1.60944	0.296512	-0.53594	246.035	240.672
52	1.60944	0.302326	-0.518658	246.035	239.828
53	1.60944	0.30814	-0.501527	246.035	238.991
54	1.60944	0.313953	-0.487364	246.035	238.3
55	1.60944	0.319767	-0.470498	246.035	237.476
56	1.60944	0.325581	-0.453763	246.035	236.659
57	1.60944	0.331395	-0.437153	246.035	235.848
58	1.60944	0.337209	-0.420664	246.035	235.042
59	1.60944	0.343023	-0.40429	246.035	234.243
60	1.60944	0.348837	-0.390726	246.035	233.58
61	1.60944	0.354651	-0.374544	246.035	232.79
62	1.60944	0.360465	-0.358459	246.035	232.005
63	1.60944	0.366279	-0.342466	246.035	231.224
64	1.60944	0.372093	-0.326561	246.035	230.447
65	1.60944	0.377907	-0.31337	246.035	229.803
66	1.60944	0.383721	-0.297612	246.035	229.033
67	1.60944	0.389535	-0.281926	246.035	228.267
68	2.89037	0.395349	-0.266311	268.878	227.505
69	2.89037	0.401163	-0.250759	268.878	226.745
70	2.89037	0.406977	-0.237847	268.878	226.115
71	3.62434	0.412791	-0.222403	281.967	225.361
72	3.62434	0.418605	-0.207012	281.967	224.609
73	3.80666	0.424419	-0.191671	285.219	223.86
74	3.80666	0.430233	-0.176374	285.219	223.113
75	3.91202	0.436047	-0.161119	287.098	222.368
76	3.95124	0.44186	-0.148434	287.797	221.749
77	4.06044	0.447674	-0.133244	289.745	221.007
78	4.09434	0.453488	-0.118085	290.349	220.267
79	4.35671	0.459302	-0.102953	295.028	219.528
80	4.43082	0.465116	-0.0878447	296.35	218.79
81	4.44265	0.47093	-0.0752698	296.561	218.176
82	4.45435	0.476744	-0.0601949	296.769	217.44
83	4.58497	0.482558	-0.0451348	299.099	216.704
84	4.59512	0.488372	-0.0300838	299.28	215.969
85	4.67283	0.494186	-0.0150408	300.665	215.234
86	4.69135	0.5	0	300.996	214.5
87	4.70048	0.505814	0.0150408	301.159	213.766
88	4.77912	0.511628	0.0300838	302.561	213.031
89	4.78749	0.517442	0.0451348	302.71	212.296
90	4.78749	0.523256	0.0601949	302.71	211.56
91	4.85203	0.52907	0.0752698	303.861	210.824
92	4.86753	0.534884	0.0878447	304.138	210.21
93	5.01064	0.540698	0.102953	306.69	209.472
94	5.11199	0.546512	0.118085	308.497	208.733
95	5.19296	0.552326	0.133244	309.941	207.993
96	5.19296	0.55814	0.148434	309.941	207.251
97	5.19296	0.563953	0.161119	309.941	206.632
98	5.19296	0.569767	0.176374	309.941	205.887
99	5.19296	0.575581	0.191671	309.941	205.14
100	5.19296	0.581395	0.207012	309.941	204.391
101	5.19296	0.587209	0.222403	309.941	203.639
102	5.19296	0.593023	0.237847	309.941	202.885
103	5.19296	0.598837	0.250759	309.941	202.255
104	5.19296	0.604651	0.266311	309.941	201.495
105	5.19296	0.610465	0.281926	309.941	200.733
106	5.19296	0.616279	0.297612	309.941	199.967
107	5.27811	0.622093	0.31337	311.46	199.197
108	5.29832	0.627907	0.326561	311.82	198.553
109	5.34233	0.633721	0.342466	312.605	197.776
110	5.37528	0.639535	0.358459	313.192	196.995

111	5.48064	0.645349	0.374544	315.071	196.21
112	5.48064	0.651163	0.390726	315.071	195.42
113	5.56068	0.656977	0.40429	316.499	194.757
114	5.68698	0.662791	0.420664	318.751	193.958
115	5.77144	0.668605	0.437153	320.257	193.152
116	5.7869	0.674419	0.453763	320.533	192.341
117	5.79909	0.680233	0.470498	320.75	191.524
118	5.80814	0.686047	0.487364	320.912	190.7
119	5.85793	0.69186	0.501527	321.8	190.009
120	5.8861	0.697674	0.518658	322.302	189.172
121	5.8861	0.703488	0.53594	322.302	188.328
122	5.9108	0.709302	0.553384	322.743	187.476
123	5.9135	0.715116	0.570999	322.791	186.616
124	5.9162	0.72093	0.585815	322.839	185.893
125	5.93225	0.726744	0.603765	323.125	185.016
126	5.98645	0.732558	0.621911	324.092	184.13
127	6.00635	0.738372	0.640266	324.447	183.234
128	6.06379	0.744186	0.658838	325.471	182.327
129	6.10925	0.75	0.67449	326.282	181.562
130	6.1203	0.755814	0.693493	326.479	180.634
131	6.1334	0.761628	0.712751	326.712	179.694
132	6.23441	0.767442	0.732275	328.514	178.741
133	6.24417	0.773256	0.752084	328.688	177.773
134	6.30262	0.77907	0.772193	329.73	176.791
135	6.31173	0.784884	0.789191	329.893	175.961
136	6.34564	0.790698	0.809896	330.497	174.95
137	6.36303	0.796512	0.830953	330.807	173.922
138	6.49224	0.802326	0.852385	333.112	172.875
139	6.56526	0.80814	0.874218	334.414	171.809
140	6.59304	0.813953	0.892733	334.909	170.905
141	6.59304	0.819767	0.915365	334.909	169.8
142	6.60665	0.825581	0.938476	335.152	168.671
143	6.64639	0.831395	0.9621	335.861	167.517
144	6.64639	0.837209	0.986272	335.861	166.337
145	6.67203	0.843023	1.01104	336.318	165.128
146	6.7093	0.848837	1.03215	336.983	164.096
147	6.76849	0.854651	1.05812	338.038	162.828
148	6.77992	0.860465	1.08482	338.242	161.524
149	6.90776	0.866279	1.11232	340.522	160.182
150	6.92756	0.872093	1.14069	340.875	158.796
151	7.04752	0.877907	1.16505	343.014	157.607
152	7.09008	0.883721	1.19522	343.773	156.133
153	7.17012	0.889535	1.22653	345.2	154.605
154	7.17012	0.895349	1.25908	345.2	153.015
155	7.24423	0.901163	1.29303	346.522	151.357
156	7.25134	0.906977	1.32251	346.649	149.918
157	7.37776	0.912791	1.35946	348.903	148.113
158	7.43838	0.918605	1.39838	349.985	146.213
159	7.49554	0.924419	1.43953	351.004	144.203
160	7.64969	0.930233	1.48328	353.753	142.066
161	7.74066	0.936047	1.53007	355.375	139.782
162	7.78322	0.94186	1.57179	356.134	137.744
163	8.4722	0.947674	1.62576	368.421	135.109
164	8.51719	0.953488	1.68494	369.223	132.219
165	8.6125	0.959302	1.75069	370.923	129.008
166	8.63052	0.965116	1.82501	371.244	125.379
167	8.89563	0.97093	1.8957	375.972	121.927
168	8.90924	0.976744	1.99539	376.215	117.058
169	9.75266	0.982558	2.12007	391.256	110.97
170	11.1273	0.988372	2.29036	415.77	102.654
171	13.3739	0.994186	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-4	11/18/2006	3.91202	86
	6/2/2007	13.3739	171
	11/15/2007	ND<1.60944	37
	5/20/2008	5.9108	122
	11/20/2008	ND<1.60944	37
	11/16/2009	ND<5.19296 U	37
	6/30/2010	4.43082 J	91
	11/17/2010	ND<-3.32424 U	37
	7/6/2011	ND<-3.28341 U	37
	11/22/2011	ND<3.62434 U	37
	5/16/2012	ND<-1.7148 U	37
	11/16/2012	ND<5.19296 U	37

Rank Sum = 766
Rank Mean = 63.8333

Background Rank Sum = 766
Background Rank Mean = 63.8333

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	11/18/2006	6.31173	135
	6/2/2007	6.92756	150
	11/15/2007	ND<1.60944	37
	5/20/2008	6.00635	127
	11/20/2008	ND<1.60944	37
	11/16/2009	7.78322	162
	6/30/2010	5.9135	123
	11/17/2010	-0.653926	79
	7/6/2011	6.36303	137
	11/22/2011	6.23441	132
	5/16/2012	7.17012	153
	11/16/2012	7.17012	154

Rank Sum = 1426
Rank Mean = 118.833

LMW-11	6/2/2007	ND<1.60944	37
	11/15/2007	ND<1.60944	37
	5/20/2008	ND<1.60944	37
	11/20/2008	ND<1.60944	37

Rank Sum = 148
Rank Mean = 37

LMW-12	6/2/2007	ND<1.60944	37
	11/15/2007	ND<1.60944	37
	5/20/2008	ND<1.60944	37
	11/20/2008	ND<1.60944	37

Rank Sum = 148
Rank Mean = 37

LMW-13	6/2/2007	ND<1.60944	37
	11/15/2007	ND<1.60944	37
	5/20/2008	ND<1.60944	37
	11/20/2008	ND<1.60944	37

Rank Sum = 148
Rank Mean = 37

LMW-14R	6/2/2007	5.7869	116
	11/15/2007	ND<1.60944	37
	5/20/2008	5.9162	124
	11/20/2008	ND<1.60944	37
	6/30/2010	ND<2.89037 U	37
	11/17/2010	ND<-3.32424 U	37
	7/6/2011	5.85793	119
	11/22/2011	4.78749 J	100
	5/16/2012	5.8861	120
	11/16/2012	ND<5.19296 U	37

Rank Sum = 764
Rank Mean = 76.4

LMW-15R	11/18/2006	8.4722	163
	6/2/2007	7.24423	155
	11/15/2007	ND<1.60944	37
	11/15/2007	ND<1.60944	37
	5/20/2008	ND<1.60944	37
	5/20/2008	ND<1.60944	37
	11/20/2008	ND<1.60944	37
	11/20/2008	ND<1.60944	37
	6/30/2010	7.64969	160
	11/17/2010	0.470004	83
	7/6/2011	11.1273 J	170
	11/22/2011	7.49554	159
	5/16/2012	7.37776	157
	11/16/2012	8.90924	168

Rank Sum = 1437
Rank Mean = 102.643

LMW-16	11/18/2006	3.95124	87
	6/2/2007	5.11199	105
	11/15/2007	ND<1.60944	37
	5/20/2008	5.93225	125
	11/20/2008	ND<1.60944	37
	11/16/2009	ND<5.19296 U	37
	6/30/2010	ND<2.89037 U	37
	11/17/2010	ND<-3.32424 U	37
	7/6/2011	5.19296 J	106
	11/22/2011	5.48064 J	111
	5/16/2012	ND<-1.7148 U	37
	11/16/2012	ND<5.19296 U	37

Rank Sum = 793
Rank Mean = 66.0833

LMW-3	11/18/2006	5.80814	118
	6/2/2007	5.34233	109
	11/15/2007	ND<1.60944	37
	5/20/2008	6.24417	133
	11/20/2008	ND<1.60944	37
	11/16/2009	6.76849 J H	147
	6/30/2010	4.35671 J M	90
	11/17/2010	-1.66073 J	77
	7/6/2011	6.59304	140

	11/22/2011	5.29832 J	108
	5/16/2012	6.49224 J	138
	11/16/2012	6.59304 J	141

Rank Sum = 1275
Rank Mean = 106.25

LMW-3S	11/18/2006	5.77144	115
	6/2/2007	5.27811	107
	11/15/2007	ND<1.60944	37
	5/20/2008	6.30262	134
	11/20/2008	ND<1.60944	37
	11/16/2009	6.56526 J M	139
	6/30/2010	ND<2.89037 U	37
	11/17/2010	-2.43042 J	74
	7/6/2011	5.01064 J	104
	11/22/2011	5.48064 J	112
	5/16/2012	6.7093 J	146
	11/16/2012	6.64639 J	143

Rank Sum = 1185
Rank Mean = 98.75

LMW-6	11/18/2006	7.04752	151
	6/2/2007	ND<1.60944	37
	11/15/2007	ND<1.60944	37
	5/20/2008	7.25134	156
	11/20/2008	ND<1.60944	37
	11/16/2009	8.51719	164
	6/30/2010	6.77992	148
	11/17/2010	0.336472	82
	7/6/2011	7.43838	158
	11/22/2011	7.09008	152
	5/16/2012	8.6125	165
	11/16/2012	8.63052	166

Rank Sum = 1453
Rank Mean = 121.083

LMW-7	11/18/2006	4.77912	99
	6/2/2007	5.68698	114
	11/15/2007	ND<1.60944	37
	5/20/2008	4.85203	102
	11/20/2008	ND<1.60944	37
	11/17/2010	-0.579818 J	80
	7/6/2011	4.45435 J	93
	11/22/2011	4.78749 J	101
	5/16/2012	5.8861 J	121
	11/16/2012	6.67203 J	145

Rank Sum = 929
Rank Mean = 92.9

LMW-8	11/18/2006	5.37528	110
	6/2/2007	5.98645	126
	11/15/2007	ND<1.60944	37
	5/20/2008	6.34564	136
	11/20/2008	ND<1.60944	37
	11/16/2009	6.60665 J	142
	6/30/2010	3.80666 J	84
	11/17/2010	-0.494296	81
	7/6/2011	5.56068	113
	11/22/2011	ND<3.62434 U	37
	5/16/2012	ND<-1.7148 U	37
	11/16/2012	ND<5.19296 U	37

Rank Sum = 977

Rank Mean = 81.4167

LMW-9	11/18/2006	4.59512	95
	6/2/2007	9.75266	169
	11/15/2007	ND<1.60944	37
	5/20/2008	6.1203	130
	11/20/2008	ND<1.60944	37
	11/16/2009	6.10925 J M H	129
	6/30/2010	3.80666 J	85
	11/17/2010	-2.36446 J	75
	7/6/2011	4.70048 J	98
	11/22/2011	4.58497 J	94
	5/16/2012	ND<5.19296 U	37
	11/16/2012	ND<5.19296 U	37

Rank Sum = 1023
Rank Mean = 85.25

LMW-9D	11/18/2006	4.67283	96
	6/2/2007	6.1334	131
	11/15/2007	ND<1.60944	37
	5/20/2008	ND<1.60944	37
	11/20/2008	ND<1.60944	37
	11/16/2009	6.06379 J M H	128
	6/30/2010	4.06044 J	88
	11/17/2010	-2.33304 J	76
	7/6/2011	4.86753 J	103
	11/22/2011	5.79909	117
	5/16/2012	4.44265 J	92
	11/16/2012	ND<5.19296 U	37

Rank Sum = 979
Rank Mean = 81.5833

LMW-9S	11/18/2006	4.69135	97
	6/2/2007	6.90776	149
	11/15/2007	ND<1.60944	37
	5/20/2008	ND<1.60944	37
	11/20/2008	ND<1.60944	37
	11/16/2009	6.64639 J M H	144
	11/16/2009	8.89563 H	167
	11/16/2009	ND<5.19296 U	37
	6/30/2010	4.09434 J	89
	11/17/2010	-1.56065 J	78
	7/6/2011	ND<-3.28341 U	37
	11/22/2011	7.74066 J	161
	5/16/2012	ND<-3.28341 U	37
	11/16/2012	ND<5.19296 U	37

Rank Sum = 1144
Rank Mean = 81.7143

MW-5	11/15/2007	ND<1.60944	37
	5/20/2008	ND<1.60944	37
	11/20/2008	ND<1.60944	37

Rank Sum = 111
Rank Mean = 37

Calculation Results:

Kruskal-Wallis H Statistic = 35.6079
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 38.6114
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
35.6079 > 26.2962 indicating a significant group difference at 5% significance level

38.6114 > 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 63.8333

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	118.833	55	47.0186
LMW-11	37	-26.8333	66.4943
LMW-12	37	-26.8333	66.4943
LMW-13	37	-26.8333	66.4943
LMW-14R	76.4	12.5667	49.3135
LMW-15R	102.643	38.8095	45.3082
LMW-16	66.0833	2.25	47.0186
LMW-3	106.25	42.4167	47.0186
LMW-3S	98.75	34.9167	47.0186
LMW-6	121.083	57.25	47.0186
LMW-7	92.9	29.0667	49.3135
LMW-8	81.4167	17.5833	47.0186
LMW-9	85.25	21.4167	47.0186
LMW-9D	81.5833	17.75	47.0186
LMW-9S	81.7143	17.881	45.3082
MW-5	37	-26.8333	74.3429

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 63.8333

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	118.833	55	55.5361
LMW-11	37	-26.8333	78.54
LMW-12	37	-26.8333	78.54
LMW-13	37	-26.8333	78.54
LMW-14R	76.4	12.5667	58.2468
LMW-15R	102.643	38.8095	53.516
LMW-16	66.0833	2.25	55.5361
LMW-3	106.25	42.4167	55.5361
LMW-3S	98.75	34.9167	55.5361
LMW-6	121.083	57.25	55.5361
LMW-7	92.9	29.0667	58.2468
LMW-8	81.4167	17.5833	55.5361
LMW-9	85.25	21.4167	55.5361
LMW-9D	81.5833	17.75	55.5361
LMW-9S	81.7143	17.881	53.516
MW-5	37	-26.8333	87.8103

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
ND<1.60944	ND<1.60944	0	6	5
7.25134	ND<1.60944	5.64191	7	5
ND<1.60944	ND<1.60944	0	7	5
8.51719	ND<1.60944	6.90776	8	5
6.77992	ND<1.60944	5.17048	9	5
0.336472	ND<1.60944	-1.272979		6
7.43838	ND<1.60944	5.82895	10	6
7.09008	ND<1.60944	5.48064	11	6
8.6125	ND<1.60944	7.00307	12	6
8.63052	ND<1.60944	7.02108	13	6
7.25134	ND<1.60944	5.64191	14	6
ND<1.60944	ND<1.60944	0	14	6
8.51719	ND<1.60944	6.90776	15	6
6.77992	ND<1.60944	5.17048	16	6
0.336472	ND<1.60944	-1.2729716		7
7.43838	ND<1.60944	5.82895	17	7
7.09008	ND<1.60944	5.48064	18	7
8.6125	ND<1.60944	7.00307	19	7
8.63052	ND<1.60944	7.02108	20	7
ND<1.60944	7.25134	-5.6419120		8
8.51719	7.25134	1.26585	21	8
6.77992	7.25134	-0.471423		21 9
0.336472	7.25134	-6.9148721		10
7.43838	7.25134	0.187039		22 10
7.09008	7.25134	-0.161268		22 11
8.6125	7.25134	1.36116	23	11
8.63052	7.25134	1.37918	24	11
8.51719	ND<1.60944	6.90776	25	11
6.77992	ND<1.60944	5.17048	26	11
0.336472	ND<1.60944	-1.2729726		12
7.43838	ND<1.60944	5.82895	27	12
7.09008	ND<1.60944	5.48064	28	12
8.6125	ND<1.60944	7.00307	29	12
8.63052	ND<1.60944	7.02108	30	12

6.77992	8.51719	-1.7372730	13		
0.336472	8.51719	-8.1807230	14		
7.43838	8.51719	-1.0788130	15		
7.09008	8.51719	-1.4271230	16		
8.6125	8.51719	0.0953102	31	16	
8.63052	8.51719	0.113329	32	16	
0.336472	6.77992	-6.4434532	17		
7.43838	6.77992	0.658462	33	17	
7.09008	6.77992	0.310155	34	17	
8.6125	6.77992	1.83258	35	17	
8.63052	6.77992	1.8506	36	17	
7.43838	0.336472	7.10191	37	17	
7.09008	0.336472	6.7536	38	17	
8.6125	0.336472	8.27603	39	17	
8.63052	0.336472	8.29405	40	17	
7.09008	7.43838	-0.348307	40	18	
8.6125	7.43838	1.17412	41	18	
8.63052	7.43838	1.19214	42	18	
8.6125	7.09008	1.52243	43	18	
8.63052	7.09008	1.54045	44	18	
8.63052	8.6125	0.0180185	45	18	

S Statistic = 45 - 18 = 27

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

There are 0 time periods with multiple data

A = 66
B = 0
C = 6
D = 0
E = 6
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 209
Z-Score = 1.79846
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)

|1.79846| <= 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 = 3.04452
Baseline Std Dev = 4.61743
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	7.04752	0	0.866932
11/18/2006	7.04752	0	0.866932
6/2/2007	1.60944	0	-0.310796
6/2/2007	1.60944	0	-0.310796
11/15/2007	1.60944	0	-0.310796
11/15/2007	1.60944	0	-0.310796
5/20/2008	7.25134	0	0.911075
5/20/2008	7.25134	0	0.911075
11/20/2008	1.60944	0	-0.310796
11/20/2008	1.60944	0	-0.310796
11/16/2009	8.51719	0.18522	1.18522
11/16/2009	8.51719	0.18522	1.18522
6/30/2010	6.77992	0	0.808978
6/30/2010	6.77992	0	0.808978
11/17/2010	0.336472	0	-0.586483
11/17/2010	0.336472	0	-0.586483
7/6/2011	7.43838	0	0.951582
7/6/2011	7.43838	0	0.951582
11/22/2011	7.09008	0	0.876149
11/22/2011	7.09008	0	0.876149
5/16/2012	8.6125	0.205861	1.20586
5/16/2012	8.6125	0.205861	1.20586
11/16/2012	8.63052	0.415625	1.20976
11/16/2012	8.63052	0.415625	1.20976

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
ND<1.60944	6.92756	-5.318125	7	
6.00635	6.92756	-0.921205	5	8
ND<1.60944	6.92756	-5.318125	9	
7.78322	6.92756	0.855666	6	9
5.9135	6.92756	-1.014056	10	
-0.653926	6.92756	-7.581486	11	
6.36303	6.92756	-0.564536	12	
6.23441	6.92756	-0.693147	6	13
7.17012	6.92756	0.242562	7	13
7.17012	6.92756	0.242562	8	13
6.00635	ND<1.60944	4.39692	9	13
ND<1.60944	ND<1.60944	0	9	13
7.78322	ND<1.60944	6.17379	10	13
5.9135	ND<1.60944	4.30407	11	13
-0.653926	ND<1.60944	-2.263361	11	14
6.36303	ND<1.60944	4.75359	12	14
6.23441	ND<1.60944	4.62497	13	14
7.17012	ND<1.60944	5.56068	14	14
7.17012	ND<1.60944	5.56068	15	14
ND<1.60944	6.00635	-4.396921	15	15
7.78322	6.00635	1.77687	16	15
5.9135	6.00635	-0.092850	2 16	16
-0.653926	6.00635	-6.660281	6 17	
6.36303	6.00635	0.356675	17	17
6.23441	6.00635	0.228058	18	17
7.17012	6.00635	1.16377	19	17
7.17012	6.00635	1.16377	20	17
7.78322	ND<1.60944	6.17379	21	17
5.9135	ND<1.60944	4.30407	22	17
-0.653926	ND<1.60944	-2.263362	2	18
6.36303	ND<1.60944	4.75359	23	18
6.23441	ND<1.60944	4.62497	24	18
7.17012	ND<1.60944	5.56068	25	18
7.17012	ND<1.60944	5.56068	26	18

5.9135	7.78322	-1.8697226	19		
-0.653926	7.78322	-8.4371526	20		
6.36303	7.78322	-1.4202 26	21		
6.23441	7.78322	-1.5488126	22		
7.17012	7.78322	-0.613104	26	23	
7.17012	7.78322	-0.613104	26	24	
-0.653926	5.9135	-6.5674326	25		
6.36303	5.9135	0.449525	27	25	
6.23441	5.9135	0.320908	28	25	
7.17012	5.9135	1.25662 29	25		
7.17012	5.9135	1.25662 30	25		
6.36303	-0.653926	7.01695 31	25		
6.23441	-0.653926	6.88834 32	25		
7.17012	-0.653926	7.82405 33	25		
7.17012	-0.653926	7.82405 34	25		
6.23441	6.36303	-0.128617	34	26	
7.17012	6.36303	0.807091	35	26	
7.17012	6.36303	0.807091	36	26	
7.17012	6.23441	0.935709	37	26	
7.17012	6.23441	0.935709	38	26	
7.17012	7.17012	0	38	26	

S Statistic = 38 - 26 = 12

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

There are 0 time periods with multiple data

A = 36
B = 0
C = 0
D = 0
E = 4
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 210.667
Z-Score = 0.75787

Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|0.75787| <= 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 = 3.04452
Baseline Std Dev = 4.61743
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	6.31173	0	0.707583
11/18/2006	6.31173	0	0.707583
6/2/2007	6.92756	0	0.840952
6/2/2007	6.92756	0	0.840952
11/15/2007	1.60944	0	-0.310796
11/15/2007	1.60944	0	-0.310796
5/20/2008	6.00635	0	0.641446
5/20/2008	6.00635	0	0.641446
11/20/2008	1.60944	0	-0.310796
11/20/2008	1.60944	0	-0.310796
11/16/2009	7.78322	0.026264	1.02626
11/16/2009	7.78322	0.026264	1.02626
6/30/2010	5.9135	0	0.621338
6/30/2010	5.9135	0	0.621338
11/17/2010	-0.653926	0	-0.800974
11/17/2010	-0.653926	0	-0.800974
7/6/2011	6.36303	0	0.718691
7/6/2011	6.36303	0	0.718691
11/22/2011	6.23441	0	0.690837
11/22/2011	6.23441	0	0.690837
5/16/2012	7.17012	0	0.893484
5/16/2012	7.17012	0	0.893484
11/16/2012	7.17012	0	0.893484
11/16/2012	7.17012	0	0.893484

Concentrations (ppb)

Parameter: Selenium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 237
Percent Non-Detects: 83.4507%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	23 (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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	16 (80%)	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

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		
LMW-14R	11	11 (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		
LMW-15R	15	12 (80%)	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
LMW-16	13	9 (69.2308%)	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
LMW-3	25	25 (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
LMW-3S	13	13 (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
LMW-6	23	8 (34.7826%)	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	
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-8	23	12 (52.1739%)	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
LMW-9	23	22 (95.6522%)	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
LMW-9D	13	11 (84.6154%)	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
LMW-9S	15	10 (66.6667%)	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
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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.105	-2.74777	7.55021	-0.288515
2	0.105	-2.45727	13.5884	-0.546529
3	0.105	-2.32634	19.0003	-0.790795
4	0.105	-2.19728	23.8283	-1.02151
5	0.105	-2.12007	28.323	-1.24412
6	0.105	-2.03352	32.4582	-1.45764
7	0.105	-1.97737	36.3682	-1.66526
8	0.105	-1.91103	40.0203	-1.86592
9	0.105	-1.86629	43.5033	-2.06188
10	0.105	-1.81191	46.7863	-2.25213
11	0.105	-1.77438	49.9348	-2.43844
12	0.105	-1.72793	52.9205	-2.61987
13	0.105	-1.6954	55.7949	-2.79789
14	0.105	-1.65463	58.5327	-2.97163
15	0.105	-1.62576	61.1758	-3.14233
16	0.105	-1.58927	63.7015	-3.3092
17	0.105	-1.56322	66.1452	-3.47334
18	0.105	-1.53007	68.4863	-3.634
19	0.105	-1.50626	70.7551	-3.79216
20	0.105	-1.47579	72.9331	-3.94711
21	0.105	-1.4538	75.0466	-4.09976
22	0.105	-1.42554	77.0788	-4.24945
23	0.105	-1.40507	79.053	-4.39698
24	0.105	-1.37866	80.9537	-4.54174
25	0.105	-1.35946	82.8019	-4.68448
26	0.105	-1.33462	84.5831	-4.82462
27	0.105	-1.31652	86.3163	-4.96285
28	0.105	-1.29303	87.9883	-5.09862
29	0.105	-1.27588	89.6161	-5.23259
30	0.105	-1.25357	91.1875	-5.36421
31	0.105	-1.23724	92.7183	-5.49412
32	0.105	-1.21596	94.1969	-5.6218
33	0.105	-1.20036	95.6377	-5.74783
34	0.105	-1.18	97.0301	-5.87173
35	0.105	-1.16505	98.3875	-5.99406
36	0.105	-1.1455	99.6996	-6.11434
37	0.105	-1.13113	100.979	-6.23311
38	0.105	-1.11232	102.216	-6.34991
39	0.105	-1.09847	103.423	-6.46524
40	0.105	-1.08032	104.59	-6.57868
41	0.105	-1.06694	105.728	-6.69071
42	0.105	-1.04939	106.83	-6.80089
43	0.105	-1.03643	107.904	-6.90972
44	0.105	-1.01943	108.943	-7.01676
45	0.105	-1.00687	109.957	-7.12248
46	0.105	-0.990356	110.938	-7.22647
47	0.105	-0.97815	111.894	-7.32917
48	0.105	-0.9621	112.82	-7.43019
49	0.105	-0.950222	113.723	-7.52997
50	0.105	-0.93459	114.596	-7.6281
51	0.105	-0.923014	115.448	-7.72501

52	0.105	-0.907769	116.272	-7.82033
53	0.105	-0.896473	117.076	-7.91446
54	0.105	-0.881587	117.853	-8.00703
55	0.105	-0.87055	118.611	-8.09843
56	0.105	-0.855996	119.344	-8.18831
57	0.105	-0.841621	120.052	-8.27668
58	0.105	-0.830953	120.743	-8.36393
59	0.105	-0.816874	121.41	-8.4497
60	0.105	-0.806422	122.06	-8.53438
61	0.105	-0.792618	122.689	-8.6176
62	0.105	-0.782366	123.301	-8.69975
63	0.105	-0.768821	123.892	-8.78048
64	0.105	-0.758753	124.467	-8.86015
65	0.105	-0.745449	125.023	-8.93842
66	0.105	-0.735557	125.564	-9.01565
67	0.105	-0.722479	126.086	-9.09151
68	0.105	-0.712751	126.594	-9.16635
69	0.105	-0.699883	127.084	-9.23984
70	0.105	-0.690309	127.561	-9.31232
71	0.105	-0.677639	128.02	-9.38347
72	0.105	-0.668209	128.466	-9.45364
73	0.21	-0.655726	128.896	-9.59134
74	0.22	-0.646431	129.314	-9.73355
75	0.24	-0.634124	129.716	-9.88574
76	0.24	-0.624956	130.107	-10.0357
77	0.25	-0.612813	130.482	-10.1889
78	0.25	-0.603765	130.847	-10.3399
79	0.26	-0.591776	131.197	-10.4937
80	0.28	-0.582841	131.537	-10.6569
81	0.3	-0.570999	131.863	-10.8282
82	0.31	-0.56217	132.179	-11.0025
83	0.32	-0.550465	132.482	-11.1787
84	0.33	-0.541736	132.775	-11.3574
85	0.38	-0.530162	133.056	-11.5589
86	0.49	-0.521527	133.328	-11.8144
87	0.59	-0.510074	133.589	-12.1154
88	0.64	-0.501527	133.84	-12.4364
89	0.66	-0.490189	134.08	-12.7599
90	0.86	-0.481728	134.312	-13.1742
91	1	-0.470498	134.534	-13.6447
92	1	-0.462114	134.747	-14.1068
93	1	-0.450985	134.951	-14.5578
94	1	-0.442676	135.147	-15.0004
95	1	-0.431644	135.333	-15.4321
96	1	-0.423405	135.512	-15.8555
97	1	-0.412463	135.682	-16.268
98	1	-0.40429	135.846	-16.6722
99	1	-0.393433	136.001	-17.0657
100	1	-0.385321	136.149	-17.451
101	1	-0.374544	136.289	-17.8255
102	1	-0.36649	136.424	-18.192
103	1	-0.355788	136.55	-18.5478
104	1	-0.347787	136.671	-18.8956
105	1	-0.337155	136.785	-19.2328
106	1	-0.329206	136.893	-19.562
107	1	-0.318639	136.995	-19.8806
108	1	-0.310738	137.091	-20.1913
109	1	-0.300232	137.182	-20.4916
110	1	-0.292375	137.267	-20.784
111	1	-0.281926	137.346	-21.0659
112	1	-0.27411	137.422	-21.34
113	1	-0.263715	137.491	-21.6037

114	1	-0.253347	137.555	-21.8571
115	1	-0.24559	137.616	-22.1026
116	1	-0.235269	137.671	-22.3379
117	1	-0.227545	137.723	-22.5655
118	1	-0.217267	137.77	-22.7827
119	1	-0.209575	137.814	-22.9923
120	1	-0.199336	137.854	-23.1916
121	1	-0.191671	137.89	-23.3833
122	1	-0.181468	137.923	-23.5648
123	1	-0.173829	137.954	-23.7386
124	1	-0.163659	137.98	-23.9023
125	1	-0.156042	138.005	-24.0583
126	1	-0.1459	138.026	-24.2042
127	1	-0.138305	138.045	-24.3425
128	1	-0.128189	138.062	-24.4707
129	1	-0.12061	138.076	-24.5913
130	1	-0.110516	138.088	-24.7018
131	1	-0.102953	138.099	-24.8048
132	1	-0.0928787	138.108	-24.8977
133	1	-0.0853288	138.115	-24.983
134	1	-0.0752698	138.12	-25.0583
135	1	-0.0677301	138.125	-25.126
136	1	-0.0576847	138.128	-25.1837
137	1	-0.0501541	138.131	-25.2338
138	1	-0.0401167	138.132	-25.2739
139	1	-0.0325917	138.134	-25.3065
140	1	-0.0225612	138.134	-25.3291
141	1	-0.0150408	138.134	-25.3441
142	1	-0.00501359	138.134	-25.3491
143	1	0.00501359	138.134	-25.3441
144	1	0.0150408	138.135	-25.3291
145	1	0.0225612	138.135	-25.3065
146	1	0.0325917	138.136	-25.2739
147	1	0.0401167	138.138	-25.2338
148	1	0.0501541	138.14	-25.1837
149	1	0.0576847	138.144	-25.126
150	1	0.0677301	138.148	-25.0583
151	1	0.0752698	138.154	-24.983
152	1	0.0853288	138.161	-24.8977
153	1	0.0928787	138.17	-24.8048
154	1	0.102953	138.18	-24.7018
155	1	0.110516	138.193	-24.5913
156	1	0.12061	138.207	-24.4707
157	1	0.128189	138.224	-24.3425
158	1	0.138305	138.243	-24.2042
159	1	0.1459	138.264	-24.0583
160	1	0.156042	138.288	-23.9023
161	1	0.163659	138.315	-23.7386
162	1	0.173829	138.345	-23.5648
163	1	0.181468	138.378	-23.3833
164	1	0.191671	138.415	-23.1916
165	1	0.199336	138.455	-22.9923
166	1	0.209575	138.499	-22.7827
167	1	0.217267	138.546	-22.5655
168	1	0.227545	138.598	-22.3379
169	1	0.235269	138.653	-22.1026
170	1	0.24559	138.713	-21.8571
171	1	0.253347	138.777	-21.6037
172	1	0.263715	138.847	-21.34
173	1	0.27411	138.922	-21.0659
174	1	0.281926	139.002	-20.784
175	1	0.292375	139.087	-20.4916

176	1	0.300232	139.177	-20.1913
177	1	0.310738	139.274	-19.8806
178	1	0.318639	139.375	-19.562
179	1	0.329206	139.484	-19.2328
180	1	0.337155	139.597	-18.8956
181	1	0.347787	139.718	-18.5478
182	1	0.355788	139.845	-18.192
183	1	0.36649	139.979	-17.8255
184	1	0.374544	140.12	-17.451
185	1	0.385321	140.268	-17.0657
186	1	0.393433	140.423	-16.6722
187	1	0.40429	140.586	-16.268
188	1	0.412463	140.756	-15.8555
189	1	0.423405	140.936	-15.4321
190	1	0.431644	141.122	-15.0004
191	1	0.442676	141.318	-14.5578
192	1	0.450985	141.521	-14.1068
193	1	0.462114	141.735	-13.6447
194	1	0.470498	141.956	-13.1742
195	1	0.481728	142.188	-12.6924
196	1	0.490189	142.429	-12.2023
197	1	0.501527	142.68	-11.7007
198	1	0.510074	142.94	-11.1907
199	1	0.521527	143.212	-10.6691
200	1	0.530162	143.493	-10.139
201	1	0.541736	143.787	-9.59723
202	1	0.550465	144.09	-9.04676
203	1	0.56217	144.406	-8.48459
204	1	0.570999	144.732	-7.91359
205	1	0.582841	145.072	-7.33075
206	1	0.591776	145.422	-6.73898
207	1	0.603765	145.786	-6.13521
208	1	0.612813	146.162	-5.5224
209	1	0.624956	146.552	-4.89744
210	1	0.634124	146.955	-4.26332
211	1	0.646431	147.372	-3.61689
212	1	0.655726	147.802	-2.96116
213	1	0.668209	148.249	-2.29295
214	1	0.677639	148.708	-1.61531
215	1	0.690309	149.185	-0.925005
216	1	0.699883	149.674	-0.225121
217	1	0.712751	150.182	0.487629
218	1	0.722479	150.704	1.21011
219	1	0.735557	151.245	1.94567
220	1	0.745449	151.801	2.69111
221	1	0.758753	152.377	3.44987
222	1	0.768821	152.968	4.21869
223	1	0.782366	153.58	5.00105
224	1	0.792618	154.208	5.79367
225	1	0.806422	154.859	6.60009
226	1	0.816874	155.526	7.41697
227	1	0.830953	156.216	8.24792
228	1	0.841621	156.925	9.08954
229	1	0.855996	157.657	9.94554
230	1	0.87055	158.415	10.8161
231	1	0.881587	159.193	11.6977
232	1	0.896473	159.996	12.5941
233	1	0.907769	160.82	13.5019
234	1	0.923014	161.672	14.4249
235	1	0.93459	162.546	15.3595
236	1	0.950222	163.449	16.3097
237	1	0.9621	164.374	17.2718

238	1	0.97815	165.331	18.25	
239	1	0.990356		166.312	19.2403
240	1	1.00687	167.326	20.2472	
241	1	1.01943	168.365	21.2666	
242	1	1.03643	169.439	22.3031	
243	1	1.04939	170.54	23.3525	
244	1	1.06694	171.679	24.4194	
245	1	1.08032	172.846	25.4997	
246	1	1.09847	174.052	26.5982	
247	1	1.11232	175.29	27.7105	
248	1	1.13113	176.569	28.8416	
249	1	1.1455	177.881	29.9871	
250	1	1.16505	179.239	31.1522	
251	1	1.18	180.631	32.3322	
252	1	1.20036	182.072	33.5326	
253	1	1.21596	183.55	34.7485	
254	1	1.23724	185.081	35.9857	
255	1	1.25357	186.653	37.2393	
256	1	1.27588	188.28	38.5152	
257	1	1.29303	189.952	39.8082	
258	1	1.31652	191.686	41.1247	
259	1	1.33462	193.467	42.4594	
260	1	1.35946	195.315	43.8188	
261	2	1.37866	197.216	46.5761	
262	2	1.40507	199.19	49.3863	
263	2	1.42554	201.222	52.2374	
264	2	1.4538	203.336	55.145	
265	2	1.47579	205.514	58.0966	
266	2	1.50626	207.782	61.1091	
267	2.6	1.53007	210.123	65.0873	
268	2.8	1.56322	212.567	69.4643	
269	3	1.58927	215.093	74.2321	
270	3	1.62576	217.736	79.1094	
271	3	1.65463	220.474	84.0733	
272	3.1	1.6954	223.348	89.329	
273	3.2	1.72793	226.334	94.8584	
274	3.2	1.77438	229.482	100.536	
275	3.2	1.81191	232.765	106.335	
276	3.3	1.86629	236.248	112.493	
277	4	1.91103	239.9	120.137	
278	4	1.97737	243.81	128.047	
279	4	2.03352	247.946	136.181	
280	4	2.12007	252.44	144.661	
281	4.3	2.19728	257.268	154.11	
282	5	2.32634	262.68	165.741	
283	5.6	2.45727	268.718	179.502	
284	6	2.74777	276.269	195.989	

Data Set Standard Deviation = 0.883346
Numerator = 38411.5
Denominator = 61007
W Statistic = 0.629625 = 38411.5 / 61007

5% Critical value of 0.976 exceeds 0.629625
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.629625
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 = 0.79611
0.79611 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.105	0.00350877		-2.74777	48.3625	348.683
2	0.105	0.00701754		-2.45727	48.3625	334.497
3	0.105	0.0105263		-2.32634	48.3625	328.103
4	0.105	0.0140351		-2.19728	48.3625	321.801
5	0.105	0.0175439		-2.12007	48.3625	318.03
6	0.105	0.0210526		-2.03352	48.3625	313.804
7	0.105	0.0245614		-1.97737	48.3625	311.062
8	0.105	0.0280702		-1.91103	48.3625	307.822
9	0.105	0.0315789		-1.86629	48.3625	305.637
10	0.105	0.0350877		-1.81191	48.3625	302.982
11	0.105	0.0385965		-1.77438	48.3625	301.149
12	0.105	0.0421053		-1.72793	48.3625	298.881
13	0.105	0.045614		-1.6954	48.3625	297.292
14	0.105	0.0491228		-1.65463	48.3625	295.301
15	0.105	0.0526316		-1.62576	48.3625	293.891
16	0.105	0.0561404		-1.58927	48.3625	292.109
17	0.105	0.0596491		-1.56322	48.3625	290.837
18	0.105	0.0631579		-1.53007	48.3625	289.218
19	0.105	0.0666667		-1.50626	48.3625	288.056
20	0.105	0.0701754		-1.47579	48.3625	286.568
21	0.105	0.0736842		-1.4538	48.3625	285.494
22	0.105	0.077193		-1.42554	48.3625	284.114
23	0.105	0.0807018		-1.40507	48.3625	283.114
24	0.105	0.0842105		-1.37866	48.3625	281.824
25	0.105	0.0877193		-1.35946	48.3625	280.887
26	0.105	0.0912281		-1.33462	48.3625	279.674
27	0.105	0.0947368		-1.31652	48.3625	278.79
28	0.105	0.0982456		-1.29303	48.3625	277.643
29	0.105	0.101754		-1.27588	48.3625	276.805
30	0.105	0.105263		-1.25357	48.3625	275.716
31	0.105	0.108772		-1.23724	48.3625	274.918
32	0.105	0.112281		-1.21596	48.3625	273.879
33	0.105	0.115789		-1.20036	48.3625	273.118
34	0.105	0.119298		-1.18	48.3625	272.123
35	0.105	0.122807		-1.16505	48.3625	271.393
36	0.105	0.126316		-1.1455	48.3625	270.439
37	0.105	0.129825		-1.13113	48.3625	269.737
38	0.105	0.133333		-1.11232	48.3625	268.818
39	0.105	0.136842		-1.09847	48.3625	268.142
40	0.105	0.140351		-1.08032	48.3625	267.256
41	0.105	0.14386		-1.06694	48.3625	266.602
42	0.105	0.147368		-1.04939	48.3625	265.745
43	0.105	0.150877		-1.03643	48.3625	265.112
44	0.105	0.154386		-1.01943	48.3625	264.282
45	0.105	0.157895		-1.00687	48.3625	263.669
46	0.105	0.161404		-0.990356	48.3625	262.862
47	0.105	0.164912		-0.97815	48.3625	262.266
48	0.105	0.168421		-0.9621	48.3625	261.483

49	0.105	0.17193	-0.950222	48.3625	260.903
50	0.105	0.175439	-0.934594	48.3625	260.139
51	0.105	0.178947	-0.923014	48.3625	259.574
52	0.105	0.182456	-0.907769	48.3625	258.829
53	0.105	0.185965	-0.896473	48.3625	258.278
54	0.105	0.189474	-0.881587	48.3625	257.551
55	0.105	0.192982	-0.870554	48.3625	257.012
56	0.105	0.196491	-0.855996	48.3625	256.301
57	0.105	0.2	-0.841621	48.3625	255.599
58	0.105	0.203509	-0.830953	48.3625	255.078
59	0.105	0.207018	-0.816874	48.3625	254.391
60	0.105	0.210526	-0.806422	48.3625	253.88
61	0.105	0.214035	-0.792618	48.3625	253.206
62	0.105	0.217544	-0.782366	48.3625	252.706
63	0.105	0.221053	-0.768821	48.3625	252.044
64	0.105	0.224561	-0.758753	48.3625	251.552
65	0.105	0.22807	-0.745449	48.3625	250.903
66	0.105	0.231579	-0.735557	48.3625	250.42
67	0.105	0.235088	-0.722479	48.3625	249.781
68	0.105	0.238596	-0.712751	48.3625	249.306
69	0.105	0.242105	-0.699883	48.3625	248.678
70	0.105	0.245614	-0.690309	48.3625	248.21
71	0.105	0.249123	-0.677639	48.3625	247.591
72	0.105	0.252632	-0.668209	48.3625	247.131
73	0.21	0.25614	-0.655726	57.725	246.521
74	0.22	0.259649	-0.646431	58.6167	246.067
75	0.24	0.263158	-0.634124	60.4	245.466
76	0.24	0.266667	-0.624956	60.4	245.019
77	0.25	0.270175	-0.612813	61.2917	244.426
78	0.25	0.273684	-0.603765	61.2917	243.984
79	0.26	0.277193	-0.591776	62.1833	243.398
80	0.28	0.280702	-0.582841	63.9667	242.962
81	0.3	0.284211	-0.570999	65.75	242.384
82	0.31	0.287719	-0.562176	66.6417	241.953
83	0.32	0.291228	-0.550465	67.5333	241.381
84	0.33	0.294737	-0.541736	68.425	240.955
85	0.38	0.298246	-0.530162	72.8833	240.39
86	0.49	0.301754	-0.521527	82.6917	239.968
87	0.59	0.305263	-0.510074	91.6083	239.409
88	0.64	0.308772	-0.501527	96.0667	238.991
89	0.66	0.312281	-0.490189	97.85	238.438
90	0.86	0.315789	-0.481728	115.683	238.024
91	1	0.319298	-0.470498	128.167	237.476
92	1	0.322807	-0.462114	128.167	237.067
93	1	0.326316	-0.450985	128.167	236.523
94	1	0.329825	-0.442676	128.167	236.117
95	1	0.333333	-0.431644	128.167	235.579
96	1	0.336842	-0.423405	128.167	235.176
97	1	0.340351	-0.412463	128.167	234.642
98	1	0.34386	-0.40429	128.167	234.243
99	1	0.347368	-0.393433	128.167	233.713
100	1	0.350877	-0.385321	128.167	233.317
101	1	0.354386	-0.374544	128.167	232.79
102	1	0.357895	-0.36649	128.167	232.397
103	1	0.361404	-0.355788	128.167	231.874
104	1	0.364912	-0.347787	128.167	231.484
105	1	0.368421	-0.337155	128.167	230.964
106	1	0.37193	-0.329206	128.167	230.576
107	1	0.375439	-0.318639	128.167	230.06
108	1	0.378947	-0.310738	128.167	229.674
109	1	0.382456	-0.300232	128.167	229.161
110	1	0.385965	-0.292375	128.167	228.778

111	1	0.389474	-0.281926	128.167	228.267
112	1	0.392982	-0.27411	128.167	227.886
113	1	0.396491	-0.263715	128.167	227.378
114	1	0.4	-0.253347	128.167	226.872
115	1	0.403509	-0.24559	128.167	226.493
116	1	0.407018	-0.235269	128.167	225.989
117	1	0.410526	-0.227545	128.167	225.612
118	1	0.414035	-0.217267	128.167	225.11
119	1	0.417544	-0.209575	128.167	224.734
120	1	0.421053	-0.199336	128.167	224.234
121	1	0.424561	-0.191671	128.167	223.86
122	1	0.42807	-0.181468	128.167	223.362
123	1	0.431579	-0.173829	128.167	222.989
124	1	0.435088	-0.163659	128.167	222.492
125	1	0.438596	-0.156042	128.167	222.12
126	1	0.442105	-0.1459	128.167	221.625
127	1	0.445614	-0.138305	128.167	221.254
128	1	0.449123	-0.128189	128.167	220.76
129	1	0.452632	-0.12061	128.167	220.39
130	1	0.45614	-0.110516	128.167	219.897
131	1	0.459649	-0.102953	128.167	219.528
132	1	0.463158	-0.0928787	128.167	219.036
133	1	0.466667	-0.0853288	128.167	218.667
134	1	0.470175	-0.0752698	128.167	218.176
135	1	0.473684	-0.0677301	128.167	217.807
136	1	0.477193	-0.0576847	128.167	217.317
137	1	0.480702	-0.0501541	128.167	216.949
138	1	0.484211	-0.0401167	128.167	216.459
139	1	0.487719	-0.0325917	128.167	216.092
140	1	0.491228	-0.0225612	128.167	215.602
141	1	0.494737	-0.0150408	128.167	215.234
142	1	0.498246	-0.00501359	128.167	214.745
143	1	0.501754	0.00501359	128.167	214.255
144	1	0.505263	0.0150408	128.167	213.766
145	1	0.508772	0.0225612	128.167	213.398
146	1	0.512281	0.0325917	128.167	212.908
147	1	0.515789	0.0401167	128.167	212.541
148	1	0.519298	0.0501541	128.167	212.051
149	1	0.522807	0.0576847	128.167	211.683
150	1	0.526316	0.0677301	128.167	211.193
151	1	0.529825	0.0752698	128.167	210.824
152	1	0.533333	0.0853288	128.167	210.333
153	1	0.536842	0.0928787	128.167	209.964
154	1	0.540351	0.102953	128.167	209.472
155	1	0.54386	0.110516	128.167	209.103
156	1	0.547368	0.12061	128.167	208.61
157	1	0.550877	0.128189	128.167	208.24
158	1	0.554386	0.138305	128.167	207.746
159	1	0.557895	0.1459	128.167	207.375
160	1	0.561404	0.156042	128.167	206.88
161	1	0.564912	0.163659	128.167	206.508
162	1	0.568421	0.173829	128.167	206.011
163	1	0.57193	0.181468	128.167	205.638
164	1	0.575439	0.191671	128.167	205.14
165	1	0.578947	0.199336	128.167	204.766
166	1	0.582456	0.209575	128.167	204.266
167	1	0.585965	0.217267	128.167	203.89
168	1	0.589474	0.227545	128.167	203.388
169	1	0.592982	0.235269	128.167	203.011
170	1	0.596491	0.24559	128.167	202.507
171	1	0.6	0.253347	128.167	202.128
172	1	0.603509	0.263715	128.167	201.622

173	1	0.607018	0.27411	128.167	201.114
174	1	0.610526	0.281926	128.167	200.733
175	1	0.614035	0.292375	128.167	200.222
176	1	0.617544	0.300232	128.167	199.839
177	1	0.621053	0.310738	128.167	199.326
178	1	0.624561	0.318639	128.167	198.94
179	1	0.62807	0.329206	128.167	198.424
180	1	0.631579	0.337155	128.167	198.036
181	1	0.635088	0.347787	128.167	197.516
182	1	0.638596	0.355788	128.167	197.126
183	1	0.642105	0.36649	128.167	196.603
184	1	0.645614	0.374544	128.167	196.21
185	1	0.649123	0.385321	128.167	195.683
186	1	0.652632	0.393433	128.167	195.287
187	1	0.65614	0.40429	128.167	194.757
188	1	0.659649	0.412463	128.167	194.358
189	1	0.663158	0.423405	128.167	193.824
190	1	0.666667	0.431644	128.167	193.421
191	1	0.670175	0.442676	128.167	192.883
192	1	0.673684	0.450985	128.167	192.477
193	1	0.677193	0.462114	128.167	191.933
194	1	0.680702	0.470498	128.167	191.524
195	1	0.684211	0.481728	128.167	190.976
196	1	0.687719	0.490189	128.167	190.562
197	1	0.691228	0.501527	128.167	190.009
198	1	0.694737	0.510074	128.167	189.591
199	1	0.698246	0.521527	128.167	189.032
200	1	0.701754	0.530162	128.167	188.61
201	1	0.705263	0.541736	128.167	188.045
202	1	0.708772	0.550465	128.167	187.619
203	1	0.712281	0.56217	128.167	187.047
204	1	0.715789	0.570999	128.167	186.616
205	1	0.719298	0.582841	128.167	186.038
206	1	0.722807	0.591776	128.167	185.602
207	1	0.726316	0.603765	128.167	185.016
208	1	0.729825	0.612813	128.167	184.574
209	1	0.733333	0.624956	128.167	183.981
210	1	0.736842	0.634124	128.167	183.534
211	1	0.740351	0.646431	128.167	182.933
212	1	0.74386	0.655726	128.167	182.479
213	1	0.747368	0.668209	128.167	181.869
214	1	0.750877	0.677639	128.167	181.409
215	1	0.754386	0.690309	128.167	180.79
216	1	0.757895	0.699883	128.167	180.322
217	1	0.761404	0.712751	128.167	179.694
218	1	0.764912	0.722479	128.167	179.219
219	1	0.768421	0.735557	128.167	178.58
220	1	0.77193	0.745449	128.167	178.097
221	1	0.775439	0.758753	128.167	177.448
222	1	0.778947	0.768821	128.167	176.956
223	1	0.782456	0.782366	128.167	176.294
224	1	0.785965	0.792618	128.167	175.794
225	1	0.789474	0.806422	128.167	175.12
226	1	0.792982	0.816874	128.167	174.609
227	1	0.796491	0.830953	128.167	173.922
228	1	0.8	0.841621	128.167	173.401
229	1	0.803509	0.855996	128.167	172.699
230	1	0.807018	0.87055	128.167	171.988
231	1	0.810526	0.881587	128.167	171.449
232	1	0.814035	0.896473	128.167	170.722
233	1	0.817544	0.907769	128.167	170.171
234	1	0.821053	0.923014	128.167	169.426

235	1	0.824561	0.93459	128.167	168.861	
236	1	0.82807	0.950222	128.167	168.097	
237	1	0.831579	0.9621	128.167	167.517	
238	1	0.835088	0.97815	128.167	166.734	
239	1	0.838596	0.990356	128.167	166.138	
240	1	0.842105	1.00687	128.167	165.331	
241	1	0.845614	1.01943	128.167	164.718	
242	1	0.849123	1.03643	128.167	163.888	
243	1	0.852632	1.04939	128.167	163.255	
244	1	0.85614	1.06694	128.167	162.398	
245	1	0.859649	1.08032	128.167	161.744	
246	1	0.863158	1.09847	128.167	160.858	
247	1	0.866667	1.11232	128.167	160.182	
248	1	0.870175	1.13113	128.167	159.263	
249	1	0.873684	1.1455	128.167	158.561	
250	1	0.877193	1.16505	128.167	157.607	
251	1	0.880702	1.18	128.167	156.877	
252	1	0.884211	1.20036	128.167	155.882	
253	1	0.887719	1.21596	128.167	155.121	
254	1	0.891228	1.23724	128.167	154.082	
255	1	0.894737	1.25357	128.167	153.284	
256	1	0.898246	1.27588	128.167	152.195	
257	1	0.901754	1.29303	128.167	151.357	
258	1	0.905263	1.31652	128.167	150.21	
259	1	0.908772	1.33462	128.167	149.326	
260	1	0.912281	1.35946	128.167	148.113	
261	2	0.915789	1.37866	217.333	147.176	
262	2	0.919298	1.40507	217.333	145.886	
263	2	0.922807	1.42554	217.333	144.886	
264	2	0.926316	1.4538	217.333	143.506	
265	2	0.929825	1.47579	217.333	142.432	
266	2	0.933333	1.50626	217.333	140.944	
267	2.6	0.936842	1.53007	270.833	139.782	
268	2.8	0.940351	1.56322	288.667	138.163	
269	3	0.94386	1.58927	306.5	136.891	
270	3	0.947368	1.62576	306.5	135.109	
271	3	0.950877	1.65463	306.5	133.699	
272	3.1	0.954386	1.6954	315.417	131.708	
273	3.2	0.957895	1.72793	324.333	130.119	
274	3.2	0.961404	1.77438	324.333	127.851	
275	3.2	0.964912	1.81191	324.333	126.018	
276	3.3	0.968421	1.86629	333.25	123.363	
277	4	0.97193	1.91103	395.667	121.178	
278	4	0.975439	1.97737	395.667	117.938	
279	4	0.978947	2.03352	395.667	115.196	
280	4	0.982456	2.12007	395.667	110.97	
281	4.3	0.985965	2.19728	422.417	107.199	
282	5	0.989474	2.32634	484.833	100.897	
283	5.6	0.992982	2.45727	538.333	94.5032	
284	6	0.996491	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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.25379	-2.74777	7.55021	6.1929
2	-2.25379	-2.45727	13.5884	11.7311
3	-2.25379	-2.32634	19.0003	16.9742
4	-2.25379	-2.19728	23.8283	21.9264
5	-2.25379	-2.12007	28.323	26.7046
6	-2.25379	-2.03352	32.4582	31.2878
7	-2.25379	-1.97737	36.3682	35.7443
8	-2.25379	-1.91103	40.0203	40.0514
9	-2.25379	-1.86629	43.5033	44.2576
10	-2.25379	-1.81191	46.7863	48.3413
11	-2.25379	-1.77438	49.9348	52.3404
12	-2.25379	-1.72793	52.9205	56.2348
13	-2.25379	-1.6954	55.7949	60.0559
14	-2.25379	-1.65463	58.5327	63.7851
15	-2.25379	-1.62576	61.1758	67.4492
16	-2.25379	-1.58927	63.7015	71.0311
17	-2.25379	-1.56322	66.1452	74.5543
18	-2.25379	-1.53007	68.4863	78.0027
19	-2.25379	-1.50626	70.7551	81.3975
20	-2.25379	-1.47579	72.9331	84.7237
21	-2.25379	-1.4538	75.0466	88.0003
22	-2.25379	-1.42554	77.0788	91.2131
23	-2.25379	-1.40507	79.053	94.3799
24	-2.25379	-1.37866	80.9537	97.4871
25	-2.25379	-1.35946	82.8019	100.551
26	-2.25379	-1.33462	84.5831	103.559
27	-2.25379	-1.31652	86.3163	106.526
28	-2.25379	-1.29303	87.9883	109.44
29	-2.25379	-1.27588	89.6161	112.316
30	-2.25379	-1.25357	91.1875	115.141
31	-2.25379	-1.23724	92.7183	117.93
32	-2.25379	-1.21596	94.1969	120.67
33	-2.25379	-1.20036	95.6377	123.376
34	-2.25379	-1.18	97.0301	126.035
35	-2.25379	-1.16505	98.3875	128.661
36	-2.25379	-1.1455	99.6996	131.243
37	-2.25379	-1.13113	100.979	133.792
38	-2.25379	-1.11232	102.216	136.299
39	-2.25379	-1.09847	103.423	138.775
40	-2.25379	-1.08032	104.59	141.209
41	-2.25379	-1.06694	105.728	143.614
42	-2.25379	-1.04939	106.83	145.979
43	-2.25379	-1.03643	107.904	148.315
44	-2.25379	-1.01943	108.943	150.613
45	-2.25379	-1.00687	109.957	152.882
46	-2.25379	-0.990356	110.938	155.114
47	-2.25379	-0.97815	111.894	157.319
48	-2.25379	-0.9621	112.82	159.487
49	-2.25379	-0.950222	113.723	161.629
50	-2.25379	-0.93459	114.596	163.735
51	-2.25379	-0.923014	115.448	165.815

52	-2.25379	-0.907769	116.272	167.861
53	-2.25379	-0.896473	117.076	169.882
54	-2.25379	-0.881587	117.853	171.869
55	-2.25379	-0.87055	118.611	173.831
56	-2.25379	-0.855996	119.344	175.76
57	-2.25379	-0.841621	120.052	177.657
58	-2.25379	-0.830953	120.743	179.529
59	-2.25379	-0.816874	121.41	181.37
60	-2.25379	-0.806422	122.06	183.188
61	-2.25379	-0.792618	122.689	184.974
62	-2.25379	-0.782366	123.301	186.738
63	-2.25379	-0.768821	123.892	188.47
64	-2.25379	-0.758753	124.467	190.181
65	-2.25379	-0.745449	125.023	191.861
66	-2.25379	-0.735557	125.564	193.518
67	-2.25379	-0.722479	126.086	195.147
68	-2.25379	-0.712751	126.594	196.753
69	-2.25379	-0.699883	127.084	198.331
70	-2.25379	-0.690309	127.561	199.886
71	-2.25379	-0.677639	128.02	201.414
72	-2.25379	-0.668209	128.466	202.92
73	-1.56065	-0.655726	128.896	203.943
74	-1.51413	-0.646431	129.314	204.922
75	-1.42712	-0.634124	129.716	205.827
76	-1.42712	-0.624956	130.107	206.719
77	-1.38629	-0.612813	130.482	207.568
78	-1.38629	-0.603765	130.847	208.405
79	-1.34707	-0.591776	131.197	209.202
80	-1.27297	-0.582841	131.537	209.944
81	-1.20397	-0.570999	131.863	210.632
82	-1.17118	-0.56217	132.179	211.29
83	-1.13943	-0.550465	132.482	211.917
84	-1.10866	-0.541736	132.775	212.518
85	-0.967584	-0.530162	133.056	213.031
86	-0.71335	-0.521527	133.328	213.403
87	-0.527633	-0.510074	133.589	213.672
88	-0.446287	-0.501527	133.84	213.896
89	-0.415515	-0.490189	134.08	214.1
90	-0.150823	-0.481728	134.312	214.172
91	0	-0.470498	134.534	214.172
92	0	-0.462114	134.747	214.172
93	0	-0.450985	134.951	214.172
94	0	-0.442676	135.147	214.172
95	0	-0.431644	135.333	214.172
96	0	-0.423405	135.512	214.172
97	0	-0.412463	135.682	214.172
98	0	-0.40429	135.846	214.172
99	0	-0.393433	136.001	214.172
100	0	-0.385321	136.149	214.172
101	0	-0.374544	136.289	214.172
102	0	-0.36649	136.424	214.172
103	0	-0.355788	136.55	214.172
104	0	-0.347787	136.671	214.172
105	0	-0.337155	136.785	214.172
106	0	-0.329206	136.893	214.172
107	0	-0.318639	136.995	214.172
108	0	-0.310738	137.091	214.172
109	0	-0.300232	137.182	214.172
110	0	-0.292375	137.267	214.172
111	0	-0.281926	137.346	214.172
112	0	-0.27411	137.422	214.172
113	0	-0.263715	137.491	214.172

114	0	-0.253347	137.555	214.172
115	0	-0.24559	137.616	214.172
116	0	-0.235269	137.671	214.172
117	0	-0.227545	137.723	214.172
118	0	-0.217267	137.77	214.172
119	0	-0.209575	137.814	214.172
120	0	-0.199336	137.854	214.172
121	0	-0.191671	137.89	214.172
122	0	-0.181468	137.923	214.172
123	0	-0.173829	137.954	214.172
124	0	-0.163659	137.98	214.172
125	0	-0.156042	138.005	214.172
126	0	-0.1459	138.026	214.172
127	0	-0.138305	138.045	214.172
128	0	-0.128189	138.062	214.172
129	0	-0.12061	138.076	214.172
130	0	-0.110516	138.088	214.172
131	0	-0.102953	138.099	214.172
132	0	-0.0928787	138.108	214.172
133	0	-0.0853288	138.115	214.172
134	0	-0.0752698	138.12	214.172
135	0	-0.0677301	138.125	214.172
136	0	-0.0576847	138.128	214.172
137	0	-0.0501541	138.131	214.172
138	0	-0.0401167	138.132	214.172
139	0	-0.0325917	138.134	214.172
140	0	-0.0225612	138.134	214.172
141	0	-0.0150408	138.134	214.172
142	0	-0.00501359	138.134	214.172
143	0	0.00501359	138.134	214.172
144	0	0.0150408	138.135	214.172
145	0	0.0225612	138.135	214.172
146	0	0.0325917	138.136	214.172
147	0	0.0401167	138.138	214.172
148	0	0.0501541	138.14	214.172
149	0	0.0576847	138.144	214.172
150	0	0.0677301	138.148	214.172
151	0	0.0752698	138.154	214.172
152	0	0.0853288	138.161	214.172
153	0	0.0928787	138.17	214.172
154	0	0.102953	138.18	214.172
155	0	0.110516	138.193	214.172
156	0	0.12061	138.207	214.172
157	0	0.128189	138.224	214.172
158	0	0.138305	138.243	214.172
159	0	0.1459	138.264	214.172
160	0	0.156042	138.288	214.172
161	0	0.163659	138.315	214.172
162	0	0.173829	138.345	214.172
163	0	0.181468	138.378	214.172
164	0	0.191671	138.415	214.172
165	0	0.199336	138.455	214.172
166	0	0.209575	138.499	214.172
167	0	0.217267	138.546	214.172
168	0	0.227545	138.598	214.172
169	0	0.235269	138.653	214.172
170	0	0.24559	138.713	214.172
171	0	0.253347	138.777	214.172
172	0	0.263715	138.847	214.172
173	0	0.27411	138.922	214.172
174	0	0.281926	139.002	214.172
175	0	0.292375	139.087	214.172

176	0	0.300232	139.177	214.172
177	0	0.310738	139.274	214.172
178	0	0.318639	139.375	214.172
179	0	0.329206	139.484	214.172
180	0	0.337155	139.597	214.172
181	0	0.347787	139.718	214.172
182	0	0.355788	139.845	214.172
183	0	0.36649	139.979	214.172
184	0	0.374544	140.12	214.172
185	0	0.385321	140.268	214.172
186	0	0.393433	140.423	214.172
187	0	0.40429	140.586	214.172
188	0	0.412463	140.756	214.172
189	0	0.423405	140.936	214.172
190	0	0.431644	141.122	214.172
191	0	0.442676	141.318	214.172
192	0	0.450985	141.521	214.172
193	0	0.462114	141.735	214.172
194	0	0.470498	141.956	214.172
195	0	0.481728	142.188	214.172
196	0	0.490189	142.429	214.172
197	0	0.501527	142.68	214.172
198	0	0.510074	142.94	214.172
199	0	0.521527	143.212	214.172
200	0	0.530162	143.493	214.172
201	0	0.541736	143.787	214.172
202	0	0.550465	144.09	214.172
203	0	0.56217	144.406	214.172
204	0	0.570999	144.732	214.172
205	0	0.582841	145.072	214.172
206	0	0.591776	145.422	214.172
207	0	0.603765	145.786	214.172
208	0	0.612813	146.162	214.172
209	0	0.624956	146.552	214.172
210	0	0.634124	146.955	214.172
211	0	0.646431	147.372	214.172
212	0	0.655726	147.802	214.172
213	0	0.668209	148.249	214.172
214	0	0.677639	148.708	214.172
215	0	0.690309	149.185	214.172
216	0	0.699883	149.674	214.172
217	0	0.712751	150.182	214.172
218	0	0.722479	150.704	214.172
219	0	0.735557	151.245	214.172
220	0	0.745449	151.801	214.172
221	0	0.758753	152.377	214.172
222	0	0.768821	152.968	214.172
223	0	0.782366	153.58	214.172
224	0	0.792618	154.208	214.172
225	0	0.806422	154.859	214.172
226	0	0.816874	155.526	214.172
227	0	0.830953	156.216	214.172
228	0	0.841621	156.925	214.172
229	0	0.855996	157.657	214.172
230	0	0.87055	158.415	214.172
231	0	0.881587	159.193	214.172
232	0	0.896473	159.996	214.172
233	0	0.907769	160.82	214.172
234	0	0.923014	161.672	214.172
235	0	0.93459	162.546	214.172
236	0	0.950222	163.449	214.172
237	0	0.9621	164.374	214.172

238	0	0.97815	165.331	214.172	
239	0	0.990356		166.312	214.172
240	0	1.00687	167.326	214.172	
241	0	1.01943	168.365	214.172	
242	0	1.03643	169.439	214.172	
243	0	1.04939	170.54	214.172	
244	0	1.06694	171.679	214.172	
245	0	1.08032	172.846	214.172	
246	0	1.09847	174.052	214.172	
247	0	1.11232	175.29	214.172	
248	0	1.13113	176.569	214.172	
249	0	1.1455	177.881	214.172	
250	0	1.16505	179.239	214.172	
251	0	1.18	180.631	214.172	
252	0	1.20036	182.072	214.172	
253	0	1.21596	183.55	214.172	
254	0	1.23724	185.081	214.172	
255	0	1.25357	186.653	214.172	
256	0	1.27588	188.28	214.172	
257	0	1.29303	189.952	214.172	
258	0	1.31652	191.686	214.172	
259	0	1.33462	193.467	214.172	
260	0	1.35946	195.315	214.172	
261	0.693147		1.37866	197.216	215.128
262	0.693147		1.40507	199.19	216.102
263	0.693147		1.42554	201.222	217.09
264	0.693147		1.4538	203.336	218.098
265	0.693147		1.47579	205.514	219.121
266	0.693147		1.50626	207.782	220.165
267	0.955511		1.53007	210.123	221.627
268	1.02962	1.56322	212.567	223.236	
269	1.09861	1.58927	215.093	224.982	
270	1.09861	1.62576	217.736	226.768	
271	1.09861	1.65463	220.474	228.586	
272	1.1314	1.6954	223.348	230.504	
273	1.16315	1.72793	226.334	232.514	
274	1.16315	1.77438	229.482	234.578	
275	1.16315	1.81191	232.765	236.685	
276	1.19392	1.86629	236.248	238.914	
277	1.38629	1.91103	239.9	241.563	
278	1.38629	1.97737	243.81	244.304	
279	1.38629	2.03352	247.946	247.123	
280	1.38629	2.12007	252.44	250.062	
281	1.45862	2.19728	257.268	253.267	
282	1.60944	2.32634	262.68	257.011	
283	1.72277	2.45727	268.718	261.245	
284	1.79176	2.74777	276.269	266.168	

Data Set Standard Deviation = 1.09534
Numerator = 70845.3
Denominator = 93802.3
W Statistic = 0.755262 = 70845.3 / 93802.3

5% Critical value of 0.976 exceeds 0.755262
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.755262
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 = 0.868027
0.868027 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.253790	0.00350877	-2.74777	118.844	348.683
2	-2.253790	0.00701754	-2.45727	118.844	334.497
3	-2.253790	0.0105263	-2.32634	118.844	328.103
4	-2.253790	0.0140351	-2.19728	118.844	321.801
5	-2.253790	0.0175439	-2.12007	118.844	318.03
6	-2.253790	0.0210526	-2.03352	118.844	313.804
7	-2.253790	0.0245614	-1.97737	118.844	311.062
8	-2.253790	0.0280702	-1.91103	118.844	307.822
9	-2.253790	0.0315789	-1.86629	118.844	305.637
10	-2.253790	0.0350877	-1.81191	118.844	302.982
11	-2.253790	0.0385965	-1.77438	118.844	301.149
12	-2.253790	0.0421053	-1.72793	118.844	298.881
13	-2.253790	0.045614	-1.6954	118.844	297.292
14	-2.253790	0.0491228	-1.65463	118.844	295.301
15	-2.253790	0.0526316	-1.62576	118.844	293.891
16	-2.253790	0.0561404	-1.58927	118.844	292.109
17	-2.253790	0.0596491	-1.56322	118.844	290.837
18	-2.253790	0.0631579	-1.53007	118.844	289.218
19	-2.253790	0.0666667	-1.50626	118.844	288.056
20	-2.253790	0.0701754	-1.47579	118.844	286.568
21	-2.253790	0.0736842	-1.4538	118.844	285.494
22	-2.253790	0.077193	-1.42554	118.844	284.114
23	-2.253790	0.0807018	-1.40507	118.844	283.114
24	-2.253790	0.0842105	-1.37866	118.844	281.824
25	-2.253790	0.0877193	-1.35946	118.844	280.887
26	-2.253790	0.0912281	-1.33462	118.844	279.674
27	-2.253790	0.0947368	-1.31652	118.844	278.79
28	-2.253790	0.0982456	-1.29303	118.844	277.643
29	-2.253790	0.101754	-1.27588	118.844	276.805
30	-2.253790	0.105263	-1.25357	118.844	275.716
31	-2.253790	0.108772	-1.23724	118.844	274.918
32	-2.253790	0.112281	-1.21596	118.844	273.879
33	-2.253790	0.115789	-1.20036	118.844	273.118
34	-2.253790	0.119298	-1.18	118.844	272.123
35	-2.253790	0.122807	-1.16505	118.844	271.393
36	-2.253790	0.126316	-1.1455	118.844	270.439
37	-2.253790	0.129825	-1.13113	118.844	269.737
38	-2.253790	0.133333	-1.11232	118.844	268.818
39	-2.253790	0.136842	-1.09847	118.844	268.142
40	-2.253790	0.140351	-1.08032	118.844	267.256
41	-2.253790	0.14386	-1.06694	118.844	266.602
42	-2.253790	0.147368	-1.04939	118.844	265.745
43	-2.253790	0.150877	-1.03643	118.844	265.112
44	-2.253790	0.154386	-1.01943	118.844	264.282
45	-2.253790	0.157895	-1.00687	118.844	263.669
46	-2.253790	0.161404	-0.990356	118.844	262.862
47	-2.253790	0.164912	-0.97815	118.844	262.266
48	-2.253790	0.168421	-0.9621	118.844	261.483

