FINAL
JUNE 2010 (N=27) GROUNDWATER, SURFACE-WATER, AND METHANE MONITORING REPORT

FOR

LONGSTREET ROAD MSW LANDFILL
NCDENR LANDFILL PERMIT #26-02

FORT BRAGG, NORTH CAROLINA

Prepared by:

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

NOVEMBER 2010

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SIGNATURE OF CERTIFIED PROFESSIONAL GEOLOGIST	
Kevin G. Haborak, P. G. Professional License Numbers: Georgia # 1683	Date

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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
USACE	US Army Corps of Engineers
VOCs	Volatile Organic Compounds

JUNE 2010 (N=27) GROUNDWATER, SURFACE-WATER, AND METHANE MONITORING REPORT FOR LONGSTREET ROAD MSW LANDFILL NCDENR LANDFILL PERMIT #26-02 FORT BRAGG, NORTH CAROLINA

1.0 INTRODUCTION

This is the N=27 Report for the groundwater and methane monitoring at the Longstreet Landfill (Figure 1) performed by the United States Army Corps of Engineers (USACE), Savannah District in June, 2010. The monitoring is required by the North Carolina Department of Environmental and Natural Resources (NCDENR) Solid Waste Management Division. This is the twenty-seventh (N=27) monitoring event 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 Longstreet Road landfill is a Municipal Solid Waste Landfill Facility (MSWLF) located north of Longstreet Road at Fort Bragg in Cumberland County, North Carolina. Figure 1 is a map of the site location. The United States Army Corps of Engineers (USACE), Savannah District has been contracted by the Fort Bragg Directorate of Public Works (DPW) to conduct water quality and methane sampling for the Environmental Branch to satisfy the permit and Sampling and Analysis Plan (SAP) requirements. Groundwater, surface-water, and methane monitoring locations are shown on Figure 2. The current SAP, approved by NCDENR, includes sampling nine monitoring wells and two surface-water stations. The monitoring wells are SLMW-6, SLMW-7, SLMW-8, SLMW-9, SLMW-10, SLMW-11R, SLMW-12AR, SLMW-12BR, and SLMW-13, and the surface-water station is SW-1. Monitoring well SLMW-11R is a replacement well that was installed in July 2008. The replacement well was installed because well SLMW-11 had been dry for several events. All sampling was conducted according to North Carolina Solid Waste Management Guidelines.

1.2 Project Scope

The scope for this project included collecting 10 groundwater samples for all Appendix I and triggered Appendix II constituents, collecting 1 surface-water sample for all Appendix I & II constituents, performing methane monitoring at 14 selected methane monitoring wells and 6 buildings on site, 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

The MSWLF is located north of Longstreet Road at Fort Bragg in Cumberland County, North Carolina. Figures 1 and 2 show the site location and layout. The MSWLF is west of the main post and east of Cooleyconch Mountain. Cooleyconch Mountain is the prominent terrain feature west of the main post. A vehicle washing facility borders the site to the east, the Lamont Road LCID and C&D Landfills are approximately 1.5 miles east of the site (on the west side of Cooleyconch Mountain).

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 Landfill. 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 2009 for Longstreet Landfill, was conducted by the USACE, Savannah District. Low levels of VOCs, SVOCs, pesticides and Appendix II inorganics were detected, but most detections were at

estimated levels and/or were below NC2L standards. Constituents found above the NC2L standards were: benzene, vinyl chloride, 4-methylphenol, Iron, Tetrachloroethene, and 1,2-dichloropropane

3.0 METHODS

3.1 Methane Monitoring

Methane monitoring was performed at 14 wells and 6 buildings. The monitoring included measuring levels of methane, carbon dioxide, and oxygen at each of the locations. The results of the monitoring are summarized in Table 1 and are also presented on Figure 3.

3.2 Water-Level Gauging

During this sampling event, USACE personnel measured the water levels in 10 monitoring wells. Measured 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 Longstreet Landfill is towards the south-southeast.

3.3 Groundwater and Surface-Water Sampling

The groundwater sampling was conducted in accordance with the SAP for the Longstreet Road MSWLF (NCDENR Landfill Permit #26-02, which has been updated to reflect the most recent SAP). Groundwater samples were collected from ten monitoring wells and one surface-water station. 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 and prior to sampling the surface-water stations. The measurements are summarized in Table 3.

The surface-water sample was collected using a peristaltic pump. The water to be collected for VOC analysis was not allowed to pass through the head of the pump, instead the tubing was filled and the flow was reversed to fill the bottles. Groundwater 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 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.

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.

3.4 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.

4.0 ANALYTICAL RESULTS AND STATISTICAL ANALYSIS

4.1 Analytical Data Summary

Groundwater samples were analyzed for VOCs, SVOCs, Pesticides, PCBs, Organophosphorus Pesticides, and Appendix II Inorganics. The surface-water samples were analyzed for all Appendix I and Appendix II constituents. 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 second 2010 sampling event indicated that some VOCs and inorganics were detected at low levels, and most detections were below NC2L standards (Table 4). Five wells and had detections exceeding the NC2L standards: wells SLMW-7, SLMW-8, SLMW-9, SLMW-10, and SLMW-11R. The analytical results for each of those wells are shown below:

- Well SLMW-7

  One compound was estimated or detected above the 2L standard as listed below:

Compound	2L	Concentration
4-Methylphenol	3.5 µg/L	26 µg/L

- Well SLMW-8

  Two compounds were estimated or detected above the 2L standard as listed below:

Compound	2L	Concentration
Benzene	1 µg/L	2.1 µg/L
Vinyl Chloride	0.015 µg/L	10 µg/L

No other constituents were above their 2L standards.

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- Well SLMW-9

  Two compounds were estimated or detected above the 2L standard as listed below:

Compound	2L		Concentration	
Benzene	1	µg/L	1.8	µg/L
Vinyl Chloride	0.015	µg/L	2.1	µg/L

  No other constituents were above their 2L standards.

- Well SLMW-10

  One compound was estimated or detected above the 2L standard as listed below:

Compound	2L		Concentration	
1,2-Dichloropropane	0.56	µg/L	1.7	µg/L

- Well SLMW-11R

  One compound was estimated or detected above the 2L standard as listed below:

Compound	2L		Concentration	
Tetrachloroethene	0.7	µg/L	1.2	µg/L

  No other constituents were above their 2L standard.

Though wells had constituent detections above method detection limits, all other detections were below the respective NC2L standard and most are estimated values that were detected above the method detection limits but below the reporting limit (Table 4).

4.2 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. However, the Kruskal-Wallis test is prone to false positives. Therefore, additional statistical analyses were used to determine the validity of the positive results. If the fraction of non-detects exceeded 90%, then the Non-Parametric Prediction Limit was applied. Intra-well comparisons of data from a single well to previous data from the same well were performed to confirm 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 analysis indicated that 1,1-dichloroethane and barium results 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.

According to North Carolina Administrative Code Title 15A Chapter 13 Subchapter B Section 1634 paragraph f [15A NC3AC 13B.1634 (f)], assessment monitoring shall continue if Appendix II parameters are detected at statistically significant levels above background but below established groundwater protection standards. Assessment monitoring will have to continue at the landfill until the presence of no SSIs is confirmed in two consecutive monitoring events.

4.3 Methane Monitoring Results

The methane levels were measured at 19 locations at Longstreet. The results of the monitoring are summarized in Table 1 and are also presented on Figure 3. Five methane monitoring wells contained high levels of methane with one reading at or above 40.8% methane by volume. Methane vent flares were recommended for this landfill in the 2005 Report.

5.0 CONCLUSIONS AND RECOMMENATIONS

The annual monitoring program consists of two sampling events (this was the second) conducted six months apart. This was the N=27 sampling event for the Longstreet Road Landfill. Low levels of VOCs, SVOCs, pesticides and Appendix II inorganics were detected, but most detections were at estimated levels and/or were below NC2L standards. Benzene was detected above its NC2L standard at monitoring wells SLMW-8 and SLMW-9. Vinyl chloride was detected above the NC2L standard at monitoring wells SLMW-8 and SLMW-9.

According to the Statistical Analysis of groundwater Data (Appendix D), The results of the analysis indicated that the samples collected at the Longstreet Road Municipal Solid Waste Landfill did not exhibit any evidence of SSIs in the analytical results.

According to North Carolina Administrative Code Title 15A Chapter 13 Subchapter B Section 1634 paragraph f [15A NC3AC 13B.1634 (f)], assessment monitoring shall continue if Appendix II parameters are detected at statistically significant levels above background but below established groundwater protection standards. Assessment monitoring will have to continue at the landfill until the presence of no SSIs is confirmed in two consecutive monitoring events.

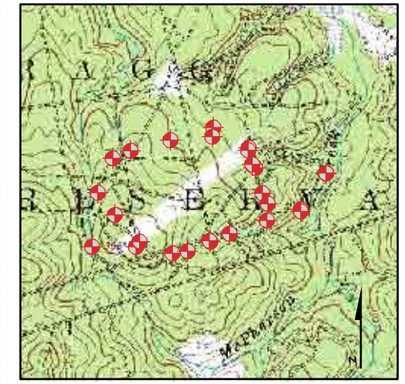
The methane levels were measured at 20 locations at Longstreet. Five methane monitoring wells showed high levels of methane with one reading at 40.8% methane by volume. Methane vent flares were recommended for this landfill in the 2005 Report.

6.0 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 Groundwaters of North Carolina, Sections .0100, .0200, and .0300 (November 8, 1993): from the Environmental Management Commission, Raleigh, North Carolina.

FIGURES



LEGEND

- METHANE SAMPLE
- SURFACE-WATER SAMPLE
- MONITORING WELL
- STREAM
- PAVED ROAD
- DIRT ROAD
- WASH RACK AREA
- BUILDING
- SWMU AREA

1 inch = 400 feet

0 200 400 800'

N

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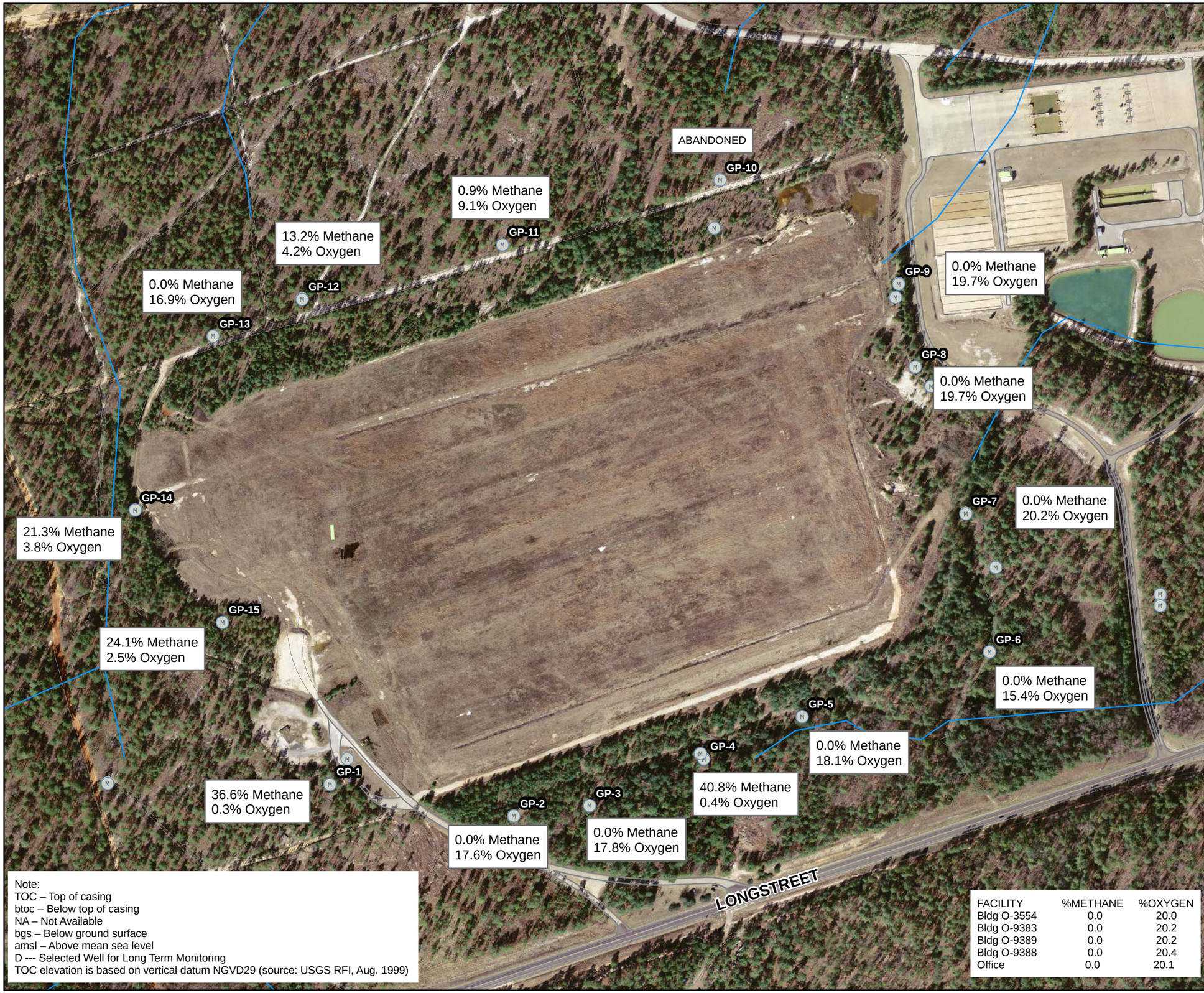
LOCATION MAP- LONGSTREET RD LANDFILL

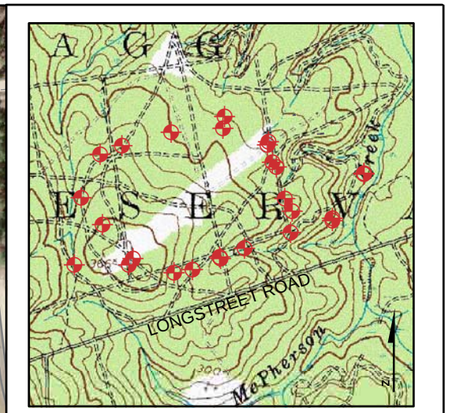
FT. BRAGG, NC

DATE: SEPT 2010 | FIGURE 2



Note:
TOC – Top of casing
btoc – Below top of casing
NA – Not Available
bgs – Below ground surface
amsl – Above mean sea level
D --- Selected Well for Long Term Monitoring
TOC elevation is based on vertical datum NGVD29 (source: USGS RFI, Aug. 1999)

FACILITY	%METHANE	%OXYGEN
Bldg O-3554	0.0	20.0
Bldg O-9383	0.0	20.2
Bldg O-9389	0.0	20.2
Bldg O-9388	0.0	20.4
Office	0.0	20.1



LEGEND

- METHANE SAMPLE
- STREAM
- BUILDING
- ROAD
- TRAIL

1 inch = 320 feet

0 170 340 680'

N

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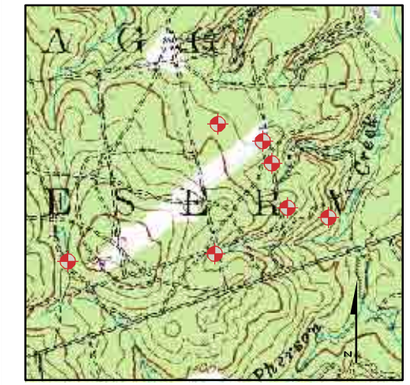
METHANE MONITORING RESULTS

LONGSTREET LANDFILL
FT. BRAGG, NC

DATE: SEPT 2010 | FIGURE 3



LEGEND

- Groundwater Flow
- SWMU Area
- Longstreet Wells
- Stream
- Groundwater Contour

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

1 inch = 293 feet

0 140 280 560'

N

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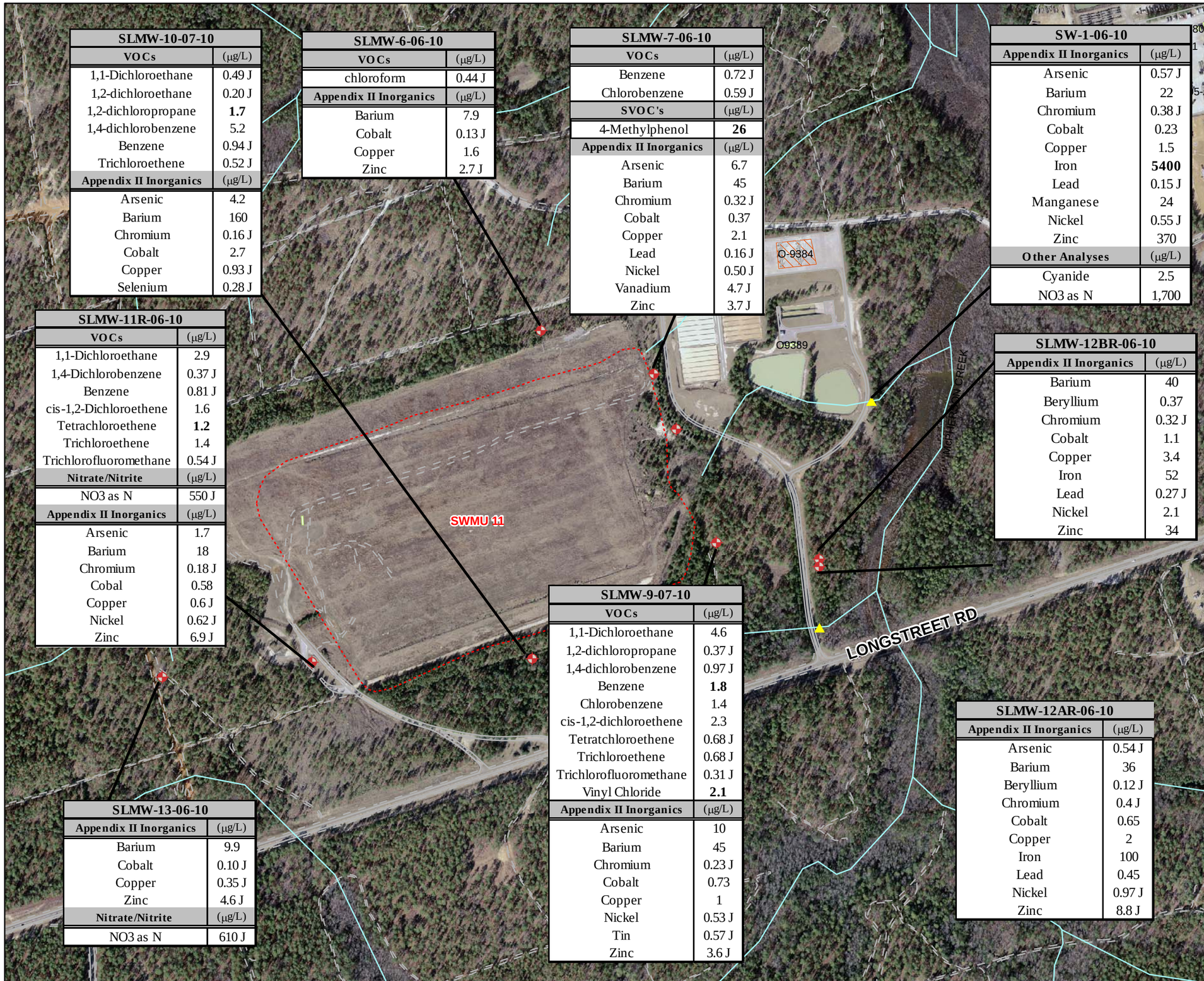
LONGSTREET LANDFILL, FORT BRAGG, NC

POTENTIOMETRIC MAP

DATE: SEPT 2010 | FIGURE 4



SLMW-10-07-10	
VOCs	(µg/L)
1,1-Dichloroethane	0.49 J
1,2-dichloroethane	0.20 J
1,2-dichloropropane	**1.7**
1,4-dichlorobenzene	5.2
Benzene	0.94 J
Trichloroethene	0.52 J
Appendix II Inorganics	(µg/L)
Arsenic	4.2
Barium	160
Chromium	0.16 J
Cobalt	2.7
Copper	0.93 J
Selenium	0.28 J

SLMW-6-06-10	
VOCs	(µg/L)
chloroform	0.44 J
Appendix II Inorganics	(µg/L)
Barium	7.9
Cobalt	0.13 J
Copper	1.6
Zinc	2.7 J

SLMW-7-06-10	
VOCs	(µg/L)
Benzene	0.72 J
Chlorobenzene	0.59 J
SVOC's	(µg/L)
4-Methylphenol	**26**
Appendix II Inorganics	(µg/L)
Arsenic	6.7
Barium	45
Chromium	0.32 J
Cobalt	0.37
Copper	2.1
Lead	0.16 J
Nickel	0.50 J
Vanadium	4.7 J
Zinc	3.7 J

SW-1-06-10	
Appendix II Inorganics	(µg/L)
Arsenic	0.57 J
Barium	22
Chromium	0.38 J
Cobalt	0.23
Copper	1.5
Iron	**5400**
Lead	0.15 J
Manganese	24
Nickel	0.55 J
Zinc	370
Other Analyses	(µg/L)
Cyanide	2.5
NO3 as N	1,700

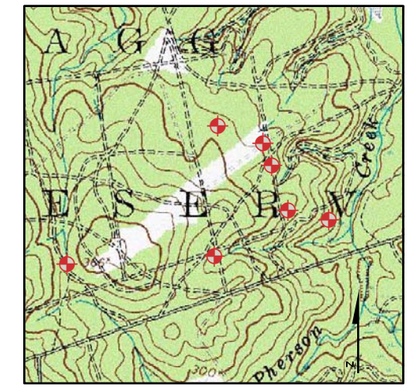
SLMW-11R-06-10	
VOCs	(µg/L)
1,1-Dichloroethane	2.9
1,4-Dichlorobenzene	0.37 J
Benzene	0.81 J
cis-1,2-Dichloroethene	1.6
Tetrachloroethene	**1.2**
Trichloroethene	1.4
Trichlorofluoromethane	0.54 J
Nitrate/Nitrite	(µg/L)
NO3 as N	550 J
Appendix II Inorganics	(µg/L)
Arsenic	1.7
Barium	18
Chromium	0.18 J
Cobal	0.58
Copper	0.6 J
Nickel	0.62 J
Zinc	6.9 J

SLMW-12BR-06-10	
Appendix II Inorganics	(µg/L)
Barium	40
Beryllium	0.37
Chromium	0.32 J
Cobalt	1.1
Copper	3.4
Iron	52
Lead	0.27 J
Nickel	2.1
Zinc	34

SLMW-9-07-10	
VOCs	(µg/L)
1,1-Dichloroethane	4.6
1,2-dichloropropane	0.37 J
1,4-dichlorobenzene	0.97 J
Benzene	**1.8**
Chlorobenzene	1.4
cis-1,2-dichloroethene	2.3
Tetratchloroethene	0.68 J
Trichloroethene	0.68 J
Trichlorofluoromethane	0.31 J
Vinyl Chloride	**2.1**
Appendix II Inorganics	(µg/L)
Arsenic	10
Barium	45
Chromium	0.23 J
Cobalt	0.73
Copper	1
Nickel	0.53 J
Tin	0.57 J
Zinc	3.6 J

SLMW-12AR-06-10	
Appendix II Inorganics	(µg/L)
Arsenic	0.54 J
Barium	36
Beryllium	0.12 J
Chromium	0.4 J
Cobalt	0.65
Copper	2
Iron	100
Lead	0.45
Nickel	0.97 J
Zinc	8.8 J

SLMW-13-06-10	
Appendix II Inorganics	(µg/L)
Barium	9.9
Cobalt	0.10 J
Copper	0.35 J
Zinc	4.6 J
Nitrate/Nitrite	(µg/L)
NO3 as N	610 J



LEGEND

- MONITORING WELL
- SURFACE-WATER SAMPLE
- STREAM
- PAVED ROAD
- DIRT ROAD
- WASH RACK AREA
- BUILDING
- SWMU AREA

NOTE: Only detected analytes shown.
Well labels show total well depth below ground surface in parenthesis.
NA - Not Available
U - Target analytes were not detected above the reporting limits
J - Analyte was present but concentration is an estimated value.
B - Observed in Method Blank
Bold - Concentrations exceed NC 2L standards.
*IMAC - Interim maximum allowable concentration
**PRG based on carcinogenic factor.

1 inch = 520 feet

0 255 510 1,020'

N

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LONGSTREET RD LANDFILL, FORT BRAGG, NC

GROUNDWATER
ANALYTICAL RESULTS

DATE: SEPT 2010 | FIGURE 5

TABLES

Table 1. Methane Monitoring Results
Longstreet Landfill, Ft. Bragg, NC

Well ID	Date Sampled	Time Sampled	%Methane by Volume	%Oxygen	%CO2
Gas-MW-1	06-12-10	1305	36.6 %	0.3 %	37.2 %
Gas-MW-2	06-12-10	1258	0.0 %	17.6 %	3.0 %
Gas-MW-3	06-12-10	1225	0.0 %	17.8 %	2.1 %
Gas-MW-4	06-12-10	1205	40.8%	0.4 %	28.7 %
Gas-MW-5	06-12-10	1213	0.0 %	18.1 %	1.7 %
Gas-MW-6	06-12-10	1510	0.0 %	15.4 %	3.4%
Gas-MW-7	06-12-10	1344	0.0%	20.2%	0.0%
Gas-MW-8	06-12-10	1134	0.0%	19.7%	0.1%
Gas-MW-9	06-12-10	1131	0.0 %	19.7 %	0.2 %
Gas-MW-10**	06-12-10	N/A	N/A	N/A	N/A
Gas-MW-11	06-12-10	1438	0.9 %	9.1 %	3.9 %
Gas-MW-12	06-12-10	1436	13.2 %	4.2 %	21.3 %
Gas-MW-13	06-12-10	1432	0.0%	16.9 %	3.8 %
Gas-MW-14	06-12-10	1333	21.3 %	3.8 %	21.7 %
Gas-MW-15	06-12-10	1314	24.1%	2.5 %	24 %
Scale House	06-12-10	1304	0.0%	20.6%	0.0%
Bldg O-9383	06-12-10	1124	0.0%	20.0 %	0.0 %
Bldg O-9389	06-12-10	1122	0.0 %	20.2 %	0.0 %
Bldg O-9388	06-12-10	1115	0.0 %	20.2 %	0.0 %
Office	06-12-10	1123	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.
**MW10 Abandoned

Table 2. Groundwater Elevation Data
Longstreet Landfill, Ft. Bragg, NC

Well ID	TOC Elev. (ft. amsl)	Water Level (ft. btoc) 11/06	Water Elev. (ft. amsl) 11/06	Water Level (ft. btoc) 5/07to 6/07	Water Elev. (ft. amsl) 5/07to 6/07	Water Level (ft. btoc) 11/07	Water Elev. (ft. amsl) 11/07	Water Level (ft. btoc) 11/08	Water Elev. (ft. amsl) 11/08	Water Level (ft. btoc) 06/09	Water Elev. (ft.amsl) 06/09	Water Level (ft. btoc) 11/09	Water Elev. (ft.amsl) 11/09	Water Level (ft. btoc) 06/10	Water Elev. (ft.amsl) 06/10
SLMW-6	293.55	27.27	266.28	25.24	268.31	28.61	264.94	26.27	267.28	26.11	267.44	28.22	265.33	25.08	268.47
SLMW-7	290.5	21.48	269.02	20.03	270.47	22.45	268.05	20.76	269.74	20.59	269.91	22.19	268.31	20.43	270.07
SLMW-8	290.34	23.2	267.14	22.93	267.41	24.39	265.95	22.91	267.43	23.03	267.31	24.21	266.13	22.91	267.43
SLMW-9	289.54	39.57	249.97	37.3	252.24	39.29	250.25	38.31	251.23	37.3	252.24	38.72	250.82	36.66	252.88
SLMW-10	305.99	20.3	285.69	19.31	286.68	20.55	285.44	19.42	286.57	19.59	286.4	20.39	285.6	19.7	286.29
SLMW-11	357.8	78	279.8	74.83	282.97	77.48	280.32	78.96	278.84	77.62	280.18	79.2	278.6	74.31	283.49
SLMW-12AR	243.36	8.12	235.24	20.12	223.24	53.39	286.63	8.45	234.91	9.03	234.33	9.53	233.83	8.75	234.61
SLMW-12BR	243.42	9.1	234.32	9	234.42	9.45	233.91	9.23	234.19	8.09	235.33	9.2	234.22	8.79	234.63
SLMW-13	340.02	53.98	286.04	50.79	289.23	9.44	224.98	53.14	286.88	51.9	288.12	53.29	286.73	50.58	289.44

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 Monitoring

*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
Longstreet Landfill, Fort Bragg, NC

Well ID	Sample Identification	pH	Specific Conductivity (µs/cm)	Temperature (°C)	Turbidity (N.T.U.)	Dissolved Oxygen (mg/L)	ORP
SLMW-6	GW-SLMW-6-06-10	1.37	0.015	18.5	1.55	7.31	246.9
SLMW-7	GW-SLMW-7-06-10	5.43	0.478	18.9	5.57	0.57	-37.3
SLMW-8	GW-SLMW-8-06-10	5.34	0.487	25.1	8.52	1.34	-19.3
SLMW-9	GW-SLMW-9-07-10	6.12	0.678	19.7	6.66	0.75	-38.4
SLMW-10	GW-SLMW-10-07-10	6.44	0.708	18.5	3.95	0.46	-70.9
SLMW-11R	GW-SLMW-11-07-10	4.87	0.052	19.7	7.48	4.81	91.7
SLMW-12AR	GW-SLMW-12AR-06-10	4.03	0.042	23.4	7.96	3.80	91.6
SLMW-12BR	GW-SLMW-12BR-06-10	4.64	0.070	21.3	3.75	3.75	38.9
SLMW-13	GW-SLMW-13-06-10	3.35	0.015	19.4	7.54	8.97	186.7
SW-1	SW-1-06-10	6.98	1.415	--	10.1	0.6	245
SW-2	SW-2-11-09	N/A	N/A	N/A	N/A	N/A	N/A

Note: N.T.U. --- Nephelometric Turbidity Unit; ORP --- Oxidation Reduction Potential
#Monitoring Wells Permanently Abandoned
*High turbidity has been a continuing problem with this well.