49	-2.253790.17193	-0.950222	118.844	260.903		
50	-2.253790.175439	-0.93459118.844	260.139			
51	-2.253790.178947	-0.923014	118.844	259.574		
52	-2.253790.182456	-0.907769	118.844	258.829		
53	-2.253790.185965	-0.896473	118.844	258.278		
54	-2.253790.189474	-0.881587	118.844	257.551		
55	-2.253790.192982	-0.87055118.844	257.012			
56	-2.253790.196491	-0.855996	118.844	256.301		
57	-2.253790.2	-0.841621	118.844	255.599		
58	-2.253790.203509	-0.830953	118.844	255.078		
59	-2.253790.207018	-0.816874	118.844	254.391		
60	-2.253790.210526	-0.806422	118.844	253.88		
61	-2.253790.214035	-0.792618	118.844	253.206		
62	-2.253790.217544	-0.782366	118.844	252.706		
63	-2.253790.221053	-0.768821	118.844	252.044		
64	-2.253790.224561	-0.758753	118.844	251.552		
65	-2.253790.22807	-0.745449	118.844	250.903		
66	-2.253790.231579	-0.735557	118.844	250.42		
67	-2.253790.235088	-0.722479	118.844	249.781		
68	-2.253790.238596	-0.712751	118.844	249.306		
69	-2.253790.242105	-0.699883	118.844	248.678		
70	-2.253790.245614	-0.690309	118.844	248.21		
71	-2.253790.249123	-0.677639	118.844	247.591		
72	-2.253790.252632	-0.668209	118.844	247.131		
73	-1.560650.25614	-0.655726	193.011	246.521		
74	-1.514130.259649	-0.646431	197.988	246.067		
75	-1.427120.263158	-0.634124	207.299	245.466		
76	-1.427120.266667	-0.624956	207.299	245.019		
77	-1.386290.270175	-0.612813	211.667	244.426		
78	-1.386290.273684	-0.603765	211.667	243.984		
79	-1.347070.277193	-0.591776	215.863	243.398		
80	-1.272970.280702	-0.582841	223.793	242.962		
81	-1.203970.284211	-0.570999	231.175	242.384		
82	-1.171180.287719	-0.56217234.683	241.953			
83	-1.139430.291228	-0.550465	238.081	241.381		
84	-1.108660.294737	-0.541736	241.373	240.955		
85	-0.967584	0.298246	-0.530162	256.469	240.39	
86	-0.713350.301754	-0.521527	283.672	239.968		
87	-0.527633	0.305263	-0.510074	303.543	239.409	
88	-0.446287	0.308772	-0.501527	312.247	238.991	
89	-0.415515	0.312281	-0.490189	315.54	238.438	
90	-0.150823	0.315789	-0.481728	343.862	238.024	
91	0	0.319298	-0.470498	360	237.476	
92	0	0.322807	-0.462114	360	237.067	
93	0	0.326316	-0.450985	360	236.523	
94	0	0.329825	-0.442676	360	236.117	
95	0	0.333333	-0.431644	360	235.579	
96	0	0.336842	-0.423405	360	235.176	
97	0	0.340351	-0.412463	360	234.642	
98	0	0.34386	-0.40429360	234.243		
99	0	0.347368	-0.393433	360	233.713	
100	0	0.350877	-0.385321	360	233.317	
101	0	0.354386	-0.374544	360	232.79	
102	0	0.357895	-0.36649360	232.397		
103	0	0.361404	-0.355788	360	231.874	
104	0	0.364912	-0.347787	360	231.484	
105	0	0.368421	-0.337155	360	230.964	
106	0	0.37193	-0.329206	360	230.576	
107	0	0.375439	-0.318639	360	230.06	
108	0	0.378947	-0.310738	360	229.674	
109	0	0.382456	-0.300232	360	229.161	
110	0	0.385965	-0.292375	360	228.778	

111	0	0.389474	-0.281926	360	228.267
112	0	0.392982	-0.27411360	227.886	
113	0	0.396491	-0.263715	360	227.378
114	0	0.4	-0.253347	360	226.872
115	0	0.403509	-0.24559360	226.493	
116	0	0.407018	-0.235269	360	225.989
117	0	0.410526	-0.227545	360	225.612
118	0	0.414035	-0.217267	360	225.11
119	0	0.417544	-0.209575	360	224.734
120	0	0.421053	-0.199336	360	224.234
121	0	0.424561	-0.191671	360	223.86
122	0	0.42807	-0.181468	360	223.362
123	0	0.431579	-0.173829	360	222.989
124	0	0.435088	-0.163659	360	222.492
125	0	0.438596	-0.156042	360	222.12
126	0	0.442105	-0.1459 360	221.625	
127	0	0.445614	-0.138305	360	221.254
128	0	0.449123	-0.128189	360	220.76
129	0	0.452632	-0.12061360	220.39	
130	0	0.45614	-0.110516	360	219.897
131	0	0.459649	-0.102953	360	219.528
132	0	0.463158	-0.0928787	360	219.036
133	0	0.466667	-0.0853288	360	218.667
134	0	0.470175	-0.0752698	360	218.176
135	0	0.473684	-0.0677301	360	217.807
136	0	0.477193	-0.0576847	360	217.317
137	0	0.480702	-0.0501541	360	216.949
138	0	0.484211	-0.0401167	360	216.459
139	0	0.487719	-0.0325917	360	216.092
140	0	0.491228	-0.0225612	360	215.602
141	0	0.494737	-0.0150408	360	215.234
142	0	0.498246	-0.00501359	360	214.745
143	0	0.501754	0.00501359	360	214.255
144	0	0.505263	0.0150408	360	213.766
145	0	0.508772	0.0225612	360	213.398
146	0	0.512281	0.0325917	360	212.908
147	0	0.515789	0.0401167	360	212.541
148	0	0.519298	0.0501541	360	212.051
149	0	0.522807	0.0576847	360	211.683
150	0	0.526316	0.0677301	360	211.193
151	0	0.529825	0.0752698	360	210.824
152	0	0.533333	0.0853288	360	210.333
153	0	0.536842	0.0928787	360	209.964
154	0	0.540351	0.102953	360	209.472
155	0	0.54386	0.110516	360	209.103
156	0	0.547368	0.12061 360	208.61	
157	0	0.550877	0.128189	360	208.24
158	0	0.554386	0.138305	360	207.746
159	0	0.557895	0.1459 360	207.375	
160	0	0.561404	0.156042	360	206.88
161	0	0.564912	0.163659	360	206.508
162	0	0.568421	0.173829	360	206.011
163	0	0.57193	0.181468	360	205.638
164	0	0.575439	0.191671	360	205.14
165	0	0.578947	0.199336	360	204.766
166	0	0.582456	0.209575	360	204.266
167	0	0.585965	0.217267	360	203.89
168	0	0.589474	0.227545	360	203.388
169	0	0.592982	0.235269	360	203.011
170	0	0.596491	0.24559 360	202.507	
171	0	0.6	0.253347	360	202.128
172	0	0.603509	0.263715	360	201.622

173	0	0.607018	0.27411	360	201.114
174	0	0.610526	0.281926	360	200.733
175	0	0.614035	0.292375	360	200.222
176	0	0.617544	0.300232	360	199.839
177	0	0.621053	0.310738	360	199.326
178	0	0.624561	0.318639	360	198.94
179	0	0.62807	0.329206	360	198.424
180	0	0.631579	0.337155	360	198.036
181	0	0.635088	0.347787	360	197.516
182	0	0.638596	0.355788	360	197.126
183	0	0.642105	0.36649	360	196.603
184	0	0.645614	0.374544	360	196.21
185	0	0.649123	0.385321	360	195.683
186	0	0.652632	0.393433	360	195.287
187	0	0.65614	0.40429	360	194.757
188	0	0.659649	0.412463	360	194.358
189	0	0.663158	0.423405	360	193.824
190	0	0.666667	0.431644	360	193.421
191	0	0.670175	0.442676	360	192.883
192	0	0.673684	0.450985	360	192.477
193	0	0.677193	0.462114	360	191.933
194	0	0.680702	0.470498	360	191.524
195	0	0.684211	0.481728	360	190.976
196	0	0.687719	0.490189	360	190.562
197	0	0.691228	0.501527	360	190.009
198	0	0.694737	0.510074	360	189.591
199	0	0.698246	0.521527	360	189.032
200	0	0.701754	0.530162	360	188.61
201	0	0.705263	0.541736	360	188.045
202	0	0.708772	0.550465	360	187.619
203	0	0.712281	0.56217	360	187.047
204	0	0.715789	0.570999	360	186.616
205	0	0.719298	0.582841	360	186.038
206	0	0.722807	0.591776	360	185.602
207	0	0.726316	0.603765	360	185.016
208	0	0.729825	0.612813	360	184.574
209	0	0.733333	0.624956	360	183.981
210	0	0.736842	0.634124	360	183.534
211	0	0.740351	0.646431	360	182.933
212	0	0.74386	0.655726	360	182.479
213	0	0.747368	0.668209	360	181.869
214	0	0.750877	0.677639	360	181.409
215	0	0.754386	0.690309	360	180.79
216	0	0.757895	0.699883	360	180.322
217	0	0.761404	0.712751	360	179.694
218	0	0.764912	0.722479	360	179.219
219	0	0.768421	0.735557	360	178.58
220	0	0.77193	0.745449	360	178.097
221	0	0.775439	0.758753	360	177.448
222	0	0.778947	0.768821	360	176.956
223	0	0.782456	0.782366	360	176.294
224	0	0.785965	0.792618	360	175.794
225	0	0.789474	0.806422	360	175.12
226	0	0.792982	0.816874	360	174.609
227	0	0.796491	0.830953	360	173.922
228	0	0.8	0.841621	360	173.401
229	0	0.803509	0.855996	360	172.699
230	0	0.807018	0.87055	360	171.988
231	0	0.810526	0.881587	360	171.449
232	0	0.814035	0.896473	360	170.722
233	0	0.817544	0.907769	360	170.171
234	0	0.821053	0.923014	360	169.426

235	0	0.824561	0.93459	360	168.861	
236	0	0.82807	0.950222	360	168.097	
237	0	0.831579	0.9621	360	167.517	
238	0	0.835088	0.97815	360	166.734	
239	0	0.838596	0.990356	360	166.138	
240	0	0.842105	1.00687	360	165.331	
241	0	0.845614	1.01943	360	164.718	
242	0	0.849123	1.03643	360	163.888	
243	0	0.852632	1.04939	360	163.255	
244	0	0.85614	1.06694	360	162.398	
245	0	0.859649	1.08032	360	161.744	
246	0	0.863158	1.09847	360	160.858	
247	0	0.866667	1.11232	360	160.182	
248	0	0.870175	1.13113	360	159.263	
249	0	0.873684	1.1455	360	158.561	
250	0	0.877193	1.16505	360	157.607	
251	0	0.880702	1.18	360	156.877	
252	0	0.884211	1.20036	360	155.882	
253	0	0.887719	1.21596	360	155.121	
254	0	0.891228	1.23724	360	154.082	
255	0	0.894737	1.25357	360	153.284	
256	0	0.898246	1.27588	360	152.195	
257	0	0.901754	1.29303	360	151.357	
258	0	0.905263	1.31652	360	150.21	
259	0	0.908772	1.33462	360	149.326	
260	0	0.912281	1.35946	360	148.113	
261	0.693147	0.915789	1.37866	434.167	147.176	
262	0.693147	0.919298	1.40507	434.167	145.886	
263	0.693147	0.922807	1.42554	434.167	144.886	
264	0.693147	0.926316	1.4538	434.167	143.506	
265	0.693147	0.929825	1.47579	434.167	142.432	
266	0.693147	0.933333	1.50626	434.167	140.944	
267	0.955511	0.936842	1.53007	462.24	139.782	
268	1.02962	0.940351	1.56322	470.169	138.163	
269	1.09861	0.94386	1.58927	477.552	136.891	
270	1.09861	0.947368	1.62576	477.552	135.109	
271	1.09861	0.950877	1.65463	477.552	133.699	
272	1.1314	0.954386	1.6954	481.06	131.708	
273	1.16315	0.957895	1.72793	484.457	130.119	
274	1.16315	0.961404	1.77438	484.457	127.851	
275	1.16315	0.964912	1.81191	484.457	126.018	
276	1.19392	0.968421	1.86629	487.75	123.363	
277	1.38629	0.97193	1.91103	508.333	121.178	
278	1.38629	0.975439	1.97737	508.333	117.938	
279	1.38629	0.978947	2.03352	508.333	115.196	
280	1.38629	0.982456	2.12007	508.333	110.97	
281	1.45862	0.985965	2.19728	516.072	107.199	
282	1.60944	0.989474	2.32634	532.21	100.897	
283	1.72277	0.992982	2.45727	544.336	94.5032	
284	1.79176	0.996491	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-4	1/16/1998	ND<0	119
	3/16/1999	ND<0	119
	9/23/1999	ND<0	119
	3/14/2000	ND<0	119
	9/23/2003	ND<0	119
	3/10/2004	ND<0	119
	10/12/2004	ND<0	119
	4/1/2005	ND<0	119
	10/26/2005	ND<0	119
	6/19/2006	ND<0	119
	11/18/2006	ND<0	119
	6/2/2007	ND<0	119
	11/15/2007	ND<0	119
	5/20/2008	ND<0	119
	11/20/2008	ND<0	119
	6/11/2009	ND<-2.25379 U	119
	11/16/2009	ND<-2.25379 U	119
	6/30/2010	ND<-2.25379 U	119
	11/17/2010	ND<-2.25379 U	119
	7/6/2011	ND<-2.25379 U	119
	11/22/2011	ND<-2.25379 U	119
	5/16/2012	ND<-2.25379 U	119
	11/16/2012	ND<-2.25379 U	119

Rank Sum = 2737
Rank Mean = 119

Background Rank Sum = 2737
Background Rank Mean = 119

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	3/14/2000	ND<0	119
	9/23/2003	ND<0	119
	3/10/2004	ND<0	119
	10/12/2004	ND<0	119
	4/1/2005	ND<0	119
	10/26/2005	ND<0	119
	6/19/2006	ND<0	119
	11/18/2006	ND<0	119
	6/2/2007	ND<0	119
	11/15/2007	ND<0	119
	5/20/2008	ND<0	119
	11/20/2008	ND<0	119
	6/11/2009	ND<-2.25379 U	119
	11/16/2009	ND<-2.25379 U	119
	6/30/2010	ND<-2.25379 U	119
	11/17/2010	ND<-2.25379 U	119
	7/6/2011	1.02962	268

	11/22/2011	1.1314	272	
	5/16/2012	1.45862		281
	11/16/2012	1.60944		282

Rank Sum = 3007
Rank Mean = 150.35

LMW-11	3/14/2000	ND<0	119
	9/23/2003	ND<0	119
	3/10/2004	ND<0	119
	10/12/2004	ND<0	119
	4/1/2005	ND<0	119
	10/26/2005	ND<0	119
	6/19/2006	ND<0	119
	6/2/2007	ND<0	119
	11/15/2007	ND<0	119
	5/20/2008	ND<0	119
	11/20/2008	ND<0	119

Rank Sum = 1309
Rank Mean = 119

LMW-12	3/14/2000	ND<0	119
	9/23/2003	ND<0	119
	3/10/2004	ND<0	119
	10/12/2004	ND<0	119
	4/1/2005	ND<0	119
	10/26/2005	ND<0	119
	6/19/2006	ND<0	119
	6/2/2007	ND<0	119
	11/15/2007	ND<0	119
	5/20/2008	ND<0	119
	11/20/2008	ND<0	119

Rank Sum = 1309
Rank Mean = 119

LMW-13	3/14/2000	ND<0	119
	9/23/2003	ND<0	119
	3/10/2004	ND<0	119
	10/12/2004	ND<0	119
	4/1/2005	ND<0	119
	10/26/2005	ND<0	119
	6/19/2006	ND<0	119
	6/2/2007	ND<0	119
	11/15/2007	ND<0	119
	5/20/2008	ND<0	119
	11/20/2008	ND<0	119

Rank Sum = 1309
Rank Mean = 119

LMW-14R	6/2/2007	ND<0	119	
	11/15/2007	ND<0	119	
	5/20/2008	ND<0	119	
	11/20/2008	ND<0	119	
	6/11/2009	ND<-2.25379 U		119
	6/30/2010	ND<-2.25379 U		119
	11/17/2010	ND<-2.25379 U		119
	7/6/2011	ND<-2.25379 U	119	
	11/22/2011	ND<-2.25379 U		119
	5/16/2012	ND<-2.25379 U		119
	11/16/2012	ND<-2.25379 U		119

Rank Sum = 1309
Rank Mean = 119

LMW-15R	11/18/2006	ND<0		119
	6/2/2007	ND<0		119
	11/15/2007	ND<0		119
	11/15/2007	ND<0		119
	5/20/2008	ND<0		119
	5/20/2008	ND<0		119
	11/20/2008	ND<0		119
	11/20/2008	ND<0		119
	6/11/2009	-1.42712	J	240
	6/30/2010	ND<-2.25379	U	119
	11/17/2010	ND<-2.25379	U	119
	7/6/2011	-1.13943	J	248
	11/22/2011	ND<-2.25379	U	119
	5/16/2012	-1.42712	J	241
	11/16/2012	ND<-2.25379	U	119

Rank Sum = 2157
Rank Mean = 143.8

LMW-16	11/18/2006	ND<0		119
	6/2/2007	ND<0		119
	11/15/2007	0.693147		261
	5/20/2008	ND<0		119
	11/20/2008	ND<0		119
	6/11/2009	ND<-2.25379	U	119
	11/16/2009	ND<-2.25379	U	119
	6/30/2010	ND<-2.25379	U	119
	11/17/2010	-1.17118	J	247
	7/6/2011	ND<-2.25379	U	119
	11/22/2011	-1.38629	J	242
	5/16/2012	ND<-2.25379	U	119
	11/16/2012	-1.56065	J	238

Rank Sum = 2059
Rank Mean = 158.385

LMW-3	11/19/1996	ND<0		119
	3/24/1997	ND<0		119
	1/16/1998	ND<0		119
	3/16/1999	ND<0		119
	9/23/1999	ND<0		119
	3/14/2000	ND<0		119
	9/23/2003	ND<0		119
	3/10/2004	ND<0		119
	10/12/2004	ND<0		119
	4/1/2005	ND<0		119
	10/26/2005	ND<0		119
	6/19/2006	ND<0		119
	11/18/2006	ND<0		119
	6/2/2007	ND<0		119
	11/15/2007	ND<0		119
	5/20/2008	ND<0		119
	11/20/2008	ND<0		119
	6/11/2009	ND<-2.25379	U	119
	11/16/2009	ND<-2.25379	U	119
	6/30/2010	ND<-2.25379	U	119
	11/17/2010	ND<-2.25379	U	119
	7/6/2011	ND<-2.25379	U	119
	11/22/2011	ND<-2.25379	U	119
	5/16/2012	ND<-2.25379	U	119
	11/16/2012	ND<-2.25379	U	119

Rank Sum = 2975
Rank Mean = 119

LMW-3S	11/18/2006	ND<0		119
	6/2/2007	ND<0		119
	11/15/2007	ND<0		119
	5/20/2008	ND<0		119
	11/20/2008	ND<0		119
	6/11/2009	ND<-2.25379	U	119
	11/16/2009	ND<-2.25379	U	119
	6/30/2010	ND<-2.25379	U	119
	11/17/2010	ND<-2.25379	U	119
	7/6/2011	ND<-2.25379	U	119
	11/22/2011	ND<-2.25379	U	119
	5/16/2012	ND<-2.25379	U	119
	11/16/2012	ND<-2.25379	U	119

Rank Sum = 1547
Rank Mean = 119

LMW-6	1/16/1998	ND<0		119
	3/16/1999	ND<0		119
	9/23/1999	ND<0		119
	3/14/2000	ND<0		119
	9/23/2003	ND<0		119
	3/10/2004	ND<0		119
	10/12/2004	ND<0		119
	4/1/2005	ND<0		119
	10/26/2005	0	J	256
	6/19/2006	0.693147		262
	11/18/2006	0.693147		263
	6/2/2007	0.693147		264
	11/15/2007	1.38629		277
	5/20/2008	0.693147		265
	11/20/2008	0.693147		266
	6/11/2009	1.16315		273
	11/16/2009	0.955511		267
	6/30/2010	1.16315		274
	11/17/2010	1.79176		284
	7/6/2011	1.72277		283
	11/22/2011	1.09861		269
	5/16/2012	1.16315		275
	11/16/2012	1.19392		276

Rank Sum = 5006
Rank Mean = 217.652

LMW-7	1/16/1998	ND<0		119
	3/16/1999	ND<0		119
	9/23/1999	ND<0		119
	3/14/2000	ND<0		119
	9/23/2003	ND<0		119
	3/10/2004	ND<0		119
	10/12/2004	ND<0		119
	4/1/2005	ND<0		119
	10/26/2005	ND<0		119
	6/19/2006	ND<0		119
	11/18/2006	ND<0		119
	6/2/2007	ND<0		119
	11/15/2007	ND<0		119
	5/20/2008	ND<0		119
	11/20/2008	ND<0		119
	6/11/2009	ND<-2.25379	U	119
	11/17/2010	ND<-2.25379	U	119
	7/6/2011	-1.20397	J	246
	11/22/2011	-0.150823		255
	5/16/2012	ND<-2.25379	U	119

	11/16/2012	ND<-2.25379	U	119

Rank Sum = 2762
Rank Mean = 131.524

LMW-8	1/16/1998	ND<0		119
	3/16/1999	ND<0		119
	9/23/1999	ND<0		119
	3/14/2000	ND<0		119
	9/23/2003	ND<0		119
	3/10/2004	ND<0		119
	10/12/2004	ND<0		119
	4/1/2005	1.09861		270
	10/26/2005	0	J	257
	6/19/2006	0	J	258
	11/18/2006	0	J	259
	6/2/2007	0	J	260
	11/15/2007	1.09861		271
	5/20/2008	ND<0		119
	11/20/2008	ND<0		119
	6/11/2009	-0.446287		253
	11/16/2009	-0.527633		252
	6/30/2010	-1.10866	J	249
	11/17/2010	-0.415515		254
	7/6/2011	ND<-2.25379	U	119
	11/22/2011	-1.51413	J	239
	5/16/2012	ND<-2.25379	U	119
	11/16/2012	ND<-2.25379	U	119

Rank Sum = 4250
Rank Mean = 184.783

LMW-9	1/16/1998	ND<0		119
	3/16/1999	ND<0		119
	9/23/1999	ND<0		119
	3/14/2000	ND<0		119
	9/23/2003	ND<0		119
	3/10/2004	ND<0		119
	10/12/2004	ND<0		119
	4/1/2005	ND<0		119
	10/26/2005	ND<0		119
	6/19/2006	ND<0		119
	11/18/2006	ND<0		119
	6/2/2007	ND<0		119
	11/15/2007	ND<0		119
	5/20/2008	ND<0		119
	11/20/2008	ND<0		119
	6/11/2009	-1.27297	J	245
	11/16/2009	ND<-2.25379	U	119
	6/30/2010	ND<-2.25379	U	119
	11/17/2010	ND<-2.25379	U	119
	7/6/2011	ND<-2.25379	U	119
	11/22/2011	ND<-2.25379	U	119
	5/16/2012	ND<-2.25379	U	119
	11/16/2012	ND<-2.25379	U	119

Rank Sum = 2863
Rank Mean = 124.478

LMW-9D	11/18/2006	ND<0		119
	6/2/2007	ND<0		119
	11/15/2007	1.38629		278
	5/20/2008	ND<0		119
	11/20/2008	ND<0		119
	6/11/2009	ND<-2.25379	U	119

	11/16/2009	ND<-2.25379	U	119
	6/30/2010	ND<-2.25379	U	119
	11/17/2010	ND<-2.25379	U	119
	7/6/2011	-0.71335	J	251
	11/22/2011	ND<-2.25379	U	119
	5/16/2012	ND<-2.25379	U	119
	11/16/2012	ND<-2.25379	U	119

Rank Sum = 1838
Rank Mean = 141.385

LMW-9S	11/18/2006	1.38629		279
	6/2/2007	1.38629		280
	11/15/2007	ND<0		119
	5/20/2008	ND<0		119
	11/20/2008	ND<0		119
	6/11/2009	ND<-2.25379	U	119
	11/16/2009	ND<-2.25379	U	119
	11/16/2009	ND<-2.25379	U	119
	11/16/2009	ND<-2.25379	U	119
	6/30/2010	ND<-2.25379	U	119
	11/17/2010	-1.34707	J	244
	7/6/2011	-0.967584	J	250
	11/22/2011	ND<-2.25379	U	119
	5/16/2012	ND<-2.25379	U	119
	11/16/2012	-1.38629	J	243

Rank Sum = 2486
Rank Mean = 165.733

MW-5	1/16/1998	ND<0	119
	3/16/1999	ND<0	119
	9/23/1999	ND<0	119
	3/14/2000	ND<0	119
	9/23/2003	ND<0	119
	3/10/2004	ND<0	119
	10/12/2004	ND<0	119
	4/1/2005	ND<0	119
	10/26/2005	ND<0	119
	6/19/2006	ND<0	119
	11/15/2007	ND<0	119
	5/20/2008	ND<0	119
	11/20/2008	ND<0	119

Rank Sum = 1547
Rank Mean = 119

Calculation Results:

Kruskal-Wallis H Statistic = 38.3746
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 91.6189
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
38.3746 > 26.2962 indicating a significant group difference at 5% significance level
91.6189 > 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

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**150.35**	**31.35**	**58.4144**
LMW-11	**119**	**0**	**70.0396**
LMW-12	**119**	**0**	**70.0396**
LMW-13	**119**	**0**	**70.0396**

LMW-14R	119	0	70.0396	
LMW-15R	143.8	24.8	63.4084	
LMW-16	158.385	39.3846	66.2949	
LMW-3	119	0	55.2015	
LMW-3S	119	0	66.2949	
LMW-6	217.652	98.6522	56.3398	
LMW-7	131.524	12.5238	57.6657	
LMW-8	184.783	65.7826	56.3398	
LMW-9	124.478	5.47826	56.3398	
LMW-9D	141.385	22.3846	66.2949	
LMW-9S	165.733	46.7333	63.4084	
MW-5	119	0	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 119

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	150.35	31.35	68.9963
LMW-11	119	0	82.7275
LMW-12	119	0	82.7275
LMW-13	119	0	82.7275
LMW-14R	119	0	82.7275
LMW-15R	143.8	24.8	74.895
LMW-16	158.385	39.3846	78.3044
LMW-3	119	0	65.2015
LMW-3S	119	0	78.3044
LMW-6	217.652	98.6522	66.546
LMW-7	131.524	12.5238	68.112
LMW-8	184.783	65.7826	66.546
LMW-9	124.478	5.47826	66.546
LMW-9D	141.385	22.3846	78.3044
LMW-9S	165.733	46.7333	74.895
MW-5	119	0	78.3044

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	
ND<0	ND<0	0	2	8	
ND<0	ND<0	0	2	8	
ND<0	ND<0	0	2	8	
ND<0	ND<0	0	2	8	
ND<0	ND<0	0	2	8	
1.09861		ND<0	1.09861	3	8
0 J	ND<0	0	3	8	
0 J	ND<0	0	3	8	
0 J	ND<0	0	3	8	
0 J	ND<0	0	3	8	
1.09861		ND<0	1.09861	4	8
ND<0	ND<0	0	4	8	
ND<0	ND<0	0	4	8	
-0.446287		ND<0	-0.446287	4	9
-0.527633		ND<0	-0.527633	4	10
-1.10866 J		ND<0	-1.108664	11	
-0.415515		ND<0	-0.415515	4	12
ND<-2.25379 U		ND<0	-2.253794	13	
-1.51413 J		ND<0	-1.514134	14	
ND<-2.25379 U		ND<0	-2.253794	15	
ND<-2.25379 U		ND<0	-2.253794	16	
ND<0	ND<0	0	4	16	
ND<0	ND<0	0	4	16	
ND<0	ND<0	0	4	16	
ND<0	ND<0	0	4	16	
1.09861		ND<0	1.09861	5	16

0 J	ND<0	0	5	16		
0 J	ND<0	0	5	16		
0 J	ND<0	0	5	16		
0 J	ND<0	0	5	16		
1.09861		ND<0	1.09861	6	16	
ND<0	ND<0	0	6	16		
ND<0	ND<0	0	6	16		
-0.446287		ND<0	-0.446287		6	17
-0.527633		ND<0	-0.527633		6	18
-1.10866 J		ND<0	-1.108666		19	
-0.415515		ND<0	-0.415515		6	20
ND<-2.25379 U		ND<0	-2.253796		21	
-1.51413 J		ND<0	-1.514136		22	
ND<-2.25379 U		ND<0	-2.253796		23	
ND<-2.25379 U		ND<0	-2.253796		24	
ND<0	ND<0	0	6	24		
ND<0	ND<0	0	6	24		
ND<0	ND<0	0	6	24		
1.09861		ND<0	1.09861	7	24	
0 J	ND<0	0	7	24		
0 J	ND<0	0	7	24		
0 J	ND<0	0	7	24		
0 J	ND<0	0	7	24		
1.09861		ND<0	1.09861	8	24	
ND<0	ND<0	0	8	24		
ND<0	ND<0	0	8	24		
-0.446287		ND<0	-0.446287		8	25
-0.527633		ND<0	-0.527633		8	26
-1.10866 J		ND<0	-1.108668		27	
-0.415515		ND<0	-0.415515		8	28
ND<-2.25379 U		ND<0	-2.253798		29	
-1.51413 J		ND<0	-1.514138		30	
ND<-2.25379 U		ND<0	-2.253798		31	
ND<-2.25379 U		ND<0	-2.253798		32	
ND<0	ND<0	0	8	32		
ND<0	ND<0	0	8	32		
1.09861		ND<0	1.09861	9	32	
0 J	ND<0	0	9	32		
0 J	ND<0	0	9	32		
0 J	ND<0	0	9	32		
0 J	ND<0	0	9	32		
1.09861		ND<0	1.09861	10	32	
ND<0	ND<0	0	10	32		
ND<0	ND<0	0	10	32		
-0.446287		ND<0	-0.446287		10	33
-0.527633		ND<0	-0.527633		10	34
-1.10866 J		ND<0	-1.108610		35	
-0.415515		ND<0	-0.415515		10	36
ND<-2.25379 U		ND<0	-2.253710		37	
-1.51413 J		ND<0	-1.514310		38	
ND<-2.25379 U		ND<0	-2.253710		39	
ND<-2.25379 U		ND<0	-2.253710		40	
ND<0	ND<0	0	10	40		
1.09861		ND<0	1.09861	11	40	
0 J	ND<0	0	11	40		
0 J	ND<0	0	11	40		
0 J	ND<0	0	11	40		
0 J	ND<0	0	11	40		
1.09861		ND<0	1.09861	12	40	

ND<0	ND<0	0	12	40		
ND<0	ND<0	0	12	40		
-0.446287		ND<0	-0.446287		12	41
-0.527633		ND<0	-0.527633		12	42
-1.10866 J		ND<0	-1.1086	12	43	
-0.415515		ND<0	-0.415515		12	44
ND<-2.25379 U		ND<0	-2.2537	12	45	
-1.51413 J		ND<0	-1.5141	312	46	
ND<-2.25379 U		ND<0	-2.2537	12	47	
ND<-2.25379 U		ND<0	-2.2537	12	48	
1.09861		ND<0	1.09861	13	48	
0 J	ND<0	0	13	48		
0 J	ND<0	0	13	48		
0 J	ND<0	0	13	48		
0 J	ND<0	0	13	48		
1.09861		ND<0	1.09861	14	48	
ND<0	ND<0	0	14	48		
ND<0	ND<0	0	14	48		
-0.446287		ND<0	-0.446287		14	49
-0.527633		ND<0	-0.527633		14	50
-1.10866 J		ND<0	-1.1086	14	51	
-0.415515		ND<0	-0.415515		14	52
ND<-2.25379 U		ND<0	-2.2537	14	53	
-1.51413 J		ND<0	-1.5141	314	54	
ND<-2.25379 U		ND<0	-2.2537	14	55	
ND<-2.25379 U		ND<0	-2.2537	14	56	
0 J	1.09861		-1.0986	114	57	
0 J	1.09861		-1.0986	114	58	
0 J	1.09861		-1.0986	114	59	
0 J	1.09861		-1.0986	114	60	
1.09861		1.09861		0	14	60
ND<0	1.09861		-1.0986	114	61	
ND<0	1.09861		-1.0986	114	62	
-0.446287		1.09861		-1.5449	14	63
-0.527633		1.09861		-1.6262	514	64
-1.10866 J		1.09861		-2.2072	714	65
-0.415515		1.09861		-1.5141	314	66
ND<-2.25379 U		1.09861		-3.3524	114	67
-1.51413 J		1.09861		-2.6127	414	68
ND<-2.25379 U		1.09861		-3.3524	114	69
ND<-2.25379 U		1.09861		-3.3524	114	70
0 J	0 J	0	14	70		
0 J	0 J	0	14	70		
0 J	0 J	0	14	70		
1.09861		0 J	1.09861	15	70	
ND<0	0 J	0	15	70		
ND<0	0 J	0	15	70		
-0.446287		0 J	-0.446287		15	71
-0.527633		0 J	-0.527633		15	72
-1.10866 J		0 J	-1.1086	15	73	
-0.415515		0 J	-0.415515		15	74
ND<-2.25379 U		0 J	-2.2537	15	75	
-1.51413 J		0 J	-1.5141	315	76	
ND<-2.25379 U		0 J	-2.2537	15	77	
ND<-2.25379 U		0 J	-2.2537	15	78	
0 J	0 J	0	15	78		
0 J	0 J	0	15	78		
1.09861		0 J	1.09861	16	78	

ND<0	0 J	0	16	78		
ND<0	0 J	0	16	78		
-0.446287		0 J	-0.446287		16	79
-0.527633		0 J	-0.527633		16	80
-1.10866 J		0 J	-1.108661	6	81	
-0.415515		0 J	-0.415515		16	82
ND<-2.25379 U		0 J	-2.253791	6	83	
-1.51413 J		0 J	-1.514131	6	84	
ND<-2.25379 U		0 J	-2.253791	6	85	
ND<-2.25379 U		0 J	-2.253791	6	86	
0 J	0 J	0	16	86		
1.09861		0 J	1.09861	17	86	
ND<0	0 J	0	17	86		
ND<0	0 J	0	17	86		
-0.446287		0 J	-0.446287		17	87
-0.527633		0 J	-0.527633		17	88
-1.10866 J		0 J	-1.108661	7	89	
-0.415515		0 J	-0.415515		17	90
ND<-2.25379 U		0 J	-2.253791	7	91	
-1.51413 J		0 J	-1.514131	7	92	
ND<-2.25379 U		0 J	-2.253791	7	93	
ND<-2.25379 U		0 J	-2.253791	7	94	
1.09861		0 J	1.09861	18	94	
ND<0	0 J	0	18	94		
ND<0	0 J	0	18	94		
-0.446287		0 J	-0.446287		18	95
-0.527633		0 J	-0.527633		18	96
-1.10866 J		0 J	-1.108661	8	97	
-0.415515		0 J	-0.415515		18	98
ND<-2.25379 U		0 J	-2.253791	8	99	
-1.51413 J		0 J	-1.514131	8	100	
ND<-2.25379 U		0 J	-2.253791	8	101	
ND<-2.25379 U		0 J	-2.253791	8	102	
ND<0	1.09861		-1.098611	8	103	
ND<0	1.09861		-1.098611	8	104	
-0.446287		1.09861		-1.5449	18	105
-0.527633		1.09861		-1.62625	18	106
-1.10866 J		1.09861		-2.20727	18	107
-0.415515		1.09861		-1.51413	18	108
ND<-2.25379 U		1.09861		-3.35241	18	109
-1.51413 J		1.09861		-2.61274	18	110
ND<-2.25379 U		1.09861		-3.35241	18	111
ND<-2.25379 U		1.09861		-3.35241	18	112
ND<0	ND<0	0	18	112		
-0.446287		ND<0	-0.446287		18	113
-0.527633		ND<0	-0.527633		18	114
-1.10866 J		ND<0	-1.108661	8	115	
-0.415515		ND<0	-0.415515		18	116
ND<-2.25379 U		ND<0	-2.253791	8	117	
-1.51413 J		ND<0	-1.514131	8	118	
ND<-2.25379 U		ND<0	-2.253791	8	119	
ND<-2.25379 U		ND<0	-2.253791	8	120	
-0.446287		ND<0	-0.446287		18	121
-0.527633		ND<0	-0.527633		18	122
-1.10866 J		ND<0	-1.108661	8	123	
-0.415515		ND<0	-0.415515		18	124
ND<-2.25379 U		ND<0	-2.253791	8	125	

-1.51413 J	ND<0	-1.5141318	126	
ND<-2.25379 U	ND<0	-2.2537918	127	
ND<-2.25379 U	ND<0	-2.2537918	128	
-0.527633	-0.446287	-0.0813456	18	129
-1.10866 J	-0.446287	-0.662376	18	130
-0.415515	-0.446287	0.0307717	19	130
ND<-2.25379 U	-0.446287	-1.8075119	131	
-1.51413 J	-0.446287	-1.0678419	132	
ND<-2.25379 U	-0.446287	-1.8075119	133	
ND<-2.25379 U	-0.446287	-1.8075119	134	
-1.10866 J	-0.527633	-0.5810319	135	
-0.415515	-0.527633	0.112117	20	135
ND<-2.25379 U	-0.527633	-1.7261620	136	
-1.51413 J	-0.527633	-0.986495	20	137
ND<-2.25379 U	-0.527633	-1.7261620	138	
ND<-2.25379 U	-0.527633	-1.7261620	139	
-0.415515	-1.10866 J	0.693147	21	139
ND<-2.25379 U	-1.10866 J	-1.1451321	140	
-1.51413 J	-1.10866 J	-0.405465	21	141
ND<-2.25379 U	-1.10866 J	-1.1451321	142	
ND<-2.25379 U	-1.10866 J	-1.1451321	143	
ND<-2.25379 U	-0.415515	-1.8382821	144	
-1.51413 J	-0.415515	-1.0986121	145	
ND<-2.25379 U	-0.415515	-1.8382821	146	
ND<-2.25379 U	-0.415515	-1.8382821	147	
-1.51413 J	ND<-2.25379 U	0.739667	22	147
ND<-2.25379 U	ND<-2.25379 U	0	22	147
ND<-2.25379 U	ND<-2.25379 U	0	22	147
ND<-2.25379 U	-1.51413 J	-0.739667	22	148
ND<-2.25379 U	-1.51413 J	-0.739667	22	149
ND<-2.25379 U	ND<-2.25379 U	0	22	149

S Statistic = 22 - 149 = -127

Tied Group	Value	Members
1	0	13
2	1.09861	2
3	-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

There are 0 time periods with multiple data

A = 4920
B = 0
C = 1722
D = 0
E = 164
F = 0
a = 25806
b = 95634
c = 1012
Group Variance = 1160.33
Z-Score = -3.69896
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.69896| > 1.97737 indicating a trend

Shewhart-CUSUM Control Chart

Parameter: Selenium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -0.783929
Baseline Std Dev = 1.09756
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
1/16/1998	0	0	0.714244
1/16/1998	0	0	0.714244
3/16/1999	0	0	0.714244
3/16/1999	0	0	0.714244
9/23/1999	0	0	0.714244
9/23/1999	0	0	0.714244
3/14/2000	0	0	0.714244
3/14/2000	0	0	0.714244
9/23/2003	0	0	0.714244
9/23/2003	0	0	0.714244
3/10/2004	0	0	0.714244
3/10/2004	0	0	0.714244
10/12/2004	0	0	0.714244
10/12/2004	0	0	0.714244
4/1/2005	1.09861	0.7152	1.7152
4/1/2005	1.09861	0.7152	1.7152
10/26/2005	0	0.429444	0.714244
10/26/2005	0	0.429444	0.714244
6/19/2006	0	0.143688	0.714244
6/19/2006	0	0.143688	0.714244
11/18/2006	0	0	0.714244
11/18/2006	0	0	0.714244
6/2/2007	0	0	0.714244
6/2/2007	0	0	0.714244
11/15/2007	1.09861	0.7152	1.7152
11/15/2007	1.09861	0.7152	1.7152
5/20/2008	0	0.429444	0.714244
5/20/2008	0	0.429444	0.714244
11/20/2008	0	0.143688	0.714244
11/20/2008	0	0.143688	0.714244
6/11/2009	-0.446287	0	0.307628
6/11/2009	-0.446287	0	0.307628
11/16/2009	-0.527633	0	0.233513
11/16/2009	-0.527633	0	0.233513
6/30/2010	-1.108660	-0.295868	
6/30/2010	-1.108660	-0.295868	
11/17/2010	-0.415515	0	0.335665
11/17/2010	-0.415515	0	0.335665
7/6/2011	-2.253790	-1.33921	
7/6/2011	-2.253790	-1.33921	
11/22/2011	-1.514130	-0.665291	
11/22/2011	-1.514130	-0.665291	
5/16/2012	-2.253790	-1.33921	
5/16/2012	-2.253790	-1.33921	
11/16/2012	-2.253790	-1.33921	
11/16/2012	-2.253790	-1.33921	

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
ND<0	ND<0	0	14	0	
ND<0	ND<0	0	14	0	
ND<0	ND<0	0	14	0	
ND<0	ND<0	0	14	0	
ND<0	ND<0	0	14	0	
ND<0	ND<0	0	14	0	
0 J	ND<0	0	14	0	
0.693147		ND<0	0.693147	15	0
0.693147		ND<0	0.693147	16	0
0.693147		ND<0	0.693147	17	0
1.38629		ND<0	1.38629	18	0
0.693147		ND<0	0.693147	19	0
0.693147		ND<0	0.693147	20	0
1.16315		ND<0	1.16315	21	0
0.955511		ND<0	0.955511	22	0
1.16315		ND<0	1.16315	23	0
1.79176		ND<0	1.79176	24	0
1.72277		ND<0	1.72277	25	0
1.09861		ND<0	1.09861	26	0
1.16315		ND<0	1.16315	27	0
1.19392		ND<0	1.19392	28	0
ND<0	ND<0	0	28	0	
ND<0	ND<0	0	28	0	
ND<0	ND<0	0	28	0	
ND<0	ND<0	0	28	0	
ND<0	ND<0	0	28	0	

0 J	ND<0	0	28	0		
0.693147		ND<0	0.693147		29	0
0.693147		ND<0	0.693147		30	0
0.693147		ND<0	0.693147		31	0
1.38629		ND<0	1.38629	32	0	
0.693147		ND<0	0.693147		33	0
0.693147		ND<0	0.693147		34	0
1.16315		ND<0	1.16315	35	0	
0.955511		ND<0	0.955511		36	0
1.16315		ND<0	1.16315	37	0	
1.79176		ND<0	1.79176	38	0	
1.72277		ND<0	1.72277	39	0	
1.09861		ND<0	1.09861	40	0	
1.16315		ND<0	1.16315	41	0	
1.19392		ND<0	1.19392	42	0	
ND<0	ND<0	0	42	0		
ND<0	ND<0	0	42	0		
ND<0	ND<0	0	42	0		
ND<0	ND<0	0	42	0		
0 J	ND<0	0	42	0		
0.693147		ND<0	0.693147		43	0
0.693147		ND<0	0.693147		44	0
0.693147		ND<0	0.693147		45	0
1.38629		ND<0	1.38629	46	0	
0.693147		ND<0	0.693147		47	0
0.693147		ND<0	0.693147		48	0
1.16315		ND<0	1.16315	49	0	
0.955511		ND<0	0.955511		50	0
1.16315		ND<0	1.16315	51	0	
1.79176		ND<0	1.79176	52	0	
1.72277		ND<0	1.72277	53	0	
1.09861		ND<0	1.09861	54	0	
1.16315		ND<0	1.16315	55	0	
1.19392		ND<0	1.19392	56	0	
ND<0	ND<0	0	56	0		
ND<0	ND<0	0	56	0		
ND<0	ND<0	0	56	0		
0 J	ND<0	0	56	0		
0.693147		ND<0	0.693147		57	0
0.693147		ND<0	0.693147		58	0
0.693147		ND<0	0.693147		59	0
1.38629		ND<0	1.38629	60	0	
0.693147		ND<0	0.693147		61	0
0.693147		ND<0	0.693147		62	0
1.16315		ND<0	1.16315	63	0	
0.955511		ND<0	0.955511		64	0
1.16315		ND<0	1.16315	65	0	
1.79176		ND<0	1.79176	66	0	
1.72277		ND<0	1.72277	67	0	
1.09861		ND<0	1.09861	68	0	
1.16315		ND<0	1.16315	69	0	
1.19392		ND<0	1.19392	70	0	
ND<0	ND<0	0	70	0		
ND<0	ND<0	0	70	0		
0 J	ND<0	0	70	0		
0.693147		ND<0	0.693147		71	0
0.693147		ND<0	0.693147		72	0
0.693147		ND<0	0.693147		73	0
1.38629		ND<0	1.38629	74	0	

0.693147	ND<0	0.693147	75	0
0.693147	ND<0	0.693147	76	0
1.16315	ND<0	1.16315 77	0	
0.955511	ND<0	0.955511	78	0
1.16315	ND<0	1.16315 79	0	
1.79176	ND<0	1.79176 80	0	
1.72277	ND<0	1.72277 81	0	
1.09861	ND<0	1.09861 82	0	
1.16315	ND<0	1.16315 83	0	
1.19392	ND<0	1.19392 84	0	

ND<0	ND<0	0	84	0
0 J	ND<0	0	84	0
0.693147	ND<0	0.693147	85	0
0.693147	ND<0	0.693147	86	0
0.693147	ND<0	0.693147	87	0
1.38629	ND<0	1.38629 88	0	
0.693147	ND<0	0.693147	89	0
0.693147	ND<0	0.693147	90	0
1.16315	ND<0	1.16315 91	0	
0.955511	ND<0	0.955511	92	0
1.16315	ND<0	1.16315 93	0	
1.79176	ND<0	1.79176 94	0	
1.72277	ND<0	1.72277 95	0	
1.09861	ND<0	1.09861 96	0	
1.16315	ND<0	1.16315 97	0	
1.19392	ND<0	1.19392 98	0	

0 J	ND<0	0	98	0
0.693147	ND<0	0.693147	99	0
0.693147	ND<0	0.693147	100	0
0.693147	ND<0	0.693147	101	0
1.38629	ND<0	1.38629 102	0	
0.693147	ND<0	0.693147	103	0
0.693147	ND<0	0.693147	104	0
1.16315	ND<0	1.16315 105	0	
0.955511	ND<0	0.955511	106	0
1.16315	ND<0	1.16315 107	0	
1.79176	ND<0	1.79176 108	0	
1.72277	ND<0	1.72277 109	0	
1.09861	ND<0	1.09861 110	0	
1.16315	ND<0	1.16315 111	0	
1.19392	ND<0	1.19392 112	0	

0.693147	0 J	0.693147	113	0
0.693147	0 J	0.693147	114	0
0.693147	0 J	0.693147	115	0
1.38629	0 J	1.38629 116	0	
0.693147	0 J	0.693147	117	0
0.693147	0 J	0.693147	118	0
1.16315	0 J	1.16315 119	0	
0.955511	0 J	0.955511	120	0
1.16315	0 J	1.16315 121	0	
1.79176	0 J	1.79176 122	0	
1.72277	0 J	1.72277 123	0	
1.09861	0 J	1.09861 124	0	
1.16315	0 J	1.16315 125	0	
1.19392	0 J	1.19392 126	0	

0.693147	0.693147	0	126	0
0.693147	0.693147	0	126	0
1.38629	0.693147	0.693147	127	0

0.693147	0.693147	0	127	0
0.693147	0.693147	0	127	0
1.16315	0.693147	0.470004	128	0
0.955511	0.693147	0.262364	129	0
1.16315	0.693147	0.470004	130	0
1.79176	0.693147	1.09861	131	0
1.72277	0.693147	1.02962	132	0
1.09861	0.693147	0.405465	133	0
1.16315	0.693147	0.470004	134	0
1.19392	0.693147	0.500775	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
1.38629	0.693147	0.693147	145	0
0.693147	0.693147	0	145	0
0.693147	0.693147	0	145	0
1.16315	0.693147	0.470004	146	0
0.955511	0.693147	0.262364	147	0
1.16315	0.693147	0.470004	148	0
1.79176	0.693147	1.09861	149	0
1.72277	0.693147	1.02962	150	0
1.09861	0.693147	0.405465	151	0
1.16315	0.693147	0.470004	152	0
1.19392	0.693147	0.500775	153	0
0.693147	1.38629	-0.693147	153	1
0.693147	1.38629	-0.693147	153	2
1.16315	1.38629	-0.223144	153	3
0.955511	1.38629	-0.430783	153	4
1.16315	1.38629	-0.223144	153	5
1.79176	1.38629	0.405465	154	5
1.72277	1.38629	0.336472	155	5
1.09861	1.38629	-0.287682	155	6
1.16315	1.38629	-0.223144	155	7
1.19392	1.38629	-0.192372	155	8
0.693147	0.693147	0	155	8
1.16315	0.693147	0.470004	156	8
0.955511	0.693147	0.262364	157	8
1.16315	0.693147	0.470004	158	8
1.79176	0.693147	1.09861	159	8
1.72277	0.693147	1.02962	160	8
1.09861	0.693147	0.405465	161	8
1.16315	0.693147	0.470004	162	8
1.19392	0.693147	0.500775	163	8
1.16315	0.693147	0.470004	164	8
0.955511	0.693147	0.262364	165	8
1.16315	0.693147	0.470004	166	8
1.79176	0.693147	1.09861	167	8
1.72277	0.693147	1.02962	168	8

1.09861	0.693147	0.405465	169	8
1.16315	0.693147	0.470004	170	8
1.19392	0.693147	0.500775	171	8
0.955511	1.16315	-0.207639	171	9
1.16315	1.16315	0	171	9
1.79176	1.16315	0.628609	172	9
1.72277	1.16315	0.559616	173	9
1.09861	1.16315	-0.0645385	173	10
1.16315	1.16315	0	173	10
1.19392	1.16315	0.0307717	174	10
1.16315	0.955511	0.207639	175	10
1.79176	0.955511	0.836248	176	10
1.72277	0.955511	0.767255	177	10
1.09861	0.955511	0.143101	178	10
1.16315	0.955511	0.207639	179	10
1.19392	0.955511	0.238411	180	10
1.79176	1.16315	0.628609	181	10
1.72277	1.16315	0.559616	182	10
1.09861	1.16315	-0.0645385	182	11
1.16315	1.16315	0	182	11
1.19392	1.16315	0.0307717	183	11
1.72277	1.79176	-0.0689929	183	12
1.09861	1.79176	-0.693147	183	13
1.16315	1.79176	-0.628609	183	14
1.19392	1.79176	-0.597837	183	15
1.09861	1.72277	-0.624154	183	16
1.16315	1.72277	-0.559616	183	17
1.19392	1.72277	-0.528844	183	18
1.16315	1.09861	0.0645385	184	18
1.19392	1.09861	0.0953102	185	18
1.19392	1.16315	0.0307717	186	18

S Statistic = 186 - 18 = 168

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

There are 0 time periods with multiple data

A = 2022
B = 0
C = 570
D = 0
E = 98
F = 0
a = 25806
b = 95634
c = 1012
Group Variance = 1321.33
Z-Score = 4.5942
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|4.5942| > 1.97737 indicating a trend

Shewhart-CUSUM Control Chart

Parameter: Selenium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -0.783929
Baseline Std Dev = 1.09756
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean	
1/16/1998	0	0	0.714244	
1/16/1998	0	0	0.714244	
3/16/1999	0	0	0.714244	
3/16/1999	0	0	0.714244	
9/23/1999	0	0	0.714244	
9/23/1999	0	0	0.714244	
3/14/2000	0	0	0.714244	
3/14/2000	0	0	0.714244	
9/23/2003	0	0	0.714244	
9/23/2003	0	0	0.714244	
3/10/2004	0	0	0.714244	
3/10/2004	0	0	0.714244	
10/12/2004	0	0	0.714244	
10/12/2004	0	0	0.714244	
4/1/2005	0	0	0.714244	
4/1/2005	0	0	0.714244	
10/26/2005	0	0	0.714244	
10/26/2005	0	0	0.714244	
6/19/2006	0.693147	0.345777	1.34578	
6/19/2006	0.693147	0.345777	1.34578	
11/18/2006	0.693147	0.691554	1.34578	
11/18/2006	0.693147	0.691554	1.34578	
6/2/2007	0.693147	1.03733	1.34578	
6/2/2007	0.693147	1.03733	1.34578	
11/15/2007	1.38629	2.01464	1.97731	
11/15/2007	1.38629	2.01464	1.97731	
5/20/2008	0.693147	2.36042	1.34578	
5/20/2008	0.693147	2.36042	1.34578	
11/20/2008	0.693147	2.70619	1.34578	
11/20/2008	0.693147	2.70619	1.34578	
6/11/2009	1.16315	3.48019	1.774	
6/11/2009	1.16315	3.48019	1.774	
11/16/2009	0.955511	4.06501	1.58482	
11/16/2009	0.955511	4.06501	1.58482	
6/30/2010	1.16315	4.83901	1.774	
6/30/2010	1.16315	4.83901	1.774	
11/17/2010	1.79176	6.18575	2.34673	
11/17/2010	1.79176	6.18575	2.34673	
7/6/2011	1.72277	7.46962	2.28387	
7/6/2011	1.72277	7.46962	2.28387	
11/22/2011	1.09861	8.18482	1.7152	
11/22/2011	1.09861	8.18482	1.7152	
5/16/2012	1.16315	8.95882	1.774	
5/16/2012	1.16315	8.95882	1.774	
11/16/2012	1.19392	9.76086	1.80204	
11/16/2012	1.19392	9.76086	1.80204	

Concentrations (ppb)

Parameter: Tetrachloroethylene

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 273
Percent Non-Detects: 96.1268%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	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
			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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	15 (75%)	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

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	
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	
		6/11/2009	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	
LMW-15R	15	15 (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	
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	
			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	
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	
			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	
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	
			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	
LMW-6	23	21 (91.3043%)	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
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-8	23	19 (82.6087%)	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
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
			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
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
			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
LMW-9S	15	15 (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
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: Tetrachloroethylene

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	-2.74777	7.55021	0
2	0	-2.45727	13.5884	0
3	0	-2.32634	19.0003	0
4	0	-2.19728	23.8283	0
5	0.075	-2.12007	28.323	-0.159005
6	0.075	-2.03352	32.4582	-0.311519
7	0.075	-1.97737	36.3682	-0.459822
8	0.075	-1.91103	40.0203	-0.603149
9	0.075	-1.86629	43.5033	-0.743121
10	0.075	-1.81191	46.7863	-0.879015
11	0.075	-1.77438	49.9348	-1.01209
12	0.075	-1.72793	52.9205	-1.14169
13	0.075	-1.6954	55.7949	-1.26884
14	0.075	-1.65463	58.5327	-1.39294
15	0.075	-1.62576	61.1758	-1.51487
16	0.075	-1.58927	63.7015	-1.63407
17	0.075	-1.56322	66.1452	-1.75131
18	0.075	-1.53007	68.4863	-1.86606
19	0.075	-1.50626	70.7551	-1.97903
20	0.075	-1.47579	72.9331	-2.08972
21	0.075	-1.4538	75.0466	-2.19875
22	0.075	-1.42554	77.0788	-2.30567
23	0.075	-1.40507	79.053	-2.41105
24	0.075	-1.37866	80.9537	-2.51445
25	0.075	-1.35946	82.8019	-2.61641
26	0.075	-1.33462	84.5831	-2.7165
27	0.075	-1.31652	86.3163	-2.81524
28	0.075	-1.29303	87.9883	-2.91222
29	0.075	-1.27588	89.6161	-3.00791
30	0.075	-1.25357	91.1875	-3.10193
31	0.075	-1.23724	92.7183	-3.19472
32	0.075	-1.21596	94.1969	-3.28592
33	0.075	-1.20036	95.6377	-3.37595
34	0.075	-1.18	97.0301	-3.46445
35	0.075	-1.16505	98.3875	-3.55182
36	0.075	-1.1455	99.6996	-3.63774
37	0.075	-1.13113	100.979	-3.72257
38	0.075	-1.11232	102.216	-3.806
39	0.075	-1.09847	103.423	-3.88838
40	0.075	-1.08032	104.59	-3.96941
41	0.075	-1.06694	105.728	-4.04943
42	0.075	-1.04939	106.83	-4.12813
43	0.075	-1.03643	107.904	-4.20586
44	0.075	-1.01943	108.943	-4.28232
45	0.075	-1.00687	109.957	-4.35783
46	0.075	-0.990356	110.938	-4.43211
47	0.075	-0.97815	111.894	-4.50547
48	0.075	-0.9621	112.82	-4.57763
49	0.075	-0.950222	113.723	-4.6489
50	0.075	-0.93459	114.596	-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	0.16	-0.423405	135.512	-7.02601
97	0.19	-0.412463	135.682	-7.10438
98	0.22	-0.40429	135.846	-7.19332
99	0.24	-0.393433	136.001	-7.28775
100	0.25	-0.385321	136.149	-7.38408
101	0.26	-0.374544	136.289	-7.48146
102	0.27	-0.36649	136.424	-7.58041
103	0.28	-0.355788	136.55	-7.68003
104	0.29	-0.347787	136.671	-7.78089
105	0.31	-0.337155	136.785	-7.88541
106	0.35	-0.329206	136.893	-8.00063
107	0.5	-0.318639	136.995	-8.15995
108	0.5	-0.310738	137.091	-8.31532
109	0.5	-0.300232	137.182	-8.46544
110	0.5	-0.292375	137.267	-8.61162
111	0.5	-0.281926	137.346	-8.75259
112	0.5	-0.27411	137.422	-8.88964
113	0.5	-0.263715	137.491	-9.0215

114	0.5	-0.253347	137.555	-9.14817
115	0.5	-0.24559	137.616	-9.27097
116	0.5	-0.235269	137.671	-9.3886
117	0.5	-0.227545	137.723	-9.50237
118	0.5	-0.217267	137.77	-9.61101
119	0.5	-0.209575	137.814	-9.71579
120	0.5	-0.199336	137.854	-9.81546
121	0.5	-0.191671	137.89	-9.9113
122	0.5	-0.181468	137.923	-10.002
123	0.5	-0.173829	137.954	-10.0889
124	0.5	-0.163659	137.98	-10.1708
125	0.5	-0.156042	138.005	-10.2488
126	0.5	-0.1459	138.026	-10.3217
127	0.5	-0.138305	138.045	-10.3909
128	0.5	-0.128189	138.062	-10.455
129	0.5	-0.12061	138.076	-10.5153
130	0.5	-0.110516	138.088	-10.5706
131	0.5	-0.102953	138.099	-10.622
132	0.5	-0.0928787	138.108	-10.6685
133	0.5	-0.0853288	138.115	-10.7111
134	0.5	-0.0752698	138.12	-10.7488
135	0.5	-0.0677301	138.125	-10.7826
136	0.5	-0.0576847	138.128	-10.8115
137	0.5	-0.0501541	138.131	-10.8366
138	0.5	-0.0401167	138.132	-10.8566
139	0.5	-0.0325917	138.134	-10.8729
140	0.5	-0.0225612	138.134	-10.8842
141	0.5	-0.0150408	138.134	-10.8917
142	0.5	-0.00501359	138.134	-10.8942
143	0.5	0.00501359	138.134	-10.8917
144	0.5	0.0150408	138.135	-10.8842
145	0.5	0.0225612	138.135	-10.8729
146	0.5	0.0325917	138.136	-10.8566
147	0.5	0.0401167	138.138	-10.8366
148	0.5	0.0501541	138.14	-10.8115
149	0.5	0.0576847	138.144	-10.7826
150	0.5	0.0677301	138.148	-10.7488
151	0.5	0.0752698	138.154	-10.7111
152	0.5	0.0853288	138.161	-10.6685
153	0.5	0.0928787	138.17	-10.622
154	0.5	0.102953	138.18	-10.5706
155	0.5	0.110516	138.193	-10.5153
156	0.5	0.12061	138.207	-10.455
157	0.5	0.128189	138.224	-10.3909
158	0.5	0.138305	138.243	-10.3217
159	0.5	0.1459	138.264	-10.2488
160	0.5	0.156042	138.288	-10.1708
161	0.5	0.163659	138.315	-10.0889
162	0.5	0.173829	138.345	-10.002
163	0.5	0.181468	138.378	-9.9113
164	0.5	0.191671	138.415	-9.81546
165	0.5	0.199336	138.455	-9.71579
166	0.5	0.209575	138.499	-9.61101
167	0.5	0.217267	138.546	-9.50237
168	0.5	0.227545	138.598	-9.3886
169	0.5	0.235269	138.653	-9.27097
170	0.5	0.24559	138.713	-9.14817
171	0.5	0.253347	138.777	-9.0215
172	0.5	0.263715	138.847	-8.88964
173	0.5	0.27411	138.922	-8.75259
174	0.5	0.281926	139.002	-8.61162
175	0.5	0.292375	139.087	-8.46544

176	0.5	0.300232	139.177	-8.31532
177	0.5	0.310738	139.274	-8.15995
178	0.5	0.318639	139.375	-8.00063
179	0.5	0.329206	139.484	-7.83603
180	0.5	0.337155	139.597	-7.66745
181	0.5	0.347787	139.718	-7.49356
182	0.5	0.355788	139.845	-7.31566
183	0.5	0.36649	139.979	-7.13242
184	0.5	0.374544	140.12	-6.94515
185	0.5	0.385321	140.268	-6.75249
186	0.5	0.393433	140.423	-6.55577
187	0.5	0.40429	140.586	-6.35362
188	0.5	0.412463	140.756	-6.14739
189	0.5	0.423405	140.936	-5.93569
190	0.5	0.431644	141.122	-5.71987
191	0.5	0.442676	141.318	-5.49853
192	0.5	0.450985	141.521	-5.27304
193	0.5	0.462114	141.735	-5.04198
194	0.5	0.470498	141.956	-4.80673
195	0.5	0.481728	142.188	-4.56587
196	0.5	0.490189	142.429	-4.32077
197	0.5	0.501527	142.68	-4.07001
198	0.5	0.510074	142.94	-3.81497
199	0.5	0.521527	143.212	-3.55421
200	0.5	0.530162	143.493	-3.28913
201	0.5	0.541736	143.787	-3.01826
202	0.5	0.550465	144.09	-2.74303
203	0.5	0.56217	144.406	-2.46194
204	0.5	0.570999	144.732	-2.17644
205	0.5	0.582841	145.072	-1.88502
206	0.5	0.591776	145.422	-1.58913
207	0.5	0.603765	145.786	-1.28725
208	0.5	0.612813	146.162	-0.980846
209	0.5	0.624956	146.552	-0.668368
210	0.5	0.634124	146.955	-0.351306
211	0.5	0.646431	147.372	-0.0280905
212	0.5	0.655726	147.802	0.299773
213	0.5	0.668209	148.249	0.633877
214	0.5	0.677639	148.708	0.972697
215	0.5	0.690309	149.185	1.31785
216	0.5	0.699883	149.674	1.66779
217	0.5	0.712751	150.182	2.02417
218	0.5	0.722479	150.704	2.38541
219	0.5	0.735557	151.245	2.75319
220	0.5	0.745449	151.801	3.12591
221	0.5	0.758753	152.377	3.50529
222	0.5	0.768821	152.968	3.8897
223	0.5	0.782366	153.58	4.28088
224	0.5	0.792618	154.208	4.67719
225	0.5	0.806422	154.859	5.0804
226	0.5	0.816874	155.526	5.48884
227	0.5	0.830953	156.216	5.90431
228	0.5	0.841621	156.925	6.32512
229	0.5	0.855996	157.657	6.75312
230	0.5	0.87055	158.415	7.1884
231	0.5	0.881587	159.193	7.62919
232	0.5	0.896473	159.996	8.07743
233	0.5	0.907769	160.82	8.53131
234	0.5	0.923014	161.672	8.99282
235	0.5	0.93459	162.546	9.46011
236	0.5	0.950222	163.449	9.93523
237	0.5	0.9621	164.374	10.4163

238	0.5	0.97815	165.331	10.9054	
239	0.5	0.990356		166.312	11.4005
240	0.5	1.00687	167.326	11.904	
241	0.5	1.01943	168.365	12.4137	
242	0.5	1.03643	169.439	12.9319	
243	0.5	1.04939	170.54	13.4566	
244	0.5	1.06694	171.679	13.9901	
245	0.5	1.08032	172.846	14.5302	
246	0.5	1.09847	174.052	15.0794	
247	0.5	1.11232	175.29	15.6356	
248	0.5	1.13113	176.569	16.2012	
249	0.5	1.1455	177.881	16.7739	
250	0.5	1.16505	179.239	17.3564	
251	0.5	1.18	180.631	17.9465	
252	0.5	1.20036	182.072	18.5466	
253	0.5	1.21596	183.55	19.1546	
254	0.5	1.23724	185.081	19.7732	
255	0.5	1.25357	186.653	20.4	
256	0.5	1.27588	188.28	21.0379	
257	0.5	1.29303	189.952	21.6845	
258	0.5	1.31652	191.686	22.3427	
259	0.5	1.33462	193.467	23.01	
260	0.5	1.35946	195.315	23.6898	
261	0.5	1.37866	197.216	24.3791	
262	0.5	1.40507	199.19	25.0816	
263	0.5	1.42554	201.222	25.7944	
264	0.5	1.4538	203.336	26.5213	
265	0.5	1.47579	205.514	27.2592	
266	0.5	1.50626	207.782	28.0123	
267	0.5	1.53007	210.123	28.7774	
268	0.5	1.56322	212.567	29.559	
269	0.5	1.58927	215.093	30.3536	
270	0.5	1.62576	217.736	31.1665	
271	0.5	1.65463	220.474	31.9938	
272	0.5	1.6954	223.348	32.8415	
273	0.5	1.72793	226.334	33.7055	
274	0.5	1.77438	229.482	34.5927	
275	0.5	1.81191	232.765	35.4986	
276	0.5	1.86629	236.248	36.4318	
277	0.5	1.91103	239.9	37.3873	
278	0.5	1.97737	243.81	38.376	
279	0.5	2.03352	247.946	39.3927	
280	0.5	2.12007	252.44	40.4528	
281	0.5	2.19728	257.268	41.5514	
282	0.5	2.32634	262.68	42.7146	
283	0.5	2.45727	268.718	43.9432	
284	0.5	2.74777	276.269	45.3171	

Data Set Standard Deviation = 0.201585
Numerator = 2053.64
Denominator = 3177.14
W Statistic = 0.646381 = 2053.64 / 3177.14

5% Critical value of 0.976 exceeds 0.646381
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.646381
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 = 0.801598
0.801598 < 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	-2.12007	119.25	318.03
6	0.075		0.0210526	-2.03352	119.25	313.804
7	0.075		0.0245614	-1.97737	119.25	311.062
8	0.075		0.0280702	-1.91103	119.25	307.822
9	0.075		0.0315789	-1.86629	119.25	305.637
10	0.075		0.0350877	-1.81191	119.25	302.982
11	0.075		0.0385965	-1.77438	119.25	301.149
12	0.075		0.0421053	-1.72793	119.25	298.881
13	0.075		0.045614	-1.6954	119.25	297.292
14	0.075		0.0491228	-1.65463	119.25	295.301
15	0.075		0.0526316	-1.62576	119.25	293.891
16	0.075		0.0561404	-1.58927	119.25	292.109
17	0.075		0.0596491	-1.56322	119.25	290.837
18	0.075		0.0631579	-1.53007	119.25	289.218
19	0.075		0.0666667	-1.50626	119.25	288.056
20	0.075		0.0701754	-1.47579	119.25	286.568
21	0.075		0.0736842	-1.4538	119.25	285.494
22	0.075		0.077193	-1.42554	119.25	284.114
23	0.075		0.0807018	-1.40507	119.25	283.114
24	0.075		0.0842105	-1.37866	119.25	281.824
25	0.075		0.0877193	-1.35946	119.25	280.887
26	0.075		0.0912281	-1.33462	119.25	279.674
27	0.075		0.0947368	-1.31652	119.25	278.79
28	0.075		0.0982456	-1.29303	119.25	277.643
29	0.075		0.101754	-1.27588	119.25	276.805
30	0.075		0.105263	-1.25357	119.25	275.716
31	0.075		0.108772	-1.23724	119.25	274.918
32	0.075		0.112281	-1.21596	119.25	273.879
33	0.075		0.115789	-1.20036	119.25	273.118
34	0.075		0.119298	-1.18	119.25	272.123
35	0.075		0.122807	-1.16505	119.25	271.393
36	0.075		0.126316	-1.1455	119.25	270.439
37	0.075		0.129825	-1.13113	119.25	269.737
38	0.075		0.133333	-1.11232	119.25	268.818
39	0.075		0.136842	-1.09847	119.25	268.142
40	0.075		0.140351	-1.08032	119.25	267.256
41	0.075		0.14386	-1.06694	119.25	266.602
42	0.075		0.147368	-1.04939	119.25	265.745
43	0.075		0.150877	-1.03643	119.25	265.112
44	0.075		0.154386	-1.01943	119.25	264.282
45	0.075		0.157895	-1.00687	119.25	263.669
46	0.075		0.161404	-0.990356	119.25	262.862
47	0.075		0.164912	-0.97815	119.25	262.266
48	0.075		0.168421	-0.9621	119.25	261.483

49	0.075	0.17193	-0.950222	119.25	260.903
50	0.075	0.175439	-0.93459	119.25	260.139
51	0.075	0.178947	-0.923014	119.25	259.574
52	0.075	0.182456	-0.907769	119.25	258.829
53	0.075	0.185965	-0.896473	119.25	258.278
54	0.075	0.189474	-0.881587	119.25	257.551
55	0.075	0.192982	-0.87055	119.25	257.012
56	0.075	0.196491	-0.855996	119.25	256.301
57	0.075	0.2	-0.841621	119.25	255.599
58	0.075	0.203509	-0.830953	119.25	255.078
59	0.075	0.207018	-0.816874	119.25	254.391
60	0.075	0.210526	-0.806422	119.25	253.88
61	0.075	0.214035	-0.792618	119.25	253.206
62	0.075	0.217544	-0.782366	119.25	252.706
63	0.075	0.221053	-0.768821	119.25	252.044
64	0.075	0.224561	-0.758753	119.25	251.552
65	0.075	0.22807	-0.745449	119.25	250.903
66	0.075	0.231579	-0.735557	119.25	250.42
67	0.075	0.235088	-0.722479	119.25	249.781
68	0.075	0.238596	-0.712751	119.25	249.306
69	0.075	0.242105	-0.699883	119.25	248.678
70	0.075	0.245614	-0.690309	119.25	248.21
71	0.075	0.249123	-0.677639	119.25	247.591
72	0.075	0.252632	-0.668209	119.25	247.131
73	0.075	0.25614	-0.655726	119.25	246.521
74	0.075	0.259649	-0.646431	119.25	246.067
75	0.075	0.263158	-0.634124	119.25	245.466
76	0.075	0.266667	-0.624956	119.25	245.019
77	0.075	0.270175	-0.612813	119.25	244.426
78	0.075	0.273684	-0.603765	119.25	243.984
79	0.075	0.277193	-0.591776	119.25	243.398
80	0.075	0.280702	-0.582841	119.25	242.962
81	0.075	0.284211	-0.570999	119.25	242.384
82	0.075	0.287719	-0.56217	119.25	241.953
83	0.075	0.291228	-0.550465	119.25	241.381
84	0.075	0.294737	-0.541736	119.25	240.955
85	0.075	0.298246	-0.530162	119.25	240.39
86	0.075	0.301754	-0.521527	119.25	239.968
87	0.075	0.305263	-0.510074	119.25	239.409
88	0.075	0.308772	-0.501527	119.25	238.991
89	0.075	0.312281	-0.490189	119.25	238.438
90	0.075	0.315789	-0.481728	119.25	238.024
91	0.075	0.319298	-0.470498	119.25	237.476
92	0.075	0.322807	-0.462114	119.25	237.067
93	0.075	0.326316	-0.450985	119.25	236.523
94	0.075	0.329825	-0.442676	119.25	236.117
95	0.075	0.333333	-0.431644	119.25	235.579
96	0.16	0.336842	-0.423405	210.2	235.176
97	0.19	0.340351	-0.412463	242.3	234.642
98	0.22	0.34386	-0.40429	274.4	234.243
99	0.24	0.347368	-0.393433	295.8	233.713
100	0.25	0.350877	-0.385321	306.5	233.317
101	0.26	0.354386	-0.374544	317.2	232.79
102	0.27	0.357895	-0.36649	327.9	232.397
103	0.28	0.361404	-0.355788	338.6	231.874
104	0.29	0.364912	-0.347787	349.3	231.484
105	0.31	0.368421	-0.337155	370.7	230.964
106	0.35	0.37193	-0.329206	413.5	230.576
107	0.5	0.375439	-0.318639	574	230.06
108	0.5	0.378947	-0.310738	574	229.674
109	0.5	0.382456	-0.300232	574	229.161
110	0.5	0.385965	-0.292375	574	228.778