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	Longstreet																																														
			SLMW-6 04/05	SLMW-6 10/05	SLMW-6 4/06	SLMW-6 11/06	SLMW-6 05/07	SLMW-6 11/07	SLMW-6 11/08	SLMW-6 06/09	SLMW-6 11/09	SLMW-6 06/10	SLMW-7 04/05	SLMW-7 10/05	SLMW-7 4/06	SLMW-7 11/06	SLMW-7 05/07	SLMW-7 11/07	SLMW-7 11/08	SLMW-7 06/09	SLMW-7 11/09	SLMW-7 06/10	SLMW-8 04/05	SLMW-8 10/05	SLMW-8 4/06	SLMW-8 11/06	GW-SLMW-8 06/07	GW-SLMW-8 11/07	GW-SLMW-8 11/08	SLMW-8 06/09	SLMW-8 11/09	SLMW-8 06/10	SLMW-9 10/05	SLMW-9 4/06	SLMW-9 11/06	GW-SLMW-9 06/07	GW-SLMW-9 11/07	GW-SLMW-9 11/08	SLMW-9 06/09	SLMW-9 11/09	SLMW-9 7/10	SLMW-10 04/05	SLM-DUP1 04/05	SLMW-10 10/05	SLMW-10 4/06	SLMW-10 Dup 4/06	SLMW-10 11/06	SLMW-10 05/07	SLMW-10 Dup 05/07
VOCs (EPA 8260B)																																																		
1,1,2,2-tetrachloroethane	0.17	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-dichloroethane	700	810*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.91 J	3.43	2.11	2.86	<2	4.11	3.08	5.2	NS	2.5	2.04	1.38J	1.39J	<2	3.170	3.11	7.6	4.8	4.6	1.25 J	1.41 J	1.6J	1.91J	1.85J	1.12J	<2	<2
1,2,3-trichloropropane	0.005	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,4-trimethylbenzene	350	15 *	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dibromo-3-chloropropane	0.025	0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dibromoethane	0.0004	0.05	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dichlorobenzene	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dichloroethane	0.38	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	0.24 J	**0.44 J**	<2	<2	<2	<2	<2	**0.58J**	**0.61J**	<2	<2	<2
1,2-dichloropropane	0.56	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	.23J	<2	<2	0.33 J	0.37 J	**2.12**	**2.28**	**3.32**	**3.97**	**3.72**	**2.93**	<2	<2
1,4-dichlorobenzene	75	75	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.28J	0.36J	0.43J	<2	0.28 J	0.31	0.62 J	NS	<2	0.54J	0.43J	0.4J	<2	.660J	<2	<2	<2	0.97 J	2.75	2.63	3.99	5.6	4.7	3.9	4.1	3.4
1,4-dioxane	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2-butanone	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
4-isopropyltoluene	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
acetone	700	NA	NA	2.2	<2	<2	<2	<2	7.6 J	<2	<2	NA	6.97	<2	1.34J	<2	<2	24	52	6 J	<2	NA	1.27J	<2	<2	<2	<2	9.72	9.8 J	NS	5.3 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NA	NA	<2	<2	<2	<2	<2	<2
acrolein	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
benzene	1	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.51J	0.68J	0.36J	**1.2**	0.50 J	1.01 J	0.73 J	<2	0.72 J	**3.22**	**4.99**	**2.54**	**4.03**	**3.2**	**4.5**	**2.72**	**3.6**	NS	**2.1**	**1.09J**	0.71J	0.8J	**2.2**	**1.54 J**	**1.35 J**	**1.9**	**1.4**	**1.8**	**1.8 J**	**1.72 J**	**1.32J**	**1.31J**	**1.24J**	0.96J	<2	<2
carbon disulfide	700	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.24J	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.54J	<2	<2
chlorobenzene	50	100	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.29 J	<2	<2	0.59 J	1.78 J	2.75	1.69J	3.46	2.2	3.36	2.18	4.8	NS	1.9	0.34J	0.25J	0.28J	1.1	0.740 J	0.65 J	0.81 J	0.8 J	1.4	0.33 J	0.35 J	0.43J	0.59J	0.50J	0.4J	<2	<2
chloroethane	2800	4.6*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.74	1.47J	2.27	0.72J	<2	0.98 J	1.23 J	<2	<2	<2	0.76 J	0.96J	0.30J	0.38J	<2	<2	1.10 J	9.1	NS	<2	<2	<2	0.22J	<2	0.530 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chloroform	70	80	0.24 J	<2	<2	<2	<2	0.27 J	0.21 J	0.31 J	<2	0.44 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chloromethane (methyl chloride)	2.6	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.13	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
cis-1,2-dichloroethene	70	70	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.21 J	<2	<2	<2	<2	0.24 J	<2	<2	<2	<2	55.9	**105**	42.5	42.4	25	60.9	35	39	NS	43	1.26J	0.88J	0.71J	3.0	1.570 J	1.79 J	2.3	<2	2.3	9.33	10	13.4	15.8	15.5	8.96	9.1	8.9
dibromochloromethane	0.41	80	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
dichlorodifluoromethane	1400	390*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.61J	0.58J	<2	<2	<2	1.9	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.96	3.5	2.13	1.5J	1.18J	0.62J	<2	<2
diisopropyl ether	70	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.43 J	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.54 J	0.56 J	1.04J	1.15J	1.22J	0.88J	<2	<2
isopropylbenzene	70	660*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
m&p xylene	530#	10000#	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
methylene chloride (dichloromethane)	4.6	5	<2	<2	<2	<2	<2	0.21 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.26	<2	<2	<2	<2	<2	<2	<2	0.75J	<2	0.43 J	<2	<2	NS	<2	<2	<2	<2	<2	0.200 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MTBE	200	13*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.54J	<2	0.21J	<2	0.39 J	<2	<2	NS	<2	0.39J	0.22J	<2	<2	<2	0.29 J	<2	<2	<2	0.2 J	0.2 J	0.37J	0.44J	0.42J	0.28J	<2	<2
naphthalene	21	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-xylene	530#	10000#	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.24 J	0.71J	0.41J	0.46J	<2	0.27 J	0.29	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
sec-butylbenzene	70	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	0.230 J	<2	<2	<2	<2	<2	<2	<2	0.28J	0.22J	0.21J	<2	<2
tetrachloroethene	0.7	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	**5.34**	**2.18**	**2.4**	**2.69**	<2	0.54 J	0.65	**0.80 J**	NS	0.24 J	0.32J	0.29J	0.21J	<2	0.280 J	0.41 J	0.39 J	0.58 J	0.68 J	**0.75 J**	0.45 J	**0.71J**	**0.96J**	**0.74J**	0.55J	<2	<2
toluene	1000	1000	<2	<2	0.43J	<2	<2	<2	<2	<2	<2	<2	<2	0.26J	0.39J	0.51J	<2	0.27 J	0.29 J	<2	<2	0.22 J	0.55J	0.58J	0.49J	1.2 J	0.85 J	1.34	1	NS	0.39 J	<2	0.46J	<2	<2	0.200 J	0.33 J	0.35 J	<2	<2	<2	<2	<2	0.35J	0.55J	<2	<2	<2
trans-1,2-dichloroethene	70	100	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.28 J	0.52J	0.28J	3.65	<2	0.55 J	0.25	<2	NS	0.24 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.24 J	0.23 J	0.24J	0.29J	0.30J	0.59J	<2	<2
trichloroethene	2.8	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.29	**6.66**	2.22	**3.54**	1.6	**4.18**	1.3	1.3	NS	0.87 J	<2	0.45J	0.43J	0.6 J	0.740 J	0.6 J	0.67 J	0.73 J	0.68 J	0.88 J	1.01 J	1.15J	1.27J	1.29J	0.89J	<2	<2
trichlorofluoromethane	2100	1300*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	10.1	<2	NS	<2	0.53J	<2	<2	<2	<2	<2	<2	<2	<2	0.31 J	<2	<2	<2	<2	<2	<2	<2	<2
vinyl chloride	0.015	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	**0.52 J**	**0.36J**	**0.64J**	**0.35J**	<2	<2	**0.58 J**	<2	<2	<2	**59**	**54.2**	**24.6**	**36.6**	**19**	**33.2**	**10.1**	**12**	NS	**10**	**1.45J**	**0.69J**	**0.73J**	<2	**1.71 J**	**1.41 J**	**2**	**1.2**	**2.1**	**1.91 J**	**3.58**	**2.48**	**2.8**	**2.62**	**1.7**	<2	<2
SVOCs (EPA 8270C)																																																	
1,4-dichlorobenzene (para)	1.4	75	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	NS	<10	<10	<10	<10	<10	0.54 J	<10	<10	<10	1.31 J	1.57 J	1.75J	2.79J	2.62J	**2.7J**	**1.94 J**	**1.75 J**
4-methylphenol (p-cresol)	3.5	180*	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	1.87 J	<10	**14.6**	<10	**13.5**	<10	38.3	**12**	<10	**26**	**7.44 J**	<10	<10	<10	<10	<10	<10	<10	NS	NS	<10	<10	<10	<10	<10	<10	2.1 J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
benzoic acid	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	8.4 J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	NS	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
benzyl alcohol	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	NS	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
diethylphthalate	5000	29000*	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	1.06J	<10	<10	<10	<10	<10	<10	NS	NS	<10	<10	<10	2.55 J	1.44 J	<10	0.95 J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
di-n-butylphthalate	700	3600*	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	NS	<10	<10	<10	<10	<10	<10	<10	3 J	<10	<10	<10	<10	<10	<10	<10	<10	<10
bis(2-Ethylhexyl)phthalate	2.5	6	<10	<10	3.62	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	NS	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	5.02	<10	<10	<10	<10
phenol	300	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	2.89 J	<10	4.42 J	1.7J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	NS	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**<10**	<10	<10	<10	<10
Pesticides (EPA 8081)																																																	
delta-BHC	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.043	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	NS	<.0505	<.0505	<.0505	<.0505	.015 PJ	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
alpha-BHC	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
beta-BHC	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	NS	<.0505	<.0505	<.0505	<.0505	<.0505	0.065	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
gamma-BHC	0.2	0.2	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	.0207J	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
alpha-Chlordane*	0.1	2	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	**0.1**	<.0505	<.0505
gamma-Chlordane*	0.1	2	<.0505	<.0505	<.0505	0.0202J	0.0202J	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	**0.11J**	<.0505	<.0505
Aldrin	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
Dieldrin	0.0022	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
Endosulfan I	NA	NA	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<.0505	<.0505	<.0505	<0.025	<0.025	<0.025	<0.0250	0.0143 J	<.0505	<0.025	<.0505	<0.025	<.0505	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	NS	NS	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<.0505	<.0505	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Heptachlor	0.0078	0.4	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	**0.06J**	<.0505	<.0505
PCBs (EPA 8082)																																																	
No Detections																															NS																			
Organophosphorus Pesticides (EPA 8141A)																																																	
No Detections																															NS																			
Appendix II Inorganics (EPA 6010B/6020A)																																																	
Antimony	NA	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.516 J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic	10	10	<2	<2	<2	<2	<2	<2	5.75	<2	<2	<2	5.76	8.44	9.41	4.84	9.45	12.3	5.37	5.2	<2	6.7	5.17	6.67	4.63	3.32	5.92	5.85	1.05 J	3.6	NS	1.7	6.28	**11**	**11.4**	**10.8**	8.98	**13.8**	8.6	8.7	10	1.13 J	1.17 J	<2	1.31J	1.31J	1.88J	3.62	3.75
Barium	2000	2000	5.7 J	5.5	<2	6.07	7.22	6.22	8	7	6.9	7.9	46.8	47.5	50	37.7	63.2	8.3	59.6	47	<2	45	95.7	65.2	70	85.5	76.3	100	64.2	55	NS	67	39	40	49.3	70.4	46.8	49	46	41	45	77.9	79.2	76.8	<2	110	123	139	129
Beryllium	NA	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	44	<4	<4	<4	<4	<4	<4	<4	<4	<4	46.2	<4	NS	<4	<4	<4	<4	<4	<4	41	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cadmium	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5.8 J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.50J	<1	0.532 J	0.518 J
Chromium	50	100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	< 50	<5	0.32 J	<5	<5	<5	<5	<5	<5	<5	<5	< 5	NS	0.

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	SLMW-10 11/07	SLMW-10 11/08	SLMW-10 DUP 11/08	SLMW-10 06/09	SLMW-10 11/09	SLMW-10 7-10	SLMW-11 04/05	SLMW-11 10/05	SLMW-11 4/06	SLMW-11 11/06	GW-SLMW-11 06/07	GW-SLMW-11 11/07	GW-SLMW-11R 11/08	SLMW-11R 06/09	SLMW-11R 11-09	SLMW-11R 06/10	SLMW-12A 04/05	SLMW-12B 04/05	SLMW-12AR 04/05	SLMW-12AR 10/05	SLMW-12AR Dup 10/05	SLMW-12AR 4/06	SLMW-12AR 11/06	SLMW-12AR 05/07	SLMW-12AR 11/07	SLMW-12AR-DUP 11/07	SLMW-12AR11/08	SLMW-12AR 06/09	SLMW-12AR 11/09	SLMW-12AR 06/10	SLMW-12BR 04/05	SLMW-12BR Dup 04/05	SLMW-12BR 10/05	SLMW-12BR 4/06	SLMW-12BR 11/06	SLMW-12BR 05/07	SLMW-12BR 11/07	SLMW-12BR 11/08	SLMW-12BR 06/09	SLMW-12BR 11/09	SLMW-12BR 06/10	SLMW-13 04/05	SLMW-13 10/05	SLMW-13 4/06	SLMW-13 11/06	GW-SLMW-13 06/07	GW-SLMW-13 11/07	GW-SLMW-13 11/08
VOCs (EPA 8260B)																																																			
1,1,2,2-tetrachloroethane	0.17	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-dichloroethane	700	810*	1.35 J	0.92 J	0.9 J	0.97 J	1.1	0.49 J	3.86	2.18	1.68J	2.07	<2	4.05	0.56 J	2.9	0.42 J	2.9	<2	<2	4.25	<2	1.21J	1.22J	1.39J	0.83J	<2	1.15 J	1.0 J	0.62 J	<2	0.35 J	<2	1.41J	1.39J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,3-trichloropropane	0.005	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,4-trimethylbenzene	350	15 *	<2	<2	0.43 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dibromo-3-chloropropane	0.025	0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dibromoethane	0.0004	0.05	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dichlorobenzene	NA	NA	<2	<2	<2	<2	0.51 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dichloroethane	0.38	5	**0.42 J**	**0.48 J**	<2	<2	**0.45 J**	0.20 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dichloropropane	0.56	5	**3.78**	**3.27**	**3.09**	**2.2**	**2.8**	**1.7**	**1.3 J**	<2	0.5J	**0.6J**	<2	**.950 J**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.23 J	<2	<2	<2	<2	<2	0.42J	0.45J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,4-dichlorobenzene	75	75	5.99	<2	<2	3.4	6.9 J	5.2	<2	<2	<2	<2	<2	0.300 J	<2	0.48 J	<2	0.37 J	<2	1.11 J	<2	1.05J	0.94J	1.14J	0.84J	<2	0.78 J	0.67 J	0.49 J	<2	<2	<2	1.07J	1.15J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,4-dioxane	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	9.8	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2-butanone	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.29J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
4-isopropyltoluene	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
acetone	700	NA	<2	<2	<2	<2	26	<2	NA	<2	<2	13.9	100	100	<2	<2	<2	<2	NA	NA	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NA	<2	<2	<2	<2	<2
acrolein	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
benzene	1	5	**1.38 J**	1.0 J	1.0 J	**1**	**1.3**	0.94 J	**4.58**	**1.54J**	0.83J	0.93J	**2.1**	**1.30 J**	<2	0.59 J	<2	0.81 J	<2	<2	<2	**1.03J**	0.95J	**1.04J**	0.76J	<2	0.84 J	0.72 J	0.53 J	<2	0.26 J	<2	**1.11J**	**1.15J**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
carbon disulfide	700	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chlorobenzene	50	100	0.59 J	0.62 J	0.61 J	0.45 J	0.63 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.01 J	<2	0.57J	0.53J	0.62J	0.53J	<2	0.56 J	0.51 J	0.4 J	<2	<2	<2	0.58J	0.6J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chloroethane	2800	4.6*	<2	<2	<2	<2	<2	<2	<2	0.42J	0.56J	0.82J	<2	.200 J	<2	<2	<2	<2	<2	0.4 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chloroform	70	80	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.22 J	<2	0.23 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chloromethane (methyl chloride)	2.6	NA	<2	<2	<2	0.45 J	<2	<2	<2	<2	<2	2.44	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.05	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
cis-1,2-dichloroethene	70	70	13.6	11.8	11.6	9	<2	5.8	9.47	4.56	2.88	1.71J	5.7	3.24	<2	1.3	<2	1.6	<2	10.7	<2	2.9	2.58	3.19	1.09J	<2	1.22 J	1.08 J	0.83 J	<2	<2	<2	3.79	4.02	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
dibromochloromethane	0.41	80	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
dichlorodifluoromethane	1400	390*	<2	<2	<2	<2	<2	<2	4.85	0.8J	<2	0.68J	<2	0.410 J	1.64 J	1.3	1.1	<2	<2	3.73	<2	5.11	5.15	4.41	3.61	<2	1.81 J	1.78 J	<2	<2	<2	<2	10.2	11.6	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
diisopropyl ether	70	NA	1.13 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	.0280 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
isopropylbenzene	70	660*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.5 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
m&p xylene	530#	10000#	<2	<2	0.64 J	<2	<2	<2	<2	0.23J	<2	<2	<2	0.510 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
methylene chloride (dichloromethane)	4.6	5	0.28 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.230 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.21 J	0.27 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.25 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MTBE	200	13*	0.39 J	0.57 J	0.54 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.32J	0.35J	0.31J	<2	<2	0.22 J	0.21 J	<2	<2	<2	<2	0.36J	0.38J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
naphthalene	21	NA	<2	<2	0.95 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-xylene	530#	10000#	<2	<2	0.33 J	<2	<2	<2	0.34 J	0.26J	<2	<2	<2	0.470 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
sec-butylbenzene	70	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
tetrachloroethene	0.7	5	0.31 J	0.25 J	0.26 J	<2	0.29 J	<2	**2.64**	0.46J	<2	0.49J	<2	0.380J	0.4 J	**2.3**	0.3 J	**1.2**	<2	0.42 J	<2	0.32J	0.3J	0.35J	<2	<2	<2	<2	<2	<2	<2	<2	0.4J	0.38J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
toluene	1000	1000	<2	<2	0.24 J	<2	<2	<2	<2	<2	3.16	<2	<2	0.550 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.37J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.24J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.15J	<2	<2	<2
trans-1,2-dichloroethene	70	100	0.28 J	0.21 J	0.22 J	<2	0.27 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.22 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
trichloroethene	2.8	5	1.00 J	0.91 J	0.89 J	0.59 J	0.94 J	0.52 J	**3.01**	1.28J	0.59J	0.96J	2.0	1.01 J	0.29 J	1.5	0.22 J	1.4	<2	2.14	<2	0.64J	0.52J	0.55J	0.35J	<2	0.45 J	0.37 J	0.23 J	<2	0.13 J	<2	0.71J	0.68J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
trichlorofluoromethane	2100	1300*	<2	<2	<2	<2	<2	<2	<2	0.28J	<2	<2	<2	<2	0.2 J	<2	<2	0.54 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
vinyl chloride	0.015	2	**2.59 J**	**1.58 J**	**1.72 J**	**1.3**	**1.5**	<2	**3.57**	**0.9J**	**0.78J**	**0.8J**	<2	**0.48 J**	<2	<2	<2	<2	<2	**5.41**	<2	**2.08**	**1.82J**	**2.44**	**1.17**	<2	**0.97 J**	**0.77 J**	**0.52 J**	<2	<2	<2	**3.25**	**3.5**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
SVOCs (EPA 8270C)																																																			
1,4-dichlorobenzene (para)	1.4	75	<10	**3.37 J**	**4.25 J**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	1.98J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-methylphenol (p-cresol)	3.5	180*	<10	<10	1.95 J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**13.1**	<10	<10
benzoic acid	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
benzyl alcohol	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
diethylphthalate	5000	29000*	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	3.49 J	<10	1.51J	1.23J	<10	1.15J	1.28 J	<10	<10	<10	<10	<10	<10	1.46J	2.2J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
di-n-butylphthalate	700	3600*	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	1.06J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
bis(2-Ethylhexyl)phthalate	2.5	6	<10	<10	<10	<10	<10	<10	<10	<10	4.41	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	1.5 J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
phenol	300	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Pesticides (EPA 8081)																																																			
delta-BHC	NA	NA	<.0505	0.124	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
alpha-BHC	NA	NA	<.0505	0.05	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.0255	<.0505	<.0505	<.0505	<.0505
beta-BHC	NA	NA	<.0505	0.123	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
gamma-BHC	0.2	0.2	<.0505	0.05	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
alpha-Chlordane*	0.1	2	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.0306	<.0505	<.0505	<.0505	<.0505
gamma-Chlordane*	0.1	2	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.0255	<.0505	<.0505	<.0505	<.0505
Aldrin	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.095	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.0918	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.0306	<.0505	<.0505	<.0505	<.0505
Dieldrin	0.0022	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
Endosulfan I	NA	NA	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Heptachlor	0.0078	0.4	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.125	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	**0.0255J**	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
PCBs (EPA 8082)																																																			
No Detections																																																			
Organophosphorus Pesticides (EPA 8141A)																																																			
No Detections																																																			
Appendix II Inorganics (EPA 6010B/6020A)																																																			
Antimony	NA	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**<1**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic	10	10	4.82	2.11	2.34	3.1	3.6	4.2	10.4	7.5	7.92	2.65	**25.5**	4.87	<2	<2	<2	1.7	<2	1.95 J	<2	2.02	1.61J	<2	1.05J	1.05 J	<2	<2	<2	0.42 J	0.5 J	0.54 J	1.26J	1.61J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.11 J	<2	<2
Barium	2000	2000	118	0.15	0.151	170	130	160	28.8	19.1	30	116	50.0	33.7	10.5	11 J	7.2	18	36	40.1	43.4	27.7	27.7	30	33.2	34.1	42.0	41.0	44.8	38	41	36	27.2	28.4	35	30	34.5	41.5	41	43.2	42	37	40	8.7 J	<2	5	5.43	10.9	7	8.3
Beryllium	NA	4	<4	56.3

Table 4. Summary of GroundWater Detections Longstreet Landfill, Fort Bragg, NC

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	Longstreet																															
			SLMW-13 06/09	SLMW-13 11/09	SLMW-13 06/10	SW-1 04/05	SW-1 10/05	SW-1 4/06	SW-1 11/06	SW-1 06/07	SW-1 11/07	SW-1 11/08	SW-1 06/09	SW-1 11/09	SW-1 06/10	SW-2 04/05	SW-2 10/05	SW-2 4/06	SW-2 11/06	SW-2 06/07	SW-2 11/07	SW-2 11/08	SW-2 06/09	SW-2 11/09	SW-2 06/10	GW-Blank 11/06	GW-Blank 05/07	GW-Blank 06/07	GW-Blank 11/07	GW-Blank 11/08	Trip Blank 11/06	Trip Blank 05/07	Trip Blank 06/07	Trip Blank 11/07	Trip Blank 11/08
VOCs (EPA 8260B)																																		
1,1,2,2-tetrachloroethane	0.17	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-dichloroethane	700	810*	<2	<2	<2	<2	7.64	7.8	3.93	7.7	7.36	7.73	10	0.46 J	<2	<2	<2	<2	<2	<2	0.20 J	0.31 J	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,3-trichloropropane	0.005	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,4-trimethylbenzene	350	15 *	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dibromo-3-chloropropane	0.025	0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dibromoethane	0.0004	0.05	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dichlorobenzene	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dichloroethane	0.38	5	<2	<2	<2	<2	<2	0.41J	<2	<2	<2	<2	0.34 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dichloropropane	0.56	5	<2	<2	<2	<2	<2	<2	<2	<2	0.44 J	0.058 J	0.44 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,4-dichlorobenzene	75	75	<2	<2	<2	<2	0.76J	0.96J	0.51J	<2	0.71 J	<2	0.62 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,4-dioxane	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	7.7 J	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2-butanone	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.78J	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
4-isopropyltoluene	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.21 J	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
acetone	700	NA	<2	<2	<2	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	NA	3.5	<2	<2	<2	4.29 J	<2	<2	<2	NS	8.6 J	<2	<2	<2	8.6 J	2.23	<2	<2	<2	<2
acrolein	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.59J	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
benzene	1	5	<2	<2	<2	<2	**1.59J**	**1.72J**	0.87J	**1.6**	**1.45 J**	**1.88 J**	**1.7**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
carbon disulfide	700	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.28J	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chlorobenzene	50	100	<2	<2	<2	<2	0.35J	0.37J	<2	<2	0.22 J	0.42 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chloroethane	2800	4.6*	<2	<2	<2	<2	0.51J	0.52J	0.23J	<2	0.38 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chloroform	70	80	<2	<2	<2	<2	<2	<2	<2	<2	0.43 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chloromethane (methyl chloride)	2.6	NA	<2	<2	<2	<2	0.51J	0.52J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
cis-1,2-dichloroethene	70	70	<2	<2	<2	<2	5.02	5.01	1.79J	6.1	4.73	5.24	4.8	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
dibromochloromethane	0.41	80	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
dichlorodifluoromethane	1400	390*	<2	<2	<2	<2	10.4	7.07	5.78	8.4	5.77	5.1	4.2	<2	<2	<2	<2	<2	<2	<2	<2	0.23 J	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
diisopropyl ether	70	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
isopropylbenzene	70	660*	<2	<2	<2	<2	0.2J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
m&p xylene	530#	10000#	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
methylene chloride (dichloromethane)	4.6	5	<2	<2	<2	<2	<2	<2	<2	<2	0.30 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.22 J	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	0.23 J	<2
MTBE	200	13*	<2	<2	<2	<2	1.2J	0.86J	<2	<2	0.56 J	0.66 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
naphthalene	21	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-xylene	530#	10000#	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
sec-butylbenzene	70	NA	<2	<2	<2	<2	<2	<2	<2	<2	0.20 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
tetrachloroethene	0.7	5	<2	<2	<2	<2	**1.41J**	**1.36J**	**0.77J**	<2	**0.88 J**	**1.32 J**	**1.1**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
toluene	1000	1000	<2	<2	<2	<2	<2	0.42J	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.62J	<2	<2	<2	<2	<2	<2	NS	0.22J	<2	<2	<2	<2	<2	<2	<2	<2	<2
trans-1,2-dichloroethene	70	100	<2	<2	<2	<2	<2	<2	0.27J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
trichloroethene	2.8	5	<2	<2	<2	<2	2.36	2.21	1.12J	<2	2.14	2.3	1.9	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
trichlorofluoromethane	2100	1300*	<2	<2	<2	<2	0.59J	0.54J	<2	<2	0.30 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
vinyl chloride	0.015	2	<2	<2	<2	<2	**2.78**	**3.52**	**1.89J**	<2	**3.24**	**2.98**	**2.8**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
SVOCs (EPA 8270C)																																		
1,4-dichlorobenzene (para)	1.4	75	<10	<10	<10	<10	<10	<10	<10	<10	<10	0.91 J	<10	<10	<10	<10	<10	<10	<10	**1.87 J**	<10	<10	<10	<10	NS	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-methylphenol (p-cresol)	3.5	180*	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
benzoic acid	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
benzyl alcohol	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	<10	<10	<10	<10	6.48 J	<10	<10	<10	<10	<10
diethylphthalate	5000	29000*	<10	<10	<10	<10	2.81J	3.19J	2.02J	2.51 J	1.79 J	1.98	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
di-n-butylphthalate	700	3600*	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
bis(2-Ethylhexyl)phthalate	2.5	6	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	1.35J	<10	<10	<10	<10	<10	NS	<10	<10	1.44 J	<10	<10	<10	<10	<10	<10	<10
phenol	300	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Pesticides (EPA 8081)																																		
delta-BHC	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.038 J	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
alpha-BHC	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.04 J	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
beta-BHC	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.042	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.03	<.0505	0.051 J	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
gamma-BHC	0.2	0.2	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
alpha-Chlordane*	0.1	2	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
gamma-Chlordane*	0.1	2	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.0354	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
Aldrin	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.131	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
Dieldrin	0.0022	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	**0.0505**	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	**0.0306J**	<.0505	<.0505	<.0505	<.0505	NS	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
Endosulfan I	NA	NA	<0.025	<.0505	<.0505	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<.0505	<.0505	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<.0505	NS	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<.0505
Heptachlor	0.0078	0.4	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	NS	**0.0101J**	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
PCBs (EPA 8082)																																		
No Detections																																		
Organophosphorus Pesticides (EPA 8141A)																																		
No Detections																																		
Appendix II Inorganics (EPA 6010B/6020A)																																		
Antimony	NA	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic	10	10	<2	<2	<2	<2	2.37	3.89	5.69	**14.0**	**27.7**	**14.4**	6.6	1.2	0.57 J	<2	1.09J	1.08J	<2	1.18 J	1.85 J	5.79	0.53 J	0.76 J	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Barium	2000	2000	9	6.9	9.9	10.2	31.7	20	22	35.0	21	28	26	8.2	22	10.3	15.6	10	11.6	9.3	20	22	23	15	NS	<2	<2	<2	<2	<2	<2	113	<2	<2	<10
Beryllium	NA	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	19	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.36 J	0.094 J	NS	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cadmium	5	5	<1	<1	<1	<1	0.774J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	50	100	0.17 J	0.19 J	<5	<5	<5	<5	<5	<5	<5	<5	0.16 J	0.74 J	0.38 J	<5	<5	<5	<5	<5	<5	<5	<5	1.4 B	NS	<5	<5	<5	<5	<5	<5	<5	<5	<5	<20
Cobalt	NA	NA	0.11 J	0.083 J	0.10 J	<1	<1	<1	<1	<1	<1	<1	0.19 J	0.18 J	0.23	<1	<1	<1	<1	<1	<1	<1	0.26	0.3	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2
Copper	1000	1000	0.50 J	0.3 J	0.35 J	<1	<1	<1	<1	7.68 J	<1	<1	0.39 J	4.4	1.5	<1	<1	<1	<1	<1	5.4	<1	0.51 J	1.8	NS	<1	<1	<1	<1	<1	<1	<1	<1	5.04 J	<20
Iron	300	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**5400**	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead	15	15	<1	<1	<1	<1	1.08	<1	<1	1.85	<1	<1	0.12 J	0.51	0.15 J	<1	<1	2.36	0.56J	<1	<1	<1	0.19 J	0.72	NS	<1	<1	<1	<1	0.631 J	<1	<1	<1	<1	<1
Manganese	50	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	24	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nickel	100	730*	0.36 J	0.42 J	<50	<50	22.9J	<50	<50	<50	<50	<50	0.54 J	1.7	0.55 J	<50	<50	<50	<50	<50	<50	<50	0.6	1.2	NS	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium	50	50	<2	<2	<2	<2	1.07J	1.16J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Silver	18	100*	<30	<30	<30	<30	10.1J	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	NS	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
Thallium	NA	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Tin	NA	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	NS	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vanadium	NA	260*	<30	<30	<30	<30	10.1J	<30	<30	13.1	11	11	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	NS	<30	<30	<30	<30	<30	<30	<30	<30	<30	<20
Zinc	2100	5000	14	3.4 J	4.6 J	<60	55.3J	<60	5.73J	117	42 J	<60	20	15	370	37.1 J	<60	0.02J	34.5	24.5 J	<60	<60	12	24	NS	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60
Other Analyses																																		
Sulfide (EPA 376.1)	250,000	250,000	<200	<200	<200	NA	<200	<200	<200	<200	<200	<200	<200	<200	10,000	NA	<200	<200	<200	<200	<200	<200	<200	<200	NS	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Cyanide (EPA 335.2)	154	200	<20	2.6 J	<20	NA	<20	<20	<20	18 J	<20	<20	<20	4.2 J	2.5	NA	<20	<20	<20	18 J	<20	<20	<20	2.7 J	NS	<20	<20	<20	<20	<20	<20	39	<20	<20	<20
Mercury	1.05	2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NS	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<20
Nitrate/Nitrite (SM 4500 - NO3-E)	10,000	10,000	420	<40	610 J	NA	78	0.058J	0.03J	11 J	<40	541	NA	<40	1,700	NA	<40	0.331J	0.492	68	<40	<40	880	<40	NS	0.031J	<40	<40	<40	67	<40	69	<40	<40	139

APPENDICES

APPENDIX A

GROUNDWATER SAMPLING LOGS

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

1. CLIENT: Ft. Bragg, NC
DATE:06/17/10 TIME: 1240
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Hot, sunny and humid

Location: Longstreet Landfill	**Sample ID:GW-SLMW-SW1-06-10**

PRESERVATIVE: HCl, HNO_3, H_2SO_4, NaOH, NaOH/ZnOAc, Ice
ANALYSES REQUESTED: 8260, 8270, 8081, 8082, 8141, App II Metals, Cyanide, Nitrate, Sulfide
OF CONTAINERS:10
SAMPLING METHOD: ☐ Peristaltic Pump
☒ Bladder Pump LOW FLOW: ☒ YES ☐ NO
SAMPLES FILTERED: ☐YES ☒NO DUPLICATE SAMPLE: ☐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): _____ (ft) Diameter (d): _____ (in)
Depth to Water (dw): _____ (ft) Diameter (d): _____ (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = _____ (gallons)
Flow Rate : _____ (ml/min) Purge vol: _____ (gallons)
Length of Time Purged: _____ (minutes) Purge time: _____
Amount Purged= _____ (gallons)

4. FIELD PARAMETERS

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

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

5. COMMENTS:

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

1. CLIENT: Ft. Bragg, NC
DATE:6/17/10 TIME: 1355
SAMPLED BY: Jackson, Louis
WEATHER CONDITIONS: Hot, sunny and humid

Location: Longstreet Landfill	**Sample ID:GW-SLMW-12AR-6-10**

PRESERVATIVE: HCl, HNO_3, H_2SO_4, NaOH, NaOH/ZnOAc, Ice
ANALYSES REQUESTED: 8260, 8270, 8081, 8082, 8141, App II Metals, Cyanide, Nitrate, Sulfide
OF CONTAINERS:13
SAMPLING METHOD: ☐ Peristaltic Pump
☒ Bladder Pump LOW FLOW: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO DUPLICATE SAMPLE: ☐ 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): 20.18 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 8.75 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 1.9 (gallons)
Flow Rate : 500 (ml/min) Purge vol: NA (gallons)
Length of Time Purged: 40 (minutes) Purge time: 1315
Amount Purged= 5.3 (gallons)

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	1330	1340	1350			
pH	3.92	3.98	4.03			
Sp. Cond	0.042	0.042	0.042			
Temp. °C	23.1	23.3	23.4			
Turbidity	10.0	8.62	7.96			
DO	3.95	3.85	3.80			
ORP	95.4	99.6	91.6			

5. COMMENTS:

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

1. CLIENT: Ft. Bragg, NC
DATE:06/17/10 TIME: 15515
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Warm, partly cloudy

Location: Longstreet Landfill	**Sample ID:GW-SLMW-12BR-06-10**

PRESERVATIVE: HCl, HNO_3, H_2SO_4, NaOH, NaOH/ZnOAc, Ice
ANALYSES REQUESTED: 8260, 8270, 8081, 8082, 8141, App II Metals, Cyanide, Nitrate, Sulfide
OF CONTAINERS:10
SAMPLING METHOD: ☐ Peristaltic Pump
☒ Bladder Pump LOW FLOW: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO DUPLICATE SAMPLE: ☐ 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): 64.80 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 8.79 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 9.3 (gallons)
Flow Rate : 500 (ml/min) Purge vol: (gallons)
Length of Time Purged: 35 (minutes) Purge time: 1440
Amount Purged= 4.6 (gallons)

4. FIELD PARAMETERS

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

Time	1450	1500	1510			
pH	4.56	4.59	4.64			
Sp. Cond	0.071	0.070	0.070			
Temp. °C	21.1	21.2	21.3			
Turbidity	7.52	4.43	3.75			
DO	4.03	3.96	3.75			
ORP	56.6	48.1	38.9			

5. COMMENTS:

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

1. CLIENT: Ft. Bragg, NC
DATE:06/30/10 TIME: 1040
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Hot, sunny

Location: Longstreet Landfill	**Sample ID:GW-SLMW-MW7-06-10**

PRESERVATIVE: HCl, HNO_3, H_2SO_4, NaOH, NaOH/ZnOAc, Ice
ANALYSES REQUESTED: 8260, 8270, 8081, 8082, 8141, App II Metals, Cyanide, Nitrate, Sulfide
OF CONTAINERS:10
SAMPLING METHOD: ☐ Peristaltic Pump
☒ Bladder Pump LOW FLOW: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO DUPLICATE SAMPLE: ☐ 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): 27.21 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 20.43 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 1.1 (gallons)
Flow Rate : 500 (ml/min) Purge vol: ____ (gallons)
Length of Time Purged: 40 (minutes) Purge time: 1000
Amount Purged= 5.3 (gallons)

4. **FIELD PARAMETERS**

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

Time	1010	1015	1025	1035		
pH	5.42	5.36	5.30	5.43		
Sp. Cond	0.358	0.453	0.462	0.478		
Temp. °C	18.9	18.7	18.9	18.9		
Turbidity	8.87	8.05	6.61	5.57		
DO	2.12	0.35	0.60	0.57		
ORP	47.6	-26.7	-30.4	-37.7		

5. COMMENTS:

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

1. CLIENT: Ft. Bragg, NC
DATE:06/30/10 TIME: 1215
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Hot, sunny

Location: Longstreet Landfill	**Sample ID:GW-LSMW-MW8-06-10**

PRESERVATIVE: HCl, HNO_3, H_2SO_4, NaOH, NaOH/ZnOAc, Ice
ANALYSES REQUESTED: 8260, 8270, 8081, 8082, 8141, App II Metals, Cyanide, Nitrate, Sulfide
OF CONTAINERS:10
SAMPLING METHOD: ☐ Peristaltic Pump
☒ Bladder Pump LOW FLOW: ☒ YES ☐ NO
SAMPLES FILTERED: ☐YES ☒NO DUPLICATE SAMPLE: ☐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): 27.40 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 22.91 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 0.7 (gallons)
Flow Rate : 500 (ml/min) Purge vol: _____ (gallons)
Length of Time Purged: 45 (minutes) Purge time: 1130
Amount Purged= 6.0 (gallons)

4. FIELD PARAMETERS

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

Time	1145	1200	1210			
pH	5.35	5.35	5.34			
Sp. Cond	0.494	0.489	0.487			
Temp. °C	24.5	24.8	25.1			
Turbidity	24.0	18.4	8.52			
DO	1.62	1.52	1.34			
ORP	-7.1	-15.8	-19.3			

5. COMMENTS: Per project manager, VOC's, nitrates, Hg, app II metals and cyanide were sampled due to low volume.

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

1. CLIENT: Ft. Bragg, NC
DATE:06/30/10 TIME: 1435
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Hot, sunny

Location: Longstreet Landfill	**Sample ID:GW-LSMW-MW6-06-10**

PRESERVATIVE: HCl, HNO_3, H_2SO_4, NaOH, NaOH/ZnOAc, Ice
ANALYSES REQUESTED: 8260, 8270, 8081, 8082, 8141, App II Metals, Cyanide, Nitrate, Sulfide
OF CONTAINERS:10
SAMPLING METHOD: ☐ Peristaltic Pump
☒ Bladder Pump LOW FLOW: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO DUPLICATE SAMPLE: X 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): 38.00 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 25.80 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 2.0 (gallons)
Flow Rate : 500 (ml/min) Purge vol: _____ (gallons)
Length of Time Purged: 35 (minutes) Purge time: 1400
Amount Purged= 4.6 (gallons)

4. **FIELD PARAMETERS**

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

Time	1415	1420	1425	1430		
pH	2.77	1.62	1.52	1.37		
Sp. Cond	0.015	0.015	0.015	0.015		
Temp. °C	19.6	18.8	18.5	18.5		
Turbidity	5.23	4.48	1.62	1.55		
DO	7.40	7.51	7.37	7.31		
ORP	224.9	230.9	241.6	246.9		

5. COMMENTS: LSMW-DUP1-6-10 @ 1200

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

1. CLIENT: Ft. Bragg, NC
DATE:06/30/10 TIME: 1645
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Hot, sunny

Location: Longstreet Landfill	**Sample ID:GW-LSMW-MW13-06-10**

PRESERVATIVE: HCl, HNO_3, H_2SO_4, NaOH, NaOH/ZnOAc, Ice
ANALYSES REQUESTED: 8260, 8270, 8081, 8082, 8141, App II Metals, Cyanide, Nitrate, Sulfide
OF CONTAINERS:10
SAMPLING METHOD: ☐ Peristaltic Pump
☒ Bladder Pump LOW FLOW: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO DUPLICATE SAMPLE: X 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): 58.19 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 50.58 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 1.3 (gallons)
Flow Rate : 500 (ml/min) Purge vol: ____ (gallons)
Length of Time Purged: 45 (minutes) Purge time: 1600
Amount Purged= 6.0 (gallons)

4. **FIELD PARAMETERS**

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

Time	1616	1620	1630	1640		
pH	4.50	3.80	3.57	3.35		
Sp. Cond	0.037	0.021	0.017	0.015		
Temp. °C	20.3	19.3	19.3	19.4		
Turbidity	2.69	18.3	9.75	7.54		
DO	8.67	9.00	9.06	8.97		
ORP	134.9	165.1	185.9	186.7		

5. COMMENTS: LSMW-DUP2-6-10 @ 1500 MS/MSD

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

1. CLIENT: Ft. Bragg, NC
DATE:07/01/10 TIME: 0835
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Hot, sunny

Location: Longstreet Landfill	**Sample ID:GW-LSMW-11R-07-10**

PRESERVATIVE: HCl, HNO_3, H_2SO_4, NaOH, NaOH/ZnOAc, Ice
ANALYSES REQUESTED: 8260, 8270, 8081, 8082, 8141, App II Metals, Cyanide, Nitrate, Sulfide
OF CONTAINERS:10
SAMPLING METHOD: ☐ Peristaltic Pump
☒ Bladder Pump LOW FLOW: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO DUPLICATE SAMPLE: X 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): 76.30 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 1.8 (gallons)
Flow Rate : 500 (ml/min) Purge vol: ____ (gallons)
Length of Time Purged: 50 (minutes) Purge time: 745
Amount Purged= 6.6 (gallons)

4. **FIELD PARAMETERS**

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

Time	0800	0810	0820	0830		
pH	4.19	4.33	4.65	4.87		
Sp. Cond	0.027	0.038	0.042	0.052		
Temp. °C	19.6	19.6	19.7	19.7		
Turbidity	15.9	12.1	9.26	7.48		
DO	6.20	5.34	5.05	4.81		
ORP	181.2	136.4	118.9	91.7		

5. COMMENTS:

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

1. CLIENT: Ft. Bragg, NC
DATE:07/01/10 TIME: 1125
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Hot, sunny

Location: Longstreet Landfill	**Sample ID:GW-LSMW-9-07-10**

PRESERVATIVE: HCl, HNO_3, H_2SO_4, NaOH, NaOH/ZnOAc, Ice
ANALYSES REQUESTED: 8260, 8270, 8081, 8082, 8141, App II Metals, Cyanide, Nitrate, Sulfide
OF CONTAINERS:10
SAMPLING METHOD: ☐ Peristaltic Pump
☒ Bladder Pump LOW FLOW: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO DUPLICATE SAMPLE: X 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): 48.76 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 36.66 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 2.0 (gallons)
Flow Rate : 500 (ml/min) Purge vol: _____ (gallons)
Length of Time Purged: 45 (minutes) Purge time: 1040
Amount Purged= 6.0 (gallons)

4. **FIELD PARAMETERS**

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

Time	1050	1100	1110	1120		
pH	6.11	6.03	6.07	6.12		
Sp. Cond	0.640	0.653	0.661	0.678		
Temp. °C	19.8	19.7	19.8	19.7		
Turbidity	10.7	9.67	7.71	6.66		
DO	1.64	0.79	0.69	0.75		
ORP	-18.6	-27.1	-36.2	-38.4		

5. COMMENTS:

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

1. CLIENT: Ft. Bragg, NC
DATE:07/01/10 TIME: 1315
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Hot, sunny

Location: Longstreet Landfill	**Sample ID:GW-LSMW-10-07-10**

PRESERVATIVE: HCl, HNO_3, H_2SO_4, NaOH, NaOH/ZnOAc, Ice
ANALYSES REQUESTED: 8260, 8270, 8081, 8082, 8141, App II Metals, Cyanide, Nitrate, Sulfide
OF CONTAINERS:10
SAMPLING METHOD: ☐ Peristaltic Pump
☒ Bladder Pump LOW FLOW: ☒ YES ☐ NO
SAMPLES FILTERED: ☐ YES ☒ NO DUPLICATE SAMPLE: X 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): 27.80 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 19.70 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 1.3 (gallons)
Flow Rate : 500 (ml/min) Purge vol: _____ (gallons)
Length of Time Purged: 50 (minutes) Purge time: 1225
Amount Purged= 6.6 (gallons)

4. **FIELD PARAMETERS**

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

Time	1230	1240	1250	1300	1310	
pH	6.08	6.23	6.34	6.40	6.44	
Sp. Cond	0.738	0.721	0.714	0.710	0.708	
Temp. °C	18.2	18.6	18.2	18.3	18.5	
Turbidity	9.44	4.83	4.92	4.10	3.95	
DO	0.63	0.92	0.43	0.44	0.46	
ORP	-16.7	-41.2	-54.7	-63.7	-70.9	

5. COMMENTS: LSMW-BLK-07-10 @1410

APPENDIX B

DATA VALIDATION REPORTS

QA LEVEL II - DATA EVALUATION CHECKLIST

Company Name: USACE
Project Name: Longstreet Landfill
Reviewer: Frank Burwell

Project Manager: Z. Kidwani
Project Number:
Validation Date: 14-Sept-2010

Laboratory: Test America
Analytical Method (type and no.): VOC (8260B), SVOCs (8270D), PCBs (8081B/8082A)
SDG #: 680-59057-1
Matrix: ☐ Air ☐ Soil/Sed. ☒ Water ☐ Waste ☐
Sample Names: LSMW-7-6-10, LSMW-8-6-10, LSMW-6-6-10, LSMW-13-6-10, LSMW-Dup-1-6-10, LSMW-Dup-2-6-10, Trip Blank

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

Field Information

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

Note Deficiencies:

Chain-of-Custody (COC)

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

General (Reference QAPP or Method)

	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	☒	☐	☐	• SVOC LSMW-13 re-extracted outside of preparation holding tim
b) Were hold times met for sample analysis?	☐	☒	☐	
c) Were the correct preservatives used?	☒	☐	☐	
d) Was the correct method used?	☒	☐	☐	
e) Were appropriate reporting limits achieved?	☒	☐	☐	
f) Were any sample dilutions noted?	☒	☐	☐	• Nitrate as NO3 diluted 5x
g) Were any matrix problems noted?	☐	☒	☐	

Blanks

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

Laboratory Control Sample (LCS)

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

Duplicates

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

Blind Standards

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

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

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

Reagent Water Spike and Duplicate (RWS & RWSD)

	YES	NO	NA	COMMENTS
a) Was RWS accuracy criteria met?	☐	☐	☒	
b) Was RWSD accuracy criteria met?	☐	☐	☒	
c) Was RWS/RWSD precision criteria met (RPD)?	☐	☐	☒	

Surrogate Spikes

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

Comments/Notes:

Organophosphorous (8141B), Metals (6020A), Mercury (7470A)
Anions (Method 300.0), Cyanide (335.4), Sulfide (Method 9030
LSMW-13, -6, -7, -8, -Dupl, -Dup-2 samples were
redigested outside of holding time due to the lab spike
recovering outside of control limits in the original batch.
8270C) SLMW-10, + -9 had surrogates outside of acceptable
criteria
6020A) SLMW-13, -10, -11R, -9, -BLK had lab spikes recoveries outside
of control limits in original batch

Data Qualification: Metals Method 6020 results determined to be ~~unusable~~ usable
because samples were analyzed within 180 d.

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: _____ Date: _____

QA LEVEL II - DATA EVALUATION CHECKLIST

Company Name: USACE
Project Name: Longstreet LANDFILL
Reviewer: Frank Burwell

Project Manager: Z. Kidwai
Project Number:
Validation Date: 14 - SEPT - 2010

Laboratory: TEST AMERICA
SDG #: 680 - 59085 - 1
Analytical Method (type and no.): VOCs (8260 B), SVOCs (8270D), PCBs (8081B/8082A), Organophosphorous (8141B
Matrix: ☐ Air ☐ Soil/Sed. ☒ Water ☐ Waste ☐
Sample Names
SLMW - 11R - 7 - 10, Trip Blank, SLMW - 9 - 7 - 10, SLMW - 10 - 7 - 10, SLMW - BLK - 6 - 10

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

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

Note Deficiencies:

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

General (Reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	☐	☐	☐	• Hold times were exceeded when
b) Were hold times met for sample analysis?	☐	☒	☐	re-analyzing metals by method 6020A.
c) Were the correct preservatives used?	☒	☐	☐	• Samples re-digested b/c lab spike was
d) Was the correct method used?	☒	☐	☐	recovered outside of limits.
e) Were appropriate reporting limits achieved?	☒	☐	☐	• Nitrate dilution 5x
f) Were any sample dilutions noted?	☒	☐	☐	
g) Were any matrix problems noted?	☐	☐	☒	

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

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

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

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

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

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

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

Comments/Notes:

Metals (6020A), Mercury (7470A), Anions (Method 300.0), Cyanide (method 335.4)
Sulfide (method 9030B)

Surrogate spikes
method 8081B - SLMW-9-7-10 surrogated Acceptance limit not reached
SLMW-10-7-10 DCB recovery percentages qualified
with (J)

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: _____ Date: _____

QA LEVEL II - DATA EVALUATION CHECKLIST

Company Name: USACE
Project Name: Longstreet Landfill
Reviewer: Frank Burwell
Project Manager: Z. Kidwai
Project Number: —
Validation Date: 14-Sept-2010
Laboratory: Test America
SDG #: 680-58693-1
Analytical Method (type and no.): VOC (8260B), SVOCs (8270D), PCBs (8081B/8082A)
Matrix: ☐ Air ☐ Soil/Sed. ☒ Water ☐ Waste ☐
Sample Names: SW-1-6-10, SLMW-12AR-6-10, SLMW-12BR-6-10, Trip Blank

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

Field Information

	YES	NO	NA	COMMENTS
a) Sampling dates noted?	☒	☐	☐	Grab sample indicated on COC form
b) Sampling team indicated?	☐	☒	☐	
c) Sample location noted?	☒	☐	☐	
d) Sample depth indicated (Soils)?	☐	☐	☒	
e) Sample type indicated (grab/composite)?	☐	☒	☐	pH, conductivity, Temperature Dissolved Oxygen, ORP Turbidity.
f) Field QC noted?	☒	☐	☐	
g) Field parameters collected (note types)?	☒	☐	☐	
h) Field Calibration within control limits?	☒	☐	☐	
i) Notations of unacceptable field conditions/performances from field logs or field notes?	☐	☒	☐	
j) Does the laboratory narrative indicate deficiencies:	☐	☒	☐	

Note Deficiencies:

Chain-of-Custody (COC)

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

General (Reference QAPP or Method)

	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	☒	☐	☐	
b) Were hold times met for sample analysis?	☒	☐	☐	Nitrate dilution 5x
c) Were the correct preservatives used?	☒	☐	☐	
d) Was the correct method used?	☒	☐	☐	
e) Were appropriate reporting limits achieved?	☒	☐	☐	
f) Were any sample dilutions noted?	☒	☐	☐	
g) Were any matrix problems noted?	☐	☒	☐	

Blanks

	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	☒	☒	☐	- Xylenes, Total - 0.235 ug/L J
b) Were analytes detected in the field blank(s)?	☐	☐	☒	
c) Were analytes detected in the equipment blank(s)?	☐	☐	☒	
d) Were analytes detected in the trip blank(s)?	☐	☒	☐	

Laboratory Control Sample (LCS)

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

Duplicates

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

Blind Standards

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

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

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

Reagent Water Spike and Duplicate (RWS & RWSD)

	YES	NO	NA	COMMENTS
a) Was RWS accuracy criteria met?	☐	☐	☒	
b) Was RWSD accuracy criteria met?	☐	☐	☒	
c) Was RWS/RWSD precision criteria met (RPD)?	☐	☐	☒	

Surrogate Spikes

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

Comments/Notes:

Organophosphorous (8141B), Metals (6020A) Mercury (7470A) Anions (Method 300.0), Cyanide (335.4), Sulfide (Method 9030B)

* Initial Calibration Curve analyzed exceeded method criteria for the following - Benzidine, Benzaldehyde, Atrazine, a,a-Dimethylphenethylamine, Methapyrilene, 3,3-Dimethylbenzidine, hexachlorophene, 1,4-Dioxane, Pyridine, N-nitrosodimethylamine, bis-ether, Benzoic Acid, 2,4-Dinitrophenol, 4-Nitroaniline, 4,6-Dinitro-2-methylphenol, Dinoseb, 2,3,4,6-Tetrachlorophenol, 2-Picoline, N-nitrosomethylethylamine, N-nitrosomorpholine, a,a,-Diemethylphenethylamine, Hexachlorophene, a-Pinene, Diallate, o,o,o-triethylphosphorothioate, Benzoic Acid, 4 Nitrophenol, Benzaldehyde. A CCV Standard was analyzed w/ the affected samples was found to be acceptable. Any detection for the analytes above is Qualified with "J"

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: _____ Date: _____

APPENDIX C

CHAIN OF CUSTODY AND LABORATORY ANALYTICAL REPORTS

(Electronic Only)

ANALYTICAL REPORT

Job Number: 680-58693-1

Job Description: Ft. Bragg Longstreet Landfill

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

Attention: Mr. Kevin Haborak

Approved for release.
Kathryn Smith
Project Manager I
7/9/2010 12:13 PM

Kathryn Smith
Project Manager I
kathye.smith@testamericainc.com
07/09/2010

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

GC/MS Semi VOA
Method(s) 8270D: The initial calibration curve analyzed in batch 1N062910D and 1N062510D was outside method criteria for the following analyte(s): Benzidine, Benzaldehyde, Atrazine, a,a-Dimethylphenethylamine, Methapyrilene, 3,3-Dimethylbenzidine and Hexachlorophene. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered an estimated concentration.

Method(s) 8270D: The continuing calibration verification (CCV) analyzed in batch 173037 (1N063010D) exceeded the method criteria for the following analyte(s): 1,4-Dioxane, Pyridine, N-nitrosodimethylamine, bis(2-chloroisopropyl)ether, Benzoic Acid, 2,4-Dinitrophenol, 4-Nitroaniline, 4,6-Dinitro-2-methylphenol, Dinoseb, 2,3,4,6-Tetrachlorophenol, 2-Picoline, N-nitrosomethylethylamien, N-nitrosomorpholine, a,a-Diemethylphenethylamine, Hexachlorophene, a-Pinene, Diallate and o,o,o-triethylphosphorothioate. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method(s) 8270D: The continuing calibration verification (CCV) analyzed in batch 172948 exceeded the method criteria for the following analyte(s): 1,4-Dioxane, bis(2chloroethyl)ether, bis(2-chloroisopropyl)ether, Benzoic Acid, 2-Nitroaniline, 2,4-Dinitrophenol, 4-Nitrophenol, 4-Nitroaniline, Benzaldehyde. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

No other analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: U.S. Army Corps of Engineers | Job Number: 680-58693-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL SAV	SW846 8270D	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081B/8082A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	TAL SAV	SW846 8141B	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Metals (ICP/MS)	TAL SAV	SW846 6020A	
Preparation, Extractable Metals	TAL SAV		SM 3030C
Mercury (CVAA)	TAL SAV	SW846 7470A	
Preparation, Mercury	TAL SAV		SW846 7470A
Anions, Ion Chromatography	TAL SAV	MCAWW 300.0	
Cyanide, Total	TAL SAV	MCAWW 335.4	
Distillation, Cyanide	TAL SAV		Distill/CN
Sulfide, Acid Soluble and Insoluble (Titrimetric)	TAL SAV	SW846 9034	
Sulfide, Distillation (Acid Soluble and Insoluble)	TAL SAV		SW846 9030B

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

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

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

METHOD / ANALYST SUMMARY

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8270D	Haynes, Carion	CRH
SW846 8081B/8082A	Hao, Lili	LH
SW846 8141B	Kellar, Joshua	JK
SW846 6020A	Robertson, Bryn	BR
SW846 7470A	Eaton, Cliff	CE
MCAWW 300.0	Brazell, Connie	CB
MCAWW 335.4	McDonald, Debbie	DAM
SW846 9034	McDonald, Debbie	DAM

SAMPLE SUMMARY

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-58693-1	SW-1-6-10	Water	06/17/2010 1240	06/18/2010 0916
680-58693-2	SLMW-12AR-6-10	Water	06/17/2010 1355	06/18/2010 0916
680-58693-3	SLMW-12BR-6-10	Water	06/17/2010 1515	06/18/2010 0916
680-58693-4TB	Trip Blank	Water	06/17/2010 0000	06/18/2010 0916

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SW-1-6-10**

Lab Sample ID: 680-58693-1

Client Matrix: Water

Date Sampled: 06/17/2010 1240

Date Received: 06/18/2010 0916

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-172179	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0228.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1738		Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1738			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	0.25	U	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.13	U	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SW-1-6-10**

Lab Sample ID: 680-58693-1

Client Matrix: Water

Date Sampled: 06/17/2010 1240

Date Received: 06/18/2010 0916

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-172179	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0228.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1738		Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1738			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	101		75 - 120
4-Bromofluorobenzene	92		75 - 120
Dibromofluoromethane	102		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12AR-6-10**

Lab Sample ID: 680-58693-2

Client Matrix: Water

Date Sampled: 06/17/2010 1355

Date Received: 06/18/2010 0916

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-172179	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0230.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1807		Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1807			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	0.25	U	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.13	U	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12AR-6-10**

Lab Sample ID: 680-58693-2

Client Matrix: Water

Date Sampled: 06/17/2010 1355

Date Received: 06/18/2010 0916

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-172179	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0230.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1807		Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1807			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	101		75 - 120
4-Bromofluorobenzene	92		75 - 120
Dibromofluoromethane	104		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12BR-6-10**

Lab Sample ID: 680-58693-3

Client Matrix: Water

Date Sampled: 06/17/2010 1515

Date Received: 06/18/2010 0916

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-172179	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0232.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1835		Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1835			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	0.25	U	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.13	U	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12BR-6-10**

Lab Sample ID: 680-58693-3

Client Matrix: Water

Date Sampled: 06/17/2010 1515

Date Received: 06/18/2010 0916

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-172179	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0232.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1835		Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1835			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	100		75 - 120
4-Bromofluorobenzene	92		75 - 120
Dibromofluoromethane	103		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 680-58693-4TB

Client Matrix: Water

Date Sampled: 06/17/2010 0000

Date Received: 06/18/2010 0916

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 1.0

Date Analyzed: 06/21/2010 1641

Date Prepared: 06/21/2010 1641

Analysis Batch: 680-172179

Instrument ID: MSO2

Lab File ID: o0224.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	0.25	U	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.13	U	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 680-58693-4TB

Client Matrix: Water

Date Sampled: 06/17/2010 0000

Date Received: 06/18/2010 0916

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-172179	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0224.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1641		Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1641			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	100		75 - 120
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	104		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SW-1-6-10**

Lab Sample ID: 680-58693-1

Client Matrix: Water

Date Sampled: 06/17/2010 1240

Date Received: 06/18/2010 0916

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-172948		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-172311		Lab File ID:	n8089.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	06/29/2010 1847			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.72	U	0.72	9.4
Acenaphthylene	0.80	U	0.80	9.4
Acetophenone	0.54	U	0.54	9.4
2-Acetylaminofluorene	1.5	U	1.5	9.4
4-Aminobiphenyl	1.1	U	1.1	9.4
Anthracene	0.65	U	0.65	9.4
Benzo[a]anthracene	0.52	U	0.52	9.4
Benzo[b]fluoranthene	2.5	U	2.5	9.4
Benzo[k]fluoranthene	1.1	U	1.1	9.4
Benzo[g,h,i]perylene	0.82	U	0.82	9.4
Benzo[a]pyrene	0.67	U	0.67	9.4
Benzyl alcohol	1.0	U	1.0	9.4
Bis(2-chloroethoxy)methane	0.89	U	0.89	9.4
Bis(2-chloroethyl)ether	1.0	U	1.0	9.4
Bis(2-ethylhexyl) phthalate	1.5	U	1.5	9.4
4-Bromophenyl phenyl ether	0.73	U	0.73	9.4
Butyl benzyl phthalate	1.1	U	1.1	9.4
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.94	U	0.94	9.4
2-Chloronaphthalene	0.75	U	0.75	9.4
2-Chlorophenol	0.82	U	0.82	9.4
4-Chlorophenyl phenyl ether	0.79	U	0.79	9.4
Chrysene	0.48	U	0.48	9.4
Diallate	0.74	U	0.74	9.4
Dibenz(a,h)anthracene	0.94	U	0.94	9.4
Dibenzofuran	0.75	U	0.75	9.4
Di-n-butyl phthalate	0.78	U	0.78	9.4
3,3'-Dichlorobenzidine	28	U	28	57
2,4-Dichlorophenol	1.0	U	1.0	9.4
2,6-Dichlorophenol	0.69	U	0.69	9.4
Diethyl phthalate	0.83	U	0.83	9.4
Dimethoate	0.71	U	0.71	9.4
p-Dimethylamino azobenzene	0.75	U	0.75	9.4
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.4
3,3'-Dimethylbenzidine	9.4	U	9.4	19
2,4-Dimethylphenol	3.8	U Q	3.8	9.4
Dimethyl phthalate	0.93	U	0.93	9.4
4,6-Dinitro-2-methylphenol	9.4	U	9.4	47
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	1.1	U	1.1	9.4
2,6-Dinitrotoluene	1.0	U	1.0	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	1.3	U	1.3	9.4
N-Nitrosodiphenylamine	0.87	U	0.87	9.4
Disulfoton	0.75	U	0.75	9.4
Ethyl methanesulfonate	0.91	U Q	0.91	9.4

Client: U.S. Army Corps of Engineers | Job Number: 680-58693-1

Client Sample ID: **SW-1-6-10**

Lab Sample ID: 680-58693-1 | Date Sampled: 06/17/2010 1240
Client Matrix: Water | Date Received: 06/18/2010 0916

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-172948		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-172311		Lab File ID:	n8089.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	06/29/2010 1847			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.2	U	1.2	9.4
Famphur	1.0	U Q	1.0	9.4
Fluoranthene	0.70	U	0.70	9.4
Fluorene	0.91	U	0.91	9.4
Hexachlorobenzene	0.75	U	0.75	9.4
Hexachlorobutadiene	0.58	U	0.58	9.4
Hexachlorocyclopentadiene	2.4	U	2.4	9.4
Hexachloroethane	0.72	U	0.72	9.4
Hexachloropropene	1.3	U Q	1.3	9.4
Indeno[1,2,3-cd]pyrene	0.94	U	0.94	9.4
Isophorone	0.85	U	0.85	9.4
Isosafrole	0.47	U	0.47	9.4
Methapyrilene	2.5	U	2.5	1900
3-Methylcholanthrene	1.3	U	1.3	9.4
Methyl methanesulfonate	0.57	U Q	0.57	9.4
2-Methylnaphthalene	0.74	U	0.74	9.4
Methyl parathion	0.83	U	0.83	9.4
2-Methylphenol	0.84	U	0.84	9.4
3 & 4 Methylphenol	1.2	U	1.2	9.4
Naphthalene	0.66	U	0.66	9.4
1,4-Naphthoquinone	0.58	U Q	0.58	9.4
1-Naphthylamine	1.0	U Q	1.0	9.4
2-Naphthylamine	1.4	U	1.4	9.4
2-Nitroaniline	1.2	U	1.2	47
3-Nitroaniline	4.7	U	4.7	47
4-Nitroaniline	4.7	U	4.7	47
Nitrobenzene	0.69	U	0.69	9.4
2-Nitrophenol	0.72	U	0.72	9.4
4-Nitrophenol	1.8	U	1.8	47
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.4
N-Nitrosodiethylamine	0.88	U	0.88	9.4
N-Nitrosodimethylamine	2.6	U	2.6	9.4
N-Nitrosodi-n-propylamine	0.68	U	0.68	9.4
N-Nitrosomethylethylamine	3.1	U	3.1	9.4
N-Nitrosopiperidine	0.83	U	0.83	9.4
N-Nitrosopyrrolidine	0.94	U	0.94	9.4
N-Nitro-o-toluidine	1.4	U	1.4	9.4
Pentachlorobenzene	0.49	U	0.49	9.4
Pentachloronitrobenzene	0.74	U	0.74	9.4
Pentachlorophenol	1.9	U	1.9	47
Phenacetin	1.3	U	1.3	9.4
Phenanthrene	0.73	U	0.73	9.4
Phenol	0.78	U	0.78	9.4
p-Phenylene diamine	9.4	U	9.4	1900
Phorate	0.82	U	0.82	9.4
Pronamide	0.84	U	0.84	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SW-1-6-10**

Lab Sample ID: 680-58693-1

Client Matrix: Water

Date Sampled: 06/17/2010 1240

Date Received: 06/18/2010 0916

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-172948		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-172311		Lab File ID:	n8089.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	06/29/2010 1847			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pyrene	0.59	U	0.59	9.4
Safrole, Total	0.75	U	0.75	9.4
Sulfotepp	0.50	U	0.50	9.4
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.4
2,3,4,6-Tetrachlorophenol	0.68	U	0.68	9.4
Thionazin	0.86	U	0.86	9.4
2-Toluidine	1.3	U	1.3	9.4
2,4,5-Trichlorophenol	1.1	U	1.1	9.4
2,4,6-Trichlorophenol	0.80	U	0.80	9.4
o,o',o"-Triethylphosphorothioate	0.94	U Q	0.94	9.4
1,3,5-Trinitrobenzene	1.9	U	1.9	9.4
1,3-Dinitrobenzene	0.57	U	0.57	9.4
bis(chloroisopropyl) ether	0.74	U	0.74	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	70		50 - 113
2-Fluorophenol	43		36 - 110
Nitrobenzene-d5	56		45 - 112
Phenol-d5	38		38 - 116
Terphenyl-d14	86		10 - 121
2,4,6-Tribromophenol	95		40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12AR-6-10**