111	0.5	0.389474	-0.281926	574	228.267
112	0.5	0.392982	-0.27411574	227.886	
113	0.5	0.396491	-0.263715	574	227.378
114	0.5	0.4	-0.253347	574	226.872
115	0.5	0.403509	-0.24559574	226.493	
116	0.5	0.407018	-0.235269	574	225.989
117	0.5	0.410526	-0.227545	574	225.612
118	0.5	0.414035	-0.217267	574	225.11
119	0.5	0.417544	-0.209575	574	224.734
120	0.5	0.421053	-0.199336	574	224.234
121	0.5	0.424561	-0.191671	574	223.86
122	0.5	0.42807	-0.181468	574	223.362
123	0.5	0.431579	-0.173829	574	222.989
124	0.5	0.435088	-0.163659	574	222.492
125	0.5	0.438596	-0.156042	574	222.12
126	0.5	0.442105	-0.1459	574	221.625
127	0.5	0.445614	-0.138305	574	221.254
128	0.5	0.449123	-0.128189	574	220.76
129	0.5	0.452632	-0.12061574	220.39	
130	0.5	0.45614	-0.110516	574	219.897
131	0.5	0.459649	-0.102953	574	219.528
132	0.5	0.463158	-0.0928787	574	219.036
133	0.5	0.466667	-0.0853288	574	218.667
134	0.5	0.470175	-0.0752698	574	218.176
135	0.5	0.473684	-0.0677301	574	217.807
136	0.5	0.477193	-0.0576847	574	217.317
137	0.5	0.480702	-0.0501541	574	216.949
138	0.5	0.484211	-0.0401167	574	216.459
139	0.5	0.487719	-0.0325917	574	216.092
140	0.5	0.491228	-0.0225612	574	215.602
141	0.5	0.494737	-0.0150408	574	215.234
142	0.5	0.498246	-0.00501359	574	214.745
143	0.5	0.501754	0.00501359	574	214.255
144	0.5	0.505263	0.0150408	574	213.766
145	0.5	0.508772	0.0225612	574	213.398
146	0.5	0.512281	0.0325917	574	212.908
147	0.5	0.515789	0.0401167	574	212.541
148	0.5	0.519298	0.0501541	574	212.051
149	0.5	0.522807	0.0576847	574	211.683
150	0.5	0.526316	0.0677301	574	211.193
151	0.5	0.529825	0.0752698	574	210.824
152	0.5	0.533333	0.0853288	574	210.333
153	0.5	0.536842	0.0928787	574	209.964
154	0.5	0.540351	0.102953	574	209.472
155	0.5	0.54386	0.110516	574	209.103
156	0.5	0.547368	0.12061	574	208.61
157	0.5	0.550877	0.128189	574	208.24
158	0.5	0.554386	0.138305	574	207.746
159	0.5	0.557895	0.1459	574	207.375
160	0.5	0.561404	0.156042	574	206.88
161	0.5	0.564912	0.163659	574	206.508
162	0.5	0.568421	0.173829	574	206.011
163	0.5	0.57193	0.181468	574	205.638
164	0.5	0.575439	0.191671	574	205.14
165	0.5	0.578947	0.199336	574	204.766
166	0.5	0.582456	0.209575	574	204.266
167	0.5	0.585965	0.217267	574	203.89
168	0.5	0.589474	0.227545	574	203.388
169	0.5	0.592982	0.235269	574	203.011
170	0.5	0.596491	0.24559	574	202.507
171	0.5	0.6	0.253347	574	202.128
172	0.5	0.603509	0.263715	574	201.622

173	0.5	0.607018	0.27411	574	201.114
174	0.5	0.610526	0.281926	574	200.733
175	0.5	0.614035	0.292375	574	200.222
176	0.5	0.617544	0.300232	574	199.839
177	0.5	0.621053	0.310738	574	199.326
178	0.5	0.624561	0.318639	574	198.94
179	0.5	0.62807	0.329206	574	198.424
180	0.5	0.631579	0.337155	574	198.036
181	0.5	0.635088	0.347787	574	197.516
182	0.5	0.638596	0.355788	574	197.126
183	0.5	0.642105	0.36649	574	196.603
184	0.5	0.645614	0.374544	574	196.21
185	0.5	0.649123	0.385321	574	195.683
186	0.5	0.652632	0.393433	574	195.287
187	0.5	0.65614	0.40429	574	194.757
188	0.5	0.659649	0.412463	574	194.358
189	0.5	0.663158	0.423405	574	193.824
190	0.5	0.666667	0.431644	574	193.421
191	0.5	0.670175	0.442676	574	192.883
192	0.5	0.673684	0.450985	574	192.477
193	0.5	0.677193	0.462114	574	191.933
194	0.5	0.680702	0.470498	574	191.524
195	0.5	0.684211	0.481728	574	190.976
196	0.5	0.687719	0.490189	574	190.562
197	0.5	0.691228	0.501527	574	190.009
198	0.5	0.694737	0.510074	574	189.591
199	0.5	0.698246	0.521527	574	189.032
200	0.5	0.701754	0.530162	574	188.61
201	0.5	0.705263	0.541736	574	188.045
202	0.5	0.708772	0.550465	574	187.619
203	0.5	0.712281	0.56217	574	187.047
204	0.5	0.715789	0.570999	574	186.616
205	0.5	0.719298	0.582841	574	186.038
206	0.5	0.722807	0.591776	574	185.602
207	0.5	0.726316	0.603765	574	185.016
208	0.5	0.729825	0.612813	574	184.574
209	0.5	0.733333	0.624956	574	183.981
210	0.5	0.736842	0.634124	574	183.534
211	0.5	0.740351	0.646431	574	182.933
212	0.5	0.74386	0.655726	574	182.479
213	0.5	0.747368	0.668209	574	181.869
214	0.5	0.750877	0.677639	574	181.409
215	0.5	0.754386	0.690309	574	180.79
216	0.5	0.757895	0.699883	574	180.322
217	0.5	0.761404	0.712751	574	179.694
218	0.5	0.764912	0.722479	574	179.219
219	0.5	0.768421	0.735557	574	178.58
220	0.5	0.77193	0.745449	574	178.097
221	0.5	0.775439	0.758753	574	177.448
222	0.5	0.778947	0.768821	574	176.956
223	0.5	0.782456	0.782366	574	176.294
224	0.5	0.785965	0.792618	574	175.794
225	0.5	0.789474	0.806422	574	175.12
226	0.5	0.792982	0.816874	574	174.609
227	0.5	0.796491	0.830953	574	173.922
228	0.5	0.8	0.841621	574	173.401
229	0.5	0.803509	0.855996	574	172.699
230	0.5	0.807018	0.87055	574	171.988
231	0.5	0.810526	0.881587	574	171.449
232	0.5	0.814035	0.896473	574	170.722
233	0.5	0.817544	0.907769	574	170.171
234	0.5	0.821053	0.923014	574	169.426

235	0.5	0.824561	0.93459	574	168.861	
236	0.5	0.82807	0.950222	574	168.097	
237	0.5	0.831579	0.9621	574	167.517	
238	0.5	0.835088	0.97815	574	166.734	
239	0.5	0.838596	0.990356	574	166.138	
240	0.5	0.842105	1.00687	574	165.331	
241	0.5	0.845614	1.01943	574	164.718	
242	0.5	0.849123	1.03643	574	163.888	
243	0.5	0.852632	1.04939	574	163.255	
244	0.5	0.85614	1.06694	574	162.398	
245	0.5	0.859649	1.08032	574	161.744	
246	0.5	0.863158	1.09847	574	160.858	
247	0.5	0.866667	1.11232	574	160.182	
248	0.5	0.870175	1.13113	574	159.263	
249	0.5	0.873684	1.1455	574	158.561	
250	0.5	0.877193	1.16505	574	157.607	
251	0.5	0.880702	1.18	574	156.877	
252	0.5	0.884211	1.20036	574	155.882	
253	0.5	0.887719	1.21596	574	155.121	
254	0.5	0.891228	1.23724	574	154.082	
255	0.5	0.894737	1.25357	574	153.284	
256	0.5	0.898246	1.27588	574	152.195	
257	0.5	0.901754	1.29303	574	151.357	
258	0.5	0.905263	1.31652	574	150.21	
259	0.5	0.908772	1.33462	574	149.326	
260	0.5	0.912281	1.35946	574	148.113	
261	0.5	0.915789	1.37866	574	147.176	
262	0.5	0.919298	1.40507	574	145.886	
263	0.5	0.922807	1.42554	574	144.886	
264	0.5	0.926316	1.4538	574	143.506	
265	0.5	0.929825	1.47579	574	142.432	
266	0.5	0.933333	1.50626	574	140.944	
267	0.5	0.936842	1.53007	574	139.782	
268	0.5	0.940351	1.56322	574	138.163	
269	0.5	0.94386	1.58927	574	136.891	
270	0.5	0.947368	1.62576	574	135.109	
271	0.5	0.950877	1.65463	574	133.699	
272	0.5	0.954386	1.6954	574	131.708	
273	0.5	0.957895	1.72793	574	130.119	
274	0.5	0.961404	1.77438	574	127.851	
275	0.5	0.964912	1.81191	574	126.018	
276	0.5	0.968421	1.86629	574	123.363	
277	0.5	0.97193	1.91103	574	121.178	
278	0.5	0.975439	1.97737	574	117.938	
279	0.5	0.978947	2.03352	574	115.196	
280	0.5	0.982456	2.12007	574	110.97	
281	0.5	0.985965	2.19728	574	107.199	
282	0.5	0.989474	2.32634	574	100.897	
283	0.5	0.992982	2.45727	574	94.5032	
284	0.5	0.996491	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 = 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	-1.83258	-0.462114	134.747	261.734
93	-1.66073	-0.450985	134.951	262.483
94	-1.51413	-0.442676	135.147	263.153
95	-1.42712	-0.431644	135.333	263.769
96	-1.38629	-0.423405	135.512	264.356
97	-1.34707	-0.412463	135.682	264.912
98	-1.30933	-0.40429	135.846	265.441
99	-1.27297	-0.393433	136.001	265.942
100	-1.23787	-0.385321	136.149	266.419
101	-1.17118	-0.374544	136.289	266.857
102	-1.04982	-0.36649	136.424	267.242
103	-0.693147	-0.355788	136.55	267.489
104	-0.693147	-0.347787	136.671	267.73
105	-0.693147	-0.337155	136.785	267.964
106	-0.693147	-0.329206	136.893	268.192
107	-0.693147	-0.318639	136.995	268.413
108	-0.693147	-0.310738	137.091	268.628
109	-0.693147	-0.300232	137.182	268.836
110	-0.693147	-0.292375	137.267	269.039
111	-0.693147	-0.281926	137.346	269.234
112	-0.693147	-0.27411	137.422	269.424
113	-0.693147	-0.263715	137.491	269.607

114	-0.693147	-0.253347	137.555	269.783
115	-0.693147	-0.24559	137.616	269.953
116	-0.693147	-0.235269	137.671	270.116
117	-0.693147	-0.227545	137.723	270.274
118	-0.693147	-0.217267	137.77	270.424
119	-0.693147	-0.209575	137.814	270.569
120	-0.693147	-0.199336	137.854	270.708
121	-0.693147	-0.191671	137.89	270.84
122	-0.693147	-0.181468	137.923	270.966
123	-0.693147	-0.173829	137.954	271.087
124	-0.693147	-0.163659	137.98	271.2
125	-0.693147	-0.156042	138.005	271.308
126	-0.693147	-0.1459	138.026	271.409
127	-0.693147	-0.138305	138.045	271.505
128	-0.693147	-0.128189	138.062	271.594
129	-0.693147	-0.12061	138.076	271.678
130	-0.693147	-0.110516	138.088	271.754
131	-0.693147	-0.102953	138.099	271.826
132	-0.693147	-0.0928787	138.108	271.89
133	-0.693147	-0.0853288	138.115	271.949
134	-0.693147	-0.0752698	138.12	272.001
135	-0.693147	-0.0677301	138.125	272.048
136	-0.693147	-0.0576847	138.128	272.088
137	-0.693147	-0.0501541	138.131	272.123
138	-0.693147	-0.0401167	138.132	272.151
139	-0.693147	-0.0325917	138.134	272.174
140	-0.693147	-0.0225612	138.134	272.189
141	-0.693147	-0.0150408	138.134	272.2
142	-0.693147	-0.00501359	138.134	272.203
143	-0.693147	0.00501359	138.134	272.2
144	-0.693147	0.0150408	138.135	272.189
145	-0.693147	0.0225612	138.135	272.174
146	-0.693147	0.0325917	138.136	272.151
147	-0.693147	0.0401167	138.138	272.123
148	-0.693147	0.0501541	138.14	272.088
149	-0.693147	0.0576847	138.144	272.048
150	-0.693147	0.0677301	138.148	272.001
151	-0.693147	0.0752698	138.154	271.949
152	-0.693147	0.0853288	138.161	271.89
153	-0.693147	0.0928787	138.17	271.826
154	-0.693147	0.102953	138.18	271.754
155	-0.693147	0.110516	138.193	271.678
156	-0.693147	0.12061	138.207	271.594
157	-0.693147	0.128189	138.224	271.505
158	-0.693147	0.138305	138.243	271.409
159	-0.693147	0.1459	138.264	271.308
160	-0.693147	0.156042	138.288	271.2
161	-0.693147	0.163659	138.315	271.087
162	-0.693147	0.173829	138.345	270.966
163	-0.693147	0.181468	138.378	270.84
164	-0.693147	0.191671	138.415	270.708
165	-0.693147	0.199336	138.455	270.569
166	-0.693147	0.209575	138.499	270.424
167	-0.693147	0.217267	138.546	270.274
168	-0.693147	0.227545	138.598	270.116
169	-0.693147	0.235269	138.653	269.953
170	-0.693147	0.24559	138.713	269.783
171	-0.693147	0.253347	138.777	269.607
172	-0.693147	0.263715	138.847	269.424
173	-0.693147	0.27411	138.922	269.234
174	-0.693147	0.281926	139.002	269.039
175	-0.693147	0.292375	139.087	268.836

176	-0.693147	0.300232	139.177	268.628
177	-0.693147	0.310738	139.274	268.413
178	-0.693147	0.318639	139.375	268.192
179	-0.693147	0.329206	139.484	267.964
180	-0.693147	0.337155	139.597	267.73
181	-0.693147	0.347787	139.718	267.489
182	-0.693147	0.355788	139.845	267.242
183	-0.693147	0.36649	139.979	266.988
184	-0.693147	0.374544	140.12	266.728
185	-0.693147	0.385321	140.268	266.461
186	-0.693147	0.393433	140.423	266.189
187	-0.693147	0.40429	140.586	265.908
188	-0.693147	0.412463	140.756	265.623
189	-0.693147	0.423405	140.936	265.329
190	-0.693147	0.431644	141.122	265.03
191	-0.693147	0.442676	141.318	264.723
192	-0.693147	0.450985	141.521	264.41
193	-0.693147	0.462114	141.735	264.09
194	-0.693147	0.470498	141.956	263.764
195	-0.693147	0.481728	142.188	263.43
196	-0.693147	0.490189	142.429	263.09
197	-0.693147	0.501527	142.68	262.743
198	-0.693147	0.510074	142.94	262.389
199	-0.693147	0.521527	143.212	262.028
200	-0.693147	0.530162	143.493	261.66
201	-0.693147	0.541736	143.787	261.285
202	-0.693147	0.550465	144.09	260.903
203	-0.693147	0.56217	144.406	260.513
204	-0.693147	0.570999	144.732	260.118
205	-0.693147	0.582841	145.072	259.714
206	-0.693147	0.591776	145.422	259.303
207	-0.693147	0.603765	145.786	258.885
208	-0.693147	0.612813	146.162	258.46
209	-0.693147	0.624956	146.552	258.027
210	-0.693147	0.634124	146.955	257.587
211	-0.693147	0.646431	147.372	257.139
212	-0.693147	0.655726	147.802	256.685
213	-0.693147	0.668209	148.249	256.222
214	-0.693147	0.677639	148.708	255.752
215	-0.693147	0.690309	149.185	255.274
216	-0.693147	0.699883	149.674	254.788
217	-0.693147	0.712751	150.182	254.294
218	-0.693147	0.722479	150.704	253.794
219	-0.693147	0.735557	151.245	253.284
220	-0.693147	0.745449	151.801	252.767
221	-0.693147	0.758753	152.377	252.241
222	-0.693147	0.768821	152.968	251.708
223	-0.693147	0.782366	153.58	251.166
224	-0.693147	0.792618	154.208	250.617
225	-0.693147	0.806422	154.859	250.058
226	-0.693147	0.816874	155.526	249.491
227	-0.693147	0.830953	156.216	248.915
228	-0.693147	0.841621	156.925	248.332
229	-0.693147	0.855996	157.657	247.739
230	-0.693147	0.87055	158.415	247.135
231	-0.693147	0.881587	159.193	246.524
232	-0.693147	0.896473	159.996	245.903
233	-0.693147	0.907769	160.82	245.274
234	-0.693147	0.923014	161.672	244.634
235	-0.693147	0.93459	162.546	243.986
236	-0.693147	0.950222	163.449	243.327
237	-0.693147	0.9621	164.374	242.66

238	-0.693147		0.97815	165.331	241.982
239	-0.693147		0.990356		166.312 241.296
240	-0.693147		1.00687	167.326	240.598
241	-0.693147		1.01943	168.365	239.891
242	-0.693147		1.03643	169.439	239.173
243	-0.693147		1.04939	170.54	238.446
244	-0.693147		1.06694	171.679	237.706
245	-0.693147		1.08032	172.846	236.957
246	-0.693147		1.09847	174.052	236.196
247	-0.693147		1.11232	175.29	235.425
248	-0.693147		1.13113	176.569	234.641
249	-0.693147		1.1455	177.881	233.847
250	-0.693147		1.16505	179.239	233.039
251	-0.693147		1.18	180.631	232.221
252	-0.693147		1.20036	182.072	231.389
253	-0.693147		1.21596	183.55	230.547
254	-0.693147		1.23724	185.081	229.689
255	-0.693147		1.25357	186.653	228.82
256	-0.693147		1.27588	188.28	227.936
257	-0.693147		1.29303	189.952	227.039
258	-0.693147		1.31652	191.686	226.127
259	-0.693147		1.33462	193.467	225.202
260	-0.693147		1.35946	195.315	224.259
261	-0.693147		1.37866	197.216	223.304
262	-0.693147		1.40507	199.19	222.33
263	-0.693147		1.42554	201.222	221.342
264	-0.693147		1.4538	203.336	220.334
265	-0.693147		1.47579	205.514	219.311
266	-0.693147		1.50626	207.782	218.267
267	-0.693147		1.53007	210.123	217.207
268	-0.693147		1.56322	212.567	216.123
269	-0.693147		1.58927	215.093	215.021
270	-0.693147		1.62576	217.736	213.895
271	-0.693147		1.65463	220.474	212.748
272	-0.693147		1.6954	223.348	211.572
273	-0.693147		1.72793	226.334	210.375
274	-0.693147		1.77438	229.482	209.145
275	-0.693147		1.81191	232.765	207.889
276	-0.693147		1.86629	236.248	206.595
277	-0.693147		1.91103	239.9	205.271
278	-0.693147		1.97737	243.81	203.9
279	-0.693147		2.03352	247.946	202.491
280	-0.693147		2.12007	252.44	201.021
281	0	2.19728	257.268	201.021	
282	0	2.32634	262.68	201.021	
283	0	2.45727	268.718	201.021	
284	0	2.74777	276.269	201.021	

Data Set Standard Deviation = 0.890241
Numerator = 40409.5
Denominator = 61963.1
W Statistic = 0.652154 = 40409.5 / 61963.1

5% Critical value of 0.976 exceeds 0.652154
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.652154
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 = 0.805675
0.805675 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.590270	0.00350877	-2.74777	112.069	348.683
2	-2.590270	0.00701754	-2.45727	112.069	334.497
3	-2.590270	0.0105263	-2.32634	112.069	328.103
4	-2.590270	0.0140351	-2.19728	112.069	321.801
5	-2.590270	0.0175439	-2.12007	112.069	318.03
6	-2.590270	0.0210526	-2.03352	112.069	313.804
7	-2.590270	0.0245614	-1.97737	112.069	311.062
8	-2.590270	0.0280702	-1.91103	112.069	307.822
9	-2.590270	0.0315789	-1.86629	112.069	305.637
10	-2.590270	0.0350877	-1.81191	112.069	302.982
11	-2.590270	0.0385965	-1.77438	112.069	301.149
12	-2.590270	0.0421053	-1.72793	112.069	298.881
13	-2.590270	0.045614	-1.6954	112.069	297.292
14	-2.590270	0.0491228	-1.65463	112.069	295.301
15	-2.590270	0.0526316	-1.62576	112.069	293.891
16	-2.590270	0.0561404	-1.58927	112.069	292.109
17	-2.590270	0.0596491	-1.56322	112.069	290.837
18	-2.590270	0.0631579	-1.53007	112.069	289.218
19	-2.590270	0.0666667	-1.50626	112.069	288.056
20	-2.590270	0.0701754	-1.47579	112.069	286.568
21	-2.590270	0.0736842	-1.4538	112.069	285.494
22	-2.590270	0.077193	-1.42554	112.069	284.114
23	-2.590270	0.0807018	-1.40507	112.069	283.114
24	-2.590270	0.0842105	-1.37866	112.069	281.824
25	-2.590270	0.0877193	-1.35946	112.069	280.887
26	-2.590270	0.0912281	-1.33462	112.069	279.674
27	-2.590270	0.0947368	-1.31652	112.069	278.79
28	-2.590270	0.0982456	-1.29303	112.069	277.643
29	-2.590270	0.101754	-1.27588	112.069	276.805
30	-2.590270	0.105263	-1.25357	112.069	275.716
31	-2.590270	0.108772	-1.23724	112.069	274.918
32	-2.590270	0.112281	-1.21596	112.069	273.879
33	-2.590270	0.115789	-1.20036	112.069	273.118
34	-2.590270	0.119298	-1.18	112.069	272.123
35	-2.590270	0.122807	-1.16505	112.069	271.393
36	-2.590270	0.126316	-1.1455	112.069	270.439
37	-2.590270	0.129825	-1.13113	112.069	269.737
38	-2.590270	0.133333	-1.11232	112.069	268.818
39	-2.590270	0.136842	-1.09847	112.069	268.142
40	-2.590270	0.140351	-1.08032	112.069	267.256
41	-2.590270	0.14386	-1.06694	112.069	266.602
42	-2.590270	0.147368	-1.04939	112.069	265.745
43	-2.590270	0.150877	-1.03643	112.069	265.112
44	-2.590270	0.154386	-1.01943	112.069	264.282
45	-2.590270	0.157895	-1.00687	112.069	263.669
46	-2.590270	0.161404	-0.990356	112.069	262.862
47	-2.590270	0.164912	-0.97815	112.069	262.266
48	-2.590270	0.168421	-0.9621	112.069	261.483

49	-2.590270.17193	-0.950222	112.069	260.903	
50	-2.590270.175439	-0.93459112.069	260.139		
51	-2.590270.178947	-0.923014	112.069	259.574	
52	-2.590270.182456	-0.907769	112.069	258.829	
53	-2.590270.185965	-0.896473	112.069	258.278	
54	-2.590270.189474	-0.881587	112.069	257.551	
55	-2.590270.192982	-0.87055112.069	257.012		
56	-2.590270.196491	-0.855996	112.069	256.301	
57	-2.590270.2	-0.841621	112.069	255.599	
58	-2.590270.203509	-0.830953	112.069	255.078	
59	-2.590270.207018	-0.816874	112.069	254.391	
60	-2.590270.210526	-0.806422	112.069	253.88	
61	-2.590270.214035	-0.792618	112.069	253.206	
62	-2.590270.217544	-0.782366	112.069	252.706	
63	-2.590270.221053	-0.768821	112.069	252.044	
64	-2.590270.224561	-0.758753	112.069	251.552	
65	-2.590270.22807	-0.745449	112.069	250.903	
66	-2.590270.231579	-0.735557	112.069	250.42	
67	-2.590270.235088	-0.722479	112.069	249.781	
68	-2.590270.238596	-0.712751	112.069	249.306	
69	-2.590270.242105	-0.699883	112.069	248.678	
70	-2.590270.245614	-0.690309	112.069	248.21	
71	-2.590270.249123	-0.677639	112.069	247.591	
72	-2.590270.252632	-0.668209	112.069	247.131	
73	-2.590270.25614	-0.655726	112.069	246.521	
74	-2.590270.259649	-0.646431	112.069	246.067	
75	-2.590270.263158	-0.634124	112.069	245.466	
76	-2.590270.266667	-0.624956	112.069	245.019	
77	-2.590270.270175	-0.612813	112.069	244.426	
78	-2.590270.273684	-0.603765	112.069	243.984	
79	-2.590270.277193	-0.591776	112.069	243.398	
80	-2.590270.280702	-0.582841	112.069	242.962	
81	-2.590270.284211	-0.570999	112.069	242.384	
82	-2.590270.287719	-0.56217112.069	241.953		
83	-2.590270.291228	-0.550465	112.069	241.381	
84	-2.590270.294737	-0.541736	112.069	240.955	
85	-2.590270.298246	-0.530162	112.069	240.39	
86	-2.590270.301754	-0.521527	112.069	239.968	
87	-2.590270.305263	-0.510074	112.069	239.409	
88	-2.590270.308772	-0.501527	112.069	238.991	
89	-2.590270.312281	-0.490189	112.069	238.438	
90	-2.590270.315789	-0.481728	112.069	238.024	
91	-2.590270.319298	-0.470498	112.069	237.476	
92	-1.832580.322807	-0.462114	247.19	237.067	
93	-1.660730.326316	-0.450985	277.836	236.523	
94	-1.514130.329825	-0.442676	303.981	236.117	
95	-1.427120.333333	-0.431644	319.498	235.579	
96	-1.386290.336842	-0.423405	326.778	235.176	
97	-1.347070.340351	-0.412463	333.772	234.642	
98	-1.309330.34386	-0.40429340.502	234.243		
99	-1.272970.347368	-0.393433	346.988	233.713	
100	-1.237870.350877	-0.385321	353.246	233.317	
101	-1.171180.354386	-0.374544	365.139	232.79	
102	-1.049820.357895	-0.36649386.782	232.397		
103	-0.693147	0.361404	-0.355788	450.389	231.874
104	-0.693147	0.364912	-0.347787	450.389	231.484
105	-0.693147	0.368421	-0.337155	450.389	230.964
106	-0.693147	0.37193	-0.329206	450.389	230.576
107	-0.693147	0.375439	-0.318639	450.389	230.06
108	-0.693147	0.378947	-0.310738	450.389	229.674
109	-0.693147	0.382456	-0.300232	450.389	229.161
110	-0.693147	0.385965	-0.292375	450.389	228.778

111	-0.693147	0.389474	-0.281926	450.389	228.267
112	-0.693147	0.392982	-0.27411	450.389	227.886
113	-0.693147	0.396491	-0.263715	450.389	227.378
114	-0.693147	0.4	-0.253347	450.389	226.872
115	-0.693147	0.403509	-0.24559	450.389	226.493
116	-0.693147	0.407018	-0.235269	450.389	225.989
117	-0.693147	0.410526	-0.227545	450.389	225.612
118	-0.693147	0.414035	-0.217267	450.389	225.11
119	-0.693147	0.417544	-0.209575	450.389	224.734
120	-0.693147	0.421053	-0.199336	450.389	224.234
121	-0.693147	0.424561	-0.191671	450.389	223.86
122	-0.693147	0.42807	-0.181468	450.389	223.362
123	-0.693147	0.431579	-0.173829	450.389	222.989
124	-0.693147	0.435088	-0.163659	450.389	222.492
125	-0.693147	0.438596	-0.156042	450.389	222.12
126	-0.693147	0.442105	-0.1459	450.389	221.625
127	-0.693147	0.445614	-0.138305	450.389	221.254
128	-0.693147	0.449123	-0.128189	450.389	220.76
129	-0.693147	0.452632	-0.12061	450.389	220.39
130	-0.693147	0.45614	-0.110516	450.389	219.897
131	-0.693147	0.459649	-0.102953	450.389	219.528
132	-0.693147	0.463158	-0.0928787	450.389	219.036
133	-0.693147	0.466667	-0.0853288	450.389	218.667
134	-0.693147	0.470175	-0.0752698	450.389	218.176
135	-0.693147	0.473684	-0.0677301	450.389	217.807
136	-0.693147	0.477193	-0.0576847	450.389	217.317
137	-0.693147	0.480702	-0.0501541	450.389	216.949
138	-0.693147	0.484211	-0.0401167	450.389	216.459
139	-0.693147	0.487719	-0.0325917	450.389	216.092
140	-0.693147	0.491228	-0.0225612	450.389	215.602
141	-0.693147	0.494737	-0.0150408	450.389	215.234
142	-0.693147	0.498246	-0.00501359	450.389	214.745
143	-0.693147	0.501754	0.00501359	450.389	214.255
144	-0.693147	0.505263	0.0150408	450.389	213.766
145	-0.693147	0.508772	0.0225612	450.389	213.398
146	-0.693147	0.512281	0.0325917	450.389	212.908
147	-0.693147	0.515789	0.0401167	450.389	212.541
148	-0.693147	0.519298	0.0501541	450.389	212.051
149	-0.693147	0.522807	0.0576847	450.389	211.683
150	-0.693147	0.526316	0.0677301	450.389	211.193
151	-0.693147	0.529825	0.0752698	450.389	210.824
152	-0.693147	0.533333	0.0853288	450.389	210.333
153	-0.693147	0.536842	0.0928787	450.389	209.964
154	-0.693147	0.540351	0.102953	450.389	209.472
155	-0.693147	0.54386	0.110516	450.389	209.103
156	-0.693147	0.547368	0.12061	450.389	208.61
157	-0.693147	0.550877	0.128189	450.389	208.24
158	-0.693147	0.554386	0.138305	450.389	207.746
159	-0.693147	0.557895	0.1459	450.389	207.375
160	-0.693147	0.561404	0.156042	450.389	206.88
161	-0.693147	0.564912	0.163659	450.389	206.508
162	-0.693147	0.568421	0.173829	450.389	206.011
163	-0.693147	0.57193	0.181468	450.389	205.638
164	-0.693147	0.575439	0.191671	450.389	205.14
165	-0.693147	0.578947	0.199336	450.389	204.766
166	-0.693147	0.582456	0.209575	450.389	204.266
167	-0.693147	0.585965	0.217267	450.389	203.89
168	-0.693147	0.589474	0.227545	450.389	203.388
169	-0.693147	0.592982	0.235269	450.389	203.011
170	-0.693147	0.596491	0.24559	450.389	202.507
171	-0.693147	0.6	0.253347	450.389	202.128
172	-0.693147	0.603509	0.263715	450.389	201.622

173	-0.693147	0.607018	0.27411	450.389	201.114
174	-0.693147	0.610526	0.281926	450.389	200.733
175	-0.693147	0.614035	0.292375	450.389	200.222
176	-0.693147	0.617544	0.300232	450.389	199.839
177	-0.693147	0.621053	0.310738	450.389	199.326
178	-0.693147	0.624561	0.318639	450.389	198.94
179	-0.693147	0.62807	0.329206	450.389	198.424
180	-0.693147	0.631579	0.337155	450.389	198.036
181	-0.693147	0.635088	0.347787	450.389	197.516
182	-0.693147	0.638596	0.355788	450.389	197.126
183	-0.693147	0.642105	0.36649	450.389	196.603
184	-0.693147	0.645614	0.374544	450.389	196.21
185	-0.693147	0.649123	0.385321	450.389	195.683
186	-0.693147	0.652632	0.393433	450.389	195.287
187	-0.693147	0.65614	0.40429	450.389	194.757
188	-0.693147	0.659649	0.412463	450.389	194.358
189	-0.693147	0.663158	0.423405	450.389	193.824
190	-0.693147	0.666667	0.431644	450.389	193.421
191	-0.693147	0.670175	0.442676	450.389	192.883
192	-0.693147	0.673684	0.450985	450.389	192.477
193	-0.693147	0.677193	0.462114	450.389	191.933
194	-0.693147	0.680702	0.470498	450.389	191.524
195	-0.693147	0.684211	0.481728	450.389	190.976
196	-0.693147	0.687719	0.490189	450.389	190.562
197	-0.693147	0.691228	0.501527	450.389	190.009
198	-0.693147	0.694737	0.510074	450.389	189.591
199	-0.693147	0.698246	0.521527	450.389	189.032
200	-0.693147	0.701754	0.530162	450.389	188.61
201	-0.693147	0.705263	0.541736	450.389	188.045
202	-0.693147	0.708772	0.550465	450.389	187.619
203	-0.693147	0.712281	0.56217	450.389	187.047
204	-0.693147	0.715789	0.570999	450.389	186.616
205	-0.693147	0.719298	0.582841	450.389	186.038
206	-0.693147	0.722807	0.591776	450.389	185.602
207	-0.693147	0.726316	0.603765	450.389	185.016
208	-0.693147	0.729825	0.612813	450.389	184.574
209	-0.693147	0.733333	0.624956	450.389	183.981
210	-0.693147	0.736842	0.634124	450.389	183.534
211	-0.693147	0.740351	0.646431	450.389	182.933
212	-0.693147	0.74386	0.655726	450.389	182.479
213	-0.693147	0.747368	0.668209	450.389	181.869
214	-0.693147	0.750877	0.677639	450.389	181.409
215	-0.693147	0.754386	0.690309	450.389	180.79
216	-0.693147	0.757895	0.699883	450.389	180.322
217	-0.693147	0.761404	0.712751	450.389	179.694
218	-0.693147	0.764912	0.722479	450.389	179.219
219	-0.693147	0.768421	0.735557	450.389	178.58
220	-0.693147	0.77193	0.745449	450.389	178.097
221	-0.693147	0.775439	0.758753	450.389	177.448
222	-0.693147	0.778947	0.768821	450.389	176.956
223	-0.693147	0.782456	0.782366	450.389	176.294
224	-0.693147	0.785965	0.792618	450.389	175.794
225	-0.693147	0.789474	0.806422	450.389	175.12
226	-0.693147	0.792982	0.816874	450.389	174.609
227	-0.693147	0.796491	0.830953	450.389	173.922
228	-0.693147	0.8	0.841621	450.389	173.401
229	-0.693147	0.803509	0.855996	450.389	172.699
230	-0.693147	0.807018	0.87055	450.389	171.988
231	-0.693147	0.810526	0.881587	450.389	171.449
232	-0.693147	0.814035	0.896473	450.389	170.722
233	-0.693147	0.817544	0.907769	450.389	170.171
234	-0.693147	0.821053	0.923014	450.389	169.426

235	-0.693147	0.824561	0.93459	450.389	168.861	
236	-0.693147	0.82807	0.950222	450.389	168.097	
237	-0.693147	0.831579	0.9621	450.389	167.517	
238	-0.693147	0.835088	0.97815	450.389	166.734	
239	-0.693147	0.838596	0.990356	450.389	166.138	
240	-0.693147	0.842105	1.00687	450.389	165.331	
241	-0.693147	0.845614	1.01943	450.389	164.718	
242	-0.693147	0.849123	1.03643	450.389	163.888	
243	-0.693147	0.852632	1.04939	450.389	163.255	
244	-0.693147	0.85614	1.06694	450.389	162.398	
245	-0.693147	0.859649	1.08032	450.389	161.744	
246	-0.693147	0.863158	1.09847	450.389	160.858	
247	-0.693147	0.866667	1.11232	450.389	160.182	
248	-0.693147	0.870175	1.13113	450.389	159.263	
249	-0.693147	0.873684	1.1455	450.389	158.561	
250	-0.693147	0.877193	1.16505	450.389	157.607	
251	-0.693147	0.880702	1.18	450.389	156.877	
252	-0.693147	0.884211	1.20036	450.389	155.882	
253	-0.693147	0.887719	1.21596	450.389	155.121	
254	-0.693147	0.891228	1.23724	450.389	154.082	
255	-0.693147	0.894737	1.25357	450.389	153.284	
256	-0.693147	0.898246	1.27588	450.389	152.195	
257	-0.693147	0.901754	1.29303	450.389	151.357	
258	-0.693147	0.905263	1.31652	450.389	150.21	
259	-0.693147	0.908772	1.33462	450.389	149.326	
260	-0.693147	0.912281	1.35946	450.389	148.113	
261	-0.693147	0.915789	1.37866	450.389	147.176	
262	-0.693147	0.919298	1.40507	450.389	145.886	
263	-0.693147	0.922807	1.42554	450.389	144.886	
264	-0.693147	0.926316	1.4538	450.389	143.506	
265	-0.693147	0.929825	1.47579	450.389	142.432	
266	-0.693147	0.933333	1.50626	450.389	140.944	
267	-0.693147	0.936842	1.53007	450.389	139.782	
268	-0.693147	0.940351	1.56322	450.389	138.163	
269	-0.693147	0.94386	1.58927	450.389	136.891	
270	-0.693147	0.947368	1.62576	450.389	135.109	
271	-0.693147	0.950877	1.65463	450.389	133.699	
272	-0.693147	0.954386	1.6954	450.389	131.708	
273	-0.693147	0.957895	1.72793	450.389	130.119	
274	-0.693147	0.961404	1.77438	450.389	127.851	
275	-0.693147	0.964912	1.81191	450.389	126.018	
276	-0.693147	0.968421	1.86629	450.389	123.363	
277	-0.693147	0.97193	1.91103	450.389	121.178	
278	-0.693147	0.975439	1.97737	450.389	117.938	
279	-0.693147	0.978947	2.03352	450.389	115.196	
280	-0.693147	0.982456	2.12007	450.389	110.97	
281	0	0.985965	2.19728	574	107.199	
282	0	0.989474	2.32634	574	100.897	
283	0	0.992982	2.45727	574	94.5032	
284	0	0.996491	2.74777	574	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 = 96.1268%
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-10	11/16/2012	1	-1.23787	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
LMW-14R	11/16/2012	1	-2.59027	FALSE
LMW-15R	11/16/2012	1	-2.59027	FALSE
LMW-16	11/16/2012	1	-2.59027	FALSE
LMW-3	11/16/2012	1	-2.59027	FALSE
LMW-3S	11/16/2012	1	-2.59027	FALSE
LMW-6	11/16/2012	1	-2.59027	FALSE
LMW-7	11/16/2012	1	-2.59027	FALSE
LMW-8	11/16/2012	1	-2.59027	FALSE
LMW-9	11/16/2012	1	-2.59027	FALSE
LMW-9D	11/16/2012	1	-2.59027	FALSE
LMW-9S	11/16/2012	1	-2.59027	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE

Concentrations (ppb)

Parameter: Toluene

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 270
Percent Non-Detects: 95.0704%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	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<0 J	ND<0 J
			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	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	0.56 J	0.56 J
			11/16/2009	ND<0.33 U	ND<0.33 U
			6/30/2010	ND<0.33 U	ND<0.33 U
			11/17/2010	ND<0.33 U	ND<0.33 U
			7/6/2011	1.2	1.2
			11/22/2011	ND<0.33 U	ND<0.33 U
			5/16/2012	ND<0.33 U	ND<0.33 U
			11/16/2012	0.42 J	0.42 J

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	19 (95%)	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<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<0 J	ND<0 J
			6/11/2009	ND<0.33 U	ND<0.33 U
			11/16/2009	ND<0.33 U	ND<0.33 U
			6/30/2010	ND<0.33 U	ND<0.33 U
			11/17/2010	ND<0.33 U	ND<0.33 U
			7/6/2011	0.38 J	0.38 J
			11/22/2011	ND<0.33 U	ND<0.33 U
			5/16/2012	ND<0.33 U	ND<0.33 U
			11/16/2012	ND<0.33 U	ND<0.33 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		
LMW-14R	11	10 (90.9091%)	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<0.33 U		ND<0.33 U	
		6/30/2010	ND<0.33 U		ND<0.33 U	
		11/17/2010	ND<0.33 U		ND<0.33 U	
		7/6/2011	0.61 J	0.61 J		
		11/22/2011	ND<0.33 U		ND<0.33 U	
		5/16/2012	ND<0.33 U		ND<0.33 U	
		11/16/2012	ND<0.33 U		ND<0.33 U	
LMW-15R	15	15 (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<0 J	ND<0 J		
		6/11/2009	ND<0.33 U		ND<0.33 U	
		6/30/2010	ND<0.33 U		ND<0.33 U	
		11/17/2010	ND<0.33 U		ND<0.33 U	
		7/6/2011	ND<0.33 U	ND<0.33 U		
		11/22/2011	ND<0.33 U		ND<0.33 U	

			5/16/2012	ND<0.33 U	ND<0.33 U
			11/16/2012	ND<0.33 U	ND<0.33 U
LMW-16	13	13 (100%)	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<1	ND<1
			6/11/2009	ND<0.33 U	ND<0.33 U
			11/16/2009	ND<0.33 U	ND<0.33 U
			6/30/2010	ND<0.33 U	ND<0.33 U
			11/17/2010	ND<0.33 U	ND<0.33 U
			7/6/2011	ND<0.33 U	ND<0.33 U
			11/22/2011	ND<0.33 U	ND<0.33 U
			5/16/2012	ND<0.33 U	ND<0.33 U
			11/16/2012	ND<0.33 U	ND<0.33 U
LMW-3	25	24 (96%)	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<0 J	ND<0 J
			6/11/2009	ND<0.33 U	ND<0.33 U
			11/16/2009	ND<0.33 U	ND<0.33 U
			6/30/2010	ND<0.33 U	ND<0.33 U
			11/17/2010	ND<0.33 U	ND<0.33 U
			7/6/2011	0.38 J	0.38 J
			11/22/2011	ND<0.33 U	ND<0.33 U
			5/16/2012	ND<0.33 U	ND<0.33 U
			11/16/2012	ND<0.33 U	ND<0.33 U
LMW-3S	13	12 (92.3077%)	11/18/2006	ND<1	ND<1
			6/2/2007	1	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	ND<0.33 U	ND<0.33 U
			11/16/2009	ND<0.33 U	ND<0.33 U
			6/30/2010	ND<0.33 U	ND<0.33 U
			11/17/2010	ND<0.33 U	ND<0.33 U
			7/6/2011	ND<0.33 U	ND<0.33 U
			11/22/2011	ND<0.33 U	ND<0.33 U
			5/16/2012	ND<0.33 U	ND<0.33 U
			11/16/2012	ND<0.33 U	ND<0.33 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<0 J	ND<0 J	
			6/11/2009	ND<0.33 U		ND<0.33 U
			11/16/2009	ND<0.33 U		ND<0.33 U
			6/30/2010	ND<0.33 U		ND<0.33 U
			11/17/2010	ND<0.33 U		ND<0.33 U
			7/6/2011	ND<0.33 U	ND<0.33 U	
			11/22/2011	ND<0.33 U		ND<0.33 U
			5/16/2012	ND<0.33 U		ND<0.33 U
			11/16/2012	ND<0.33 U		ND<0.33 U
LMW-7	21	17 (80.9524%)	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	1	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	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	0.5 J	0.5 J	
			11/17/2010	ND<0.33 U		ND<0.33 U
			7/6/2011	1.3	1.3	
			11/22/2011	ND<0.33 U		ND<0.33 U
			5/16/2012	ND<0.33 U		ND<0.33 U
			11/16/2012	0.94 J	0.94 J	
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<0 J	ND<0 J	
			6/11/2009	ND<0.33 U		ND<0.33 U
			11/16/2009	ND<0.33 U		ND<0.33 U
			6/30/2010	ND<0.33 U		ND<0.33 U
			11/17/2010	ND<0.33 U		ND<0.33 U
			7/6/2011	ND<0.33 U	ND<0.33 U	
			11/22/2011	ND<0.33 U		ND<0.33 U

			5/16/2012	ND<0.33 U	ND<0.33 U
			11/16/2012	ND<0.33 U	ND<0.33 U
LMW-9	23	21 (91.3043%)	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<0 J	ND<0 J
			6/11/2009	ND<0.33 U	ND<0.33 U
			11/16/2009	0.41 J	0.41 J
			6/30/2010	ND<0.33 U	ND<0.33 U
			11/17/2010	ND<0.33 U	ND<0.33 U
			7/6/2011	0.39 J	0.39 J
			11/22/2011	ND<0.33 U	ND<0.33 U
			5/16/2012	ND<0.33 U	ND<0.33 U
			11/16/2012	ND<0.33 U	ND<0.33 U
LMW-9D	13	12 (92.3077%)	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<0 J	ND<0 J
			6/11/2009	ND<0.33 U	ND<0.33 U
			11/16/2009	ND<0.33 U	ND<0.33 U
			6/30/2010	ND<0.33 U	ND<0.33 U
			11/17/2010	ND<0.33 U	ND<0.33 U
			7/6/2011	0.43 J	0.43 J
			11/22/2011	ND<0.33 U	ND<0.33 U
			5/16/2012	ND<0.33 U	ND<0.33 U
			11/16/2012	ND<0.33 U	ND<0.33 U
LMW-9S	15	15 (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<0 J	ND<0 J
			6/11/2009	ND<0.33 U	ND<0.33 U
			11/16/2009	ND<0.33 U	ND<0.33 U
			11/16/2009	ND<0.33 U	ND<0.33 U
			11/16/2009	ND<0.33 U	ND<0.33 U
			6/30/2010	ND<0.33 U	ND<0.33 U
			11/17/2010	ND<0.33 U	ND<0.33 U
			7/6/2011	ND<0.33 U	ND<0.33 U
			11/22/2011	ND<0.33 U	ND<0.33 U
			5/16/2012	ND<0.33 U	ND<0.33 U
			11/16/2012	ND<0.33 U	ND<0.33 U
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: Toluene

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	-2.4572713.5884	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	-1.8119146.7863	0	
11	0	-1.7743849.9348	0	
12	0	-1.7279352.9205	0	
13	0	-1.6954 55.7949	0	
14	0	-1.6546358.5327	0	
15	0	-1.6257661.1758	0	
16	0.165	-1.5892763.7015	-0.262229	
17	0.165	-1.5632266.1452	-0.520161	
18	0.165	-1.5300768.4863	-0.772622	
19	0.165	-1.5062670.7551	-1.02115	
20	0.165	-1.4757972.9331	-1.26466	
21	0.165	-1.4538 75.0466	-1.50454	
22	0.165	-1.4255477.0788	-1.73975	
23	0.165	-1.4050779.053	-1.97159	
24	0.165	-1.3786680.9537	-2.19907	
25	0.165	-1.3594682.8019	-2.42338	
26	0.165	-1.3346284.5831	-2.64359	
27	0.165	-1.3165286.3163	-2.86082	
28	0.165	-1.2930387.9883	-3.07417	
29	0.165	-1.2758889.6161	-3.28469	
30	0.165	-1.2535791.1875	-3.49153	
31	0.165	-1.2372492.7183	-3.69567	
32	0.165	-1.2159694.1969	-3.8963	
33	0.165	-1.2003695.6377	-4.09436	
34	0.165	-1.18 97.0301	-4.28906	
35	0.165	-1.1650598.3875	-4.4813	
36	0.165	-1.1455 99.6996	-4.6703	
37	0.165	-1.13113100.979	-4.85694	
38	0.165	-1.11232102.216	-5.04047	
39	0.165	-1.09847103.423	-5.22172	
40	0.165	-1.08032104.59	-5.39997	
41	0.165	-1.06694105.728	-5.57602	
42	0.165	-1.04939106.83	-5.74917	
43	0.165	-1.03643107.904	-5.92018	
44	0.165	-1.01943108.943	-6.08839	
45	0.165	-1.00687109.957	-6.25452	
46	0.165	-0.990356	110.938	-6.41793
47	0.165	-0.97815111.894	-6.57932	
48	0.165	-0.9621 112.82	-6.73807	
49	0.165	-0.950222	113.723	-6.89485
50	0.165	-0.93459114.596	-7.04906	
51	0.165	-0.923014	115.448	-7.20136

52	0.165	-0.907769	116.272	-7.35114
53	0.165	-0.896473	117.076	-7.49906
54	0.165	-0.881587	117.853	-7.64452
55	0.165	-0.87055	118.611	-7.78816
56	0.165	-0.855996	119.344	-7.9294
57	0.165	-0.841621	120.052	-8.06827
58	0.165	-0.830953	120.743	-8.20538
59	0.165	-0.816874	121.41	-8.34016
60	0.165	-0.806422	122.06	-8.47322
61	0.165	-0.792618	122.689	-8.604
62	0.165	-0.782366	123.301	-8.73309
63	0.165	-0.768821	123.892	-8.85995
64	0.165	-0.758753	124.467	-8.98514
65	0.165	-0.745449	125.023	-9.10814
66	0.165	-0.735557	125.564	-9.22951
67	0.165	-0.722479	126.086	-9.34872
68	0.165	-0.712751	126.594	-9.46632
69	0.165	-0.699883	127.084	-9.5818
70	0.165	-0.690309	127.561	-9.6957
71	0.165	-0.677639	128.02	-9.80751
72	0.165	-0.668209	128.466	-9.91777
73	0.165	-0.655726	128.896	-10.026
74	0.165	-0.646431	129.314	-10.1326
75	0.165	-0.634124	129.716	-10.2373
76	0.165	-0.624956	130.107	-10.3404
77	0.165	-0.612813	130.482	-10.4415
78	0.165	-0.603765	130.847	-10.5411
79	0.165	-0.591776	131.197	-10.6387
80	0.165	-0.582841	131.537	-10.7349
81	0.165	-0.570999	131.863	-10.8291
82	0.165	-0.56217	132.179	-10.9219
83	0.165	-0.550465	132.482	-11.0127
84	0.165	-0.541736	132.775	-11.1021
85	0.165	-0.530162	133.056	-11.1896
86	0.165	-0.521527	133.328	-11.2756
87	0.165	-0.510074	133.589	-11.3598
88	0.165	-0.501527	133.84	-11.4425
89	0.165	-0.490189	134.08	-11.5234
90	0.165	-0.481728	134.312	-11.6029
91	0.165	-0.470498	134.534	-11.6805
92	0.165	-0.462114	134.747	-11.7568
93	0.165	-0.450985	134.951	-11.8312
94	0.165	-0.442676	135.147	-11.9042
95	0.165	-0.431644	135.333	-11.9755
96	0.165	-0.423405	135.512	-12.0453
97	0.165	-0.412463	135.682	-12.1134
98	0.165	-0.40429	135.846	-12.1801
99	0.165	-0.393433	136.001	-12.245
100	0.165	-0.385321	136.149	-12.3086
101	0.165	-0.374544	136.289	-12.3704
102	0.165	-0.36649	136.424	-12.4309
103	0.165	-0.355788	136.55	-12.4896
104	0.165	-0.347787	136.671	-12.547
105	0.165	-0.337155	136.785	-12.6026
106	0.38	-0.329206	136.893	-12.7277
107	0.38	-0.318639	136.995	-12.8488
108	0.39	-0.310738	137.091	-12.97
109	0.41	-0.300232	137.182	-13.093
110	0.42	-0.292375	137.267	-13.2158
111	0.43	-0.281926	137.346	-13.3371
112	0.5	-0.27411	137.422	-13.4741
113	0.5	-0.263715	137.491	-13.606

114	0.5	-0.253347	137.555	-13.7327
115	0.5	-0.24559	137.616	-13.8555
116	0.5	-0.235269	137.671	-13.9731
117	0.5	-0.227545	137.723	-14.0869
118	0.5	-0.217267	137.77	-14.1955
119	0.5	-0.209575	137.814	-14.3003
120	0.5	-0.199336	137.854	-14.3999
121	0.5	-0.191671	137.89	-14.4958
122	0.5	-0.181468	137.923	-14.5865
123	0.5	-0.173829	137.954	-14.6734
124	0.5	-0.163659	137.98	-14.7553
125	0.5	-0.156042	138.005	-14.8333
126	0.5	-0.1459	138.026	-14.9062
127	0.5	-0.138305	138.045	-14.9754
128	0.5	-0.128189	138.062	-15.0395
129	0.5	-0.12061	138.076	-15.0998
130	0.5	-0.110516	138.088	-15.155
131	0.5	-0.102953	138.099	-15.2065
132	0.5	-0.0928787	138.108	-15.253
133	0.5	-0.0853288	138.115	-15.2956
134	0.5	-0.0752698	138.12	-15.3333
135	0.5	-0.0677301	138.125	-15.3671
136	0.5	-0.0576847	138.128	-15.396
137	0.5	-0.0501541	138.131	-15.421
138	0.5	-0.0401167	138.132	-15.4411
139	0.5	-0.0325917	138.134	-15.4574
140	0.5	-0.0225612	138.134	-15.4687
141	0.5	-0.0150408	138.134	-15.4762
142	0.5	-0.00501359	138.134	-15.4787
143	0.5	0.00501359	138.134	-15.4762
144	0.5	0.0150408	138.135	-15.4687
145	0.5	0.0225612	138.135	-15.4574
146	0.5	0.0325917	138.136	-15.4411
147	0.5	0.0401167	138.138	-15.421
148	0.5	0.0501541	138.14	-15.396
149	0.5	0.0576847	138.144	-15.3671
150	0.5	0.0677301	138.148	-15.3333
151	0.5	0.0752698	138.154	-15.2956
152	0.5	0.0853288	138.161	-15.253
153	0.5	0.0928787	138.17	-15.2065
154	0.5	0.102953	138.18	-15.155
155	0.5	0.110516	138.193	-15.0998
156	0.5	0.12061	138.207	-15.0395
157	0.5	0.128189	138.224	-14.9754
158	0.5	0.138305	138.243	-14.9062
159	0.5	0.1459	138.264	-14.8333
160	0.5	0.156042	138.288	-14.7553
161	0.5	0.163659	138.315	-14.6734
162	0.5	0.173829	138.345	-14.5865
163	0.5	0.181468	138.378	-14.4958
164	0.5	0.191671	138.415	-14.3999
165	0.5	0.199336	138.455	-14.3003
166	0.5	0.209575	138.499	-14.1955
167	0.5	0.217267	138.546	-14.0869
168	0.5	0.227545	138.598	-13.9731
169	0.5	0.235269	138.653	-13.8555
170	0.5	0.24559	138.713	-13.7327
171	0.5	0.253347	138.777	-13.606
172	0.5	0.263715	138.847	-13.4741
173	0.5	0.27411	138.922	-13.3371
174	0.5	0.281926	139.002	-13.1961
175	0.5	0.292375	139.087	-13.0499

176	0.5	0.300232	139.177	-12.8998
177	0.5	0.310738	139.274	-12.7444
178	0.5	0.318639	139.375	-12.5851
179	0.5	0.329206	139.484	-12.4205
180	0.5	0.337155	139.597	-12.2519
181	0.5	0.347787	139.718	-12.078
182	0.5	0.355788	139.845	-11.9001
183	0.5	0.36649	139.979	-11.7169
184	0.5	0.374544	140.12	-11.5296
185	0.5	0.385321	140.268	-11.337
186	0.5	0.393433	140.423	-11.1403
187	0.5	0.40429	140.586	-10.9381
188	0.5	0.412463	140.756	-10.7319
189	0.5	0.423405	140.936	-10.5202
190	0.5	0.431644	141.122	-10.3044
191	0.5	0.442676	141.318	-10.083
192	0.5	0.450985	141.521	-9.85752
193	0.5	0.462114	141.735	-9.62647
194	0.5	0.470498	141.956	-9.39122
195	0.5	0.481728	142.188	-9.15035
196	0.5	0.490189	142.429	-8.90526
197	0.5	0.501527	142.68	-8.65449
198	0.5	0.510074	142.94	-8.39946
199	0.5	0.521527	143.212	-8.13869
200	0.5	0.530162	143.493	-7.87361
201	0.5	0.541736	143.787	-7.60275
202	0.5	0.550465	144.09	-7.32751
203	0.5	0.56217	144.406	-7.04643
204	0.5	0.570999	144.732	-6.76093
205	0.5	0.582841	145.072	-6.46951
206	0.5	0.591776	145.422	-6.17362
207	0.5	0.603765	145.786	-5.87174
208	0.5	0.612813	146.162	-5.56533
209	0.5	0.624956	146.552	-5.25285
210	0.5	0.634124	146.955	-4.93579
211	0.5	0.646431	147.372	-4.61258
212	0.5	0.655726	147.802	-4.28471
213	0.5	0.668209	148.249	-3.95061
214	0.5	0.677639	148.708	-3.61179
215	0.5	0.690309	149.185	-3.26663
216	0.5	0.699883	149.674	-2.91669
217	0.5	0.712751	150.182	-2.56032
218	0.5	0.722479	150.704	-2.19908
219	0.5	0.735557	151.245	-1.8313
220	0.5	0.745449	151.801	-1.45857
221	0.5	0.758753	152.377	-1.0792
222	0.5	0.768821	152.968	-0.694788
223	0.5	0.782366	153.58	-0.303605
224	0.5	0.792618	154.208	0.092704
225	0.5	0.806422	154.859	0.495915
226	0.5	0.816874	155.526	0.904352
227	0.5	0.830953	156.216	1.31983
228	0.5	0.841621	156.925	1.74064
229	0.5	0.855996	157.657	2.16864
230	0.5	0.87055	158.415	2.60391
231	0.5	0.881587	159.193	3.04471
232	0.5	0.896473	159.996	3.49294
233	0.5	0.907769	160.82	3.94683
234	0.5	0.923014	161.672	4.40833
235	0.5	0.93459	162.546	4.87563
236	0.5	0.950222	163.449	5.35074
237	0.5	0.9621	164.374	5.83179

238	0.5	0.97815	165.331	6.32086	
239	0.5	0.990356		166.312	6.81604
240	0.5	1.00687	167.326	7.31947	
241	0.5	1.01943	168.365	7.82919	
242	0.5	1.03643	169.439	8.34741	
243	0.5	1.04939	170.54	8.8721	
244	0.5	1.06694	171.679	9.40557	
245	0.5	1.08032	172.846	9.94573	
246	0.5	1.09847	174.052	10.495	
247	0.5	1.11232	175.29	11.0511	
248	0.5	1.13113	176.569	11.6167	
249	0.5	1.1455	177.881	12.1894	
250	0.5	1.16505	179.239	12.772	
251	0.5	1.18	180.631	13.362	
252	0.5	1.20036	182.072	13.9621	
253	0.5	1.21596	183.55	14.5701	
254	0.5	1.23724	185.081	15.1887	
255	0.5	1.25357	186.653	15.8155	
256	0.5	1.27588	188.28	16.4535	
257	0.5	1.29303	189.952	17.1	
258	0.5	1.31652	191.686	17.7582	
259	0.5	1.33462	193.467	18.4256	
260	0.5	1.35946	195.315	19.1053	
261	0.5	1.37866	197.216	19.7946	
262	0.5	1.40507	199.19	20.4971	
263	0.5	1.42554	201.222	21.2099	
264	0.5	1.4538	203.336	21.9368	
265	0.5	1.47579	205.514	22.6747	
266	0.5	1.50626	207.782	23.4278	
267	0.5	1.53007	210.123	24.1929	
268	0.5	1.56322	212.567	24.9745	
269	0.5	1.58927	215.093	25.7691	
270	0.5	1.62576	217.736	26.582	
271	0.5	1.65463	220.474	27.4093	
272	0.5	1.6954	223.348	28.257	
273	0.5	1.72793	226.334	29.121	
274	0.5	1.77438	229.482	30.0082	
275	0.5	1.81191	232.765	30.9141	
276	0.5	1.86629	236.248	31.8473	
277	0.5	1.91103	239.9	32.8028	
278	0.56	1.97737	243.81	33.9101	
279	0.61	2.03352	247.946	35.1506	
280	0.94	2.12007	252.44	37.1434	
281	1	2.19728	257.268	39.3407	
282	1	2.32634	262.68	41.6671	
283	1.2	2.45727	268.718	44.6158	
284	1.3	2.74777	276.269	48.1879	

Data Set Standard Deviation = 0.200744
Numerator = 2322.07
Denominator = 3150.67
W Statistic = 0.737009 = 2322.07 / 3150.67

5% Critical value of 0.976 exceeds 0.737009
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.737009
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Toluene

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.859838
0.859838 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0		0.00350877	-2.7477739	348.683	
2	0		0.00701754	-2.4572739	334.497	
3	0		0.0105263	-2.3263439	328.103	
4	0		0.0140351	-2.1972839	321.801	
5	0		0.0175439	-2.1200739	318.03	
6	0		0.0210526	-2.0335239	313.804	
7	0		0.0245614	-1.9773739	311.062	
8	0		0.0280702	-1.9110339	307.822	
9	0		0.0315789	-1.8662939	305.637	
10	0		0.0350877	-1.8119139	302.982	
11	0		0.0385965	-1.7743839	301.149	
12	0		0.0421053	-1.7279339	298.881	
13	0		0.045614	-1.6954 39	297.292	
14	0		0.0491228	-1.6546339	295.301	
15	0		0.0526316	-1.6257639	293.891	
16	0.165		0.0561404	-1.5892783.1375	292.109	
17	0.165		0.0596491	-1.5632283.1375	290.837	
18	0.165		0.0631579	-1.5300783.1375	289.218	
19	0.165		0.0666667	-1.5062683.1375	288.056	
20	0.165		0.0701754	-1.4757983.1375	286.568	
21	0.165		0.0736842	-1.4538 83.1375	285.494	
22	0.165		0.077193	-1.4255483.1375	284.114	
23	0.165		0.0807018	-1.4050783.1375	283.114	
24	0.165		0.0842105	-1.3786683.1375	281.824	
25	0.165		0.0877193	-1.3594683.1375	280.887	
26	0.165		0.0912281	-1.3346283.1375	279.674	
27	0.165		0.0947368	-1.3165283.1375	278.79	
28	0.165		0.0982456	-1.2930383.1375	277.643	
29	0.165		0.101754	-1.2758883.1375	276.805	
30	0.165		0.105263	-1.2535783.1375	275.716	
31	0.165		0.108772	-1.2372483.1375	274.918	
32	0.165		0.112281	-1.2159683.1375	273.879	
33	0.165		0.115789	-1.2003683.1375	273.118	
34	0.165		0.119298	-1.18 83.1375	272.123	
35	0.165		0.122807	-1.1650583.1375	271.393	
36	0.165		0.126316	-1.1455 83.1375	270.439	
37	0.165		0.129825	-1.1311383.1375	269.737	
38	0.165		0.133333	-1.1123283.1375	268.818	
39	0.165		0.136842	-1.0984783.1375	268.142	
40	0.165		0.140351	-1.0803283.1375	267.256	
41	0.165	0.14386	-1.0669483.1375	266.602		
42	0.165		0.147368	-1.0493983.1375	265.745	
43	0.165		0.150877	-1.0364383.1375	265.112	
44	0.165		0.154386	-1.0194383.1375	264.282	
45	0.165		0.157895	-1.0068783.1375	263.669	
46	0.165		0.161404	-0.990356	83.1375	262.862
47	0.165		0.164912	-0.9781583.1375	262.266	
48	0.165		0.168421	-0.9621 83.1375	261.483	

49	0.165	0.17193	-0.950222	83.1375	260.903
50	0.165	0.175439	-0.934583	83.1375	260.139
51	0.165	0.178947	-0.923014	83.1375	259.574
52	0.165	0.182456	-0.907769	83.1375	258.829
53	0.165	0.185965	-0.896473	83.1375	258.278
54	0.165	0.189474	-0.881587	83.1375	257.551
55	0.165	0.192982	-0.870558	83.1375	257.012
56	0.165	0.196491	-0.855996	83.1375	256.301
57	0.165	0.2	-0.841621	83.1375	255.599
58	0.165	0.203509	-0.830953	83.1375	255.078
59	0.165	0.207018	-0.816874	83.1375	254.391
60	0.165	0.210526	-0.806422	83.1375	253.88
61	0.165	0.214035	-0.792618	83.1375	253.206
62	0.165	0.217544	-0.782366	83.1375	252.706
63	0.165	0.221053	-0.768821	83.1375	252.044
64	0.165	0.224561	-0.758753	83.1375	251.552
65	0.165	0.22807	-0.745449	83.1375	250.903
66	0.165	0.231579	-0.735557	83.1375	250.42
67	0.165	0.235088	-0.722479	83.1375	249.781
68	0.165	0.238596	-0.712751	83.1375	249.306
69	0.165	0.242105	-0.699883	83.1375	248.678
70	0.165	0.245614	-0.690309	83.1375	248.21
71	0.165	0.249123	-0.677639	83.1375	247.591
72	0.165	0.252632	-0.668209	83.1375	247.131
73	0.165	0.25614	-0.655726	83.1375	246.521
74	0.165	0.259649	-0.646431	83.1375	246.067
75	0.165	0.263158	-0.634124	83.1375	245.466
76	0.165	0.266667	-0.624956	83.1375	245.019
77	0.165	0.270175	-0.612813	83.1375	244.426
78	0.165	0.273684	-0.603765	83.1375	243.984
79	0.165	0.277193	-0.591776	83.1375	243.398
80	0.165	0.280702	-0.582841	83.1375	242.962
81	0.165	0.284211	-0.570999	83.1375	242.384
82	0.165	0.287719	-0.562178	83.1375	241.953
83	0.165	0.291228	-0.550465	83.1375	241.381
84	0.165	0.294737	-0.541736	83.1375	240.955
85	0.165	0.298246	-0.530162	83.1375	240.39
86	0.165	0.301754	-0.521527	83.1375	239.968
87	0.165	0.305263	-0.510074	83.1375	239.409
88	0.165	0.308772	-0.501527	83.1375	238.991
89	0.165	0.312281	-0.490189	83.1375	238.438
90	0.165	0.315789	-0.481728	83.1375	238.024
91	0.165	0.319298	-0.470498	83.1375	237.476
92	0.165	0.322807	-0.462114	83.1375	237.067
93	0.165	0.326316	-0.450985	83.1375	236.523
94	0.165	0.329825	-0.442676	83.1375	236.117
95	0.165	0.333333	-0.431644	83.1375	235.579
96	0.165	0.336842	-0.423405	83.1375	235.176
97	0.165	0.340351	-0.412463	83.1375	234.642
98	0.165	0.34386	-0.404298	83.1375	234.243
99	0.165	0.347368	-0.393433	83.1375	233.713
100	0.165	0.350877	-0.385321	83.1375	233.317
101	0.165	0.354386	-0.374544	83.1375	232.79
102	0.165	0.357895	-0.366498	83.1375	232.397
103	0.165	0.361404	-0.355788	83.1375	231.874
104	0.165	0.364912	-0.347787	83.1375	231.484
105	0.165	0.368421	-0.337155	83.1375	230.964
106	0.38	0.37193	-0.329206	140.65	230.576
107	0.38	0.375439	-0.318639	140.65	230.06
108	0.39	0.378947	-0.310738	143.325	229.674
109	0.41	0.382456	-0.300232	148.675	229.161
110	0.42	0.385965	-0.292375	151.35	228.778

111	0.43	0.389474	-0.281926		154.025	228.267
112	0.5	0.392982	-0.27411	172.75	227.886	
113	0.5	0.396491	-0.263715		172.75	227.378
114	0.5	0.4	-0.253347	172.75	226.872	
115	0.5	0.403509	-0.24559	172.75	226.493	
116	0.5	0.407018	-0.235269		172.75	225.989
117	0.5	0.410526	-0.227545		172.75	225.612
118	0.5	0.414035	-0.217267		172.75	225.11
119	0.5	0.417544	-0.209575		172.75	224.734
120	0.5	0.421053	-0.199336		172.75	224.234
121	0.5	0.424561	-0.191671		172.75	223.86
122	0.5	0.42807	-0.181468	172.75	223.362	
123	0.5	0.431579	-0.173829		172.75	222.989
124	0.5	0.435088	-0.163659		172.75	222.492
125	0.5	0.438596	-0.156042		172.75	222.12
126	0.5	0.442105	-0.1459	172.75	221.625	
127	0.5	0.445614	-0.138305		172.75	221.254
128	0.5	0.449123	-0.128189		172.75	220.76
129	0.5	0.452632	-0.12061	172.75	220.39	
130	0.5	0.45614	-0.110516	172.75	219.897	
131	0.5	0.459649	-0.102953		172.75	219.528
132	0.5	0.463158	-0.0928787		172.75	219.036
133	0.5	0.466667	-0.0853288		172.75	218.667
134	0.5	0.470175	-0.0752698		172.75	218.176
135	0.5	0.473684	-0.0677301		172.75	217.807
136	0.5	0.477193	-0.0576847		172.75	217.317
137	0.5	0.480702	-0.0501541		172.75	216.949
138	0.5	0.484211	-0.0401167		172.75	216.459
139	0.5	0.487719	-0.0325917		172.75	216.092
140	0.5	0.491228	-0.0225612		172.75	215.602
141	0.5	0.494737	-0.0150408		172.75	215.234
142	0.5	0.498246	-0.00501359		172.75	214.745
143	0.5	0.501754	0.00501359		172.75	214.255
144	0.5	0.505263	0.0150408		172.75	213.766
145	0.5	0.508772	0.0225612		172.75	213.398
146	0.5	0.512281	0.0325917		172.75	212.908
147	0.5	0.515789	0.0401167		172.75	212.541
148	0.5	0.519298	0.0501541		172.75	212.051
149	0.5	0.522807	0.0576847		172.75	211.683
150	0.5	0.526316	0.0677301		172.75	211.193
151	0.5	0.529825	0.0752698		172.75	210.824
152	0.5	0.533333	0.0853288		172.75	210.333
153	0.5	0.536842	0.0928787		172.75	209.964
154	0.5	0.540351	0.102953		172.75	209.472
155	0.5	0.54386	0.110516	172.75	209.103	
156	0.5	0.547368	0.12061	172.75	208.61	
157	0.5	0.550877	0.128189		172.75	208.24
158	0.5	0.554386	0.138305		172.75	207.746
159	0.5	0.557895	0.1459	172.75	207.375	
160	0.5	0.561404	0.156042		172.75	206.88
161	0.5	0.564912	0.163659		172.75	206.508
162	0.5	0.568421	0.173829		172.75	206.011
163	0.5	0.57193	0.181468	172.75	205.638	
164	0.5	0.575439	0.191671		172.75	205.14
165	0.5	0.578947	0.199336		172.75	204.766
166	0.5	0.582456	0.209575		172.75	204.266
167	0.5	0.585965	0.217267		172.75	203.89
168	0.5	0.589474	0.227545		172.75	203.388
169	0.5	0.592982	0.235269		172.75	203.011
170	0.5	0.596491	0.24559	172.75	202.507	
171	0.5	0.6	0.253347	172.75	202.128	
172	0.5	0.603509	0.263715		172.75	201.622

173	0.5	0.607018	0.27411	172.75	201.114
174	0.5	0.610526	0.281926	172.75	200.733
175	0.5	0.614035	0.292375	172.75	200.222
176	0.5	0.617544	0.300232	172.75	199.839
177	0.5	0.621053	0.310738	172.75	199.326
178	0.5	0.624561	0.318639	172.75	198.94
179	0.5	0.62807	0.329206	172.75	198.424
180	0.5	0.631579	0.337155	172.75	198.036
181	0.5	0.635088	0.347787	172.75	197.516
182	0.5	0.638596	0.355788	172.75	197.126
183	0.5	0.642105	0.36649	172.75	196.603
184	0.5	0.645614	0.374544	172.75	196.21
185	0.5	0.649123	0.385321	172.75	195.683
186	0.5	0.652632	0.393433	172.75	195.287
187	0.5	0.65614	0.40429	172.75	194.757
188	0.5	0.659649	0.412463	172.75	194.358
189	0.5	0.663158	0.423405	172.75	193.824
190	0.5	0.666667	0.431644	172.75	193.421
191	0.5	0.670175	0.442676	172.75	192.883
192	0.5	0.673684	0.450985	172.75	192.477
193	0.5	0.677193	0.462114	172.75	191.933
194	0.5	0.680702	0.470498	172.75	191.524
195	0.5	0.684211	0.481728	172.75	190.976
196	0.5	0.687719	0.490189	172.75	190.562
197	0.5	0.691228	0.501527	172.75	190.009
198	0.5	0.694737	0.510074	172.75	189.591
199	0.5	0.698246	0.521527	172.75	189.032
200	0.5	0.701754	0.530162	172.75	188.61
201	0.5	0.705263	0.541736	172.75	188.045
202	0.5	0.708772	0.550465	172.75	187.619
203	0.5	0.712281	0.56217	172.75	187.047
204	0.5	0.715789	0.570999	172.75	186.616
205	0.5	0.719298	0.582841	172.75	186.038
206	0.5	0.722807	0.591776	172.75	185.602
207	0.5	0.726316	0.603765	172.75	185.016
208	0.5	0.729825	0.612813	172.75	184.574
209	0.5	0.733333	0.624956	172.75	183.981
210	0.5	0.736842	0.634124	172.75	183.534
211	0.5	0.740351	0.646431	172.75	182.933
212	0.5	0.74386	0.655726	172.75	182.479
213	0.5	0.747368	0.668209	172.75	181.869
214	0.5	0.750877	0.677639	172.75	181.409
215	0.5	0.754386	0.690309	172.75	180.79
216	0.5	0.757895	0.699883	172.75	180.322
217	0.5	0.761404	0.712751	172.75	179.694
218	0.5	0.764912	0.722479	172.75	179.219
219	0.5	0.768421	0.735557	172.75	178.58
220	0.5	0.77193	0.745449	172.75	178.097
221	0.5	0.775439	0.758753	172.75	177.448
222	0.5	0.778947	0.768821	172.75	176.956
223	0.5	0.782456	0.782366	172.75	176.294
224	0.5	0.785965	0.792618	172.75	175.794
225	0.5	0.789474	0.806422	172.75	175.12
226	0.5	0.792982	0.816874	172.75	174.609
227	0.5	0.796491	0.830953	172.75	173.922
228	0.5	0.8	0.841621	172.75	173.401
229	0.5	0.803509	0.855996	172.75	172.699
230	0.5	0.807018	0.87055	172.75	171.988
231	0.5	0.810526	0.881587	172.75	171.449
232	0.5	0.814035	0.896473	172.75	170.722
233	0.5	0.817544	0.907769	172.75	170.171
234	0.5	0.821053	0.923014	172.75	169.426