Lab Sample ID: 680-58693-2

Client Matrix: Water

Date Sampled: 06/17/2010 1355

Date Received: 06/18/2010 0916

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-172948		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-172311		Lab File ID:	n8090.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	06/29/2010 1911			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.72	U	0.72	9.4
Acenaphthylene	0.80	U	0.80	9.4
Acetophenone	0.54	U	0.54	9.4
2-Acetylaminofluorene	1.5	U	1.5	9.4
4-Aminobiphenyl	1.1	U	1.1	9.4
Anthracene	0.65	U	0.65	9.4
Benzo[a]anthracene	0.52	U	0.52	9.4
Benzo[b]fluoranthene	2.5	U	2.5	9.4
Benzo[k]fluoranthene	1.1	U	1.1	9.4
Benzo[g,h,i]perylene	0.82	U	0.82	9.4
Benzo[a]pyrene	0.67	U	0.67	9.4
Benzyl alcohol	1.0	U	1.0	9.4
Bis(2-chloroethoxy)methane	0.89	U	0.89	9.4
Bis(2-chloroethyl)ether	1.0	U	1.0	9.4
Bis(2-ethylhexyl) phthalate	1.5	U	1.5	9.4
4-Bromophenyl phenyl ether	0.73	U	0.73	9.4
Butyl benzyl phthalate	1.1	U	1.1	9.4
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.94	U	0.94	9.4
2-Chloronaphthalene	0.75	U	0.75	9.4
2-Chlorophenol	0.82	U	0.82	9.4
4-Chlorophenyl phenyl ether	0.79	U	0.79	9.4
Chrysene	0.48	U	0.48	9.4
Diallate	0.74	U	0.74	9.4
Dibenz(a,h)anthracene	0.94	U	0.94	9.4
Dibenzofuran	0.75	U	0.75	9.4
Di-n-butyl phthalate	0.78	U	0.78	9.4
3,3'-Dichlorobenzidine	28	U	28	57
2,4-Dichlorophenol	1.0	U	1.0	9.4
2,6-Dichlorophenol	0.69	U	0.69	9.4
Diethyl phthalate	0.83	U	0.83	9.4
Dimethoate	0.71	U	0.71	9.4
p-Dimethylamino azobenzene	0.75	U	0.75	9.4
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.4
3,3'-Dimethylbenzidine	9.4	U	9.4	19
2,4-Dimethylphenol	3.8	U Q	3.8	9.4
Dimethyl phthalate	0.93	U	0.93	9.4
4,6-Dinitro-2-methylphenol	9.4	U	9.4	47
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	1.1	U	1.1	9.4
2,6-Dinitrotoluene	1.0	U	1.0	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	1.3	U	1.3	9.4
N-Nitrosodiphenylamine	0.87	U	0.87	9.4
Disulfoton	0.75	U	0.75	9.4
Ethyl methanesulfonate	0.91	U Q	0.91	9.4

Client: U.S. Army Corps of Engineers | Job Number: 680-58693-1

Client Sample ID: **SLMW-12AR-6-10**

Lab Sample ID: 680-58693-2 | Date Sampled: 06/17/2010 1355
Client Matrix: Water | Date Received: 06/18/2010 0916

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-172948		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-172311		Lab File ID:	n8090.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	06/29/2010 1911			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.2	U	1.2	9.4
Famphur	1.0	U Q	1.0	9.4
Fluoranthene	0.70	U	0.70	9.4
Fluorene	0.91	U	0.91	9.4
Hexachlorobenzene	0.75	U	0.75	9.4
Hexachlorobutadiene	0.58	U	0.58	9.4
Hexachlorocyclopentadiene	2.4	U	2.4	9.4
Hexachloroethane	0.72	U	0.72	9.4
Hexachloropropene	1.3	U Q	1.3	9.4
Indeno[1,2,3-cd]pyrene	0.94	U	0.94	9.4
Isophorone	0.85	U	0.85	9.4
Isosafrole	0.47	U	0.47	9.4
Methapyrilene	2.5	U	2.5	1900
3-Methylcholanthrene	1.3	U	1.3	9.4
Methyl methanesulfonate	0.57	U Q	0.57	9.4
2-Methylnaphthalene	0.74	U	0.74	9.4
Methyl parathion	0.83	U	0.83	9.4
2-Methylphenol	0.84	U	0.84	9.4
3 & 4 Methylphenol	1.2	U	1.2	9.4
Naphthalene	0.66	U	0.66	9.4
1,4-Naphthoquinone	0.58	U Q	0.58	9.4
1-Naphthylamine	1.0	U Q	1.0	9.4
2-Naphthylamine	1.4	U	1.4	9.4
2-Nitroaniline	1.2	U	1.2	47
3-Nitroaniline	4.7	U	4.7	47
4-Nitroaniline	4.7	U	4.7	47
Nitrobenzene	0.69	U	0.69	9.4
2-Nitrophenol	0.72	U	0.72	9.4
4-Nitrophenol	1.8	U	1.8	47
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.4
N-Nitrosodiethylamine	0.88	U	0.88	9.4
N-Nitrosodimethylamine	2.6	U	2.6	9.4
N-Nitrosodi-n-propylamine	0.68	U	0.68	9.4
N-Nitrosomethylethylamine	3.1	U	3.1	9.4
N-Nitrosopiperidine	0.83	U	0.83	9.4
N-Nitrosopyrrolidine	0.94	U	0.94	9.4
N-Nitro-o-toluidine	1.4	U	1.4	9.4
Pentachlorobenzene	0.49	U	0.49	9.4
Pentachloronitrobenzene	0.74	U	0.74	9.4
Pentachlorophenol	1.9	U	1.9	47
Phenacetin	1.3	U	1.3	9.4
Phenanthrene	0.73	U	0.73	9.4
Phenol	0.78	U	0.78	9.4
p-Phenylene diamine	9.4	U	9.4	1900
Phorate	0.82	U	0.82	9.4
Pronamide	0.84	U	0.84	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12AR-6-10**

Lab Sample ID: 680-58693-2

Client Matrix: Water

Date Sampled: 06/17/2010 1355

Date Received: 06/18/2010 0916

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-172948		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-172311		Lab File ID:	n8090.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	06/29/2010 1911			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pyrene	0.59	U	0.59	9.4
Safrole, Total	0.75	U	0.75	9.4
Sulfotepp	0.50	U	0.50	9.4
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.4
2,3,4,6-Tetrachlorophenol	0.68	U	0.68	9.4
Thionazin	0.86	U	0.86	9.4
2-Toluidine	1.3	U	1.3	9.4
2,4,5-Trichlorophenol	1.1	U	1.1	9.4
2,4,6-Trichlorophenol	0.80	U	0.80	9.4
o,o',o"-Triethylphosphorothioate	0.94	U Q	0.94	9.4
1,3,5-Trinitrobenzene	1.9	U	1.9	9.4
1,3-Dinitrobenzene	0.57	U	0.57	9.4
bis(chloroisopropyl) ether	0.74	U	0.74	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	72		50 - 113
2-Fluorophenol	66		36 - 110
Nitrobenzene-d5	69		45 - 112
Phenol-d5	70		38 - 116
Terphenyl-d14	91		10 - 121
2,4,6-Tribromophenol	106		40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12BR-6-10**

Lab Sample ID: 680-58693-3

Client Matrix: Water

Date Sampled: 06/17/2010 1515

Date Received: 06/18/2010 0916

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-172948		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-172311		Lab File ID:	n8091.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	06/29/2010 1934			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.72	U	0.72	9.4
Acenaphthylene	0.80	U	0.80	9.4
Acetophenone	0.54	U	0.54	9.4
2-Acetylaminofluorene	1.5	U	1.5	9.4
4-Aminobiphenyl	1.1	U	1.1	9.4
Anthracene	0.65	U	0.65	9.4
Benzo[a]anthracene	0.52	U	0.52	9.4
Benzo[b]fluoranthene	2.5	U	2.5	9.4
Benzo[k]fluoranthene	1.1	U	1.1	9.4
Benzo[g,h,i]perylene	0.82	U	0.82	9.4
Benzo[a]pyrene	0.67	U	0.67	9.4
Benzyl alcohol	1.0	U	1.0	9.4
Bis(2-chloroethoxy)methane	0.89	U	0.89	9.4
Bis(2-chloroethyl)ether	1.0	U	1.0	9.4
Bis(2-ethylhexyl) phthalate	1.5	U	1.5	9.4
4-Bromophenyl phenyl ether	0.73	U	0.73	9.4
Butyl benzyl phthalate	1.1	U	1.1	9.4
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.94	U	0.94	9.4
2-Chloronaphthalene	0.75	U	0.75	9.4
2-Chlorophenol	0.82	U	0.82	9.4
4-Chlorophenyl phenyl ether	0.79	U	0.79	9.4
Chrysene	0.48	U	0.48	9.4
Diallate	0.74	U	0.74	9.4
Dibenz(a,h)anthracene	0.94	U	0.94	9.4
Dibenzofuran	0.75	U	0.75	9.4
Di-n-butyl phthalate	0.78	U	0.78	9.4
3,3'-Dichlorobenzidine	28	U	28	57
2,4-Dichlorophenol	1.0	U	1.0	9.4
2,6-Dichlorophenol	0.69	U	0.69	9.4
Diethyl phthalate	0.83	U	0.83	9.4
Dimethoate	0.71	U	0.71	9.4
p-Dimethylamino azobenzene	0.75	U	0.75	9.4
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.4
3,3'-Dimethylbenzidine	9.4	U	9.4	19
2,4-Dimethylphenol	3.8	U Q	3.8	9.4
Dimethyl phthalate	0.93	U	0.93	9.4
4,6-Dinitro-2-methylphenol	9.4	U	9.4	47
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	1.1	U	1.1	9.4
2,6-Dinitrotoluene	1.0	U	1.0	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	1.3	U	1.3	9.4
N-Nitrosodiphenylamine	0.87	U	0.87	9.4
Disulfoton	0.75	U	0.75	9.4
Ethyl methanesulfonate	0.91	U Q	0.91	9.4

Client: U.S. Army Corps of Engineers | Job Number: 680-58693-1

Client Sample ID: **SLMW-12BR-6-10**

Lab Sample ID: 680-58693-3 | Date Sampled: 06/17/2010 1515
Client Matrix: Water | Date Received: 06/18/2010 0916

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-172948		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-172311		Lab File ID:	n8091.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	06/29/2010 1934			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.2	U	1.2	9.4
Famphur	1.0	U Q	1.0	9.4
Fluoranthene	0.70	U	0.70	9.4
Fluorene	0.91	U	0.91	9.4
Hexachlorobenzene	0.75	U	0.75	9.4
Hexachlorobutadiene	0.58	U	0.58	9.4
Hexachlorocyclopentadiene	2.4	U	2.4	9.4
Hexachloroethane	0.72	U	0.72	9.4
Hexachloropropene	1.3	U Q	1.3	9.4
Indeno[1,2,3-cd]pyrene	0.94	U	0.94	9.4
Isophorone	0.85	U	0.85	9.4
Isosafrole	0.47	U	0.47	9.4
Methapyrilene	2.5	U	2.5	1900
3-Methylcholanthrene	1.3	U	1.3	9.4
Methyl methanesulfonate	0.57	U Q	0.57	9.4
2-Methylnaphthalene	0.74	U	0.74	9.4
Methyl parathion	0.83	U	0.83	9.4
2-Methylphenol	0.84	U	0.84	9.4
3 & 4 Methylphenol	1.2	U	1.2	9.4
Naphthalene	0.66	U	0.66	9.4
1,4-Naphthoquinone	0.58	U Q	0.58	9.4
1-Naphthylamine	1.0	U Q	1.0	9.4
2-Naphthylamine	1.4	U	1.4	9.4
2-Nitroaniline	1.2	U	1.2	47
3-Nitroaniline	4.7	U	4.7	47
4-Nitroaniline	4.7	U	4.7	47
Nitrobenzene	0.69	U	0.69	9.4
2-Nitrophenol	0.72	U	0.72	9.4
4-Nitrophenol	1.8	U	1.8	47
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.4
N-Nitrosodiethylamine	0.88	U	0.88	9.4
N-Nitrosodimethylamine	2.6	U	2.6	9.4
N-Nitrosodi-n-propylamine	0.68	U	0.68	9.4
N-Nitrosomethylethylamine	3.1	U	3.1	9.4
N-Nitrosopiperidine	0.83	U	0.83	9.4
N-Nitrosopyrrolidine	0.94	U	0.94	9.4
N-Nitro-o-toluidine	1.4	U	1.4	9.4
Pentachlorobenzene	0.49	U	0.49	9.4
Pentachloronitrobenzene	0.74	U	0.74	9.4
Pentachlorophenol	1.9	U	1.9	47
Phenacetin	1.3	U	1.3	9.4
Phenanthrene	0.73	U	0.73	9.4
Phenol	0.78	U	0.78	9.4
p-Phenylene diamine	9.4	U	9.4	1900
Phorate	0.82	U	0.82	9.4
Pronamide	0.84	U	0.84	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12BR-6-10**

Lab Sample ID: 680-58693-3

Client Matrix: Water

Date Sampled: 06/17/2010 1515

Date Received: 06/18/2010 0916

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-172948		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-172311		Lab File ID:	n8091.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	06/29/2010 1934			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pyrene	0.59	U	0.59	9.4
Safrole, Total	0.75	U	0.75	9.4
Sulfotepp	0.50	U	0.50	9.4
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.4
2,3,4,6-Tetrachlorophenol	0.68	U	0.68	9.4
Thionazin	0.86	U	0.86	9.4
2-Toluidine	1.3	U	1.3	9.4
2,4,5-Trichlorophenol	1.1	U	1.1	9.4
2,4,6-Trichlorophenol	0.80	U	0.80	9.4
o,o',o"-Triethylphosphorothioate	0.94	U Q	0.94	9.4
1,3,5-Trinitrobenzene	1.9	U	1.9	9.4
1,3-Dinitrobenzene	0.57	U	0.57	9.4
bis(chloroisopropyl) ether	0.74	U	0.74	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	87		50 - 113
2-Fluorophenol	73		36 - 110
Nitrobenzene-d5	78		45 - 112
Phenol-d5	76		38 - 116
Terphenyl-d14	95		10 - 121
2,4,6-Tribromophenol	113		40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SW-1-6-10**

Lab Sample ID: 680-58693-1

Client Matrix: Water

Date Sampled: 06/17/2010 1240

Date Received: 06/18/2010 0916

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-172625		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-172318		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	06/24/2010 1811			Injection Volume:	2 uL
Date Prepared:	06/23/2010 1422			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0061	U	0.0061	0.094
4,4'-DDE	0.0073	U	0.0073	0.094
4,4'-DDT	0.0092	U	0.0092	0.094
Aldrin	0.0066	U	0.0066	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
delta-BHC	0.0045	U	0.0045	0.047
Dieldrin	0.0086	U	0.0086	0.094
Endosulfan I	0.0040	U	0.0040	0.047
Endosulfan II	0.0092	U	0.0092	0.094
Endosulfan sulfate	0.0064	U	0.0064	0.094
Endrin	0.0092	U	0.0092	0.094
Endrin aldehyde	0.015	U	0.015	0.094
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
Isodrin	0.047	U	0.047	0.047
Methoxychlor	0.012	U	0.012	0.094
PCB-1016	0.067	U	0.067	0.94
PCB-1221	0.26	U	0.26	1.9
PCB-1232	0.10	U	0.10	0.94
PCB-1242	0.17	U	0.17	0.94
PCB-1248	0.34	U	0.34	0.94
PCB-1254	0.25	U	0.25	0.94
PCB-1260	0.19	U	0.19	0.94
PCB-1262	0.23	U	0.23	0.94
Toxaphene	0.47	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	53		14 - 115
Tetrachloro-m-xylene	66		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SW-1-6-10**

Lab Sample ID: 680-58693-1

Client Matrix: Water

Date Sampled: 06/17/2010 1240

Date Received: 06/18/2010 0916

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-172625	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-172318	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/24/2010 1811		Injection Volume:	2 uL
Date Prepared:	06/23/2010 1422		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	50		14 - 115
Tetrachloro-m-xylene	56		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12AR-6-10**

Lab Sample ID: 680-58693-2

Client Matrix: Water

Date Sampled: 06/17/2010 1355

Date Received: 06/18/2010 0916

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-172625		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-172318		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	06/24/2010 1830			Injection Volume:	2 uL
Date Prepared:	06/23/2010 1422			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0061	U	0.0061	0.094
4,4'-DDE	0.0073	U	0.0073	0.094
4,4'-DDT	0.0092	U	0.0092	0.094
Aldrin	0.0066	U	0.0066	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
delta-BHC	0.0045	U	0.0045	0.047
Dieldrin	0.0086	U	0.0086	0.094
Endosulfan I	0.0040	U	0.0040	0.047
Endosulfan II	0.0092	U	0.0092	0.094
Endosulfan sulfate	0.0064	U	0.0064	0.094
Endrin	0.0092	U	0.0092	0.094
Endrin aldehyde	0.015	U	0.015	0.094
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
Isodrin	0.047	U	0.047	0.047
Methoxychlor	0.012	U	0.012	0.094
PCB-1016	0.067	U	0.067	0.94
PCB-1221	0.26	U	0.26	1.9
PCB-1232	0.10	U	0.10	0.94
PCB-1242	0.17	U	0.17	0.94
PCB-1248	0.34	U	0.34	0.94
PCB-1254	0.25	U	0.25	0.94
PCB-1260	0.19	U	0.19	0.94
PCB-1262	0.23	U	0.23	0.94
Toxaphene	0.47	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	60		14 - 115
Tetrachloro-m-xylene	69		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12AR-6-10**

Lab Sample ID: 680-58693-2

Client Matrix: Water

Date Sampled: 06/17/2010 1355

Date Received: 06/18/2010 0916

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-172625	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-172318	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/24/2010 1830		Injection Volume:	2 uL
Date Prepared:	06/23/2010 1422		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	59		14 - 115
Tetrachloro-m-xylene	58		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12BR-6-10**

Lab Sample ID: 680-58693-3

Client Matrix: Water

Date Sampled: 06/17/2010 1515

Date Received: 06/18/2010 0916

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-172625		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-172318		Initial Weight/Volume:	500 mL
Dilution:	1.0			Final Weight/Volume:	5 mL
Date Analyzed:	06/24/2010 1849			Injection Volume:	2 uL
Date Prepared:	06/23/2010 1422			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0065	U	0.0065	0.10
4,4'-DDE	0.0077	U	0.0077	0.10
4,4'-DDT	0.0097	U	0.0097	0.10
Aldrin	0.0070	U	0.0070	0.050
alpha-BHC	0.0057	U	0.0057	0.050
beta-BHC	0.0067	U	0.0067	0.050
Chlordane (technical)	0.10	U	0.10	0.50
Chlorobenzilate	0.50	U	0.50	0.50
delta-BHC	0.0048	U	0.0048	0.050
Dieldrin	0.0091	U	0.0091	0.10
Endosulfan I	0.0042	U	0.0042	0.050
Endosulfan II	0.0098	U	0.0098	0.10
Endosulfan sulfate	0.0068	U	0.0068	0.10
Endrin	0.0097	U	0.0097	0.10
Endrin aldehyde	0.016	U	0.016	0.10
gamma-BHC (Lindane)	0.0059	U	0.0059	0.050
Heptachlor	0.0070	U	0.0070	0.050
Heptachlor epoxide	0.0060	U	0.0060	0.050
Isodrin	0.050	U	0.050	0.050
Methoxychlor	0.013	U	0.013	0.10
PCB-1016	0.071	U	0.071	1.0
PCB-1221	0.28	U	0.28	2.0
PCB-1232	0.11	U	0.11	1.0
PCB-1242	0.18	U	0.18	1.0
PCB-1248	0.36	U	0.36	1.0
PCB-1254	0.26	U	0.26	1.0
PCB-1260	0.20	U	0.20	1.0
PCB-1262	0.24	U	0.24	1.0
Toxaphene	0.50	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	57		14 - 115
Tetrachloro-m-xylene	77		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12BR-6-10**

Lab Sample ID: 680-58693-3

Client Matrix: Water

Date Sampled: 06/17/2010 1515

Date Received: 06/18/2010 0916

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-172625		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-172318		Initial Weight/Volume:	500 mL
Dilution:	1.0			Final Weight/Volume:	5 mL
Date Analyzed:	06/24/2010 1849			Injection Volume:	2 uL
Date Prepared:	06/23/2010 1422			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	55		14 - 115
Tetrachloro-m-xylene	59		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SW-1-6-10**

Lab Sample ID: 680-58693-1

Client Matrix: Water

Date Sampled: 06/17/2010 1240

Date Received: 06/18/2010 0916

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-172564	Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-172318	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/24/2010 1958		Injection Volume:	2 uL
Date Prepared:	06/23/2010 1422		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Azinphos-methyl	0.47	U	0.47	0.94
Bolstar	0.47	U	0.47	0.94
Chlorpyrifos	0.47	U	0.47	0.94
Coumaphos	0.47	U	0.47	0.94
Demeton-O	1.2	U Q	1.2	2.4
Demeton-S	1.2	U	1.2	2.4
Diazinon	0.47	U	0.47	0.94
Dichlorvos	0.94	U	0.94	1.9
Dimethoate	0.94	U	0.94	1.9
Disulfoton	0.94	U	0.94	1.9
EPN	0.47	U	0.47	0.94
Famphur	0.94	U	0.94	1.9
Fensulfothion	2.4	U	2.4	4.7
Fenthion	0.47	U	0.47	0.94
Malathion	0.47	U	0.47	0.94
Methyl parathion	0.24	U	0.24	0.47
Merphos	0.71	U	0.71	1.4
Mevinphos	0.94	U	0.94	1.9
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U Q	2.4	4.7
Ethyl Parathion	0.47	U	0.47	0.94
Phorate	0.47	U	0.47	0.94
Ronnel	0.47	U	0.47	0.94
Stirophos	0.47	U	0.47	0.94
Sulfotepp	0.24	U	0.24	0.47
Thionazin	0.47	U	0.47	0.94
Tokuthion	0.47	U	0.47	0.94
Trichloronate	0.47	U	0.47	0.94
Ethoprop	0.24	U	0.24	0.47

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	94		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12AR-6-10**

Lab Sample ID: 680-58693-2

Client Matrix: Water

Date Sampled: 06/17/2010 1355

Date Received: 06/18/2010 0916

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-172564		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-172318		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	06/24/2010 2023			Injection Volume:	2 uL
Date Prepared:	06/23/2010 1422			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Azinphos-methyl	0.47	U	0.47	0.94
Bolstar	0.47	U	0.47	0.94
Chlorpyrifos	0.47	U	0.47	0.94
Coumaphos	0.47	U	0.47	0.94
Demeton-O	1.2	U Q	1.2	2.4
Demeton-S	1.2	U	1.2	2.4
Diazinon	0.47	U	0.47	0.94
Dichlorvos	0.94	U	0.94	1.9
Dimethoate	0.94	U	0.94	1.9
Disulfoton	0.94	U	0.94	1.9
EPN	0.47	U	0.47	0.94
Famphur	0.94	U	0.94	1.9
Fensulfothion	2.4	U	2.4	4.7
Fenthion	0.47	U	0.47	0.94
Malathion	0.47	U	0.47	0.94
Methyl parathion	0.24	U	0.24	0.47
Merphos	0.71	U	0.71	1.4
Mevinphos	0.94	U	0.94	1.9
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U Q	2.4	4.7
Ethyl Parathion	0.47	U	0.47	0.94
Phorate	0.47	U	0.47	0.94
Ronnel	0.47	U	0.47	0.94
Stirophos	0.47	U	0.47	0.94
Sulfotepp	0.24	U	0.24	0.47
Thionazin	0.47	U	0.47	0.94
Tokuthion	0.47	U	0.47	0.94
Trichloronate	0.47	U	0.47	0.94
Ethoprop	0.24	U	0.24	0.47

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	85		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12BR-6-10**

Lab Sample ID: 680-58693-3

Client Matrix: Water

Date Sampled: 06/17/2010 1515

Date Received: 06/18/2010 0916

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-172564		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-172318		Initial Weight/Volume:	500 mL
Dilution:	1.0			Final Weight/Volume:	5 mL
Date Analyzed:	06/24/2010 2048			Injection Volume:	2 uL
Date Prepared:	06/23/2010 1422			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Azinphos-methyl	0.50	U	0.50	1.0
Bolstar	0.50	U	0.50	1.0
Chlorpyrifos	0.50	U	0.50	1.0
Coumaphos	0.50	U	0.50	1.0
Demeton-O	1.3	U Q	1.3	2.5
Demeton-S	1.3	U	1.3	2.5
Diazinon	0.50	U	0.50	1.0
Dichlorvos	1.0	U	1.0	2.0
Dimethoate	1.0	U	1.0	2.0
Disulfoton	1.0	U	1.0	2.0
EPN	0.50	U	0.50	1.0
Famphur	1.0	U	1.0	2.0
Fensulfothion	2.5	U	2.5	5.0
Fenthion	0.50	U	0.50	1.0
Malathion	0.50	U	0.50	1.0
Methyl parathion	0.25	U	0.25	0.50
Merphos	0.75	U	0.75	1.5
Mevinphos	1.0	U	1.0	2.0
Monochrotophos	5.0	U	5.0	10
Naled	2.5	U Q	2.5	5.0
Ethyl Parathion	0.50	U	0.50	1.0
Phorate	0.50	U	0.50	1.0
Ronnel	0.50	U	0.50	1.0
Stirophos	0.50	U	0.50	1.0
Sulfotepp	0.25	U	0.25	0.50
Thionazin	0.50	U	0.50	1.0
Tokuthion	0.50	U	0.50	1.0
Trichloronate	0.50	U	0.50	1.0
Ethoprop	0.25	U	0.25	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	94		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SW-1-6-10**

Lab Sample ID: 680-58693-1

Client Matrix: Water

Date Sampled: 06/17/2010 1240

Date Received: 06/18/2010 0916

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-172176		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-171906		Lab File ID:	171906171906.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/19/2010 0348			Final Weight/Volume:	50 mL
Date Prepared:	06/18/2010 1210				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Arsenic	0.57	J	0.40	1.0
Barium	22		0.15	1.0
Beryllium	0.070	U	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.38	J	0.16	1.0
Cobalt	0.23		0.078	0.20
Copper	1.5		0.21	1.0
Iron	5400		20	50
Lead	0.15	J	0.080	0.30
Manganese	24		0.84	2.0
Nickel	0.55	J	0.40	1.0
Selenium	0.21	U	0.21	0.50
Silver	0.10	U	0.10	0.20
Thallium	0.10	U	0.10	0.20
Tin	0.40	U	0.40	1.0
Vanadium	1.4	U	1.4	5.0
Zinc	370		2.6	10

Method:	6020A	Analysis Batch: 680-172169		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-171906		Lab File ID:	171906.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/21/2010 2307			Final Weight/Volume:	50 mL
Date Prepared:	06/18/2010 1210				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-172629		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-172235		Lab File ID:	b062410.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/24/2010 1646			Final Weight/Volume:	50 mL
Date Prepared:	06/22/2010 1453				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12AR-6-10**

Lab Sample ID: 680-58693-2

Client Matrix: Water

Date Sampled: 06/17/2010 1355

Date Received: 06/18/2010 0916

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-172176		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-171906		Lab File ID:	171906171906.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/19/2010 0356			Final Weight/Volume:	50 mL
Date Prepared:	06/18/2010 1210				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Arsenic	0.54	J	0.40	1.0
Barium	36		0.15	1.0
Beryllium	0.12	J	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.40	J	0.16	1.0
Cobalt	0.65		0.078	0.20
Copper	2.0		0.21	1.0
Iron	100		20	50
Lead	0.45		0.080	0.30
Manganese	30		0.84	2.0
Nickel	0.97	J	0.40	1.0
Selenium	0.21	U	0.21	0.50
Silver	0.10	U	0.10	0.20
Thallium	0.10	U	0.10	0.20
Tin	0.40	U	0.40	1.0
Vanadium	1.4	U	1.4	5.0
Zinc	8.8	J	2.6	10

Method:	6020A	Analysis Batch: 680-172169		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-171906		Lab File ID:	171906.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/21/2010 2315			Final Weight/Volume:	50 mL
Date Prepared:	06/18/2010 1210				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-172629		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-172235		Lab File ID:	b062410.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/24/2010 1655			Final Weight/Volume:	50 mL
Date Prepared:	06/22/2010 1453				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Client Sample ID: **SLMW-12BR-6-10**

Lab Sample ID: 680-58693-3

Client Matrix: Water

Date Sampled: 06/17/2010 1515

Date Received: 06/18/2010 0916

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-172176		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-171906		Lab File ID:	171906171906.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/19/2010 0403			Final Weight/Volume:	50 mL
Date Prepared:	06/18/2010 1210				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Arsenic	0.40	U	0.40	1.0
Barium	40		0.15	1.0
Beryllium	0.37		0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.32	J	0.16	1.0
Cobalt	1.1		0.078	0.20
Copper	3.4		0.21	1.0
Iron	52		20	50
Lead	0.27	J	0.080	0.30
Manganese	14		0.84	2.0
Nickel	2.1		0.40	1.0
Selenium	0.21	U	0.21	0.50
Silver	0.10	U	0.10	0.20
Thallium	0.10	U	0.10	0.20
Tin	0.40	U	0.40	1.0
Vanadium	1.4	U	1.4	5.0
Zinc	34		2.6	10

Method:	6020A	Analysis Batch: 680-172169		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-171906		Lab File ID:	171906.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/21/2010 2322			Final Weight/Volume:	50 mL
Date Prepared:	06/18/2010 1210				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-172629		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-172235		Lab File ID:	b062410.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/24/2010 1658			Final Weight/Volume:	50 mL
Date Prepared:	06/22/2010 1453				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

General Chemistry

Client Sample ID: **SW-1-6-10**

Lab Sample ID: 680-58693-1

Client Matrix: Water

Date Sampled: 06/17/2010 1240

Date Received: 06/18/2010 0916

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	1.7		mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-172461	Date Analyzed: 06/18/2010 1816						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-172152	Date Analyzed: 06/22/2010 0908						
Prep Batch: 680-172026	Date Prepared: 06/21/2010 0944						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-172198	Date Analyzed: 06/22/2010 1153						
Prep Batch: 680-172140	Date Prepared: 06/22/2010 0641						

General Chemistry

Client Sample ID: **SLMW-12AR-6-10**

Lab Sample ID: 680-58693-2

Client Matrix: Water

Date Sampled: 06/17/2010 1355

Date Received: 06/18/2010 0916

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-172461	Date Analyzed: 06/18/2010 1840						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-172152	Date Analyzed: 06/22/2010 0908						
Prep Batch: 680-172026	Date Prepared: 06/21/2010 0944						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-172198	Date Analyzed: 06/22/2010 1153						
Prep Batch: 680-172140	Date Prepared: 06/22/2010 0641						

General Chemistry

Client Sample ID: **SLMW-12BR-6-10**

Lab Sample ID: 680-58693-3

Client Matrix: Water

Date Sampled: 06/17/2010 1515

Date Received: 06/18/2010 0916

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U M	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-172461	Date Analyzed: 06/18/2010 1955						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-172152	Date Analyzed: 06/22/2010 0908						
Prep Batch: 680-172026	Date Prepared: 06/21/2010 0944						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-172198	Date Analyzed: 06/22/2010 1153						
Prep Batch: 680-172140	Date Prepared: 06/22/2010 0641						

DATA REPORTING QUALIFIERS

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	U	Undetected at the Limit of Detection.
GC/MS Semi VOA		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	M	Manual integrated compound.
	Q	One or more quality control criteria failed.
	U	Undetected at the Limit of Detection.
GC Semi VOA		
	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.
	M	Manual integrated compound.
	Q	One or more quality control criteria failed.
	U	Undetected at the Limit of Detection.
Metals		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	U	Undetected at the Limit of Detection.
General Chemistry		
	M	Manual integrated compound.
	U	Undetected at the Limit of Detection.

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-172179

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-172179/23	Analysis Batch:	680-172179	Instrument ID:	MSO2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq134.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1203			Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1203				

Analyte	Result	Qual	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	0.25	U	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.13	U	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-172179

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-172179/23
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/21/2010 1203
Date Prepared: 06/21/2010 1203

Analysis Batch: 680-172179
Prep Batch: N/A
Units: ug/L

Instrument ID: MSO2
Lab File ID: oq134.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Xylenes, Total	0.235	J	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	% Rec	Acceptance Limits
Toluene-d8 (Surr)	102	75 - 120
4-Bromofluorobenzene	92	75 - 120
Dibromofluoromethane	105	75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-172179

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-172179/20	Analysis Batch:	680-172179	Instrument ID:	MSO2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq126.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1002			Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1002				

LCSD Lab Sample ID:	LCSD 680-172179/21	Analysis Batch:	680-172179	Instrument ID:	MSO2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq128.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1030			Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1030				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	86	84	17 - 175	2	50		
Benzene	98	96	77 - 119	2	30		
Dichlorobromomethane	97	97	78 - 127	1	30		
Bromomethane	86	92	12 - 184	6	50		
Carbon disulfide	106	106	55 - 131	0	30		
Chlorobenzene	97	97	85 - 116	0	30		
Chlorodibromomethane	101	101	75 - 133	1	30		
Chloroethane	91	93	40 - 165	3	50		
Chloromethane	96	91	48 - 142	5	50		
Chloroform	101	101	82 - 120	1	30		
1,2-Dibromo-3-Chloropropane	91	92	49 - 140	1	30		
Ethylene Dibromide	94	95	80 - 121	1	30		
Dichlorodifluoromethane	110	109	34 - 154	1	30		
1,1-Dichloroethane	103	104	74 - 127	1	30		
1,2-Dichloroethane	90	89	66 - 132	2	30		
trans-1,2-Dichloroethene	103	104	72 - 131	1	30		
1,1-Dichloroethene	108	109	62 - 141	1	30		
Methylene Chloride	103	105	70 - 125	2	30		
1,2-Dichloropropane	96	95	73 - 124	1	30		
cis-1,3-Dichloropropene	97	97	76 - 126	0	30		
trans-1,3-Dichloropropene	101	101	73 - 128	0	30		
Ethylbenzene	99	101	86 - 116	3	30		
2-Butanone (MEK)	86	87	33 - 157	0	30		
4-Methyl-2-pentanone (MIBK)	81	80	40 - 151	2	30		
Styrene	98	99	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	97	97	81 - 128	0	30		
1,1,2,2-Tetrachloroethane	87	88	69 - 129	0	30		
Tetrachloroethene	96	98	76 - 126	2	30		
Carbon tetrachloride	99	98	71 - 135	1	30		
Toluene	101	100	81 - 117	0	30		
Bromoform	95	93	62 - 133	2	30		
1,1,2-Trichloroethane	92	91	75 - 121	1	30		
1,1,1-Trichloroethane	100	97	76 - 127	2	30		

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-172179

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-172179/20	Analysis Batch:	680-172179	Instrument ID:	MSO2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq126.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1002			Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1002				

LCSD Lab Sample ID:	LCSD 680-172179/21	Analysis Batch:	680-172179	Instrument ID:	MSO2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq128.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/21/2010 1030			Final Weight/Volume:	5 mL
Date Prepared:	06/21/2010 1030				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Trichloroethene	94	95	84 - 115	1	30		
Trichlorofluoromethane	89	89	58 - 149	0	50		
1,2,3-Trichloropropane	90	90	70 - 130	0	30		
Vinyl acetate	107	106	10 - 217	1	30		
Vinyl chloride	90	90	59 - 144	0	50		
Xylenes, Total	99	100	84 - 118	1	30		
2-Hexanone	86	85	34 - 161	1	30		
Chlorobromomethane	100	97	10 - 150	3	30		
cis-1,2-Dichloroethene	102	105	69 - 134	3	30		
1,3-Dichloropropane	94	95	75 - 120	1	30		
2,2-Dichloropropane	113	113	55 - 157	0	30		
1,1-Dichloropropene	97	95	77 - 122	2	30		
1,2-Dichlorobenzene	98	100	79 - 124	2	30		
1,3-Dichlorobenzene	99	101	78 - 125	2	30		
1,4-Dichlorobenzene	99	100	81 - 122	1	30		
1,2,4-Trichlorobenzene	97	99	60 - 135	2	30		
Dibromomethane	93	90	78 - 119	4	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Toluene-d8 (Surr)	98	98	75 - 120
4-Bromofluorobenzene	98	100	75 - 120
Dibromofluoromethane	101	105	75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-172311

Method: 8270D
Preparation: 3520C

Lab Sample ID:	MB 680-172311/15-A	Analysis Batch:	680-173037	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-172311	Lab File ID:	n8093a.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	06/30/2010 1459			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Acenaphthene	0.76	U	0.76	10
Acenaphthylene	0.85	U	0.85	10
Acetophenone	0.57	U	0.57	10
2-Acetylaminofluorene	1.6	U	1.6	10
4-Aminobiphenyl	1.2	U	1.2	10
Anthracene	0.69	U	0.69	10
Benzo[a]anthracene	0.55	U	0.55	10
Benzo[b]fluoranthene	2.6	U	2.6	10
Benzo[k]fluoranthene	1.2	U	1.2	10
Benzo[g,h,i]perylene	0.87	U	0.87	10
Benzo[a]pyrene	0.71	U	0.71	10
Benzyl alcohol	1.1	U	1.1	10
Bis(2-chloroethoxy)methane	0.94	U	0.94	10
Bis(2-chloroethyl)ether	1.1	U	1.1	10
Bis(2-ethylhexyl) phthalate	1.6	U	1.6	10
4-Bromophenyl phenyl ether	0.77	U	0.77	10
Butyl benzyl phthalate	1.2	U	1.2	10
4-Chloroaniline	2.2	U	2.2	20
4-Chloro-3-methylphenol	1.0	U	1.0	10
2-Chloronaphthalene	0.80	U	0.80	10
2-Chlorophenol	0.87	U	0.87	10
4-Chlorophenyl phenyl ether	0.84	U	0.84	10
Chrysene	0.51	U	0.51	10
Diallate	0.78	U	0.78	10
Dibenz(a,h)anthracene	1.0	U	1.0	10
Dibenzofuran	0.79	U	0.79	10
Di-n-butyl phthalate	0.83	U	0.83	10
3,3'-Dichlorobenzidine	30	U	30	60
2,4-Dichlorophenol	1.1	U	1.1	10
2,6-Dichlorophenol	0.73	U	0.73	10
Diethyl phthalate	0.88	U	0.88	10
Dimethoate	0.75	U	0.75	10
p-Dimethylamino azobenzene	0.79	U	0.79	10
7,12-Dimethylbenz(a)anthracene	1.2	U	1.2	10
3,3'-Dimethylbenzidine	10	U	10	20
2,4-Dimethylphenol	4.0	U	4.0	10
Dimethyl phthalate	0.99	U	0.99	10
4,6-Dinitro-2-methylphenol	10	U	10	50
2,4-Dinitrophenol	10	U	10	50
2,4-Dinitrotoluene	1.2	U	1.2	10
2,6-Dinitrotoluene	1.1	U	1.1	10
Dinoseb	5.0	U	5.0	10
Di-n-octyl phthalate	1.4	U	1.4	10

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-172311

Method: 8270D
Preparation: 3520C

Lab Sample ID:	MB 680-172311/15-A	Analysis Batch:	680-173037	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-172311	Lab File ID:	n8093a.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	06/30/2010 1459			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
N-Nitrosodiphenylamine	0.92	U	0.92	10
Disulfoton	0.79	U	0.79	10
Ethyl methanesulfonate	0.96	U	0.96	10
Ethyl Parathion	1.3	U	1.3	10
Famphur	1.1	U	1.1	10
Fluoranthene	0.74	U	0.74	10
Fluorene	0.96	U	0.96	10
Hexachlorobenzene	0.79	U	0.79	10
Hexachlorobutadiene	0.62	U	0.62	10
Hexachlorocyclopentadiene	2.5	U	2.5	10
Hexachloroethane	0.76	U	0.76	10
Hexachloropropene	1.4	U	1.4	10
Indeno[1,2,3-cd]pyrene	1.0	U	1.0	10
Isophorone	0.90	U	0.90	10
Isosafrole	0.50	U	0.50	10
Methapyrilene	2.7	U	2.7	2000
3-Methylcholanthrene	1.4	U	1.4	10
Methyl methanesulfonate	0.60	U	0.60	10
2-Methylnaphthalene	0.78	U	0.78	10
Methyl parathion	0.88	U	0.88	10
2-Methylphenol	0.89	U	0.89	10
3 & 4 Methylphenol	1.3	U	1.3	10
Naphthalene	0.70	U	0.70	10
1,4-Naphthoquinone	0.62	U	0.62	10
1-Naphthylamine	1.1	U	1.1	10
2-Naphthylamine	1.5	U	1.5	10
2-Nitroaniline	1.3	U	1.3	50
3-Nitroaniline	5.0	U	5.0	50
4-Nitroaniline	5.0	U	5.0	50
Nitrobenzene	0.73	U	0.73	10
2-Nitrophenol	0.76	U	0.76	10
4-Nitrophenol	1.9	U	1.9	50
N-Nitrosodi-n-butylamine	0.96	U	0.96	10
N-Nitrosodiethylamine	0.93	U	0.93	10
N-Nitrosodimethylamine	2.8	U	2.8	10
N-Nitrosodi-n-propylamine	0.72	U	0.72	10
N-Nitrosomethylethylamine	3.3	U	3.3	10
N-Nitrosopiperidine	0.88	U	0.88	10
N-Nitrosopyrrolidine	1.0	U	1.0	10
N-Nitro-o-toluidine	1.5	U	1.5	10
Pentachlorobenzene	0.52	U	0.52	10
Pentachloronitrobenzene	0.78	U	0.78	10
Pentachlorophenol	2.0	U	2.0	50

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-172311

Method: 8270D
Preparation: 3520C

Lab Sample ID:	MB 680-172311/15-A	Analysis Batch:	680-173037	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-172311	Lab File ID:	n8093a.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	06/30/2010 1459			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Phenacetin	1.4	U	1.4	10
Phenanthrene	0.77	U	0.77	10
Phenol	0.83	U	0.83	10
p-Phenylene diamine	10	U	10	2000
Phorate	0.87	U	0.87	10
Pronamide	0.89	U	0.89	10
Pyrene	0.63	U	0.63	10
Safrole, Total	0.80	U	0.80	10
Sulfotepp	0.53	U	0.53	10
1,2,4,5-Tetrachlorobenzene	0.76	U	0.76	10
2,3,4,6-Tetrachlorophenol	0.72	U	0.72	10
Thionazin	0.91	U	0.91	10
2-Toluidine	1.4	U	1.4	10
2,4,5-Trichlorophenol	1.2	U	1.2	10
2,4,6-Trichlorophenol	0.85	U	0.85	10
o,o',o"-Triethylphosphorothioate	1.0	U	1.0	10
1,3,5-Trinitrobenzene	2.0	U	2.0	10
1,3-Dinitrobenzene	0.60	U	0.60	10
bis(chloroisopropyl) ether	0.78	U	0.78	10

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	83	50 - 113
2-Fluorophenol	78	36 - 110
Nitrobenzene-d5	96	45 - 112
Phenol-d5	86	38 - 116
Terphenyl-d14	95	10 - 121
2,4,6-Tribromophenol	90	40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Lab Control Sample - Batch: 680-172311

Method: 8270D
Preparation: 3520C

Lab Sample ID:	LCS 680-172311/16-A	Analysis Batch:	680-172948	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-172311	Lab File ID:	n8086.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	06/29/2010 1736			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	100	77.3	77	45 - 117	
Acenaphthylene	100	77.9	78	51 - 112	
Anthracene	100	79.2	79	52 - 116	
Benzo[a]anthracene	100	79.6	80	49 - 124	
Benzo[b]fluoranthene	100	74.5	75	46 - 126	
Benzo[k]fluoranthene	100	84.6	85	47 - 126	
Benzo[g,h,i]perylene	100	95.5	95	51 - 117	
Benzo[a]pyrene	100	96.1	96	48 - 120	
Benzyl alcohol	100	86.2	86	34 - 113	
Bis(2-chloroethoxy)methane	100	87.7	88	50 - 112	
Bis(2-chloroethyl)ether	100	66.7	67	43 - 110	
Bis(2-ethylhexyl) phthalate	100	79.2	79	47 - 134	
4-Bromophenyl phenyl ether	100	106	106	42 - 110	
Butyl benzyl phthalate	100	87.3	87	52 - 135	
4-Chloroaniline	100	79.0	79	10 - 110	
4-Chloro-3-methylphenol	100	88.5	89	46 - 118	
2-Chloronaphthalene	100	78.1	78	47 - 110	
2-Chlorophenol	100	83.1	83	47 - 110	
4-Chlorophenyl phenyl ether	100	93.6	94	46 - 114	
Chrysene	100	84.6	85	51 - 123	
Dibenz(a,h)anthracene	100	90.9	91	46 - 124	
Dibenzofuran	100	77.5	78	50 - 112	
Di-n-butyl phthalate	100	79.4	79	49 - 123	
3,3'-Dichlorobenzidine	100	85.7	86	10 - 113	
2,4-Dichlorophenol	100	91.6	92	46 - 115	
Diethyl phthalate	100	84.3	84	51 - 119	
2,4-Dimethylphenol	100	56.3	56	36 - 110	
Dimethyl phthalate	100	88.9	89	50 - 116	
4,6-Dinitro-2-methylphenol	100	98.3	98	29 - 167	
2,4-Dinitrophenol	100	98.2	98	10 - 189	
2,4-Dinitrotoluene	100	88.8	89	49 - 128	
2,6-Dinitrotoluene	100	96.5	96	45 - 131	
Di-n-octyl phthalate	100	83.3	83	44 - 134	
N-Nitrosodiphenylamine	100	94.4	94	47 - 119	
Fluoranthene	100	84.3	84	50 - 120	
Fluorene	100	80.9	81	50 - 115	
Hexachlorobenzene	100	97.9	98	48 - 119	
Hexachlorobutadiene	100	84.2	84	40 - 110	
Hexachlorocyclopentadiene	100	32.0	32	10 - 110	
Hexachloroethane	100	59.0	59	33 - 110	
Indeno[1,2,3-cd]pyrene	100	105	105	40 - 126	
Isophorone	100	77.8	78	50 - 111	
2-Methylnaphthalene	100	82.9	83	46 - 110	

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Lab Control Sample - Batch: 680-172311

Method: 8270D
Preparation: 3520C

Lab Sample ID: LCS 680-172311/16-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/29/2010 1736
Date Prepared: 06/23/2010 1153

Analysis Batch: 680-172948
Prep Batch: 680-172311
Units: ug/L

Instrument ID: MSN
Lab File ID: n8086.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2-Methylphenol	100	78.5	79	46 - 110	
3 & 4 Methylphenol	100	82.1	82	43 - 110	
Naphthalene	100	73.2	73	41 - 110	
2-Nitroaniline	100	74.6	75	45 - 122	
3-Nitroaniline	100	81.7	82	30 - 116	
4-Nitroaniline	100	81.9	82	36 - 125	
Nitrobenzene	100	72.0	72	46 - 110	
2-Nitrophenol	100	86.6	87	42 - 120	
4-Nitrophenol	100	67.0	67	30 - 122	
N-Nitrosodimethylamine	100	75.9	76	33 - 110	
N-Nitrosodi-n-propylamine	100	83.1	83	45 - 112	
Pentachlorophenol	100	101	101	37 - 132	
Phenanthrene	100	76.5	76	52 - 117	
Phenol	100	74.1	74	39 - 110	
Pyrene	100	81.0	81	52 - 125	
2,4,5-Trichlorophenol	100	98.4	98	47 - 122	
2,4,6-Trichlorophenol	100	90.7	91	46 - 120	
bis(chloroisopropyl) ether	100	61.1	61	42 - 110	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	81	50 - 113
2-Fluorophenol	72	36 - 110
Nitrobenzene-d5	79	45 - 112
Phenol-d5	75	38 - 116
Terphenyl-d14	83	10 - 121
2,4,6-Tribromophenol	110	40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-172311

Method: 8270D
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-172311/19-A	Analysis Batch:	680-173037	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-172311	Lab File ID:	n8094.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	06/30/2010 1435			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

LCSD Lab Sample ID:	LCSD 680-172311/20-A	Analysis Batch:	680-172948	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-172311	Lab File ID:	n8088.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	06/29/2010 1823			Final Weight/Volume:	1 mL
Date Prepared:	06/23/2010 1153			Injection Volume:	1 uL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
2,4-Dimethylphenol	0	0	36 - 110	NC	40	U Q	U Q

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2-Fluorobiphenyl	85	82	50 - 113
2-Fluorophenol	75	64	36 - 110
Nitrobenzene-d5	105	81	45 - 112
Phenol-d5	85	70	38 - 116
Terphenyl-d14	88	87	10 - 121
2,4,6-Tribromophenol	101	112	40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-172318

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: MB 680-172318/13-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/24/2010 1516
Date Prepared: 06/23/2010 1422

Analysis Batch: 680-172625
Prep Batch: 680-172318
Units: ug/L

Instrument ID: SGM
Lab File ID: mf24008.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.0065	U	0.0065	0.10
4,4'-DDE	0.0077	U	0.0077	0.10
4,4'-DDT	0.0097	U	0.0097	0.10
Aldrin	0.0070	U	0.0070	0.050
alpha-BHC	0.0057	U	0.0057	0.050
beta-BHC	0.0067	U	0.0067	0.050
Chlordane (technical)	0.10	U	0.10	0.50
Chlorobenzilate	0.50	U	0.50	0.50
delta-BHC	0.0048	U	0.0048	0.050
Dieldrin	0.0091	U	0.0091	0.10
Endosulfan I	0.0042	U	0.0042	0.050
Endosulfan II	0.0098	U	0.0098	0.10
Endosulfan sulfate	0.0068	U	0.0068	0.10
Endrin	0.0097	U	0.0097	0.10
Endrin aldehyde	0.016	U	0.016	0.10
gamma-BHC (Lindane)	0.0059	U	0.0059	0.050
Heptachlor	0.0070	U	0.0070	0.050
Heptachlor epoxide	0.0060	U	0.0060	0.050
Isodrin	0.050	U	0.050	0.050
Methoxychlor	0.013	U	0.013	0.10
PCB-1016	0.071	U	0.071	1.0
PCB-1221	0.28	U	0.28	2.0
PCB-1232	0.11	U	0.11	1.0
PCB-1242	0.18	U	0.18	1.0
PCB-1248	0.36	U	0.36	1.0
PCB-1254	0.26	U	0.26	1.0
PCB-1260	0.20	U	0.20	1.0
PCB-1262	0.24	U	0.24	1.0
Toxaphene	0.50	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	89	14 - 115
Tetrachloro-m-xylene	85	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	88	14 - 115
Tetrachloro-m-xylene	79	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Lab Control Sample - Batch: 680-172318

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: LCS 680-172318/14-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/24/2010 1535
Date Prepared: 06/23/2010 1422

Analysis Batch: 680-172625
Prep Batch: 680-172318
Units: ug/L

Instrument ID: SGM
Lab File ID: mf24009.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	0.200	0.184	92	37 - 179	
4,4'-DDE	0.200	0.158	79	33 - 142	
4,4'-DDT	0.200	0.183	92	27 - 141	
Aldrin	0.100	0.0511	51	32 - 114	J
alpha-BHC	0.100	0.0573	57	29 - 112	J
beta-BHC	0.100	0.0872	87	15 - 204	
delta-BHC	0.100	0.0933	93	25 - 123	
Dieldrin	0.200	0.186	93	45 - 137	
Endosulfan I	0.100	0.0960	96	31 - 134	
Endosulfan II	0.200	0.157	78	24 - 144	
Endosulfan sulfate	0.200	0.161	81	44 - 128	
Endrin	0.200	0.168	84	38 - 144	
Endrin aldehyde	0.200	0.178	89	37 - 135	
gamma-BHC (Lindane)	0.100	0.0641	64	31 - 118	J
Heptachlor	0.100	0.0904	90	30 - 133	
Heptachlor epoxide	0.100	0.0964	96	34 - 126	
Methoxychlor	0.200	0.153	76	10 - 243	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	71	14 - 115
Tetrachloro-m-xylene	75	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	64	14 - 115
Tetrachloro-m-xylene	61	35 - 120

Lab Control Sample - Batch: 680-172318

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: LCS 680-172318/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/24/2010 1555
Date Prepared: 06/23/2010 1422

Analysis Batch: 680-172625
Prep Batch: 680-172318
Units: ug/L

Instrument ID: SGM
Lab File ID: mf24010.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
PCB-1016	10.0	8.02	80	57 - 124	
PCB-1260	10.0	8.23	82	58 - 124	

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	74	14 - 115
Tetrachloro-m-xylene	70	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	67	14 - 115
Tetrachloro-m-xylene	51	35 - 120

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-172318

Method: 8081B/8082A
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-172318/28-A	Analysis Batch:	680-172625	Instrument ID:	SGM
Client Matrix:	Water	Prep Batch:	680-172318	Lab File ID:	mf24013.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	06/24/2010 1653			Final Weight/Volume:	10 mL
Date Prepared:	06/23/2010 1422			Injection Volume:	
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-172318/29-A	Analysis Batch:	680-172625	Instrument ID:	SGM
Client Matrix:	Water	Prep Batch:	680-172318	Lab File ID:	mf24014.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	06/24/2010 1712			Final Weight/Volume:	10 mL
Date Prepared:	06/23/2010 1422			Injection Volume:	
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chlordane (technical)	84	86	70 - 130	3	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	65	68	14 - 115
Tetrachloro-m-xylene	68	76	35 - 120

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	62	63	14 - 115
Tetrachloro-m-xylene	58	65	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-172318

Method: 8081B/8082A
Preparation: 3520C

MS Lab Sample ID:	680-58693-3	Analysis Batch: 680-172625	Instrument ID: SGM
Client Matrix:	Water	Prep Batch: 680-172318	Lab File ID: mf24023.d
Dilution:	1.0		Initial Weight/Volume: 500 mL
Date Analyzed:	06/24/2010 2007		Final Weight/Volume: 5 mL
Date Prepared:	06/23/2010 1422		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-58693-3	Analysis Batch: 680-172625	Instrument ID: SGM
Client Matrix:	Water	Prep Batch: 680-172318	Lab File ID: mf24024.d
Dilution:	1.0		Initial Weight/Volume: 500 mL
Date Analyzed:	06/24/2010 2026		Final Weight/Volume: 5 mL
Date Prepared:	06/23/2010 1422		Injection Volume: 2 uL
			Column ID: PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
PCB-1016	88	91	57 - 124	3	40		
PCB-1260	75	83	58 - 124	11	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	57	66	14 - 115
Tetrachloro-m-xylene	68	72	35 - 120

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	54	62	14 - 115
Tetrachloro-m-xylene	50	54	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-172318

Method: 8141B
Preparation: 3520C

Lab Sample ID: MB 680-172318/13-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/24/2010 1525
Date Prepared: 06/23/2010 1422

Analysis Batch: 680-172564
Prep Batch: 680-172318
Units: ug/L

Instrument ID: SGO
Lab File ID: of24009.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Azinphos-methyl	0.50	U	0.50	1.0
Bolstar	0.50	U	0.50	1.0
Chlorpyrifos	0.50	U	0.50	1.0
Coumaphos	0.50	U	0.50	1.0
Demeton-O	1.3	U	1.3	2.5
Demeton-S	1.3	U	1.3	2.5
Diazinon	0.50	U	0.50	1.0
Dichlorvos	1.0	U	1.0	2.0
Dimethoate	1.0	U	1.0	2.0
Disulfoton	1.0	U	1.0	2.0
EPN	0.50	U	0.50	1.0
Famphur	1.0	U	1.0	2.0
Fensulfothion	2.5	U	2.5	5.0
Fenthion	0.50	U	0.50	1.0
Malathion	0.50	U	0.50	1.0
Methyl parathion	0.25	U	0.25	0.50
Merphos	0.75	U	0.75	1.5
Mevinphos	1.0	U	1.0	2.0
Monochrotophos	5.0	U	5.0	10
Naled	2.5	U	2.5	5.0
Ethyl Parathion	0.50	U	0.50	1.0
Phorate	0.50	U	0.50	1.0
Ronnel	0.50	U	0.50	1.0
Stirophos	0.50	U	0.50	1.0
Sulfotepp	0.25	U	0.25	0.50
Thionazin	0.50	U	0.50	1.0
Tokuthion	0.50	U	0.50	1.0
Trichloronate	0.50	U	0.50	1.0
Ethoprop	0.25	U	0.25	0.50

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	87	26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Lab Control Sample - Batch: 680-172318

Method: 8141B
Preparation: 3520C

Lab Sample ID: LCS 680-172318/20-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/24/2010 1550
Date Prepared: 06/23/2010 1422

Analysis Batch: 680-172564
Prep Batch: 680-172318
Units: ug/L

Instrument ID: SGO
Lab File ID: of24010.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Diazinon	4.00	3.05	76	53 - 138	
Methyl parathion	4.00	2.83	71	31 - 130	
Ronnel	4.00	3.46	86	46 - 142	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	92	26 - 134

Lab Control Sample - Batch: 680-172318

Method: 8141B
Preparation: 3520C

Lab Sample ID: LCS 680-172318/23-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/24/2010 1615
Date Prepared: 06/23/2010 1422

Analysis Batch: 680-172564
Prep Batch: 680-172318
Units: ug/L

Instrument ID: SGO
Lab File ID: of24011.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ethyl Parathion	4.00	3.49	87	45 - 132	
Thionazin	4.00	2.97	74	37 - 134	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	92	26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-171906

Method: 6020A
Preparation: 3030C

Lab Sample ID: MB 680-171906/5-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2010 0221
Date Prepared: 06/18/2010 1055

Analysis Batch: 680-172176
Prep Batch: 680-171906
Units: ug/L

Instrument ID: ICPMSA
Lab File ID: 171906171906.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Arsenic	0.40	U	0.40	1.0
Barium	0.15	U	0.15	1.0
Beryllium	0.070	U	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.16	U	0.16	1.0
Cobalt	0.078	U	0.078	0.20
Copper	0.21	U	0.21	1.0
Iron	20	U	20	50
Lead	0.080	U	0.080	0.30
Manganese	0.84	U	0.84	2.0
Nickel	0.40	U	0.40	1.0
Selenium	0.21	U	0.21	0.50
Silver	0.10	U	0.10	0.20
Thallium	0.10	U	0.10	0.20
Tin	0.40	U	0.40	1.0
Vanadium	1.4	U	1.4	5.0
Zinc	2.6	U	2.6	10

Method Blank - Batch: 680-171906

Method: 6020A
Preparation: 3030C

Lab Sample ID: MB 680-171906/5-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/21/2010 2139
Date Prepared: 06/18/2010 1055

Analysis Batch: 680-172169
Prep Batch: 680-171906
Units: ug/L

Instrument ID: ICPMSA
Lab File ID: 171906.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Antimony	0.99	U	0.99	2.0

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Lab Control Sample - Batch: 680-171906

Method: 6020A
Preparation: 3030C

Lab Sample ID: LCS 680-171906/6-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2010 0228
Date Prepared: 06/18/2010 1055

Analysis Batch: 680-172176
Prep Batch: 680-171906
Units: ug/L

Instrument ID: ICPMSA
Lab File ID: 171906171906.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	20.0	19.9	100	75 - 125	
Barium	20.0	19.8	99	75 - 125	
Beryllium	10.0	9.84	98	75 - 125	
Cadmium	10.0	10.1	101	75 - 125	
Chromium	20.0	20.2	101	75 - 125	
Cobalt	10.0	9.70	97	75 - 125	
Copper	20.0	20.9	105	75 - 125	
Iron	1000	1010	101	75 - 125	
Lead	10.0	9.73	97	75 - 125	
Manganese	100	104	104	75 - 125	
Nickel	20.0	20.5	103	75 - 125	
Selenium	20.0	19.6	98	75 - 125	
Silver	10.0	9.85	98	75 - 125	
Thallium	8.00	7.81	98	75 - 125	
Tin	20.0	19.8	99	75 - 125	
Vanadium	20.0	19.8	99	75 - 125	
Zinc	20.0	21.1	105	75 - 125	

Lab Control Sample - Batch: 680-171906

Method: 6020A
Preparation: 3030C

Lab Sample ID: LCS 680-171906/6-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/21/2010 2147
Date Prepared: 06/18/2010 1055

Analysis Batch: 680-172169
Prep Batch: 680-171906
Units: ug/L

Instrument ID: ICPMSA
Lab File ID: 171906.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	10.0	10.9	109	75 - 125	

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-172235

Method: 7470A
Preparation: 7470A

Lab Sample ID: MB 680-172235/23-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/24/2010 1547
Date Prepared: 06/22/2010 1453

Analysis Batch: 680-172629
Prep Batch: 680-172235
Units: ug/L

Instrument ID: LEEMAN1
Lab File ID: b062410.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.091	U	0.091	0.20

Lab Control Sample - Batch: 680-172235

Method: 7470A
Preparation: 7470A

Lab Sample ID: LCS 680-172235/24-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/24/2010 1550
Date Prepared: 06/22/2010 1453

Analysis Batch: 680-172629
Prep Batch: 680-172235
Units: ug/L

Instrument ID: LEEMAN1
Lab File ID: b062410.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.55	102	80 - 120	

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-172461

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 680-172461/2
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 06/18/2010 1649
Date Prepared: N/A

Analysis Batch: 680-172461
Prep Batch: N/A
Units: mg/L

Instrument ID: ICG
Lab File ID: 0005.d
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Nitrate as NO3	0.36	U	0.36	1.1

Lab Control Sample - Batch: 680-172461

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 680-172461/3
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 06/18/2010 1701
Date Prepared: N/A

Analysis Batch: 680-172461
Prep Batch: N/A
Units: mg/L

Instrument ID: ICG
Lab File ID: 0006.d
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as NO3	11.0	10.9	99	90 - 110	

Matrix Spike - Batch: 680-172461

Method: 300.0
Preparation: N/A

Lab Sample ID: 680-58693-2
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 06/18/2010 1853
Date Prepared: N/A

Analysis Batch: 680-172461
Prep Batch: N/A
Units: mg/L

Instrument ID: ICG
Lab File ID: 0015.d
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL
1 uL

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as NO3	0.36	U	22.1	22.2	101	90 - 110	

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-172026

Method: 335.4
Preparation: Distill/CN

Lab Sample ID:	MB 680-172026/1-A	Analysis Batch:	680-172152	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-172026	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	06/22/2010 0908			Final Weight/Volume:	50 mL
Date Prepared:	06/21/2010 0944				

Analyte	Result	Qual	MDL	RL
Cyanide, Total	0.0025	U	0.0025	0.010

Lab Control Sample - Batch: 680-172026

Method: 335.4
Preparation: Distill/CN

Lab Sample ID:	LCS 680-172026/2-A	Analysis Batch:	680-172152	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-172026	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	06/22/2010 0908			Final Weight/Volume:	50 mL
Date Prepared:	06/21/2010 0944				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0300	0.0317	105	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-172026

Method: 335.4
Preparation: Distill/CN

MS Lab Sample ID:	680-58693-3	Analysis Batch:	680-172152	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-172026	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/22/2010 0908			Final Weight/Volume:	50 mL
Date Prepared:	06/21/2010 0944				

MSD Lab Sample ID:	680-58693-3	Analysis Batch:	680-172152	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-172026	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/22/2010 0908			Final Weight/Volume:	50 mL
Date Prepared:	06/21/2010 0944				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Total	95	92	90 - 110	3	20		

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Method Blank - Batch: 680-172140

Method: 9034
Preparation: 9030B

Lab Sample ID: MB 680-172140/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/22/2010 1153
Date Prepared: 06/22/2010 0641

Analysis Batch: 680-172198
Prep Batch: 680-172140
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 6 mL
Final Weight/Volume: 6 mL

Analyte	Result	Qual	RL	RL
Sulfide	10	U	10	10

Lab Control Sample - Batch: 680-172140

Method: 9034
Preparation: 9030B

Lab Sample ID: LCS 680-172140/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/22/2010 1153
Date Prepared: 06/22/2010 0641

Analysis Batch: 680-172198
Prep Batch: 680-172140
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 6 mL
Final Weight/Volume: 6 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfide	421	399	95	50 - 150	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-172140

Method: 9034
Preparation: 9030B

MS Lab Sample ID: 680-58693-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/22/2010 1153
Date Prepared: 06/22/2010 0641

Analysis Batch: 680-172198
Prep Batch: 680-172140

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 6 mL
Final Weight/Volume: 6 mL

MSD Lab Sample ID: 680-58693-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/22/2010 1153
Date Prepared: 06/22/2010 0641

Analysis Batch: 680-172198
Prep Batch: 680-172140

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 6 mL
Final Weight/Volume: 6 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Sulfide	91	93	50 - 150	2	50		

Serial Number 030366

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: Fort Bragg Expansion	PROJECT NO.: 0008	PROJECT LOCATION (STATE):
TAL (LAB) PROJECT MANAGER: Kathy Smith	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: K. Hobrak	CLIENT PHONE: 912 652 6080	CLIENT FAX:
CLIENT NAME: USACE	CLIENT E-MAIL:	
CLIENT ADDRESS: 100 W. Oglethorpe Avenue Savannah GA		
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:

PRESERVATIVE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	VOC - 8260B	SVOC 8270C	PCB 8082	Pesticides 8081A	Metals Fe, Mn	300.0 Nitrate	300.0 Chloride	300.0 Sulfate			REMARKS
								HCL	HCL	HCL	HCL	HNO3	NaOH	NaOH	NaOH			
12 JUNE 2010	1240	SW-1-6-10	G	W				3	2	2	2	1	1	2	2			
12 JUNE 2010	1355	SLMW-12AR-6-10	G	W				3	2	2	2	1	1	2	2			
12 JUNE 2010	1515	SLMW-12BR-6-10	G	W				3	2	2	2	1	1	2	2			
		Trip Blank		W				2										

NUMBER OF CONTAINERS SUBMITTED

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	17 JUNE 2010	1615	Shipped via Fedex					
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]	6/18/10	0916	YES ◯ NO ◯		680-58693	2.8/3.0/2.6

TAL8240-680 (1207)

Login Sample Receipt Check List

Client: U.S. Army Corps of Engineers

Job Number: 680-58693-1

Login Number: 58693

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is 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	
There are no discrepancies between the sample IDs on the containers 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	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	

ANALYTICAL REPORT

Job Number: 680-59057-1

Job Description: Ft. Bragg Longstreet Landfill

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

Attention: Mr. Kevin Haborak

Approved for release.
Kathryn Smith
Project Manager I
7/28/2010 1:33 PM

Kathryn Smith
Project Manager I
kathye.smith@testamericainc.com
07/28/2010

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

TestAmerica Laboratories, Inc.
TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404
Tel (912) 354-7858 Fax (912) 352-0165 www.testamericainc.com

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

GC/MS Semi VOA
No analytical or quality issues were noted.