235	0.5	0.824561	0.93459	172.75	168.861	
236	0.5	0.82807	0.950222	172.75	168.097	
237	0.5	0.831579	0.9621	172.75	167.517	
238	0.5	0.835088	0.97815	172.75	166.734	
239	0.5	0.838596	0.990356	172.75	166.138	
240	0.5	0.842105	1.00687	172.75	165.331	
241	0.5	0.845614	1.01943	172.75	164.718	
242	0.5	0.849123	1.03643	172.75	163.888	
243	0.5	0.852632	1.04939	172.75	163.255	
244	0.5	0.85614	1.06694	172.75	162.398	
245	0.5	0.859649	1.08032	172.75	161.744	
246	0.5	0.863158	1.09847	172.75	160.858	
247	0.5	0.866667	1.11232	172.75	160.182	
248	0.5	0.870175	1.13113	172.75	159.263	
249	0.5	0.873684	1.1455	172.75	158.561	
250	0.5	0.877193	1.16505	172.75	157.607	
251	0.5	0.880702	1.18	172.75	156.877	
252	0.5	0.884211	1.20036	172.75	155.882	
253	0.5	0.887719	1.21596	172.75	155.121	
254	0.5	0.891228	1.23724	172.75	154.082	
255	0.5	0.894737	1.25357	172.75	153.284	
256	0.5	0.898246	1.27588	172.75	152.195	
257	0.5	0.901754	1.29303	172.75	151.357	
258	0.5	0.905263	1.31652	172.75	150.21	
259	0.5	0.908772	1.33462	172.75	149.326	
260	0.5	0.912281	1.35946	172.75	148.113	
261	0.5	0.915789	1.37866	172.75	147.176	
262	0.5	0.919298	1.40507	172.75	145.886	
263	0.5	0.922807	1.42554	172.75	144.886	
264	0.5	0.926316	1.4538	172.75	143.506	
265	0.5	0.929825	1.47579	172.75	142.432	
266	0.5	0.933333	1.50626	172.75	140.944	
267	0.5	0.936842	1.53007	172.75	139.782	
268	0.5	0.940351	1.56322	172.75	138.163	
269	0.5	0.94386	1.58927	172.75	136.891	
270	0.5	0.947368	1.62576	172.75	135.109	
271	0.5	0.950877	1.65463	172.75	133.699	
272	0.5	0.954386	1.6954	172.75	131.708	
273	0.5	0.957895	1.72793	172.75	130.119	
274	0.5	0.961404	1.77438	172.75	127.851	
275	0.5	0.964912	1.81191	172.75	126.018	
276	0.5	0.968421	1.86629	172.75	123.363	
277	0.5	0.97193	1.91103	172.75	121.178	
278	0.56	0.975439	1.97737	188.8	117.938	
279	0.61	0.978947	2.03352	202.175	115.196	
280	0.94	0.982456	2.12007	290.45	110.97	
281	1	0.985965	2.19728	306.5	107.199	
282	1	0.989474	2.32634	306.5	100.897	
283	1.2	0.992982	2.45727	360	94.5032	
284	1.3	0.996491	2.74777	386.75	80.3175	

Shapiro-Francia Test of Normality

Parameter: Toluene

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	-1.80181	-2.74777	7.55021	4.95095
2	-1.80181	-2.45727	13.5884	9.37849
3	-1.80181	-2.32634	19.0003	13.5701
4	-1.80181	-2.19728	23.8283	17.5292
5	-1.80181	-2.12007	28.323	21.3492
6	-1.80181	-2.03352	32.4582	25.0132
7	-1.80181	-1.97737	36.3682	28.576
8	-1.80181	-1.91103	40.0203	32.0193
9	-1.80181	-1.86629	43.5033	35.382
10	-1.80181	-1.81191	46.7863	38.6468
11	-1.80181	-1.77438	49.9348	41.8439
12	-1.80181	-1.72793	52.9205	44.9573
13	-1.80181	-1.6954	55.7949	48.012
14	-1.80181	-1.65463	58.5327	50.9934
15	-1.80181	-1.62576	61.1758	53.9227
16	-1.80181	-1.58927	63.7015	56.7862
17	-1.80181	-1.56322	66.1452	59.6029
18	-1.80181	-1.53007	68.4863	62.3598
19	-1.80181	-1.50626	70.7551	65.0738
20	-1.80181	-1.47579	72.9331	67.7328
21	-1.80181	-1.4538	75.0466	70.3523
22	-1.80181	-1.42554	77.0788	72.9209
23	-1.80181	-1.40507	79.053	75.4526
24	-1.80181	-1.37866	80.9537	77.9366
25	-1.80181	-1.35946	82.8019	80.3861
26	-1.80181	-1.33462	84.5831	82.7909
27	-1.80181	-1.31652	86.3163	85.163
28	-1.80181	-1.29303	87.9883	87.4928
29	-1.80181	-1.27588	89.6161	89.7917
30	-1.80181	-1.25357	91.1875	92.0504
31	-1.80181	-1.23724	92.7183	94.2796
32	-1.80181	-1.21596	94.1969	96.4706
33	-1.80181	-1.20036	95.6377	98.6334
34	-1.80181	-1.18	97.0301	100.76
35	-1.80181	-1.16505	98.3875	102.859
36	-1.80181	-1.1455	99.6996	104.923
37	-1.80181	-1.13113	100.979	106.961
38	-1.80181	-1.11232	102.216	108.965
39	-1.80181	-1.09847	103.423	110.944
40	-1.80181	-1.08032	104.59	112.891
41	-1.80181	-1.06694	105.728	114.813
42	-1.80181	-1.04939	106.83	116.704
43	-1.80181	-1.03643	107.904	118.571
44	-1.80181	-1.01943	108.943	120.408
45	-1.80181	-1.00687	109.957	122.222
46	-1.80181	-0.990356	110.938	124.007
47	-1.80181	-0.97815	111.894	125.769
48	-1.80181	-0.9621	112.82	127.503
49	-1.80181	-0.950222	113.723	129.215
50	-1.80181	-0.93459	114.596	130.899
51	-1.80181	-0.923014	115.448	132.562

52	-1.80181	-0.907769	116.272	134.198
53	-1.80181	-0.896473	117.076	135.813
54	-1.80181	-0.881587	117.853	137.401
55	-1.80181	-0.87055	118.611	138.97
56	-1.80181	-0.855996	119.344	140.512
57	-1.80181	-0.841621	120.052	142.029
58	-1.80181	-0.830953	120.743	143.526
59	-1.80181	-0.816874	121.41	144.998
60	-1.80181	-0.806422	122.06	146.451
61	-1.80181	-0.792618	122.689	147.879
62	-1.80181	-0.782366	123.301	149.289
63	-1.80181	-0.768821	123.892	150.674
64	-1.80181	-0.758753	124.467	152.041
65	-1.80181	-0.745449	125.023	153.384
66	-1.80181	-0.735557	125.564	154.709
67	-1.80181	-0.722479	126.086	156.011
68	-1.80181	-0.712751	126.594	157.295
69	-1.80181	-0.699883	127.084	158.557
70	-1.80181	-0.690309	127.561	159.8
71	-1.80181	-0.677639	128.02	161.021
72	-1.80181	-0.668209	128.466	162.225
73	-1.80181	-0.655726	128.896	163.407
74	-1.80181	-0.646431	129.314	164.572
75	-1.80181	-0.634124	129.716	165.714
76	-1.80181	-0.624956	130.107	166.84
77	-1.80181	-0.612813	130.482	167.944
78	-1.80181	-0.603765	130.847	169.032
79	-1.80181	-0.591776	131.197	170.098
80	-1.80181	-0.582841	131.537	171.149
81	-1.80181	-0.570999	131.863	172.177
82	-1.80181	-0.56217	132.179	173.19
83	-1.80181	-0.550465	132.482	174.182
84	-1.80181	-0.541736	132.775	175.158
85	-1.80181	-0.530162	133.056	176.114
86	-1.80181	-0.521527	133.328	177.053
87	-1.80181	-0.510074	133.589	177.972
88	-1.80181	-0.501527	133.84	178.876
89	-1.80181	-0.490189	134.08	179.759
90	-1.80181	-0.481728	134.312	180.627
91	-0.967584	-0.470498	134.534	181.082
92	-0.967584	-0.462114	134.747	181.53
93	-0.941609	-0.450985	134.951	181.954
94	-0.891598	-0.442676	135.147	182.349
95	-0.867501	-0.431644	135.333	182.723
96	-0.84397	-0.423405	135.512	183.081
97	-0.693147	-0.412463	135.682	183.367
98	-0.693147	-0.40429	135.846	183.647
99	-0.693147	-0.393433	136.001	183.92
100	-0.693147	-0.385321	136.149	184.187
101	-0.693147	-0.374544	136.289	184.446
102	-0.693147	-0.36649	136.424	184.7
103	-0.693147	-0.355788	136.55	184.947
104	-0.693147	-0.347787	136.671	185.188
105	-0.693147	-0.337155	136.785	185.422
106	-0.693147	-0.329206	136.893	185.65
107	-0.693147	-0.318639	136.995	185.871
108	-0.693147	-0.310738	137.091	186.086
109	-0.693147	-0.300232	137.182	186.294
110	-0.693147	-0.292375	137.267	186.497
111	-0.693147	-0.281926	137.346	186.692
112	-0.693147	-0.27411	137.422	186.882
113	-0.693147	-0.263715	137.491	187.065

114	-0.693147	-0.253347	137.555	187.241
115	-0.693147	-0.24559	137.616	187.411
116	-0.693147	-0.235269	137.671	187.574
117	-0.693147	-0.227545	137.723	187.732
118	-0.693147	-0.217267	137.77	187.882
119	-0.693147	-0.209575	137.814	188.028
120	-0.693147	-0.199336	137.854	188.166
121	-0.693147	-0.191671	137.89	188.299
122	-0.693147	-0.181468	137.923	188.424
123	-0.693147	-0.173829	137.954	188.545
124	-0.693147	-0.163659	137.98	188.658
125	-0.693147	-0.156042	138.005	188.766
126	-0.693147	-0.1459	138.026	188.868
127	-0.693147	-0.138305	138.045	188.963
128	-0.693147	-0.128189	138.062	189.052
129	-0.693147	-0.12061	138.076	189.136
130	-0.693147	-0.110516	138.088	189.213
131	-0.693147	-0.102953	138.099	189.284
132	-0.693147	-0.0928787	138.108	189.348
133	-0.693147	-0.0853288	138.115	189.407
134	-0.693147	-0.0752698	138.12	189.46
135	-0.693147	-0.0677301	138.125	189.507
136	-0.693147	-0.0576847	138.128	189.546
137	-0.693147	-0.0501541	138.131	189.581
138	-0.693147	-0.0401167	138.132	189.609
139	-0.693147	-0.0325917	138.134	189.632
140	-0.693147	-0.0225612	138.134	189.647
141	-0.693147	-0.0150408	138.134	189.658
142	-0.693147	-0.00501359	138.134	189.661
143	-0.693147	0.00501359	138.134	189.658
144	-0.693147	0.0150408	138.135	189.647
145	-0.693147	0.0225612	138.135	189.632
146	-0.693147	0.0325917	138.136	189.609
147	-0.693147	0.0401167	138.138	189.581
148	-0.693147	0.0501541	138.14	189.546
149	-0.693147	0.0576847	138.144	189.507
150	-0.693147	0.0677301	138.148	189.46
151	-0.693147	0.0752698	138.154	189.407
152	-0.693147	0.0853288	138.161	189.348
153	-0.693147	0.0928787	138.17	189.284
154	-0.693147	0.102953	138.18	189.213
155	-0.693147	0.110516	138.193	189.136
156	-0.693147	0.12061	138.207	189.052
157	-0.693147	0.128189	138.224	188.963
158	-0.693147	0.138305	138.243	188.868
159	-0.693147	0.1459	138.264	188.766
160	-0.693147	0.156042	138.288	188.658
161	-0.693147	0.163659	138.315	188.545
162	-0.693147	0.173829	138.345	188.424
163	-0.693147	0.181468	138.378	188.299
164	-0.693147	0.191671	138.415	188.166
165	-0.693147	0.199336	138.455	188.028
166	-0.693147	0.209575	138.499	187.882
167	-0.693147	0.217267	138.546	187.732
168	-0.693147	0.227545	138.598	187.574
169	-0.693147	0.235269	138.653	187.411
170	-0.693147	0.24559	138.713	187.241
171	-0.693147	0.253347	138.777	187.065
172	-0.693147	0.263715	138.847	186.882
173	-0.693147	0.27411	138.922	186.692
174	-0.693147	0.281926	139.002	186.497
175	-0.693147	0.292375	139.087	186.294

176	-0.693147	0.300232	139.177	186.086
177	-0.693147	0.310738	139.274	185.871
178	-0.693147	0.318639	139.375	185.65
179	-0.693147	0.329206	139.484	185.422
180	-0.693147	0.337155	139.597	185.188
181	-0.693147	0.347787	139.718	184.947
182	-0.693147	0.355788	139.845	184.7
183	-0.693147	0.36649	139.979	184.446
184	-0.693147	0.374544	140.12	184.187
185	-0.693147	0.385321	140.268	183.92
186	-0.693147	0.393433	140.423	183.647
187	-0.693147	0.40429	140.586	183.367
188	-0.693147	0.412463	140.756	183.081
189	-0.693147	0.423405	140.936	182.787
190	-0.693147	0.431644	141.122	182.488
191	-0.693147	0.442676	141.318	182.181
192	-0.693147	0.450985	141.521	181.869
193	-0.693147	0.462114	141.735	181.548
194	-0.693147	0.470498	141.956	181.222
195	-0.693147	0.481728	142.188	180.888
196	-0.693147	0.490189	142.429	180.548
197	-0.693147	0.501527	142.68	180.201
198	-0.693147	0.510074	142.94	179.847
199	-0.693147	0.521527	143.212	179.486
200	-0.693147	0.530162	143.493	179.118
201	-0.693147	0.541736	143.787	178.743
202	-0.693147	0.550465	144.09	178.361
203	-0.693147	0.56217	144.406	177.972
204	-0.693147	0.570999	144.732	177.576
205	-0.693147	0.582841	145.072	177.172
206	-0.693147	0.591776	145.422	176.762
207	-0.693147	0.603765	145.786	176.343
208	-0.693147	0.612813	146.162	175.918
209	-0.693147	0.624956	146.552	175.485
210	-0.693147	0.634124	146.955	175.046
211	-0.693147	0.646431	147.372	174.598
212	-0.693147	0.655726	147.802	174.143
213	-0.693147	0.668209	148.249	173.68
214	-0.693147	0.677639	148.708	173.21
215	-0.693147	0.690309	149.185	172.732
216	-0.693147	0.699883	149.674	172.247
217	-0.693147	0.712751	150.182	171.753
218	-0.693147	0.722479	150.704	171.252
219	-0.693147	0.735557	151.245	170.742
220	-0.693147	0.745449	151.801	170.225
221	-0.693147	0.758753	152.377	169.699
222	-0.693147	0.768821	152.968	169.166
223	-0.693147	0.782366	153.58	168.624
224	-0.693147	0.792618	154.208	168.075
225	-0.693147	0.806422	154.859	167.516
226	-0.693147	0.816874	155.526	166.949
227	-0.693147	0.830953	156.216	166.373
228	-0.693147	0.841621	156.925	165.79
229	-0.693147	0.855996	157.657	165.197
230	-0.693147	0.87055	158.415	164.593
231	-0.693147	0.881587	159.193	163.982
232	-0.693147	0.896473	159.996	163.361
233	-0.693147	0.907769	160.82	162.732
234	-0.693147	0.923014	161.672	162.092
235	-0.693147	0.93459	162.546	161.444
236	-0.693147	0.950222	163.449	160.785
237	-0.693147	0.9621	164.374	160.119

238	-0.693147		0.97815	165.331	159.441
239	-0.693147		0.990356		166.312 158.754
240	-0.693147		1.00687	167.326	158.056
241	-0.693147		1.01943	168.365	157.35
242	-0.693147		1.03643	169.439	156.631
243	-0.693147		1.04939	170.54	155.904
244	-0.693147		1.06694	171.679	155.164
245	-0.693147		1.08032	172.846	154.415
246	-0.693147		1.09847	174.052	153.654
247	-0.693147		1.11232	175.29	152.883
248	-0.693147		1.13113	176.569	152.099
249	-0.693147		1.1455	177.881	151.305
250	-0.693147		1.16505	179.239	150.497
251	-0.693147		1.18	180.631	149.68
252	-0.693147		1.20036	182.072	148.848
253	-0.693147		1.21596	183.55	148.005
254	-0.693147		1.23724	185.081	147.147
255	-0.693147		1.25357	186.653	146.278
256	-0.693147		1.27588	188.28	145.394
257	-0.693147		1.29303	189.952	144.498
258	-0.693147		1.31652	191.686	143.585
259	-0.693147		1.33462	193.467	142.66
260	-0.693147		1.35946	195.315	141.718
261	-0.693147		1.37866	197.216	140.762
262	-0.693147		1.40507	199.19	139.788
263	-0.579818		1.42554	201.222	138.962
264	-0.494296		1.4538	203.336	138.243
265	-0.0618754		1.47579	205.514	138.152
266	0	1.50626	207.782	138.152	
267	0	1.53007	210.123	138.152	
268	0	1.56322	212.567	138.152	
269	0	1.58927	215.093	138.152	
270	0	1.62576	217.736	138.152	
271	0	1.65463	220.474	138.152	
272	0	1.6954	223.348	138.152	
273	0	1.72793	226.334	138.152	
274	0	1.77438	229.482	138.152	
275	0	1.81191	232.765	138.152	
276	0	1.86629	236.248	138.152	
277	0	1.91103	239.9	138.152	
278	0	1.97737	243.81	138.152	
279	0	2.03352	247.946	138.152	
280	0	2.12007	252.44	138.152	
281	0	2.19728	257.268	138.152	
282	0	2.32634	262.68	138.152	
283	0.182322		2.45727	268.718	138.6
284	0.262364		2.74777	276.269	139.321

Data Set Standard Deviation = 0.578938
Numerator = 19410.2
Denominator = 26204.9
W Statistic = 0.740709 = 19410.2 / 26204.9

5% Critical value of 0.976 exceeds 0.740709
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.740709
Evidence of non-normality at 99% level of significance

Probability Plot

Parameter: Toluene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Probability Plot
Correlation Coefficient = 0.859358
0.859358 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-1.801810	0.00350877	-2.747774	3.4339	348.683
2	-1.801810	0.00701754	-2.457274	3.4339	334.497
3	-1.801810	0.0105263	-2.326347	4.3439	328.103
4	-1.801810	0.0140351	-2.197287	4.3439	321.801
5	-1.801810	0.0175439	-2.120077	4.3439	318.03
6	-1.801810	0.0210526	-2.033527	4.3439	313.804
7	-1.801810	0.0245614	-1.977377	4.3439	311.062
8	-1.801810	0.0280702	-1.911037	4.3439	307.822
9	-1.801810	0.0315789	-1.866297	4.3439	305.637
10	-1.801810	0.0350877	-1.811917	4.3439	302.982
11	-1.801810	0.0385965	-1.774387	4.3439	301.149
12	-1.801810	0.0421053	-1.727937	4.3439	298.881
13	-1.801810	0.045614	-1.6954	74.3439	297.292
14	-1.801810	0.0491228	-1.654637	4.3439	295.301
15	-1.801810	0.0526316	-1.625767	4.3439	293.891
16	-1.801810	0.0561404	-1.589277	4.3439	292.109
17	-1.801810	0.0596491	-1.563227	4.3439	290.837
18	-1.801810	0.0631579	-1.530077	4.3439	289.218
19	-1.801810	0.0666667	-1.506267	4.3439	288.056
20	-1.801810	0.0701754	-1.475797	4.3439	286.568
21	-1.801810	0.0736842	-1.4538	74.3439	285.494
22	-1.801810	0.077193	-1.425547	4.3439	284.114
23	-1.801810	0.0807018	-1.405077	4.3439	283.114
24	-1.801810	0.0842105	-1.378667	4.3439	281.824
25	-1.801810	0.0877193	-1.359467	4.3439	280.887
26	-1.801810	0.0912281	-1.334627	4.3439	279.674
27	-1.801810	0.0947368	-1.316527	4.3439	278.79
28	-1.801810	0.0982456	-1.293037	4.3439	277.643
29	-1.801810	0.101754	-1.275887	4.3439	276.805
30	-1.801810	0.105263	-1.253577	4.3439	275.716
31	-1.801810	0.108772	-1.237247	4.3439	274.918
32	-1.801810	0.112281	-1.215967	4.3439	273.879
33	-1.801810	0.115789	-1.200367	4.3439	273.118
34	-1.801810	0.119298	-1.18	74.3439	272.123
35	-1.801810	0.122807	-1.165057	4.3439	271.393
36	-1.801810	0.126316	-1.1455	74.3439	270.439
37	-1.801810	0.129825	-1.131137	4.3439	269.737
38	-1.801810	0.133333	-1.112327	4.3439	268.818
39	-1.801810	0.136842	-1.098477	4.3439	268.142
40	-1.801810	0.140351	-1.080327	4.3439	267.256
41	-1.801810	0.14386	-1.066947	4.3439	266.602
42	-1.801810	0.147368	-1.049397	4.3439	265.745
43	-1.801810	0.150877	-1.036437	4.3439	265.112
44	-1.801810	0.154386	-1.019437	4.3439	264.282
45	-1.801810	0.157895	-1.006877	4.3439	263.669
46	-1.801810	0.161404	-0.990356	74.3439	262.862
47	-1.801810	0.164912	-0.978157	4.3439	262.266
48	-1.801810	0.168421	-0.9621	74.3439	261.483

49	-1.801810.17193	-0.950222	74.3439	260.903	
50	-1.801810.175439	-0.9345974.3439	260.139		
51	-1.801810.178947	-0.923014	74.3439	259.574	
52	-1.801810.182456	-0.907769	74.3439	258.829	
53	-1.801810.185965	-0.896473	74.3439	258.278	
54	-1.801810.189474	-0.881587	74.3439	257.551	
55	-1.801810.192982	-0.8705574.3439	257.012		
56	-1.801810.196491	-0.855996	74.3439	256.301	
57	-1.801810.2	-0.841621	74.3439	255.599	
58	-1.801810.203509	-0.830953	74.3439	255.078	
59	-1.801810.207018	-0.816874	74.3439	254.391	
60	-1.801810.210526	-0.806422	74.3439	253.88	
61	-1.801810.214035	-0.792618	74.3439	253.206	
62	-1.801810.217544	-0.782366	74.3439	252.706	
63	-1.801810.221053	-0.768821	74.3439	252.044	
64	-1.801810.224561	-0.758753	74.3439	251.552	
65	-1.801810.22807	-0.745449	74.3439	250.903	
66	-1.801810.231579	-0.735557	74.3439	250.42	
67	-1.801810.235088	-0.722479	74.3439	249.781	
68	-1.801810.238596	-0.712751	74.3439	249.306	
69	-1.801810.242105	-0.699883	74.3439	248.678	
70	-1.801810.245614	-0.690309	74.3439	248.21	
71	-1.801810.249123	-0.677639	74.3439	247.591	
72	-1.801810.252632	-0.668209	74.3439	247.131	
73	-1.801810.25614	-0.655726	74.3439	246.521	
74	-1.801810.259649	-0.646431	74.3439	246.067	
75	-1.801810.263158	-0.634124	74.3439	245.466	
76	-1.801810.266667	-0.624956	74.3439	245.019	
77	-1.801810.270175	-0.612813	74.3439	244.426	
78	-1.801810.273684	-0.603765	74.3439	243.984	
79	-1.801810.277193	-0.591776	74.3439	243.398	
80	-1.801810.280702	-0.582841	74.3439	242.962	
81	-1.801810.284211	-0.570999	74.3439	242.384	
82	-1.801810.287719	-0.5621774.3439	241.953		
83	-1.801810.291228	-0.550465	74.3439	241.381	
84	-1.801810.294737	-0.541736	74.3439	240.955	
85	-1.801810.298246	-0.530162	74.3439	240.39	
86	-1.801810.301754	-0.521527	74.3439	239.968	
87	-1.801810.305263	-0.510074	74.3439	239.409	
88	-1.801810.308772	-0.501527	74.3439	238.991	
89	-1.801810.312281	-0.490189	74.3439	238.438	
90	-1.801810.315789	-0.481728	74.3439	238.024	
91	-0.967584	0.319298	-0.470498	223.114	237.476
92	-0.967584	0.322807	-0.462114	223.114	237.067
93	-0.941609	0.326316	-0.450985	227.746	236.523
94	-0.891598	0.329825	-0.442676	236.665	236.117
95	-0.867501	0.333333	-0.431644	240.962	235.579
96	-0.843970.336842	-0.423405	245.159	235.176	
97	-0.693147	0.340351	-0.412463	272.055	234.642
98	-0.693147	0.34386	-0.40429272.055	234.243	
99	-0.693147	0.347368	-0.393433	272.055	233.713
100	-0.693147	0.350877	-0.385321	272.055	233.317
101	-0.693147	0.354386	-0.374544	272.055	232.79
102	-0.693147	0.357895	-0.36649272.055	232.397	
103	-0.693147	0.361404	-0.355788	272.055	231.874
104	-0.693147	0.364912	-0.347787	272.055	231.484
105	-0.693147	0.368421	-0.337155	272.055	230.964
106	-0.693147	0.37193	-0.329206	272.055	230.576
107	-0.693147	0.375439	-0.318639	272.055	230.06
108	-0.693147	0.378947	-0.310738	272.055	229.674
109	-0.693147	0.382456	-0.300232	272.055	229.161
110	-0.693147	0.385965	-0.292375	272.055	228.778

111	-0.693147	0.389474	-0.281926	272.055	228.267
112	-0.693147	0.392982	-0.27411	272.055	227.886
113	-0.693147	0.396491	-0.263715	272.055	227.378
114	-0.693147	0.4	-0.253347	272.055	226.872
115	-0.693147	0.403509	-0.24559	272.055	226.493
116	-0.693147	0.407018	-0.235269	272.055	225.989
117	-0.693147	0.410526	-0.227545	272.055	225.612
118	-0.693147	0.414035	-0.217267	272.055	225.11
119	-0.693147	0.417544	-0.209575	272.055	224.734
120	-0.693147	0.421053	-0.199336	272.055	224.234
121	-0.693147	0.424561	-0.191671	272.055	223.86
122	-0.693147	0.42807	-0.181468	272.055	223.362
123	-0.693147	0.431579	-0.173829	272.055	222.989
124	-0.693147	0.435088	-0.163659	272.055	222.492
125	-0.693147	0.438596	-0.156042	272.055	222.12
126	-0.693147	0.442105	-0.1459	272.055	221.625
127	-0.693147	0.445614	-0.138305	272.055	221.254
128	-0.693147	0.449123	-0.128189	272.055	220.76
129	-0.693147	0.452632	-0.12061	272.055	220.39
130	-0.693147	0.45614	-0.110516	272.055	219.897
131	-0.693147	0.459649	-0.102953	272.055	219.528
132	-0.693147	0.463158	-0.0928787	272.055	219.036
133	-0.693147	0.466667	-0.0853288	272.055	218.667
134	-0.693147	0.470175	-0.0752698	272.055	218.176
135	-0.693147	0.473684	-0.0677301	272.055	217.807
136	-0.693147	0.477193	-0.0576847	272.055	217.317
137	-0.693147	0.480702	-0.0501541	272.055	216.949
138	-0.693147	0.484211	-0.0401167	272.055	216.459
139	-0.693147	0.487719	-0.0325917	272.055	216.092
140	-0.693147	0.491228	-0.0225612	272.055	215.602
141	-0.693147	0.494737	-0.0150408	272.055	215.234
142	-0.693147	0.498246	-0.00501359	272.055	214.745
143	-0.693147	0.501754	0.00501359	272.055	214.255
144	-0.693147	0.505263	0.0150408	272.055	213.766
145	-0.693147	0.508772	0.0225612	272.055	213.398
146	-0.693147	0.512281	0.0325917	272.055	212.908
147	-0.693147	0.515789	0.0401167	272.055	212.541
148	-0.693147	0.519298	0.0501541	272.055	212.051
149	-0.693147	0.522807	0.0576847	272.055	211.683
150	-0.693147	0.526316	0.0677301	272.055	211.193
151	-0.693147	0.529825	0.0752698	272.055	210.824
152	-0.693147	0.533333	0.0853288	272.055	210.333
153	-0.693147	0.536842	0.0928787	272.055	209.964
154	-0.693147	0.540351	0.102953	272.055	209.472
155	-0.693147	0.54386	0.110516	272.055	209.103
156	-0.693147	0.547368	0.12061	272.055	208.61
157	-0.693147	0.550877	0.128189	272.055	208.24
158	-0.693147	0.554386	0.138305	272.055	207.746
159	-0.693147	0.557895	0.1459	272.055	207.375
160	-0.693147	0.561404	0.156042	272.055	206.88
161	-0.693147	0.564912	0.163659	272.055	206.508
162	-0.693147	0.568421	0.173829	272.055	206.011
163	-0.693147	0.57193	0.181468	272.055	205.638
164	-0.693147	0.575439	0.191671	272.055	205.14
165	-0.693147	0.578947	0.199336	272.055	204.766
166	-0.693147	0.582456	0.209575	272.055	204.266
167	-0.693147	0.585965	0.217267	272.055	203.89
168	-0.693147	0.589474	0.227545	272.055	203.388
169	-0.693147	0.592982	0.235269	272.055	203.011
170	-0.693147	0.596491	0.24559	272.055	202.507
171	-0.693147	0.6	0.253347	272.055	202.128
172	-0.693147	0.603509	0.263715	272.055	201.622

173	-0.693147	0.607018	0.27411	272.055	201.114
174	-0.693147	0.610526	0.281926	272.055	200.733
175	-0.693147	0.614035	0.292375	272.055	200.222
176	-0.693147	0.617544	0.300232	272.055	199.839
177	-0.693147	0.621053	0.310738	272.055	199.326
178	-0.693147	0.624561	0.318639	272.055	198.94
179	-0.693147	0.62807	0.329206	272.055	198.424
180	-0.693147	0.631579	0.337155	272.055	198.036
181	-0.693147	0.635088	0.347787	272.055	197.516
182	-0.693147	0.638596	0.355788	272.055	197.126
183	-0.693147	0.642105	0.36649	272.055	196.603
184	-0.693147	0.645614	0.374544	272.055	196.21
185	-0.693147	0.649123	0.385321	272.055	195.683
186	-0.693147	0.652632	0.393433	272.055	195.287
187	-0.693147	0.65614	0.40429	272.055	194.757
188	-0.693147	0.659649	0.412463	272.055	194.358
189	-0.693147	0.663158	0.423405	272.055	193.824
190	-0.693147	0.666667	0.431644	272.055	193.421
191	-0.693147	0.670175	0.442676	272.055	192.883
192	-0.693147	0.673684	0.450985	272.055	192.477
193	-0.693147	0.677193	0.462114	272.055	191.933
194	-0.693147	0.680702	0.470498	272.055	191.524
195	-0.693147	0.684211	0.481728	272.055	190.976
196	-0.693147	0.687719	0.490189	272.055	190.562
197	-0.693147	0.691228	0.501527	272.055	190.009
198	-0.693147	0.694737	0.510074	272.055	189.591
199	-0.693147	0.698246	0.521527	272.055	189.032
200	-0.693147	0.701754	0.530162	272.055	188.61
201	-0.693147	0.705263	0.541736	272.055	188.045
202	-0.693147	0.708772	0.550465	272.055	187.619
203	-0.693147	0.712281	0.56217	272.055	187.047
204	-0.693147	0.715789	0.570999	272.055	186.616
205	-0.693147	0.719298	0.582841	272.055	186.038
206	-0.693147	0.722807	0.591776	272.055	185.602
207	-0.693147	0.726316	0.603765	272.055	185.016
208	-0.693147	0.729825	0.612813	272.055	184.574
209	-0.693147	0.733333	0.624956	272.055	183.981
210	-0.693147	0.736842	0.634124	272.055	183.534
211	-0.693147	0.740351	0.646431	272.055	182.933
212	-0.693147	0.74386	0.655726	272.055	182.479
213	-0.693147	0.747368	0.668209	272.055	181.869
214	-0.693147	0.750877	0.677639	272.055	181.409
215	-0.693147	0.754386	0.690309	272.055	180.79
216	-0.693147	0.757895	0.699883	272.055	180.322
217	-0.693147	0.761404	0.712751	272.055	179.694
218	-0.693147	0.764912	0.722479	272.055	179.219
219	-0.693147	0.768421	0.735557	272.055	178.58
220	-0.693147	0.77193	0.745449	272.055	178.097
221	-0.693147	0.775439	0.758753	272.055	177.448
222	-0.693147	0.778947	0.768821	272.055	176.956
223	-0.693147	0.782456	0.782366	272.055	176.294
224	-0.693147	0.785965	0.792618	272.055	175.794
225	-0.693147	0.789474	0.806422	272.055	175.12
226	-0.693147	0.792982	0.816874	272.055	174.609
227	-0.693147	0.796491	0.830953	272.055	173.922
228	-0.693147	0.8	0.841621	272.055	173.401
229	-0.693147	0.803509	0.855996	272.055	172.699
230	-0.693147	0.807018	0.87055	272.055	171.988
231	-0.693147	0.810526	0.881587	272.055	171.449
232	-0.693147	0.814035	0.896473	272.055	170.722
233	-0.693147	0.817544	0.907769	272.055	170.171
234	-0.693147	0.821053	0.923014	272.055	169.426

235	-0.693147	0.824561	0.93459	272.055	168.861
236	-0.693147	0.82807	0.950222	272.055	168.097
237	-0.693147	0.831579	0.9621	272.055	167.517
238	-0.693147	0.835088	0.97815	272.055	166.734
239	-0.693147	0.838596	0.990356	272.055	166.138
240	-0.693147	0.842105	1.00687	272.055	165.331
241	-0.693147	0.845614	1.01943	272.055	164.718
242	-0.693147	0.849123	1.03643	272.055	163.888
243	-0.693147	0.852632	1.04939	272.055	163.255
244	-0.693147	0.85614	1.06694	272.055	162.398
245	-0.693147	0.859649	1.08032	272.055	161.744
246	-0.693147	0.863158	1.09847	272.055	160.858
247	-0.693147	0.866667	1.11232	272.055	160.182
248	-0.693147	0.870175	1.13113	272.055	159.263
249	-0.693147	0.873684	1.1455	272.055	158.561
250	-0.693147	0.877193	1.16505	272.055	157.607
251	-0.693147	0.880702	1.18	272.055	156.877
252	-0.693147	0.884211	1.20036	272.055	155.882
253	-0.693147	0.887719	1.21596	272.055	155.121
254	-0.693147	0.891228	1.23724	272.055	154.082
255	-0.693147	0.894737	1.25357	272.055	153.284
256	-0.693147	0.898246	1.27588	272.055	152.195
257	-0.693147	0.901754	1.29303	272.055	151.357
258	-0.693147	0.905263	1.31652	272.055	150.21
259	-0.693147	0.908772	1.33462	272.055	149.326
260	-0.693147	0.912281	1.35946	272.055	148.113
261	-0.693147	0.915789	1.37866	272.055	147.176
262	-0.693147	0.919298	1.40507	272.055	145.886
263	-0.579818	0.922807	1.42554	292.266	144.886
264	-0.494296	0.926316	1.4538	307.517	143.506
265	-0.0618754	0.929825	1.47579	384.632	142.432
266	0	0.933333	1.50626	395.667	140.944
267	0	0.936842	1.53007	395.667	139.782
268	0	0.940351	1.56322	395.667	138.163
269	0	0.94386	1.58927	395.667	136.891
270	0	0.947368	1.62576	395.667	135.109
271	0	0.950877	1.65463	395.667	133.699
272	0	0.954386	1.6954	395.667	131.708
273	0	0.957895	1.72793	395.667	130.119
274	0	0.961404	1.77438	395.667	127.851
275	0	0.964912	1.81191	395.667	126.018
276	0	0.968421	1.86629	395.667	123.363
277	0	0.97193	1.91103	395.667	121.178
278	0	0.975439	1.97737	395.667	117.938
279	0	0.978947	2.03352	395.667	115.196
280	0	0.982456	2.12007	395.667	110.97
281	0	0.985965	2.19728	395.667	107.199
282	0	0.989474	2.32634	395.667	100.897
283	0.182322	0.992982	2.45727	428.181	94.5032
284	0.262364	0.996491	2.74777	442.455	80.3175

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Toluene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 95.0704%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 23
Maximum Background Value = 0.182322
Confidence Level = 74.2%
False Positive Rate = 25.8%

Location	Date	Count	Mean	Significant
LMW-10	11/16/2012	1	-1.80181	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
LMW-14R	11/16/2012	1	-1.80181	FALSE
LMW-15R	11/16/2012	1	-1.80181	FALSE
LMW-16	11/16/2012	1	-1.80181	FALSE
LMW-3	11/16/2012	1	-1.80181	FALSE
LMW-3S	11/16/2012	1	-1.80181	FALSE
LMW-6	11/16/2012	1	-1.80181	FALSE
LMW-7	11/16/2012	1	-0.0618754	FALSE
LMW-8	11/16/2012	1	-1.80181	FALSE
LMW-9	11/16/2012	1	-1.80181	FALSE
LMW-9D	11/16/2012	1	-1.80181	FALSE
LMW-9S	11/16/2012	1	-1.80181	FALSE
MW-5	11/20/2008	1	-0.693147	FALSE

Concentrations (ppb)

Parameter: Trichloroethylene

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 284
Total Non-Detect: 264
Percent Non-Detects: 92.9577%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	22 (95.6522%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	12 (60%)	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

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	
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	
		6/11/2009	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	
LMW-15R	15	15 (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	
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<0.13 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	
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<0.13 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	
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<0.13 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	
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<0.13 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
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-8	23	16 (69.5652%)	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	
LMW-9	23	21 (91.3043%)	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
LMW-9D	13	12 (92.3077%)	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
LMW-9S	15	15 (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
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 = 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	-2.120072	8.323	0
6	0	-2.033523	2.4582	0
7	0	-1.977373	6.3682	0
8	0	-1.911034	0.0203	0
9	0.065	-1.866294	3.5033	-0.121309
10	0.065	-1.811914	6.7863	-0.239083
11	0.065	-1.774384	9.9348	-0.354418
12	0.065	-1.727935	2.9205	-0.466733
13	0.065	-1.6954	55.7949	-0.576934
14	0.065	-1.654635	8.5327	-0.684485
15	0.065	-1.625766	1.1758	-0.79016
16	0.065	-1.589276	3.7015	-0.893462
17	0.065	-1.563226	6.1452	-0.995071
18	0.065	-1.530076	8.4863	-1.09453
19	0.065	-1.506267	0.7551	-1.19243
20	0.065	-1.475797	2.9331	-1.28836
21	0.065	-1.4538	75.0466	-1.38286
22	0.065	-1.425547	7.0788	-1.47552
23	0.065	-1.405077	9.053	-1.56685
24	0.065	-1.378668	0.9537	-1.65646
25	0.065	-1.359468	2.8019	-1.74482
26	0.065	-1.334628	4.5831	-1.83157
27	0.065	-1.316528	6.3163	-1.91715
28	0.065	-1.293038	7.9883	-2.0012
29	0.065	-1.275888	9.6161	-2.08413
30	0.065	-1.253579	1.1875	-2.16561
31	0.065	-1.237249	2.7183	-2.24603
32	0.065	-1.215969	4.1969	-2.32507
33	0.065	-1.200369	5.6377	-2.40309
34	0.065	-1.18	97.0301	-2.47979
35	0.065	-1.165059	8.3875	-2.55552
36	0.065	-1.1455	99.6996	-2.62998
37	0.065	-1.13113	100.979	-2.7035
38	0.065	-1.11232	102.216	-2.7758
39	0.065	-1.09847	103.423	-2.8472
40	0.065	-1.08032	104.59	-2.91742
41	0.065	-1.06694	105.728	-2.98677
42	0.065	-1.04939	106.83	-3.05498
43	0.065	-1.03643	107.904	-3.12235
44	0.065	-1.01943	108.943	-3.18861
45	0.065	-1.00687	109.957	-3.25406
46	0.065	-0.990356	110.938	-3.31843
47	0.065	-0.97815	111.894	-3.38201
48	0.065	-0.9621	112.82	-3.44455
49	0.065	-0.950222	113.723	-3.50631
50	0.065	-0.93459	114.596	-3.56706
51	0.065	-0.923014	115.448	-3.62706

52	0.065	-0.907769	116.272	-3.68606
53	0.065	-0.896473	117.076	-3.74433
54	0.065	-0.881587	117.853	-3.80164
55	0.065	-0.87055	118.611	-3.85822
56	0.065	-0.855996	119.344	-3.91386
57	0.065	-0.841621	120.052	-3.96857
58	0.065	-0.830953	120.743	-4.02258
59	0.065	-0.816874	121.41	-4.07568
60	0.065	-0.806422	122.06	-4.12809
61	0.065	-0.792618	122.689	-4.17961
62	0.065	-0.782366	123.301	-4.23047
63	0.065	-0.768821	123.892	-4.28044
64	0.065	-0.758753	124.467	-4.32976
65	0.065	-0.745449	125.023	-4.37822
66	0.065	-0.735557	125.564	-4.42603
67	0.065	-0.722479	126.086	-4.47299
68	0.065	-0.712751	126.594	-4.51932
69	0.065	-0.699883	127.084	-4.56481
70	0.065	-0.690309	127.561	-4.60968
71	0.065	-0.677639	128.02	-4.65373
72	0.065	-0.668209	128.466	-4.69716
73	0.065	-0.655726	128.896	-4.73978
74	0.065	-0.646431	129.314	-4.7818
75	0.065	-0.634124	129.716	-4.82302
76	0.065	-0.624956	130.107	-4.86364
77	0.065	-0.612813	130.482	-4.90347
78	0.065	-0.603765	130.847	-4.94272
79	0.065	-0.591776	131.197	-4.98118
80	0.065	-0.582841	131.537	-5.01907
81	0.065	-0.570999	131.863	-5.05618
82	0.065	-0.56217	132.179	-5.09272
83	0.065	-0.550465	132.482	-5.1285
84	0.065	-0.541736	132.775	-5.16372
85	0.065	-0.530162	133.056	-5.19818
86	0.065	-0.521527	133.328	-5.23208
87	0.065	-0.510074	133.589	-5.26523
88	0.065	-0.501527	133.84	-5.29783
89	0.065	-0.490189	134.08	-5.32969
90	0.065	-0.481728	134.312	-5.361
91	0.13	-0.470498	134.534	-5.42217
92	0.14	-0.462114	134.747	-5.48687
93	0.14	-0.450985	134.951	-5.55
94	0.16	-0.442676	135.147	-5.62083
95	0.16	-0.431644	135.333	-5.68989
96	0.19	-0.423405	135.512	-5.77034
97	0.19	-0.412463	135.682	-5.84871
98	0.22	-0.40429	135.846	-5.93765
99	0.23	-0.393433	136.001	-6.02814
100	0.23	-0.385321	136.149	-6.11677
101	0.29	-0.374544	136.289	-6.22538
102	0.41	-0.36649	136.424	-6.37564
103	0.5	-0.355788	136.55	-6.55354
104	0.5	-0.347787	136.671	-6.72743
105	0.5	-0.337155	136.785	-6.89601
106	0.5	-0.329206	136.893	-7.06061
107	0.5	-0.318639	136.995	-7.21993
108	0.5	-0.310738	137.091	-7.3753
109	0.5	-0.300232	137.182	-7.52542
110	0.5	-0.292375	137.267	-7.67161
111	0.5	-0.281926	137.346	-7.81257
112	0.5	-0.27411	137.422	-7.94962
113	0.5	-0.263715	137.491	-8.08148

114	0.5	-0.253347	137.555	-8.20815
115	0.5	-0.24559	137.616	-8.33095
116	0.5	-0.235269	137.671	-8.44858
117	0.5	-0.227545	137.723	-8.56236
118	0.5	-0.217267	137.77	-8.67099
119	0.5	-0.209575	137.814	-8.77578
120	0.5	-0.199336	137.854	-8.87545
121	0.5	-0.191671	137.89	-8.97128
122	0.5	-0.181468	137.923	-9.06202
123	0.5	-0.173829	137.954	-9.14893
124	0.5	-0.163659	137.98	-9.23076
125	0.5	-0.156042	138.005	-9.30878
126	0.5	-0.1459	138.026	-9.38173
127	0.5	-0.138305	138.045	-9.45088
128	0.5	-0.128189	138.062	-9.51498
129	0.5	-0.12061	138.076	-9.57528
130	0.5	-0.110516	138.088	-9.63054
131	0.5	-0.102953	138.099	-9.68202
132	0.5	-0.0928787	138.108	-9.72846
133	0.5	-0.0853288	138.115	-9.77112
134	0.5	-0.0752698	138.12	-9.80876
135	0.5	-0.0677301	138.125	-9.84262
136	0.5	-0.0576847	138.128	-9.87146
137	0.5	-0.0501541	138.131	-9.89654
138	0.5	-0.0401167	138.132	-9.9166
139	0.5	-0.0325917	138.134	-9.93289
140	0.5	-0.0225612	138.134	-9.94417
141	0.5	-0.0150408	138.134	-9.95169
142	0.5	-0.00501359	138.134	-9.9542
143	0.5	0.00501359	138.134	-9.95169
144	0.5	0.0150408	138.135	-9.94417
145	0.5	0.0225612	138.135	-9.93289
146	0.5	0.0325917	138.136	-9.9166
147	0.5	0.0401167	138.138	-9.89654
148	0.5	0.0501541	138.14	-9.87146
149	0.5	0.0576847	138.144	-9.84262
150	0.5	0.0677301	138.148	-9.80876
151	0.5	0.0752698	138.154	-9.77112
152	0.5	0.0853288	138.161	-9.72846
153	0.5	0.0928787	138.17	-9.68202
154	0.5	0.102953	138.18	-9.63054
155	0.5	0.110516	138.193	-9.57528
156	0.5	0.12061	138.207	-9.51498
157	0.5	0.128189	138.224	-9.45088
158	0.5	0.138305	138.243	-9.38173
159	0.5	0.1459	138.264	-9.30878
160	0.5	0.156042	138.288	-9.23076
161	0.5	0.163659	138.315	-9.14893
162	0.5	0.173829	138.345	-9.06202
163	0.5	0.181468	138.378	-8.97128
164	0.5	0.191671	138.415	-8.87545
165	0.5	0.199336	138.455	-8.77578
166	0.5	0.209575	138.499	-8.67099
167	0.5	0.217267	138.546	-8.56236
168	0.5	0.227545	138.598	-8.44858
169	0.5	0.235269	138.653	-8.33095
170	0.5	0.24559	138.713	-8.20815
171	0.5	0.253347	138.777	-8.08148
172	0.5	0.263715	138.847	-7.94962
173	0.5	0.27411	138.922	-7.81257
174	0.5	0.281926	139.002	-7.67161
175	0.5	0.292375	139.087	-7.52542

176	0.5	0.300232	139.177	-7.3753
177	0.5	0.310738	139.274	-7.21993
178	0.5	0.318639	139.375	-7.06061
179	0.5	0.329206	139.484	-6.89601
180	0.5	0.337155	139.597	-6.72743
181	0.5	0.347787	139.718	-6.55354
182	0.5	0.355788	139.845	-6.37564
183	0.5	0.36649	139.979	-6.1924
184	0.5	0.374544	140.12	-6.00513
185	0.5	0.385321	140.268	-5.81247
186	0.5	0.393433	140.423	-5.61575
187	0.5	0.40429	140.586	-5.41361
188	0.5	0.412463	140.756	-5.20737
189	0.5	0.423405	140.936	-4.99567
190	0.5	0.431644	141.122	-4.77985
191	0.5	0.442676	141.318	-4.55851
192	0.5	0.450985	141.521	-4.33302
193	0.5	0.462114	141.735	-4.10196
194	0.5	0.470498	141.956	-3.86671
195	0.5	0.481728	142.188	-3.62585
196	0.5	0.490189	142.429	-3.38076
197	0.5	0.501527	142.68	-3.12999
198	0.5	0.510074	142.94	-2.87495
199	0.5	0.521527	143.212	-2.61419
200	0.5	0.530162	143.493	-2.34911
201	0.5	0.541736	143.787	-2.07824
202	0.5	0.550465	144.09	-1.80301
203	0.5	0.56217	144.406	-1.52192
204	0.5	0.570999	144.732	-1.23643
205	0.5	0.582841	145.072	-0.945005
206	0.5	0.591776	145.422	-0.649117
207	0.5	0.603765	145.786	-0.347235
208	0.5	0.612813	146.162	-0.0408282
209	0.5	0.624956	146.552	0.27165
210	0.5	0.634124	146.955	0.588712
211	0.5	0.646431	147.372	0.911927
212	0.5	0.655726	147.802	1.23979
213	0.5	0.668209	148.249	1.57389
214	0.5	0.677639	148.708	1.91271
215	0.5	0.690309	149.185	2.25787
216	0.5	0.699883	149.674	2.60781
217	0.5	0.712751	150.182	2.96419
218	0.5	0.722479	150.704	3.32543
219	0.5	0.735557	151.245	3.6932
220	0.5	0.745449	151.801	4.06593
221	0.5	0.758753	152.377	4.4453
222	0.5	0.768821	152.968	4.82972
223	0.5	0.782366	153.58	5.2209
224	0.5	0.792618	154.208	5.61721
225	0.5	0.806422	154.859	6.02042
226	0.5	0.816874	155.526	6.42885
227	0.5	0.830953	156.216	6.84433
228	0.5	0.841621	156.925	7.26514
229	0.5	0.855996	157.657	7.69314
230	0.5	0.87055	158.415	8.12842
231	0.5	0.881587	159.193	8.56921
232	0.5	0.896473	159.996	9.01745
233	0.5	0.907769	160.82	9.47133
234	0.5	0.923014	161.672	9.93284
235	0.5	0.93459	162.546	10.4001
236	0.5	0.950222	163.449	10.8752
237	0.5	0.9621	164.374	11.3563

238	0.5	0.97815	165.331	11.8454	
239	0.5	0.990356		166.312	12.3405
240	0.5	1.00687	167.326	12.844	
241	0.5	1.01943	168.365	13.3537	
242	0.5	1.03643	169.439	13.8719	
243	0.5	1.04939	170.54	14.3966	
244	0.5	1.06694	171.679	14.9301	
245	0.5	1.08032	172.846	15.4702	
246	0.5	1.09847	174.052	16.0195	
247	0.5	1.11232	175.29	16.5756	
248	0.5	1.13113	176.569	17.1412	
249	0.5	1.1455	177.881	17.7139	
250	0.5	1.16505	179.239	18.2965	
251	0.5	1.18	180.631	18.8865	
252	0.5	1.20036	182.072	19.4866	
253	0.5	1.21596	183.55	20.0946	
254	0.5	1.23724	185.081	20.7132	
255	0.5	1.25357	186.653	21.34	
256	0.5	1.27588	188.28	21.978	
257	0.5	1.29303	189.952	22.6245	
258	0.5	1.31652	191.686	23.2827	
259	0.5	1.33462	193.467	23.9501	
260	0.5	1.35946	195.315	24.6298	
261	0.5	1.37866	197.216	25.3191	
262	0.5	1.40507	199.19	26.0217	
263	0.5	1.42554	201.222	26.7344	
264	0.5	1.4538	203.336	27.4613	
265	0.5	1.47579	205.514	28.1992	
266	0.5	1.50626	207.782	28.9524	
267	0.5	1.53007	210.123	29.7174	
268	0.5	1.56322	212.567	30.499	
269	0.5	1.58927	215.093	31.2936	
270	0.5	1.62576	217.736	32.1065	
271	0.5	1.65463	220.474	32.9338	
272	0.5	1.6954	223.348	33.7815	
273	0.5	1.72793	226.334	34.6455	
274	0.5	1.77438	229.482	35.5327	
275	0.5	1.81191	232.765	36.4386	
276	0.5	1.86629	236.248	37.3718	
277	0.88	1.91103	239.9	39.0535	
278	0.97	1.97737	243.81	40.9715	
279	1.1	2.03352	247.946	43.2084	
280	1.4	2.12007	252.44	46.1765	
281	1.4	2.19728	257.268	49.2527	
282	1.6	2.32634	262.68	52.9749	
283	1.7	2.45727	268.718	57.1522	
284	1.9	2.74777	276.269	62.373	

Data Set Standard Deviation = 0.272054
Numerator = 3890.39
Denominator = 5786.66
W Statistic = 0.672303 = 3890.39 / 5786.66

5% Critical value of 0.976 exceeds 0.672303
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.672303
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 = 0.822157
0.822157 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0		0.00350877	-2.7477739	348.683	
2	0		0.00701754	-2.4572739	334.497	
3	0		0.0105263	-2.3263439	328.103	
4	0		0.0140351	-2.1972839	321.801	
5	0		0.0175439	-2.1200739	318.03	
6	0		0.0210526	-2.0335239	313.804	
7	0		0.0245614	-1.9773739	311.062	
8	0		0.0280702	-1.9110339	307.822	
9	0.065		0.0315789	-1.8662956.3875	305.637	
10	0.065		0.0350877	-1.8119156.3875	302.982	
11	0.065		0.0385965	-1.7743856.3875	301.149	
12	0.065		0.0421053	-1.7279356.3875	298.881	
13	0.065		0.045614	-1.6954 56.3875	297.292	
14	0.065		0.0491228	-1.6546356.3875	295.301	
15	0.065		0.0526316	-1.6257656.3875	293.891	
16	0.065		0.0561404	-1.5892756.3875	292.109	
17	0.065		0.0596491	-1.5632256.3875	290.837	
18	0.065		0.0631579	-1.5300756.3875	289.218	
19	0.065		0.0666667	-1.5062656.3875	288.056	
20	0.065		0.0701754	-1.4757956.3875	286.568	
21	0.065		0.0736842	-1.4538 56.3875	285.494	
22	0.065		0.077193	-1.4255456.3875	284.114	
23	0.065		0.0807018	-1.4050756.3875	283.114	
24	0.065		0.0842105	-1.3786656.3875	281.824	
25	0.065		0.0877193	-1.3594656.3875	280.887	
26	0.065		0.0912281	-1.3346256.3875	279.674	
27	0.065		0.0947368	-1.3165256.3875	278.79	
28	0.065		0.0982456	-1.2930356.3875	277.643	
29	0.065		0.101754	-1.2758856.3875	276.805	
30	0.065		0.105263	-1.2535756.3875	275.716	
31	0.065		0.108772	-1.2372456.3875	274.918	
32	0.065		0.112281	-1.2159656.3875	273.879	
33	0.065		0.115789	-1.2003656.3875	273.118	
34	0.065		0.119298	-1.18 56.3875	272.123	
35	0.065		0.122807	-1.1650556.3875	271.393	
36	0.065		0.126316	-1.1455 56.3875	270.439	
37	0.065		0.129825	-1.1311356.3875	269.737	
38	0.065		0.133333	-1.1123256.3875	268.818	
39	0.065		0.136842	-1.0984756.3875	268.142	
40	0.065		0.140351	-1.0803256.3875	267.256	
41	0.065	0.14386	-1.0669456.3875	266.602		
42	0.065		0.147368	-1.0493956.3875	265.745	
43	0.065		0.150877	-1.0364356.3875	265.112	
44	0.065		0.154386	-1.0194356.3875	264.282	
45	0.065		0.157895	-1.0068756.3875	263.669	
46	0.065		0.161404	-0.990356	56.3875	262.862
47	0.065		0.164912	-0.9781556.3875	262.266	
48	0.065		0.168421	-0.9621 56.3875	261.483	

49	0.065	0.17193	-0.950222	56.3875	260.903
50	0.065	0.175439	-0.934595	56.3875	260.139
51	0.065	0.178947	-0.923014	56.3875	259.574
52	0.065	0.182456	-0.907769	56.3875	258.829
53	0.065	0.185965	-0.896473	56.3875	258.278
54	0.065	0.189474	-0.881587	56.3875	257.551
55	0.065	0.192982	-0.870555	56.3875	257.012
56	0.065	0.196491	-0.855996	56.3875	256.301
57	0.065	0.2	-0.841621	56.3875	255.599
58	0.065	0.203509	-0.830953	56.3875	255.078
59	0.065	0.207018	-0.816874	56.3875	254.391
60	0.065	0.210526	-0.806422	56.3875	253.88
61	0.065	0.214035	-0.792618	56.3875	253.206
62	0.065	0.217544	-0.782366	56.3875	252.706
63	0.065	0.221053	-0.768821	56.3875	252.044
64	0.065	0.224561	-0.758753	56.3875	251.552
65	0.065	0.22807	-0.745449	56.3875	250.903
66	0.065	0.231579	-0.735557	56.3875	250.42
67	0.065	0.235088	-0.722479	56.3875	249.781
68	0.065	0.238596	-0.712751	56.3875	249.306
69	0.065	0.242105	-0.699883	56.3875	248.678
70	0.065	0.245614	-0.690309	56.3875	248.21
71	0.065	0.249123	-0.677639	56.3875	247.591
72	0.065	0.252632	-0.668209	56.3875	247.131
73	0.065	0.25614	-0.655726	56.3875	246.521
74	0.065	0.259649	-0.646431	56.3875	246.067
75	0.065	0.263158	-0.634124	56.3875	245.466
76	0.065	0.266667	-0.624956	56.3875	245.019
77	0.065	0.270175	-0.612813	56.3875	244.426
78	0.065	0.273684	-0.603765	56.3875	243.984
79	0.065	0.277193	-0.591776	56.3875	243.398
80	0.065	0.280702	-0.582841	56.3875	242.962
81	0.065	0.284211	-0.570999	56.3875	242.384
82	0.065	0.287719	-0.562175	56.3875	241.953
83	0.065	0.291228	-0.550465	56.3875	241.381
84	0.065	0.294737	-0.541736	56.3875	240.955
85	0.065	0.298246	-0.530162	56.3875	240.39
86	0.065	0.301754	-0.521527	56.3875	239.968
87	0.065	0.305263	-0.510074	56.3875	239.409
88	0.065	0.308772	-0.501527	56.3875	238.991
89	0.065	0.312281	-0.490189	56.3875	238.438
90	0.065	0.315789	-0.481728	56.3875	238.024
91	0.13	0.319298	-0.470498	73.775	237.476
92	0.14	0.322807	-0.462114	76.45	237.067
93	0.14	0.326316	-0.450985	76.45	236.523
94	0.16	0.329825	-0.442676	81.8	236.117
95	0.16	0.333333	-0.431644	81.8	235.579
96	0.19	0.336842	-0.423405	89.825	235.176
97	0.19	0.340351	-0.412463	89.825	234.642
98	0.22	0.34386	-0.404299	97.85	234.243
99	0.23	0.347368	-0.393433	100.525	233.713
100	0.23	0.350877	-0.385321	100.525	233.317
101	0.29	0.354386	-0.374544	116.575	232.79
102	0.41	0.357895	-0.36649	148.675	232.397
103	0.5	0.361404	-0.355788	172.75	231.874
104	0.5	0.364912	-0.347787	172.75	231.484
105	0.5	0.368421	-0.337155	172.75	230.964
106	0.5	0.37193	-0.329206	172.75	230.576
107	0.5	0.375439	-0.318639	172.75	230.06
108	0.5	0.378947	-0.310738	172.75	229.674
109	0.5	0.382456	-0.300232	172.75	229.161
110	0.5	0.385965	-0.292375	172.75	228.778

111	0.5	0.389474	-0.281926	172.75	228.267
112	0.5	0.392982	-0.27411	172.75	227.886
113	0.5	0.396491	-0.263715	172.75	227.378
114	0.5	0.4	-0.253347	172.75	226.872
115	0.5	0.403509	-0.24559	172.75	226.493
116	0.5	0.407018	-0.235269	172.75	225.989
117	0.5	0.410526	-0.227545	172.75	225.612
118	0.5	0.414035	-0.217267	172.75	225.11
119	0.5	0.417544	-0.209575	172.75	224.734
120	0.5	0.421053	-0.199336	172.75	224.234
121	0.5	0.424561	-0.191671	172.75	223.86
122	0.5	0.42807	-0.181468	172.75	223.362
123	0.5	0.431579	-0.173829	172.75	222.989
124	0.5	0.435088	-0.163659	172.75	222.492
125	0.5	0.438596	-0.156042	172.75	222.12
126	0.5	0.442105	-0.1459	172.75	221.625
127	0.5	0.445614	-0.138305	172.75	221.254
128	0.5	0.449123	-0.128189	172.75	220.76
129	0.5	0.452632	-0.12061	172.75	220.39
130	0.5	0.45614	-0.110516	172.75	219.897
131	0.5	0.459649	-0.102953	172.75	219.528
132	0.5	0.463158	-0.0928787	172.75	219.036
133	0.5	0.466667	-0.0853288	172.75	218.667
134	0.5	0.470175	-0.0752698	172.75	218.176
135	0.5	0.473684	-0.0677301	172.75	217.807
136	0.5	0.477193	-0.0576847	172.75	217.317
137	0.5	0.480702	-0.0501541	172.75	216.949
138	0.5	0.484211	-0.0401167	172.75	216.459
139	0.5	0.487719	-0.0325917	172.75	216.092
140	0.5	0.491228	-0.0225612	172.75	215.602
141	0.5	0.494737	-0.0150408	172.75	215.234
142	0.5	0.498246	-0.00501359	172.75	214.745
143	0.5	0.501754	0.00501359	172.75	214.255
144	0.5	0.505263	0.0150408	172.75	213.766
145	0.5	0.508772	0.0225612	172.75	213.398
146	0.5	0.512281	0.0325917	172.75	212.908
147	0.5	0.515789	0.0401167	172.75	212.541
148	0.5	0.519298	0.0501541	172.75	212.051
149	0.5	0.522807	0.0576847	172.75	211.683
150	0.5	0.526316	0.0677301	172.75	211.193
151	0.5	0.529825	0.0752698	172.75	210.824
152	0.5	0.533333	0.0853288	172.75	210.333
153	0.5	0.536842	0.0928787	172.75	209.964
154	0.5	0.540351	0.102953	172.75	209.472
155	0.5	0.54386	0.110516	172.75	209.103
156	0.5	0.547368	0.12061	172.75	208.61
157	0.5	0.550877	0.128189	172.75	208.24
158	0.5	0.554386	0.138305	172.75	207.746
159	0.5	0.557895	0.1459	172.75	207.375
160	0.5	0.561404	0.156042	172.75	206.88
161	0.5	0.564912	0.163659	172.75	206.508
162	0.5	0.568421	0.173829	172.75	206.011
163	0.5	0.57193	0.181468	172.75	205.638
164	0.5	0.575439	0.191671	172.75	205.14
165	0.5	0.578947	0.199336	172.75	204.766
166	0.5	0.582456	0.209575	172.75	204.266
167	0.5	0.585965	0.217267	172.75	203.89
168	0.5	0.589474	0.227545	172.75	203.388
169	0.5	0.592982	0.235269	172.75	203.011
170	0.5	0.596491	0.24559	172.75	202.507
171	0.5	0.6	0.253347	172.75	202.128
172	0.5	0.603509	0.263715	172.75	201.622

173	0.5	0.607018	0.27411	172.75	201.114
174	0.5	0.610526	0.281926	172.75	200.733
175	0.5	0.614035	0.292375	172.75	200.222
176	0.5	0.617544	0.300232	172.75	199.839
177	0.5	0.621053	0.310738	172.75	199.326
178	0.5	0.624561	0.318639	172.75	198.94
179	0.5	0.62807	0.329206	172.75	198.424
180	0.5	0.631579	0.337155	172.75	198.036
181	0.5	0.635088	0.347787	172.75	197.516
182	0.5	0.638596	0.355788	172.75	197.126
183	0.5	0.642105	0.36649	172.75	196.603
184	0.5	0.645614	0.374544	172.75	196.21
185	0.5	0.649123	0.385321	172.75	195.683
186	0.5	0.652632	0.393433	172.75	195.287
187	0.5	0.65614	0.40429	172.75	194.757
188	0.5	0.659649	0.412463	172.75	194.358
189	0.5	0.663158	0.423405	172.75	193.824
190	0.5	0.666667	0.431644	172.75	193.421
191	0.5	0.670175	0.442676	172.75	192.883
192	0.5	0.673684	0.450985	172.75	192.477
193	0.5	0.677193	0.462114	172.75	191.933
194	0.5	0.680702	0.470498	172.75	191.524
195	0.5	0.684211	0.481728	172.75	190.976
196	0.5	0.687719	0.490189	172.75	190.562
197	0.5	0.691228	0.501527	172.75	190.009
198	0.5	0.694737	0.510074	172.75	189.591
199	0.5	0.698246	0.521527	172.75	189.032
200	0.5	0.701754	0.530162	172.75	188.61
201	0.5	0.705263	0.541736	172.75	188.045
202	0.5	0.708772	0.550465	172.75	187.619
203	0.5	0.712281	0.56217	172.75	187.047
204	0.5	0.715789	0.570999	172.75	186.616
205	0.5	0.719298	0.582841	172.75	186.038
206	0.5	0.722807	0.591776	172.75	185.602
207	0.5	0.726316	0.603765	172.75	185.016
208	0.5	0.729825	0.612813	172.75	184.574
209	0.5	0.733333	0.624956	172.75	183.981
210	0.5	0.736842	0.634124	172.75	183.534
211	0.5	0.740351	0.646431	172.75	182.933
212	0.5	0.74386	0.655726	172.75	182.479
213	0.5	0.747368	0.668209	172.75	181.869
214	0.5	0.750877	0.677639	172.75	181.409
215	0.5	0.754386	0.690309	172.75	180.79
216	0.5	0.757895	0.699883	172.75	180.322
217	0.5	0.761404	0.712751	172.75	179.694
218	0.5	0.764912	0.722479	172.75	179.219
219	0.5	0.768421	0.735557	172.75	178.58
220	0.5	0.77193	0.745449	172.75	178.097
221	0.5	0.775439	0.758753	172.75	177.448
222	0.5	0.778947	0.768821	172.75	176.956
223	0.5	0.782456	0.782366	172.75	176.294
224	0.5	0.785965	0.792618	172.75	175.794
225	0.5	0.789474	0.806422	172.75	175.12
226	0.5	0.792982	0.816874	172.75	174.609
227	0.5	0.796491	0.830953	172.75	173.922
228	0.5	0.8	0.841621	172.75	173.401
229	0.5	0.803509	0.855996	172.75	172.699
230	0.5	0.807018	0.87055	172.75	171.988
231	0.5	0.810526	0.881587	172.75	171.449
232	0.5	0.814035	0.896473	172.75	170.722
233	0.5	0.817544	0.907769	172.75	170.171
234	0.5	0.821053	0.923014	172.75	169.426

235	0.5	0.824561	0.93459	172.75	168.861	
236	0.5	0.82807	0.950222	172.75	168.097	
237	0.5	0.831579	0.9621	172.75	167.517	
238	0.5	0.835088	0.97815	172.75	166.734	
239	0.5	0.838596	0.990356	172.75	166.138	
240	0.5	0.842105	1.00687	172.75	165.331	
241	0.5	0.845614	1.01943	172.75	164.718	
242	0.5	0.849123	1.03643	172.75	163.888	
243	0.5	0.852632	1.04939	172.75	163.255	
244	0.5	0.85614	1.06694	172.75	162.398	
245	0.5	0.859649	1.08032	172.75	161.744	
246	0.5	0.863158	1.09847	172.75	160.858	
247	0.5	0.866667	1.11232	172.75	160.182	
248	0.5	0.870175	1.13113	172.75	159.263	
249	0.5	0.873684	1.1455	172.75	158.561	
250	0.5	0.877193	1.16505	172.75	157.607	
251	0.5	0.880702	1.18	172.75	156.877	
252	0.5	0.884211	1.20036	172.75	155.882	
253	0.5	0.887719	1.21596	172.75	155.121	
254	0.5	0.891228	1.23724	172.75	154.082	
255	0.5	0.894737	1.25357	172.75	153.284	
256	0.5	0.898246	1.27588	172.75	152.195	
257	0.5	0.901754	1.29303	172.75	151.357	
258	0.5	0.905263	1.31652	172.75	150.21	
259	0.5	0.908772	1.33462	172.75	149.326	
260	0.5	0.912281	1.35946	172.75	148.113	
261	0.5	0.915789	1.37866	172.75	147.176	
262	0.5	0.919298	1.40507	172.75	145.886	
263	0.5	0.922807	1.42554	172.75	144.886	
264	0.5	0.926316	1.4538	172.75	143.506	
265	0.5	0.929825	1.47579	172.75	142.432	
266	0.5	0.933333	1.50626	172.75	140.944	
267	0.5	0.936842	1.53007	172.75	139.782	
268	0.5	0.940351	1.56322	172.75	138.163	
269	0.5	0.94386	1.58927	172.75	136.891	
270	0.5	0.947368	1.62576	172.75	135.109	
271	0.5	0.950877	1.65463	172.75	133.699	
272	0.5	0.954386	1.6954	172.75	131.708	
273	0.5	0.957895	1.72793	172.75	130.119	
274	0.5	0.961404	1.77438	172.75	127.851	
275	0.5	0.964912	1.81191	172.75	126.018	
276	0.5	0.968421	1.86629	172.75	123.363	
277	0.88	0.97193	1.91103	274.4	121.178	
278	0.97	0.975439	1.97737	298.475	117.938	
279	1.1	0.978947	2.03352	333.25	115.196	
280	1.4	0.982456	2.12007	413.5	110.97	
281	1.4	0.985965	2.19728	413.5	107.199	
282	1.6	0.989474	2.32634	467	100.897	
283	1.7	0.992982	2.45727	493.75	94.5032	
284	1.9	0.996491	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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.73337	-2.74777	7.55021	7.51065
2	-2.73337	-2.45727	13.5884	14.2273
3	-2.73337	-2.32634	19.0003	20.586
4	-2.73337	-2.19728	23.8283	26.592
5	-2.73337	-2.12007	28.323	32.3869
6	-2.73337	-2.03352	32.4582	37.9453
7	-2.73337	-1.97737	36.3682	43.3502
8	-2.73337	-1.91103	40.0203	48.5737
9	-2.73337	-1.86629	43.5033	53.675
10	-2.73337	-1.81191	46.7863	58.6276
11	-2.73337	-1.77438	49.9348	63.4777
12	-2.73337	-1.72793	52.9205	68.2007
13	-2.73337	-1.6954	55.7949	72.8349
14	-2.73337	-1.65463	58.5327	77.3576
15	-2.73337	-1.62576	61.1758	81.8014
16	-2.73337	-1.58927	63.7015	86.1454
17	-2.73337	-1.56322	66.1452	90.4183
18	-2.73337	-1.53007	68.4863	94.6005
19	-2.73337	-1.50626	70.7551	98.7177
20	-2.73337	-1.47579	72.9331	102.752
21	-2.73337	-1.4538	75.0466	106.725
22	-2.73337	-1.42554	77.0788	110.622
23	-2.73337	-1.40507	79.053	114.462
24	-2.73337	-1.37866	80.9537	118.231
25	-2.73337	-1.35946	82.8019	121.947
26	-2.73337	-1.33462	84.5831	125.595
27	-2.73337	-1.31652	86.3163	129.193
28	-2.73337	-1.29303	87.9883	132.728
29	-2.73337	-1.27588	89.6161	136.215
30	-2.73337	-1.25357	91.1875	139.642
31	-2.73337	-1.23724	92.7183	143.023
32	-2.73337	-1.21596	94.1969	146.347
33	-2.73337	-1.20036	95.6377	149.628
34	-2.73337	-1.18	97.0301	152.853
35	-2.73337	-1.16505	98.3875	156.038
36	-2.73337	-1.1455	99.6996	159.169
37	-2.73337	-1.13113	100.979	162.261
38	-2.73337	-1.11232	102.216	165.301
39	-2.73337	-1.09847	103.423	168.304
40	-2.73337	-1.08032	104.59	171.257
41	-2.73337	-1.06694	105.728	174.173
42	-2.73337	-1.04939	106.83	177.041
43	-2.73337	-1.03643	107.904	179.874
44	-2.73337	-1.01943	108.943	182.661
45	-2.73337	-1.00687	109.957	185.413
46	-2.73337	-0.990356	110.938	188.12
47	-2.73337	-0.97815	111.894	190.794
48	-2.73337	-0.9621	112.82	193.423
49	-2.73337	-0.950222	113.723	196.021
50	-2.73337	-0.93459	114.596	198.575
51	-2.73337	-0.923014	115.448	201.098