GC Semi VOA
Method(s) 3520C: The following samples were re-extracted outside of preparation holding time: GW-LSMW-13-6-10 (680-59057-4 MS), GW-LSMW-13-6-10 (680-59057-4 MSD).

No other analytical or quality issues were noted.

Metals
Method(s) 6020A: Reanalysis of the following sample(s) was performed outside of the analytical holding time: GW-LSMW-13-6-10 (680-59057-4), GW-LSMW-6-6-10 (680-59057-3), GW-LSMW-7-6-10 (680-59057-1), GW-LSMW-8-6-10 (680-59057-2), GW-LSMW-Dup1-6-10 (680-59057-5), GW-LSMW-Dup2-6-10 (680-59057-6). Samples were redigested outside of holding time due to the lab spike recovering outside of control limits in the original batch.

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: U.S. Army Corps of Engineers | Job Number: 680-59057-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL SAV	SW846 8270D	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081B/8082A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	TAL SAV	SW846 8141B	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Metals (ICP/MS)	TAL SAV	SW846 6020A	
Preparation, Extractable Metals	TAL SAV		SM 3030C
Mercury (CVAA)	TAL SAV	SW846 7470A	
Preparation, Mercury	TAL SAV		SW846 7470A
Anions, Ion Chromatography	TAL SAV	MCAWW 300.0	
Cyanide, Total	TAL SAV	MCAWW 335.4	
Distillation, Cyanide	TAL SAV		Distill/CN
Sulfide, Acid Soluble and Insoluble (Titrimetric)	TAL SAV	SW846 9034	
Sulfide, Distillation (Acid Soluble and Insoluble)	TAL SAV		SW846 9030B

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

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

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

METHOD / ANALYST SUMMARY

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8270D	Haynes, Carion	CRH
SW846 8081B/8082A	Meincke, Griffin	GM
SW846 8141B	Hao, Lili	LH
SW846 6020A	Robertson, Bryn	BR
SW846 7470A	Eaton, Cliff	CE
MCAWW 300.0	Brazell, Connie	CB
MCAWW 335.4	McDonald, Debbie	DAM
SW846 9034	McDonald, Debbie	DAM

SAMPLE SUMMARY

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-59057-1	GW-LSMW-7-6-10	Water	06/30/2010 1040	07/01/2010 1310
680-59057-2	GW-LSMW-8-6-10	Water	06/30/2010 1215	07/01/2010 1310
680-59057-3	GW-LSMW-6-6-10	Water	06/30/2010 1435	07/01/2010 1310
680-59057-4	GW-LSMW-13-6-10	Water	06/30/2010 1645	07/01/2010 1310
680-59057-4MS	GW-LSMW-13-6-10	Water	06/30/2010 1645	07/01/2010 1310
680-59057-4MSD	GW-LSMW-13-6-10	Water	06/30/2010 1645	07/01/2010 1310
680-59057-5FD	GW-LSMW-Dup1-6-10	Water	06/30/2010 1200	07/01/2010 1310
680-59057-6FD	GW-LSMW-Dup2-6-10	Water	06/30/2010 1500	07/01/2010 1310
680-59057-7TB	Trip Blank	Water	06/30/2010 0000	07/01/2010 1310

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-7-6-10**

Lab Sample ID: 680-59057-1

Client Matrix: Water

Date Sampled: 06/30/2010 1040

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0567.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1310		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1310			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	5.0	25
Acetonitrile	10	U	10	40
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Benzene	0.72	J	0.25	1.0
Bromoform	0.50	U	0.50	1.0
Bromomethane	0.80	U	0.80	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Carbon disulfide	0.60	U	0.60	2.0
Carbon tetrachloride	0.50	U	0.50	1.0
Chlorobenzene	0.59	J	0.25	1.0
Chlorobromomethane	0.14	U	0.14	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	0.14	U	0.14	1.0
Chloromethane	0.33	U	0.33	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Dibromomethane	0.20	U	0.20	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
Ethylbenzene	0.11	U	0.11	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
Ethyl methacrylate	0.25	U	0.25	1.0
2-Hexanone	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Isobutyl alcohol	11	U	11	40
Methacrylonitrile	3.3	U	3.3	20
Methylene Chloride	1.0	U	1.0	5.0
Methyl methacrylate	0.48	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20
Styrene	0.11	U	0.11	1.0

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-7-6-10**

Lab Sample ID: 680-59057-1

Client Matrix: Water

Date Sampled: 06/30/2010 1040

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0567.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1310		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1310			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Toluene	0.33	U	0.33	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	103		75 - 120
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	111		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-8-6-10**

Lab Sample ID: 680-59057-2

Client Matrix: Water

Date Sampled: 06/30/2010 1215

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0569.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1339		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1339			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.3	J	5.0	25
Acetonitrile	10	U	10	40
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Benzene	2.1		0.25	1.0
Bromoform	0.50	U	0.50	1.0
Bromomethane	0.80	U	0.80	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Carbon disulfide	0.60	U	0.60	2.0
Carbon tetrachloride	0.50	U	0.50	1.0
Chlorobenzene	1.9		0.25	1.0
Chlorobromomethane	0.14	U	0.14	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	0.14	U	0.14	1.0
Chloromethane	0.33	U	0.33	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
cis-1,2-Dichloroethene	43		0.15	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Dibromomethane	0.20	U	0.20	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	2.5		0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
Ethylbenzene	0.11	U	0.11	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
Ethyl methacrylate	0.25	U	0.25	1.0
2-Hexanone	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Isobutyl alcohol	11	U	11	40
Methacrylonitrile	3.3	U	3.3	20
Methylene Chloride	1.0	U	1.0	5.0
Methyl methacrylate	0.48	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20
Styrene	0.11	U	0.11	1.0

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-8-6-10**

Lab Sample ID: 680-59057-2

Client Matrix: Water

Date Sampled: 06/30/2010 1215

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0569.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1339		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1339			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.24	J	0.15	1.0
Toluene	0.39	J	0.33	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
trans-1,2-Dichloroethene	0.24	J	0.20	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.87	J	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	10		0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	102		75 - 120
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	111		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-6-6-10**

Lab Sample ID: 680-59057-3

Client Matrix: Water

Date Sampled: 06/30/2010 1435

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0571.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1408		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1408			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	5.0	25
Acetonitrile	10	U	10	40
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Benzene	0.25	U	0.25	1.0
Bromoform	0.50	U	0.50	1.0
Bromomethane	0.80	U	0.80	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Carbon disulfide	0.60	U	0.60	2.0
Carbon tetrachloride	0.50	U	0.50	1.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorobromomethane	0.14	U	0.14	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	0.44	J	0.14	1.0
Chloromethane	0.33	U	0.33	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Dibromomethane	0.20	U	0.20	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
Ethylbenzene	0.11	U	0.11	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
Ethyl methacrylate	0.25	U	0.25	1.0
2-Hexanone	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Isobutyl alcohol	11	U	11	40
Methacrylonitrile	3.3	U	3.3	20
Methylene Chloride	1.0	U	1.0	5.0
Methyl methacrylate	0.48	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20
Styrene	0.11	U	0.11	1.0

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-6-6-10**

Lab Sample ID: 680-59057-3

Client Matrix: Water

Date Sampled: 06/30/2010 1435

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0571.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1408		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1408			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Toluene	0.33	U	0.33	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	101		75 - 120
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	110		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-13-6-10**

Lab Sample ID: 680-59057-4

Client Matrix: Water

Date Sampled: 06/30/2010 1645

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0573.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1436		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1436			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	5.0	25
Acetonitrile	10	U	10	40
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Benzene	0.25	U	0.25	1.0
Bromoform	0.50	U	0.50	1.0
Bromomethane	0.80	U	0.80	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Carbon disulfide	0.60	U J	0.60	2.0
Carbon tetrachloride	0.50	U	0.50	1.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorobromomethane	0.14	U	0.14	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U J	1.0	1.0
Chloroform	0.14	U	0.14	1.0
Chloromethane	0.33	U	0.33	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Dibromomethane	0.20	U	0.20	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
1,1-Dichloroethene	0.11	U J	0.11	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
Ethylbenzene	0.11	U	0.11	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
Ethyl methacrylate	0.25	U	0.25	1.0
2-Hexanone	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Isobutyl alcohol	11	U	11	40
Methacrylonitrile	3.3	U	3.3	20
Methylene Chloride	1.0	U J	1.0	5.0
Methyl methacrylate	0.48	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20
Styrene	0.11	U	0.11	1.0

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-13-6-10**

Lab Sample ID: 680-59057-4

Client Matrix: Water

Date Sampled: 06/30/2010 1645

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0573.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1436		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1436			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Toluene	0.33	U	0.33	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
trans-1,2-Dichloroethene	0.20	U J	0.20	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	102		75 - 120
4-Bromofluorobenzene	94		75 - 120
Dibromofluoromethane	112		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup1-6-10**

Lab Sample ID: 680-59057-5FD

Client Matrix: Water

Date Sampled: 06/30/2010 1200

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0575.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1505		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1505			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	5.0	25
Acetonitrile	10	U	10	40
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Benzene	0.25	U	0.25	1.0
Bromoform	0.50	U	0.50	1.0
Bromomethane	0.80	U	0.80	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Carbon disulfide	0.60	U	0.60	2.0
Carbon tetrachloride	0.50	U	0.50	1.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorobromomethane	0.14	U	0.14	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	0.45	J	0.14	1.0
Chloromethane	0.33	U	0.33	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Dibromomethane	0.20	U	0.20	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
Ethylbenzene	0.11	U	0.11	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
Ethyl methacrylate	0.25	U	0.25	1.0
2-Hexanone	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Isobutyl alcohol	11	U	11	40
Methacrylonitrile	3.3	U	3.3	20
Methylene Chloride	1.0	U	1.0	5.0
Methyl methacrylate	0.48	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20
Styrene	0.11	U	0.11	1.0

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup1-6-10**

Lab Sample ID: 680-59057-5FD

Client Matrix: Water

Date Sampled: 06/30/2010 1200

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0575.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1505		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1505			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Toluene	0.33	U	0.33	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	102		75 - 120
4-Bromofluorobenzene	94		75 - 120
Dibromofluoromethane	110		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup2-6-10**

Lab Sample ID: 680-59057-6FD

Client Matrix: Water

Date Sampled: 06/30/2010 1500

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0577.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1533		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1533			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	5.0	25
Acetonitrile	10	U	10	40
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Benzene	0.25	U	0.25	1.0
Bromoform	0.50	U	0.50	1.0
Bromomethane	0.80	U	0.80	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Carbon disulfide	0.60	U	0.60	2.0
Carbon tetrachloride	0.50	U	0.50	1.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorobromomethane	0.14	U	0.14	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	0.14	U	0.14	1.0
Chloromethane	0.33	U	0.33	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Dibromomethane	0.20	U	0.20	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
Ethylbenzene	0.11	U	0.11	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
Ethyl methacrylate	0.25	U	0.25	1.0
2-Hexanone	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Isobutyl alcohol	11	U	11	40
Methacrylonitrile	3.3	U	3.3	20
Methylene Chloride	1.0	U	1.0	5.0
Methyl methacrylate	0.48	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20
Styrene	0.11	U	0.11	1.0

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup2-6-10**

Lab Sample ID: 680-59057-6FD

Client Matrix: Water

Date Sampled: 06/30/2010 1500

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0577.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1533		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1533			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Toluene	0.33	U	0.33	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	102		75 - 120
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	111		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 680-59057-7TB

Client Matrix: Water

Date Sampled: 06/30/2010 0000

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0565.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1242		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1242			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	0.25	U	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.13	U	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 680-59057-7TB

Client Matrix: Water

Date Sampled: 06/30/2010 0000

Date Received: 07/01/2010 1310

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173369	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0565.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1242		Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1242			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	102		75 - 120
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	113		75 - 121

Client: U.S. Army Corps of Engineers | Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-7-6-10**

Lab Sample ID: 680-59057-1 | Date Sampled: 06/30/2010 1040
Client Matrix: Water | Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8189.d
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	07/13/2010 1344			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.74	U	0.74	9.7
Acenaphthylene	0.83	U	0.83	9.7
Acetophenone	0.55	U	0.55	9.7
2-Acetylaminofluorene	1.6	U	1.6	9.7
4-Aminobiphenyl	1.2	U	1.2	9.7
Anthracene	0.67	U	0.67	9.7
Benzo[a]anthracene	0.53	U	0.53	9.7
Benzo[a]pyrene	0.69	U	0.69	9.7
Benzo[b]fluoranthene	2.5	U	2.5	9.7
Benzo[g,h,i]perylene	0.84	U	0.84	9.7
Benzo[k]fluoranthene	1.2	U	1.2	9.7
Benzyl alcohol	1.1	U	1.1	9.7
Bis(2-chloroethoxy)methane	0.91	U	0.91	9.7
Bis(2-chloroethyl)ether	1.1	U	1.1	9.7
bis(chloroisopropyl) ether	0.76	U	0.76	9.7
Bis(2-ethylhexyl) phthalate	1.6	U	1.6	9.7
4-Bromophenyl phenyl ether	0.75	U	0.75	9.7
Butyl benzyl phthalate	1.2	U	1.2	9.7
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.97	U	0.97	9.7
2-Chloronaphthalene	0.78	U	0.78	9.7
2-Chlorophenol	0.84	U	0.84	9.7
4-Chlorophenyl phenyl ether	0.82	U	0.82	9.7
Chrysene	0.50	U	0.50	9.7
Diallate	0.76	U	0.76	9.7
Dibenz(a,h)anthracene	0.97	U	0.97	9.7
Dibenzofuran	0.77	U	0.77	9.7
3,3'-Dichlorobenzidine	29	U	29	58
2,4-Dichlorophenol	1.1	U	1.1	9.7
2,6-Dichlorophenol	0.71	U	0.71	9.7
Diethyl phthalate	0.85	U	0.85	9.7
Dimethoate	0.73	U	0.73	9.7
7,12-Dimethylbenz(a)anthracene	1.2	U	1.2	9.7
3,3'-Dimethylbenzidine	9.7	U	9.7	19
2,4-Dimethylphenol	3.9	U	3.9	9.7
Dimethyl phthalate	0.96	U	0.96	9.7
Di-n-butyl phthalate	0.81	U	0.81	9.7
1,3-Dinitrobenzene	0.58	U	0.58	9.7
4,6-Dinitro-2-methylphenol	9.7	U	9.7	49
2,4-Dinitrophenol	9.7	U	9.7	49
2,4-Dinitrotoluene	1.2	U	1.2	9.7
2,6-Dinitrotoluene	1.1	U	1.1	9.7
Di-n-octyl phthalate	1.4	U	1.4	9.7
Dinoseb	4.9	U	4.9	9.7
Disulfoton	0.77	U	0.77	9.7
Ethyl methanesulfonate	0.93	U	0.93	9.7

Client: U.S. Army Corps of Engineers | Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-7-6-10**

Lab Sample ID: 680-59057-1 | Date Sampled: 06/30/2010 1040
Client Matrix: Water | Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8189.d
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	07/13/2010 1344			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.3	U	1.3	9.7
Famphur	1.1	U	1.1	9.7
Fluoranthene	0.72	U	0.72	9.7
Fluorene	0.93	U	0.93	9.7
Hexachlorobenzene	0.77	U	0.77	9.7
Hexachlorobutadiene	0.60	U	0.60	9.7
Hexachlorocyclopentadiene	2.4	U	2.4	9.7
Hexachloroethane	0.74	U	0.74	9.7
Hexachloropropene	1.4	U	1.4	9.7
Indeno[1,2,3-cd]pyrene	0.97	U	0.97	9.7
Isophorone	0.87	U	0.87	9.7
Isosafrole	0.49	U	0.49	9.7
Methapyrilene	2.6	U	2.6	1900
3-Methylcholanthrene	1.4	U	1.4	9.7
Methyl methanesulfonate	0.58	U	0.58	9.7
2-Methylnaphthalene	0.76	U	0.76	9.7
Methyl parathion	0.85	U	0.85	9.7
2-Methylphenol	0.86	U	0.86	9.7
3 & 4 Methylphenol	26		1.3	9.7
Naphthalene	0.68	U	0.68	9.7
1,4-Naphthoquinone	0.60	U	0.60	9.7
1-Naphthylamine	1.1	U	1.1	9.7
2-Naphthylamine	1.5	U	1.5	9.7
2-Nitroaniline	1.3	U	1.3	49
3-Nitroaniline	4.9	U	4.9	49
4-Nitroaniline	4.9	U	4.9	49
Nitrobenzene	0.71	U	0.71	9.7
2-Nitrophenol	0.74	U	0.74	9.7
4-Nitrophenol	1.8	U	1.8	49
N-Nitro-o-toluidine	1.5	U	1.5	9.7
N-Nitrosodiethylamine	0.90	U	0.90	9.7
N-Nitrosodimethylamine	2.7	U	2.7	9.7
N-Nitrosodi-n-butylamine	0.93	U	0.93	9.7
N-Nitrosodi-n-propylamine	0.70	U	0.70	9.7
N-Nitrosodiphenylamine	0.89	U	0.89	9.7
N-Nitrosomethylethylamine	3.2	U	3.2	9.7
N-Nitrosopiperidine	0.85	U	0.85	9.7
N-Nitrosopyrrolidine	0.97	U	0.97	9.7
o,o',o"-Triethylphosphorothioate	0.97	U	0.97	9.7
para-Dimethylaminoazobenzene	0.77	U	0.77	9.7
Pentachlorobenzene	0.50	U	0.50	9.7
Pentachloronitrobenzene	0.76	U	0.76	9.7
Pentachlorophenol	1.9	U	1.9	49
Phenacetin	1.4	U	1.4	9.7
Phenanthrene	0.75	U	0.75	9.7
Phenol	0.81	U	0.81	9.7

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-7-6-10**

Lab Sample ID: 680-59057-1

Client Matrix: Water

Date Sampled: 06/30/2010 1040

Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8189.d
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	07/13/2010 1344			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phorate	0.84	U	0.84	9.7
p-Phenylene diamine	9.7	U	9.7	1900
Pronamide	0.86	U	0.86	9.7
Pyrene	0.61	U	0.61	9.7
Safrole, Total	0.78	U	0.78	9.7
Sulfotepp	0.51	U	0.51	9.7
1,2,4,5-Tetrachlorobenzene	0.74	U	0.74	9.7
2,3,4,6-Tetrachlorophenol	0.70	U	0.70	9.7
Thionazin	0.88	U	0.88	9.7
2-Toluidine	1.4	U	1.4	9.7
2,4,5-Trichlorophenol	1.2	U	1.2	9.7
2,4,6-Trichlorophenol	0.83	U	0.83	9.7
1,3,5-Trinitrobenzene	1.9	U	1.9	9.7

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	83		50 - 113
2-Fluorophenol	69		36 - 110
Nitrobenzene-d5	83		45 - 112
Phenol-d5	75		38 - 116
Terphenyl-d14	49		10 - 121
2,4,6-Tribromophenol	94		40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-6-6-10**

Lab Sample ID: 680-59057-3

Client Matrix: Water

Date Sampled: 06/30/2010 1435

Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8190.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1407			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.72	U	0.72	9.5
Acenaphthylene	0.81	U	0.81	9.5
Acetophenone	0.54	U	0.54	9.5
2-Acetylaminofluorene	1.5	U	1.5	9.5
4-Aminobiphenyl	1.1	U	1.1	9.5
Anthracene	0.66	U	0.66	9.5
Benzo[a]anthracene	0.52	U	0.52	9.5
Benzo[a]pyrene	0.68	U	0.68	9.5
Benzo[b]fluoranthene	2.5	U	2.5	9.5
Benzo[g,h,i]perylene	0.83	U	0.83	9.5
Benzo[k]fluoranthene	1.1	U	1.1	9.5
Benzyl alcohol	1.0	U	1.0	9.5
Bis(2-chloroethoxy)methane	0.90	U	0.90	9.5
Bis(2-chloroethyl)ether	1.0	U	1.0	9.5
bis(chloroisopropyl) ether	0.74	U	0.74	9.5
Bis(2-ethylhexyl) phthalate	1.5	U	1.5	9.5
4-Bromophenyl phenyl ether	0.73	U	0.73	9.5
Butyl benzyl phthalate	1.1	U	1.1	9.5
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.95	U	0.95	9.5
2-Chloronaphthalene	0.76	U	0.76	9.5
2-Chlorophenol	0.83	U	0.83	9.5
4-Chlorophenyl phenyl ether	0.80	U	0.80	9.5
Chrysene	0.49	U	0.49	9.5
Diallate	0.74	U	0.74	9.5
Dibenz(a,h)anthracene	0.95	U	0.95	9.5
Dibenzofuran	0.75	U	0.75	9.5
3,3'-Dichlorobenzidine	29	U	29	57
2,4-Dichlorophenol	1.0	U	1.0	9.5
2,6-Dichlorophenol	0.70	U	0.70	9.5
Diethyl phthalate	0.84	U	0.84	9.5
Dimethoate	0.71	U	0.71	9.5
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.5
3,3'-Dimethylbenzidine	9.5	U	9.5	19
2,4-Dimethylphenol	3.8	U	3.8	9.5
Dimethyl phthalate	0.94	U	0.94	9.5
Di-n-butyl phthalate	0.79	U	0.79	9.5
1,3-Dinitrobenzene	0.57	U	0.57	9.5
4,6-Dinitro-2-methylphenol	9.5	U	9.5	48
2,4-Dinitrophenol	9.5	U	9.5	48
2,4-Dinitrotoluene	1.1	U	1.1	9.5
2,6-Dinitrotoluene	1.0	U	1.0	9.5
Di-n-octyl phthalate	1.3	U	1.3	9.5
Dinoseb	4.8	U	4.8	9.5
Disulfoton	0.75	U	0.75	9.5
Ethyl methanesulfonate	0.91	U	0.91	9.5

Client: U.S. Army Corps of Engineers | Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-6-6-10**

Lab Sample ID: 680-59057-3 | Date Sampled: 06/30/2010 1435
Client Matrix: Water | Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8190.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1407			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.2	U	1.2	9.5
Famphur	1.0	U	1.0	9.5
Fluoranthene	0.70	U	0.70	9.5
Fluorene	0.91	U	0.91	9.5
Hexachlorobenzene	0.75	U	0.75	9.5
Hexachlorobutadiene	0.59	U	0.59	9.5
Hexachlorocyclopentadiene	2.4	U	2.4	9.5
Hexachloroethane	0.72	U	0.72	9.5
Hexachloropropene	1.3	U	1.3	9.5
Indeno[1,2,3-cd]pyrene	0.95	U	0.95	9.5
Isophorone	0.86	U	0.86	9.5
Isosafrole	0.48	U	0.48	9.5
Methapyrilene	2.6	U	2.6	1900
3-Methylcholanthrene	1.3	U	1.3	9.5
Methyl methanesulfonate	0.57	U	0.57	9.5
2-Methylnaphthalene	0.74	U	0.74	9.5
Methyl parathion	0.84	U	0.84	9.5
2-Methylphenol	0.85	U	0.85	9.5
3 & 4 Methylphenol	1.2	U	1.2	9.5
Naphthalene	0.67	U	0.67	9.5
1,4-Naphthoquinone	0.59	U	0.59	9.5
1-Naphthylamine	1.0	U	1.0	9.5
2-Naphthylamine	1.4	U	1.4	9.5
2-Nitroaniline	1.2	U	1.2	48
3-Nitroaniline	4.8	U	4.8	48
4-Nitroaniline	4.8	U	4.8	48
Nitrobenzene	0.70	U	0.70	9.5
2-Nitrophenol	0.72	U	0.72	9.5
4-Nitrophenol	1.8	U	1.8	48
N-Nitro-o-toluidine	1.4	U	1.4	9.5
N-Nitrosodiethylamine	0.89	U	0.89	9.5
N-Nitrosodimethylamine	2.7	U	2.7	9.5
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.5
N-Nitrosodi-n-propylamine	0.69	U	0.69	9.5
N-Nitrosodiphenylamine	0.88	U	0.88	9.5
N-Nitrosomethylethylamine	3.1	U	3.1	9.5
N-Nitrosopiperidine	0.84	U	0.84	9.5
N-Nitrosopyrrolidine	0.95	U	0.95	9.5
o,o',o"-Triethylphosphorothioate	0.95	U	0.95	9.5
para-Dimethylaminoazobenzene	0.75	U	0.75	9.5
Pentachlorobenzene	0.50	U	0.50	9.5
Pentachloronitrobenzene	0.74	U	0.74	9.5
Pentachlorophenol	1.9	U	1.9	48
Phenacetin	1.3	U	1.3	9.5
Phenanthrene	0.73	U	0.73	9.5
Phenol	0.79	U	0.79	9.5

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-6-6-10**

Lab Sample ID: 680-59057-3

Client Matrix: Water

Date Sampled: 06/30/2010 1435

Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8190.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1407			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phorate	0.83	U	0.83	9.5
p-Phenylene diamine	9.5	U	9.5	1900
Pronamide	0.85	U	0.85	9.5
Pyrene	0.60	U	0.60	9.5
Safrole, Total	0.76	U	0.76	9.5
Sulfotepp	0.50	U	0.50	9.5
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.5
2,3,4,6-Tetrachlorophenol	0.69	U	0.69	9.5
Thionazin	0.87	U	0.87	9.5
2-Toluidine	1.3	U	1.3	9.5
2,4,5-Trichlorophenol	1.1	U	1.1	9.5
2,4,6-Trichlorophenol	0.81	U	0.81	9.5
1,3,5-Trinitrobenzene	1.9	U	1.9	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	79		50 - 113
2-Fluorophenol	74		36 - 110
Nitrobenzene-d5	85		45 - 112
Phenol-d5	80		38 - 116
Terphenyl-d14	86		10 - 121
2,4,6-Tribromophenol	90		40 - 139

Client: U.S. Army Corps of Engineers | Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-13-6-10**

Lab Sample ID: 680-59057-4 | Date Sampled: 06/30/2010 1645
Client Matrix: Water | Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8191.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1431			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.72	U	0.72	9.5
Acenaphthylene	0.81	U	0.81	9.5
Acetophenone	0.54	U	0.54	9.5
2-Acetylaminofluorene	1.5	U	1.5	9.5
4-Aminobiphenyl	1.1	U	1.1	9.5
Anthracene	0.66	U	0.66	9.5
Benzo[a]anthracene	0.52	U	0.52	9.5
Benzo[a]pyrene	0.68	U	0.68	9.5
Benzo[b]fluoranthene	2.5	U	2.5	9.5
Benzo[g,h,i]perylene	0.83	U	0.83	9.5
Benzo[k]fluoranthene	1.1	U	1.1	9.5
Benzyl alcohol	1.0	U	1.0	9.5
Bis(2-chloroethoxy)methane	0.90	U	0.90	9.5
Bis(2-chloroethyl)ether	1.0	U	1.0	9.5
bis(chloroisopropyl) ether	0.74	U	0.74	9.5
Bis(2-ethylhexyl) phthalate	1.5	U	1.5	9.5
4-Bromophenyl phenyl ether	0.73	U	0.73	9.5
Butyl benzyl phthalate	1.1	U	1.1	9.5
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.95	U	0.95	9.5
2-Chloronaphthalene	0.76	U	0.76	9.5
2-Chlorophenol	0.83	U	0.83	9.5
4-Chlorophenyl phenyl ether	0.80	U	0.80	9.5
Chrysene	0.49	U	0.49	9.5
Diallate	0.74	U	0.74	9.5
Dibenz(a,h)anthracene	0.95	U	0.95	9.5
Dibenzofuran	0.75	U	0.75	9.5
3,3'-Dichlorobenzidine	29	U	29	57
2,4-Dichlorophenol	1.0	U	1.0	9.5
2,6-Dichlorophenol	0.70	U	0.70	9.5
Diethyl phthalate	0.84	U	0.84	9.5
Dimethoate	0.71	U	0.71	9.5
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.5
3,3'-Dimethylbenzidine	9.5	U	9.5	19
2,4-Dimethylphenol	3.8	U	3.8	9.5
Dimethyl phthalate	0.94	U	0.94	9.5
Di-n-butyl phthalate	0.79	U	0.79	9.5
1,3-Dinitrobenzene	0.57	U	0.57	9.5
4,6-Dinitro-2-methylphenol	9.5	U	9.5	48
2,4-Dinitrophenol	9.5	U	9.5	48
2,4-Dinitrotoluene	1.1	U	1.1	9.5
2,6-Dinitrotoluene	1.0	U	1.0	9.5
Di-n-octyl phthalate	1.3	U	1.3	9.5
Dinoseb	4.8	U	4.8	9.5
Disulfoton	0.75	U	0.75	9.5
Ethyl methanesulfonate	0.91	U	0.91	9.5

Client: U.S. Army Corps of Engineers | Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-13-6-10**

Lab Sample ID: 680-59057-4 | Date Sampled: 06/30/2010 1645
Client Matrix: Water | Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8191.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1431			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.2	U	1.2	9.5
Famphur	1.0	U	1.0	9.5
Fluoranthene	0.70	U	0.70	9.5
Fluorene	0.91	U	0.91	9.5
Hexachlorobenzene	0.75	U	0.75	9.5
Hexachlorobutadiene	0.59	U	0.59	9.5
Hexachlorocyclopentadiene	2.4	U	2.4	9.5
Hexachloroethane	0.72	U	0.72	9.5
Hexachloropropene	1.3	U	1.3	9.5
Indeno[1,2,3-cd]pyrene	0.95	U	0.95	9.5
Isophorone	0.86	U	0.86	9.5
Isosafrole	0.48	U	0.48	9.5
Methapyrilene	2.6	U	2.6	1900
3-Methylcholanthrene	1.3	U	1.3	9.5
Methyl methanesulfonate	0.57	U	0.57	9.5
2-Methylnaphthalene	0.74	U	0.74	9.5
Methyl parathion	0.84	U	0.84	9.5
2-Methylphenol	0.85	U	0.85	9.5
3 & 4 Methylphenol	1.2	U	1.2	9.5
Naphthalene	0.67	U	0.67	9.5
1,4-Naphthoquinone	0.59	U	0.59	9.5
1-Naphthylamine	1.0	U	1.0	9.5
2-Naphthylamine	1.4	U	1.4	9.5
2-Nitroaniline	1.2	U	1.2	48
3-Nitroaniline	4.8	U	4.8	48
4-Nitroaniline	4.8	U	4.8	48
Nitrobenzene	0.70	U	0.70	9.5
2-Nitrophenol	0.72	U	0.72	9.5
4-Nitrophenol	1.8	U	1.8	48
N-Nitro-o-toluidine	1.4	U	1.4	9.5
N-Nitrosodiethylamine	0.89	U	0.89	9.5
N-Nitrosodimethylamine	2.7	U	2.7	9.5
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.5
N-Nitrosodi-n-propylamine	0.69	U	0.69	9.5
N-Nitrosodiphenylamine	0.88	U	0.88	9.5
N-Nitrosomethylethylamine	3.1	U	3.1	9.5
N-Nitrosopiperidine	0.84	U	0.84	9.5
N-Nitrosopyrrolidine	0.95	U	0.95	9.5
o,o',o"-Triethylphosphorothioate	0.95	U	0.95	9.5
para-Dimethylaminoazobenzene	0.75	U	0.75	9.5
Pentachlorobenzene	0.50	U	0.50	9.5
Pentachloronitrobenzene	0.74	U	0.74	9.5
Pentachlorophenol	1.9	U	1.9	48
Phenacetin	1.3	U	1.3	9.5
Phenanthrene	0.73	U	0.73	9.5
Phenol	0.79	U	0.79	9.5