52	-2.73337	-0.907769	116.272	203.579
53	-2.73337	-0.896473	117.076	206.03
54	-2.73337	-0.881587	117.853	208.439
55	-2.73337	-0.87055	118.611	210.819
56	-2.73337	-0.855996	119.344	213.159
57	-2.73337	-0.841621	120.052	215.459
58	-2.73337	-0.830953	120.743	217.731
59	-2.73337	-0.816874	121.41	219.963
60	-2.73337	-0.806422	122.06	222.168
61	-2.73337	-0.792618	122.689	224.334
62	-2.73337	-0.782366	123.301	226.473
63	-2.73337	-0.768821	123.892	228.574
64	-2.73337	-0.758753	124.467	230.648
65	-2.73337	-0.745449	125.023	232.686
66	-2.73337	-0.735557	125.564	234.696
67	-2.73337	-0.722479	126.086	236.671
68	-2.73337	-0.712751	126.594	238.619
69	-2.73337	-0.699883	127.084	240.532
70	-2.73337	-0.690309	127.561	242.419
71	-2.73337	-0.677639	128.02	244.271
72	-2.73337	-0.668209	128.466	246.098
73	-2.73337	-0.655726	128.896	247.89
74	-2.73337	-0.646431	129.314	249.657
75	-2.73337	-0.634124	129.716	251.39
76	-2.73337	-0.624956	130.107	253.099
77	-2.73337	-0.612813	130.482	254.774
78	-2.73337	-0.603765	130.847	256.424
79	-2.73337	-0.591776	131.197	258.041
80	-2.73337	-0.582841	131.537	259.635
81	-2.73337	-0.570999	131.863	261.195
82	-2.73337	-0.56217	132.179	262.732
83	-2.04022	-0.550465	132.482	263.855
84	-1.96611	-0.541736	132.775	264.92
85	-1.96611	-0.530162	133.056	265.963
86	-1.83258	-0.521527	133.328	266.918
87	-1.83258	-0.510074	133.589	267.853
88	-1.66073	-0.501527	133.84	268.686
89	-1.66073	-0.490189	134.08	269.5
90	-1.51413	-0.481728	134.312	270.229
91	-1.46968	-0.470498	134.534	270.921
92	-1.46968	-0.462114	134.747	271.6
93	-1.23787	-0.450985	134.951	272.158
94	-0.891598	-0.442676	135.147	272.553
95	-0.693147	-0.431644	135.333	272.852
96	-0.693147	-0.423405	135.512	273.146
97	-0.693147	-0.412463	135.682	273.432
98	-0.693147	-0.40429	135.846	273.712
99	-0.693147	-0.393433	136.001	273.984
100	-0.693147	-0.385321	136.149	274.252
101	-0.693147	-0.374544	136.289	274.511
102	-0.693147	-0.36649	136.424	274.765
103	-0.693147	-0.355788	136.55	275.012
104	-0.693147	-0.347787	136.671	275.253
105	-0.693147	-0.337155	136.785	275.487
106	-0.693147	-0.329206	136.893	275.715
107	-0.693147	-0.318639	136.995	275.936
108	-0.693147	-0.310738	137.091	276.151
109	-0.693147	-0.300232	137.182	276.359
110	-0.693147	-0.292375	137.267	276.562
111	-0.693147	-0.281926	137.346	276.757
112	-0.693147	-0.27411	137.422	276.947
113	-0.693147	-0.263715	137.491	277.13

114	-0.693147	-0.253347	137.555	277.306
115	-0.693147	-0.24559	137.616	277.476
116	-0.693147	-0.235269	137.671	277.639
117	-0.693147	-0.227545	137.723	277.797
118	-0.693147	-0.217267	137.77	277.947
119	-0.693147	-0.209575	137.814	278.093
120	-0.693147	-0.199336	137.854	278.231
121	-0.693147	-0.191671	137.89	278.364
122	-0.693147	-0.181468	137.923	278.489
123	-0.693147	-0.173829	137.954	278.61
124	-0.693147	-0.163659	137.98	278.723
125	-0.693147	-0.156042	138.005	278.831
126	-0.693147	-0.1459	138.026	278.933
127	-0.693147	-0.138305	138.045	279.028
128	-0.693147	-0.128189	138.062	279.117
129	-0.693147	-0.12061	138.076	279.201
130	-0.693147	-0.110516	138.088	279.277
131	-0.693147	-0.102953	138.099	279.349
132	-0.693147	-0.0928787	138.108	279.413
133	-0.693147	-0.0853288	138.115	279.472
134	-0.693147	-0.0752698	138.12	279.525
135	-0.693147	-0.0677301	138.125	279.571
136	-0.693147	-0.0576847	138.128	279.611
137	-0.693147	-0.0501541	138.131	279.646
138	-0.693147	-0.0401167	138.132	279.674
139	-0.693147	-0.0325917	138.134	279.697
140	-0.693147	-0.0225612	138.134	279.712
141	-0.693147	-0.0150408	138.134	279.723
142	-0.693147	-0.00501359	138.134	279.726
143	-0.693147	0.00501359	138.134	279.723
144	-0.693147	0.0150408	138.135	279.712
145	-0.693147	0.0225612	138.135	279.697
146	-0.693147	0.0325917	138.136	279.674
147	-0.693147	0.0401167	138.138	279.646
148	-0.693147	0.0501541	138.14	279.611
149	-0.693147	0.0576847	138.144	279.571
150	-0.693147	0.0677301	138.148	279.525
151	-0.693147	0.0752698	138.154	279.472
152	-0.693147	0.0853288	138.161	279.413
153	-0.693147	0.0928787	138.17	279.349
154	-0.693147	0.102953	138.18	279.277
155	-0.693147	0.110516	138.193	279.201
156	-0.693147	0.12061	138.207	279.117
157	-0.693147	0.128189	138.224	279.028
158	-0.693147	0.138305	138.243	278.933
159	-0.693147	0.1459	138.264	278.831
160	-0.693147	0.156042	138.288	278.723
161	-0.693147	0.163659	138.315	278.61
162	-0.693147	0.173829	138.345	278.489
163	-0.693147	0.181468	138.378	278.364
164	-0.693147	0.191671	138.415	278.231
165	-0.693147	0.199336	138.455	278.093
166	-0.693147	0.209575	138.499	277.947
167	-0.693147	0.217267	138.546	277.797
168	-0.693147	0.227545	138.598	277.639
169	-0.693147	0.235269	138.653	277.476
170	-0.693147	0.24559	138.713	277.306
171	-0.693147	0.253347	138.777	277.13
172	-0.693147	0.263715	138.847	276.947
173	-0.693147	0.27411	138.922	276.757
174	-0.693147	0.281926	139.002	276.562
175	-0.693147	0.292375	139.087	276.359

176	-0.693147	0.300232	139.177	276.151
177	-0.693147	0.310738	139.274	275.936
178	-0.693147	0.318639	139.375	275.715
179	-0.693147	0.329206	139.484	275.487
180	-0.693147	0.337155	139.597	275.253
181	-0.693147	0.347787	139.718	275.012
182	-0.693147	0.355788	139.845	274.765
183	-0.693147	0.36649	139.979	274.511
184	-0.693147	0.374544	140.12	274.252
185	-0.693147	0.385321	140.268	273.984
186	-0.693147	0.393433	140.423	273.712
187	-0.693147	0.40429	140.586	273.432
188	-0.693147	0.412463	140.756	273.146
189	-0.693147	0.423405	140.936	272.852
190	-0.693147	0.431644	141.122	272.553
191	-0.693147	0.442676	141.318	272.246
192	-0.693147	0.450985	141.521	271.934
193	-0.693147	0.462114	141.735	271.613
194	-0.693147	0.470498	141.956	271.287
195	-0.693147	0.481728	142.188	270.953
196	-0.693147	0.490189	142.429	270.613
197	-0.693147	0.501527	142.68	270.266
198	-0.693147	0.510074	142.94	269.912
199	-0.693147	0.521527	143.212	269.551
200	-0.693147	0.530162	143.493	269.183
201	-0.693147	0.541736	143.787	268.808
202	-0.693147	0.550465	144.09	268.426
203	-0.693147	0.56217	144.406	268.037
204	-0.693147	0.570999	144.732	267.641
205	-0.693147	0.582841	145.072	267.237
206	-0.693147	0.591776	145.422	266.827
207	-0.693147	0.603765	145.786	266.408
208	-0.693147	0.612813	146.162	265.983
209	-0.693147	0.624956	146.552	265.55
210	-0.693147	0.634124	146.955	265.111
211	-0.693147	0.646431	147.372	264.662
212	-0.693147	0.655726	147.802	264.208
213	-0.693147	0.668209	148.249	263.745
214	-0.693147	0.677639	148.708	263.275
215	-0.693147	0.690309	149.185	262.797
216	-0.693147	0.699883	149.674	262.312
217	-0.693147	0.712751	150.182	261.817
218	-0.693147	0.722479	150.704	261.317
219	-0.693147	0.735557	151.245	260.807
220	-0.693147	0.745449	151.801	260.29
221	-0.693147	0.758753	152.377	259.764
222	-0.693147	0.768821	152.968	259.231
223	-0.693147	0.782366	153.58	258.689
224	-0.693147	0.792618	154.208	258.14
225	-0.693147	0.806422	154.859	257.581
226	-0.693147	0.816874	155.526	257.014
227	-0.693147	0.830953	156.216	256.438
228	-0.693147	0.841621	156.925	255.855
229	-0.693147	0.855996	157.657	255.262
230	-0.693147	0.87055	158.415	254.658
231	-0.693147	0.881587	159.193	254.047
232	-0.693147	0.896473	159.996	253.426
233	-0.693147	0.907769	160.82	252.797
234	-0.693147	0.923014	161.672	252.157
235	-0.693147	0.93459	162.546	251.509
236	-0.693147	0.950222	163.449	250.85
237	-0.693147	0.9621	164.374	250.184

238	-0.693147		0.97815	165.331	249.506
239	-0.693147		0.990356		166.312 248.819
240	-0.693147		1.00687	167.326	248.121
241	-0.693147		1.01943	168.365	247.415
242	-0.693147		1.03643	169.439	246.696
243	-0.693147		1.04939	170.54	245.969
244	-0.693147		1.06694	171.679	245.229
245	-0.693147		1.08032	172.846	244.48
246	-0.693147		1.09847	174.052	243.719
247	-0.693147		1.11232	175.29	242.948
248	-0.693147		1.13113	176.569	242.164
249	-0.693147		1.1455	177.881	241.37
250	-0.693147		1.16505	179.239	240.562
251	-0.693147		1.18	180.631	239.744
252	-0.693147		1.20036	182.072	238.912
253	-0.693147		1.21596	183.55	238.07
254	-0.693147		1.23724	185.081	237.212
255	-0.693147		1.25357	186.653	236.343
256	-0.693147		1.27588	188.28	235.459
257	-0.693147		1.29303	189.952	234.563
258	-0.693147		1.31652	191.686	233.65
259	-0.693147		1.33462	193.467	232.725
260	-0.693147		1.35946	195.315	231.783
261	-0.693147		1.37866	197.216	230.827
262	-0.693147		1.40507	199.19	229.853
263	-0.693147		1.42554	201.222	228.865
264	-0.693147		1.4538	203.336	227.857
265	-0.693147		1.47579	205.514	226.834
266	-0.693147		1.50626	207.782	225.79
267	-0.693147		1.53007	210.123	224.73
268	-0.693147		1.56322	212.567	223.646
269	-0.127833		1.58927	215.093	223.443
270	-0.0304592		1.62576	217.736	223.393
271	0	1.65463	220.474	223.393	
272	0	1.6954	223.348	223.393	
273	0	1.72793	226.334	223.393	
274	0	1.77438	229.482	223.393	
275	0	1.81191	232.765	223.393	
276	0	1.86629	236.248	223.393	
277	0	1.91103	239.9	223.393	
278	0	1.97737	243.81	223.393	
279	0.0953102		2.03352	247.946	223.587
280	0.336472		2.12007	252.44	224.301
281	0.336472		2.19728	257.268	225.04
282	0.470004		2.32634	262.68	226.133
283	0.530628		2.45727	268.718	227.437
284	0.641854		2.74777	276.269	229.201

Data Set Standard Deviation = 0.974899
Numerator = 52533
Denominator = 74308.3
W Statistic = 0.70696 = 52533 / 74308.3

5% Critical value of 0.976 exceeds 0.70696
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.70696
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 = 0.839492
0.839492 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.733370	0.00350877	-2.747774.662	348.683	
2	-2.733370	0.00701754	-2.457274.662	334.497	
3	-2.733370	0.0105263	-2.326374.662	328.103	
4	-2.733370	0.0140351	-2.197274.662	321.801	
5	-2.733370	0.0175439	-2.120074.662	318.03	
6	-2.733370	0.0210526	-2.033574.662	313.804	
7	-2.733370	0.0245614	-1.977374.662	311.062	
8	-2.733370	0.0280702	-1.911074.662	307.822	
9	-2.733370	0.0315789	-1.866274.662	305.637	
10	-2.733370	0.0350877	-1.811974.662	302.982	
11	-2.733370	0.0385965	-1.774374.662	301.149	
12	-2.733370	0.0421053	-1.727974.662	298.881	
13	-2.733370	0.045614	-1.6954 74.662	297.292	
14	-2.733370	0.0491228	-1.654674.662	295.301	
15	-2.733370	0.0526316	-1.625774.662	293.891	
16	-2.733370	0.0561404	-1.589274.662	292.109	
17	-2.733370	0.0596491	-1.563274.662	290.837	
18	-2.733370	0.0631579	-1.530074.662	289.218	
19	-2.733370	0.0666667	-1.506274.662	288.056	
20	-2.733370	0.0701754	-1.475974.662	286.568	
21	-2.733370	0.0736842	-1.4538 74.662	285.494	
22	-2.733370	0.077193	-1.425574.662	284.114	
23	-2.733370	0.0807018	-1.405074.662	283.114	
24	-2.733370	0.0842105	-1.378674.662	281.824	
25	-2.733370	0.0877193	-1.359474.662	280.887	
26	-2.733370	0.0912281	-1.334674.662	279.674	
27	-2.733370	0.0947368	-1.316574.662	278.79	
28	-2.733370	0.0982456	-1.293074.662	277.643	
29	-2.733370	0.101754	-1.275874.662	276.805	
30	-2.733370	0.105263	-1.253574.662	275.716	
31	-2.733370	0.108772	-1.237274.662	274.918	
32	-2.733370	0.112281	-1.215974.662	273.879	
33	-2.733370	0.115789	-1.200374.662	273.118	
34	-2.733370	0.119298	-1.18 74.662	272.123	
35	-2.733370	0.122807	-1.165074.662	271.393	
36	-2.733370	0.126316	-1.1455 74.662	270.439	
37	-2.733370	0.129825	-1.131174.662	269.737	
38	-2.733370	0.133333	-1.112374.662	268.818	
39	-2.733370	0.136842	-1.098474.662	268.142	
40	-2.733370	0.140351	-1.080374.662	267.256	
41	-2.733370	0.14386	-1.066974.662	266.602	
42	-2.733370	0.147368	-1.049374.662	265.745	
43	-2.733370	0.150877	-1.036474.662	265.112	
44	-2.733370	0.154386	-1.019474.662	264.282	
45	-2.733370	0.157895	-1.006874.662	263.669	
46	-2.733370	0.161404	-0.990356	74.662	262.862
47	-2.733370	0.164912	-0.978174.662	262.266	
48	-2.733370	0.168421	-0.9621 74.662	261.483	

49	-2.733370.17193	-0.950222	74.662	260.903	
50	-2.733370.175439	-0.9345974.662	260.139		
51	-2.733370.178947	-0.923014	74.662	259.574	
52	-2.733370.182456	-0.907769	74.662	258.829	
53	-2.733370.185965	-0.896473	74.662	258.278	
54	-2.733370.189474	-0.881587	74.662	257.551	
55	-2.733370.192982	-0.8705574.662	257.012		
56	-2.733370.196491	-0.855996	74.662	256.301	
57	-2.733370.2	-0.841621	74.662	255.599	
58	-2.733370.203509	-0.830953	74.662	255.078	
59	-2.733370.207018	-0.816874	74.662	254.391	
60	-2.733370.210526	-0.806422	74.662	253.88	
61	-2.733370.214035	-0.792618	74.662	253.206	
62	-2.733370.217544	-0.782366	74.662	252.706	
63	-2.733370.221053	-0.768821	74.662	252.044	
64	-2.733370.224561	-0.758753	74.662	251.552	
65	-2.733370.22807	-0.745449	74.662	250.903	
66	-2.733370.231579	-0.735557	74.662	250.42	
67	-2.733370.235088	-0.722479	74.662	249.781	
68	-2.733370.238596	-0.712751	74.662	249.306	
69	-2.733370.242105	-0.699883	74.662	248.678	
70	-2.733370.245614	-0.690309	74.662	248.21	
71	-2.733370.249123	-0.677639	74.662	247.591	
72	-2.733370.252632	-0.668209	74.662	247.131	
73	-2.733370.25614	-0.655726	74.662	246.521	
74	-2.733370.259649	-0.646431	74.662	246.067	
75	-2.733370.263158	-0.634124	74.662	245.466	
76	-2.733370.266667	-0.624956	74.662	245.019	
77	-2.733370.270175	-0.612813	74.662	244.426	
78	-2.733370.273684	-0.603765	74.662	243.984	
79	-2.733370.277193	-0.591776	74.662	243.398	
80	-2.733370.280702	-0.582841	74.662	242.962	
81	-2.733370.284211	-0.570999	74.662	242.384	
82	-2.733370.287719	-0.5621774.662	241.953		
83	-2.040220.291228	-0.550465	167.37	241.381	
84	-1.966110.294737	-0.541736	177.282	240.955	
85	-1.966110.298246	-0.530162	177.282	240.39	
86	-1.832580.301754	-0.521527	195.142	239.968	
87	-1.832580.305263	-0.510074	195.142	239.409	
88	-1.660730.308772	-0.501527	218.127	238.991	
89	-1.660730.312281	-0.490189	218.127	238.438	
90	-1.514130.315789	-0.481728	237.735	238.024	
91	-1.469680.319298	-0.470498	243.681	237.476	
92	-1.469680.322807	-0.462114	243.681	237.067	
93	-1.237870.326316	-0.450985	274.684	236.523	
94	-0.891598	0.329825	-0.442676	320.999	236.117
95	-0.693147	0.333333	-0.431644	347.542	235.579
96	-0.693147	0.336842	-0.423405	347.542	235.176
97	-0.693147	0.340351	-0.412463	347.542	234.642
98	-0.693147	0.34386	-0.40429347.542	234.243	
99	-0.693147	0.347368	-0.393433	347.542	233.713
100	-0.693147	0.350877	-0.385321	347.542	233.317
101	-0.693147	0.354386	-0.374544	347.542	232.79
102	-0.693147	0.357895	-0.36649347.542	232.397	
103	-0.693147	0.361404	-0.355788	347.542	231.874
104	-0.693147	0.364912	-0.347787	347.542	231.484
105	-0.693147	0.368421	-0.337155	347.542	230.964
106	-0.693147	0.37193	-0.329206	347.542	230.576
107	-0.693147	0.375439	-0.318639	347.542	230.06
108	-0.693147	0.378947	-0.310738	347.542	229.674
109	-0.693147	0.382456	-0.300232	347.542	229.161
110	-0.693147	0.385965	-0.292375	347.542	228.778

111	-0.693147	0.389474	-0.281926	347.542	228.267
112	-0.693147	0.392982	-0.27411	347.542	227.886
113	-0.693147	0.396491	-0.263715	347.542	227.378
114	-0.693147	0.4	-0.253347	347.542	226.872
115	-0.693147	0.403509	-0.24559	347.542	226.493
116	-0.693147	0.407018	-0.235269	347.542	225.989
117	-0.693147	0.410526	-0.227545	347.542	225.612
118	-0.693147	0.414035	-0.217267	347.542	225.11
119	-0.693147	0.417544	-0.209575	347.542	224.734
120	-0.693147	0.421053	-0.199336	347.542	224.234
121	-0.693147	0.424561	-0.191671	347.542	223.86
122	-0.693147	0.42807	-0.181468	347.542	223.362
123	-0.693147	0.431579	-0.173829	347.542	222.989
124	-0.693147	0.435088	-0.163659	347.542	222.492
125	-0.693147	0.438596	-0.156042	347.542	222.12
126	-0.693147	0.442105	-0.1459	347.542	221.625
127	-0.693147	0.445614	-0.138305	347.542	221.254
128	-0.693147	0.449123	-0.128189	347.542	220.76
129	-0.693147	0.452632	-0.12061	347.542	220.39
130	-0.693147	0.45614	-0.110516	347.542	219.897
131	-0.693147	0.459649	-0.102953	347.542	219.528
132	-0.693147	0.463158	-0.0928787	347.542	219.036
133	-0.693147	0.466667	-0.0853288	347.542	218.667
134	-0.693147	0.470175	-0.0752698	347.542	218.176
135	-0.693147	0.473684	-0.0677301	347.542	217.807
136	-0.693147	0.477193	-0.0576847	347.542	217.317
137	-0.693147	0.480702	-0.0501541	347.542	216.949
138	-0.693147	0.484211	-0.0401167	347.542	216.459
139	-0.693147	0.487719	-0.0325917	347.542	216.092
140	-0.693147	0.491228	-0.0225612	347.542	215.602
141	-0.693147	0.494737	-0.0150408	347.542	215.234
142	-0.693147	0.498246	-0.00501359	347.542	214.745
143	-0.693147	0.501754	0.00501359	347.542	214.255
144	-0.693147	0.505263	0.0150408	347.542	213.766
145	-0.693147	0.508772	0.0225612	347.542	213.398
146	-0.693147	0.512281	0.0325917	347.542	212.908
147	-0.693147	0.515789	0.0401167	347.542	212.541
148	-0.693147	0.519298	0.0501541	347.542	212.051
149	-0.693147	0.522807	0.0576847	347.542	211.683
150	-0.693147	0.526316	0.0677301	347.542	211.193
151	-0.693147	0.529825	0.0752698	347.542	210.824
152	-0.693147	0.533333	0.0853288	347.542	210.333
153	-0.693147	0.536842	0.0928787	347.542	209.964
154	-0.693147	0.540351	0.102953	347.542	209.472
155	-0.693147	0.54386	0.110516	347.542	209.103
156	-0.693147	0.547368	0.12061	347.542	208.61
157	-0.693147	0.550877	0.128189	347.542	208.24
158	-0.693147	0.554386	0.138305	347.542	207.746
159	-0.693147	0.557895	0.1459	347.542	207.375
160	-0.693147	0.561404	0.156042	347.542	206.88
161	-0.693147	0.564912	0.163659	347.542	206.508
162	-0.693147	0.568421	0.173829	347.542	206.011
163	-0.693147	0.57193	0.181468	347.542	205.638
164	-0.693147	0.575439	0.191671	347.542	205.14
165	-0.693147	0.578947	0.199336	347.542	204.766
166	-0.693147	0.582456	0.209575	347.542	204.266
167	-0.693147	0.585965	0.217267	347.542	203.89
168	-0.693147	0.589474	0.227545	347.542	203.388
169	-0.693147	0.592982	0.235269	347.542	203.011
170	-0.693147	0.596491	0.24559	347.542	202.507
171	-0.693147	0.6	0.253347	347.542	202.128
172	-0.693147	0.603509	0.263715	347.542	201.622

173	-0.693147	0.607018	0.27411	347.542	201.114
174	-0.693147	0.610526	0.281926	347.542	200.733
175	-0.693147	0.614035	0.292375	347.542	200.222
176	-0.693147	0.617544	0.300232	347.542	199.839
177	-0.693147	0.621053	0.310738	347.542	199.326
178	-0.693147	0.624561	0.318639	347.542	198.94
179	-0.693147	0.62807	0.329206	347.542	198.424
180	-0.693147	0.631579	0.337155	347.542	198.036
181	-0.693147	0.635088	0.347787	347.542	197.516
182	-0.693147	0.638596	0.355788	347.542	197.126
183	-0.693147	0.642105	0.36649	347.542	196.603
184	-0.693147	0.645614	0.374544	347.542	196.21
185	-0.693147	0.649123	0.385321	347.542	195.683
186	-0.693147	0.652632	0.393433	347.542	195.287
187	-0.693147	0.65614	0.40429	347.542	194.757
188	-0.693147	0.659649	0.412463	347.542	194.358
189	-0.693147	0.663158	0.423405	347.542	193.824
190	-0.693147	0.666667	0.431644	347.542	193.421
191	-0.693147	0.670175	0.442676	347.542	192.883
192	-0.693147	0.673684	0.450985	347.542	192.477
193	-0.693147	0.677193	0.462114	347.542	191.933
194	-0.693147	0.680702	0.470498	347.542	191.524
195	-0.693147	0.684211	0.481728	347.542	190.976
196	-0.693147	0.687719	0.490189	347.542	190.562
197	-0.693147	0.691228	0.501527	347.542	190.009
198	-0.693147	0.694737	0.510074	347.542	189.591
199	-0.693147	0.698246	0.521527	347.542	189.032
200	-0.693147	0.701754	0.530162	347.542	188.61
201	-0.693147	0.705263	0.541736	347.542	188.045
202	-0.693147	0.708772	0.550465	347.542	187.619
203	-0.693147	0.712281	0.56217	347.542	187.047
204	-0.693147	0.715789	0.570999	347.542	186.616
205	-0.693147	0.719298	0.582841	347.542	186.038
206	-0.693147	0.722807	0.591776	347.542	185.602
207	-0.693147	0.726316	0.603765	347.542	185.016
208	-0.693147	0.729825	0.612813	347.542	184.574
209	-0.693147	0.733333	0.624956	347.542	183.981
210	-0.693147	0.736842	0.634124	347.542	183.534
211	-0.693147	0.740351	0.646431	347.542	182.933
212	-0.693147	0.74386	0.655726	347.542	182.479
213	-0.693147	0.747368	0.668209	347.542	181.869
214	-0.693147	0.750877	0.677639	347.542	181.409
215	-0.693147	0.754386	0.690309	347.542	180.79
216	-0.693147	0.757895	0.699883	347.542	180.322
217	-0.693147	0.761404	0.712751	347.542	179.694
218	-0.693147	0.764912	0.722479	347.542	179.219
219	-0.693147	0.768421	0.735557	347.542	178.58
220	-0.693147	0.77193	0.745449	347.542	178.097
221	-0.693147	0.775439	0.758753	347.542	177.448
222	-0.693147	0.778947	0.768821	347.542	176.956
223	-0.693147	0.782456	0.782366	347.542	176.294
224	-0.693147	0.785965	0.792618	347.542	175.794
225	-0.693147	0.789474	0.806422	347.542	175.12
226	-0.693147	0.792982	0.816874	347.542	174.609
227	-0.693147	0.796491	0.830953	347.542	173.922
228	-0.693147	0.8	0.841621	347.542	173.401
229	-0.693147	0.803509	0.855996	347.542	172.699
230	-0.693147	0.807018	0.87055	347.542	171.988
231	-0.693147	0.810526	0.881587	347.542	171.449
232	-0.693147	0.814035	0.896473	347.542	170.722
233	-0.693147	0.817544	0.907769	347.542	170.171
234	-0.693147	0.821053	0.923014	347.542	169.426

235	-0.693147	0.824561	0.93459	347.542	168.861	
236	-0.693147	0.82807	0.950222	347.542	168.097	
237	-0.693147	0.831579	0.9621	347.542	167.517	
238	-0.693147	0.835088	0.97815	347.542	166.734	
239	-0.693147	0.838596	0.990356	347.542	166.138	
240	-0.693147	0.842105	1.00687	347.542	165.331	
241	-0.693147	0.845614	1.01943	347.542	164.718	
242	-0.693147	0.849123	1.03643	347.542	163.888	
243	-0.693147	0.852632	1.04939	347.542	163.255	
244	-0.693147	0.85614	1.06694	347.542	162.398	
245	-0.693147	0.859649	1.08032	347.542	161.744	
246	-0.693147	0.863158	1.09847	347.542	160.858	
247	-0.693147	0.866667	1.11232	347.542	160.182	
248	-0.693147	0.870175	1.13113	347.542	159.263	
249	-0.693147	0.873684	1.1455	347.542	158.561	
250	-0.693147	0.877193	1.16505	347.542	157.607	
251	-0.693147	0.880702	1.18	347.542	156.877	
252	-0.693147	0.884211	1.20036	347.542	155.882	
253	-0.693147	0.887719	1.21596	347.542	155.121	
254	-0.693147	0.891228	1.23724	347.542	154.082	
255	-0.693147	0.894737	1.25357	347.542	153.284	
256	-0.693147	0.898246	1.27588	347.542	152.195	
257	-0.693147	0.901754	1.29303	347.542	151.357	
258	-0.693147	0.905263	1.31652	347.542	150.21	
259	-0.693147	0.908772	1.33462	347.542	149.326	
260	-0.693147	0.912281	1.35946	347.542	148.113	
261	-0.693147	0.915789	1.37866	347.542	147.176	
262	-0.693147	0.919298	1.40507	347.542	145.886	
263	-0.693147	0.922807	1.42554	347.542	144.886	
264	-0.693147	0.926316	1.4538	347.542	143.506	
265	-0.693147	0.929825	1.47579	347.542	142.432	
266	-0.693147	0.933333	1.50626	347.542	140.944	
267	-0.693147	0.936842	1.53007	347.542	139.782	
268	-0.693147	0.940351	1.56322	347.542	138.163	
269	-0.127833	0.94386	1.58927	423.152	136.891	
270	-0.0304592	0.947368	1.62576	436.176	135.109	
271	0	0.950877	1.65463	440.25	133.699	
272	0	0.954386	1.6954	440.25	131.708	
273	0	0.957895	1.72793	440.25	130.119	
274	0	0.961404	1.77438	440.25	127.851	
275	0	0.964912	1.81191	440.25	126.018	
276	0	0.968421	1.86629	440.25	123.363	
277	0	0.97193	1.91103	440.25	121.178	
278	0	0.975439	1.97737	440.25	117.938	
279	0.0953102	0.978947	2.03352	452.998	115.196	
280	0.336472	0.982456	2.12007	485.253	110.97	
281	0.336472	0.985965	2.19728	485.253	107.199	
282	0.470004	0.989474	2.32634	503.113	100.897	
283	0.530628	0.992982	2.45727	511.222	94.5032	
284	0.641854	0.996491	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 = 92.9577%
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-10	11/16/2012	1	0.470004	TRUE
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
LMW-14R	11/16/2012	1	-2.73337	FALSE
LMW-15R	11/16/2012	1	-2.73337	FALSE
LMW-16	11/16/2012	1	-2.73337	FALSE
LMW-3	11/16/2012	1	-2.73337	FALSE
LMW-3S	11/16/2012	1	-2.73337	FALSE
LMW-6	11/16/2012	1	-2.73337	FALSE
LMW-7	11/16/2012	1	-1.51413	FALSE
LMW-8	11/16/2012	1	-1.66073	FALSE
LMW-9	11/16/2012	1	-2.73337	FALSE
LMW-9D	11/16/2012	1	-2.73337	FALSE
LMW-9S	11/16/2012	1	-2.73337	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
ND<-0.693147	ND<-0.693147	0	13	0
ND<-0.693147	ND<-0.693147	0	13	0
ND<0 J	ND<-0.693147	0.693147	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<-0.693147	ND<-0.693147	0	17	0
ND<-0.693147	ND<-0.693147	0	17	0
ND<-0.693147	ND<-0.693147	0	17	0
ND<0 J	ND<-0.693147	0.693147	18	0
-0.127833 J	ND<-0.693147	0.565314	19	0
0.530628	ND<-0.693147	1.22378	20	0
0.0953102	ND<-0.693147	0.788457	21	0
-0.0304592 J	ND<-0.693147	0.662688	22	0
0.336472	ND<-0.693147	1.02962	23	0
0.641854	ND<-0.693147	1.335	24	0
0.336472	ND<-0.693147	1.02962	25	0
0.470004	ND<-0.693147	1.16315	26	0
ND<-0.693147	ND<-0.693147	0	26	0
ND<0 J	ND<-0.693147	0.693147	27	0
ND<0 J	ND<-0.693147	0.693147	28	0
ND<0 J	ND<-0.693147	0.693147	29	0
ND<0 J	ND<-0.693147	0.693147	30	0
ND<-0.693147	ND<-0.693147	0	30	0
ND<-0.693147	ND<-0.693147	0	30	0
ND<-0.693147	ND<-0.693147	0	30	0
ND<0 J	ND<-0.693147	0.693147	31	0
-0.127833 J	ND<-0.693147	0.565314	32	0
0.530628	ND<-0.693147	1.22378	33	0

0.0953102	ND<-0.693147	0.788457	34	0
-0.0304592 J	ND<-0.693147	0.662688	35	0
0.336472	ND<-0.693147	1.02962	36	0
0.641854	ND<-0.693147	1.335	37	0
0.336472	ND<-0.693147	1.02962	38	0
0.470004	ND<-0.693147	1.16315	39	0
ND<0 J	ND<-0.693147	0.693147	40	0
ND<0 J	ND<-0.693147	0.693147	41	0
ND<0 J	ND<-0.693147	0.693147	42	0
ND<0 J	ND<-0.693147	0.693147	43	0
ND<-0.693147	ND<-0.693147	0	43	0
ND<-0.693147	ND<-0.693147	0	43	0
ND<-0.693147	ND<-0.693147	0	43	0
ND<0 J	ND<-0.693147	0.693147	44	0
-0.127833 J	ND<-0.693147	0.565314	45	0
0.530628	ND<-0.693147	1.22378	46	0
0.0953102	ND<-0.693147	0.788457	47	0
-0.0304592 J	ND<-0.693147	0.662688	48	0
0.336472	ND<-0.693147	1.02962	49	0
0.641854	ND<-0.693147	1.335	50	0
0.336472	ND<-0.693147	1.02962	51	0
0.470004	ND<-0.693147	1.16315	52	0
ND<0 J	ND<0 J	0	52	0
ND<0 J	ND<0 J	0	52	0
ND<0 J	ND<0 J	0	52	0
ND<-0.693147	ND<0 J	-0.693147	52	1
ND<-0.693147	ND<0 J	-0.693147	52	2
ND<-0.693147	ND<0 J	-0.693147	52	3
ND<0 J	ND<0 J	0	52	3
-0.127833 J	ND<0 J	-0.127833	52	4
0.530628	ND<0 J	0.530628	53	4
0.0953102	ND<0 J	0.0953102	54	4
-0.0304592 J	ND<0 J	-0.0304592	54	5
0.336472	ND<0 J	0.336472	55	5
0.641854	ND<0 J	0.641854	56	5
0.336472	ND<0 J	0.336472	57	5
0.470004	ND<0 J	0.470004	58	5
ND<0 J	ND<0 J	0	58	5
ND<0 J	ND<0 J	0	58	5
ND<-0.693147	ND<0 J	-0.693147	58	6
ND<-0.693147	ND<0 J	-0.693147	58	7
ND<-0.693147	ND<0 J	-0.693147	58	8
ND<0 J	ND<0 J	0	58	8
-0.127833 J	ND<0 J	-0.127833	58	9
0.530628	ND<0 J	0.530628	59	9
0.0953102	ND<0 J	0.0953102	60	9
-0.0304592 J	ND<0 J	-0.0304592	60	10
0.336472	ND<0 J	0.336472	61	10
0.641854	ND<0 J	0.641854	62	10
0.336472	ND<0 J	0.336472	63	10
0.470004	ND<0 J	0.470004	64	10
ND<0 J	ND<0 J	0	64	10
ND<-0.693147	ND<0 J	-0.693147	64	11
ND<-0.693147	ND<0 J	-0.693147	64	12
ND<-0.693147	ND<0 J	-0.693147	64	13
ND<0 J	ND<0 J	0	64	13
-0.127833 J	ND<0 J	-0.127833	64	14
0.530628	ND<0 J	0.530628	65	14

0.0953102	ND<0 J	0.0953102	66	14	
-0.0304592 J	ND<0 J	-0.0304592	66	15	
0.336472	ND<0 J	0.336472	67	15	
0.641854	ND<0 J	0.641854	68	15	
0.336472	ND<0 J	0.336472	69	15	
0.470004	ND<0 J	0.470004	70	15	
ND<-0.693147	ND<0 J	-0.693147	70	16	
ND<-0.693147	ND<0 J	-0.693147	70	17	
ND<-0.693147	ND<0 J	-0.693147	70	18	
ND<0 J	ND<0 J	0	70	18	
-0.127833 J	ND<0 J	-0.127833	70	19	
0.530628	ND<0 J	0.530628	71	19	
0.0953102	ND<0 J	0.0953102	72	19	
-0.0304592 J	ND<0 J	-0.0304592	72	20	
0.336472	ND<0 J	0.336472	73	20	
0.641854	ND<0 J	0.641854	74	20	
0.336472	ND<0 J	0.336472	75	20	
0.470004	ND<0 J	0.470004	76	20	
ND<-0.693147	ND<-0.693147	0	76	20	
ND<-0.693147	ND<-0.693147	0	76	20	
ND<0 J	ND<-0.693147	0.693147	77	20	
-0.127833 J	ND<-0.693147	0.565314	78	20	
0.530628	ND<-0.693147	1.22378	79	20	
0.0953102	ND<-0.693147	0.788457	80	20	
-0.0304592 J	ND<-0.693147	0.662688	81	20	
0.336472	ND<-0.693147	1.02962	82	20	
0.641854	ND<-0.693147	1.335	83	20	
0.336472	ND<-0.693147	1.02962	84	20	
0.470004	ND<-0.693147	1.16315	85	20	
ND<-0.693147	ND<-0.693147	0	85	20	
ND<0 J	ND<-0.693147	0.693147	86	20	
-0.127833 J	ND<-0.693147	0.565314	87	20	
0.530628	ND<-0.693147	1.22378	88	20	
0.0953102	ND<-0.693147	0.788457	89	20	
-0.0304592 J	ND<-0.693147	0.662688	90	20	
0.336472	ND<-0.693147	1.02962	91	20	
0.641854	ND<-0.693147	1.335	92	20	
0.336472	ND<-0.693147	1.02962	93	20	
0.470004	ND<-0.693147	1.16315	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	
-0.127833 J	ND<0 J	-0.127833	103	21	
0.530628	ND<0 J	0.530628	104	21	
0.0953102	ND<0 J	0.0953102	105	21	
-0.0304592 J	ND<0 J	-0.0304592	105	22	
0.336472	ND<0 J	0.336472	106	22	
0.641854	ND<0 J	0.641854	107	22	
0.336472	ND<0 J	0.336472	108	22	
0.470004	ND<0 J	0.470004	109	22	

0.530628	-0.127833 J	0.658462	110	22
0.0953102	-0.127833 J	0.223144	111	22
-0.0304592 J	-0.127833 J	0.0973742	112	22
0.336472	-0.127833 J	0.464306	113	22
0.641854	-0.127833 J	0.769687	114	22
0.336472	-0.127833 J	0.464306	115	22
0.470004	-0.127833 J	0.597837	116	22
0.0953102	0.530628	-0.435318	116	23
-0.0304592 J	0.530628	-0.561087	116	24
0.336472	0.530628	-0.194156	116	25
0.641854	0.530628	0.111226	117	25
0.336472	0.530628	-0.194156	117	26
0.470004	0.530628	-0.0606246	117	27
-0.0304592 J	0.0953102	-0.125769	117	28
0.336472	0.0953102	0.241162	118	28
0.641854	0.0953102	0.546544	119	28
0.336472	0.0953102	0.241162	120	28
0.470004	0.0953102	0.374693	121	28
0.336472	-0.0304592 J	0.366931	122	28
0.641854	-0.0304592 J	0.672313	123	28
0.336472	-0.0304592 J	0.366931	124	28
0.470004	-0.0304592 J	0.500463	125	28
0.641854	0.336472	0.305382	126	28
0.336472	0.336472	0	126	28
0.470004	0.336472	0.133531	127	28
0.336472	0.641854	-0.305382	127	29
0.470004	0.641854	-0.17185127	30	
0.470004	0.336472	0.133531	128	30

S Statistic = 128 - 30 = 98

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

There are 0 time periods with multiple data

A = 1116
B = 0
C = 270
D = 0
E = 64
F = 0
a = 17100
b = 61560
c = 760
Group Variance = 888
Z-Score = 3.25511
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|3.25511| > 1.97737 indicating a trend

Shewhart-CUSUM Control Chart

Parameter: Trichloroethylene

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = -1.36362
Baseline Std Dev = 0.955758
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std	Mean
3/14/2000	-0.693147	0	0.701514	
3/14/2000	-0.693147	0	0.701514	
9/23/2003	-0.693147	0	0.701514	
9/23/2003	-0.693147	0	0.701514	
3/10/2004	-0.693147	0	0.701514	
3/10/2004	-0.693147	0	0.701514	
10/12/2004	-0.693147	0	0.701514	
10/12/2004	-0.693147	0	0.701514	
4/1/2005	0	0.426747	1.42675	
4/1/2005	0	0.426747	1.42675	
10/26/2005	0	0.853494	1.42675	
10/26/2005	0	0.853494	1.42675	
6/19/2006	0	1.28024	1.42675	
6/19/2006	0	1.28024	1.42675	
11/18/2006	0	1.70699	1.42675	
11/18/2006	0	1.70699	1.42675	
6/2/2007	-0.693147	1.4085	0.701514	
6/2/2007	-0.693147	1.4085	0.701514	
11/15/2007	-0.693147	1.11002	0.701514	
11/15/2007	-0.693147	1.11002	0.701514	
5/20/2008	-0.693147	0.811531	0.701514	
5/20/2008	-0.693147	0.811531	0.701514	
11/20/2008	0	1.23828	1.42675	
11/20/2008	0	1.23828	1.42675	
6/11/2009	-0.127833	1.53127	1.293	
6/11/2009	-0.127833	1.53127	1.293	
11/16/2009	0.530628	2.51321	1.98194	
11/16/2009	0.530628	2.51321	1.98194	
6/30/2010	0.0953102	3.03968	1.52647	
6/30/2010	0.0953102	3.03968	1.52647	
11/17/2010	-0.0304592	3.43456	1.39488	
11/17/2010	-0.0304592	3.43456	1.39488	
7/6/2011	0.336472	4.21336	1.77879	
7/6/2011	0.336472	4.21336	1.77879	
11/22/2011	0.641854	5.31167	2.09831	
11/22/2011	0.641854	5.31167	2.09831	
5/16/2012	0.336472	6.09046	1.77879	
5/16/2012	0.336472	6.09046	1.77879	
11/16/2012	0.470004	7.00897	1.91851	
11/16/2012	0.470004	7.00897	1.91851	

Concentrations (ppb)

Parameter: Trichlorofluoromethane

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 296
Total Non-Detect: 226
Percent Non-Detects: 76.3514%
Total Background Measurements: 24
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	24	9 (37.5%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	21	7 (33.3333%)	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	
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	
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	
		6/11/2009	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	
LMW-15R	15	15 (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
LMW-16	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<0.25 U	ND<0.25 U
			11/16/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	9.3 J B	9.3 J 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
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<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	32 B	32 B
			11/16/2009	0.68 J	0.68 J
			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
LMW-3S	14	4 (28.5714%)	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

LMW-6	24	12 (50%)	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
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-8	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<0.25 U	ND<0.25 U
			11/16/2009	19	19
			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
LMW-9	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<0.25 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
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<0.25 U	ND<0.25 U
			11/16/2009	ND<0.25 U	ND<0.25 U
			11/16/2009	25	25
			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
LMW-9S	18	15 (83.3333%)	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	ND<0.25 U	ND<0.25 U
			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	9.1 J B	9.1 J B
			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
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 = 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	-1.7506953.9767	0	
13	0	-1.7168856.9244	0	
14	0.125	-1.6746659.7289	-0.209333	
15	0.125	-1.6448562.4344	-0.414939	
16	0.125	-1.6164465.0473	-0.616994	
17	0.125	-1.5804767.5452	-0.814552	
18	0.125	-1.5547769.9625	-1.0089	
19	0.125	-1.5300772.3036	-1.20016	
20	0.125	-1.4985274.5491	-1.38747	
21	0.125	-1.4757976.7271	-1.57195	
22	0.125	-1.4466378.8198	-1.75277	
23	0.125	-1.4255480.852	-1.93097	
24	0.125	-1.4050782.8262	-2.1066	
25	0.125	-1.3786684.7269	-2.27893	
26	0.125	-1.3594686.5751	-2.44887	
27	0.125	-1.3407588.3727	-2.61646	
28	0.125	-1.3165290.1059	-2.78103	
29	0.125	-1.2988491.7929	-2.94338	
30	0.125	-1.2758893.4208	-3.10286	
31	0.125	-1.2590895.006	-3.26025	
32	0.125	-1.2426496.5502	-3.41558	
33	0.125	-1.2212398.0416	-3.56823	
34	0.125	-1.2055399.4949	-3.71892	
35	0.125	-1.19012100.911	-3.86769	
36	0.125	-1.17 102.28	-4.01394	
37	0.125	-1.15522103.615	-4.15834	
38	0.125	-1.14069104.916	-4.30093	
39	0.125	-1.12168106.174	-4.44114	
40	0.125	-1.10768107.401	-4.5796	
41	0.125	-1.08935108.588	-4.71577	
42	0.125	-1.07584109.745	-4.85025	
43	0.125	-1.06252110.874	-4.98306	
44	0.125	-1.04505111.966	-5.11369	
45	0.125	-1.03215113.032	-5.24271	
46	0.125	-1.01943114.071	-5.37014	
47	0.125	-1.00271115.076	-5.49548	
48	0.125	-0.990356	116.057	-5.61927
49	0.125	-0.97815117.014	-5.74154	
50	0.125	-0.9621 117.939	-5.86181	
51	0.125	-0.950222	118.842	-5.98058

52	0.125	-0.93459	119.716	-6.09741
53	0.125	-0.923014	120.568	-6.21278
54	0.125	-0.911562	121.399	-6.32673
55	0.125	-0.896473	122.202	-6.43879
56	0.125	-0.885291	122.986	-6.54945
57	0.125	-0.874218	123.75	-6.65873
58	0.125	-0.859618	124.489	-6.76618
59	0.125	-0.848786	125.21	-6.87228
60	0.125	-0.834498	125.906	-6.97659
61	0.125	-0.823893	126.585	-7.07958
62	0.125	-0.813379	127.247	-7.18125
63	0.125	-0.7995	127.886	-7.28119
64	0.125	-0.789191	128.509	-7.37983
65	0.125	-0.778966	129.115	-7.47721
66	0.125	-0.765456	129.701	-7.57289
67	0.125	-0.755415	130.272	-7.66731
68	0.125	-0.745449	130.828	-7.7605
69	0.125	-0.732275	131.364	-7.85203
70	0.125	-0.722479	131.886	-7.94234
71	0.125	-0.709522	132.389	-8.03103
72	0.125	-0.699883	132.879	-8.11852
73	0.125	-0.690309	133.356	-8.2048
74	0.125	-0.677639	133.815	-8.28951
75	0.125	-0.668209	134.261	-8.37304
76	0.31	-0.658838	134.695	-8.57727
77	0.35	-0.646431	135.113	-8.80353
78	0.36	-0.637192	135.519	-9.03291
79	0.41	-0.628006	135.914	-9.2904
80	0.48	-0.615839	136.293	-9.586
81	0.5	-0.606775	136.661	-9.88939
82	0.5	-0.594766	137.015	-10.1868
83	0.5	-0.585815	137.358	-10.4797
84	0.5	-0.576911	137.691	-10.7681
85	0.5	-0.565108	138.01	-11.0507
86	0.5	-0.556308	138.32	-11.3288
87	0.5	-0.547551	138.619	-11.6026
88	0.5	-0.53594	138.907	-11.8706
89	0.5	-0.52728	139.185	-12.1342
90	0.5	-0.515791	139.451	-12.3921
91	0.5	-0.507221	139.708	-12.6457
92	0.5	-0.498687	139.957	-12.8951
93	0.5	-0.487364	140.194	-13.1388
94	0.5	-0.478914	140.424	-13.3782
95	0.5	-0.470498	140.645	-13.6135
96	0.5	-0.459327	140.856	-13.8431
97	0.5	-0.450985	141.059	-14.0686
98	0.5	-0.442676	141.255	-14.29
99	0.5	-0.431644	141.442	-14.5058
100	0.5	-0.423405	141.621	-14.7175
101	0.5	-0.412463	141.791	-14.9237
102	0.5	-0.40429	141.954	-15.1259
103	0.5	-0.396142	142.111	-15.3239
104	0.5	-0.385321	142.26	-15.5166
105	0.5	-0.377233	142.402	-15.7052
106	0.5	-0.369171	142.538	-15.8898
107	0.5	-0.358459	142.667	-16.069
108	0.5	-0.350451	142.79	-16.2442
109	0.5	-0.33981	142.905	-16.4142
110	0.5	-0.331854	143.015	-16.5801
111	0.5	-0.323919	143.12	-16.742
112	0.5	-0.31337	143.218	-16.8987
113	0.5	-0.305481	143.312	-17.0515

114	0.5	-0.297612	143.4	-17.2003
115	0.5	-0.287147	143.483	-17.3438
116	0.5	-0.279319	143.561	-17.4835
117	0.5	-0.271509	143.635	-17.6193
118	0.5	-0.26112143.703	-17.7498	
119	0.5	-0.253347	143.767	-17.8765
120	0.5	-0.243007	143.826	-17.998
121	0.5	-0.235269	143.881	-18.1156
122	0.5	-0.227545	143.933	-18.2294
123	0.5	-0.217267	143.98	-18.338
124	0.5	-0.209575	144.024	-18.4428
125	0.5	-0.201894	144.065	-18.5438
126	0.5	-0.191671	144.102	-18.6396
127	0.5	-0.184017	144.136	-18.7316
128	0.5	-0.176374	144.167	-18.8198
129	0.5	-0.166199	144.194	-18.9029
130	0.5	-0.158579	144.219	-18.9822
131	0.5	-0.148434	144.241	-19.0564
132	0.5	-0.140835	144.261	-19.1268
133	0.5	-0.133244	144.279	-19.1934
134	0.5	-0.123135	144.294	-19.255
135	0.5	-0.115562	144.308	-19.3128
136	0.5	-0.107995	144.319	-19.3668
137	0.5	-0.0979139	144.329	-19.4158
138	0.5	-0.0903606	144.337	-19.4609
139	0.5	-0.0802981	144.343	-19.5011
140	0.5	-0.0727562	144.349	-19.5375
141	0.5	-0.0652187	144.353	-19.5701
142	0.5	-0.0551734	144.356	-19.5977
143	0.5	-0.0476439	144.358	-19.6215
144	0.5	-0.0401167	144.36	-19.6415
145	0.5	-0.0300838	144.361	-19.6566
146	0.5	-0.0225612	144.361	-19.6679
147	0.5	-0.0150408	144.362	-19.6754
148	0.5	-0.00501359	144.362	-19.6779
149	0.5	0.00501359	144.362	-19.6754
150	0.5	0.0150408	144.362	-19.6679
151	0.5	0.0225612	144.362	-19.6566
152	0.5	0.0300838	144.363	-19.6415
153	0.5	0.0401167	144.365	-19.6215
154	0.5	0.0476439	144.367	-19.5977
155	0.5	0.0551734	144.37	-19.5701
156	0.5	0.0652187	144.374	-19.5375
157	0.5	0.0727562	144.38	-19.5011
158	0.5	0.0802981	144.386	-19.4609
159	0.5	0.0903606	144.394	-19.4158
160	0.5	0.0979139	144.404	-19.3668
161	0.5	0.107995	144.416	-19.3128
162	0.5	0.115562	144.429	-19.255
163	0.5	0.123135	144.444	-19.1934
164	0.5	0.133244	144.462	-19.1268
165	0.5	0.140835	144.482	-19.0564
166	0.5	0.148434	144.504	-18.9822
167	0.5	0.158579	144.529	-18.9029
168	0.5	0.166199	144.557	-18.8198
169	0.5	0.176374	144.588	-18.7316
170	0.5	0.184017	144.621	-18.6396
171	0.5	0.191671	144.658	-18.5438
172	0.5	0.201894	144.699	-18.4428
173	0.5	0.209575	144.743	-18.338
174	0.5	0.217267	144.79	-18.2294
175	0.5	0.227545	144.842	-18.1156

176	0.5	0.235269	144.897	-17.998
177	0.5	0.243007	144.956	-17.8765
178	0.5	0.253347	145.02	-17.7498
179	0.5	0.26112	145.089	-17.6193
180	0.5	0.271509	145.162	-17.4835
181	0.5	0.279319	145.24	-17.3438
182	0.5	0.287147	145.323	-17.2003
183	0.5	0.297612	145.411	-17.0515
184	0.5	0.305481	145.505	-16.8987
185	0.5	0.31337	145.603	-16.742
186	0.5	0.323919	145.708	-16.5801
187	0.5	0.331854	145.818	-16.4142
188	0.5	0.33981	145.933	-16.2442
189	0.5	0.350451	146.056	-16.069
190	0.5	0.358459	146.185	-15.8898
191	0.5	0.369171	146.321	-15.7052
192	0.5	0.377233	146.463	-15.5166
193	0.5	0.385321	146.612	-15.3239
194	0.5	0.396142	146.769	-15.1259
195	0.5	0.40429	146.932	-14.9237
196	0.5	0.412463	147.102	-14.7175
197	0.5	0.423405	147.282	-14.5058
198	0.5	0.431644	147.468	-14.29
199	0.5	0.442676	147.664	-14.0686
200	0.5	0.450985	147.867	-13.8431
201	0.5	0.459327	148.078	-13.6135
202	0.5	0.470498	148.3	-13.3782
203	0.5	0.478914	148.529	-13.1388
204	0.5	0.487364	148.767	-12.8951
205	0.5	0.498687	149.015	-12.6457
206	0.5	0.507221	149.272	-12.3921
207	0.5	0.515791	149.539	-12.1342
208	0.5	0.52728	149.817	-11.8706
209	0.5	0.53594	150.104	-11.6026
210	0.5	0.547551	150.404	-11.3288
211	0.5	0.556308	150.713	-11.0507
212	0.5	0.565108	151.032	-10.7681
213	0.5	0.576911	151.365	-10.4797
214	0.5	0.585815	151.708	-10.1868
215	0.5	0.594766	152.062	-9.88939
216	0.5	0.606775	152.43	-9.586
217	0.5	0.615839	152.81	-9.27808
218	0.5	0.628006	153.204	-8.96408
219	0.5	0.637192	153.61	-8.64548
220	0.5	0.646431	154.028	-8.32227
221	0.5	0.658838	154.462	-7.99285
222	0.5	0.668209	154.908	-7.65874
223	0.5	0.677639	155.368	-7.31992
224	0.5	0.690309	155.844	-6.97477
225	0.5	0.699883	156.334	-6.62483
226	0.5	0.709522	156.837	-6.27007
227	0.5	0.722479	157.359	-5.90883
228	0.5	0.732275	157.896	-5.54269
229	0.5	0.745449	158.451	-5.16996
230	0.5	0.755415	159.022	-4.79226
231	0.5	0.765456	159.608	-4.40953
232	0.51	0.778966	160.215	-4.01226
233	0.52	0.789191	160.837	-3.60188
234	0.58	0.7995	161.477	-3.13817
235	0.67	0.813379	162.138	-2.5932
236	0.68	0.823893	162.817	-2.03295
237	0.7	0.834498	163.513	-1.44881

238	0.71	0.848786		164.234	-0.846168
239	0.72	0.859618		164.973	-0.227243
240	0.8	0.874218		165.737	0.472131
241	0.82	0.885291		166.521	1.19807
242	0.84	0.896473		167.325	1.95111
243	0.89	0.911562		168.155	2.7624
244	0.95	0.923014		169.007	3.63926
245	0.97	0.93459	169.881	4.54581	
246	1	0.950222		170.784	5.49603
247	1	0.9621	171.709	6.45813	
248	1	0.97815	172.666	7.43628	
249	1	0.990356		173.647	8.42664
250	1	1.00271	174.652	9.42935	
251	1.1	1.01943	175.692	10.5507	
252	1.1	1.03215	176.757	11.6861	
253	1.1	1.04505	177.849	12.8356	
254	1.1	1.06252	178.978	14.0044	
255	1.2	1.07584	180.136	15.2954	
256	1.2	1.08935	181.322	16.6026	
257	1.3	1.10768	182.549	18.0426	
258	1.4	1.12168	183.807	19.613	
259	1.7	1.14069	185.108	21.5521	
260	1.7	1.15522	186.443	23.516	
261	2	1.17	187.812	25.856	
262	2	1.19012	189.228	28.2363	
263	2	1.20553	190.682	30.6473	
264	2	1.22123	192.173	33.0898	
265	2	1.24264	193.717	35.5751	
266	2	1.25908	195.302	38.0932	
267	2	1.27588	196.93	40.645	
268	2.4	1.29884	198.617	43.7622	
269	3	1.31652	200.351	47.7117	
270	3	1.34075	202.148	51.734	
271	3	1.35946	203.996	55.8124	
272	3	1.37866	205.897	59.9484	
273	3.7	1.40507	207.871	65.1471	
274	4	1.42554	209.903	70.8493	
275	5.8	1.44663	211.996	79.2398	
276	6.6	1.47579	214.174	88.98	
277	7	1.49852	216.42	99.4696	
278	7	1.53007	218.761	110.18	
279	7	1.55477	221.178	121.063	
280	7.3	1.58047	223.676	132.601	
281	9.1	1.61644	226.289	147.31	
282	9.3	1.64485	228.994	162.608	
283	10	1.67466	231.799	179.354	
284	13	1.71688	234.747	201.674	
285	13	1.75069	237.811	224.433	
286	13	1.78661	241.003	247.659	
287	14	1.83843	244.383	273.397	
288	14	1.88079	247.921	299.728	
289	15	1.94314	251.696	328.875	
290	16	1.99539	255.678	360.801	
291	19	2.05375	259.896	399.822	
292	21	2.14441	264.494	444.855	
293	25	2.22621	269.45	500.51	
294	26	2.32634	274.862	560.995	
295	32	2.51213	281.173	641.383	
296	41	2.74777	288.723	754.041	

Data Set Standard Deviation = 4.55602

Numerator = 568578
Denominator = 1.76797e+006
W Statistic = 0.3216 = 568578 / 1.76797e+006

5% Critical value of 0.976 exceeds 0.3216
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.3216
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 = 0.571283
0.571283 < 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	0.023569		-1.995393	9	311.942
8	0	0.026936		-1.943143	9	309.39
9	0	0.030303		-1.880793	9	306.345
10	0	0.03367	-1.838433	9	304.276	
11	0	0.037037		-1.786613	9	301.746
12	0	0.040404		-1.750693	9	299.992
13	0	0.043771		-1.716883	9	298.341
14	0.125	0.047138		-1.674664	0.3375	296.279
15	0.125	0.0505051		-1.644854	0.3375	294.824
16	0.125	0.0538721		-1.616444	0.3375	293.436
17	0.125	0.0572391		-1.580474	0.3375	291.679
18	0.125	0.0606061		-1.554774	0.3375	290.425
19	0.125	0.0639731		-1.530074	0.3375	289.218
20	0.125	0.0673401		-1.498524	0.3375	287.677
21	0.125	0.0707071		-1.475794	0.3375	286.568
22	0.125	0.0740741		-1.446634	0.3375	285.144
23	0.125	0.0774411		-1.425544	0.3375	284.114
24	0.125	0.0808081		-1.405074	0.3375	283.114
25	0.125	0.0841751		-1.378664	0.3375	281.824
26	0.125	0.0875421		-1.359464	0.3375	280.887
27	0.125	0.0909091		-1.340754	0.3375	279.974
28	0.125	0.0942761		-1.316524	0.3375	278.79
29	0.125	0.0976431		-1.298844	0.3375	277.926
30	0.125	0.10101	-1.275884	0.3375	276.805	
31	0.125	0.104377		-1.259084	0.3375	275.985
32	0.125	0.107744		-1.242644	0.3375	275.182
33	0.125	0.111111		-1.221234	0.3375	274.137
34	0.125	0.114478		-1.205534	0.3375	273.37
35	0.125	0.117845		-1.190124	0.3375	272.617
36	0.125	0.121212		-1.17	40.3375	271.635
37	0.125	0.124579		-1.155224	0.3375	270.913
38	0.125	0.127946		-1.140694	0.3375	270.204
39	0.125	0.131313		-1.121684	0.3375	269.275
40	0.125	0.13468	-1.107684	0.3375	268.592	
41	0.125	0.138047		-1.089354	0.3375	267.697
42	0.125	0.141414		-1.075844	0.3375	267.037
43	0.125	0.144781		-1.062524	0.3375	266.386
44	0.125	0.148148		-1.045054	0.3375	265.533
45	0.125	0.151515		-1.032154	0.3375	264.904
46	0.125	0.154882		-1.019434	0.3375	264.282
47	0.125	0.158249		-1.002714	0.3375	263.466
48	0.125	0.161616		-0.990356	40.3375	262.862

49	0.125	0.164983	-0.978154	0.3375	262.266
50	0.125	0.16835	-0.9621	40.3375	261.483
51	0.125	0.171717	-0.950222	40.3375	260.903
52	0.125	0.175084	-0.934594	0.3375	260.139
53	0.125	0.178451	-0.923014	40.3375	259.574
54	0.125	0.181818	-0.911562	40.3375	259.015
55	0.125	0.185185	-0.896473	40.3375	258.278
56	0.125	0.188552	-0.885291	40.3375	257.732
57	0.125	0.191919	-0.874218	40.3375	257.191
58	0.125	0.195286	-0.859618	40.3375	256.478
59	0.125	0.198653	-0.848786	40.3375	255.949
60	0.125	0.20202	-0.834498	40.3375	255.251
61	0.125	0.205387	-0.823893	40.3375	254.733
62	0.125	0.208754	-0.813379	40.3375	254.22
63	0.125	0.212121	-0.7995	40.3375	253.542
64	0.125	0.215488	-0.789191	40.3375	253.039
65	0.125	0.218855	-0.778966	40.3375	252.54
66	0.125	0.222222	-0.765456	40.3375	251.88
67	0.125	0.225589	-0.755415	40.3375	251.389
68	0.125	0.228956	-0.745449	40.3375	250.903
69	0.125	0.232323	-0.732275	40.3375	250.259
70	0.125	0.23569	-0.722479	40.3375	249.781
71	0.125	0.239057	-0.709522	40.3375	249.148
72	0.125	0.242424	-0.699883	40.3375	248.678
73	0.125	0.245791	-0.690309	40.3375	248.21
74	0.125	0.249158	-0.677639	40.3375	247.591
75	0.125	0.252525	-0.668209	40.3375	247.131
76	0.31	0.255892	-0.658838	42.317	246.673
77	0.35	0.259259	-0.646431	42.745	246.067
78	0.36	0.262626	-0.637192	42.852	245.616
79	0.41	0.265993	-0.628006	43.387	245.168
80	0.48	0.26936	-0.615839	44.136	244.573
81	0.5	0.272727	-0.606775	44.35	244.131
82	0.5	0.276094	-0.594766	44.35	243.544
83	0.5	0.279461	-0.585815	44.35	243.107
84	0.5	0.282828	-0.576911	44.35	242.672
85	0.5	0.286195	-0.565108	44.35	242.096
86	0.5	0.289562	-0.556308	44.35	241.666
87	0.5	0.292929	-0.547551	44.35	241.239
88	0.5	0.296296	-0.535944	4.35	240.672
89	0.5	0.299663	-0.527284	4.35	240.249
90	0.5	0.30303	-0.515791	44.35	239.688
91	0.5	0.306397	-0.507221	44.35	239.269
92	0.5	0.309764	-0.498687	44.35	238.853
93	0.5	0.313131	-0.487364	44.35	238.3
94	0.5	0.316498	-0.478914	44.35	237.887
95	0.5	0.319865	-0.470498	44.35	237.476
96	0.5	0.323232	-0.459327	44.35	236.93
97	0.5	0.326599	-0.450985	44.35	236.523
98	0.5	0.329966	-0.442676	44.35	236.117
99	0.5	0.333333	-0.431644	44.35	235.579
100	0.5	0.3367	-0.423405	44.35	235.176
101	0.5	0.340067	-0.412463	44.35	234.642
102	0.5	0.343434	-0.404294	4.35	234.243
103	0.5	0.346801	-0.396142	44.35	233.845
104	0.5	0.350168	-0.385321	44.35	233.317
105	0.5	0.353535	-0.377233	44.35	232.922
106	0.5	0.356902	-0.369171	44.35	232.528
107	0.5	0.360269	-0.358459	44.35	232.005
108	0.5	0.363636	-0.350451	44.35	231.614
109	0.5	0.367003	-0.339814	4.35	231.094
110	0.5	0.37037	-0.331854	44.35	230.706

111	0.5	0.373737	-0.323919	44.35	230.318
112	0.5	0.377104	-0.3133744.35	229.803	
113	0.5	0.380471	-0.305481	44.35	229.418
114	0.5	0.383838	-0.297612	44.35	229.033
115	0.5	0.387205	-0.287147	44.35	228.522
116	0.5	0.390572	-0.279319	44.35	228.14
117	0.5	0.393939	-0.271509	44.35	227.759
118	0.5	0.397306	-0.2611244.35	227.251	
119	0.5	0.400673	-0.253347	44.35	226.872
120	0.5	0.40404 -0.243007	44.35	226.367	
121	0.5	0.407407	-0.235269	44.35	225.989
122	0.5	0.410774	-0.227545	44.35	225.612
123	0.5	0.414141	-0.217267	44.35	225.11
124	0.5	0.417508	-0.209575	44.35	224.734
125	0.5	0.420875	-0.201894	44.35	224.359
126	0.5	0.424242	-0.191671	44.35	223.86
127	0.5	0.427609	-0.184017	44.35	223.486
128	0.5	0.430976	-0.176374	44.35	223.113
129	0.5	0.434343	-0.166199	44.35	222.616
130	0.5	0.43771 -0.158579	44.35	222.244	
131	0.5	0.441077	-0.148434	44.35	221.749
132	0.5	0.444444	-0.140835	44.35	221.377
133	0.5	0.447811	-0.133244	44.35	221.007
134	0.5	0.451178	-0.123135	44.35	220.513
135	0.5	0.454545	-0.115562	44.35	220.143
136	0.5	0.457912	-0.107995	44.35	219.774
137	0.5	0.461279	-0.0979139	44.35	219.281
138	0.5	0.464646	-0.0903606	44.35	218.913
139	0.5	0.468013	-0.0802981	44.35	218.421
140	0.5	0.47138 -0.0727562	44.35	218.053	
141	0.5	0.474747	-0.0652187	44.35	217.685
142	0.5	0.478114	-0.0551734	44.35	217.194
143	0.5	0.481481	-0.0476439	44.35	216.827
144	0.5	0.484848	-0.0401167	44.35	216.459
145	0.5	0.488215	-0.0300838	44.35	215.969
146	0.5	0.491582	-0.0225612	44.35	215.602
147	0.5	0.494949	-0.0150408	44.35	215.234
148	0.5	0.498316	-0.00501359	44.35	214.745
149	0.5	0.501684	0.00501359	44.35	214.255
150	0.5	0.505051	0.0150408	44.35	213.766
151	0.5	0.508418	0.0225612	44.35	213.398
152	0.5	0.511785	0.0300838	44.35	213.031
153	0.5	0.515152	0.0401167	44.35	212.541
154	0.5	0.518519	0.0476439	44.35	212.173
155	0.5	0.521886	0.0551734	44.35	211.806
156	0.5	0.525253	0.0652187	44.35	211.315
157	0.5	0.52862 0.0727562	44.35	210.947	
158	0.5	0.531987	0.0802981	44.35	210.579
159	0.5	0.535354	0.0903606	44.35	210.087
160	0.5	0.538721	0.0979139	44.35	209.719
161	0.5	0.542088	0.107995	44.35	209.226
162	0.5	0.545455	0.115562	44.35	208.857
163	0.5	0.548822	0.123135	44.35	208.487
164	0.5	0.552189	0.133244	44.35	207.993
165	0.5	0.555556	0.140835	44.35	207.623
166	0.5	0.558923	0.148434	44.35	207.251
167	0.5	0.56229 0.158579	44.35	206.756	
168	0.5	0.565657	0.166199	44.35	206.384
169	0.5	0.569024	0.176374	44.35	205.887
170	0.5	0.572391	0.184017	44.35	205.514
171	0.5	0.575758	0.191671	44.35	205.14
172	0.5	0.579125	0.201894	44.35	204.641

173	0.5	0.582492	0.209575	44.35	204.266
174	0.5	0.585859	0.217267	44.35	203.89
175	0.5	0.589226	0.227545	44.35	203.388
176	0.5	0.592593	0.235269	44.35	203.011
177	0.5	0.59596	0.243007	44.35	202.633
178	0.5	0.599327	0.253347	44.35	202.128
179	0.5	0.602694	0.26112	44.35	201.749
180	0.5	0.606061	0.271509	44.35	201.241
181	0.5	0.609428	0.279319	44.35	200.86
182	0.5	0.612795	0.287147	44.35	200.478
183	0.5	0.616162	0.297612	44.35	199.967
184	0.5	0.619529	0.305481	44.35	199.582
185	0.5	0.622896	0.31337	44.35	199.197
186	0.5	0.626263	0.323919	44.35	198.682
187	0.5	0.62963	0.331854	44.35	198.294
188	0.5	0.632997	0.33981	44.35	197.906
189	0.5	0.636364	0.350451	44.35	197.386
190	0.5	0.639731	0.358459	44.35	196.995
191	0.5	0.643098	0.369171	44.35	196.472
192	0.5	0.646465	0.377233	44.35	196.078
193	0.5	0.649832	0.385321	44.35	195.683
194	0.5	0.653199	0.396142	44.35	195.155
195	0.5	0.656566	0.40429	44.35	194.757
196	0.5	0.659933	0.412463	44.35	194.358
197	0.5	0.6633	0.423405	44.35	193.824
198	0.5	0.666667	0.431644	44.35	193.421
199	0.5	0.670034	0.442676	44.35	192.883
200	0.5	0.673401	0.450985	44.35	192.477
201	0.5	0.676768	0.459327	44.35	192.07
202	0.5	0.680135	0.470498	44.35	191.524
203	0.5	0.683502	0.478914	44.35	191.113
204	0.5	0.686869	0.487364	44.35	190.7
205	0.5	0.690236	0.498687	44.35	190.147
206	0.5	0.693603	0.507221	44.35	189.731
207	0.5	0.69697	0.515791	44.35	189.312
208	0.5	0.700337	0.52728	44.35	188.751
209	0.5	0.703704	0.53594	44.35	188.328
210	0.5	0.707071	0.547551	44.35	187.761
211	0.5	0.710438	0.556308	44.35	187.334
212	0.5	0.713805	0.565108	44.35	186.904
213	0.5	0.717172	0.576911	44.35	186.328
214	0.5	0.720539	0.585815	44.35	185.893
215	0.5	0.723906	0.594766	44.35	185.456
216	0.5	0.727273	0.606775	44.35	184.869
217	0.5	0.73064	0.615839	44.35	184.427
218	0.5	0.734007	0.628006	44.35	183.832
219	0.5	0.737374	0.637192	44.35	183.384
220	0.5	0.740741	0.646431	44.35	182.933
221	0.5	0.744108	0.658838	44.35	182.327
222	0.5	0.747475	0.668209	44.35	181.869
223	0.5	0.750842	0.677639	44.35	181.409
224	0.5	0.754209	0.690309	44.35	180.79
225	0.5	0.757576	0.699883	44.35	180.322
226	0.5	0.760943	0.709522	44.35	179.852
227	0.5	0.76431	0.722479	44.35	179.219
228	0.5	0.767677	0.732275	44.35	178.741
229	0.5	0.771044	0.745449	44.35	178.097
230	0.5	0.774411	0.755415	44.35	177.611
231	0.5	0.777778	0.765456	44.35	177.12
232	0.51	0.781145	0.778966	44.457	176.46
233	0.52	0.784512	0.789191	44.564	175.961
234	0.58	0.787879	0.7995	45.206	175.458