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-13-6-10**

Lab Sample ID: 680-59057-4

Client Matrix: Water

Date Sampled: 06/30/2010 1645

Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8191.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1431			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phorate	0.83	U	0.83	9.5
p-Phenylene diamine	9.5	U	9.5	1900
Pronamide	0.85	U	0.85	9.5
Pyrene	0.60	U	0.60	9.5
Safrole, Total	0.76	U	0.76	9.5
Sulfotepp	0.50	U	0.50	9.5
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.5
2,3,4,6-Tetrachlorophenol	0.69	U	0.69	9.5
Thionazin	0.87	U	0.87	9.5
2-Toluidine	1.3	U	1.3	9.5
2,4,5-Trichlorophenol	1.1	U	1.1	9.5
2,4,6-Trichlorophenol	0.81	U	0.81	9.5
1,3,5-Trinitrobenzene	1.9	U	1.9	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	93		50 - 113
2-Fluorophenol	86		36 - 110
Nitrobenzene-d5	94		45 - 112
Phenol-d5	91		38 - 116
Terphenyl-d14	103		10 - 121
2,4,6-Tribromophenol	99		40 - 139

Client: U.S. Army Corps of Engineers | Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup1-6-10**

Lab Sample ID: 680-59057-5FD | Date Sampled: 06/30/2010 1200
Client Matrix: Water | Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8192.d
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	07/13/2010 1455			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.74	U	0.74	9.7
Acenaphthylene	0.83	U	0.83	9.7
Acetophenone	0.55	U	0.55	9.7
2-Acetylaminofluorene	1.6	U	1.6	9.7
4-Aminobiphenyl	1.2	U	1.2	9.7
Anthracene	0.67	U	0.67	9.7
Benzo[a]anthracene	0.53	U	0.53	9.7
Benzo[a]pyrene	0.69	U	0.69	9.7
Benzo[b]fluoranthene	2.5	U	2.5	9.7
Benzo[g,h,i]perylene	0.84	U	0.84	9.7
Benzo[k]fluoranthene	1.2	U	1.2	9.7
Benzyl alcohol	1.1	U	1.1	9.7
Bis(2-chloroethoxy)methane	0.91	U	0.91	9.7
Bis(2-chloroethyl)ether	1.1	U	1.1	9.7
bis(chloroisopropyl) ether	0.76	U	0.76	9.7
Bis(2-ethylhexyl) phthalate	1.6	U	1.6	9.7
4-Bromophenyl phenyl ether	0.75	U	0.75	9.7
Butyl benzyl phthalate	1.2	U	1.2	9.7
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.97	U	0.97	9.7
2-Chloronaphthalene	0.78	U	0.78	9.7
2-Chlorophenol	0.84	U	0.84	9.7
4-Chlorophenyl phenyl ether	0.82	U	0.82	9.7
Chrysene	0.50	U	0.50	9.7
Diallate	0.76	U	0.76	9.7
Dibenz(a,h)anthracene	0.97	U	0.97	9.7
Dibenzofuran	0.77	U	0.77	9.7
3,3'-Dichlorobenzidine	29	U	29	58
2,4-Dichlorophenol	1.1	U	1.1	9.7
2,6-Dichlorophenol	0.71	U	0.71	9.7
Diethyl phthalate	0.85	U	0.85	9.7
Dimethoate	0.73	U	0.73	9.7
7,12-Dimethylbenz(a)anthracene	1.2	U	1.2	9.7
3,3'-Dimethylbenzidine	9.7	U	9.7	19
2,4-Dimethylphenol	3.9	U	3.9	9.7
Dimethyl phthalate	0.96	U	0.96	9.7
Di-n-butyl phthalate	0.81	U	0.81	9.7
1,3-Dinitrobenzene	0.58	U	0.58	9.7
4,6-Dinitro-2-methylphenol	9.7	U	9.7	49
2,4-Dinitrophenol	9.7	U	9.7	49
2,4-Dinitrotoluene	1.2	U	1.2	9.7
2,6-Dinitrotoluene	1.1	U	1.1	9.7
Di-n-octyl phthalate	1.4	U	1.4	9.7
Dinoseb	4.9	U	4.9	9.7
Disulfoton	0.77	U	0.77	9.7
Ethyl methanesulfonate	0.93	U	0.93	9.7

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup1-6-10**

Lab Sample ID: 680-59057-5FD

Client Matrix: Water

Date Sampled: 06/30/2010 1200

Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8192.d
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	07/13/2010 1455			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.3	U	1.3	9.7
Famphur	1.1	U	1.1	9.7
Fluoranthene	0.72	U	0.72	9.7
Fluorene	0.93	U	0.93	9.7
Hexachlorobenzene	0.77	U	0.77	9.7
Hexachlorobutadiene	0.60	U	0.60	9.7
Hexachlorocyclopentadiene	2.4	U	2.4	9.7
Hexachloroethane	0.74	U	0.74	9.7
Hexachloropropene	1.4	U	1.4	9.7
Indeno[1,2,3-cd]pyrene	0.97	U	0.97	9.7
Isophorone	0.87	U	0.87	9.7
Isosafrole	0.49	U	0.49	9.7
Methapyrilene	2.6	U	2.6	1900
3-Methylcholanthrene	1.4	U	1.4	9.7
Methyl methanesulfonate	0.58	U	0.58	9.7
2-Methylnaphthalene	0.76	U	0.76	9.7
Methyl parathion	0.85	U	0.85	9.7
2-Methylphenol	0.86	U	0.86	9.7
3 & 4 Methylphenol	1.3	U	1.3	9.7
Naphthalene	0.68	U	0.68	9.7
1,4-Naphthoquinone	0.60	U	0.60	9.7
1-Naphthylamine	1.1	U	1.1	9.7
2-Naphthylamine	1.5	U	1.5	9.7
2-Nitroaniline	1.3	U	1.3	49
3-Nitroaniline	4.9	U	4.9	49
4-Nitroaniline	4.9	U	4.9	49
Nitrobenzene	0.71	U	0.71	9.7
2-Nitrophenol	0.74	U	0.74	9.7
4-Nitrophenol	1.8	U	1.8	49
N-Nitro-o-toluidine	1.5	U	1.5	9.7
N-Nitrosodiethylamine	0.90	U	0.90	9.7
N-Nitrosodimethylamine	2.7	U	2.7	9.7
N-Nitrosodi-n-butylamine	0.93	U	0.93	9.7
N-Nitrosodi-n-propylamine	0.70	U	0.70	9.7
N-Nitrosodiphenylamine	0.89	U	0.89	9.7
N-Nitrosomethylethylamine	3.2	U	3.2	9.7
N-Nitrosopiperidine	0.85	U	0.85	9.7
N-Nitrosopyrrolidine	0.97	U	0.97	9.7
o,o',o"-Triethylphosphorothioate	0.97	U	0.97	9.7
para-Dimethylaminoazobenzene	0.77	U	0.77	9.7
Pentachlorobenzene	0.50	U	0.50	9.7
Pentachloronitrobenzene	0.76	U	0.76	9.7
Pentachlorophenol	1.9	U	1.9	49
Phenacetin	1.4	U	1.4	9.7
Phenanthrene	0.75	U	0.75	9.7
Phenol	0.81	U	0.81	9.7

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup1-6-10**

Lab Sample ID: 680-59057-5FD

Client Matrix: Water

Date Sampled: 06/30/2010 1200

Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8192.d
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	07/13/2010 1455			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phorate	0.84	U	0.84	9.7
p-Phenylene diamine	9.7	U	9.7	1900
Pronamide	0.86	U	0.86	9.7
Pyrene	0.61	U	0.61	9.7
Safrole, Total	0.78	U	0.78	9.7
Sulfotepp	0.51	U	0.51	9.7
1,2,4,5-Tetrachlorobenzene	0.74	U	0.74	9.7
2,3,4,6-Tetrachlorophenol	0.70	U	0.70	9.7
Thionazin	0.88	U	0.88	9.7
2-Toluidine	1.4	U	1.4	9.7
2,4,5-Trichlorophenol	1.2	U	1.2	9.7
2,4,6-Trichlorophenol	0.83	U	0.83	9.7
1,3,5-Trinitrobenzene	1.9	U	1.9	9.7

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	77		50 - 113
2-Fluorophenol	64		36 - 110
Nitrobenzene-d5	78		45 - 112
Phenol-d5	73		38 - 116
Terphenyl-d14	90		10 - 121
2,4,6-Tribromophenol	79		40 - 139

Client: U.S. Army Corps of Engineers | Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup2-6-10**

Lab Sample ID: 680-59057-6FD | Date Sampled: 06/30/2010 1500
Client Matrix: Water | Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8193.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1518			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.72	U	0.72	9.5
Acenaphthylene	0.81	U	0.81	9.5
Acetophenone	0.54	U	0.54	9.5
2-Acetylaminofluorene	1.5	U	1.5	9.5
4-Aminobiphenyl	1.1	U	1.1	9.5
Anthracene	0.66	U	0.66	9.5
Benzo[a]anthracene	0.52	U	0.52	9.5
Benzo[a]pyrene	0.68	U	0.68	9.5
Benzo[b]fluoranthene	2.5	U	2.5	9.5
Benzo[g,h,i]perylene	0.83	U	0.83	9.5
Benzo[k]fluoranthene	1.1	U	1.1	9.5
Benzyl alcohol	1.0	U	1.0	9.5
Bis(2-chloroethoxy)methane	0.90	U	0.90	9.5
Bis(2-chloroethyl)ether	1.0	U	1.0	9.5
bis(chloroisopropyl) ether	0.74	U	0.74	9.5
Bis(2-ethylhexyl) phthalate	1.5	U	1.5	9.5
4-Bromophenyl phenyl ether	0.73	U	0.73	9.5
Butyl benzyl phthalate	1.1	U	1.1	9.5
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.95	U	0.95	9.5
2-Chloronaphthalene	0.76	U	0.76	9.5
2-Chlorophenol	0.83	U	0.83	9.5
4-Chlorophenyl phenyl ether	0.80	U	0.80	9.5
Chrysene	0.49	U	0.49	9.5
Diallate	0.74	U	0.74	9.5
Dibenz(a,h)anthracene	0.95	U	0.95	9.5
Dibenzofuran	0.75	U	0.75	9.5
3,3'-Dichlorobenzidine	29	U	29	57
2,4-Dichlorophenol	1.0	U	1.0	9.5
2,6-Dichlorophenol	0.70	U	0.70	9.5
Diethyl phthalate	0.84	U	0.84	9.5
Dimethoate	0.71	U	0.71	9.5
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.5
3,3'-Dimethylbenzidine	9.5	U	9.5	19
2,4-Dimethylphenol	3.8	U	3.8	9.5
Dimethyl phthalate	0.94	U	0.94	9.5
Di-n-butyl phthalate	0.79	U	0.79	9.5
1,3-Dinitrobenzene	0.57	U	0.57	9.5
4,6-Dinitro-2-methylphenol	9.5	U	9.5	48
2,4-Dinitrophenol	9.5	U	9.5	48
2,4-Dinitrotoluene	1.1	U	1.1	9.5
2,6-Dinitrotoluene	1.0	U	1.0	9.5
Di-n-octyl phthalate	1.3	U	1.3	9.5
Dinoseb	4.8	U	4.8	9.5
Disulfoton	0.75	U	0.75	9.5
Ethyl methanesulfonate	0.91	U	0.91	9.5

Client: U.S. Army Corps of Engineers | Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup2-6-10**

Lab Sample ID: 680-59057-6FD | Date Sampled: 06/30/2010 1500
Client Matrix: Water | Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8193.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1518			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.2	U	1.2	9.5
Famphur	1.0	U	1.0	9.5
Fluoranthene	0.70	U	0.70	9.5
Fluorene	0.91	U	0.91	9.5
Hexachlorobenzene	0.75	U	0.75	9.5
Hexachlorobutadiene	0.59	U	0.59	9.5
Hexachlorocyclopentadiene	2.4	U	2.4	9.5
Hexachloroethane	0.72	U	0.72	9.5
Hexachloropropene	1.3	U	1.3	9.5
Indeno[1,2,3-cd]pyrene	0.95	U	0.95	9.5
Isophorone	0.86	U	0.86	9.5
Isosafrole	0.48	U	0.48	9.5
Methapyrilene	2.6	U	2.6	1900
3-Methylcholanthrene	1.3	U	1.3	9.5
Methyl methanesulfonate	0.57	U	0.57	9.5
2-Methylnaphthalene	0.74	U	0.74	9.5
Methyl parathion	0.84	U	0.84	9.5
2-Methylphenol	0.85	U	0.85	9.5
3 & 4 Methylphenol	1.2	U	1.2	9.5
Naphthalene	0.67	U	0.67	9.5
1,4-Naphthoquinone	0.59	U	0.59	9.5
1-Naphthylamine	1.0	U	1.0	9.5
2-Naphthylamine	1.4	U	1.4	9.5
2-Nitroaniline	1.2	U	1.2	48
3-Nitroaniline	4.8	U	4.8	48
4-Nitroaniline	4.8	U	4.8	48
Nitrobenzene	0.70	U	0.70	9.5
2-Nitrophenol	0.72	U	0.72	9.5
4-Nitrophenol	1.8	U	1.8	48
N-Nitro-o-toluidine	1.4	U	1.4	9.5
N-Nitrosodiethylamine	0.89	U	0.89	9.5
N-Nitrosodimethylamine	2.7	U	2.7	9.5
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.5
N-Nitrosodi-n-propylamine	0.69	U	0.69	9.5
N-Nitrosodiphenylamine	0.88	U	0.88	9.5
N-Nitrosomethylethylamine	3.1	U	3.1	9.5
N-Nitrosopiperidine	0.84	U	0.84	9.5
N-Nitrosopyrrolidine	0.95	U	0.95	9.5
o,o',o"-Triethylphosphorothioate	0.95	U	0.95	9.5
para-Dimethylaminoazobenzene	0.75	U	0.75	9.5
Pentachlorobenzene	0.50	U	0.50	9.5
Pentachloronitrobenzene	0.74	U	0.74	9.5
Pentachlorophenol	1.9	U	1.9	48
Phenacetin	1.3	U	1.3	9.5
Phenanthrene	0.73	U	0.73	9.5
Phenol	0.79	U	0.79	9.5

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup2-6-10**

Lab Sample ID: 680-59057-6FD

Client Matrix: Water

Date Sampled: 06/30/2010 1500

Date Received: 07/01/2010 1310

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8193.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1518			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phorate	0.83	U	0.83	9.5
p-Phenylene diamine	9.5	U	9.5	1900
Pronamide	0.85	U	0.85	9.5
Pyrene	0.60	U	0.60	9.5
Safrole, Total	0.76	U	0.76	9.5
Sulfotepp	0.50	U	0.50	9.5
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.5
2,3,4,6-Tetrachlorophenol	0.69	U	0.69	9.5
Thionazin	0.87	U	0.87	9.5
2-Toluidine	1.3	U	1.3	9.5
2,4,5-Trichlorophenol	1.1	U	1.1	9.5
2,4,6-Trichlorophenol	0.81	U	0.81	9.5
1,3,5-Trinitrobenzene	1.9	U	1.9	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	92		50 - 113
2-Fluorophenol	84		36 - 110
Nitrobenzene-d5	95		45 - 112
Phenol-d5	92		38 - 116
Terphenyl-d14	98		10 - 121
2,4,6-Tribromophenol	107		40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-7-6-10**

Lab Sample ID: 680-59057-1

Client Matrix: Water

Date Sampled: 06/30/2010 1040

Date Received: 07/01/2010 1310

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/08/2010 2223		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0061	U	0.0061	0.094
4,4'-DDE	0.0073	U	0.0073	0.094
4,4'-DDT	0.0092	U	0.0092	0.094
Aldrin	0.0066	U	0.0066	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
delta-BHC	0.0045	U	0.0045	0.047
Dieldrin	0.0086	U	0.0086	0.094
Endosulfan I	0.0040	U	0.0040	0.047
Endosulfan II	0.0092	U	0.0092	0.094
Endosulfan sulfate	0.0064	U	0.0064	0.094
Endrin	0.0092	U	0.0092	0.094
Endrin aldehyde	0.015	U	0.015	0.094
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
Isodrin	0.047	U	0.047	0.047
Methoxychlor	0.012	U	0.012	0.094
PCB-1016	0.067	U	0.067	0.94
PCB-1221	0.26	U	0.26	1.9
PCB-1232	0.10	U	0.10	0.94
PCB-1242	0.17	U	0.17	0.94
PCB-1248	0.34	U	0.34	0.94
PCB-1254	0.25	U	0.25	0.94
PCB-1260	0.19	U	0.19	0.94
PCB-1262	0.23	U	0.23	0.94
Toxaphene	0.47	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	15		14 - 115
Tetrachloro-m-xylene	49	J	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-7-6-10**

Lab Sample ID: 680-59057-1

Client Matrix: Water

Date Sampled: 06/30/2010 1040

Date Received: 07/01/2010 1310

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/08/2010 2223		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	10	J	14 - 115
Tetrachloro-m-xylene	77		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-6-6-10**

Lab Sample ID: 680-59057-3

Client Matrix: Water

Date Sampled: 06/30/2010 1435

Date Received: 07/01/2010 1310

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/08/2010 2242		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0061	U	0.0061	0.094
4,4'-DDE	0.0073	U	0.0073	0.094
4,4'-DDT	0.0092	U	0.0092	0.094
Aldrin	0.0066	U	0.0066	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
delta-BHC	0.0045	U	0.0045	0.047
Dieldrin	0.0086	U	0.0086	0.094
Endosulfan I	0.0040	U	0.0040	0.047
Endosulfan II	0.0092	U	0.0092	0.094
Endosulfan sulfate	0.0064	U	0.0064	0.094
Endrin	0.0092	U	0.0092	0.094
Endrin aldehyde	0.015	U	0.015	0.094
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
Isodrin	0.047	U	0.047	0.047
Methoxychlor	0.012	U	0.012	0.094
PCB-1016	0.067	U	0.067	0.94
PCB-1221	0.26	U	0.26	1.9
PCB-1232	0.10	U	0.10	0.94
PCB-1242	0.17	U	0.17	0.94
PCB-1248	0.34	U	0.34	0.94
PCB-1254	0.25	U	0.25	0.94
PCB-1260	0.19	U	0.19	0.94
PCB-1262	0.23	U	0.23	0.94
Toxaphene	0.47	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	71		14 - 115
Tetrachloro-m-xylene	69		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-6-6-10**

Lab Sample ID: 680-59057-3

Client Matrix: Water

Date Sampled: 06/30/2010 1435

Date Received: 07/01/2010 1310

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/08/2010 2242		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	66		14 - 115
Tetrachloro-m-xylene	67		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-13-6-10**

Lab Sample ID: 680-59057-4

Client Matrix: Water

Date Sampled: 06/30/2010 1645

Date Received: 07/01/2010 1310

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	07/08/2010 2302		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0065	U	0.0065	0.10
4,4'-DDE	0.0077	U	0.0077	0.10
4,4'-DDT	0.0097	U	0.0097	0.10
Aldrin	0.0070	U	0.0070	0.050
alpha-BHC	0.0057	U	0.0057	0.050
beta-BHC	0.0067	U	0.0067	0.050
Chlordane (technical)	0.10	U	0.10	0.50
Chlorobenzilate	0.50	U	0.50	0.50
delta-BHC	0.0048	U	0.0048	0.050
Dieldrin	0.0091	U	0.0091	0.10
Endosulfan I	0.0042	U	0.0042	0.050
Endosulfan II	0.0098	U	0.0098	0.10
Endosulfan sulfate	0.0068	U	0.0068	0.10
Endrin	0.0097	U	0.0097	0.10
Endrin aldehyde	0.016	U	0.016	0.10
gamma-BHC (Lindane)	0.0059	U	0.0059	0.050
Heptachlor	0.0070	U	0.0070	0.050
Heptachlor epoxide	0.0060	U	0.0060	0.050
Isodrin	0.050	U	0.050	0.050
Methoxychlor	0.013	U	0.013	0.10
PCB-1016	0.071	U	0.071	1.0
PCB-1221	0.28	U	0.28	2.0
PCB-1232	0.11	U	0.11	1.0
PCB-1242	0.18	U	0.18	1.0
PCB-1248	0.36	U	0.36	1.0
PCB-1254	0.26	U	0.26	1.0
PCB-1260	0.20	U	0.20	1.0
PCB-1262	0.24	U	0.24	1.0
Toxaphene	0.50	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	60		14 - 115
Tetrachloro-m-xylene	48		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-13-6-10**

Lab Sample ID: 680-59057-4

Client Matrix: Water

Date Sampled: 06/30/2010 1645

Date Received: 07/01/2010 1310

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	07/08/2010 2302		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	54		14 - 115
Tetrachloro-m-xylene	46		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup1-6-10**

Lab Sample ID: 680-59057-5FD

Client Matrix: Water

Date Sampled: 06/30/2010 1200

Date Received: 07/01/2010 1310

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/08/2010 2321		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0062	U	0.0062	0.095
4,4'-DDE	0.0073	U	0.0073	0.095
4,4'-DDT	0.0092	U	0.0092	0.095
Aldrin	0.0067	U	0.0067	0.048
alpha-BHC	0.0054	U	0.0054	0.048
beta-BHC	0.0064	U	0.0064	0.048
Chlordane (technical)	0.095	U	0.095	0.48
Chlorobenzilate	0.48	U	0.48	0.48
delta-BHC	0.0046	U	0.0046	0.048
Dieldrin	0.0087	U	0.0087	0.095
Endosulfan I	0.0040	U	0.0040	0.048
Endosulfan II	0.0093	U	0.0093	0.095
Endosulfan sulfate	0.0065	U	0.0065	0.095
Endrin	0.0092	U	0.0092	0.095
Endrin aldehyde	0.015	U	0.015	0.095
gamma-BHC (Lindane)	0.0056	U	0.0056	0.048
Heptachlor	0.0067	U	0.0067	0.048
Heptachlor epoxide	0.0057	U	0.0057	0.048
Isodrin	0.048	U	0.048	0.048
Methoxychlor	0.012	U	0.012	0.095
PCB-1016	0.068	U	0.068	0.95
PCB-1221	0.27	U	0.27	1.9
PCB-1232	0.10	U	0.10	0.95
PCB-1242	0.17	U	0.17	0.95
PCB-1248	0.34	U	0.34	0.95
PCB-1254	0.25	U	0.25	0.95
PCB-1260	0.19	U	0.19	0.95
PCB-1262	0.23	U	0.23	0.95
Toxaphene	0.48	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	70		14 - 115
Tetrachloro-m-xylene	71		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup1-6-10**

Lab Sample ID: 680-59057-5FD

Client Matrix: Water

Date Sampled: 06/30/2010 1200

Date Received: 07/01/2010 1310

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/08/2010 2321		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	65		14 - 115
Tetrachloro-m-xylene	69		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup2-6-10**

Lab Sample ID: 680-59057-6FD

Client Matrix: Water

Date Sampled: 06/30/2010 1500

Date Received: 07/01/2010 1310

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/08/2010 2340		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0061	U	0.0061	0.094
4,4'-DDE	0.0073	U	0.0073	0.094
4,4'-DDT	0.0092	U	0.0092	0.094
Aldrin	0.0066	U	0.0066	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
delta-BHC	0.0045	U	0.0045	0.047
Dieldrin	0.0086	U	0.0086	0.094
Endosulfan I	0.0040	U	0.0040	0.047
Endosulfan II	0.0092	U	0.0092	0.094
Endosulfan sulfate	0.0064	U	0.0064	0.094
Endrin	0.0092	U	0.0092	0.094
Endrin aldehyde	0.015	U	0.015	0.094
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
Isodrin	0.047	U	0.047	0.047
Methoxychlor	0.012	U	0.012	0.094
PCB-1016	0.067	U	0.067	0.94
PCB-1221	0.26	U	0.26	1.9
PCB-1232	0.10	U	0.10	0.94
PCB-1242	0.17	U	0.17	0.94
PCB-1248	0.34	U	0.34	0.94
PCB-1254	0.25	U	0.25	0.94
PCB-1260	0.19	U	0.19	0.94
PCB-1262	0.23	U	0.23	0.94
Toxaphene	0.47	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	73		14 - 115
Tetrachloro-m-xylene	64		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup2-6-10**

Lab Sample ID: 680-59057-6FD

Client Matrix: Water

Date Sampled: 06/30/2010 1500

Date Received: 07/01/2010 1310

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/08/2010 2340		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	67		14 - 115
Tetrachloro-m-xylene	63		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-7-6-10**

Lab Sample ID: 680-59057-1

Client Matrix: Water

Date Sampled: 06/30/2010 1040

Date Received: 07/01/2010 1310

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-173885		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0419			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethoate	0.94	U	0.94	1.9
Disulfoton	0.94	U	0.94	1.9
Famphur	0.94	U	0.94	1.9
Methyl parathion	0.47	U	0.47	0.47
Ethyl Parathion	0.47	U	0.47	0.94
Phorate	0.47	U	0.47	0.94
Sulfotepp	0.47	U	0.47	0.47
Thionazin	0.47	U	0.47	0.94

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	84		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-6-6-10**

Lab Sample ID: 680-59057-3

Client Matrix: Water

Date Sampled: 06/30/2010 1435

Date Received: 07/01/2010 1310

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-173885		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0444			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethoate	0.94	U	0.94	1.9
Disulfoton	0.94	U	0.94	1.9
Famphur	0.94	U	0.94	1.9
Methyl parathion	0.47	U	0.47	0.47
Ethyl Parathion	0.47	U	0.47	0.94
Phorate	0.47	U	0.47	0.94
Sulfotepp	0.47	U	0.47	0.47
Thionazin	0.47	U	0.47	0.94

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	91		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-13-6-10**

Lab Sample ID: 680-59057-4

Client Matrix: Water

Date Sampled: 06/30/2010 1645

Date Received: 07/01/2010 1310

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-173885		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	500 mL
Dilution:	1.0			Final Weight/Volume:	5 mL
Date Analyzed:	07/09/2010 0509			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethoate	1.0	U	1.0	2.0
Disulfoton	1.0	U	1.0	2.0
Famphur	1.0	U	1.0	2.0
Methyl parathion	0.50	U	0.50	0.50
Ethyl Parathion	0.50	U	0.50	1.0
Phorate	0.50	U	0.50	1.0
Sulfotepp	0.50	U	0.50	0.50
Thionazin	0.50	U	0.50	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	84		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup1-6-10**

Lab Sample ID: 680-59057-5FD

Client Matrix: Water

Date Sampled: 06/30/2010 1200

Date Received: 07/01/2010 1310

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-173885		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	1050 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0534			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethoate	0.95	U	0.95	1.9
Disulfoton	0.95	U	0.95	1.9
Famphur	0.95	U	0.95	1.9
Methyl parathion	0.48	U	0.48	0.48
Ethyl Parathion	0.48	U	0.48	0.95
Phorate	0.48	U	0.48	0.95
Sulfotepp	0.48	U	0.48	0.48
Thionazin	0.48	U	0.48	0.95

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	90		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup2-6-10**

Lab Sample ID: 680-59057-6FD

Client Matrix: Water

Date Sampled: 06/30/2010 1500

Date Received: 07/01/2010 1310

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-173885		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0558			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Dimethoate	0.94	U	0.94	1.9
Disulfoton	0.94	U	0.94	1.9
Famphur	0.94	U	0.94	1.9
Methyl parathion	0.47	U	0.47	0.47
Ethyl Parathion	0.47	U	0.47	0.94
Phorate	0.47	U	0.47	0.94
Sulfotepp	0.47	U	0.47	0.47
Thionazin	0.47	U	0.47	0.94

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	92		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-7-6-10**

Lab Sample ID: 680-59057-1

Client Matrix: Water

Date Sampled: 06/30/2010 1040

Date Received: 07/01/2010 1310

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-174604		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-174022		Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0208			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U H	0.99	2.0
Arsenic	6.7	H	0.40	1.0
Barium	45	H	0.15	1.0
Beryllium	0.070	U H	0.070	0.20
Cadmium	0.20	U H	0.20	0.50
Chromium	0.32	J H	0.16	1.0
Cobalt	0.37	H	0.078	0.20
Copper	2.1	H	0.21	1.0
Lead	0.16	J H	0.080	0.30
Nickel	0.50	J H	0.40	1.0
Selenium	0.21	U H	0.21	0.50
Silver	0.10	U H	0.10	0.20
Thallium	0.10	U H	0.10	0.20
Tin	0.40	U H	0.40	1.0
Vanadium	4.7	J H	1.4	5.0
Zinc	3.7	J H	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-173649		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-173437		Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1637			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-8-6-10**

Lab Sample ID: 680-59057-2

Client Matrix: Water

Date Sampled: 06/30/2010 1215

Date Received: 07/01/2010 1310

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-174604		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-174022		Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0215			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U H	0.99	2.0
Arsenic	1.7	H	0.40	1.0
Barium	67	H	0.15	1.0
Beryllium	0.070	U H	0.070	0.20
Cadmium	0.20	U H	0.20	0.50
Chromium	0.24	J H	0.16	1.0
Cobalt	0.51	H	0.078	0.20
Copper	0.62	J H	0.21	1.0
Lead	0.080	U H	0.080	0.30
Nickel	0.68	J H	0.40	1.0
Selenium	0.21	U H	0.21	0.50
Silver	0.10	U H	0.10	0.20
Thallium	0.10	U H	0.10	0.20
Tin	0.40	U H	0.40	1.0
Vanadium	1.4	U H	1.4	5.0
Zinc	6.1	J H	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-173649		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-173437		Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1641			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-6-6-10**

Lab Sample ID: 680-59057-3

Client Matrix: Water

Date Sampled: 06/30/2010 1435

Date Received: 07/01/2010 1310

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-174604		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-174022		Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0222			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U H	0.99	2.0
Arsenic	0.40	U H	0.40	1.0
Barium	7.9	H	0.15	1.0
Beryllium	0.070	U H	0.070	0.20
Cadmium	0.20	U H	0.20	0.50
Chromium	0.16	U H	0.16	1.0
Cobalt	0.13	J H	0.078	0.20
Copper	1.6	H	0.21	1.0
Lead	0.080	U H	0.080	0.30
Nickel	0.40	U H	0.40	1.0
Selenium	0.21	U H	0.21	0.50
Silver	0.10	U H	0.10	0.20
Thallium	0.10	U H	0.10	0.20
Tin	0.40	U H	0.40	1.0
Vanadium	1.4	U H	1.4	5.0
Zinc	2.7	J H	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-173649		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-173437		Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1643			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-13-6-10**

Lab Sample ID: 680-59057-4

Client Matrix: Water

Date Sampled: 06/30/2010 1645

Date Received: 07/01/2010 1310

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-174604		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-174022		Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0230			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U H	0.99	2.0
Arsenic	0.40	U H	0.40	1.0
Barium	9.9	H	0.15	1.0
Beryllium	0.070	U H	0.070	0.20
Cadmium	0.20	U H	0.20	0.50
Chromium	0.16	U H	0.16	1.0
Cobalt	0.10	J H	0.078	0.20
Copper	0.35	J H	0.21	1.0
Lead	0.080	U H	0.080	0.30
Nickel	0.40	U H	0.40	1.0
Selenium	0.21	U H	0.21	0.50
Silver	0.10	U H	0.10	0.20
Thallium	0.10	U H	0.10	0.20
Tin	0.40	U H	0.40	1.0
Vanadium	1.4	U H	1.4	5.0
Zinc	4.6	J H	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-173649		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-173437		Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1646			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup1-6-10**