235	0.67	0.791246	0.813379		46.169	174.78
236	0.68	0.794613	0.823893		46.276	174.267
237	0.7	0.79798	0.834498	46.49	173.749	
238	0.71	0.801347	0.848786		46.597	173.051
239	0.72	0.804714	0.859618		46.704	172.522
240	0.8	0.808081	0.874218		47.56	171.809
241	0.82	0.811448	0.885291		47.774	171.268
242	0.84	0.814815	0.896473		47.988	170.722
243	0.89	0.818182	0.911562		48.523	169.985
244	0.95	0.821549	0.923014		49.165	169.426
245	0.97	0.824916	0.93459	49.379	168.861	
246	1	0.828283	0.950222		49.7	168.097
247	1	0.83165	0.9621	49.7	167.517	
248	1	0.835017	0.97815	49.7	166.734	
249	1	0.838384	0.990356		49.7	166.138
250	1	0.841751	1.00271	49.7	165.534	
251	1.1	0.845118	1.01943	50.77	164.718	
252	1.1	0.848485	1.03215	50.77	164.096	
253	1.1	0.851852	1.04505	50.77	163.467	
254	1.1	0.855219	1.06252	50.77	162.614	
255	1.2	0.858586	1.07584	51.84	161.963	
256	1.2	0.861953	1.08935	51.84	161.303	
257	1.3	0.86532	1.10768	52.91	160.408	
258	1.4	0.868687	1.12168	53.98	159.725	
259	1.7	0.872054	1.14069	57.19	158.796	
260	1.7	0.875421	1.15522	57.19	158.087	
261	2	0.878788	1.17	60.4	157.365	
262	2	0.882155	1.19012	60.4	156.383	
263	2	0.885522	1.20553	60.4	155.63	
264	2	0.888889	1.22123	60.4	154.863	
265	2	0.892256	1.24264	60.4	153.818	
266	2	0.895623	1.25908	60.4	153.015	
267	2	0.89899	1.27588	60.4	152.195	
268	2.4	0.902357	1.29884	64.68	151.074	
269	3	0.905724	1.31652	71.1	150.21	
270	3	0.909091	1.34075	71.1	149.026	
271	3	0.912458	1.35946	71.1	148.113	
272	3	0.915825	1.37866	71.1	147.176	
273	3.7	0.919192	1.40507	78.59	145.886	
274	4	0.922559	1.42554	81.8	144.886	
275	5.8	0.925926	1.44663	101.06	143.856	
276	6.6	0.929293	1.47579	109.62	142.432	
277	7	0.93266	1.49852	113.9	141.323	
278	7	0.936027	1.53007	113.9	139.782	
279	7	0.939394	1.55477	113.9	138.575	
280	7.3	0.942761	1.58047	117.11	137.321	
281	9.1	0.946128	1.61644	136.37	135.564	
282	9.3	0.949495	1.64485	138.51	134.176	
283	10	0.952862	1.67466	146	132.721	
284	13	0.956229	1.71688	178.1	130.659	
285	13	0.959596	1.75069	178.1	129.008	
286	13	0.962963	1.78661	178.1	127.254	
287	14	0.96633	1.83843	188.8	124.724	
288	14	0.969697	1.88079	188.8	122.655	
289	15	0.973064	1.94314	199.5	119.61	
290	16	0.976431	1.99539	210.2	117.058	
291	19	0.979798	2.05375	242.3	114.209	
292	21	0.983165	2.14441	263.7	109.781	
293	25	0.986532	2.22621	306.5	105.787	
294	26	0.989899	2.32634	317.2	100.897	
295	32	0.993266	2.51213	381.4	91.8241	
296	41	0.996633	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 = 296

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	-2.32634	19.2729	15.7751
4	-2.07944	-2.22621	24.2289	20.4044
5	-2.07944	-2.14441	28.8274	24.8636
6	-2.07944	-2.05375	33.0453	29.1342
7	-2.07944	-1.99539	37.0269	33.2835
8	-2.07944	-1.94314	40.8026	37.3242
9	-2.07944	-1.88079	44.34	41.2352
10	-2.07944	-1.83843	47.7198	45.0581
11	-2.07944	-1.78661	50.9118	48.7732
12	-2.07944	-1.75069	53.9767	52.4137
13	-2.07944	-1.71688	56.9244	55.9838
14	-2.07944	-1.67466	59.7289	59.4662
15	-2.07944	-1.64485	62.4344	62.8866
16	-2.07944	-1.61644	65.0473	66.2478
17	-2.07944	-1.58047	67.5452	69.5343
18	-2.07944	-1.55477	69.9625	72.7674
19	-2.07944	-1.53007	72.3036	75.9491
20	-2.07944	-1.49852	74.5491	79.0651
21	-2.07944	-1.47579	76.7271	82.134
22	-2.07944	-1.44663	78.8198	85.1422
23	-2.07944	-1.42554	80.852	88.1065
24	-2.07944	-1.40507	82.8262	91.0283
25	-2.07944	-1.37866	84.7269	93.8951
26	-2.07944	-1.35946	86.5751	96.722
27	-2.07944	-1.34075	88.3727	99.51
28	-2.07944	-1.31652	90.1059	102.248
29	-2.07944	-1.29884	91.7929	104.949
30	-2.07944	-1.27588	93.4208	107.602
31	-2.07944	-1.25908	95.006	110.22
32	-2.07944	-1.24264	96.5502	112.804
33	-2.07944	-1.22123	98.0416	115.343
34	-2.07944	-1.20553	99.4949	117.85
35	-2.07944	-1.19012	100.911	120.325
36	-2.07944	-1.17	102.28	122.758
37	-2.07944	-1.15522	103.615	125.16
38	-2.07944	-1.14069	104.916	127.532
39	-2.07944	-1.12168	106.174	129.865
40	-2.07944	-1.10768	107.401	132.168
41	-2.07944	-1.08935	108.588	134.433
42	-2.07944	-1.07584	109.745	136.67
43	-2.07944	-1.06252	110.874	138.88
44	-2.07944	-1.04505	111.966	141.053
45	-2.07944	-1.03215	113.032	143.199
46	-2.07944	-1.01943	114.071	145.319
47	-2.07944	-1.00271	115.076	147.404
48	-2.07944	-0.990356	116.057	149.463
49	-2.07944	-0.97815	117.014	151.497
50	-2.07944	-0.9621	117.939	153.498
51	-2.07944	-0.950222	118.842	155.474

52	-2.07944	-0.93459	119.716	157.417
53	-2.07944	-0.923014	120.568	159.337
54	-2.07944	-0.911562	121.399	161.232
55	-2.07944	-0.896473	122.202	163.096
56	-2.07944	-0.885291	122.986	164.937
57	-2.07944	-0.874218	123.75	166.755
58	-2.07944	-0.859618	124.489	168.543
59	-2.07944	-0.848786	125.21	170.308
60	-2.07944	-0.834498	125.906	172.043
61	-2.07944	-0.823893	126.585	173.756
62	-2.07944	-0.813379	127.247	175.448
63	-1.17118	-0.7995	127.886	176.384
64	-1.04982	-0.789191	128.509	177.213
65	-1.02165	-0.778966	129.115	178.008
66	-0.891598	-0.765456	129.701	178.691
67	-0.733969	-0.755415	130.272	179.245
68	-0.693147	-0.745449	130.828	179.762
69	-0.693147	-0.732275	131.364	180.27
70	-0.693147	-0.722479	131.886	180.77
71	-0.693147	-0.709522	132.389	181.262
72	-0.693147	-0.699883	132.879	181.747
73	-0.693147	-0.690309	133.356	182.226
74	-0.693147	-0.677639	133.815	182.696
75	-0.693147	-0.668209	134.261	183.159
76	-0.693147	-0.658838	134.695	183.615
77	-0.693147	-0.646431	135.113	184.063
78	-0.693147	-0.637192	135.519	184.505
79	-0.693147	-0.628006	135.914	184.94
80	-0.693147	-0.615839	136.293	185.367
81	-0.693147	-0.606775	136.661	185.788
82	-0.693147	-0.594766	137.015	186.2
83	-0.693147	-0.585815	137.358	186.606
84	-0.693147	-0.576911	137.691	187.006
85	-0.693147	-0.565108	138.01	187.398
86	-0.693147	-0.556308	138.32	187.783
87	-0.693147	-0.547551	138.619	188.163
88	-0.693147	-0.53594	138.907	188.534
89	-0.693147	-0.52728	139.185	188.9
90	-0.693147	-0.515791	139.451	189.257
91	-0.693147	-0.507221	139.708	189.609
92	-0.693147	-0.498687	139.957	189.955
93	-0.693147	-0.487364	140.194	190.292
94	-0.693147	-0.478914	140.424	190.624
95	-0.693147	-0.470498	140.645	190.951
96	-0.693147	-0.459327	140.856	191.269
97	-0.693147	-0.450985	141.059	191.582
98	-0.693147	-0.442676	141.255	191.888
99	-0.693147	-0.431644	141.442	192.188
100	-0.693147	-0.423405	141.621	192.481
101	-0.693147	-0.412463	141.791	192.767
102	-0.693147	-0.40429	141.954	193.047
103	-0.693147	-0.396142	142.111	193.322
104	-0.693147	-0.385321	142.26	193.589
105	-0.693147	-0.377233	142.402	193.85
106	-0.693147	-0.369171	142.538	194.106
107	-0.693147	-0.358459	142.667	194.355
108	-0.693147	-0.350451	142.79	194.598
109	-0.693147	-0.33981	142.905	194.833
110	-0.693147	-0.331854	143.015	195.063
111	-0.693147	-0.323919	143.12	195.288
112	-0.693147	-0.31337	143.218	195.505
113	-0.693147	-0.305481	143.312	195.717

114	-0.693147	-0.297612	143.4	195.923
115	-0.693147	-0.287147	143.483	196.122
116	-0.693147	-0.279319	143.561	196.316
117	-0.693147	-0.271509	143.635	196.504
118	-0.693147	-0.26112143.703	196.685	
119	-0.693147	-0.253347	143.767	196.86
120	-0.693147	-0.243007	143.826	197.029
121	-0.693147	-0.235269	143.881	197.192
122	-0.693147	-0.227545	143.933	197.35
123	-0.693147	-0.217267	143.98	197.5
124	-0.693147	-0.209575	144.024	197.645
125	-0.693147	-0.201894	144.065	197.785
126	-0.693147	-0.191671	144.102	197.918
127	-0.693147	-0.184017	144.136	198.046
128	-0.693147	-0.176374	144.167	198.168
129	-0.693147	-0.166199	144.194	198.283
130	-0.693147	-0.158579	144.219	198.393
131	-0.693147	-0.148434	144.241	198.496
132	-0.693147	-0.140835	144.261	198.594
133	-0.693147	-0.133244	144.279	198.686
134	-0.693147	-0.123135	144.294	198.771
135	-0.693147	-0.115562	144.308	198.851
136	-0.693147	-0.107995	144.319	198.926
137	-0.693147	-0.0979139	144.329	198.994
138	-0.693147	-0.0903606	144.337	199.057
139	-0.693147	-0.0802981	144.343	199.112
140	-0.693147	-0.0727562	144.349	199.163
141	-0.693147	-0.0652187	144.353	199.208
142	-0.693147	-0.0551734	144.356	199.246
143	-0.693147	-0.0476439	144.358	199.279
144	-0.693147	-0.0401167	144.36	199.307
145	-0.693147	-0.0300838	144.361	199.328
146	-0.693147	-0.0225612	144.361	199.344
147	-0.693147	-0.0150408	144.362	199.354
148	-0.693147	-0.00501359	144.362	199.358
149	-0.693147	0.00501359	144.362	199.354
150	-0.693147	0.0150408	144.362	199.344
151	-0.693147	0.0225612	144.362	199.328
152	-0.693147	0.0300838	144.363	199.307
153	-0.693147	0.0401167	144.365	199.279
154	-0.693147	0.0476439	144.367	199.246
155	-0.693147	0.0551734	144.37	199.208
156	-0.693147	0.0652187	144.374	199.163
157	-0.693147	0.0727562	144.38	199.112
158	-0.693147	0.0802981	144.386	199.057
159	-0.693147	0.0903606	144.394	198.994
160	-0.693147	0.0979139	144.404	198.926
161	-0.693147	0.107995	144.416	198.851
162	-0.693147	0.115562	144.429	198.771
163	-0.693147	0.123135	144.444	198.686
164	-0.693147	0.133244	144.462	198.594
165	-0.693147	0.140835	144.482	198.496
166	-0.693147	0.148434	144.504	198.393
167	-0.693147	0.158579	144.529	198.283
168	-0.693147	0.166199	144.557	198.168
169	-0.693147	0.176374	144.588	198.046
170	-0.693147	0.184017	144.621	197.918
171	-0.693147	0.191671	144.658	197.785
172	-0.693147	0.201894	144.699	197.645
173	-0.693147	0.209575	144.743	197.5
174	-0.693147	0.217267	144.79	197.35
175	-0.693147	0.227545	144.842	197.192

176	-0.693147	0.235269		144.897	197.029
177	-0.693147	0.243007		144.956	196.86
178	-0.693147	0.253347		145.02	196.685
179	-0.693147	0.26112	145.089	196.504	
180	-0.693147	0.271509		145.162	196.316
181	-0.693147	0.279319		145.24	196.122
182	-0.693147	0.287147		145.323	195.923
183	-0.693147	0.297612		145.411	195.717
184	-0.693147	0.305481		145.505	195.505
185	-0.693147	0.31337	145.603	195.288	
186	-0.693147	0.323919		145.708	195.063
187	-0.693147	0.331854		145.818	194.833
188	-0.693147	0.33981	145.933	194.598	
189	-0.693147	0.350451		146.056	194.355
190	-0.693147	0.358459		146.185	194.106
191	-0.693147	0.369171		146.321	193.85
192	-0.693147	0.377233		146.463	193.589
193	-0.693147	0.385321		146.612	193.322
194	-0.693147	0.396142		146.769	193.047
195	-0.693147	0.40429	146.932	192.767	
196	-0.693147	0.412463		147.102	192.481
197	-0.693147	0.423405		147.282	192.188
198	-0.693147	0.431644		147.468	191.888
199	-0.693147	0.442676		147.664	191.582
200	-0.693147	0.450985		147.867	191.269
201	-0.693147	0.459327		148.078	190.951
202	-0.693147	0.470498		148.3	190.624
203	-0.693147	0.478914		148.529	190.292
204	-0.693147	0.487364		148.767	189.955
205	-0.693147	0.498687		149.015	189.609
206	-0.693147	0.507221		149.272	189.257
207	-0.693147	0.515791		149.539	188.9
208	-0.693147	0.52728	149.817	188.534	
209	-0.693147	0.53594	150.104	188.163	
210	-0.693147	0.547551		150.404	187.783
211	-0.693147	0.556308		150.713	187.398
212	-0.693147	0.565108		151.032	187.006
213	-0.693147	0.576911		151.365	186.606
214	-0.693147	0.585815		151.708	186.2
215	-0.693147	0.594766		152.062	185.788
216	-0.693147	0.606775		152.43	185.367
217	-0.693147	0.615839		152.81	184.94
218	-0.693147	0.628006		153.204	184.505
219	-0.673345	0.637192		153.61	184.076
220	-0.653926	0.646431		154.028	183.653
221	-0.544727	0.658838		154.462	183.294
222	-0.400478	0.668209		154.908	183.027
223	-0.385662	0.677639		155.368	182.766
224	-0.356675	0.690309		155.844	182.519
225	-0.342490	0.699883	156.334	182.28	
226	-0.328504	0.709522		156.837	182.047
227	-0.223144	0.722479		157.359	181.885
228	-0.198451	0.732275		157.896	181.74
229	-0.174353	0.745449		158.451	181.61
230	-0.116534	0.755415		159.022	181.522
231	-0.0512933	0.765456		159.608	181.483
232	-0.0304592	0.778966		160.215	181.459
233	0	0.789191	160.837	181.459	
234	0	0.7995	161.477	181.459	
235	0	0.813379	162.138	181.459	
236	0	0.823893	162.817	181.459	
237	0	0.834498	163.513	181.459	

238	0	0.848786		164.234	181.459
239	0	0.859618		164.973	181.459
240	0	0.874218		165.737	181.459
241	0	0.885291		166.521	181.459
242	0	0.896473		167.325	181.459
243	0	0.911562		168.155	181.459
244	0	0.923014		169.007	181.459
245	0	0.93459	169.881	181.459	
246	0	0.950222		170.784	181.459
247	0	0.9621	171.709	181.459	
248	0	0.97815	172.666	181.459	
249	0	0.990356		173.647	181.459
250	0	1.00271	174.652	181.459	
251	0.0953102		1.01943	175.692	181.556
252	0.0953102		1.03215	176.757	181.655
253	0.0953102		1.04505	177.849	181.754
254	0.0953102		1.06252	178.978	181.855
255	0.182322		1.07584	180.136	182.052
256	0.182322		1.08935	181.322	182.25
257	0.262364		1.10768	182.549	182.541
258	0.336472		1.12168	183.807	182.918
259	0.530628		1.14069	185.108	183.523
260	0.530628		1.15522	186.443	184.136
261	0.693147		1.17	187.812	184.947
262	0.693147		1.19012	189.228	185.772
263	0.693147		1.20553	190.682	186.608
264	0.693147		1.22123	192.173	187.454
265	0.693147		1.24264	193.717	188.316
266	0.693147		1.25908	195.302	189.189
267	0.693147		1.27588	196.93	190.073
268	0.875469		1.29884	198.617	191.21
269	1.09861	1.31652	200.351	192.656	
270	1.09861	1.34075	202.148	194.129	
271	1.09861	1.35946	203.996	195.623	
272	1.09861	1.37866	205.897	197.137	
273	1.30833	1.40507	207.871	198.976	
274	1.38629	1.42554	209.903	200.952	
275	1.75786	1.44663	211.996	203.495	
276	1.88707	1.47579	214.174	206.28	
277	1.94591	1.49852	216.42	209.196	
278	1.94591	1.53007	218.761	212.173	
279	1.94591	1.55477	221.178	215.199	
280	1.98787	1.58047	223.676	218.34	
281	2.20827	1.61644	226.289	221.91	
282	2.23001	1.64485	228.994	225.578	
283	2.30259	1.67466	231.799	229.434	
284	2.56495	1.71688	234.747	233.838	
285	2.56495	1.75069	237.811	238.328	
286	2.56495	1.78661	241.003	242.911	
287	2.63906	1.83843	244.383	247.762	
288	2.63906	1.88079	247.921	252.726	
289	2.70805	1.94314	251.696	257.988	
290	2.77259	1.99539	255.678	263.521	
291	2.94444	2.05375	259.896	269.568	
292	3.04452	2.14441	264.494	276.096	
293	3.21888	2.22621	269.45	283.262	
294	3.2581	2.32634	274.862	290.842	
295	3.46574	2.51213	281.173	299.548	
296	3.71357	2.74777	288.723	309.752	

Data Set Standard Deviation = 1.18202

Numerator = 95946.3
Denominator = 119003
W Statistic = 0.806254 = 95946.3 / 119003

5% Critical value of 0.976 exceeds 0.806254
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.806254
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 = 0.898212
0.898212 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-2.079440	0.003367	-2.74777	109.357	348.683
2	-2.079440	0.00673401	-2.51213	109.357	337.176
3	-2.079440	0.010101	-2.32634	109.357	328.103
4	-2.079440	0.013468	-2.22621	109.357	323.213
5	-2.079440	0.016835	-2.14441	109.357	319.219
6	-2.079440	0.020202	-2.05375	109.357	314.791
7	-2.079440	0.023569	-1.99539	109.357	311.942
8	-2.079440	0.026936	-1.94314	109.357	309.39
9	-2.079440	0.030303	-1.88079	109.357	306.345
10	-2.079440	0.03367	-1.83843	109.357	304.276
11	-2.079440	0.037037	-1.78661	109.357	301.746
12	-2.079440	0.040404	-1.75069	109.357	299.992
13	-2.079440	0.043771	-1.71688	109.357	298.341
14	-2.079440	0.047138	-1.67466	109.357	296.279
15	-2.079440	0.0505051	-1.64485	109.357	294.824
16	-2.079440	0.0538721	-1.61644	109.357	293.436
17	-2.079440	0.0572391	-1.58047	109.357	291.679
18	-2.079440	0.0606061	-1.55477	109.357	290.425
19	-2.079440	0.0639731	-1.53007	109.357	289.218
20	-2.079440	0.0673401	-1.49852	109.357	287.677
21	-2.079440	0.0707071	-1.47579	109.357	286.568
22	-2.079440	0.0740741	-1.44663	109.357	285.144
23	-2.079440	0.0774411	-1.42554	109.357	284.114
24	-2.079440	0.0808081	-1.40507	109.357	283.114
25	-2.079440	0.0841751	-1.37866	109.357	281.824
26	-2.079440	0.0875421	-1.35946	109.357	280.887
27	-2.079440	0.0909091	-1.34075	109.357	279.974
28	-2.079440	0.0942761	-1.31652	109.357	278.79
29	-2.079440	0.0976431	-1.29884	109.357	277.926
30	-2.079440	0.10101	-1.27588	109.357	276.805
31	-2.079440	0.104377	-1.25908	109.357	275.985
32	-2.079440	0.107744	-1.24264	109.357	275.182
33	-2.079440	0.111111	-1.22123	109.357	274.137
34	-2.079440	0.114478	-1.20553	109.357	273.37
35	-2.079440	0.117845	-1.19012	109.357	272.617
36	-2.079440	0.121212	-1.17	109.357	271.635
37	-2.079440	0.124579	-1.15522	109.357	270.913
38	-2.079440	0.127946	-1.14069	109.357	270.204
39	-2.079440	0.131313	-1.12168	109.357	269.275
40	-2.079440	0.13468	-1.10768	109.357	268.592
41	-2.079440	0.138047	-1.08935	109.357	267.697
42	-2.079440	0.141414	-1.07584	109.357	267.037
43	-2.079440	0.144781	-1.06252	109.357	266.386
44	-2.079440	0.148148	-1.04505	109.357	265.533
45	-2.079440	0.151515	-1.03215	109.357	264.904
46	-2.079440	0.154882	-1.01943	109.357	264.282
47	-2.079440	0.158249	-1.00271	109.357	263.466
48	-2.079440	0.161616	-0.990356	109.357	262.862

49	-2.079440.164983	-0.97815109.357	262.266		
50	-2.079440.16835 -0.9621	109.357	261.483		
51	-2.079440.171717	-0.950222	109.357	260.903	
52	-2.079440.175084	-0.93459109.357	260.139		
53	-2.079440.178451	-0.923014	109.357	259.574	
54	-2.079440.181818	-0.911562	109.357	259.015	
55	-2.079440.185185	-0.896473	109.357	258.278	
56	-2.079440.188552	-0.885291	109.357	257.732	
57	-2.079440.191919	-0.874218	109.357	257.191	
58	-2.079440.195286	-0.859618	109.357	256.478	
59	-2.079440.198653	-0.848786	109.357	255.949	
60	-2.079440.20202 -0.834498	109.357	255.251		
61	-2.079440.205387	-0.823893	109.357	254.733	
62	-2.079440.208754	-0.813379	109.357	254.22	
63	-1.171180.212121	-0.7995 178.774	253.542		
64	-1.049820.215488	-0.789191	188.049	253.039	
65	-1.021650.218855	-0.778966	190.202	252.54	
66	-0.891598	0.222222	-0.765456	200.142	251.88
67	-0.733969	0.225589	-0.755415	212.189	251.389
68	-0.693147	0.228956	-0.745449	215.309	250.903
69	-0.693147	0.232323	-0.732275	215.309	250.259
70	-0.693147	0.23569 -0.722479	215.309	249.781	
71	-0.693147	0.239057	-0.709522	215.309	249.148
72	-0.693147	0.242424	-0.699883	215.309	248.678
73	-0.693147	0.245791	-0.690309	215.309	248.21
74	-0.693147	0.249158	-0.677639	215.309	247.591
75	-0.693147	0.252525	-0.668209	215.309	247.131
76	-0.693147	0.255892	-0.658838	215.309	246.673
77	-0.693147	0.259259	-0.646431	215.309	246.067
78	-0.693147	0.262626	-0.637192	215.309	245.616
79	-0.693147	0.265993	-0.628006	215.309	245.168
80	-0.693147	0.26936 -0.615839	215.309	244.573	
81	-0.693147	0.272727	-0.606775	215.309	244.131
82	-0.693147	0.276094	-0.594766	215.309	243.544
83	-0.693147	0.279461	-0.585815	215.309	243.107
84	-0.693147	0.282828	-0.576911	215.309	242.672
85	-0.693147	0.286195	-0.565108	215.309	242.096
86	-0.693147	0.289562	-0.556308	215.309	241.666
87	-0.693147	0.292929	-0.547551	215.309	241.239
88	-0.693147	0.296296	-0.53594215.309	240.672	
89	-0.693147	0.299663	-0.52728215.309	240.249	
90	-0.693147	0.30303 -0.515791	215.309	239.688	
91	-0.693147	0.306397	-0.507221	215.309	239.269
92	-0.693147	0.309764	-0.498687	215.309	238.853
93	-0.693147	0.313131	-0.487364	215.309	238.3
94	-0.693147	0.316498	-0.478914	215.309	237.887
95	-0.693147	0.319865	-0.470498	215.309	237.476
96	-0.693147	0.323232	-0.459327	215.309	236.93
97	-0.693147	0.326599	-0.450985	215.309	236.523
98	-0.693147	0.329966	-0.442676	215.309	236.117
99	-0.693147	0.333333	-0.431644	215.309	235.579
100	-0.693147	0.3367 -0.423405	215.309	235.176	
101	-0.693147	0.340067	-0.412463	215.309	234.642
102	-0.693147	0.343434	-0.40429215.309	234.243	
103	-0.693147	0.346801	-0.396142	215.309	233.845
104	-0.693147	0.350168	-0.385321	215.309	233.317
105	-0.693147	0.353535	-0.377233	215.309	232.922
106	-0.693147	0.356902	-0.369171	215.309	232.528
107	-0.693147	0.360269	-0.358459	215.309	232.005
108	-0.693147	0.363636	-0.350451	215.309	231.614
109	-0.693147	0.367003	-0.33981215.309	231.094	
110	-0.693147	0.37037 -0.331854	215.309	230.706	

111	-0.693147	0.373737	-0.323919	215.309	230.318
112	-0.693147	0.377104	-0.31337	215.309	229.803
113	-0.693147	0.380471	-0.305481	215.309	229.418
114	-0.693147	0.383838	-0.297612	215.309	229.033
115	-0.693147	0.387205	-0.287147	215.309	228.522
116	-0.693147	0.390572	-0.279319	215.309	228.14
117	-0.693147	0.393939	-0.271509	215.309	227.759
118	-0.693147	0.397306	-0.26112	215.309	227.251
119	-0.693147	0.400673	-0.253347	215.309	226.872
120	-0.693147	0.40404	-0.243007	215.309	226.367
121	-0.693147	0.407407	-0.235269	215.309	225.989
122	-0.693147	0.410774	-0.227545	215.309	225.612
123	-0.693147	0.414141	-0.217267	215.309	225.11
124	-0.693147	0.417508	-0.209575	215.309	224.734
125	-0.693147	0.420875	-0.201894	215.309	224.359
126	-0.693147	0.424242	-0.191671	215.309	223.86
127	-0.693147	0.427609	-0.184017	215.309	223.486
128	-0.693147	0.430976	-0.176374	215.309	223.113
129	-0.693147	0.434343	-0.166199	215.309	222.616
130	-0.693147	0.43771	-0.158579	215.309	222.244
131	-0.693147	0.441077	-0.148434	215.309	221.749
132	-0.693147	0.444444	-0.140835	215.309	221.377
133	-0.693147	0.447811	-0.133244	215.309	221.007
134	-0.693147	0.451178	-0.123135	215.309	220.513
135	-0.693147	0.454545	-0.115562	215.309	220.143
136	-0.693147	0.457912	-0.107995	215.309	219.774
137	-0.693147	0.461279	-0.0979139	215.309	219.281
138	-0.693147	0.464646	-0.0903606	215.309	218.913
139	-0.693147	0.468013	-0.0802981	215.309	218.421
140	-0.693147	0.47138	-0.0727562	215.309	218.053
141	-0.693147	0.474747	-0.0652187	215.309	217.685
142	-0.693147	0.478114	-0.0551734	215.309	217.194
143	-0.693147	0.481481	-0.0476439	215.309	216.827
144	-0.693147	0.484848	-0.0401167	215.309	216.459
145	-0.693147	0.488215	-0.0300838	215.309	215.969
146	-0.693147	0.491582	-0.0225612	215.309	215.602
147	-0.693147	0.494949	-0.0150408	215.309	215.234
148	-0.693147	0.498316	-0.00501359	215.309	214.745
149	-0.693147	0.501684	0.00501359	215.309	214.255
150	-0.693147	0.505051	0.0150408	215.309	213.766
151	-0.693147	0.508418	0.0225612	215.309	213.398
152	-0.693147	0.511785	0.0300838	215.309	213.031
153	-0.693147	0.515152	0.0401167	215.309	212.541
154	-0.693147	0.518519	0.0476439	215.309	212.173
155	-0.693147	0.521886	0.0551734	215.309	211.806
156	-0.693147	0.525253	0.0652187	215.309	211.315
157	-0.693147	0.52862	0.0727562	215.309	210.947
158	-0.693147	0.531987	0.0802981	215.309	210.579
159	-0.693147	0.535354	0.0903606	215.309	210.087
160	-0.693147	0.538721	0.0979139	215.309	209.719
161	-0.693147	0.542088	0.107995	215.309	209.226
162	-0.693147	0.545455	0.115562	215.309	208.857
163	-0.693147	0.548822	0.123135	215.309	208.487
164	-0.693147	0.552189	0.133244	215.309	207.993
165	-0.693147	0.555556	0.140835	215.309	207.623
166	-0.693147	0.558923	0.148434	215.309	207.251
167	-0.693147	0.56229	0.158579	215.309	206.756
168	-0.693147	0.565657	0.166199	215.309	206.384
169	-0.693147	0.569024	0.176374	215.309	205.887
170	-0.693147	0.572391	0.184017	215.309	205.514
171	-0.693147	0.575758	0.191671	215.309	205.14
172	-0.693147	0.579125	0.201894	215.309	204.641

173	-0.693147	0.582492	0.209575	215.309	204.266
174	-0.693147	0.585859	0.217267	215.309	203.89
175	-0.693147	0.589226	0.227545	215.309	203.388
176	-0.693147	0.592593	0.235269	215.309	203.011
177	-0.693147	0.59596	0.243007	215.309	202.633
178	-0.693147	0.599327	0.253347	215.309	202.128
179	-0.693147	0.602694	0.26112	215.309	201.749
180	-0.693147	0.606061	0.271509	215.309	201.241
181	-0.693147	0.609428	0.279319	215.309	200.86
182	-0.693147	0.612795	0.287147	215.309	200.478
183	-0.693147	0.616162	0.297612	215.309	199.967
184	-0.693147	0.619529	0.305481	215.309	199.582
185	-0.693147	0.622896	0.31337	215.309	199.197
186	-0.693147	0.626263	0.323919	215.309	198.682
187	-0.693147	0.62963	0.331854	215.309	198.294
188	-0.693147	0.632997	0.33981	215.309	197.906
189	-0.693147	0.636364	0.350451	215.309	197.386
190	-0.693147	0.639731	0.358459	215.309	196.995
191	-0.693147	0.643098	0.369171	215.309	196.472
192	-0.693147	0.646465	0.377233	215.309	196.078
193	-0.693147	0.649832	0.385321	215.309	195.683
194	-0.693147	0.653199	0.396142	215.309	195.155
195	-0.693147	0.656566	0.40429	215.309	194.757
196	-0.693147	0.659933	0.412463	215.309	194.358
197	-0.693147	0.6633	0.423405	215.309	193.824
198	-0.693147	0.666667	0.431644	215.309	193.421
199	-0.693147	0.670034	0.442676	215.309	192.883
200	-0.693147	0.673401	0.450985	215.309	192.477
201	-0.693147	0.676768	0.459327	215.309	192.07
202	-0.693147	0.680135	0.470498	215.309	191.524
203	-0.693147	0.683502	0.478914	215.309	191.113
204	-0.693147	0.686869	0.487364	215.309	190.7
205	-0.693147	0.690236	0.498687	215.309	190.147
206	-0.693147	0.693603	0.507221	215.309	189.731
207	-0.693147	0.69697	0.515791	215.309	189.312
208	-0.693147	0.700337	0.52728	215.309	188.751
209	-0.693147	0.703704	0.53594	215.309	188.328
210	-0.693147	0.707071	0.547551	215.309	187.761
211	-0.693147	0.710438	0.556308	215.309	187.334
212	-0.693147	0.713805	0.565108	215.309	186.904
213	-0.693147	0.717172	0.576911	215.309	186.328
214	-0.693147	0.720539	0.585815	215.309	185.893
215	-0.693147	0.723906	0.594766	215.309	185.456
216	-0.693147	0.727273	0.606775	215.309	184.869
217	-0.693147	0.73064	0.615839	215.309	184.427
218	-0.693147	0.734007	0.628006	215.309	183.832
219	-0.673345	0.737374	0.637192	216.823	183.384
220	-0.653926	0.740741	0.646431	218.307	182.933
221	-0.544727	0.744108	0.658838	226.653	182.327
222	-0.400478	0.747475	0.668209	237.678	181.869
223	-0.385662	0.750842	0.677639	238.81	181.409
224	-0.356675	0.754209	0.690309	241.026	180.79
225	-0.342490	0.757576	0.699883	242.11	180.322
226	-0.328504	0.760943	0.709522	243.179	179.852
227	-0.223144	0.76431	0.722479	251.231	179.219
228	-0.198451	0.767677	0.732275	253.118	178.741
229	-0.174353	0.771044	0.745449	254.96	178.097
230	-0.116534	0.774411	0.755415	259.379	177.611
231	-0.0512933	0.777778	0.765456	264.365	177.12
232	-0.0304592	0.781145	0.778966	265.958	176.46
233	0	0.784512	0.789191	268.286	175.961
234	0	0.787879	0.7995	268.286	175.458

235	0	0.791246	0.813379	268.286	174.78	
236	0	0.794613	0.823893	268.286	174.267	
237	0	0.79798	0.834498	268.286	173.749	
238	0	0.801347	0.848786	268.286	173.051	
239	0	0.804714	0.859618	268.286	172.522	
240	0	0.808081	0.874218	268.286	171.809	
241	0	0.811448	0.885291	268.286	171.268	
242	0	0.814815	0.896473	268.286	170.722	
243	0	0.818182	0.911562	268.286	169.985	
244	0	0.821549	0.923014	268.286	169.426	
245	0	0.824916	0.93459	268.286	168.861	
246	0	0.828283	0.950222	268.286	168.097	
247	0	0.83165	0.9621	268.286	167.517	
248	0	0.835017	0.97815	268.286	166.734	
249	0	0.838384	0.990356	268.286	166.138	
250	0	0.841751	1.00271	268.286	165.534	
251	0.0953102	0.845118	1.01943	275.57	164.718	
252	0.0953102	0.848485	1.03215	275.57	164.096	
253	0.0953102	0.851852	1.04505	275.57	163.467	
254	0.0953102	0.855219	1.06252	275.57	162.614	
255	0.182322	0.858586	1.07584	282.22	161.963	
256	0.182322	0.861953	1.08935	282.22	161.303	
257	0.262364	0.86532	1.10768	288.338	160.408	
258	0.336472	0.868687	1.12168	294.002	159.725	
259	0.530628	0.872054	1.14069	308.841	158.796	
260	0.530628	0.875421	1.15522	308.841	158.087	
261	0.693147	0.878788	1.17	321.262	157.365	
262	0.693147	0.882155	1.19012	321.262	156.383	
263	0.693147	0.885522	1.20553	321.262	155.63	
264	0.693147	0.888889	1.22123	321.262	154.863	
265	0.693147	0.892256	1.24264	321.262	153.818	
266	0.693147	0.895623	1.25908	321.262	153.015	
267	0.693147	0.89899	1.27588	321.262	152.195	
268	0.875469	0.902357	1.29884	335.197	151.074	
269	1.09861	0.905724	1.31652	352.251	150.21	
270	1.09861	0.909091	1.34075	352.251	149.026	
271	1.09861	0.912458	1.35946	352.251	148.113	
272	1.09861	0.915825	1.37866	352.251	147.176	
273	1.30833	0.919192	1.40507	368.28	145.886	
274	1.38629	0.922559	1.42554	374.238	144.886	
275	1.75786	0.925926	1.44663	402.636	143.856	
276	1.88707	0.929293	1.47579	412.512	142.432	
277	1.94591	0.93266	1.49852	417.009	141.323	
278	1.94591	0.936027	1.53007	417.009	139.782	
279	1.94591	0.939394	1.55477	417.009	138.575	
280	1.98787	0.942761	1.58047	420.216	137.321	
281	2.20827	0.946128	1.61644	437.061	135.564	
282	2.23001	0.949495	1.64485	438.723	134.176	
283	2.30259	0.952862	1.67466	444.269	132.721	
284	2.56495	0.956229	1.71688	464.321	130.659	
285	2.56495	0.959596	1.75069	464.321	129.008	
286	2.56495	0.962963	1.78661	464.321	127.254	
287	2.63906	0.96633	1.83843	469.985	124.724	
288	2.63906	0.969697	1.88079	469.985	122.655	
289	2.70805	0.973064	1.94314	475.258	119.61	
290	2.77259	0.976431	1.99539	480.191	117.058	
291	2.94444	0.979798	2.05375	493.325	114.209	
292	3.04452	0.983165	2.14441	500.974	109.781	
293	3.21888	0.986532	2.22621	514.3	105.787	
294	3.2581	0.989899	2.32634	517.297	100.897	
295	3.46574	0.993266	2.51213	533.167	91.8241	
296	3.71357	0.996633	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-4	1/16/1998	ND<-0.693147	113.5
	3/16/1999	ND<-0.693147	113.5
	9/23/1999	ND<-0.693147	113.5
	3/14/2000	ND<-0.693147	113.5
	9/23/2003	ND<-0.693147	113.5
	3/10/2004	ND<-0.693147	113.5
	10/12/2004	ND<-0.693147	113.5
	4/1/2005	0.693147	261
	10/26/2005	ND<0 J	113.5
	6/19/2006	0.693147	262
	11/18/2006	0.693147	263
	6/2/2007	1.09861	269
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	1.09861	270
	11/20/2008	0.693147	264
	6/11/2009	-0.198451 J	241
	11/16/2009	0.875469	268
	11/16/2009	2.77259 B	290
	6/30/2010	0.693147	265
	11/17/2010	0.530628	259
	7/6/2011	-1.17118 J	227
	11/22/2011	0.182322	255
	5/16/2012	0.262364	257
	11/16/2012	0	246

Rank Sum = 4918.5
Rank Mean = 204.938

Background Rank Sum = 4918.5
Background Rank Mean = 204.938

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	3/14/2000	ND<-0.693147	113.5
	9/23/2003	ND<-0.693147	113.5
	3/10/2004	ND<-0.693147	113.5
	10/12/2004	ND<-0.693147	113.5
	4/1/2005	ND<-0.693147	113.5
	10/26/2005	ND<0 J	113.5
	6/19/2006	0.693147	266
	11/18/2006	1.94591	277
	6/2/2007	1.09861	271
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	2.30259	283
	11/20/2008	1.09861	272
	6/11/2009	1.88707	276
	11/16/2009	2.56495	284
	11/16/2009	3.04452	292
	6/30/2010	1.75786	275

	11/17/2010	1.98787	280
	7/6/2011	1.30833	273
	11/22/2011	2.63906	287
	5/16/2012	2.63906	288
	11/16/2012	2.56495	285

Rank Sum = 4703.5
Rank Mean = 223.976

LMW-11	3/14/2000	ND<-0.693147	113.5
	9/23/2003	ND<-0.693147	113.5
	3/10/2004	ND<-0.693147	113.5
	10/12/2004	ND<-0.693147	113.5
	4/1/2005	ND<-0.693147	113.5
	10/26/2005	ND<-0.693147	113.5
	6/19/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5

Rank Sum = 1248.5
Rank Mean = 113.5

LMW-12	3/14/2000	ND<-0.693147	113.5
	9/23/2003	ND<-0.693147	113.5
	3/10/2004	ND<-0.693147	113.5
	10/12/2004	ND<-0.693147	113.5
	4/1/2005	ND<-0.693147	113.5
	10/26/2005	ND<-0.693147	113.5
	6/19/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5

Rank Sum = 1248.5
Rank Mean = 113.5

LMW-13	3/14/2000	ND<-0.693147	113.5
	9/23/2003	ND<-0.693147	113.5
	3/10/2004	ND<-0.693147	113.5
	10/12/2004	ND<-0.693147	113.5
	4/1/2005	ND<-0.693147	113.5
	10/26/2005	ND<-0.693147	113.5
	6/19/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5

Rank Sum = 1248.5
Rank Mean = 113.5

LMW-14R	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5
	6/11/2009	ND<-2.07944 U	113.5
	6/30/2010	ND<-2.07944 U	113.5
	11/17/2010	ND<-2.07944 U	113.5
	7/6/2011	ND<-2.07944 U	113.5
	11/22/2011	ND<-2.07944 U	113.5
	5/16/2012	ND<-2.07944 U	113.5
	11/16/2012	ND<-2.07944 U	113.5

Rank Sum = 1248.5

Rank Mean = 113.5

LMW-15R	11/18/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<-0.693147	113.5
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	ND<-0.693147	113.5
	5/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5
	6/11/2009	ND<-2.07944 U	113.5
	6/30/2010	ND<-2.07944 U	113.5
	11/17/2010	ND<-2.07944 U	113.5
	7/6/2011	ND<-2.07944 U	113.5
	11/22/2011	ND<-2.07944 U	113.5
	5/16/2012	ND<-2.07944 U	113.5
	11/16/2012	ND<-2.07944 U	113.5

Rank Sum = 1702.5
Rank Mean = 113.5

LMW-16	11/18/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5
	6/11/2009	ND<-2.07944 U	113.5
	11/16/2009	ND<-2.07944 U	113.5
	11/16/2009	2.23001 J B	282
	6/30/2010	ND<-2.07944 U	113.5
	11/17/2010	ND<-2.07944 U	113.5
	7/6/2011	ND<-2.07944 U	113.5
	11/22/2011	ND<-2.07944 U	113.5
	5/16/2012	ND<-2.07944 U	113.5
	11/16/2012	ND<-2.07944 U	113.5

Rank Sum = 1757.5
Rank Mean = 125.536

LMW-3	11/19/1996	ND<-0.693147	113.5
	3/24/1997	ND<-0.693147	113.5
	1/16/1998	ND<-0.693147	113.5
	3/16/1999	ND<-0.693147	113.5
	9/23/1999	ND<-0.693147	113.5
	3/14/2000	ND<-0.693147	113.5
	9/23/2003	ND<-0.693147	113.5
	3/10/2004	ND<-0.693147	113.5
	10/12/2004	ND<-0.693147	113.5
	4/1/2005	ND<0 J	113.5
	10/26/2005	ND<0 J	113.5
	6/19/2006	ND<0 J	113.5
	11/18/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<0 J	113.5
	5/20/2008	ND<0 J	113.5
	11/20/2008	ND<0 J	113.5
	6/11/2009	-0.174353 J	242
	11/16/2009	3.46574 B	295
	11/16/2009	-0.385662 J	236
	6/30/2010	-0.544727 J	234
	11/17/2010	-0.653926 J	233
	7/6/2011	-0.673345 J	232
	11/22/2011	-0.116534 J	243
	5/16/2012	-0.34249 J	238

	11/16/2012	0.0953102	251

Rank Sum = 4133.5
Rank Mean = 158.981

LMW-3S	11/18/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	0	247
	5/20/2008	ND<0 J	113.5
	11/20/2008	ND<0 J	113.5
	6/11/2009	0.0953102	252
	11/16/2009	2.56495	286
	11/16/2009	-0.0304592 J	245
	6/30/2010	0.336472	258
	11/17/2010	0.0953102	253
	7/6/2011	-1.02165 J	229
	11/22/2011	-0.223144 J	240
	5/16/2012	0.182322	256
	11/16/2012	0.530628	260

Rank Sum = 2980
Rank Mean = 212.857

LMW-6	1/16/1998	ND<-0.693147	113.5
	3/16/1999	ND<-0.693147	113.5
	9/23/1999	ND<-0.693147	113.5
	3/14/2000	ND<-0.693147	113.5
	9/23/2003	ND<-0.693147	113.5
	3/10/2004	ND<-0.693147	113.5
	10/12/2004	ND<-0.693147	113.5
	4/1/2005	ND<0 J	113.5
	10/26/2005	0	248
	6/19/2006	0	249
	11/18/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<0 J	113.5
	5/20/2008	0	250
	11/20/2008	ND<0 J	113.5
	6/11/2009	-0.0512933 J	244
	11/16/2009	3.71357	296
	11/16/2009	0.0953102	254
	6/30/2010	-0.328504 J	239
	11/17/2010	-0.733969 J	231
	7/6/2011	-0.356675 J	237
	11/22/2011	-1.04982 J	228
	5/16/2012	-0.400478 J	235
	11/16/2012	-0.891598 J	230

Rank Sum = 4303
Rank Mean = 179.292

LMW-7	1/16/1998	ND<-0.693147	113.5
	3/16/1999	ND<-0.693147	113.5
	9/23/1999	ND<-0.693147	113.5
	3/14/2000	ND<-0.693147	113.5
	9/23/2003	ND<-0.693147	113.5
	3/10/2004	ND<-0.693147	113.5
	10/12/2004	ND<-0.693147	113.5
	4/1/2005	ND<-0.693147	113.5
	10/26/2005	ND<-0.693147	113.5
	6/19/2006	ND<-0.693147	113.5
	11/18/2006	ND<-0.693147	113.5
	6/2/2007	0.693147	267
	11/15/2007	1.38629	274
	5/20/2008	ND<-0.693147	113.5

	11/20/2008	ND<-0.693147	113.5
	6/11/2009	ND<-2.07944 U	113.5
	11/17/2010	ND<-2.07944 U	113.5
	7/6/2011	ND<-2.07944 U	113.5
	11/22/2011	ND<-2.07944 U	113.5
	5/16/2012	ND<-2.07944 U	113.5
	11/16/2012	ND<-2.07944 U	113.5

Rank Sum = 2697.5
Rank Mean = 128.452

LMW-8	1/16/1998	ND<-0.693147	113.5
	3/16/1999	ND<-0.693147	113.5
	9/23/1999	ND<-0.693147	113.5
	3/14/2000	ND<-0.693147	113.5
	9/23/2003	ND<-0.693147	113.5
	3/10/2004	ND<-0.693147	113.5
	10/12/2004	ND<-0.693147	113.5
	4/1/2005	ND<-0.693147	113.5
	10/26/2005	ND<-0.693147	113.5
	6/19/2006	ND<-0.693147	113.5
	11/18/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5
	6/11/2009	ND<-2.07944 U	113.5
	11/16/2009	2.94444	291
	11/16/2009	ND<-2.07944 U	113.5
	6/30/2010	ND<-2.07944 U	113.5
	11/17/2010	ND<-2.07944 U	113.5
	7/6/2011	ND<-2.07944 U	113.5
	11/22/2011	ND<-2.07944 U	113.5
	5/16/2012	ND<-2.07944 U	113.5
	11/16/2012	ND<-2.07944 U	113.5

Rank Sum = 2901.5
Rank Mean = 120.896

LMW-9	1/16/1998	ND<-0.693147	113.5
	3/16/1999	ND<-0.693147	113.5
	9/23/1999	ND<-0.693147	113.5
	3/14/2000	ND<-0.693147	113.5
	9/23/2003	ND<-0.693147	113.5
	3/10/2004	ND<-0.693147	113.5
	10/12/2004	ND<-0.693147	113.5
	4/1/2005	ND<-0.693147	113.5
	10/26/2005	ND<-0.693147	113.5
	6/19/2006	ND<-0.693147	113.5
	11/18/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5
	6/11/2009	ND<-2.07944 U	113.5
	11/16/2009	ND<-2.07944 U	113.5
	11/16/2009	1.94591 J	278
	6/30/2010	ND<-2.07944 U	113.5
	11/17/2010	ND<-2.07944 U	113.5
	7/6/2011	ND<-2.07944 U	113.5
	11/22/2011	ND<-2.07944 U	113.5
	5/16/2012	ND<-2.07944 U	113.5
	11/16/2012	ND<-2.07944 U	113.5

Rank Sum = 2888.5

Rank Mean = 120.354

LMW-9D	11/18/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5
	6/11/2009	ND<-2.07944 U	113.5
	11/16/2009	ND<-2.07944 U	113.5
	11/16/2009	3.21888	293
	6/30/2010	ND<-2.07944 U	113.5
	11/17/2010	ND<-2.07944 U	113.5
	7/6/2011	ND<-2.07944 U	113.5
	11/22/2011	ND<-2.07944 U	113.5
	5/16/2012	ND<-2.07944 U	113.5
	11/16/2012	ND<-2.07944 U	113.5

Rank Sum = 1768.5
Rank Mean = 126.321

LMW-9S	11/18/2006	ND<-0.693147	113.5
	6/2/2007	ND<-0.693147	113.5
	11/15/2007	ND<-0.693147	113.5
	5/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5
	6/11/2009	ND<-2.07944 U	113.5
	11/16/2009	ND<-2.07944 U	113.5
	11/16/2009	3.2581 B	294
	11/16/2009	ND<-2.07944 U	113.5
	11/16/2009	ND<-2.07944 U	113.5
	11/16/2009	2.20827 J B	281
	11/16/2009	2.70805 B	289
	6/30/2010	ND<-2.07944 U	113.5
	11/17/2010	ND<-2.07944 U	113.5
	7/6/2011	ND<-2.07944 U	113.5
	11/22/2011	ND<-2.07944 U	113.5
	5/16/2012	ND<-2.07944 U	113.5
	11/16/2012	ND<-2.07944 U	113.5

Rank Sum = 2566.5
Rank Mean = 142.583

MW-5	1/16/1998	ND<-0.693147	113.5
	3/16/1999	ND<-0.693147	113.5
	9/23/1999	ND<-0.693147	113.5
	3/14/2000	ND<-0.693147	113.5
	9/23/2003	ND<-0.693147	113.5
	3/10/2004	ND<-0.693147	113.5
	10/12/2004	ND<-0.693147	113.5
	4/1/2005	ND<-0.693147	113.5
	10/26/2005	ND<-0.693147	113.5
	6/19/2006	ND<-0.693147	113.5
	11/15/2007	1.94591	279
	5/20/2008	ND<-0.693147	113.5
	11/20/2008	ND<-0.693147	113.5

Rank Sum = 1641
Rank Mean = 126.231

Calculation Results:

Kruskal-Wallis H Statistic = 57.1981
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 103.076
95% Confidence comparison value is 26.2962 at 16 degrees of freedom

57.1981 > 26.2962 indicating a significant group difference at 5% significance level
103.076 > 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 204.938

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	223.976	19.0387	59.4974
LMW-11	113.5	-91.437	572.5002
LMW-12	113.5	-91.437	572.5002
LMW-13	113.5	-91.437	572.5002
LMW-14R	113.5	-91.437	572.5002
LMW-15R	113.5	-91.437	565.5372
LMW-16	125.536	-79.401	866.9621
LMW-3	158.981	-45.956	756.3637
LMW-3S	212.857	7.91964	66.9621
LMW-6	179.292	-25.645	857.48
LMW-7	128.452	-76.485	159.4974
LMW-8	120.896	-84.041	757.48
LMW-9	120.354	-84.583	357.48
LMW-9D	126.321	-78.616	166.9621
LMW-9S	142.583	-62.354	262.0854
MW-5	126.231	-78.706	768.5694

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 204.938

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	223.976	19.0387	70.2755
LMW-11	113.5	-91.437	585.6338
LMW-12	113.5	-91.437	585.6338
LMW-13	113.5	-91.437	585.6338
LMW-14R	113.5	-91.437	585.6338
LMW-15R	113.5	-91.437	577.4095
LMW-16	125.536	-79.401	879.0925
LMW-3	158.981	-45.956	766.5742
LMW-3S	212.857	7.91964	79.0925
LMW-6	179.292	-25.645	867.8926
LMW-7	128.452	-76.485	170.2755
LMW-8	120.896	-84.041	767.8926
LMW-9	120.354	-84.583	367.8926
LMW-9D	126.321	-78.616	179.0925
LMW-9S	142.583	-62.354	273.3324
MW-5	126.231	-78.706	780.991

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Trichlorofluoromethane

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 76.3514%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 24
Maximum Background Value = 2.77259
Confidence Level = 75%
False Positive Rate = 25%

Location	Date	Count	Mean	Significant
LMW-10	11/16/2012	1	2.56495	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
LMW-14R	11/16/2012	1	-2.07944	FALSE
LMW-15R	11/16/2012	1	-2.07944	FALSE
LMW-16	11/16/2012	1	-2.07944	FALSE
LMW-3	11/16/2012	1	0.0953102	FALSE
LMW-3S	11/16/2012	1	0.530628	FALSE
LMW-6	11/16/2012	1	-0.891598	FALSE
LMW-7	11/16/2012	1	-2.07944	FALSE
LMW-8	11/16/2012	1	-2.07944	FALSE
LMW-9	11/16/2012	1	-2.07944	FALSE
LMW-9D	11/16/2012	1	-2.07944	FALSE
LMW-9S	11/16/2012	1	-2.07944	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: 284
Total Non-Detect: 239
Percent Non-Detects: 84.1549%
Total Background Measurements: 23
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	23	22 (95.6522%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	20	18 (90%)	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

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	
LMW-14R	11	10 (90.9091%)	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
LMW-15R	15	14 (93.3333%)	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
LMW-16	13	10 (76.9231%)	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	
LMW-3	25	24 (96%)	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
LMW-3S	13	9 (69.2308%)	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
LMW-6	23	22 (95.6522%)	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
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-8	23	22 (95.6522%)	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
LMW-9	23	16 (69.5652%)	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
LMW-9D	13	1 (7.69231%)	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	
LMW-9S	15	13 (86.6667%)	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
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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.7	-2.74777	7.55021	-1.92344
2	0.7	-2.45727	13.5884	-3.64353
3	0.7	-2.32634	19.0003	-5.27197
4	0.7	-2.19728	23.8283	-6.81007
5	0.7	-2.12007	28.323	-8.29411
6	0.7	-2.03352	32.4582	-9.71758
7	0.7	-1.97737	36.3682	-11.1017
8	0.7	-1.91103	40.0203	-12.4395
9	0.7	-1.86629	43.5033	-13.7459
10	0.7	-1.81191	46.7863	-15.0142
11	0.7	-1.77438	49.9348	-16.2563
12	0.7	-1.72793	52.9205	-17.4658
13	0.7	-1.6954	55.7949	-18.6526
14	0.7	-1.65463	58.5327	-19.8108
15	0.7	-1.62576	61.1758	-20.9489
16	0.7	-1.58927	63.7015	-22.0614
17	0.7	-1.56322	66.1452	-23.1556
18	0.7	-1.53007	68.4863	-24.2267
19	0.7	-1.50626	70.7551	-25.281
20	0.7	-1.47579	72.9331	-26.3141
21	0.7	-1.4538	75.0466	-27.3318
22	0.7	-1.42554	77.0788	-28.3296
23	0.7	-1.40507	79.053	-29.3132
24	0.7	-1.37866	80.9537	-30.2782
25	0.7	-1.35946	82.8019	-31.2299
26	0.7	-1.33462	84.5831	-32.1641
27	0.7	-1.31652	86.3163	-33.0857
28	0.7	-1.29303	87.9883	-33.9908
29	0.7	-1.27588	89.6161	-34.8839
30	0.7	-1.25357	91.1875	-35.7614
31	0.7	-1.23724	92.7183	-36.6275
32	0.7	-1.21596	94.1969	-37.4786
33	0.7	-1.20036	95.6377	-38.3189
34	0.7	-1.18	97.0301	-39.1449
35	0.7	-1.16505	98.3875	-39.9604
36	0.7	-1.1455	99.6996	-40.7623
37	0.7	-1.13113	100.979	-41.5541
38	0.7	-1.11232	102.216	-42.3327
39	0.7	-1.09847	103.423	-43.1016
40	0.7	-1.08032	104.59	-43.8579
41	0.7	-1.06694	105.728	-44.6047
42	0.7	-1.04939	106.83	-45.3393
43	0.7	-1.03643	107.904	-46.0648
44	0.7	-1.01943	108.943	-46.7784
45	0.7	-1.00687	109.957	-47.4832
46	0.7	-0.990356	110.938	-48.1764
47	0.7	-0.97815	111.894	-48.8611
48	0.7	-0.9621	112.82	-49.5346
49	0.7	-0.950222	113.723	-50.1998
50	0.7	-0.93459	114.596	-50.854
51	0.7	-0.923014	115.448	-51.5001

52	0.7	-0.907769	116.272	-52.1355
53	0.7	-0.896473	117.076	-52.7631
54	0.7	-0.881587	117.853	-53.3802
55	0.7	-0.87055	118.611	-53.9896
56	0.7	-0.855996	119.344	-54.5888
57	0.7	-0.841621	120.052	-55.1779
58	0.7	-0.830953	120.743	-55.7596
59	0.7	-0.816874	121.41	-56.3314
60	0.7	-0.806422	122.06	-56.8959
61	0.7	-0.792618	122.689	-57.4507
62	0.7	-0.782366	123.301	-57.9983
63	0.7	-0.768821	123.892	-58.5365
64	0.7	-0.758753	124.467	-59.0677
65	0.7	-0.745449	125.023	-59.5895
66	0.7	-0.735557	125.564	-60.1044
67	0.7	-0.722479	126.086	-60.6101
68	0.7	-0.712751	126.594	-61.109
69	0.7	-0.699883	127.084	-61.5989
70	0.7	-0.690309	127.561	-62.0822
71	0.7	-0.677639	128.02	-62.5565
72	0.7	-0.668209	128.466	-63.0242
73	0.7	-0.655726	128.896	-63.4833
74	0.7	-0.646431	129.314	-63.9358
75	0.7	-0.634124	129.716	-64.3796
76	0.7	-0.624956	130.107	-64.8171
77	0.7	-0.612813	130.482	-65.2461
78	0.7	-0.603765	130.847	-65.6687
79	0.7	-0.591776	131.197	-66.083
80	0.7	-0.582841	131.537	-66.4909
81	0.7	-0.570999	131.863	-66.8906
82	0.7	-0.56217	132.179	-67.2842
83	1.5	-0.550465	132.482	-68.1099
84	1.8	-0.541736	132.775	-69.085
85	1.8	-0.530162	133.056	-70.0393
86	2	-0.521527	133.328	-71.0823
87	2	-0.510074	133.589	-72.1025
88	2	-0.501527	133.84	-73.1055
89	2.1	-0.490189	134.08	-74.1349
90	2.3	-0.481728	134.312	-75.2429
91	2.3	-0.470498	134.534	-76.325
92	2.4	-0.462114	134.747	-77.4341
93	2.5	-0.450985	134.951	-78.5616
94	2.6	-0.442676	135.147	-79.7125
95	2.6	-0.431644	135.333	-80.8348
96	2.7	-0.423405	135.512	-81.978
97	2.9	-0.412463	135.682	-83.1742
98	3	-0.40429	135.846	-84.387
99	3	-0.393433	136.001	-85.5673
100	3	-0.385321	136.149	-86.7233
101	3.2	-0.374544	136.289	-87.9218
102	3.9	-0.36649	136.424	-89.3511
103	4.6	-0.355788	136.55	-90.9878
104	5	-0.347787	136.671	-92.7267
105	5	-0.337155	136.785	-94.4125
106	5	-0.329206	136.893	-96.0585
107	5	-0.318639	136.995	-97.6517
108	5	-0.310738	137.091	-99.2054
109	6.2	-0.300232	137.182	-101.067
110	7	-0.292375	137.267	-103.113
111	7	-0.281926	137.346	-105.087
112	7	-0.27411	137.422	-107.006
113	7	-0.263715	137.491	-108.852

114	7.5	-0.253347	137.555	-110.752
115	8	-0.24559	137.616	-112.717
116	8	-0.235269	137.671	-114.599
117	8	-0.227545	137.723	-116.419
118	9	-0.217267	137.77	-118.374
119	10	-0.209575	137.814	-120.47
120	10	-0.199336	137.854	-122.464
121	10	-0.191671	137.89	-124.38
122	10	-0.181468	137.923	-126.195
123	10	-0.173829	137.954	-127.933
124	10	-0.163659	137.98	-129.57
125	10	-0.156042	138.005	-131.13
126	10	-0.1459	138.026	-132.589
127	10	-0.138305	138.045	-133.972
128	10	-0.128189	138.062	-135.254
129	10	-0.12061	138.076	-136.46
130	10	-0.110516	138.088	-137.565
131	10	-0.102953	138.099	-138.595
132	10	-0.0928787	138.108	-139.524
133	10	-0.0853288	138.115	-140.377
134	10	-0.0752698	138.12	-141.13
135	10	-0.0677301	138.125	-141.807
136	10	-0.0576847	138.128	-142.384
137	10	-0.0501541	138.131	-142.885
138	10	-0.0401167	138.132	-143.287
139	10	-0.0325917	138.134	-143.613
140	10	-0.0225612	138.134	-143.838
141	10	-0.0150408	138.134	-143.989
142	10	-0.00501359	138.134	-144.039
143	10	0.00501359	138.134	-143.989
144	10	0.0150408	138.135	-143.838
145	10	0.0225612	138.135	-143.613
146	10	0.0325917	138.136	-143.287
147	10	0.0401167	138.138	-142.885
148	10	0.0501541	138.14	-142.384
149	10	0.0576847	138.144	-141.807
150	10	0.0677301	138.148	-141.13
151	10	0.0752698	138.154	-140.377
152	10	0.0853288	138.161	-139.524
153	10	0.0928787	138.17	-138.595
154	10	0.102953	138.18	-137.565
155	10	0.110516	138.193	-136.46
156	10	0.12061	138.207	-135.254
157	10	0.128189	138.224	-133.972
158	10	0.138305	138.243	-132.589
159	10	0.1459	138.264	-131.13
160	10	0.156042	138.288	-129.57
161	10	0.163659	138.315	-127.933
162	10	0.173829	138.345	-126.195
163	10	0.181468	138.378	-124.38
164	10	0.191671	138.415	-122.464
165	10	0.199336	138.455	-120.47
166	10	0.209575	138.499	-118.374
167	10	0.217267	138.546	-116.202
168	10	0.227545	138.598	-113.926
169	10	0.235269	138.653	-111.574
170	10	0.24559	138.713	-109.118
171	10	0.253347	138.777	-106.584
172	10	0.263715	138.847	-103.947
173	10	0.27411	138.922	-101.206
174	10	0.281926	139.002	-98.3868
175	10	0.292375	139.087	-95.463

176	10	0.300232	139.177	-92.4607
177	10	0.310738	139.274	-89.3533
178	10	0.318639	139.375	-86.1669
179	10	0.329206	139.484	-82.8748
180	10	0.337155	139.597	-79.5033
181	10	0.347787	139.718	-76.0254
182	10	0.355788	139.845	-72.4675
183	10	0.36649	139.979	-68.8026
184	10	0.374544	140.12	-65.0572
185	10	0.385321	140.268	-61.204
186	10	0.393433	140.423	-57.2697
187	10	0.40429	140.586	-53.2268
188	10	0.412463	140.756	-49.1022
189	10	0.423405	140.936	-44.8681
190	10	0.431644	141.122	-40.5517
191	10	0.442676	141.318	-36.1249
192	10	0.450985	141.521	-31.615
193	10	0.462114	141.735	-26.9939
194	10	0.470498	141.956	-22.2889
195	10	0.481728	142.188	-17.4717
196	10	0.490189	142.429	-12.5698
197	10	0.501527	142.68	-7.55449
198	10	0.510074	142.94	-2.45375
199	10	0.521527	143.212	2.76152
200	10	0.530162	143.493	8.06314
201	10	0.541736	143.787	13.4805
202	10	0.550465	144.09	18.9851
203	10	0.56217	144.406	24.6068
204	10	0.570999	144.732	30.3168
205	10	0.582841	145.072	36.1452
206	10	0.591776	145.422	42.063
207	10	0.603765	145.786	48.1007
208	10	0.612813	146.162	54.2288
209	10	0.624956	146.552	60.4783
210	10	0.634124	146.955	66.8196
211	10	0.646431	147.372	73.2839
212	10	0.655726	147.802	79.8412
213	10	0.668209	148.249	86.5232
214	10	0.677639	148.708	93.2996
215	10	0.690309	149.185	100.203
216	10	0.699883	149.674	107.202
217	10	0.712751	150.182	114.329
218	10	0.722479	150.704	121.554
219	10	0.735557	151.245	128.909
220	10	0.745449	151.801	136.364
221	10	0.758753	152.377	143.951
222	10	0.768821	152.968	151.64
223	10	0.782366	153.58	159.463
224	10	0.792618	154.208	167.389
225	10	0.806422	154.859	175.454
226	10	0.816874	155.526	183.622
227	10	0.830953	156.216	191.932
228	10	0.841621	156.925	200.348
229	10	0.855996	157.657	208.908
230	10	0.87055	158.415	217.614
231	10	0.881587	159.193	226.43
232	10	0.896473	159.996	235.394
233	10	0.907769	160.82	244.472
234	10	0.923014	161.672	253.702
235	10	0.93459	162.546	263.048
236	10	0.950222	163.449	272.55
237	10	0.9621	164.374	282.171

238	10	0.97815	165.331	291.953	
239	10	0.990356		166.312	301.856
240	10	1.00687	167.326	311.925	
241	10	1.01943	168.365	322.119	
242	10	1.03643	169.439	332.484	
243	10	1.04939	170.54	342.977	
244	10	1.06694	171.679	353.647	
245	10	1.08032	172.846	364.45	
246	10	1.09847	174.052	375.435	
247	10	1.11232	175.29	386.558	
248	10	1.13113	176.569	397.869	
249	10	1.1455	177.881	409.324	
250	10	1.16505	179.239	420.975	
251	10	1.18	180.631	432.775	
252	10	1.20036	182.072	444.778	
253	10	1.21596	183.55	456.938	
254	10	1.23724	185.081	469.31	
255	10	1.25357	186.653	481.846	
256	10	1.27588	188.28	494.605	
257	10	1.29303	189.952	507.535	
258	10	1.31652	191.686	520.7	
259	10	1.33462	193.467	534.046	
260	10	1.35946	195.315	547.641	
261	10	1.37866	197.216	561.428	
262	10	1.40507	199.19	575.478	
263	10	1.42554	201.222	589.734	
264	10	1.4538	203.336	604.272	
265	10	1.47579	205.514	619.03	
266	10	1.50626	207.782	634.092	
267	10	1.53007	210.123	649.393	
268	10	1.56322	212.567	665.025	
269	10	1.58927	215.093	680.918	
270	10	1.62576	217.736	697.176	
271	10	1.65463	220.474	713.722	
272	10	1.6954	223.348	730.676	
273	10	1.72793	226.334	747.955	
274	10	1.77438	229.482	765.699	
275	10	1.81191	232.765	783.818	
276	10	1.86629	236.248	802.481	
277	11	1.91103	239.9	823.502	
278	12	1.97737	243.81	847.231	
279	14	2.03352	247.946	875.7	
280	15	2.12007	252.44	907.501	
281	18	2.19728	257.268	947.052	
282	30	2.32634	262.68	1016.84	
283	41	2.45727	268.718	1117.59	
284	49	2.74777	276.269	1252.23	

Data Set Standard Deviation = 5.59185
Numerator = 1.56808e+006
Denominator = 2.44472e+006
W Statistic = 0.641416 = 1.56808e+006 / 2.44472e+006

5% Critical value of 0.976 exceeds 0.641416
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.641416
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 = 0.803384
0.803384 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	0.7	0.00350877	-2.747	7 46.49	348.683	
2	0.7	0.00701754	-2.457	2 46.49	334.497	
3	0.7	0.0105263	-2.326	3 46.49	328.103	
4	0.7	0.0140351	-2.197	2 46.49	321.801	
5	0.7	0.0175439	-2.120	0 46.49	318.03	
6	0.7	0.0210526	-2.033	5 46.49	313.804	
7	0.7	0.0245614	-1.977	3 46.49	311.062	
8	0.7	0.0280702	-1.911	0 46.49	307.822	
9	0.7	0.0315789	-1.866	2 46.49	305.637	
10	0.7	0.0350877	-1.811	9 46.49	302.982	
11	0.7	0.0385965	-1.774	3 46.49	301.149	
12	0.7	0.0421053	-1.727	9 46.49	298.881	
13	0.7	0.045614	-1.6954	46.49	297.292	
14	0.7	0.0491228	-1.654	6 46.49	295.301	
15	0.7	0.0526316	-1.625	7 46.49	293.891	
16	0.7	0.0561404	-1.589	2 46.49	292.109	
17	0.7	0.0596491	-1.563	2 46.49	290.837	
18	0.7	0.0631579	-1.530	0 46.49	289.218	
19	0.7	0.0666667	-1.506	2 46.49	288.056	
20	0.7	0.0701754	-1.475	9 46.49	286.568	
21	0.7	0.0736842	-1.4538	46.49	285.494	
22	0.7	0.077193	-1.425	5 46.49	284.114	
23	0.7	0.0807018	-1.405	0 46.49	283.114	
24	0.7	0.0842105	-1.378	6 46.49	281.824	
25	0.7	0.0877193	-1.359	4 46.49	280.887	
26	0.7	0.0912281	-1.334	6 46.49	279.674	
27	0.7	0.0947368	-1.316	5 46.49	278.79	
28	0.7	0.0982456	-1.293	0 46.49	277.643	
29	0.7	0.101754	-1.275	8 46.49	276.805	
30	0.7	0.105263	-1.253	5 46.49	275.716	
31	0.7	0.108772	-1.237	2 46.49	274.918	
32	0.7	0.112281	-1.215	9 46.49	273.879	
33	0.7	0.115789	-1.200	3 46.49	273.118	
34	0.7	0.119298	-1.18	46.49	272.123	
35	0.7	0.122807	-1.165	0 46.49	271.393	
36	0.7	0.126316	-1.1455	46.49	270.439	
37	0.7	0.129825	-1.131	1 46.49	269.737	
38	0.7	0.133333	-1.112	3 46.49	268.818	
39	0.7	0.136842	-1.098	4 46.49	268.142	
40	0.7	0.140351	-1.080	3 46.49	267.256	
41	0.7	0.14386	-1.0669	46.49	266.602	
42	0.7	0.147368	-1.049	3 46.49	265.745	
43	0.7	0.150877	-1.036	4 46.49	265.112	
44	0.7	0.154386	-1.019	4 46.49	264.282	
45	0.7	0.157895	-1.006	8 46.49	263.669	
46	0.7	0.161404	-0.990356		46.49	262.862
47	0.7	0.164912	-0.978	1 46.49	262.266	
48	0.7	0.168421	-0.9621	46.49	261.483	

49	0.7	0.17193	-0.950222	46.49	260.903
50	0.7	0.175439	-0.934594	6.49	260.139
51	0.7	0.178947	-0.923014	46.49	259.574
52	0.7	0.182456	-0.907769	46.49	258.829
53	0.7	0.185965	-0.896473	46.49	258.278
54	0.7	0.189474	-0.881587	46.49	257.551
55	0.7	0.192982	-0.870554	6.49	257.012
56	0.7	0.196491	-0.855996	46.49	256.301
57	0.7	0.2	-0.841621	46.49	255.599
58	0.7	0.203509	-0.830953	46.49	255.078
59	0.7	0.207018	-0.816874	46.49	254.391
60	0.7	0.210526	-0.806422	46.49	253.88
61	0.7	0.214035	-0.792618	46.49	253.206
62	0.7	0.217544	-0.782366	46.49	252.706
63	0.7	0.221053	-0.768821	46.49	252.044
64	0.7	0.224561	-0.758753	46.49	251.552
65	0.7	0.22807	-0.745449	46.49	250.903
66	0.7	0.231579	-0.735557	46.49	250.42
67	0.7	0.235088	-0.722479	46.49	249.781
68	0.7	0.238596	-0.712751	46.49	249.306
69	0.7	0.242105	-0.699883	46.49	248.678
70	0.7	0.245614	-0.690309	46.49	248.21
71	0.7	0.249123	-0.677639	46.49	247.591
72	0.7	0.252632	-0.668209	46.49	247.131
73	0.7	0.25614	-0.655726	46.49	246.521
74	0.7	0.259649	-0.646431	46.49	246.067
75	0.7	0.263158	-0.634124	46.49	245.466
76	0.7	0.266667	-0.624956	46.49	245.019
77	0.7	0.270175	-0.612813	46.49	244.426
78	0.7	0.273684	-0.603765	46.49	243.984
79	0.7	0.277193	-0.591776	46.49	243.398
80	0.7	0.280702	-0.582841	46.49	242.962
81	0.7	0.284211	-0.570999	46.49	242.384
82	0.7	0.287719	-0.562174	6.49	241.953
83	1.5	0.291228	-0.550465	55.05	241.381
84	1.8	0.294737	-0.541736	58.26	240.955
85	1.8	0.298246	-0.530162	58.26	240.39
86	2	0.301754	-0.521527	60.4	239.968
87	2	0.305263	-0.510074	60.4	239.409
88	2	0.308772	-0.501527	60.4	238.991
89	2.1	0.312281	-0.490189	61.47	238.438
90	2.3	0.315789	-0.481728	63.61	238.024
91	2.3	0.319298	-0.470498	63.61	237.476
92	2.4	0.322807	-0.462114	64.68	237.067
93	2.5	0.326316	-0.450985	65.75	236.523
94	2.6	0.329825	-0.442676	66.82	236.117
95	2.6	0.333333	-0.431644	66.82	235.579
96	2.7	0.336842	-0.423405	67.89	235.176
97	2.9	0.340351	-0.412463	70.03	234.642
98	3	0.34386	-0.404297	1.1	234.243
99	3	0.347368	-0.393433	71.1	233.713
100	3	0.350877	-0.385321	71.1	233.317
101	3.2	0.354386	-0.374544	73.24	232.79
102	3.9	0.357895	-0.366498	0.73	232.397
103	4.6	0.361404	-0.355788	88.22	231.874
104	5	0.364912	-0.347787	92.5	231.484
105	5	0.368421	-0.337155	92.5	230.964
106	5	0.37193	-0.329206	92.5	230.576
107	5	0.375439	-0.318639	92.5	230.06
108	5	0.378947	-0.310738	92.5	229.674
109	6.2	0.382456	-0.300232	105.34	229.161
110	7	0.385965	-0.292375	113.9	228.778

111	7	0.389474	-0.281926	113.9	228.267
112	7	0.392982	-0.27411	113.9	227.886
113	7	0.396491	-0.263715	113.9	227.378
114	7.5	0.4	-0.253347	119.25	226.872
115	8	0.403509	-0.24559	124.6	226.493
116	8	0.407018	-0.235269	124.6	225.989
117	8	0.410526	-0.227545	124.6	225.612
118	9	0.414035	-0.217267	135.3	225.11
119	10	0.417544	-0.209575	146	224.734
120	10	0.421053	-0.199336	146	224.234
121	10	0.424561	-0.191671	146	223.86
122	10	0.42807	-0.181468	146	223.362
123	10	0.431579	-0.173829	146	222.989
124	10	0.435088	-0.163659	146	222.492
125	10	0.438596	-0.156042	146	222.12
126	10	0.442105	-0.1459	146	221.625
127	10	0.445614	-0.138305	146	221.254
128	10	0.449123	-0.128189	146	220.76
129	10	0.452632	-0.12061	146	220.39
130	10	0.45614	-0.110516	146	219.897
131	10	0.459649	-0.102953	146	219.528
132	10	0.463158	-0.0928787	146	219.036
133	10	0.466667	-0.0853288	146	218.667
134	10	0.470175	-0.0752698	146	218.176
135	10	0.473684	-0.0677301	146	217.807
136	10	0.477193	-0.0576847	146	217.317
137	10	0.480702	-0.0501541	146	216.949
138	10	0.484211	-0.0401167	146	216.459
139	10	0.487719	-0.0325917	146	216.092
140	10	0.491228	-0.0225612	146	215.602
141	10	0.494737	-0.0150408	146	215.234
142	10	0.498246	-0.00501359	146	214.745
143	10	0.501754	0.00501359	146	214.255
144	10	0.505263	0.0150408	146	213.766
145	10	0.508772	0.0225612	146	213.398
146	10	0.512281	0.0325917	146	212.908
147	10	0.515789	0.0401167	146	212.541
148	10	0.519298	0.0501541	146	212.051
149	10	0.522807	0.0576847	146	211.683
150	10	0.526316	0.0677301	146	211.193
151	10	0.529825	0.0752698	146	210.824
152	10	0.533333	0.0853288	146	210.333
153	10	0.536842	0.0928787	146	209.964
154	10	0.540351	0.102953	146	209.472
155	10	0.54386	0.110516	146	209.103
156	10	0.547368	0.12061	146	208.61
157	10	0.550877	0.128189	146	208.24
158	10	0.554386	0.138305	146	207.746
159	10	0.557895	0.1459	146	207.375
160	10	0.561404	0.156042	146	206.88
161	10	0.564912	0.163659	146	206.508
162	10	0.568421	0.173829	146	206.011
163	10	0.57193	0.181468	146	205.638
164	10	0.575439	0.191671	146	205.14
165	10	0.578947	0.199336	146	204.766
166	10	0.582456	0.209575	146	204.266
167	10	0.585965	0.217267	146	203.89
168	10	0.589474	0.227545	146	203.388
169	10	0.592982	0.235269	146	203.011
170	10	0.596491	0.24559	146	202.507
171	10	0.6	0.253347	146	202.128
172	10	0.603509	0.263715	146	201.622

173	10	0.607018	0.27411	146	201.114
174	10	0.610526	0.281926	146	200.733
175	10	0.614035	0.292375	146	200.222
176	10	0.617544	0.300232	146	199.839
177	10	0.621053	0.310738	146	199.326
178	10	0.624561	0.318639	146	198.94
179	10	0.62807	0.329206	146	198.424
180	10	0.631579	0.337155	146	198.036
181	10	0.635088	0.347787	146	197.516
182	10	0.638596	0.355788	146	197.126
183	10	0.642105	0.36649	146	196.603
184	10	0.645614	0.374544	146	196.21
185	10	0.649123	0.385321	146	195.683
186	10	0.652632	0.393433	146	195.287
187	10	0.65614	0.40429	146	194.757
188	10	0.659649	0.412463	146	194.358
189	10	0.663158	0.423405	146	193.824
190	10	0.666667	0.431644	146	193.421
191	10	0.670175	0.442676	146	192.883
192	10	0.673684	0.450985	146	192.477
193	10	0.677193	0.462114	146	191.933
194	10	0.680702	0.470498	146	191.524
195	10	0.684211	0.481728	146	190.976
196	10	0.687719	0.490189	146	190.562
197	10	0.691228	0.501527	146	190.009
198	10	0.694737	0.510074	146	189.591
199	10	0.698246	0.521527	146	189.032
200	10	0.701754	0.530162	146	188.61
201	10	0.705263	0.541736	146	188.045
202	10	0.708772	0.550465	146	187.619
203	10	0.712281	0.56217	146	187.047
204	10	0.715789	0.570999	146	186.616
205	10	0.719298	0.582841	146	186.038
206	10	0.722807	0.591776	146	185.602
207	10	0.726316	0.603765	146	185.016
208	10	0.729825	0.612813	146	184.574
209	10	0.733333	0.624956	146	183.981
210	10	0.736842	0.634124	146	183.534
211	10	0.740351	0.646431	146	182.933
212	10	0.74386	0.655726	146	182.479
213	10	0.747368	0.668209	146	181.869
214	10	0.750877	0.677639	146	181.409
215	10	0.754386	0.690309	146	180.79
216	10	0.757895	0.699883	146	180.322
217	10	0.761404	0.712751	146	179.694
218	10	0.764912	0.722479	146	179.219
219	10	0.768421	0.735557	146	178.58
220	10	0.77193	0.745449	146	178.097
221	10	0.775439	0.758753	146	177.448
222	10	0.778947	0.768821	146	176.956
223	10	0.782456	0.782366	146	176.294
224	10	0.785965	0.792618	146	175.794
225	10	0.789474	0.806422	146	175.12
226	10	0.792982	0.816874	146	174.609
227	10	0.796491	0.830953	146	173.922
228	10	0.8	0.841621	146	173.401
229	10	0.803509	0.855996	146	172.699
230	10	0.807018	0.87055	146	171.988
231	10	0.810526	0.881587	146	171.449
232	10	0.814035	0.896473	146	170.722
233	10	0.817544	0.907769	146	170.171
234	10	0.821053	0.923014	146	169.426

235	10	0.824561	0.93459	146	168.861	
236	10	0.82807	0.950222	146	168.097	
237	10	0.831579	0.9621	146	167.517	
238	10	0.835088	0.97815	146	166.734	
239	10	0.838596	0.990356	146	166.138	
240	10	0.842105	1.00687	146	165.331	
241	10	0.845614	1.01943	146	164.718	
242	10	0.849123	1.03643	146	163.888	
243	10	0.852632	1.04939	146	163.255	
244	10	0.85614	1.06694	146	162.398	
245	10	0.859649	1.08032	146	161.744	
246	10	0.863158	1.09847	146	160.858	
247	10	0.866667	1.11232	146	160.182	
248	10	0.870175	1.13113	146	159.263	
249	10	0.873684	1.1455	146	158.561	
250	10	0.877193	1.16505	146	157.607	
251	10	0.880702	1.18	146	156.877	
252	10	0.884211	1.20036	146	155.882	
253	10	0.887719	1.21596	146	155.121	
254	10	0.891228	1.23724	146	154.082	
255	10	0.894737	1.25357	146	153.284	
256	10	0.898246	1.27588	146	152.195	
257	10	0.901754	1.29303	146	151.357	
258	10	0.905263	1.31652	146	150.21	
259	10	0.908772	1.33462	146	149.326	
260	10	0.912281	1.35946	146	148.113	
261	10	0.915789	1.37866	146	147.176	
262	10	0.919298	1.40507	146	145.886	
263	10	0.922807	1.42554	146	144.886	
264	10	0.926316	1.4538	146	143.506	
265	10	0.929825	1.47579	146	142.432	
266	10	0.933333	1.50626	146	140.944	
267	10	0.936842	1.53007	146	139.782	
268	10	0.940351	1.56322	146	138.163	
269	10	0.94386	1.58927	146	136.891	
270	10	0.947368	1.62576	146	135.109	
271	10	0.950877	1.65463	146	133.699	
272	10	0.954386	1.6954	146	131.708	
273	10	0.957895	1.72793	146	130.119	
274	10	0.961404	1.77438	146	127.851	
275	10	0.964912	1.81191	146	126.018	
276	10	0.968421	1.86629	146	123.363	
277	11	0.97193	1.91103	156.7	121.178	
278	12	0.975439	1.97737	167.4	117.938	
279	14	0.978947	2.03352	188.8	115.196	
280	15	0.982456	2.12007	199.5	110.97	
281	18	0.985965	2.19728	231.6	107.199	
282	30	0.989474	2.32634	360	100.897	
283	41	0.992982	2.45727	477.7	94.5032	
284	49	0.996491	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 = 284

i	x(i)	m(i)	sum(m^2)	sum(mx)	
1	-0.356675		-2.747777.55021	0.980059	
2	-0.356675		-2.4572713.5884	1.85651	
3	-0.356675		-2.3263419.0003	2.68625	
4	-0.356675		-2.1972823.8283	3.46997	
5	-0.356675		-2.1200728.323	4.22615	
6	-0.356675		-2.0335232.4582	4.95145	
7	-0.356675		-1.9773736.3682	5.65673	
8	-0.356675		-1.9110340.0203	6.33835	
9	-0.356675		-1.8662943.5033	7.00401	
10	-0.356675		-1.8119146.7863	7.65027	
11	-0.356675		-1.7743849.9348	8.28315	
12	-0.356675		-1.7279352.9205	8.89946	
13	-0.356675		-1.6954 55.7949	9.50416	
14	-0.356675		-1.6546358.5327	10.0943	
15	-0.356675		-1.6257661.1758	10.6742	
16	-0.356675		-1.5892763.7015	11.241	
17	-0.356675		-1.5632266.1452	11.7986	
18	-0.356675		-1.5300768.4863	12.3443	
19	-0.356675		-1.5062670.7551	12.8816	
20	-0.356675		-1.4757972.9331	13.408	
21	-0.356675		-1.4538 75.0466	13.9265	
22	-0.356675		-1.4255477.0788	14.435	
23	-0.356675		-1.4050779.053	14.9361	
24	-0.356675		-1.3786680.9537	15.4278	
25	-0.356675		-1.3594682.8019	15.9127	
26	-0.356675		-1.3346284.5831	16.3888	
27	-0.356675		-1.3165286.3163	16.8583	
28	-0.356675		-1.2930387.9883	17.3195	
29	-0.356675		-1.2758889.6161	17.7746	
30	-0.356675		-1.2535791.1875	18.2217	
31	-0.356675		-1.2372492.7183	18.663	
32	-0.356675		-1.2159694.1969	19.0967	
33	-0.356675		-1.2003695.6377	19.5248	
34	-0.356675		-1.18 97.0301	19.9457	
35	-0.356675		-1.1650598.3875	20.3613	
36	-0.356675		-1.1455 99.6996	20.7698	
37	-0.356675		-1.13113100.979	21.1733	
38	-0.356675		-1.11232102.216	21.57	
39	-0.356675		-1.09847103.423	21.9618	
40	-0.356675		-1.08032104.59	22.3471	
41	-0.356675		-1.06694105.728	22.7277	
42	-0.356675		-1.04939106.83	23.102	
43	-0.356675		-1.03643107.904	23.4716	
44	-0.356675		-1.01943108.943	23.8353	
45	-0.356675		-1.00687109.957	24.1944	
46	-0.356675		-0.990356	110.938	24.5476
47	-0.356675		-0.97815111.894	24.8965	
48	-0.356675		-0.9621 112.82	25.2396	
49	-0.356675		-0.950222	113.723	25.5786
50	-0.356675		-0.93459114.596	25.9119	
51	-0.356675		-0.923014	115.448	26.2411

52	-0.356675	-0.907769	116.272	26.5649
53	-0.356675	-0.896473	117.076	26.8847
54	-0.356675	-0.881587	117.853	27.1991
55	-0.356675	-0.87055	118.611	27.5096
56	-0.356675	-0.855996	119.344	27.8149
57	-0.356675	-0.841621	120.052	28.1151
58	-0.356675	-0.830953	120.743	28.4115
59	-0.356675	-0.816874	121.41	28.7028
60	-0.356675	-0.806422	122.06	28.9905
61	-0.356675	-0.792618	122.689	29.2732
62	-0.356675	-0.782366	123.301	29.5522
63	-0.356675	-0.768821	123.892	29.8264
64	-0.356675	-0.758753	124.467	30.0971
65	-0.356675	-0.745449	125.023	30.363
66	-0.356675	-0.735557	125.564	30.6253
67	-0.356675	-0.722479	126.086	30.883
68	-0.356675	-0.712751	126.594	31.1372
69	-0.356675	-0.699883	127.084	31.3869
70	-0.356675	-0.690309	127.561	31.6331
71	-0.356675	-0.677639	128.02	31.8748
72	-0.356675	-0.668209	128.466	32.1131
73	-0.356675	-0.655726	128.896	32.347
74	-0.356675	-0.646431	129.314	32.5775
75	-0.356675	-0.634124	129.716	32.8037
76	-0.356675	-0.624956	130.107	33.0266
77	-0.356675	-0.612813	130.482	33.2452
78	-0.356675	-0.603765	130.847	33.4606
79	-0.356675	-0.591776	131.197	33.6716
80	-0.356675	-0.582841	131.537	33.8795
81	-0.356675	-0.570999	131.863	34.0832
82	-0.356675	-0.56217	132.179	34.2837
83	0.405465	-0.550465	132.482	34.0605
84	0.587787	-0.541736	132.775	33.7421
85	0.587787	-0.530162	133.056	33.4304
86	0.693147	-0.521527	133.328	33.0689
87	0.693147	-0.510074	133.589	32.7154
88	0.693147	-0.501527	133.84	32.3678
89	0.741937	-0.490189	134.08	32.0041
90	0.832909	-0.481728	134.312	31.6028
91	0.832909	-0.470498	134.534	31.2109
92	0.875469	-0.462114	134.747	30.8064
93	0.916291	-0.450985	134.951	30.3931
94	0.955511	-0.442676	135.147	29.9702
95	0.955511	-0.431644	135.333	29.5577
96	0.993252	-0.423405	135.512	29.1372
97	1.06471	-0.412463	135.682	28.698
98	1.09861	-0.40429	135.846	28.2539
99	1.09861	-0.393433	136.001	27.8216
100	1.09861	-0.385321	136.149	27.3983
101	1.16315	-0.374544	136.289	26.9627
102	1.36098	-0.36649	136.424	26.4639
103	1.52606	-0.355788	136.55	25.9209
104	1.60944	-0.347787	136.671	25.3612
105	1.60944	-0.337155	136.785	24.8186
106	1.60944	-0.329206	136.893	24.2887
107	1.60944	-0.318639	136.995	23.7759
108	1.60944	-0.310738	137.091	23.2758
109	1.82455	-0.300232	137.182	22.728
110	1.94591	-0.292375	137.267	22.1591
111	1.94591	-0.281926	137.346	21.6105
112	1.94591	-0.27411	137.422	21.0771
113	1.94591	-0.263715	137.491	20.5639

114	2.0149	-0.253347	137.555	20.0534
115	2.07944	-0.24559	137.616	19.5427
116	2.07944	-0.235269	137.671	19.0535
117	2.07944	-0.227545	137.723	18.5803
118	2.19722	-0.217267	137.77	18.103
119	2.30259	-0.209575	137.814	17.6204
120	2.30259	-0.199336	137.854	17.1614
121	2.30259	-0.191671	137.89	16.7201
122	2.30259	-0.181468	137.923	16.3022
123	2.30259	-0.173829	137.954	15.902
124	2.30259	-0.163659	137.98	15.5251
125	2.30259	-0.156042	138.005	15.1658
126	2.30259	-0.1459	138.026	14.8299
127	2.30259	-0.138305	138.045	14.5114
128	2.30259	-0.128189	138.062	14.2162
129	2.30259	-0.12061	138.076	13.9385
130	2.30259	-0.110516	138.088	13.6841
131	2.30259	-0.102953	138.099	13.447
132	2.30259	-0.0928787	138.108	13.2331
133	2.30259	-0.0853288	138.115	13.0367
134	2.30259	-0.0752698	138.12	12.8633
135	2.30259	-0.0677301	138.125	12.7074
136	2.30259	-0.0576847	138.128	12.5746
137	2.30259	-0.0501541	138.131	12.4591
138	2.30259	-0.0401167	138.132	12.3667
139	2.30259	-0.0325917	138.134	12.2917
140	2.30259	-0.0225612	138.134	12.2397
141	2.30259	-0.0150408	138.134	12.2051
142	2.30259	-0.00501359	138.134	12.1935
143	2.30259	0.00501359	138.134	12.2051
144	2.30259	0.0150408	138.135	12.2397
145	2.30259	0.0225612	138.135	12.2917
146	2.30259	0.0325917	138.136	12.3667
147	2.30259	0.0401167	138.138	12.4591
148	2.30259	0.0501541	138.14	12.5746
149	2.30259	0.0576847	138.144	12.7074
150	2.30259	0.0677301	138.148	12.8633
151	2.30259	0.0752698	138.154	13.0367
152	2.30259	0.0853288	138.161	13.2331
153	2.30259	0.0928787	138.17	13.447
154	2.30259	0.102953	138.18	13.6841
155	2.30259	0.110516	138.193	13.9385
156	2.30259	0.12061	138.207	14.2162
157	2.30259	0.128189	138.224	14.5114
158	2.30259	0.138305	138.243	14.8299
159	2.30259	0.1459	138.264	15.1658
160	2.30259	0.156042	138.288	15.5251
161	2.30259	0.163659	138.315	15.902
162	2.30259	0.173829	138.345	16.3022
163	2.30259	0.181468	138.378	16.7201
164	2.30259	0.191671	138.415	17.1614
165	2.30259	0.199336	138.455	17.6204
166	2.30259	0.209575	138.499	18.103
167	2.30259	0.217267	138.546	18.6032
168	2.30259	0.227545	138.598	19.1272
169	2.30259	0.235269	138.653	19.6689
170	2.30259	0.24559	138.713	20.2344
171	2.30259	0.253347	138.777	20.8177
172	2.30259	0.263715	138.847	21.425
173	2.30259	0.27411	138.922	22.0561
174	2.30259	0.281926	139.002	22.7053
175	2.30259	0.292375	139.087	23.3785

176	2.30259	0.300232		139.177	24.0698
177	2.30259	0.310738		139.274	24.7853
178	2.30259	0.318639		139.375	25.519
179	2.30259	0.329206		139.484	26.277
180	2.30259	0.337155		139.597	27.0534
181	2.30259	0.347787		139.718	27.8542
182	2.30259	0.355788		139.845	28.6734
183	2.30259	0.36649	139.979	29.5173	
184	2.30259	0.374544		140.12	30.3797
185	2.30259	0.385321		140.268	31.2669
186	2.30259	0.393433		140.423	32.1728
187	2.30259	0.40429	140.586	33.1038	
188	2.30259	0.412463		140.756	34.0535
189	2.30259	0.423405		140.936	35.0284
190	2.30259	0.431644		141.122	36.0223
191	2.30259	0.442676		141.318	37.0416
192	2.30259	0.450985		141.521	38.08
193	2.30259	0.462114		141.735	39.1441
194	2.30259	0.470498		141.956	40.2275
195	2.30259	0.481728		142.188	41.3367
196	2.30259	0.490189		142.429	42.4654
197	2.30259	0.501527		142.68	43.6202
198	2.30259	0.510074		142.94	44.7947
199	2.30259	0.521527		143.212	45.9955
200	2.30259	0.530162		143.493	47.2163
201	2.30259	0.541736		143.787	48.4637
202	2.30259	0.550465		144.09	49.7312
203	2.30259	0.56217	144.406	51.0256	
204	2.30259	0.570999		144.732	52.3404
205	2.30259	0.582841		145.072	53.6824
206	2.30259	0.591776		145.422	55.045
207	2.30259	0.603765		145.786	56.4353
208	2.30259	0.612813		146.162	57.8463
209	2.30259	0.624956		146.552	59.2853
210	2.30259	0.634124		146.955	60.7455
211	2.30259	0.646431		147.372	62.2339
212	2.30259	0.655726		147.802	63.7438
213	2.30259	0.668209		148.249	65.2824
214	2.30259	0.677639		148.708	66.8427
215	2.30259	0.690309		149.185	68.4322
216	2.30259	0.699883		149.674	70.0437
217	2.30259	0.712751		150.182	71.6849
218	2.30259	0.722479		150.704	73.3485
219	2.30259	0.735557		151.245	75.0422
220	2.30259	0.745449		151.801	76.7586
221	2.30259	0.758753		152.377	78.5057
222	2.30259	0.768821		152.968	80.276
223	2.30259	0.782366		153.58	82.0775
224	2.30259	0.792618		154.208	83.9025
225	2.30259	0.806422		154.859	85.7594
226	2.30259	0.816874		155.526	87.6403
227	2.30259	0.830953		156.216	89.5536
228	2.30259	0.841621		156.925	91.4916
229	2.30259	0.855996		157.657	93.4626
230	2.30259	0.87055	158.415	95.4671	
231	2.30259	0.881587		159.193	97.497
232	2.30259	0.896473		159.996	99.5612
233	2.30259	0.907769		160.82	101.651
234	2.30259	0.923014		161.672	103.777
235	2.30259	0.93459	162.546	105.929	
236	2.30259	0.950222		163.449	108.117
237	2.30259	0.9621	164.374	110.332	

238	2.30259	0.97815	165.331	112.584	
239	2.30259	0.990356		166.312	114.865
240	2.30259	1.00687	167.326	117.183	
241	2.30259	1.01943	168.365	119.53	
242	2.30259	1.03643	169.439	121.917	
243	2.30259	1.04939	170.54	124.333	
244	2.30259	1.06694	171.679	126.79	
245	2.30259	1.08032	172.846	129.277	
246	2.30259	1.09847	174.052	131.807	
247	2.30259	1.11232	175.29	134.368	
248	2.30259	1.13113	176.569	136.972	
249	2.30259	1.1455	177.881	139.61	
250	2.30259	1.16505	179.239	142.293	
251	2.30259	1.18	180.631	145.01	
252	2.30259	1.20036	182.072	147.774	
253	2.30259	1.21596	183.55	150.574	
254	2.30259	1.23724	185.081	153.422	
255	2.30259	1.25357	186.653	156.309	
256	2.30259	1.27588	188.28	159.247	
257	2.30259	1.29303	189.952	162.224	
258	2.30259	1.31652	191.686	165.255	
259	2.30259	1.33462	193.467	168.328	
260	2.30259	1.35946	195.315	171.459	
261	2.30259	1.37866	197.216	174.633	
262	2.30259	1.40507	199.19	177.868	
263	2.30259	1.42554	201.222	181.151	
264	2.30259	1.4538	203.336	184.498	
265	2.30259	1.47579	205.514	187.897	
266	2.30259	1.50626	207.782	191.365	
267	2.30259	1.53007	210.123	194.888	
268	2.30259	1.56322	212.567	198.487	
269	2.30259	1.58927	215.093	202.147	
270	2.30259	1.62576	217.736	205.89	
271	2.30259	1.65463	220.474	209.7	
272	2.30259	1.6954	223.348	213.604	
273	2.30259	1.72793	226.334	217.583	
274	2.30259	1.77438	229.482	221.668	
275	2.30259	1.81191	232.765	225.84	
276	2.30259	1.86629	236.248	230.138	
277	2.3979	1.91103	239.9	234.72	
278	2.48491	1.97737	243.81	239.634	
279	2.63906	2.03352	247.946	245	
280	2.70805	2.12007	252.44	250.742	
281	2.89037	2.19728	257.268	257.093	
282	3.4012	2.32634	262.68	265.005	
283	3.71357	2.45727	268.718	274.13	
284	3.89182	2.74777	276.269	284.824	

Data Set Standard Deviation = 1.21114
Numerator = 81124.7
Denominator = 114685
W Statistic = 0.707367 = 81124.7 / 114685

5% Critical value of 0.976 exceeds 0.707367
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.707367
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 = 0.839397
0.839397 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	-0.356675	0.00350877	-2.74777	107.836	348.683
2	-0.356675	0.00701754	-2.45727	107.836	334.497
3	-0.356675	0.0105263	-2.32634	107.836	328.103
4	-0.356675	0.0140351	-2.19728	107.836	321.801
5	-0.356675	0.0175439	-2.12007	107.836	318.03
6	-0.356675	0.0210526	-2.03352	107.836	313.804
7	-0.356675	0.0245614	-1.97737	107.836	311.062
8	-0.356675	0.0280702	-1.91103	107.836	307.822
9	-0.356675	0.0315789	-1.86629	107.836	305.637
10	-0.356675	0.0350877	-1.81191	107.836	302.982
11	-0.356675	0.0385965	-1.77438	107.836	301.149
12	-0.356675	0.0421053	-1.72793	107.836	298.881
13	-0.356675	0.045614	-1.6954	107.836	297.292
14	-0.356675	0.0491228	-1.65463	107.836	295.301
15	-0.356675	0.0526316	-1.62576	107.836	293.891
16	-0.356675	0.0561404	-1.58927	107.836	292.109
17	-0.356675	0.0596491	-1.56322	107.836	290.837
18	-0.356675	0.0631579	-1.53007	107.836	289.218
19	-0.356675	0.0666667	-1.50626	107.836	288.056
20	-0.356675	0.0701754	-1.47579	107.836	286.568
21	-0.356675	0.0736842	-1.4538	107.836	285.494
22	-0.356675	0.077193	-1.42554	107.836	284.114
23	-0.356675	0.0807018	-1.40507	107.836	283.114
24	-0.356675	0.0842105	-1.37866	107.836	281.824
25	-0.356675	0.0877193	-1.35946	107.836	280.887
26	-0.356675	0.0912281	-1.33462	107.836	279.674
27	-0.356675	0.0947368	-1.31652	107.836	278.79
28	-0.356675	0.0982456	-1.29303	107.836	277.643
29	-0.356675	0.101754	-1.27588	107.836	276.805
30	-0.356675	0.105263	-1.25357	107.836	275.716
31	-0.356675	0.108772	-1.23724	107.836	274.918
32	-0.356675	0.112281	-1.21596	107.836	273.879
33	-0.356675	0.115789	-1.20036	107.836	273.118
34	-0.356675	0.119298	-1.18	107.836	272.123
35	-0.356675	0.122807	-1.16505	107.836	271.393
36	-0.356675	0.126316	-1.1455	107.836	270.439
37	-0.356675	0.129825	-1.13113	107.836	269.737
38	-0.356675	0.133333	-1.11232	107.836	268.818
39	-0.356675	0.136842	-1.09847	107.836	268.142
40	-0.356675	0.140351	-1.08032	107.836	267.256
41	-0.356675	0.14386	-1.06694	107.836	266.602
42	-0.356675	0.147368	-1.04939	107.836	265.745
43	-0.356675	0.150877	-1.03643	107.836	265.112
44	-0.356675	0.154386	-1.01943	107.836	264.282
45	-0.356675	0.157895	-1.00687	107.836	263.669
46	-0.356675	0.161404	-0.990356	107.836	262.862
47	-0.356675	0.164912	-0.97815	107.836	262.266
48	-0.356675	0.168421	-0.9621	107.836	261.483

49	-0.356675	0.17193	-0.950222	107.836	260.903
50	-0.356675	0.175439	-0.93459	107.836	260.139
51	-0.356675	0.178947	-0.923014	107.836	259.574
52	-0.356675	0.182456	-0.907769	107.836	258.829
53	-0.356675	0.185965	-0.896473	107.836	258.278
54	-0.356675	0.189474	-0.881587	107.836	257.551
55	-0.356675	0.192982	-0.87055	107.836	257.012
56	-0.356675	0.196491	-0.855996	107.836	256.301
57	-0.356675	0.2	-0.841621	107.836	255.599
58	-0.356675	0.203509	-0.830953	107.836	255.078
59	-0.356675	0.207018	-0.816874	107.836	254.391
60	-0.356675	0.210526	-0.806422	107.836	253.88
61	-0.356675	0.214035	-0.792618	107.836	253.206
62	-0.356675	0.217544	-0.782366	107.836	252.706
63	-0.356675	0.221053	-0.768821	107.836	252.044
64	-0.356675	0.224561	-0.758753	107.836	251.552
65	-0.356675	0.22807	-0.745449	107.836	250.903
66	-0.356675	0.231579	-0.735557	107.836	250.42
67	-0.356675	0.235088	-0.722479	107.836	249.781
68	-0.356675	0.238596	-0.712751	107.836	249.306
69	-0.356675	0.242105	-0.699883	107.836	248.678
70	-0.356675	0.245614	-0.690309	107.836	248.21
71	-0.356675	0.249123	-0.677639	107.836	247.591
72	-0.356675	0.252632	-0.668209	107.836	247.131
73	-0.356675	0.25614	-0.655726	107.836	246.521
74	-0.356675	0.259649	-0.646431	107.836	246.067
75	-0.356675	0.263158	-0.634124	107.836	245.466
76	-0.356675	0.266667	-0.624956	107.836	245.019
77	-0.356675	0.270175	-0.612813	107.836	244.426
78	-0.356675	0.273684	-0.603765	107.836	243.984
79	-0.356675	0.277193	-0.591776	107.836	243.398
80	-0.356675	0.280702	-0.582841	107.836	242.962
81	-0.356675	0.284211	-0.570999	107.836	242.384
82	-0.356675	0.287719	-0.56217	107.836	241.953
83	0.405465	0.291228	-0.550465	189.385	241.381
84	0.587787	0.294737	-0.541736	208.893	240.955
85	0.587787	0.298246	-0.530162	208.893	240.39
86	0.693147	0.301754	-0.521527	220.167	239.968
87	0.693147	0.305263	-0.510074	220.167	239.409
88	0.693147	0.308772	-0.501527	220.167	238.991
89	0.741937	0.312281	-0.490189	225.387	238.438
90	0.832909	0.315789	-0.481728	235.121	238.024
91	0.832909	0.319298	-0.470498	235.121	237.476
92	0.875469	0.322807	-0.462114	239.675	237.067
93	0.916291	0.326316	-0.450985	244.043	236.523
94	0.955511	0.329825	-0.442676	248.24	236.117
95	0.955511	0.333333	-0.431644	248.24	235.579
96	0.993252	0.336842	-0.423405	252.278	235.176
97	1.06471	0.340351	-0.412463	259.924	234.642
98	1.09861	0.34386	-0.40429	263.552	234.243
99	1.09861	0.347368	-0.393433	263.552	233.713
100	1.09861	0.350877	-0.385321	263.552	233.317
101	1.16315	0.354386	-0.374544	270.457	232.79
102	1.36098	0.357895	-0.36649	291.624	232.397
103	1.52606	0.361404	-0.355788	309.288	231.874
104	1.60944	0.364912	-0.347787	318.21	231.484
105	1.60944	0.368421	-0.337155	318.21	230.964
106	1.60944	0.37193	-0.329206	318.21	230.576
107	1.60944	0.375439	-0.318639	318.21	230.06
108	1.60944	0.378947	-0.310738	318.21	229.674
109	1.82455	0.382456	-0.300232	341.227	229.161
110	1.94591	0.385965	-0.292375	354.212	228.778

111	1.94591	0.389474	-0.281926	354.212	228.267
112	1.94591	0.392982	-0.27411	354.212	227.886
113	1.94591	0.396491	-0.263715	354.212	227.378
114	2.0149	0.4	-0.253347	361.595	226.872
115	2.07944	0.403509	-0.24559	368.5	226.493
116	2.07944	0.407018	-0.235269	368.5	225.989
117	2.07944	0.410526	-0.227545	368.5	225.612
118	2.19722	0.414035	-0.217267	381.103	225.11
119	2.30259	0.417544	-0.209575	392.377	224.734
120	2.30259	0.421053	-0.199336	392.377	224.234
121	2.30259	0.424561	-0.191671	392.377	223.86
122	2.30259	0.42807	-0.181468	392.377	223.362
123	2.30259	0.431579	-0.173829	392.377	222.989
124	2.30259	0.435088	-0.163659	392.377	222.492
125	2.30259	0.438596	-0.156042	392.377	222.12
126	2.30259	0.442105	-0.1459	392.377	221.625
127	2.30259	0.445614	-0.138305	392.377	221.254
128	2.30259	0.449123	-0.128189	392.377	220.76
129	2.30259	0.452632	-0.12061	392.377	220.39
130	2.30259	0.45614	-0.110516	392.377	219.897
131	2.30259	0.459649	-0.102953	392.377	219.528
132	2.30259	0.463158	-0.0928787	392.377	219.036
133	2.30259	0.466667	-0.0853288	392.377	218.667
134	2.30259	0.470175	-0.0752698	392.377	218.176
135	2.30259	0.473684	-0.0677301	392.377	217.807
136	2.30259	0.477193	-0.0576847	392.377	217.317
137	2.30259	0.480702	-0.0501541	392.377	216.949
138	2.30259	0.484211	-0.0401167	392.377	216.459
139	2.30259	0.487719	-0.0325917	392.377	216.092
140	2.30259	0.491228	-0.0225612	392.377	215.602
141	2.30259	0.494737	-0.0150408	392.377	215.234
142	2.30259	0.498246	-0.00501359	392.377	214.745
143	2.30259	0.501754	0.00501359	392.377	214.255
144	2.30259	0.505263	0.0150408	392.377	213.766
145	2.30259	0.508772	0.0225612	392.377	213.398
146	2.30259	0.512281	0.0325917	392.377	212.908
147	2.30259	0.515789	0.0401167	392.377	212.541
148	2.30259	0.519298	0.0501541	392.377	212.051
149	2.30259	0.522807	0.0576847	392.377	211.683
150	2.30259	0.526316	0.0677301	392.377	211.193
151	2.30259	0.529825	0.0752698	392.377	210.824
152	2.30259	0.533333	0.0853288	392.377	210.333
153	2.30259	0.536842	0.0928787	392.377	209.964
154	2.30259	0.540351	0.102953	392.377	209.472
155	2.30259	0.54386	0.110516	392.377	209.103
156	2.30259	0.547368	0.12061	392.377	208.61
157	2.30259	0.550877	0.128189	392.377	208.24
158	2.30259	0.554386	0.138305	392.377	207.746
159	2.30259	0.557895	0.1459	392.377	207.375
160	2.30259	0.561404	0.156042	392.377	206.88
161	2.30259	0.564912	0.163659	392.377	206.508
162	2.30259	0.568421	0.173829	392.377	206.011
163	2.30259	0.57193	0.181468	392.377	205.638
164	2.30259	0.575439	0.191671	392.377	205.14
165	2.30259	0.578947	0.199336	392.377	204.766
166	2.30259	0.582456	0.209575	392.377	204.266
167	2.30259	0.585965	0.217267	392.377	203.89
168	2.30259	0.589474	0.227545	392.377	203.388
169	2.30259	0.592982	0.235269	392.377	203.011
170	2.30259	0.596491	0.24559	392.377	202.507
171	2.30259	0.6	0.253347	392.377	202.128
172	2.30259	0.603509	0.263715	392.377	201.622

173	2.30259	0.607018	0.27411	392.377	201.114
174	2.30259	0.610526	0.281926	392.377	200.733
175	2.30259	0.614035	0.292375	392.377	200.222
176	2.30259	0.617544	0.300232	392.377	199.839
177	2.30259	0.621053	0.310738	392.377	199.326
178	2.30259	0.624561	0.318639	392.377	198.94
179	2.30259	0.62807	0.329206	392.377	198.424
180	2.30259	0.631579	0.337155	392.377	198.036
181	2.30259	0.635088	0.347787	392.377	197.516
182	2.30259	0.638596	0.355788	392.377	197.126
183	2.30259	0.642105	0.36649	392.377	196.603
184	2.30259	0.645614	0.374544	392.377	196.21
185	2.30259	0.649123	0.385321	392.377	195.683
186	2.30259	0.652632	0.393433	392.377	195.287
187	2.30259	0.65614	0.40429	392.377	194.757
188	2.30259	0.659649	0.412463	392.377	194.358
189	2.30259	0.663158	0.423405	392.377	193.824
190	2.30259	0.666667	0.431644	392.377	193.421
191	2.30259	0.670175	0.442676	392.377	192.883
192	2.30259	0.673684	0.450985	392.377	192.477
193	2.30259	0.677193	0.462114	392.377	191.933
194	2.30259	0.680702	0.470498	392.377	191.524
195	2.30259	0.684211	0.481728	392.377	190.976
196	2.30259	0.687719	0.490189	392.377	190.562
197	2.30259	0.691228	0.501527	392.377	190.009
198	2.30259	0.694737	0.510074	392.377	189.591
199	2.30259	0.698246	0.521527	392.377	189.032
200	2.30259	0.701754	0.530162	392.377	188.61
201	2.30259	0.705263	0.541736	392.377	188.045
202	2.30259	0.708772	0.550465	392.377	187.619
203	2.30259	0.712281	0.56217	392.377	187.047
204	2.30259	0.715789	0.570999	392.377	186.616
205	2.30259	0.719298	0.582841	392.377	186.038
206	2.30259	0.722807	0.591776	392.377	185.602
207	2.30259	0.726316	0.603765	392.377	185.016
208	2.30259	0.729825	0.612813	392.377	184.574
209	2.30259	0.733333	0.624956	392.377	183.981
210	2.30259	0.736842	0.634124	392.377	183.534
211	2.30259	0.740351	0.646431	392.377	182.933
212	2.30259	0.74386	0.655726	392.377	182.479
213	2.30259	0.747368	0.668209	392.377	181.869
214	2.30259	0.750877	0.677639	392.377	181.409
215	2.30259	0.754386	0.690309	392.377	180.79
216	2.30259	0.757895	0.699883	392.377	180.322
217	2.30259	0.761404	0.712751	392.377	179.694
218	2.30259	0.764912	0.722479	392.377	179.219
219	2.30259	0.768421	0.735557	392.377	178.58
220	2.30259	0.77193	0.745449	392.377	178.097
221	2.30259	0.775439	0.758753	392.377	177.448
222	2.30259	0.778947	0.768821	392.377	176.956
223	2.30259	0.782456	0.782366	392.377	176.294
224	2.30259	0.785965	0.792618	392.377	175.794
225	2.30259	0.789474	0.806422	392.377	175.12
226	2.30259	0.792982	0.816874	392.377	174.609
227	2.30259	0.796491	0.830953	392.377	173.922
228	2.30259	0.8	0.841621	392.377	173.401
229	2.30259	0.803509	0.855996	392.377	172.699
230	2.30259	0.807018	0.87055	392.377	171.988
231	2.30259	0.810526	0.881587	392.377	171.449
232	2.30259	0.814035	0.896473	392.377	170.722
233	2.30259	0.817544	0.907769	392.377	170.171
234	2.30259	0.821053	0.923014	392.377	169.426

235	2.30259	0.824561	0.93459	392.377	168.861	
236	2.30259	0.82807	0.950222	392.377	168.097	
237	2.30259	0.831579	0.9621	392.377	167.517	
238	2.30259	0.835088	0.97815	392.377	166.734	
239	2.30259	0.838596	0.990356	392.377	166.138	
240	2.30259	0.842105	1.00687	392.377	165.331	
241	2.30259	0.845614	1.01943	392.377	164.718	
242	2.30259	0.849123	1.03643	392.377	163.888	
243	2.30259	0.852632	1.04939	392.377	163.255	
244	2.30259	0.85614	1.06694	392.377	162.398	
245	2.30259	0.859649	1.08032	392.377	161.744	
246	2.30259	0.863158	1.09847	392.377	160.858	
247	2.30259	0.866667	1.11232	392.377	160.182	
248	2.30259	0.870175	1.13113	392.377	159.263	
249	2.30259	0.873684	1.1455	392.377	158.561	
250	2.30259	0.877193	1.16505	392.377	157.607	
251	2.30259	0.880702	1.18	392.377	156.877	
252	2.30259	0.884211	1.20036	392.377	155.882	
253	2.30259	0.887719	1.21596	392.377	155.121	
254	2.30259	0.891228	1.23724	392.377	154.082	
255	2.30259	0.894737	1.25357	392.377	153.284	
256	2.30259	0.898246	1.27588	392.377	152.195	
257	2.30259	0.901754	1.29303	392.377	151.357	
258	2.30259	0.905263	1.31652	392.377	150.21	
259	2.30259	0.908772	1.33462	392.377	149.326	
260	2.30259	0.912281	1.35946	392.377	148.113	
261	2.30259	0.915789	1.37866	392.377	147.176	
262	2.30259	0.919298	1.40507	392.377	145.886	
263	2.30259	0.922807	1.42554	392.377	144.886	
264	2.30259	0.926316	1.4538	392.377	143.506	
265	2.30259	0.929825	1.47579	392.377	142.432	
266	2.30259	0.933333	1.50626	392.377	140.944	
267	2.30259	0.936842	1.53007	392.377	139.782	
268	2.30259	0.940351	1.56322	392.377	138.163	
269	2.30259	0.94386	1.58927	392.377	136.891	
270	2.30259	0.947368	1.62576	392.377	135.109	
271	2.30259	0.950877	1.65463	392.377	133.699	
272	2.30259	0.954386	1.6954	392.377	131.708	
273	2.30259	0.957895	1.72793	392.377	130.119	
274	2.30259	0.961404	1.77438	392.377	127.851	
275	2.30259	0.964912	1.81191	392.377	126.018	
276	2.30259	0.968421	1.86629	392.377	123.363	
277	2.3979	0.97193	1.91103	402.575	121.178	
278	2.48491	0.975439	1.97737	411.885	117.938	
279	2.63906	0.978947	2.03352	428.379	115.196	
280	2.70805	0.982456	2.12007	435.761	110.97	
281	2.89037	0.985965	2.19728	455.27	107.199	
282	3.4012	0.989474	2.32634	509.928	100.897	
283	3.71357	0.992982	2.45727	543.352	94.5032	
284	3.89182	0.996491	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-4	1/16/1998	ND<2.30259	120
	3/16/1999	ND<2.30259	120
	9/23/1999	ND<2.30259	120
	3/14/2000	ND<2.30259	120
	9/23/2003	ND<2.30259	120
	3/10/2004	ND<2.30259	120
	10/12/2004	ND<2.30259	120
	4/1/2005	ND<2.30259	120
	10/26/2005	ND<2.30259	120
	6/19/2006	ND<2.30259	120
	11/18/2006	ND<2.30259	120
	6/2/2007	2.70805	280
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	6/11/2009	ND<-0.356675 U	120
	11/16/2009	ND<-0.356675 U	120
	6/30/2010	ND<-0.356675 U	120
	11/17/2010	ND<-0.356675 U	120
	7/6/2011	ND<-0.356675 U	120
	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120
	11/16/2012	ND<-0.356675 U	120

Rank Sum = 2920
Rank Mean = 126.957

Background Rank Sum = 2920
Background Rank Mean = 126.957

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	3/14/2000	ND<2.30259	120
	9/23/2003	ND<2.30259	120
	3/10/2004	ND<2.30259	120
	10/12/2004	ND<2.30259	120
	4/1/2005	ND<2.30259	120
	10/26/2005	ND<2.30259	120
	6/19/2006	2.07944 J	272
	11/18/2006	ND<2.30259	120
	6/2/2007	1.09861 J	255
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	6/11/2009	ND<-0.356675 U	120
	11/16/2009	ND<-0.356675 U	120
	6/30/2010	ND<-0.356675 U	120
	11/17/2010	ND<-0.356675 U	120
	7/6/2011	ND<-0.356675 U	120

	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120
	11/16/2012	ND<-0.356675 U	120

Rank Sum = 2687
Rank Mean = 134.35

LMW-11	3/14/2000	ND<2.30259	120
	9/23/2003	ND<2.30259	120
	3/10/2004	ND<2.30259	120
	10/12/2004	ND<2.30259	120
	4/1/2005	ND<2.30259	120
	10/26/2005	ND<2.30259	120
	6/19/2006	ND<2.30259	120
	6/2/2007	ND<2.30259	120
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120

Rank Sum = 1320
Rank Mean = 120

LMW-12	3/14/2000	ND<2.30259	120
	9/23/2003	ND<2.30259	120
	3/10/2004	ND<2.30259	120
	10/12/2004	ND<2.30259	120
	4/1/2005	ND<2.30259	120
	10/26/2005	ND<2.30259	120
	6/19/2006	ND<2.30259	120
	6/2/2007	ND<2.30259	120
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120

Rank Sum = 1320
Rank Mean = 120

LMW-13	3/14/2000	ND<2.30259	120
	9/23/2003	ND<2.30259	120
	3/10/2004	ND<2.30259	120
	10/12/2004	ND<2.30259	120
	4/1/2005	ND<2.30259	120
	10/26/2005	ND<2.30259	120
	6/19/2006	ND<2.30259	120
	6/2/2007	ND<2.30259	120
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120

Rank Sum = 1320
Rank Mean = 120

LMW-14R	6/2/2007	0.693147 J	243
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	6/11/2009	ND<-0.356675 U	120
	6/30/2010	ND<-0.356675 U	120
	11/17/2010	ND<-0.356675 U	120
	7/6/2011	ND<-0.356675 U	120
	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120
	11/16/2012	ND<-0.356675 U	120

Rank Sum = 1443
Rank Mean = 131.182

LMW-15R	11/18/2006	ND<2.30259	120
	6/2/2007	ND<2.30259	120
	11/15/2007	ND<2.30259	120
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	6/11/2009	2.0149	271
	6/30/2010	ND<-0.356675 U	120
	11/17/2010	ND<-0.356675 U	120
	7/6/2011	ND<-0.356675 U	120
	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120
	11/16/2012	ND<-0.356675 U	120

Rank Sum = 1951
Rank Mean = 130.067

LMW-16	11/18/2006	ND<2.30259	120
	6/2/2007	3.71357	283
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	6/11/2009	ND<-0.356675 U	120
	11/16/2009	ND<-0.356675 U	120
	6/30/2010	ND<-0.356675 U	120
	11/17/2010	ND<-0.356675 U	120
	7/6/2011	0.993252 J	253
	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120
	11/16/2012	0.405465 J	240

Rank Sum = 1976
Rank Mean = 152

LMW-3	11/19/1996	ND<2.30259	120
	3/24/1997	ND<2.30259	120
	1/16/1998	ND<2.30259	120
	3/16/1999	ND<2.30259	120
	9/23/1999	ND<2.30259	120
	3/14/2000	ND<2.30259	120
	9/23/2003	ND<2.30259	120
	3/10/2004	ND<2.30259	120
	10/12/2004	ND<2.30259	120
	4/1/2005	ND<2.30259	120
	10/26/2005	ND<2.30259	120
	6/19/2006	ND<2.30259	120
	11/18/2006	ND<2.30259	120
	6/2/2007	ND<2.30259	120
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	6/11/2009	ND<-0.356675 U	120
	11/16/2009	ND<-0.356675 U	120
	6/30/2010	ND<-0.356675 U	120
	11/17/2010	0.587787 J	241
	7/6/2011	ND<-0.356675 U	120
	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120
	11/16/2012	ND<-0.356675 U	120

Rank Sum = 3121
Rank Mean = 124.84

LMW-3S	11/18/2006	ND<2.30259	120
	6/2/2007	2.19722	275
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	6/11/2009	0.741937 J	246
	11/16/2009	ND<-0.356675 U	120
	6/30/2010	ND<-0.356675 U	120
	11/17/2010	1.52606 J	260
	7/6/2011	1.16315 J	258
	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120
	11/16/2012	ND<-0.356675 U	120

Rank Sum = 2119
Rank Mean = 163

LMW-6	1/16/1998	ND<2.30259	120
	3/16/1999	ND<2.30259	120
	9/23/1999	ND<2.30259	120
	3/14/2000	ND<2.30259	120
	9/23/2003	ND<2.30259	120
	3/10/2004	ND<2.30259	120
	10/12/2004	ND<2.30259	120
	4/1/2005	ND<2.30259	120
	10/26/2005	ND<2.30259	120
	6/19/2006	ND<2.30259	120
	11/18/2006	ND<2.30259	120
	6/2/2007	1.09861	256
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	6/11/2009	ND<-0.356675 U	120
	11/16/2009	ND<-0.356675 U	120
	6/30/2010	ND<-0.356675 U	120
	11/17/2010	ND<-0.356675 U	120
	7/6/2011	ND<-0.356675 U	120
	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120
	11/16/2012	ND<-0.356675 U	120

Rank Sum = 2896
Rank Mean = 125.913

LMW-7	1/16/1998	ND<2.30259	120
	3/16/1999	1.94591 J	267
	9/23/1999	3.89182	284
	3/14/2000	ND<2.30259	120
	9/23/2003	ND<2.30259	120
	3/10/2004	ND<2.30259	120
	10/12/2004	ND<2.30259	120
	4/1/2005	2.48491 J	278
	10/26/2005	2.89037 J	281
	6/19/2006	2.07944 J	273
	11/18/2006	1.09861 J	257
	6/2/2007	2.63906	279
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	6/11/2009	1.06471 J	254
	11/17/2010	ND<-0.356675 U	120
	7/6/2011	1.94591	268
	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120

	11/16/2012	ND<-0.356675 U	120

Rank Sum = 3881
Rank Mean = 184.81

LMW-8	1/16/1998	ND<2.30259	120
	3/16/1999	ND<2.30259	120
	9/23/1999	1.94591 J	269
	3/14/2000	ND<2.30259	120
	9/23/2003	ND<2.30259	120
	3/10/2004	ND<2.30259	120
	10/12/2004	ND<2.30259	120
	4/1/2005	ND<2.30259	120
	10/26/2005	ND<2.30259	120
	6/19/2006	ND<2.30259	120
	11/18/2006	ND<2.30259	120
	6/2/2007	ND<2.30259	120
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	6/11/2009	ND<-0.356675 U	120
	11/16/2009	ND<-0.356675 U	120
	6/30/2010	ND<-0.356675 U	120
	11/17/2010	ND<-0.356675 U	120
	7/6/2011	ND<-0.356675 U	120
	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120
	11/16/2012	ND<-0.356675 U	120

Rank Sum = 2909
Rank Mean = 126.478

LMW-9	1/16/1998	ND<2.30259	120
	3/16/1999	ND<2.30259	120
	9/23/1999	ND<2.30259	120
	3/14/2000	ND<2.30259	120
	9/23/2003	ND<2.30259	120
	3/10/2004	ND<2.30259	120
	10/12/2004	ND<2.30259	120
	4/1/2005	2.07944 J	274
	10/26/2005	2.3979 J	277
	6/19/2006	3.4012	282
	11/18/2006	ND<2.30259	120
	6/2/2007	1.94591	270
	11/15/2007	ND<2.30259	120
	5/20/2008	0.693147 J	244
	11/20/2008	ND<2.30259	120
	6/11/2009	0.955511 J	251
	11/16/2009	ND<-0.356675 U	120
	6/30/2010	ND<-0.356675 U	120
	11/17/2010	1.60944	261
	7/6/2011	ND<-0.356675 U	120
	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120
	11/16/2012	ND<-0.356675 U	120

Rank Sum = 3779
Rank Mean = 164.304

LMW-9D	11/18/2006	2.30259 J	276
	6/2/2007	1.60944	262
	11/15/2007	ND<2.30259	120
	5/20/2008	1.60944 J	263
	11/20/2008	1.60944 J	264
	6/11/2009	0.916291 J	250

	11/16/2009	0.832909 J	247
	6/30/2010	0.587787 J	242
	11/17/2010	0.832909 J	248
	7/6/2011	0.955511 J	252
	11/22/2011	0.693147 J	245
	5/16/2012	0.875469 J	249
	11/16/2012	1.36098 J	259

Rank Sum = 3177
Rank Mean = 244.385

LMW-9S	11/18/2006	ND<2.30259	120
	6/2/2007	1.60944	265
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120
	6/11/2009	ND<-0.356675 U	120
	11/16/2009	ND<-0.356675 U	120
	11/16/2009	ND<-0.356675 U	120
	11/16/2009	ND<-0.356675 U	120
	6/30/2010	ND<-0.356675 U	120
	11/17/2010	1.82455	266
	7/6/2011	ND<-0.356675 U	120
	11/22/2011	ND<-0.356675 U	120
	5/16/2012	ND<-0.356675 U	120
	11/16/2012	ND<-0.356675 U	120

Rank Sum = 2091
Rank Mean = 139.4

MW-5	1/16/1998	ND<2.30259	120
	3/16/1999	ND<2.30259	120
	9/23/1999	ND<2.30259	120
	3/14/2000	ND<2.30259	120
	9/23/2003	ND<2.30259	120
	3/10/2004	ND<2.30259	120
	10/12/2004	ND<2.30259	120
	4/1/2005	ND<2.30259	120
	10/26/2005	ND<2.30259	120
	6/19/2006	ND<2.30259	120
	11/15/2007	ND<2.30259	120
	5/20/2008	ND<2.30259	120
	11/20/2008	ND<2.30259	120

Rank Sum = 1560
Rank Mean = 120

Calculation Results:

Kruskal-Wallis H Statistic = 36.2021
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 89.6062
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
36.2021 > 26.2962 indicating a significant group difference at 5% significance level
89.6062 > 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 126.957

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**134.35**	**7.39348**	**58.4144**
LMW-11	**120**	**-6.9565**	**70.0396**
LMW-12	**120**	**-6.9565**	**70.0396**
LMW-13	**120**	**-6.9565**	**70.0396**

LMW-14R		131.182	4.2253	70.0396
LMW-15R		130.067	3.11014	63.4084
LMW-16	152	25.0435	66.2949	
LMW-3	124.84	-2.1165	255.2015	
LMW-3S	163	36.0435	66.2949	
LMW-6	125.913	-1.04348	56.3398	
LMW-7	184.81	57.853	57.6657	
LMW-8	126.478	-0.478261		56.3398
LMW-9	164.304	37.3478	56.3398	
LMW-9D	244.385	117.428	66.2949	
LMW-9S	139.4	12.4435	63.4084	
MW-5	120	-6.95652	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 126.957

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	134.35	7.39348	68.9963
LMW-11	120	-6.95652	82.7275
LMW-12	120	-6.95652	82.7275
LMW-13	120	-6.95652	82.7275
LMW-14R		131.182	4.2253	82.7275
LMW-15R		130.067	3.11014	74.895
LMW-16	152	25.0435	78.3044
LMW-3	124.84	-2.1165	265.2015
LMW-3S	163	36.0435	78.3044
LMW-6	125.913	-1.04348	66.546
LMW-7	184.81	57.853	68.112
LMW-8	126.478	-0.478261		66.546
LMW-9	164.304	37.3478	66.546
LMW-9D	244.385	117.428	78.3044
LMW-9S	139.4	12.4435	74.895
MW-5	120	-6.95652	78.3044

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	-1.589241	6	25	
ND<2.30259	3.89182	-1.589241	6	26	
ND<2.30259	3.89182	-1.589241	6	27	
1.06471 J	3.89182	-2.827111	6	28	
ND<-0.356675 U	3.89182	-4.2485	16	29	
1.94591	3.89182	-1.945911	6	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	-1.203971	8	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	-1.237871	9	36	
ND<-0.356675 U	ND<2.30259	-2.659261	9	37	
1.94591	ND<2.30259	-0.356675		19	38
ND<-0.356675 U	ND<2.30259	-2.659261	9	39	
ND<-0.356675 U	ND<2.30259	-2.659261	9	40	
ND<-0.356675 U	ND<2.30259	-2.659261	9	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	-1.203972	1	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	-1.237872	2	44	
ND<-0.356675 U	ND<2.30259	-2.659262	2	45	
1.94591	ND<2.30259	-0.356675		22	46
ND<-0.356675 U	ND<2.30259	-2.659262	2	47	
ND<-0.356675 U	ND<2.30259	-2.659262	2	48	
ND<-0.356675 U	ND<2.30259	-2.659262	2	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	-1.203972	4	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	-1.237872	5	52	
ND<-0.356675 U	ND<2.30259	-2.659262	5	53	
1.94591	ND<2.30259	-0.356675		25	54
ND<-0.356675 U	ND<2.30259	-2.659262	5	55	
ND<-0.356675 U	ND<2.30259	-2.659262	5	56	
ND<-0.356675 U	ND<2.30259	-2.659262	5	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 = 1.39525
Baseline Std Dev = 1.31085
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
1/16/1998	2.30259	0	0.692172
1/16/1998	2.30259	0	0.692172
3/16/1999	1.94591	0	0.420077
3/16/1999	1.94591	0	0.420077
9/23/1999	3.89182	0.904546	1.90455
9/23/1999	3.89182	0.904546	1.90455
3/14/2000	2.30259	0.596718	0.692172
3/14/2000	2.30259	0.596718	0.692172
9/23/2003	2.30259	0.288891	0.692172
9/23/2003	2.30259	0.288891	0.692172
3/10/2004	2.30259	0	0.692172
3/10/2004	2.30259	0	0.692172
10/12/2004	2.30259	0	0.692172
10/12/2004	2.30259	0	0.692172
4/1/2005	2.48491	0	0.831259
4/1/2005	2.48491	0	0.831259
10/26/2005	2.89037	0.140575	1.14057
10/26/2005	2.89037	0.140575	1.14057
6/19/2006	2.07944	0	0.521944
6/19/2006	2.07944	0	0.521944
11/18/2006	1.09861	0	-0.226298
11/18/2006	1.09861	0	-0.226298
6/2/2007	2.63906	0	0.948856
6/2/2007	2.63906	0	0.948856
11/15/2007	2.30259	0	0.692172
11/15/2007	2.30259	0	0.692172
5/20/2008	2.30259	0	0.692172
5/20/2008	2.30259	0	0.692172
11/20/2008	2.30259	0	0.692172
11/20/2008	2.30259	0	0.692172
6/11/2009	1.06471	0	-0.25216
6/11/2009	1.06471	0	-0.25216
11/17/2010	-0.356675	0	-1.33649
11/17/2010	-0.356675	0	-1.33649
7/6/2011	1.94591	0	0.420077
7/6/2011	1.94591	0	0.420077
11/22/2011	-0.356675	0	-1.33649
11/22/2011	-0.356675	0	-1.33649
5/16/2012	-0.356675	0	-1.33649
5/16/2012	-0.356675	0	-1.33649
11/16/2012	-0.356675	0	-1.33649
11/16/2012	-0.356675	0	-1.33649

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
ND<2.30259		1.60944	0.693147	1	11
1.60944 J		1.60944	0	1	11
1.60944 J		1.60944	0	1	11
0.916291 J		1.60944	-0.693147	1	12
0.832909 J		1.60944	-0.776529	1	13
0.587787 J		1.60944	-1.021651	14
0.832909 J		1.60944	-0.776529	1	15
0.955511 J		1.60944	-0.653926	1	16
0.693147 J		1.60944	-0.916291	1	17
0.875469 J		1.60944	-0.733969	1	18
1.36098 J		1.60944	-0.248461	1	19
1.60944 J		ND<2.30259	-0.693147	1	20
1.60944 J		ND<2.30259	-0.693147	1	21
0.916291 J		ND<2.30259	-1.386291	22
0.832909 J		ND<2.30259	-1.469681	23
0.587787 J		ND<2.30259	-1.7148 1	24
0.832909 J		ND<2.30259	-1.469681	25
0.955511 J		ND<2.30259	-1.347071	26
0.693147 J		ND<2.30259	-1.609441	27
0.875469 J		ND<2.30259	-1.427121	28
1.36098 J		ND<2.30259	-0.941609	1	29
1.60944 J		1.60944 J	0	1	29
0.916291 J		1.60944 J	-0.693147	1	30
0.832909 J		1.60944 J	-0.776529	1	31
0.587787 J		1.60944 J	-1.021651	32
0.832909 J		1.60944 J	-0.776529	1	33
0.955511 J		1.60944 J	-0.653926	1	34
0.693147 J		1.60944 J	-0.916291	1	35
0.875469 J		1.60944 J	-0.733969	1	36
1.36098 J		1.60944 J	-0.248461	1	37
0.916291 J		1.60944 J	-0.693147	1	38
0.832909 J		1.60944 J	-0.776529	1	39
0.587787 J		1.60944 J	-1.021651	40
0.832909 J		1.60944 J	-0.776529	1	41

0.955511 J	1.60944 J	-0.653926	1	42
0.693147 J	1.60944 J	-0.916291	1	43
0.875469 J	1.60944 J	-0.733969	1	44
1.36098 J	1.60944 J	-0.248461	1	45
0.832909 J	0.916291 J	-0.0833816	1	46
0.587787 J	0.916291 J	-0.328504	1	47
0.832909 J	0.916291 J	-0.0833816	1	48
0.955511 J	0.916291 J	0.0392207	2	48
0.693147 J	0.916291 J	-0.223144	2	49
0.875469 J	0.916291 J	-0.040822	2	50
1.36098 J	0.916291 J	0.444686	3	50
0.587787 J	0.832909 J	-0.245122	3	51
0.832909 J	0.832909 J	0 3	51	
0.955511 J	0.832909 J	0.122602	4	51
0.693147 J	0.832909 J	-0.139762	4	52
0.875469 J	0.832909 J	0.0425596	5	52
1.36098 J	0.832909 J	0.528067	6	52
0.832909 J	0.587787 J	0.245122	7	52
0.955511 J	0.587787 J	0.367725	8	52
0.693147 J	0.587787 J	0.105361	9	52
0.875469 J	0.587787 J	0.287682	10	52
1.36098 J	0.587787 J	0.77319 11	52	
0.955511 J	0.832909 J	0.122602	12	52
0.693147 J	0.832909 J	-0.139762	12	53
0.875469 J	0.832909 J	0.0425596	13	53
1.36098 J	0.832909 J	0.528067	14	53
0.693147 J	0.955511 J	-0.262364	14	54
0.875469 J	0.955511 J	-0.0800427	14	55
1.36098 J	0.955511 J	0.405465	15	55
0.875469 J	0.693147 J	0.182322	16	55
1.36098 J	0.693147 J	0.667829	17	55
1.36098 J	0.875469 J	0.485508	18	55

S Statistic = 18 - 55 = -37

Tied Group	Value	Members
1	2.30259	2
2	1.60944	3
3	0.832909	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

There are 0 time periods with multiple data

A = 102
B = 0
C = 6
D = 0
E = 10
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 263
Z-Score = -2.21986
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.21986| > 1.97737 indicating a trend

Shewhart-CUSUM Control Chart

Parameter: Vanadium

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Baseline mean = 1.39525
Baseline Std Dev = 1.31085
k = 1
h = 5
SCL = 4.5

Date	Value	CuSum	Std Mean
11/18/2006	2.30259	0	0.692172
11/18/2006	2.30259	0	0.692172
6/2/2007	1.60944	0	0.163394
6/2/2007	1.60944	0	0.163394
11/15/2007	2.30259	0	0.692172
11/15/2007	2.30259	0	0.692172
5/20/2008	1.60944	0	0.163394
5/20/2008	1.60944	0	0.163394
11/20/2008	1.60944	0	0.163394
11/20/2008	1.60944	0	0.163394
6/11/2009	0.916291	0	-0.365385
6/11/2009	0.916291	0	-0.365385
11/16/2009	0.832909	0	-0.428994
11/16/2009	0.832909	0	-0.428994
6/30/2010	0.587787	0	-0.61599
6/30/2010	0.587787	0	-0.61599
11/17/2010	0.832909	0	-0.428994
11/17/2010	0.832909	0	-0.428994
7/6/2011	0.955511	0	-0.335465
7/6/2011	0.955511	0	-0.335465
11/22/2011	0.693147	0	-0.535614
11/22/2011	0.693147	0	-0.535614
5/16/2012	0.875469	0	-0.396527
5/16/2012	0.875469	0	-0.396527
11/16/2012	1.36098	0	-0.0261491
11/16/2012	1.36098	0	-0.0261491

Concentrations (ppb)

Parameter: Zinc

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 272
Total Non-Detect: 150
Percent Non-Detects: 55.1471%
Total Background Measurements: 22
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
LMW-4	22	11 (50%)	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

There are 16 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
LMW-10	19	14 (73.6842%)	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
LMW-11	11	11 (100%)	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	
			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	
			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	
			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-14R	11	3 (27.2727%)	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	
LMW-15R	15	8 (53.3333%)	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	

LMW-16	12	4 (33.3333%)	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
LMW-3	24	13 (54.1667%)	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
LMW-3S	12	1 (8.33333%)	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
LMW-6	22	8 (36.3636%)	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	
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-8	22	15 (68.1818%)	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
LMW-9	22	12 (54.5455%)	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	
LMW-9D	12	3 (25%)	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	
LMW-9S	12	7 (58.3333%)	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
MW-5	13	11 (84.6154%)	1/16/1998	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 = 272

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1.3	-2.747777	7.55021	-3.5721
2	1.3	-2.457271	13.5884	-6.76655
3	1.3	-2.326341	9.0003	-9.79079
4	1.3	-2.197282	3.8283	-12.6473
5	1.3	-2.096932	8.2255	-15.3733
6	1.3	-2.033523	2.3607	-18.0169
7	1.3	-1.959963	6.2021	-20.5648
8	1.3	-1.8957	39.7958	-23.0292
9	1.3	-1.852184	3.2263	-25.437
10	1.3	-1.799124	6.4632	-27.7759
11	1.3	-1.750694	9.5281	-30.0518
12	1.3	-1.716885	2.4757	-32.2837
13	1.3	-1.674665	5.2802	-34.4608
14	1.3	-1.635245	7.9542	-36.5866
15	2.7	-1.607256	0.5375	-40.9262
16	2.9	-1.571796	3.008	-45.4844
17	3	-1.5382	65.3741	-50.099
18	3.2	-1.5141	67.6666	-54.9441
19	3.4	-1.483286	9.8667	-59.9873
20	3.5	-1.4538	71.9802	-65.0756
21	3.5	-1.4325	74.0323	-70.0893
22	3.6	-1.405077	6.0066	-75.1476
23	3.6	-1.378667	7.9072	-80.1108
24	3.7	-1.359467	9.7554	-85.1408
25	3.8	-1.334628	1.5366	-90.2123
26	4	-1.310588	3.2542	-95.4547
27	4.2	-1.293038	4.9262	-100.885
28	4.4	-1.270248	6.5397	-106.474
29	4.5	-1.248098	8.0974	-112.091
30	4.5	-1.231878	9.6149	-117.634
31	4.5	-1.210739	1.0807	-123.083
32	4.9	-1.190129	2.4971	-128.914
33	4.9	-1.174999	3.8777	-134.672
34	5	-1.155229	5.2123	-140.448
35	5.1	-1.1359	96.5025	-146.241
36	5.1	-1.121689	7.7607	-151.961
37	5.2	-1.103069	8.9774	-157.697
38	5.3	-1.08482	100.154	-163.447
39	5.3	-1.07138	101.302	-169.125
40	5.4	-1.05375	102.412	-174.815
41	5.5	-1.03643	103.487	-180.516
42	5.5	-1.02365	104.535	-186.146
43	5.6	-1.00687	105.548	-191.784
44	6	-0.990356	106.529	-197.726
45	6	-0.97815	107.486	-203.595
46	6.3	-0.9621	108.412	-209.656
47	6.3	-0.946291	109.307	-215.618
48	6.4	-0.93459	110.18	-221.599
49	6.5	-0.919183	111.025	-227.574
50	6.6	-0.903992	111.843	-233.54
51	6.6	-0.892733	112.64	-239.433

52	6.7	-0.877897	113.41	-245.314
53	6.7	-0.863249	114.155	-251.098
54	6.9	-0.852385	114.882	-256.98
55	7	-0.838054	115.584	-262.846
56	7	-0.823893	116.263	-268.613
57	7	-0.813379	116.925	-274.307
58	7.3	-0.7995	117.564	-280.143
59	7.3	-0.785774	118.181	-285.879
60	7.4	-0.775574	118.783	-291.619
61	7.6	-0.7621	119.364	-297.411
62	7.6	-0.748762	119.924	-303.101
63	7.9	-0.738846	120.47	-308.938
64	8.2	-0.725736	120.997	-314.889
65	8.2	-0.712751	121.505	-320.734
66	8.3	-0.703089	121.999	-326.569
67	8.5	-0.690309	122.476	-332.437
68	8.5	-0.677639	122.935	-338.197
69	8.6	-0.668209	123.381	-343.944
70	8.6	-0.655726	123.811	-349.583
71	8.7	-0.643345	124.225	-355.18
72	9.5	-0.634124	124.627	-361.204
73	10	-0.621911	125.014	-367.423
74	10	-0.609791	125.386	-373.521
75	10	-0.60076	125.747	-379.529
76	10	-0.588793	126.094	-385.417
77	10	-0.576911	126.426	-391.186
78	11	-0.568052	126.749	-397.434
79	11	-0.556308	127.059	-403.554
80	11	-0.544642	127.355	-409.545
81	11	-0.53594	127.643	-415.44
82	11	-0.524401	127.918	-421.208
83	11	-0.51293	128.181	-426.851
84	11	-0.504372	128.435	-432.399
85	11	-0.493018	128.678	-437.822
86	11	-0.481728	128.91	-443.121
87	12	-0.473299	129.134	-448.801
88	12	-0.462114	129.348	-454.346
89	12	-0.450985	129.551	-459.758
90	12	-0.442676	129.747	-465.07
91	13	-0.431644	129.933	-470.681
92	14	-0.423405	130.113	-476.609
93	14	-0.412463	130.283	-482.383
94	14	-0.401571	130.444	-488.005
95	14	-0.393433	130.599	-493.513
96	15	-0.382622	130.745	-499.253
97	15	-0.371856	130.883	-504.831
98	15	-0.363809	131.016	-510.288
99	15	-0.353118	131.141	-515.585
100	15	-0.342466	131.258	-520.722
101	16	-0.334503	131.37	-526.074
102	16	-0.323919	131.475	-531.256
103	17	-0.31337	131.573	-536.584
104	17	-0.305481	131.666	-541.777
105	18	-0.294992	131.753	-547.087
106	18	-0.284535	131.834	-552.208
107	18	-0.276714	131.911	-557.189
108	20	-0.266311	131.982	-562.515
109	20	-0.255936	132.047	-567.634
110	20	-0.248174	132.109	-572.598
111	20	-0.237847	132.165	-577.354
112	20	-0.227545	132.217	-581.905
113	21	-0.219834	132.265	-586.522

114	24	-0.209575	132.309	-591.552
115	27	-0.199336	132.349	-596.934
116	27	-0.191671	132.386	-602.109
117	29	-0.181468	132.419	-607.371
118	30	-0.171285	132.448	-612.51
119	30	-0.163659	132.475	-617.42
120	30	-0.153505	132.498	-622.025
121	30	-0.143367	132.519	-626.326
122	30	-0.135774	132.537	-630.399
123	30	-0.125661	132.553	-634.169
124	30	-0.115562	132.567	-637.636
125	30	-0.107995	132.578	-640.876
126	30	-0.0979139	132.588	-643.813
127	30	-0.0878447	132.596	-646.448
128	30	-0.0802981	132.602	-648.857
129	30	-0.0702426	132.607	-650.965
130	30	-0.0601949	132.611	-652.771
131	30	-0.0526632	132.613	-654.35
132	30	-0.0426257	132.615	-655.629
133	30	-0.0325917	132.616	-656.607
134	30	-0.0250691	132.617	-657.359
135	30	-0.0150408	132.617	-657.81
136	30	-0.00501359	132.617	-657.961
137	30	0.00501359	132.617	-657.81
138	30	0.0150408	132.617	-657.359
139	30	0.0250691	132.618	-656.607
140	30	0.0325917	132.619	-655.629
141	30	0.0426257	132.621	-654.35
142	30	0.0526632	132.624	-652.771
143	30	0.0601949	132.627	-650.965
144	30	0.0702426	132.632	-648.857
145	30	0.0802981	132.639	-646.448
146	30	0.0878447	132.646	-643.813
147	30	0.0979139	132.656	-640.876
148	30	0.107995	132.668	-637.636
149	30	0.115562	132.681	-634.169
150	30	0.125661	132.697	-630.399
151	30	0.135774	132.715	-626.326
152	30	0.143367	132.736	-622.025
153	30	0.153505	132.759	-617.42
154	30	0.163659	132.786	-612.51
155	30	0.171285	132.815	-607.371
156	30	0.181468	132.848	-601.927
157	30	0.191671	132.885	-596.177
158	30	0.199336	132.925	-590.197
159	30	0.209575	132.969	-583.91
160	30	0.219834	133.017	-577.315
161	30	0.227545	133.069	-570.489
162	30	0.237847	133.125	-563.353
163	30	0.248174	133.187	-555.908
164	30	0.255936	133.252	-548.23
165	30	0.266311	133.323	-540.241
166	30	0.276714	133.4	-531.939
167	30	0.284535	133.481	-523.403
168	30	0.294992	133.568	-514.553
169	30	0.305481	133.661	-505.389
170	30	0.31337	133.759	-495.988
171	30	0.323919	133.864	-486.27
172	30	0.334503	133.976	-476.235
173	30	0.342466	134.094	-465.961
174	30	0.353118	134.218	-455.368
175	30	0.363809	134.351	-444.453

176	30	0.371856	134.489	-433.298
177	30	0.382622	134.635	-421.819
178	30	0.393433	134.79	-410.016
179	30	0.401571	134.951	-397.969
180	30	0.412463	135.121	-385.595
181	30	0.423405	135.301	-372.893
182	30	0.431644	135.487	-359.943
183	30	0.442676	135.683	-346.663
184	30	0.450985	135.886	-333.134
185	30	0.462114	136.1	-319.27
186	30	0.473299	136.324	-305.071
187	30	0.481728	136.556	-290.619
188	30	0.493018	136.799	-275.829
189	30	0.504372	137.053	-260.698
190	30	0.51293	137.317	-245.31
191	30	0.524401	137.592	-229.578
192	30	0.53594	137.879	-213.5
193	30	0.544642	138.175	-197.16
194	30	0.556308	138.485	-180.471
195	30	0.568052	138.808	-163.43
196	30	0.576911	139.14	-146.122
197	30	0.588793	139.487	-128.458
198	30	0.60076	139.848	-110.436
199	30	0.609791	140.22	-92.1419
200	30	0.621911	140.607	-73.4845
201	30	0.634124	141.009	-54.4608
202	30	0.643345	141.423	-35.1605
203	30	0.655726	141.853	-15.4887
204	30	0.668209	142.299	4.55757
205	30	0.677639	142.758	24.8868
206	30	0.690309	143.235	45.596
207	30	0.703089	143.729	66.6887
208	30	0.712751	144.237	88.0712
209	30	0.725736	144.764	109.843
210	30	0.738846	145.31	132.009
211	30	0.748762	145.87	154.472
212	30	0.7621	146.451	177.335
213	30	0.775574	147.053	200.602
214	30	0.785774	147.67	224.175
215	30	0.7995	148.309	248.16
216	30	0.813379	148.971	272.561
217	30	0.823893	149.65	297.278
218	30	0.838054	150.352	322.42
219	30	0.852385	151.079	347.991
220	30	0.863249	151.824	373.889
221	30	0.877897	152.595	400.226
222	30	0.892733	153.392	427.008
223	30	0.903992	154.209	454.127
224	30	0.919183	155.054	481.703
225	30	0.93459	155.927	509.741
226	30	0.946291	156.823	538.129
227	30	0.9621	157.748	566.992
228	30	0.97815	158.705	596.337
229	30	0.990356	159.686	626.048
230	30	1.00687	160.7	656.253
231	30	1.02365	161.747	686.963
232	30	1.03643	162.822	718.056
233	30	1.05375	163.932	749.668
234	30	1.07138	165.08	781.81
235	30	1.08482	166.257	814.354
236	30	1.10306	167.473	847.446
237	30	1.12168	168.732	881.097

238	30	1.1359	170.022	915.173
239	30	1.15522	171.356	949.83
240	30	1.17499	172.737	985.08
241	30	1.19012	174.153	1020.78
242	30	1.21073	175.619	1057.11
243	30	1.23187	177.137	1094.06
244	30	1.24809	178.694	1131.5
245	30	1.27024	180.308	1169.61
246	30	1.29303	181.98	1208.4
247	30	1.31058	183.697	1247.72
248	30	1.33462	185.479	1287.76
249	30	1.35946	187.327	1328.54
250	30	1.37866	189.228	1369.9
251	30	1.40507	191.202	1412.05
252	30	1.4325	193.254	1455.03
253	30	1.4538	195.367	1498.64
254	30	1.48328	197.568	1543.14
255	31	1.5141	199.86	1590.08
256	32	1.5382	202.226	1639.3
257	36	1.57179	204.697	1695.89
258	39	1.60725	207.28	1758.57
259	40	1.63524	209.954	1823.98
260	40	1.67466	212.758	1890.96
261	40	1.71688	215.706	1959.64
262	40	1.75069	218.771	2029.67
263	47	1.79912	222.008	2114.23
264	48	1.85218	225.438	2203.13
265	50	1.8957	229.032	2297.91
266	51	1.95996	232.873	2397.87
267	53	2.03352	237.009	2505.65
268	59	2.09693	241.406	2629.37
269	66	2.19728	246.234	2774.39
270	69	2.32634	251.646	2934.91
271	90	2.45727	257.684	3156.06
272	90	2.74777	265.234	3403.36

Data Set Standard Deviation = 14.079
Numerator = 1.15829e+007
Denominator = 1.42477e+007
W Statistic = 0.812964 = 1.15829e+007 / 1.42477e+007

5% Critical value of 0.976 exceeds 0.812964
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.812964
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 = 0.902494
0.902494 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum		Value	Prob.	Quantile.	x	y
1	1.3	0.003663	-2.747	77	46.7278	348.683
2	1.3	0.00732601	-2.457	27	46.7278	334.497
3	1.3	0.010989	-2.326	34	46.7278	328.103
4	1.3	0.014652	-2.197	28	46.7278	321.801
5	1.3	0.018315	-2.096	93	46.7278	316.9
6	1.3	0.021978	-2.033	52	46.7278	313.804
7	1.3	0.025641	-1.959	96	46.7278	310.211
8	1.3	0.029304	-1.895	7	46.7278	307.073
9	1.3	0.032967	-1.852	18	46.7278	304.948
10	1.3	0.03663	-1.799	12	46.7278	302.357
11	1.3	0.040293	-1.750	69	46.7278	299.992
12	1.3	0.043956	-1.716	88	46.7278	298.341
13	1.3	0.047619	-1.674	66	46.7278	296.279
14	1.3	0.0512821	-1.635	24	46.7278	294.354
15	2.7	0.0549451	-1.607	25	55.05	292.987
16	2.9	0.0586081	-1.571	79	56.2389	291.256
17	3	0.0622711	-1.538	2	56.8333	289.615
18	3.2	0.0659341	-1.514	1	58.0222	288.439
19	3.4	0.0695971	-1.483	28	59.2111	286.934
20	3.5	0.0732601	-1.453	8	59.8056	285.494
21	3.5	0.0769231	-1.432	5	59.8056	284.454
22	3.6	0.0805861	-1.405	07	60.4	283.114
23	3.6	0.0842491	-1.378	66	60.4	281.824
24	3.7	0.0879121	-1.359	46	60.9944	280.887
25	3.8	0.0915751	-1.334	62	61.5889	279.674
26	4	0.0952381	-1.310	58	62.7778	278.5
27	4.2	0.0989011	-1.293	03	63.9667	277.643
28	4.4	0.102564	-1.270	24	65.1556	276.53
29	4.5	0.106227	-1.248	09	65.75	275.448
30	4.5	0.10989	-1.231	87	65.75	274.656
31	4.5	0.113553	-1.210	73	65.75	273.624
32	4.9	0.117216	-1.190	12	68.1278	272.617
33	4.9	0.120879	-1.174	99	68.1278	271.879
34	5	0.124542	-1.155	22	68.7222	270.913
35	5.1	0.128205	-1.135	9	69.3167	269.97
36	5.1	0.131868	-1.121	68	69.3167	269.275
37	5.2	0.135531	-1.103	06	69.9111	268.366
38	5.3	0.139194	-1.084	82	70.5056	267.476
39	5.3	0.142857	-1.071	38	70.5056	266.819
40	5.4	0.14652	-1.053	75	71.1	265.958
41	5.5	0.150183	-1.036	43	71.6944	265.112
42	5.5	0.153846	-1.023	65	71.6944	264.488
43	5.6	0.157509	-1.006	87	72.2889	263.669
44	6	0.161172	-0.990356		74.6667	262.862
45	6	0.164835	-0.978	15	74.6667	262.266
46	6.3	0.168498	-0.962	1	76.45	261.483
47	6.3	0.172161	-0.946291		76.45	260.711
48	6.4	0.175824	-0.934	59	77.0444	260.139

49	6.5	0.179487	-0.919183	77.6389	259.387
50	6.6	0.18315	-0.903992	78.2333	258.645
51	6.6	0.186813	-0.892733	78.2333	258.095
52	6.7	0.190476	-0.877897	78.8278	257.371
53	6.7	0.194139	-0.863249	78.8278	256.655
54	6.9	0.197802	-0.852385	80.0167	256.125
55	7	0.201465	-0.838054	80.6111	255.425
56	7	0.205128	-0.823893	80.6111	254.733
57	7	0.208791	-0.813379	80.6111	254.22
58	7.3	0.212454	-0.7995	82.3944	253.542
59	7.3	0.216117	-0.785774	82.3944	252.872
60	7.4	0.21978	-0.775574	82.9889	252.374
61	7.6	0.223443	-0.7621	84.1778	251.716
62	7.6	0.227106	-0.748762	84.1778	251.065
63	7.9	0.230769	-0.738846	85.9611	250.58
64	8.2	0.234432	-0.725736	87.7444	249.94
65	8.2	0.238095	-0.712751	87.7444	249.306
66	8.3	0.241758	-0.703089	88.3389	248.834
67	8.5	0.245421	-0.690309	89.5278	248.21
68	8.5	0.249084	-0.677639	89.5278	247.591
69	8.6	0.252747	-0.668209	90.1222	247.131
70	8.6	0.25641	-0.655726	90.1222	246.521
71	8.7	0.260073	-0.643345	90.7167	245.917
72	9.5	0.263736	-0.634124	95.4722	245.466
73	10	0.267399	-0.621911	98.4444	244.87
74	10	0.271062	-0.609791	98.4444	244.278
75	10	0.274725	-0.600769	8.4444	243.837
76	10	0.278388	-0.588793	98.4444	243.253
77	10	0.282051	-0.576911	98.4444	242.672
78	11	0.285714	-0.568052	104.389	242.24
79	11	0.289377	-0.556308	104.389	241.666
80	11	0.29304	-0.544642	104.389	241.097
81	11	0.296703	-0.53594	104.389	240.672
82	11	0.300366	-0.524401	104.389	240.108
83	11	0.304029	-0.51293	104.389	239.548
84	11	0.307692	-0.504372	104.389	239.13
85	11	0.311355	-0.493018	104.389	238.576
86	11	0.315018	-0.481728	104.389	238.024
87	12	0.318681	-0.473299	110.333	237.613
88	12	0.322344	-0.462114	110.333	237.067
89	12	0.326007	-0.450985	110.333	236.523
90	12	0.32967	-0.442676	110.333	236.117
91	13	0.333333	-0.431644	116.278	235.579
92	14	0.336996	-0.423405	122.222	235.176
93	14	0.340659	-0.412463	122.222	234.642
94	14	0.344322	-0.401571	122.222	234.11
95	14	0.347985	-0.393433	122.222	233.713
96	15	0.351648	-0.382622	128.167	233.185
97	15	0.355311	-0.371856	128.167	232.659
98	15	0.358974	-0.363809	128.167	232.266
99	15	0.362637	-0.353118	128.167	231.744
100	15	0.3663	-0.342466	128.167	231.224
101	16	0.369963	-0.334503	134.111	230.835
102	16	0.373626	-0.323919	134.111	230.318
103	17	0.377289	-0.31337	140.056	229.803
104	17	0.380952	-0.305481	140.056	229.418
105	18	0.384615	-0.294992	146	228.905
106	18	0.388278	-0.284535	146	228.395
107	18	0.391941	-0.276714	146	228.013
108	20	0.395604	-0.266311	157.889	227.505
109	20	0.399267	-0.255936	157.889	226.998
110	20	0.40293	-0.248174	157.889	226.619

111	20	0.406593	-0.237847	157.889	226.115
112	20	0.410256	-0.227545	157.889	225.612
113	21	0.413919	-0.219834	163.833	225.235
114	24	0.417582	-0.209575	181.667	224.734
115	27	0.421245	-0.199336	199.5	224.234
116	27	0.424908	-0.191671	199.5	223.86
117	29	0.428571	-0.181468	211.389	223.362
118	30	0.432234	-0.171285	217.333	222.864
119	30	0.435897	-0.163659	217.333	222.492
120	30	0.43956	-0.153505	217.333	221.996
121	30	0.443223	-0.143367	217.333	221.501
122	30	0.446886	-0.135774	217.333	221.13
123	30	0.450549	-0.125661	217.333	220.636
124	30	0.454212	-0.115562	217.333	220.143
125	30	0.457875	-0.107995	217.333	219.774
126	30	0.461538	-0.0979139	217.333	219.281
127	30	0.465201	-0.0878447	217.333	218.79
128	30	0.468864	-0.0802981	217.333	218.421
129	30	0.472527	-0.0702426	217.333	217.93
130	30	0.47619	-0.0601949	217.333	217.44
131	30	0.479853	-0.0526632	217.333	217.072
132	30	0.483516	-0.0426257	217.333	216.582
133	30	0.487179	-0.0325917	217.333	216.092
134	30	0.490842	-0.0250691	217.333	215.724
135	30	0.494505	-0.0150408	217.333	215.234
136	30	0.498168	-0.00501359	217.333	214.745
137	30	0.501832	0.00501359	217.333	214.255
138	30	0.505495	0.0150408	217.333	213.766
139	30	0.509158	0.0250691	217.333	213.276
140	30	0.512821	0.0325917	217.333	212.908
141	30	0.516484	0.0426257	217.333	212.418
142	30	0.520147	0.0526632	217.333	211.928
143	30	0.52381	0.0601949	217.333	211.56
144	30	0.527473	0.0702426	217.333	211.07
145	30	0.531136	0.0802981	217.333	210.579
146	30	0.534799	0.0878447	217.333	210.21
147	30	0.538462	0.0979139	217.333	209.719
148	30	0.542125	0.107995	217.333	209.226
149	30	0.545788	0.115562	217.333	208.857
150	30	0.549451	0.125661	217.333	208.364
151	30	0.553114	0.135774	217.333	207.87
152	30	0.556777	0.143367	217.333	207.499
153	30	0.56044	0.153505	217.333	207.004
154	30	0.564103	0.163659	217.333	206.508
155	30	0.567766	0.171285	217.333	206.136
156	30	0.571429	0.181468	217.333	205.638
157	30	0.575092	0.191671	217.333	205.14
158	30	0.578755	0.199336	217.333	204.766
159	30	0.582418	0.209575	217.333	204.266
160	30	0.586081	0.219834	217.333	203.765
161	30	0.589744	0.227545	217.333	203.388
162	30	0.593407	0.237847	217.333	202.885
163	30	0.59707	0.248174	217.333	202.381
164	30	0.600733	0.255936	217.333	202.002
165	30	0.604396	0.266311	217.333	201.495
166	30	0.608059	0.276714	217.333	200.987
167	30	0.611722	0.284535	217.333	200.605
168	30	0.615385	0.294992	217.333	200.095
169	30	0.619048	0.305481	217.333	199.582
170	30	0.622711	0.31337	217.333	199.197
171	30	0.626374	0.323919	217.333	198.682
172	30	0.630037	0.334503	217.333	198.165

173	30	0.6337	0.342466	217.333	197.776
174	30	0.637363	0.353118	217.333	197.256
175	30	0.641026	0.363809	217.333	196.734
176	30	0.644689	0.371856	217.333	196.341
177	30	0.648352	0.382622	217.333	195.815
178	30	0.652015	0.393433	217.333	195.287
179	30	0.655678	0.401571	217.333	194.89
180	30	0.659341	0.412463	217.333	194.358
181	30	0.663004	0.423405	217.333	193.824
182	30	0.666667	0.431644	217.333	193.421
183	30	0.67033	0.442676	217.333	192.883
184	30	0.673993	0.450985	217.333	192.477
185	30	0.677656	0.462114	217.333	191.933
186	30	0.681319	0.473299	217.333	191.387
187	30	0.684982	0.481728	217.333	190.976
188	30	0.688645	0.493018	217.333	190.424
189	30	0.692308	0.504372	217.333	189.87
190	30	0.695971	0.51293	217.333	189.452
191	30	0.699634	0.524401	217.333	188.892
192	30	0.703297	0.53594	217.333	188.328
193	30	0.70696	0.544642	217.333	187.903
194	30	0.710623	0.556308	217.333	187.334
195	30	0.714286	0.568052	217.333	186.76
196	30	0.717949	0.576911	217.333	186.328
197	30	0.721612	0.588793	217.333	185.747
198	30	0.725275	0.60076	217.333	185.163
199	30	0.728938	0.609791	217.333	184.722
200	30	0.732601	0.621911	217.333	184.13
201	30	0.736264	0.634124	217.333	183.534
202	30	0.739927	0.643345	217.333	183.083
203	30	0.74359	0.655726	217.333	182.479
204	30	0.747253	0.668209	217.333	181.869
205	30	0.750916	0.677639	217.333	181.409
206	30	0.754579	0.690309	217.333	180.79
207	30	0.758242	0.703089	217.333	180.166
208	30	0.761905	0.712751	217.333	179.694
209	30	0.765568	0.725736	217.333	179.06
210	30	0.769231	0.738846	217.333	178.42
211	30	0.772894	0.748762	217.333	177.935
212	30	0.776557	0.7621	217.333	177.284
213	30	0.78022	0.775574	217.333	176.626
214	30	0.783883	0.785774	217.333	176.128
215	30	0.787546	0.7995	217.333	175.458
216	30	0.791209	0.813379	217.333	174.78
217	30	0.794872	0.823893	217.333	174.267
218	30	0.798535	0.838054	217.333	173.575
219	30	0.802198	0.852385	217.333	172.875
220	30	0.805861	0.863249	217.333	172.345
221	30	0.809524	0.877897	217.333	171.629
222	30	0.813187	0.892733	217.333	170.905
223	30	0.81685	0.903992	217.333	170.355
224	30	0.820513	0.919183	217.333	169.613
225	30	0.824176	0.93459	217.333	168.861
226	30	0.827839	0.946291	217.333	168.289
227	30	0.831502	0.9621	217.333	167.517
228	30	0.835165	0.97815	217.333	166.734
229	30	0.838828	0.990356	217.333	166.138
230	30	0.842491	1.00687	217.333	165.331
231	30	0.846154	1.02365	217.333	164.512
232	30	0.849817	1.03643	217.333	163.888
233	30	0.85348	1.05375	217.333	163.042
234	30	0.857143	1.07138	217.333	162.181

235	30	0.860806	1.08482	217.333	161.524
236	30	0.864469	1.10306	217.333	160.634
237	30	0.868132	1.12168	217.333	159.725
238	30	0.871795	1.1359	217.333	159.03
239	30	0.875458	1.15522	217.333	158.087
240	30	0.879121	1.17499	217.333	157.121
241	30	0.882784	1.19012	217.333	156.383
242	30	0.886447	1.21073	217.333	155.376
243	30	0.89011	1.23187	217.333	154.344
244	30	0.893773	1.24809	217.333	153.552
245	30	0.897436	1.27024	217.333	152.47
246	30	0.901099	1.29303	217.333	151.357
247	30	0.904762	1.31058	217.333	150.5
248	30	0.908425	1.33462	217.333	149.326
249	30	0.912088	1.35946	217.333	148.113
250	30	0.915751	1.37866	217.333	147.176
251	30	0.919414	1.40507	217.333	145.886
252	30	0.923077	1.4325	217.333	144.546
253	30	0.92674	1.4538	217.333	143.506
254	30	0.930403	1.48328	217.333	142.066
255	31	0.934066	1.5141	223.278	140.561
256	32	0.937729	1.5382	229.222	139.385
257	36	0.941392	1.57179	253	137.744
258	39	0.945055	1.60725	270.833	136.013
259	40	0.948718	1.63524	276.778	134.646
260	40	0.952381	1.67466	276.778	132.721
261	40	0.956044	1.71688	276.778	130.659
262	40	0.959707	1.75069	276.778	129.008
263	47	0.96337	1.79912	318.389	126.643
264	48	0.967033	1.85218	324.333	124.052
265	50	0.970696	1.8957	336.222	121.927
266	51	0.974359	1.95996	342.167	118.789
267	53	0.978022	2.03352	354.056	115.196
268	59	0.981685	2.09693	389.722	112.1
269	66	0.985348	2.19728	431.333	107.199
270	69	0.989011	2.32634	449.167	100.897
271	90	0.992674	2.45727	574	94.5032
272	90	0.996337	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 = 272

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.262364	-2.747777.55021	-0.720915	
2	0.262364	-2.4572713.5884	-1.36562	
3	0.262364	-2.3263419.0003	-1.97597	
4	0.262364	-2.1972823.8283	-2.55245	
5	0.262364	-2.0969328.2255	-3.10261	
6	0.262364	-2.0335232.3607	-3.63614	
7	0.262364	-1.9599636.2021	-4.15036	
8	0.262364	-1.8957 39.7958	-4.64772	
9	0.262364	-1.8521843.2263	-5.13367	
10	0.262364	-1.7991246.4632	-5.60569	
11	0.262364	-1.7506949.5281	-6.06501	
12	0.262364	-1.7168852.4757	-6.51546	
13	0.262364	-1.6746655.2802	-6.95483	
14	0.262364	-1.6352457.9542	-7.38386	
15	0.993252	-1.6072560.5375	-8.98026	
16	1.06471	-1.5717963.008	-10.6538	
17	1.09861	-1.5382 65.3741	-12.3436	
18	1.16315	-1.5141 67.6666	-14.1048	
19	1.22378	-1.4832869.8667	-15.92	
20	1.25276	-1.4538 71.9802	-17.7413	
21	1.25276	-1.4325 74.0323	-19.5358	
22	1.28093	-1.4050776.0066	-21.3357	
23	1.28093	-1.3786677.9072	-23.1016	
24	1.30833	-1.3594679.7554	-24.8802	
25	1.335	-1.3346281.5366	-26.662	
26	1.38629	-1.3105883.2542	-28.4788	
27	1.43508	-1.2930384.9262	-30.3344	
28	1.4816	-1.2702486.5397	-32.2164	
29	1.50408	-1.2480988.0974	-34.0936	
30	1.50408	-1.2318789.6149	-35.9465	
31	1.50408	-1.2107391.0807	-37.7675	
32	1.58924	-1.1901292.4971	-39.6589	
33	1.58924	-1.1749993.8777	-41.5262	
34	1.60944	-1.1552295.2123	-43.3855	
35	1.62924	-1.1359 96.5025	-45.2361	
36	1.62924	-1.1216897.7607	-47.0636	
37	1.64866	-1.1030698.9774	-48.8822	
38	1.66771	-1.08482100.154	-50.6913	
39	1.66771	-1.07138101.302	-52.4781	
40	1.6864	-1.05375102.412	-54.2551	
41	1.70475	-1.03643103.487	-56.022	
42	1.70475	-1.02365104.535	-57.767	
43	1.72277	-1.00687105.548	-59.5016	
44	1.79176	-0.990356	106.529	-61.2761
45	1.79176	-0.97815107.486	-63.0287	
46	1.84055	-0.9621 108.412	-64.7995	
47	1.84055	-0.946291	109.307	-66.5412
48	1.8563	-0.93459110.18	-68.2761	
49	1.8718	-0.919183	111.025	-69.9966
50	1.88707	-0.903992	111.843	-71.7025
51	1.88707	-0.892733	112.64	-73.3872

52	1.90211	-0.877897	113.41	-75.057
53	1.90211	-0.863249	114.155	-76.699
54	1.93152	-0.852385	114.882	-78.3454
55	1.94591	-0.838054	115.584	-79.9762
56	1.94591	-0.823893	116.263	-81.5794
57	1.94591	-0.813379	116.925	-83.1622
58	1.98787	-0.7995	117.564	-84.7515
59	1.98787	-0.785774	118.181	-86.3135
60	2.00148	-0.775574	118.783	-87.8658
61	2.02815	-0.7621	119.364	-89.4114
62	2.02815	-0.748762	119.924	-90.93
63	2.06686	-0.738846	120.47	-92.4571
64	2.10413	-0.725736	120.997	-93.9842
65	2.10413	-0.712751	121.505	-95.4839
66	2.11626	-0.703089	121.999	-96.9718
67	2.14007	-0.690309	122.476	-98.4491
68	2.14007	-0.677639	122.935	-99.8993
69	2.15176	-0.668209	123.381	-101.337
70	2.15176	-0.655726	123.811	-102.748
71	2.16332	-0.643345	124.225	-104.14
72	2.25129	-0.634124	124.627	-105.567
73	2.30259	-0.621911	125.014	-106.999
74	2.30259	-0.609791	125.386	-108.404
75	2.30259	-0.60076	125.747	-109.787
76	2.30259	-0.588793	126.094	-111.143
77	2.30259	-0.576911	126.426	-112.471
78	2.3979	-0.568052	126.749	-113.833
79	2.3979	-0.556308	127.059	-115.167
80	2.3979	-0.544642	127.355	-116.473
81	2.3979	-0.53594	127.643	-117.758
82	2.3979	-0.524401	127.918	-119.016
83	2.3979	-0.51293	128.181	-120.246
84	2.3979	-0.504372	128.435	-121.455
85	2.3979	-0.493018	128.678	-122.637
86	2.3979	-0.481728	128.91	-123.792
87	2.48491	-0.473299	129.134	-124.969
88	2.48491	-0.462114	129.348	-126.117
89	2.48491	-0.450985	129.551	-127.237
90	2.48491	-0.442676	129.747	-128.337
91	2.56495	-0.431644	129.933	-129.445
92	2.63906	-0.423405	130.113	-130.562
93	2.63906	-0.412463	130.283	-131.651
94	2.63906	-0.401571	130.444	-132.71
95	2.63906	-0.393433	130.599	-133.749
96	2.70805	-0.382622	130.745	-134.785
97	2.70805	-0.371856	130.883	-135.792
98	2.70805	-0.363809	131.016	-136.777
99	2.70805	-0.353118	131.141	-137.733
100	2.70805	-0.342466	131.258	-138.661
101	2.77259	-0.334503	131.37	-139.588
102	2.77259	-0.323919	131.475	-140.486
103	2.83321	-0.31337	131.573	-141.374
104	2.83321	-0.305481	131.666	-142.24
105	2.89037	-0.294992	131.753	-143.092
106	2.89037	-0.284535	131.834	-143.915
107	2.89037	-0.276714	131.911	-144.714
108	2.99573	-0.266311	131.982	-145.512
109	2.99573	-0.255936	132.047	-146.279
110	2.99573	-0.248174	132.109	-147.022
111	2.99573	-0.237847	132.165	-147.735
112	2.99573	-0.227545	132.217	-148.417
113	3.04452	-0.219834	132.265	-149.086

114	3.17805	-0.209575	132.309	-149.752
115	3.29584	-0.199336	132.349	-150.409
116	3.29584	-0.191671	132.386	-151.041
117	3.3673	-0.181468	132.419	-151.652
118	3.4012	-0.171285	132.448	-152.234
119	3.4012	-0.163659	132.475	-152.791
120	3.4012	-0.153505	132.498	-153.313
121	3.4012	-0.143367	132.519	-153.801
122	3.4012	-0.135774	132.537	-154.262
123	3.4012	-0.125661	132.553	-154.69
124	3.4012	-0.115562	132.567	-155.083
125	3.4012	-0.107995	132.578	-155.45
126	3.4012	-0.0979139	132.588	-155.783
127	3.4012	-0.0878447	132.596	-156.082
128	3.4012	-0.0802981	132.602	-156.355
129	3.4012	-0.0702426	132.607	-156.594
130	3.4012	-0.0601949	132.611	-156.799
131	3.4012	-0.0526632	132.613	-156.978
132	3.4012	-0.0426257	132.615	-157.123
133	3.4012	-0.0325917	132.616	-157.234
134	3.4012	-0.0250691	132.617	-157.319
135	3.4012	-0.0150408	132.617	-157.37
136	3.4012	-0.00501359	132.617	-157.387
137	3.4012	0.00501359	132.617	-157.37
138	3.4012	0.0150408	132.617	-157.319
139	3.4012	0.0250691	132.618	-157.234
140	3.4012	0.0325917	132.619	-157.123
141	3.4012	0.0426257	132.621	-156.978
142	3.4012	0.0526632	132.624	-156.799
143	3.4012	0.0601949	132.627	-156.594
144	3.4012	0.0702426	132.632	-156.355
145	3.4012	0.0802981	132.639	-156.082
146	3.4012	0.0878447	132.646	-155.783
147	3.4012	0.0979139	132.656	-155.45
148	3.4012	0.107995	132.668	-155.083
149	3.4012	0.115562	132.681	-154.69
150	3.4012	0.125661	132.697	-154.262
151	3.4012	0.135774	132.715	-153.801
152	3.4012	0.143367	132.736	-153.313
153	3.4012	0.153505	132.759	-152.791
154	3.4012	0.163659	132.786	-152.234
155	3.4012	0.171285	132.815	-151.652
156	3.4012	0.181468	132.848	-151.034
157	3.4012	0.191671	132.885	-150.383
158	3.4012	0.199336	132.925	-149.705
159	3.4012	0.209575	132.969	-148.992
160	3.4012	0.219834	133.017	-148.244
161	3.4012	0.227545	133.069	-147.47
162	3.4012	0.237847	133.125	-146.661
163	3.4012	0.248174	133.187	-145.817
164	3.4012	0.255936	133.252	-144.947
165	3.4012	0.266311	133.323	-144.041
166	3.4012	0.276714	133.4	-143.1
167	3.4012	0.284535	133.481	-142.132
168	3.4012	0.294992	133.568	-141.129
169	3.4012	0.305481	133.661	-140.09
170	3.4012	0.31337	133.759	-139.024
171	3.4012	0.323919	133.864	-137.922
172	3.4012	0.334503	133.976	-136.784
173	3.4012	0.342466	134.094	-135.619
174	3.4012	0.353118	134.218	-134.418
175	3.4012	0.363809	134.351	-133.181

176	3.4012	0.371856		134.489	-131.916
177	3.4012	0.382622		134.635	-130.615
178	3.4012	0.393433		134.79	-129.277
179	3.4012	0.401571		134.951	-127.911
180	3.4012	0.412463		135.121	-126.508
181	3.4012	0.423405		135.301	-125.068
182	3.4012	0.431644		135.487	-123.6
183	3.4012	0.442676		135.683	-122.094
184	3.4012	0.450985		135.886	-120.56
185	3.4012	0.462114		136.1	-118.989
186	3.4012	0.473299		136.324	-117.379
187	3.4012	0.481728		136.556	-115.74
188	3.4012	0.493018		136.799	-114.064
189	3.4012	0.504372		137.053	-112.348
190	3.4012	0.51293	137.317	-110.604	
191	3.4012	0.524401		137.592	-108.82
192	3.4012	0.53594	137.879	-106.997	
193	3.4012	0.544642		138.175	-105.145
194	3.4012	0.556308		138.485	-103.253
195	3.4012	0.568052		138.808	-101.32
196	3.4012	0.576911		139.14	-99.3583
197	3.4012	0.588793		139.487	-97.3557
198	3.4012	0.60076	139.848	-95.3124	
199	3.4012	0.609791		140.22	-93.2384
200	3.4012	0.621911		140.607	-91.1231
201	3.4012	0.634124		141.009	-88.9664
202	3.4012	0.643345		141.423	-86.7782
203	3.4012	0.655726		141.853	-84.548
204	3.4012	0.668209		142.299	-82.2752
205	3.4012	0.677639		142.758	-79.9705
206	3.4012	0.690309		143.235	-77.6226
207	3.4012	0.703089		143.729	-75.2312
208	3.4012	0.712751		144.237	-72.807
209	3.4012	0.725736		144.764	-70.3387
210	3.4012	0.738846		145.31	-67.8257
211	3.4012	0.748762		145.87	-65.279
212	3.4012	0.7621	146.451	-62.687	
213	3.4012	0.775574		147.053	-60.0491
214	3.4012	0.785774		147.67	-57.3765
215	3.4012	0.7995	148.309	-54.6572	
216	3.4012	0.813379		148.971	-51.8908
217	3.4012	0.823893		149.65	-49.0886
218	3.4012	0.838054		150.352	-46.2382
219	3.4012	0.852385		151.079	-43.339
220	3.4012	0.863249		151.824	-40.403
221	3.4012	0.877897		152.595	-37.4171
222	3.4012	0.892733		153.392	-34.3807
223	3.4012	0.903992		154.209	-31.306
224	3.4012	0.919183		155.054	-28.1797
225	3.4012	0.93459	155.927	-25.001	
226	3.4012	0.946291		156.823	-21.7825
227	3.4012	0.9621	157.748	-18.5102	
228	3.4012	0.97815	158.705	-15.1833	
229	3.4012	0.990356		159.686	-11.8149
230	3.4012	1.00687	160.7	-8.39036	
231	3.4012	1.02365	161.747	-4.90872	
232	3.4012	1.03643	162.822	-1.38361	
233	3.4012	1.05375	163.932	2.20039	
234	3.4012	1.07138	165.08	5.84436	
235	3.4012	1.08482	166.257	9.53405	
236	3.4012	1.10306	167.473	13.2858	
237	3.4012	1.12168	168.732	17.1008	

238	3.4012	1.1359	170.022	20.9642
239	3.4012	1.15522	171.356	24.8934
240	3.4012	1.17499	172.737	28.8897
241	3.4012	1.19012	174.153	32.9376
242	3.4012	1.21073	175.619	37.0555
243	3.4012	1.23187	177.137	41.2453
244	3.4012	1.24809	178.694	45.4903
245	3.4012	1.27024	180.308	49.8106
246	3.4012	1.29303	181.98	54.2085
247	3.4012	1.31058	183.697	58.666
248	3.4012	1.33462	185.479	63.2053
249	3.4012	1.35946	187.327	67.8291
250	3.4012	1.37866	189.228	72.5182
251	3.4012	1.40507	191.202	77.2972
252	3.4012	1.4325	193.254	82.1694
253	3.4012	1.4538	195.367	87.1141
254	3.4012	1.48328	197.568	92.159
255	3.43399	1.5141	199.86	97.3584
256	3.46574	1.5382	202.226	102.689
257	3.58352	1.57179	204.697	108.322
258	3.66356	1.60725	207.28	114.21
259	3.68888	1.63524	209.954	120.242
260	3.68888	1.67466	212.758	126.42
261	3.68888	1.71688	215.706	132.753
262	3.68888	1.75069	218.771	139.211
263	3.85015	1.79912	222.008	146.138
264	3.8712	1.85218	225.438	153.308
265	3.91202	1.8957	229.032	160.724
266	3.93183	1.95996	232.873	168.431
267	3.97029	2.03352	237.009	176.504
268	4.07754	2.09693	241.406	185.055
269	4.18965	2.19728	246.234	194.261
270	4.23411	2.32634	251.646	204.111
271	4.49981	2.45727	257.684	215.168
272	4.49981	2.74777	265.234	227.532

Data Set Standard Deviation = 0.943035
Numerator = 51770.9
Denominator = 63922.5
W Statistic = 0.809901 = 51770.9 / 63922.5

5% Critical value of 0.976 exceeds 0.809901
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.809901
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 = 0.899774
0.899774 < 0.987 -- Normality test fails at 95% level

Plotted Data Points

Datum	Value	Prob.	Quantile.	x	y
1	0.262364	0.003663	-2.74777	67.073	348.683
2	0.262364	0.00732601	-2.45727	67.073	334.497
3	0.262364	0.010989	-2.32634	67.073	328.103
4	0.262364	0.014652	-2.19728	67.073	321.801
5	0.262364	0.018315	-2.09693	67.073	316.9
6	0.262364	0.021978	-2.03352	67.073	313.804
7	0.262364	0.025641	-1.95996	67.073	310.211
8	0.262364	0.029304	-1.8957	67.073	307.073
9	0.262364	0.032967	-1.85218	67.073	304.948
10	0.262364	0.03663	-1.79912	67.073	302.357
11	0.262364	0.040293	-1.75069	67.073	299.992
12	0.262364	0.043956	-1.71688	67.073	298.341
13	0.262364	0.047619	-1.67466	67.073	296.279
14	0.262364	0.0512821	-1.63524	67.073	294.354
15	0.993252	0.0549451	-1.60725	145.278	292.987
16	1.06471	0.0586081	-1.57179	152.924	291.256
17	1.09861	0.0622711	-1.5382	156.552	289.615
18	1.16315	0.0659341	-1.5141	163.457	288.439
19	1.22378	0.0695971	-1.48328	169.944	286.934
20	1.25276	0.0732601	-1.4538	173.046	285.494
21	1.25276	0.0769231	-1.4325	173.046	284.454
22	1.28093	0.0805861	-1.40507	176.06	283.114
23	1.28093	0.0842491	-1.37866	176.06	281.824
24	1.30833	0.0879121	-1.35946	178.992	280.887
25	1.335	0.0915751	-1.33462	181.845	279.674
26	1.38629	0.0952381	-1.31058	187.333	278.5
27	1.43508	0.0989011	-1.29303	192.554	277.643
28	1.4816	0.102564	-1.27024	197.532	276.53
29	1.50408	0.106227	-1.24809	199.936	275.448
30	1.50408	0.10989	-1.23187	199.936	274.656
31	1.50408	0.113553	-1.21073	199.936	273.624
32	1.58924	0.117216	-1.19012	209.048	272.617
33	1.58924	0.120879	-1.17499	209.048	271.879
34	1.60944	0.124542	-1.15522	211.21	270.913
35	1.62924	0.128205	-1.1359	213.329	269.97
36	1.62924	0.131868	-1.12168	213.329	269.275
37	1.64866	0.135531	-1.10306	215.406	268.366
38	1.66771	0.139194	-1.08482	217.445	267.476
39	1.66771	0.142857	-1.07138	217.445	266.819
40	1.6864	0.14652	-1.05375	219.445	265.958
41	1.70475	0.150183	-1.03643	221.408	265.112
42	1.70475	0.153846	-1.02365	221.408	264.488
43	1.72277	0.157509	-1.00687	223.336	263.669
44	1.79176	0.161172	-0.990356	230.718	262.862
45	1.79176	0.164835	-0.97815	230.718	262.266
46	1.84055	0.168498	-0.9621	235.939	261.483
47	1.84055	0.172161	-0.946291	235.939	260.711
48	1.8563	0.175824	-0.93459	237.624	260.139

49	1.8718	0.179487	-0.919183	239.283	259.387
50	1.88707	0.18315	-0.903992	240.916	258.645
51	1.88707	0.186813	-0.892733	240.916	258.095
52	1.90211	0.190476	-0.877897	242.526	257.371
53	1.90211	0.194139	-0.863249	242.526	256.655
54	1.93152	0.197802	-0.852385	245.673	256.125
55	1.94591	0.201465	-0.838054	247.212	255.425
56	1.94591	0.205128	-0.823893	247.212	254.733
57	1.94591	0.208791	-0.813379	247.212	254.22
58	1.98787	0.212454	-0.7995	251.703	253.542
59	1.98787	0.216117	-0.785774	251.703	252.872
60	2.00148	0.21978	-0.775574	253.158	252.374
61	2.02815	0.223443	-0.7621	256.012	251.716
62	2.02815	0.227106	-0.748762	256.012	251.065
63	2.06686	0.230769	-0.738846	260.154	250.58
64	2.10413	0.234432	-0.725736	264.142	249.94
65	2.10413	0.238095	-0.712751	264.142	249.306
66	2.11626	0.241758	-0.703089	265.439	248.834
67	2.14007	0.245421	-0.690309	267.987	248.21
68	2.14007	0.249084	-0.677639	267.987	247.591
69	2.15176	0.252747	-0.668209	269.239	247.131
70	2.15176	0.25641	-0.655726	269.239	246.521
71	2.16332	0.260073	-0.643345	270.476	245.917
72	2.25129	0.263736	-0.634124	279.888	245.466
73	2.30259	0.267399	-0.621911	285.377	244.87
74	2.30259	0.271062	-0.609791	285.377	244.278
75	2.30259	0.274725	-0.60076	285.377	243.837
76	2.30259	0.278388	-0.588793	285.377	243.253
77	2.30259	0.282051	-0.576911	285.377	242.672
78	2.3979	0.285714	-0.568052	295.575	242.24
79	2.3979	0.289377	-0.556308	295.575	241.666
80	2.3979	0.29304	-0.544642	295.575	241.097
81	2.3979	0.296703	-0.53594	295.575	240.672
82	2.3979	0.300366	-0.524401	295.575	240.108
83	2.3979	0.304029	-0.51293	295.575	239.548
84	2.3979	0.307692	-0.504372	295.575	239.13
85	2.3979	0.311355	-0.493018	295.575	238.576
86	2.3979	0.315018	-0.481728	295.575	238.024
87	2.48491	0.318681	-0.473299	304.885	237.613
88	2.48491	0.322344	-0.462114	304.885	237.067
89	2.48491	0.326007	-0.450985	304.885	236.523
90	2.48491	0.32967	-0.442676	304.885	236.117
91	2.56495	0.333333	-0.431644	313.45	235.579
92	2.63906	0.336996	-0.423405	321.379	235.176
93	2.63906	0.340659	-0.412463	321.379	234.642
94	2.63906	0.344322	-0.401571	321.379	234.11
95	2.63906	0.347985	-0.393433	321.379	233.713
96	2.70805	0.351648	-0.382622	328.761	233.185
97	2.70805	0.355311	-0.371856	328.761	232.659
98	2.70805	0.358974	-0.363809	328.761	232.266
99	2.70805	0.362637	-0.353118	328.761	231.744
100	2.70805	0.3663	-0.342466	328.761	231.224
101	2.77259	0.369963	-0.334503	335.667	230.835
102	2.77259	0.373626	-0.323919	335.667	230.318
103	2.83321	0.377289	-0.31337	342.154	229.803
104	2.83321	0.380952	-0.305481	342.154	229.418
105	2.89037	0.384615	-0.294992	348.27	228.905
106	2.89037	0.388278	-0.284535	348.27	228.395
107	2.89037	0.391941	-0.276714	348.27	228.013
108	2.99573	0.395604	-0.266311	359.543	227.505
109	2.99573	0.399267	-0.255936	359.543	226.998
110	2.99573	0.40293	-0.248174	359.543	226.619

111	2.99573	0.406593	-0.237847	359.543	226.115
112	2.99573	0.410256	-0.227545	359.543	225.612
113	3.04452	0.413919	-0.219834	364.764	225.235
114	3.17805	0.417582	-0.209575	379.052	224.734
115	3.29584	0.421245	-0.199336	391.655	224.234
116	3.29584	0.424908	-0.191671	391.655	223.86
117	3.3673	0.428571	-0.181468	399.301	223.362
118	3.4012	0.432234	-0.171285	402.928	222.864
119	3.4012	0.435897	-0.163659	402.928	222.492
120	3.4012	0.43956	-0.153505	402.928	221.996
121	3.4012	0.443223	-0.143367	402.928	221.501
122	3.4012	0.446886	-0.135774	402.928	221.13
123	3.4012	0.450549	-0.125661	402.928	220.636
124	3.4012	0.454212	-0.115562	402.928	220.143
125	3.4012	0.457875	-0.107995	402.928	219.774
126	3.4012	0.461538	-0.0979139	402.928	219.281
127	3.4012	0.465201	-0.0878447	402.928	218.79
128	3.4012	0.468864	-0.0802981	402.928	218.421
129	3.4012	0.472527	-0.0702426	402.928	217.93
130	3.4012	0.47619	-0.0601949	402.928	217.44
131	3.4012	0.479853	-0.0526632	402.928	217.072
132	3.4012	0.483516	-0.0426257	402.928	216.582
133	3.4012	0.487179	-0.0325917	402.928	216.092
134	3.4012	0.490842	-0.0250691	402.928	215.724
135	3.4012	0.494505	-0.0150408	402.928	215.234
136	3.4012	0.498168	-0.00501359	402.928	214.745
137	3.4012	0.501832	0.00501359	402.928	214.255
138	3.4012	0.505495	0.0150408	402.928	213.766
139	3.4012	0.509158	0.0250691	402.928	213.276
140	3.4012	0.512821	0.0325917	402.928	212.908
141	3.4012	0.516484	0.0426257	402.928	212.418
142	3.4012	0.520147	0.0526632	402.928	211.928
143	3.4012	0.52381	0.0601949	402.928	211.56
144	3.4012	0.527473	0.0702426	402.928	211.07
145	3.4012	0.531136	0.0802981	402.928	210.579
146	3.4012	0.534799	0.0878447	402.928	210.21
147	3.4012	0.538462	0.0979139	402.928	209.719
148	3.4012	0.542125	0.107995	402.928	209.226
149	3.4012	0.545788	0.115562	402.928	208.857
150	3.4012	0.549451	0.125661	402.928	208.364
151	3.4012	0.553114	0.135774	402.928	207.87
152	3.4012	0.556777	0.143367	402.928	207.499
153	3.4012	0.56044	0.153505	402.928	207.004
154	3.4012	0.564103	0.163659	402.928	206.508
155	3.4012	0.567766	0.171285	402.928	206.136
156	3.4012	0.571429	0.181468	402.928	205.638
157	3.4012	0.575092	0.191671	402.928	205.14
158	3.4012	0.578755	0.199336	402.928	204.766
159	3.4012	0.582418	0.209575	402.928	204.266
160	3.4012	0.586081	0.219834	402.928	203.765
161	3.4012	0.589744	0.227545	402.928	203.388
162	3.4012	0.593407	0.237847	402.928	202.885
163	3.4012	0.59707	0.248174	402.928	202.381
164	3.4012	0.600733	0.255936	402.928	202.002
165	3.4012	0.604396	0.266311	402.928	201.495
166	3.4012	0.608059	0.276714	402.928	200.987
167	3.4012	0.611722	0.284535	402.928	200.605
168	3.4012	0.615385	0.294992	402.928	200.095
169	3.4012	0.619048	0.305481	402.928	199.582
170	3.4012	0.622711	0.31337	402.928	199.197
171	3.4012	0.626374	0.323919	402.928	198.682
172	3.4012	0.630037	0.334503	402.928	198.165

173	3.4012	0.6337	0.342466	402.928	197.776
174	3.4012	0.637363	0.353118	402.928	197.256
175	3.4012	0.641026	0.363809	402.928	196.734
176	3.4012	0.644689	0.371856	402.928	196.341
177	3.4012	0.648352	0.382622	402.928	195.815
178	3.4012	0.652015	0.393433	402.928	195.287
179	3.4012	0.655678	0.401571	402.928	194.89
180	3.4012	0.659341	0.412463	402.928	194.358
181	3.4012	0.663004	0.423405	402.928	193.824
182	3.4012	0.666667	0.431644	402.928	193.421
183	3.4012	0.67033	0.442676	402.928	192.883
184	3.4012	0.673993	0.450985	402.928	192.477
185	3.4012	0.677656	0.462114	402.928	191.933
186	3.4012	0.681319	0.473299	402.928	191.387
187	3.4012	0.684982	0.481728	402.928	190.976
188	3.4012	0.688645	0.493018	402.928	190.424
189	3.4012	0.692308	0.504372	402.928	189.87
190	3.4012	0.695971	0.51293	402.928	189.452
191	3.4012	0.699634	0.524401	402.928	188.892
192	3.4012	0.703297	0.53594	402.928	188.328
193	3.4012	0.70696	0.544642	402.928	187.903
194	3.4012	0.710623	0.556308	402.928	187.334
195	3.4012	0.714286	0.568052	402.928	186.76
196	3.4012	0.717949	0.576911	402.928	186.328
197	3.4012	0.721612	0.588793	402.928	185.747
198	3.4012	0.725275	0.60076	402.928	185.163
199	3.4012	0.728938	0.609791	402.928	184.722
200	3.4012	0.732601	0.621911	402.928	184.13
201	3.4012	0.736264	0.634124	402.928	183.534
202	3.4012	0.739927	0.643345	402.928	183.083
203	3.4012	0.74359	0.655726	402.928	182.479
204	3.4012	0.747253	0.668209	402.928	181.869
205	3.4012	0.750916	0.677639	402.928	181.409
206	3.4012	0.754579	0.690309	402.928	180.79
207	3.4012	0.758242	0.703089	402.928	180.166
208	3.4012	0.761905	0.712751	402.928	179.694
209	3.4012	0.765568	0.725736	402.928	179.06
210	3.4012	0.769231	0.738846	402.928	178.42
211	3.4012	0.772894	0.748762	402.928	177.935
212	3.4012	0.776557	0.7621	402.928	177.284
213	3.4012	0.78022	0.775574	402.928	176.626
214	3.4012	0.783883	0.785774	402.928	176.128
215	3.4012	0.787546	0.7995	402.928	175.458
216	3.4012	0.791209	0.813379	402.928	174.78
217	3.4012	0.794872	0.823893	402.928	174.267
218	3.4012	0.798535	0.838054	402.928	173.575
219	3.4012	0.802198	0.852385	402.928	172.875
220	3.4012	0.805861	0.863249	402.928	172.345
221	3.4012	0.809524	0.877897	402.928	171.629
222	3.4012	0.813187	0.892733	402.928	170.905
223	3.4012	0.81685	0.903992	402.928	170.355
224	3.4012	0.820513	0.919183	402.928	169.613
225	3.4012	0.824176	0.93459	402.928	168.861
226	3.4012	0.827839	0.946291	402.928	168.289
227	3.4012	0.831502	0.9621	402.928	167.517
228	3.4012	0.835165	0.97815	402.928	166.734
229	3.4012	0.838828	0.990356	402.928	166.138
230	3.4012	0.842491	1.00687	402.928	165.331
231	3.4012	0.846154	1.02365	402.928	164.512
232	3.4012	0.849817	1.03643	402.928	163.888
233	3.4012	0.85348	1.05375	402.928	163.042
234	3.4012	0.857143	1.07138	402.928	162.181

235	3.4012	0.860806	1.08482	402.928	161.524
236	3.4012	0.864469	1.10306	402.928	160.634
237	3.4012	0.868132	1.12168	402.928	159.725
238	3.4012	0.871795	1.1359	402.928	159.03
239	3.4012	0.875458	1.15522	402.928	158.087
240	3.4012	0.879121	1.17499	402.928	157.121
241	3.4012	0.882784	1.19012	402.928	156.383
242	3.4012	0.886447	1.21073	402.928	155.376
243	3.4012	0.89011	1.23187	402.928	154.344
244	3.4012	0.893773	1.24809	402.928	153.552
245	3.4012	0.897436	1.27024	402.928	152.47
246	3.4012	0.901099	1.29303	402.928	151.357
247	3.4012	0.904762	1.31058	402.928	150.5
248	3.4012	0.908425	1.33462	402.928	149.326
249	3.4012	0.912088	1.35946	402.928	148.113
250	3.4012	0.915751	1.37866	402.928	147.176
251	3.4012	0.919414	1.40507	402.928	145.886
252	3.4012	0.923077	1.4325	402.928	144.546
253	3.4012	0.92674	1.4538	402.928	143.506
254	3.4012	0.930403	1.48328	402.928	142.066
255	3.43399	0.934066	1.5141	406.437	140.561
256	3.46574	0.937729	1.5382	409.834	139.385
257	3.58352	0.941392	1.57179	422.437	137.744
258	3.66356	0.945055	1.60725	431.001	136.013
259	3.68888	0.948718	1.63524	433.71	134.646
260	3.68888	0.952381	1.67466	433.71	132.721
261	3.68888	0.956044	1.71688	433.71	130.659
262	3.68888	0.959707	1.75069	433.71	129.008
263	3.85015	0.96337	1.79912	450.966	126.643
264	3.8712	0.967033	1.85218	453.219	124.052
265	3.91202	0.970696	1.8957	457.586	121.927
266	3.93183	0.974359	1.95996	459.705	118.789
267	3.97029	0.978022	2.03352	463.821	115.196
268	4.07754	0.981685	2.09693	475.297	112.1
269	4.18965	0.985348	2.19728	487.293	107.199
270	4.23411	0.989011	2.32634	492.049	100.897
271	4.49981	0.992674	2.45727	520.48	94.5032
272	4.49981	0.996337	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-4	1/16/1998	ND<3.4012	75.5
	3/16/1999	3.91202 J	265
	9/23/1999	ND<3.4012	75.5
	3/14/2000	ND<3.4012	75.5
	9/23/2003	ND<3.4012	75.5
	3/10/2004	ND<3.4012	75.5
	10/12/2004	ND<3.4012	75.5
	4/1/2005	ND<3.4012	75.5
	10/26/2005	ND<3.4012	75.5
	6/19/2006	ND<3.4012	75.5
	11/18/2006	2.3979 J	214
	6/2/2007	3.85015	263
	11/15/2007	ND<3.4012	75.5
	5/20/2008	2.70805 J	232
	11/20/2008	ND<3.4012	75.5
	6/11/2009	1.90211 J	188
	6/30/2010	1.93152 J	190
	11/17/2010	1.98787 J	194
	7/6/2011	2.99573	244
	11/22/2011	2.3979	215
	5/16/2012	1.79176 J	180
	11/16/2012	2.3979	216

Rank Sum = 3231.5
Rank Mean = 146.886

Background Rank Sum = 3231.5
Background Rank Mean = 146.886

Compliance Locations

Loc. ID	Date	Value	Rank
LMW-10	3/14/2000	ND<3.4012	75.5
	9/23/2003	ND<3.4012	75.5
	3/10/2004	ND<3.4012	75.5
	10/12/2004	ND<3.4012	75.5
	4/1/2005	ND<3.4012	75.5
	10/26/2005	ND<3.4012	75.5
	6/19/2006	ND<3.4012	75.5
	11/18/2006	ND<3.4012	75.5
	6/2/2007	ND<3.4012	75.5
	11/15/2007	ND<3.4012	75.5
	5/20/2008	3.68888 J	259
	11/20/2008	ND<3.4012	75.5
	6/11/2009	ND<0.262364 U	75.5
	6/30/2010	1.28093 J	158
	11/17/2010	1.66771 J	174
	7/6/2011	1.43508 J	163
	11/22/2011	1.70475 J	177
	5/16/2012	ND<0.262364 U	75.5

	11/16/2012	ND<0.262364 U	75.5

Rank Sum = 1988
Rank Mean = 104.632

LMW-11	3/14/2000	ND<3.4012	75.5
	9/23/2003	ND<3.4012	75.5
	3/10/2004	ND<3.4012	75.5
	10/12/2004	ND<3.4012	75.5
	4/1/2005	ND<3.4012	75.5
	10/26/2005	ND<3.4012	75.5
	6/19/2006	ND<3.4012	75.5
	6/2/2007	ND<3.4012	75.5
	11/15/2007	ND<3.4012	75.5
	5/20/2008	ND<3.4012	75.5
	11/20/2008	ND<3.4012	75.5

Rank Sum = 830.5
Rank Mean = 75.5

LMW-12	3/14/2000	ND<3.4012	75.5
	9/23/2003	ND<3.4012	75.5
	3/10/2004	ND<3.4012	75.5
	10/12/2004	ND<3.4012	75.5
	4/1/2005	ND<3.4012	75.5
	10/26/2005	ND<3.4012	75.5
	6/19/2006	ND<3.4012	75.5
	6/2/2007	ND<3.4012	75.5
	11/15/2007	ND<3.4012	75.5
	5/20/2008	ND<3.4012	75.5
	11/20/2008	ND<3.4012	75.5

Rank Sum = 830.5
Rank Mean = 75.5

LMW-13	3/14/2000	ND<3.4012	75.5
	9/23/2003	ND<3.4012	75.5
	3/10/2004	ND<3.4012	75.5
	10/12/2004	ND<3.4012	75.5
	4/1/2005	ND<3.4012	75.5
	10/26/2005	ND<3.4012	75.5
	6/19/2006	ND<3.4012	75.5
	6/2/2007	ND<3.4012	75.5
	11/15/2007	ND<3.4012	75.5
	5/20/2008	ND<3.4012	75.5
	11/20/2008	ND<3.4012	75.5

Rank Sum = 830.5
Rank Mean = 75.5

LMW-14R	6/2/2007	2.70805 J	233
	11/15/2007	ND<3.4012	75.5
	5/20/2008	2.89037 J	241
	11/20/2008	ND<3.4012	75.5
	6/11/2009	1.84055 J	182
	6/30/2010	1.58924 J	168
	11/17/2010	1.50408 J	165
	7/6/2011	2.30259	209
	11/22/2011	2.30259	210
	5/16/2012	1.90211 J	189
	11/16/2012	ND<0.262364 U	75.5

Rank Sum = 1823.5
Rank Mean = 165.773

LMW-15R	11/18/2006	2.63906 J	228
	6/2/2007	ND<3.4012	75.5

	11/15/2007	ND<3.4012		75.5
	11/15/2007	ND<3.4012		75.5
	5/20/2008	3.66356	J	258
	5/20/2008	ND<3.4012		75.5
	11/20/2008	ND<3.4012		75.5
	11/20/2008	ND<3.4012		75.5
	6/11/2009	1.8718	J	185
	6/30/2010	1.88707	J	186
	11/17/2010	2.11626	J	202
	7/6/2011	2.15176	J	205
	11/22/2011	2.14007	J	203
	5/16/2012	ND<0.262364	U	75.5
	11/16/2012	ND<0.262364	U	75.5

Rank Sum = 2071
Rank Mean = 138.067

LMW-16	11/18/2006	ND<3.4012		75.5
	6/2/2007	2.77259	J	237
	11/15/2007	4.23411		270
	5/20/2008	2.70805	J	234
	11/20/2008	ND<3.4012		75.5
	6/11/2009	ND<0.262364	U	75.5
	6/30/2010	2.06686	J	199
	11/17/2010	1.6864	J	176
	7/6/2011	1.62924	J	171
	11/22/2011	2.48491		223
	5/16/2012	1.335	J	161
	11/16/2012	ND<0.262364	U	75.5

Rank Sum = 1973
Rank Mean = 164.417

LMW-3	11/19/1996	ND<3.4012		75.5
	3/24/1997	ND<3.4012		75.5
	1/16/1998	ND<3.4012		75.5
	3/16/1999	2.99573	J	245
	9/23/1999	ND<3.4012		75.5
	3/14/2000	ND<3.4012		75.5
	9/23/2003	ND<3.4012		75.5
	3/10/2004	ND<3.4012		75.5
	10/12/2004	ND<3.4012		75.5
	4/1/2005	ND<3.4012		75.5
	10/26/2005	ND<3.4012		75.5
	6/19/2006	ND<3.4012		75.5
	11/18/2006	1.79176	J	181
	6/2/2007	ND<3.4012		75.5
	11/15/2007	4.18965		269
	5/20/2008	2.48491	J	224
	11/20/2008	ND<3.4012		75.5
	6/11/2009	1.98787	J B	195
	6/30/2010	2.14007	J	204
	11/17/2010	2.3979		217
	7/6/2011	2.02815	J	197
	11/22/2011	2.63906		229
	5/16/2012	1.38629	J	162
	11/16/2012	1.09861	J	153

Rank Sum = 3257.5
Rank Mean = 135.729

LMW-3S	11/18/2006	2.30259	J	211
	6/2/2007	2.77259	J	238
	11/15/2007	3.8712	J	264
	5/20/2008	2.70805	J	235

	11/20/2008	ND<3.4012		75.5
	6/11/2009	2.89037	B	242
	6/30/2010	2.63906	Q	230
	11/17/2010	2.3979		218
	7/6/2011	2.02815	J	198
	11/22/2011	1.70475	J	178
	5/16/2012	2.3979		219
	11/16/2012	2.48491		225

Rank Sum = 2533.5
Rank Mean = 211.125

LMW-6	1/16/1998	ND<3.4012		75.5
	3/16/1999	3.4012	J	254
	9/23/1999	3.97029	J	267
	3/14/2000	ND<3.4012		75.5
	9/23/2003	ND<3.4012		75.5
	3/10/2004	ND<3.4012		75.5
	10/12/2004	ND<3.4012		75.5
	4/1/2005	ND<3.4012		75.5
	10/26/2005	ND<3.4012		75.5
	6/19/2006	2.99573	J	246
	11/18/2006	1.94591	J	191
	6/2/2007	2.83321	J	239
	11/15/2007	3.29584	J	251
	5/20/2008	2.30259	J	212
	11/20/2008	ND<3.4012		75.5
	6/11/2009	2.10413	J B	200
	6/30/2010	2.3979		220
	11/17/2010	2.15176	J	206
	7/6/2011	2.16332	J	207
	11/22/2011	1.58924	J	169
	5/16/2012	1.06471	J	152
	11/16/2012	1.22378	J	155

Rank Sum = 3573
Rank Mean = 162.409

LMW-7	1/16/1998	ND<3.4012		75.5
	3/16/1999	2.99573	J	247
	9/23/1999	3.68888	J	260
	3/14/2000	ND<3.4012		75.5
	9/23/2003	ND<3.4012		75.5
	3/10/2004	ND<3.4012		75.5
	10/12/2004	ND<3.4012		75.5
	4/1/2005	3.29584	J	252
	10/26/2005	3.43399	J	255
	6/19/2006	3.68888	J	261
	11/18/2006	3.04452	J	249
	6/2/2007	3.93183		266
	11/15/2007	ND<3.4012		75.5
	5/20/2008	2.30259	J	213
	11/20/2008	ND<3.4012		75.5
	6/11/2009	3.3673	B	253
	11/17/2010	2.25129	J	208
	7/6/2011	4.07754		268
	11/22/2011	2.70805		236
	5/16/2012	2.3979		221
	11/16/2012	1.8563	J	184

Rank Sum = 3901.5
Rank Mean = 185.786

LMW-8	1/16/1998	ND<3.4012		75.5
	3/16/1999	4.49981		271

	9/23/1999	ND<3.4012	75.5
	3/14/2000	ND<3.4012	75.5
	9/23/2003	ND<3.4012	75.5
	3/10/2004	ND<3.4012	75.5
	10/12/2004	ND<3.4012	75.5
	4/1/2005	ND<3.4012	75.5
	10/26/2005	ND<3.4012	75.5
	6/19/2006	ND<3.4012	75.5
	11/18/2006	ND<3.4012	75.5
	6/2/2007	ND<3.4012	75.5
	11/15/2007	ND<3.4012	75.5
	5/20/2008	1.60944 J	170
	11/20/2008	ND<3.4012	75.5
	6/11/2009	2.10413 J	201
	6/30/2010	1.50408 J	166
	11/17/2010	1.16315 J	154
	7/6/2011	2.3979 J	222
	11/22/2011	3.17805	250
	5/16/2012	ND<0.262364 U	75.5
	11/16/2012	ND<0.262364 U	75.5

Rank Sum = 2566.5
Rank Mean = 116.659

LMW-9	1/16/1998	ND<3.4012	75.5
	3/16/1999	4.49981	272
	9/23/1999	ND<3.4012	75.5
	3/14/2000	ND<3.4012	75.5
	9/23/2003	ND<3.4012	75.5
	3/10/2004	ND<3.4012	75.5
	10/12/2004	ND<3.4012	75.5
	4/1/2005	ND<3.4012	75.5
	10/26/2005	ND<3.4012	75.5
	6/19/2006	2.99573 J	248
	11/18/2006	ND<3.4012	75.5
	6/2/2007	2.83321 J	240
	11/15/2007	ND<3.4012	75.5
	5/20/2008	1.94591 J	192
	11/20/2008	ND<3.4012	75.5
	6/11/2009	ND<0.262364 U	75.5
	6/30/2010	1.4816 J	164
	11/17/2010	1.50408 J	167
	7/6/2011	1.30833 J	160
	11/22/2011	1.88707 J	187
	5/16/2012	2.00148 J	196
	11/16/2012	2.48491 J	226

Rank Sum = 2958
Rank Mean = 134.455

LMW-9D	11/18/2006	1.94591 J	193
	6/2/2007	ND<3.4012	75.5
	11/15/2007	ND<3.4012	75.5
	5/20/2008	2.89037 J	243
	11/20/2008	ND<3.4012	75.5
	6/11/2009	1.25276 J	156
	6/30/2010	1.72277 J	179
	11/17/2010	1.62924 J	172
	7/6/2011	2.56495	227
	11/22/2011	2.63906	231
	5/16/2012	0.993252 J	151
	11/16/2012	1.66771 J	175

Rank Sum = 1953.5
Rank Mean = 162.792

LMW-9S	11/18/2006	ND<3.4012	75.5
	6/2/2007	ND<3.4012	75.5
	11/15/2007	ND<3.4012	75.5
	5/20/2008	3.46574 J	256
	11/20/2008	ND<3.4012	75.5
	6/11/2009	1.64866 J	173
	6/30/2010	1.25276 J	157
	11/17/2010	1.28093 J	159
	7/6/2011	ND<0.262364 U	75.5
	11/22/2011	1.84055 J	183
	5/16/2012	ND<0.262364 U	75.5
	11/16/2012	ND<0.262364 U	75.5

Rank Sum = 1456.5
Rank Mean = 121.375

MW-5	1/16/1998	ND<3.4012	75.5
	3/16/1999	3.68888 J	262
	9/23/1999	3.58352 J	257
	3/14/2000	ND<3.4012	75.5
	9/23/2003	ND<3.4012	75.5
	3/10/2004	ND<3.4012	75.5
	10/12/2004	ND<3.4012	75.5
	4/1/2005	ND<3.4012	75.5
	10/26/2005	ND<3.4012	75.5
	6/19/2006	ND<3.4012	75.5
	11/15/2007	ND<3.4012	75.5
	5/20/2008	ND<3.4012	75.5
	11/20/2008	ND<3.4012	75.5

Rank Sum = 1349.5
Rank Mean = 103.808

Calculation Results:

Kruskal-Wallis H Statistic = 53.2618
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 63.9942
95% Confidence comparison value is 26.2962 at 16 degrees of freedom
53.2618 > 26.2962 indicating a significant group difference at 5% significance level
63.9942 > 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 146.886

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**104.632**	**-42.2548**	**57.3129**
LMW-11	**75.5**	**-71.3864**	**67.5769**
LMW-12	**75.5**	**-71.3864**	**67.5769**
LMW-13	**75.5**	**-71.3864**	**67.5769**
LMW-14R	**165.773**	**18.8864**	**67.5769**
LMW-15R	**138.067**	**-8.8197**	**61.2763**
LMW-16	**164.417**	**17.5303**	**65.6729**
LMW-3	**135.729**	**-11.1572**	**54.0145**
LMW-3S	**211.125**	**64.2386**	**65.6729**
LMW-6	**162.409**	**15.5227**	**55.1763**
LMW-7	**185.786**	**38.8994**	**55.8293**
LMW-8	**116.659**	**-30.2273**	**55.1763**
LMW-9	**134.455**	**-12.4318**	**55.1763**
LMW-9D	**162.792**	**15.9053**	**65.6729**
LMW-9S	**121.375**	**-25.5114**	**65.6729**
MW-5	**103.808**	**-43.0787**	**64.0176**

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 146.886

Well	Mean Rank	Dif from Bkg	Critical Value
LMW-10	**104.632**	**-42.2548**	**67.6953**
LMW-11	**75.5**	**-71.3864**	**79.8186**
LMW-12	**75.5**	**-71.3864**	**79.8186**
LMW-13	**75.5**	**-71.3864**	**79.8186**
LMW-14R	**165.773**	**18.8864**	**79.8186**
LMW-15R	**138.067**	**-8.8197**	**72.3767**
LMW-16	**164.417**	**17.5303**	**77.5697**
LMW-3	**135.729**	**-11.1572**	**63.7994**
LMW-3S	**211.125**	**64.2386**	**77.5697**
LMW-6	**162.409**	**15.5227**	**65.1716**
LMW-7	**185.786**	**38.8994**	**65.9429**
LMW-8	**116.659**	**-30.2273**	**65.1716**
LMW-9	**134.455**	**-12.4318**	**65.1716**
LMW-9D	**162.792**	**15.9053**	**77.5697**
LMW-9S	**121.375**	**-25.5114**	**77.5697**
MW-5	**103.808**	**-43.0787**	**75.6146**

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Zinc

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 55.1471%
Number of comparisons = 16
Future Samples (k) = 8
Recent Dates = 1
Background Measurements (n) = 22
Maximum Background Value = 3.91202
Confidence Level = 73.3%
False Positive Rate = 26.7%

Location	Date	Count	Mean	Significant
LMW-10	11/16/2012	1	0.262364	FALSE
LMW-11	11/20/2008	1	3.4012	FALSE
LMW-12	11/20/2008	1	3.4012	FALSE
LMW-13	11/20/2008	1	3.4012	FALSE
LMW-14R	11/16/2012	1	0.262364	FALSE
LMW-15R	11/16/2012	1	0.262364	FALSE
LMW-16	11/16/2012	1	0.262364	FALSE
LMW-3	11/16/2012	1	1.09861	FALSE
LMW-3S	11/16/2012	1	2.48491	FALSE
LMW-6	11/16/2012	1	1.22378	FALSE
LMW-7	11/16/2012	1	1.8563	FALSE
LMW-8	11/16/2012	1	0.262364	FALSE
LMW-9	11/16/2012	1	2.48491	FALSE
LMW-9D	11/16/2012	1	1.66771	FALSE
LMW-9S	11/16/2012	1	0.262364	FALSE
MW-5	11/20/2008	1	3.4012	FALSE

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 N26

Permit No. 26G and 26-08

August 2013

Prepared by
U.S. Army Corps of Engineers, Savannah District
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Statistical Analysis of Ground-Water Data
Lamont Road Land Clearing and Inert Debris Landfill
Fort Bragg, North Carolina
Rounds N1 through N26

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 May 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 or the Shewhart-CUSUM Control Chart. The fluctuations in the LMW-8 data are not an 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 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 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 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.

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.

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: August 2013

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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=26) were conducted during May 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-4 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-4	**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.

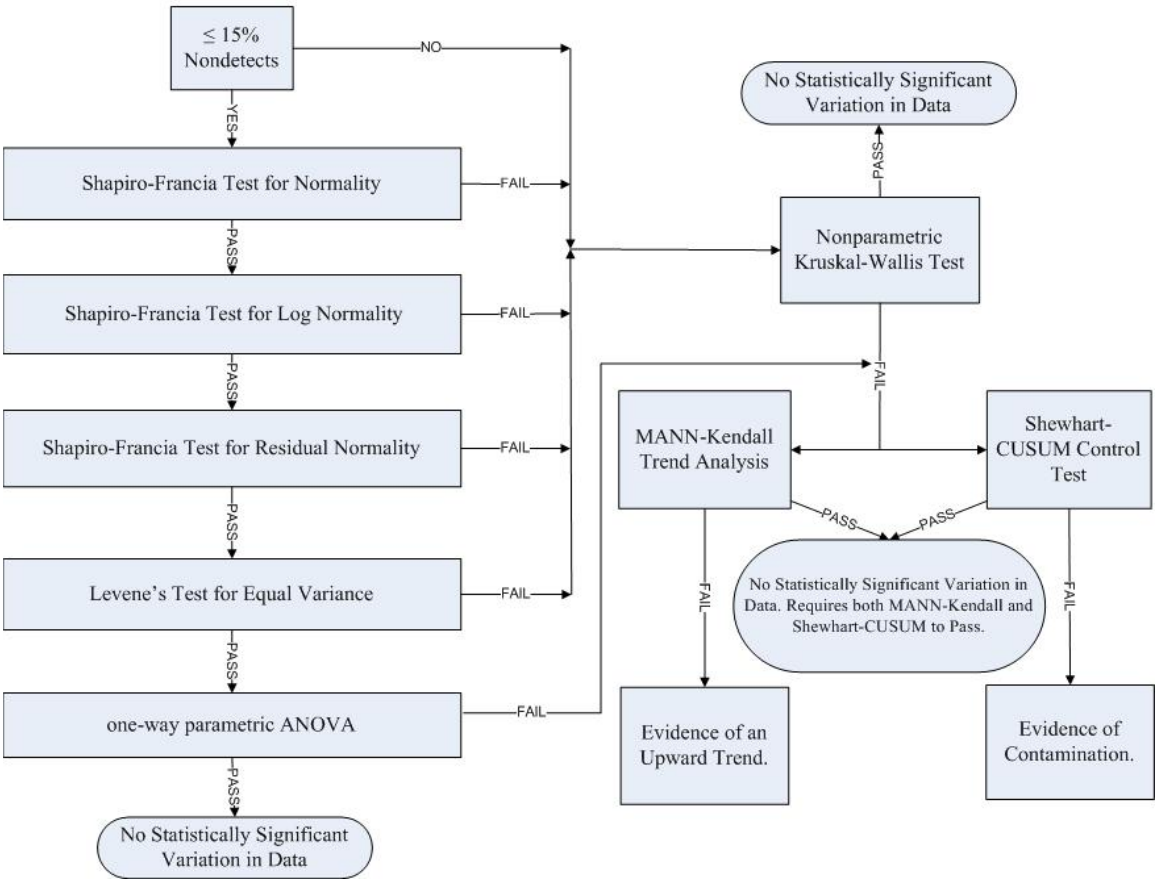
In this case, the Kruskal-Wallis Test performs post-hoc comparisons between background and compliance well data to determine which wells, if any, show evidence of contamination. If the difference between the average ranks and the mean background rank of any individual well exceeds the critical difference 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 or the Shewhart-CUSUM Control Chart. The fluctuations in the LMW-8 data are not an 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 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 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 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.

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.