Lab Sample ID: 680-59057-5FD

Client Matrix: Water

Date Sampled: 06/30/2010 1200

Date Received: 07/01/2010 1310

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-174604		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-174022		Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0321			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U H	0.99	2.0
Arsenic	0.40	U H	0.40	1.0
Barium	7.6	H	0.15	1.0
Beryllium	0.070	U H	0.070	0.20
Cadmium	0.20	U H	0.20	0.50
Chromium	0.16	U H	0.16	1.0
Cobalt	0.14	J H	0.078	0.20
Copper	1.3	H	0.21	1.0
Lead	0.080	U H	0.080	0.30
Nickel	0.40	U H	0.40	1.0
Selenium	0.21	U H	0.21	0.50
Silver	0.10	U H	0.10	0.20
Thallium	0.10	U H	0.10	0.20
Tin	0.40	U H	0.40	1.0
Vanadium	1.4	U H	1.4	5.0
Zinc	11	H	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-173649		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-173437		Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1702			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Client Sample ID: **GW-LSMW-Dup2-6-10**

Lab Sample ID: 680-59057-6FD

Client Matrix: Water

Date Sampled: 06/30/2010 1500

Date Received: 07/01/2010 1310

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-174604		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-174022		Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0328			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U H	0.99	2.0
Arsenic	0.40	U H	0.40	1.0
Barium	9.3	H	0.15	1.0
Beryllium	0.070	U H	0.070	0.20
Cadmium	0.20	U H	0.20	0.50
Chromium	0.16	U H	0.16	1.0
Cobalt	0.11	J H	0.078	0.20
Copper	0.51	J H	0.21	1.0
Lead	0.080	U H	0.080	0.30
Nickel	0.40	U H	0.40	1.0
Selenium	0.21	U H	0.21	0.50
Silver	0.10	U H	0.10	0.20
Thallium	0.10	U H	0.10	0.20
Tin	0.40	U H	0.40	1.0
Vanadium	1.4	U H	1.4	5.0
Zinc	3.3	J H	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-173649		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-173437		Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1705			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

General Chemistry

Client Sample ID: **GW-LSMW-7-6-10**

Lab Sample ID: 680-59057-1

Client Matrix: Water

Date Sampled: 06/30/2010 1040

Date Received: 07/01/2010 1310

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1519						
Nitrite as NO2	0.28	U	mg/L	0.28	0.85	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1519						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-173665	Date Analyzed: 07/09/2010 0958						
Prep Batch: 680-173507	Date Prepared: 07/08/2010 0624						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-173427	Date Analyzed: 07/07/2010 1026						
Prep Batch: 680-173401	Date Prepared: 07/07/2010 0741						

General Chemistry

Client Sample ID: **GW-LSMW-8-6-10**

Lab Sample ID: 680-59057-2

Client Matrix: Water

Date Sampled: 06/30/2010 1215

Date Received: 07/01/2010 1310

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.60	J	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1531						
Nitrite as NO2	0.28	U	mg/L	0.28	0.85	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1531						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-173665	Date Analyzed: 07/09/2010 0958						
Prep Batch: 680-173507	Date Prepared: 07/08/2010 0624						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-173427	Date Analyzed: 07/07/2010 1026						
Prep Batch: 680-173401	Date Prepared: 07/07/2010 0741						

General Chemistry

Client Sample ID: **GW-LSMW-6-6-10**

Lab Sample ID: 680-59057-3

Client Matrix: Water

Date Sampled: 06/30/2010 1435

Date Received: 07/01/2010 1310

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1544						
Nitrite as NO2	0.28	U	mg/L	0.28	0.85	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1544						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-173665	Date Analyzed: 07/09/2010 0958						
Prep Batch: 680-173507	Date Prepared: 07/08/2010 0624						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-173427	Date Analyzed: 07/07/2010 1026						
Prep Batch: 680-173401	Date Prepared: 07/07/2010 0741						

General Chemistry

Client Sample ID: **GW-LSMW-13-6-10**

Lab Sample ID: 680-59057-4

Client Matrix: Water

Date Sampled: 06/30/2010 1645

Date Received: 07/01/2010 1310

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.61	J	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1556						
Nitrite as NO2	0.28	U	mg/L	0.28	0.85	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1556						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-173665	Date Analyzed: 07/09/2010 0958						
Prep Batch: 680-173507	Date Prepared: 07/08/2010 0624						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-173427	Date Analyzed: 07/07/2010 1026						
Prep Batch: 680-173401	Date Prepared: 07/07/2010 0741						

General Chemistry

Client Sample ID: **GW-LSMW-Dup1-6-10**

Lab Sample ID: 680-59057-5FD

Client Matrix: Water

Date Sampled: 06/30/2010 1200

Date Received: 07/01/2010 1310

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.40	J	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1633						
Nitrite as NO2	0.28	U	mg/L	0.28	0.85	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1633						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-173665	Date Analyzed: 07/09/2010 0958						
Prep Batch: 680-173507	Date Prepared: 07/08/2010 0624						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-173427	Date Analyzed: 07/07/2010 1026						
Prep Batch: 680-173401	Date Prepared: 07/07/2010 0741						

General Chemistry

Client Sample ID: **GW-LSMW-Dup2-6-10**

Lab Sample ID: 680-59057-6FD

Client Matrix: Water

Date Sampled: 06/30/2010 1500

Date Received: 07/01/2010 1310

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.59	J	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1646						
Nitrite as NO2	0.28	U	mg/L	0.28	0.85	5.0	300.0
Analysis Batch: 680-173209	Date Analyzed: 07/01/2010 1646						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-173665	Date Analyzed: 07/09/2010 0958						
Prep Batch: 680-173507	Date Prepared: 07/08/2010 0624						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-173427	Date Analyzed: 07/07/2010 1026						
Prep Batch: 680-173401	Date Prepared: 07/07/2010 0741						

DATA REPORTING QUALIFIERS

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Lab Section	Qualifier	Description
GC/MS VOA		
	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.
	U	Undetected at the Limit of Detection.
GC/MS Semi VOA		
	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.
	Q	One or more quality control criteria failed.
	U	Undetected at the Limit of Detection.
GC Semi VOA		
	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.
	M	Manual integrated compound.
	H	Sample was prepped or analyzed beyond the specified holding time
	U	Undetected at the Limit of Detection.

DATA REPORTING QUALIFIERS

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Lab Section	Qualifier	Description
Metals		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	H	Sample was prepped or analyzed beyond the specified holding time
	U	Undetected at the Limit of Detection.
General Chemistry		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	U	Undetected at the Limit of Detection.

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173369

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-173369/11	Analysis Batch:	680-173369	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq285.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1139			Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1139				

Analyte	Result	Qual	MDL	RL
Acetone	5.0	U	5.0	25
Acetonitrile	10	U	10	40
Benzene	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	0.14	U	0.14	1.0
Chloromethane	0.33	U	0.33	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
1,2-Dichloropropane	0.13	U	0.13	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Ethylbenzene	0.11	U	0.11	1.0
Bromoform	0.50	U	0.50	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
Methylene Chloride	1.0	U	1.0	5.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
Methyl methacrylate	0.48	U	0.48	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Tetrachloroethene	0.15	U	0.15	1.0
Ethyl methacrylate	0.25	U	0.25	1.0
Toluene	0.33	U	0.33	1.0
Isobutyl alcohol	11	U	11	40
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Chlorobromomethane	0.14	U	0.14	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173369

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-173369/11	Analysis Batch:	680-173369	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq285.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1139			Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1139				

Analyte	Result	Qual	MDL	RL
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
Vinyl acetate	0.28	U	0.28	2.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
Vinyl chloride	0.18	U	0.18	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
Xylenes, Total	0.20	U	0.20	2.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	% Rec	Acceptance Limits
Toluene-d8 (Surr)	101	75 - 120
4-Bromofluorobenzene	97	75 - 120
Dibromofluoromethane	112	75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-173369

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-173369/8	Analysis Batch:	680-173369	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq277.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 0945			Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 0945				

LCSD Lab Sample ID:	LCSD 680-173369/9	Analysis Batch:	680-173369	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq279.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1014			Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1014				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	111	95	17 - 175	16	50		
Benzene	101	100	77 - 119	0	30		
Bromomethane	72	97	12 - 184	30	50		
Carbon disulfide	120	115	55 - 131	4	30		
Chlorobenzene	102	100	85 - 116	2	30		
Chlorodibromomethane	109	107	75 - 133	2	30		
Chloroethane	149	159	40 - 165	6	50		
Chloroform	108	110	82 - 120	2	30		
Chloromethane	84	89	48 - 142	5	50		
1,2-Dibromo-3-Chloropropane	103	98	49 - 140	5	30		
cis-1,3-Dichloropropene	107	105	76 - 126	2	30		
2-Butanone (MEK)	96	94	33 - 157	2	30		
Dichlorobromomethane	101	100	78 - 127	0	30		
Dichlorodifluoromethane	121	119	34 - 154	2	30		
1,1-Dichloroethane	114	112	74 - 127	2	30		
1,2-Dichloroethane	90	88	66 - 132	3	30		
1,1-Dichloroethene	117	111	62 - 141	6	30		
1,2-Dichloropropane	100	101	73 - 124	1	30		
Carbon tetrachloride	109	108	71 - 135	0	30		
Ethylbenzene	104	103	86 - 116	0	30		
Bromoform	111	105	62 - 133	5	30		
Ethylene Dibromide	99	97	80 - 121	1	30		
Methylene Chloride	125	122	70 - 125	2	30		
4-Methyl-2-pentanone (MIBK)	85	82	40 - 151	4	30		
2-Hexanone	87	83	34 - 161	6	30		
Styrene	101	99	82 - 122	2	30		
1,1,1,2-Tetrachloroethane	107	106	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	91	89	69 - 129	3	30		
Tetrachloroethene	103	102	76 - 126	2	30		
Toluene	100	101	81 - 117	1	30		
Chlorobromomethane	104	104	10 - 150	0	30		
trans-1,2-Dichloroethene	114	113	72 - 131	1	30		
cis-1,2-Dichloroethene	113	113	69 - 134	0	30		

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-173369

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-173369/8	Analysis Batch:	680-173369	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq277.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 0945			Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 0945				

LCSD Lab Sample ID:	LCSD 680-173369/9	Analysis Batch:	680-173369	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq279.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1014			Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1014				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
trans-1,3-Dichloropropene	103	103	73 - 128	0	30		
1,3-Dichloropropane	95	95	75 - 120	1	30		
1,1,2-Trichloroethane	97	94	75 - 121	3	30		
2,2-Dichloropropane	126	123	55 - 157	2	30		
1,1,1-Trichloroethane	105	104	76 - 127	0	30		
1,1-Dichloropropene	98	99	77 - 122	1	30		
Trichloroethene	100	102	84 - 115	2	30		
Trichlorofluoromethane	93	95	58 - 149	1	50		
1,2,3-Trichloropropane	94	92	70 - 130	2	30		
Vinyl acetate	111	108	10 - 217	3	30		
1,2-Dichlorobenzene	100	99	79 - 124	1	30		
Vinyl chloride	86	86	59 - 144	0	50		
1,3-Dichlorobenzene	101	100	78 - 125	1	30		
Xylenes, Total	101	100	84 - 118	1	30		
1,4-Dichlorobenzene	101	100	81 - 122	1	30		
1,2,4-Trichlorobenzene	108	106	60 - 135	2	30		
Dibromomethane	96	96	78 - 119	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Toluene-d8 (Surr)	102	102	75 - 120
4-Bromofluorobenzene	103	104	75 - 120
Dibromofluoromethane	113	114	75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173369

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	680-59057-4	Analysis Batch:	680-173369	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	o0593.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1922			Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1922				

MSD Lab Sample ID:	680-59057-4	Analysis Batch:	680-173369	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	o0595.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1950			Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1950				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acetone	136	107	17 - 175	24	50		
Benzene	96	97	77 - 119	1	30		
Bromoform	94	100	62 - 133	6	30		
Bromomethane	87	83	12 - 184	4	50		
2-Butanone (MEK)	90	95	33 - 157	6	30		
Carbon disulfide	178	122	55 - 131	38	30	J	J
Carbon tetrachloride	100	105	71 - 135	5	30		
Chlorobenzene	100	100	85 - 116	0	30		
Chlorobromomethane	101	102	10 - 150	1	30		
Chlorodibromomethane	97	100	75 - 133	3	30		
Chloroethane	182	166	40 - 165	9	50	J	J
Chloroform	110	109	82 - 120	1	30		
Chloromethane	95	90	48 - 142	5	50		
cis-1,2-Dichloroethene	112	112	69 - 134	0	30		
cis-1,3-Dichloropropene	96	97	76 - 126	1	30		
1,2-Dibromo-3-Chloropropane	92	97	49 - 140	5	30		
Dibromomethane	91	93	78 - 119	2	30		
1,2-Dichlorobenzene	95	97	79 - 124	2	30		
1,3-Dichlorobenzene	100	100	78 - 125	0	30		
1,4-Dichlorobenzene	98	99	81 - 122	1	30		
Dichlorobromomethane	94	95	78 - 127	1	30		
Dichlorodifluoromethane	130	124	34 - 154	5	30		
1,1-Dichloroethane	99	113	74 - 127	13	30		
1,2-Dichloroethane	85	87	66 - 132	3	30		
1,1-Dichloroethene	212	119	62 - 141	57	30	J	J
1,2-Dichloropropane	96	96	73 - 124	0	30		
1,3-Dichloropropane	91	90	75 - 120	0	30		
2,2-Dichloropropane	109	110	55 - 157	1	30		
1,1-Dichloropropene	97	97	77 - 122	0	30		
Ethylbenzene	102	102	86 - 116	1	30		

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173369

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	680-59057-4	Analysis Batch:	680-173369	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	o0593.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1922			Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1922				

MSD Lab Sample ID:	680-59057-4	Analysis Batch:	680-173369	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	o0595.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	07/06/2010 1950			Final Weight/Volume:	5 mL
Date Prepared:	07/06/2010 1950				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ethylene Dibromide	93	94	80 - 121	1	30		
2-Hexanone	78	85	34 - 161	8	30		
Methylene Chloride	180	122	70 - 125	38	30	J	J
4-Methyl-2-pentanone (MIBK)	79	84	40 - 151	6	30		
Styrene	99	100	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	100	101	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	85	89	69 - 129	4	30		
Tetrachloroethene	102	103	76 - 126	1	30		
Toluene	99	99	81 - 117	0	30		
trans-1,2-Dichloroethene	187	116	72 - 131	47	30	J	J
trans-1,3-Dichloropropene	91	90	73 - 128	1	30		
1,2,4-Trichlorobenzene	99	104	60 - 135	5	30		
1,1,2-Trichloroethane	91	91	75 - 121	0	30		
1,1,1-Trichloroethane	100	101	76 - 127	2	30		
Trichloroethene	100	100	84 - 115	0	30		
Trichlorofluoromethane	103	100	58 - 149	3	50		
1,2,3-Trichloropropane	89	93	70 - 130	4	30		
Vinyl acetate	93	112	10 - 217	19	30		
Vinyl chloride	97	93	59 - 144	5	50		
Xylenes, Total	101	101	84 - 118	0	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Toluene-d8 (Surr)	100	99	75 - 120
4-Bromofluorobenzene	99	99	75 - 120
Dibromofluoromethane	113	111	75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173430

Method: 8270D
Preparation: 3520C

Lab Sample ID:	MB 680-173430/11-A	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8179.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	07/13/2010 0902			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Acenaphthene	0.76	U	0.76	10
Acenaphthylene	0.85	U	0.85	10
Acetophenone	0.57	U	0.57	10
2-Acetylaminofluorene	1.6	U	1.6	10
4-Aminobiphenyl	1.2	U	1.2	10
Anthracene	0.69	U	0.69	10
Benzo[a]anthracene	0.55	U	0.55	10
Benzo[a]pyrene	0.71	U	0.71	10
Benzo[b]fluoranthene	2.6	U	2.6	10
Benzo[g,h,i]perylene	0.87	U	0.87	10
Benzo[k]fluoranthene	1.2	U	1.2	10
Benzyl alcohol	1.1	U	1.1	10
Bis(2-chloroethoxy)methane	0.94	U	0.94	10
Bis(2-chloroethyl)ether	1.1	U	1.1	10
bis(chloroisopropyl) ether	0.78	U	0.78	10
Bis(2-ethylhexyl) phthalate	1.6	U	1.6	10
4-Bromophenyl phenyl ether	0.77	U	0.77	10
Butyl benzyl phthalate	1.2	U	1.2	10
4-Chloroaniline	2.2	U	2.2	20
4-Chloro-3-methylphenol	1.0	U	1.0	10
2-Chloronaphthalene	0.80	U	0.80	10
2-Chlorophenol	0.87	U	0.87	10
4-Chlorophenyl phenyl ether	0.84	U	0.84	10
Chrysene	0.51	U	0.51	10
Diallate	0.78	U	0.78	10
Dibenz(a,h)anthracene	1.0	U	1.0	10
Dibenzofuran	0.79	U	0.79	10
3,3'-Dichlorobenzidine	30	U	30	60
2,4-Dichlorophenol	1.1	U	1.1	10
2,6-Dichlorophenol	0.73	U	0.73	10
Diethyl phthalate	0.88	U	0.88	10
Dimethoate	0.75	U	0.75	10
7,12-Dimethylbenz(a)anthracene	1.2	U	1.2	10
3,3'-Dimethylbenzidine	10	U	10	20
2,4-Dimethylphenol	4.0	U	4.0	10
Dimethyl phthalate	0.99	U	0.99	10
Di-n-butyl phthalate	0.83	U	0.83	10
1,3-Dinitrobenzene	0.60	U	0.60	10
4,6-Dinitro-2-methylphenol	10	U	10	50
2,4-Dinitrophenol	10	U	10	50
2,4-Dinitrotoluene	1.2	U	1.2	10
2,6-Dinitrotoluene	1.1	U	1.1	10
Di-n-octyl phthalate	1.4	U	1.4	10

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173430

Method: 8270D
Preparation: 3520C

Lab Sample ID:	MB 680-173430/11-A	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8179.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	07/13/2010 0902			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Dinoseb	5.0	U	5.0	10
Disulfoton	0.79	U	0.79	10
Ethyl methanesulfonate	0.96	U	0.96	10
Ethyl Parathion	1.3	U	1.3	10
Famphur	1.1	U	1.1	10
Fluoranthene	0.74	U	0.74	10
Fluorene	0.96	U	0.96	10
Hexachlorobenzene	0.79	U	0.79	10
Hexachlorobutadiene	0.62	U	0.62	10
Hexachlorocyclopentadiene	2.5	U	2.5	10
Hexachloroethane	0.76	U	0.76	10
Hexachloropropene	1.4	U	1.4	10
Indeno[1,2,3-cd]pyrene	1.0	U	1.0	10
Isophorone	0.90	U	0.90	10
Isosafrole	0.50	U	0.50	10
Methapyrilene	2.7	U	2.7	2000
3-Methylcholanthrene	1.4	U	1.4	10
Methyl methanesulfonate	0.60	U	0.60	10
2-Methylnaphthalene	0.78	U	0.78	10
Methyl parathion	0.88	U	0.88	10
2-Methylphenol	0.89	U	0.89	10
3 & 4 Methylphenol	1.3	U	1.3	10
Naphthalene	0.70	U	0.70	10
1,4-Naphthoquinone	0.62	U	0.62	10
1-Naphthylamine	1.1	U	1.1	10
2-Naphthylamine	1.5	U	1.5	10
2-Nitroaniline	1.3	U	1.3	50
3-Nitroaniline	5.0	U	5.0	50
4-Nitroaniline	5.0	U	5.0	50
Nitrobenzene	0.73	U	0.73	10
2-Nitrophenol	0.76	U	0.76	10
4-Nitrophenol	1.9	U	1.9	50
N-Nitro-o-toluidine	1.5	U	1.5	10
N-Nitrosodiethylamine	0.93	U	0.93	10
N-Nitrosodimethylamine	2.8	U	2.8	10
N-Nitrosodi-n-butylamine	0.96	U	0.96	10
N-Nitrosodi-n-propylamine	0.72	U	0.72	10
N-Nitrosodiphenylamine	0.92	U	0.92	10
N-Nitrosomethylethylamine	3.3	U	3.3	10
N-Nitrosopiperidine	0.88	U	0.88	10
N-Nitrosopyrrolidine	1.0	U	1.0	10
o,o',o"-Triethylphosphorothioate	1.0	U	1.0	10
para-Dimethylaminoazobenzene	0.79	U	0.79	10

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173430

Method: 8270D
Preparation: 3520C

Lab Sample ID:	MB 680-173430/11-A	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8179.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	07/13/2010 0902			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Pentachlorobenzene	0.52	U	0.52	10
Pentachloronitrobenzene	0.78	U	0.78	10
Pentachlorophenol	2.0	U	2.0	50
Phenacetin	1.4	U	1.4	10
Phenanthrene	0.77	U	0.77	10
Phenol	0.83	U	0.83	10
Phorate	0.87	U	0.87	10
p-Phenylene diamine	10	U	10	2000
Pronamide	0.89	U	0.89	10
Pyrene	0.63	U	0.63	10
Safrole, Total	0.80	U	0.80	10
Sulfotepp	0.53	U	0.53	10
1,2,4,5-Tetrachlorobenzene	0.76	U	0.76	10
2,3,4,6-Tetrachlorophenol	0.72	U	0.72	10
Thionazin	0.91	U	0.91	10
2-Toluidine	1.4	U	1.4	10
2,4,5-Trichlorophenol	1.2	U	1.2	10
2,4,6-Trichlorophenol	0.85	U	0.85	10
1,3,5-Trinitrobenzene	2.0	U	2.0	10

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	87	50 - 113
2-Fluorophenol	78	36 - 110
Nitrobenzene-d5	91	45 - 112
Phenol-d5	90	38 - 116
Terphenyl-d14	96	10 - 121
2,4,6-Tribromophenol	100	40 - 139

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2-Fluorobiphenyl	81	72	50 - 113
2-Fluorophenol	73	62	36 - 110
Nitrobenzene-d5	82	75	45 - 112
Phenol-d5	81	66	38 - 116
Terphenyl-d14	94	81	10 - 121
2,4,6-Tribromophenol	98	85	40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173430

Method: 8270D
Preparation: 3520C

MS Lab Sample ID:	680-59057-4	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8198.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	07/13/2010 1717			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

MSD Lab Sample ID:	680-59057-4	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8199.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	07/13/2010 1741			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	95	83	45 - 117	13	40		
Acenaphthylene	84	75	51 - 112	13	40		
Anthracene	87	77	52 - 116	12	40		
Benzo[a]anthracene	87	81	49 - 124	7	40		
Benzo[a]pyrene	101	96	48 - 120	5	40		
Benzo[b]fluoranthene	77	82	46 - 126	5	40		
Benzo[g,h,i]perylene	93	89	51 - 117	5	40		
Benzo[k]fluoranthene	95	79	47 - 126	18	40		
Benzyl alcohol	86	80	34 - 113	8	40		
Bis(2-chloroethoxy)methane	97	86	50 - 112	12	40		
Bis(2-chloroethyl)ether	88	80	43 - 110	10	40		
bis(chloroisopropyl) ether	91	81	42 - 110	12	40		
Bis(2-ethylhexyl) phthalate	94	91	47 - 134	4	40		
4-Bromophenyl phenyl ether	95	87	42 - 110	9	40		
Butyl benzyl phthalate	103	96	52 - 135	6	40		
4-Chloroaniline	80	77	10 - 110	3	40		
4-Chloro-3-methylphenol	96	85	46 - 118	12	40		
2-Chloronaphthalene	81	72	47 - 110	12	40		
2-Chlorophenol	82	76	47 - 110	9	40		
4-Chlorophenyl phenyl ether	91	82	46 - 114	11	40		
Chrysene	89	85	51 - 123	5	40		
Dibenz(a,h)anthracene	92	87	46 - 124	5	40		
Dibenzofuran	82	73	50 - 112	12	40		
3,3'-Dichlorobenzidine	74	73	10 - 113	0	40		
2,4-Dichlorophenol	90	80	46 - 115	12	40		
Diethyl phthalate	97	90	51 - 119	7	40		
2,4-Dimethylphenol	76	65	36 - 110	17	40		
Dimethyl phthalate	97	88	50 - 116	10	40		
Di-n-butyl phthalate	87	82	49 - 123	6	40		
4,6-Dinitro-2-methylphenol	105	105	29 - 167	0	40		

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173430

Method: 8270D
Preparation: 3520C

MS Lab Sample ID:	680-59057-4	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8198.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	07/13/2010 1717			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

MSD Lab Sample ID:	680-59057-4	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8199.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	07/13/2010 1741			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dinitrophenol	130	124	10 - 189	4	40		
2,4-Dinitrotoluene	105	97	49 - 128	8	40		
2,6-Dinitrotoluene	104	93	45 - 131	11	40		
Di-n-octyl phthalate	95	94	44 - 134	2	40		
Fluoranthene	84	82	50 - 120	3	40		
Fluorene	86	77	50 - 115	11	40		
Hexachlorobenzene	85	78	48 - 119	8	40		
Hexachlorobutadiene	64	59	40 - 110	8	40		
Hexachlorocyclopentadiene	50	44	10 - 110	12	40		
Hexachloroethane	58	51	33 - 110	12	40		
Indeno[1,2,3-cd]pyrene	92	89	40 - 126	3	40		
Isophorone	87	79	50 - 111	9	40		
2-Methylnaphthalene	80	71	46 - 110	12	40		
2-Methylphenol	86	78	46 - 110	9	40		
3 & 4 Methylphenol	94	82	43 - 110	14	40		
Naphthalene	79	70	41 - 110	12	40		
2-Nitroaniline	104	93	45 - 122	11	40		
3-Nitroaniline	101	91	30 - 116	11	40		
4-Nitroaniline	107	100	36 - 125	7	40		
Nitrobenzene	86	78	46 - 110	10	40		
2-Nitrophenol	89	82	42 - 120	8	40		
4-Nitrophenol	107	104	30 - 122	2	40		
N-Nitrosodimethylamine	90	92	33 - 110	2	40		
N-Nitrosodi-n-propylamine	98	88	45 - 112	11	40		
N-Nitrosodiphenylamine	92	84	47 - 119	9	40		
Pentachlorophenol	94	88	37 - 132	6	40		
Phenanthrene	86	75	52 - 117	13	40		
Phenol	91	74	39 - 110	20	40		
Pyrene	87	80	52 - 125	9	40		
2,4,5-Trichlorophenol	93	83	47 - 122	11	40		

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173430

Method: 8270D
Preparation: 3520C

MS Lab Sample ID:	680-59057-4	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8198.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	07/13/2010 1717			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

MSD Lab Sample ID:	680-59057-4	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8199.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	07/13/2010 1741			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4,6-Trichlorophenol	95	86	46 - 120	10	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl	84	73	50 - 113
2-Fluorophenol	76	68	36 - 110
Nitrobenzene-d5	85	78	45 - 112
Phenol-d5	86	76	38 - 116
Terphenyl-d14	91	83	10 - 121
2,4,6-Tribromophenol	111	103	40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173431

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: MB 680-173431/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/08/2010 2007
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173682
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGM
Lab File ID: mg08013.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.0065	U	0.0065	0.10
4,4'-DDE	0.0077	U	0.0077	0.10
4,4'-DDT	0.0097	U	0.0097	0.10
Aldrin	0.0070	U	0.0070	0.050
alpha-BHC	0.0057	U	0.0057	0.050
beta-BHC	0.0067	U	0.0067	0.050
Chlordane (technical)	0.10	U	0.10	0.50
Chlorobenzilate	0.50	U	0.50	0.50
delta-BHC	0.0048	U	0.0048	0.050
Dieldrin	0.0091	U	0.0091	0.10
Endosulfan I	0.0042	U	0.0042	0.050
Endosulfan II	0.0098	U	0.0098	0.10
Endosulfan sulfate	0.0068	U	0.0068	0.10
Endrin	0.0097	U	0.0097	0.10
Endrin aldehyde	0.016	U	0.016	0.10
gamma-BHC (Lindane)	0.0059	U	0.0059	0.050
Heptachlor	0.0070	U	0.0070	0.050
Heptachlor epoxide	0.0060	U	0.0060	0.050
Isodrin	0.050	U	0.050	0.050
Methoxychlor	0.013	U	0.013	0.10
PCB-1016	0.071	U	0.071	1.0
PCB-1221	0.28	U	0.28	2.0
PCB-1232	0.11	U	0.11	1.0
PCB-1242	0.18	U	0.18	1.0
PCB-1248	0.36	U	0.36	1.0
PCB-1254	0.26	U	0.26	1.0
PCB-1260	0.20	U	0.20	1.0
PCB-1262	0.24	U	0.24	1.0
Toxaphene	0.50	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	98	14 - 115
Tetrachloro-m-xylene	72	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	87	14 - 115
Tetrachloro-m-xylene	69	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Lab Control Sample - Batch: 680-173431

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: LCS 680-173431/18-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/08/2010 2027
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173682
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGM
Lab File ID: mg08014.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	0.200	0.236	118	37 - 179	
4,4'-DDE	0.200	0.166	83	33 - 142	
4,4'-DDT	0.200	0.238	119	27 - 141	
Aldrin	0.100	0.0553	55	32 - 114	
alpha-BHC	0.100	0.0968	97	29 - 112	
beta-BHC	0.100	0.106	106	15 - 204	
delta-BHC	0.100	0.118	118	25 - 123	
Dieldrin	0.200	0.207	103	45 - 137	
Endosulfan I	0.100	0.114	114	31 - 134	
Endosulfan II	0.200	0.178	89	24 - 144	
Endosulfan sulfate	0.200	0.196	98	44 - 128	
Endrin	0.200	0.198	99	38 - 144	
Endrin aldehyde	0.200	0.235	117	37 - 135	
gamma-BHC (Lindane)	0.100	0.102	102	31 - 118	
Heptachlor	0.100	0.0778	78	30 - 133	
Heptachlor epoxide	0.100	0.107	107	34 - 126	
Methoxychlor	0.200	0.188	94	10 - 243	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	83	14 - 115
Tetrachloro-m-xylene	67	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	73	14 - 115
Tetrachloro-m-xylene	66	35 - 120

Lab Control Sample - Batch: 680-173431

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: LCS 680-173431/21-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/08/2010 2046
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173682
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGM
Lab File ID: mg08015.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
PCB-1016	10.0	8.49	85	57 - 124	
PCB-1260	10.0	10.1	101	58 - 124	

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	84	14 - 115
Tetrachloro-m-xylene	61	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	78	14 - 115
Tetrachloro-m-xylene	59	35 - 120

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	84	76	14 - 115
Tetrachloro-m-xylene	69	68	35 - 120

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	81	75	14 - 115
Tetrachloro-m-xylene	68	68	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173854

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: MB 680-173854/13-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1637
Date Prepared: 07/12/2010 1434

Analysis Batch: 680-174139
Prep Batch: 680-173854
Units: ug/L

Instrument ID: SGM
Lab File ID: mg13007.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.0065	U	0.0065	0.10
4,4'-DDE	0.0077	U	0.0077	0.10
4,4'-DDT	0.0097	U	0.0097	0.10
Aldrin	0.0070	U	0.0070	0.050
alpha-BHC	0.0057	U	0.0057	0.050
beta-BHC	0.0067	U	0.0067	0.050
Chlordane (technical)	0.10	U	0.10	0.50
Chlorobenzilate	0.50	U	0.50	0.50
delta-BHC	0.0048	U	0.0048	0.050
Dieldrin	0.0091	U	0.0091	0.10
Endosulfan I	0.0042	U	0.0042	0.050
Endosulfan II	0.0098	U	0.0098	0.10
Endosulfan sulfate	0.0068	U	0.0068	0.10
Endrin	0.0097	U	0.0097	0.10
Endrin aldehyde	0.016	U	0.016	0.10
gamma-BHC (Lindane)	0.0059	U	0.0059	0.050
Heptachlor	0.0070	U	0.0070	0.050
Heptachlor epoxide	0.0060	U	0.0060	0.050
Isodrin	0.050	U	0.050	0.050
Methoxychlor	0.013	U	0.013	0.10
PCB-1016	0.071	U	0.071	1.0
PCB-1221	0.28	U	0.28	2.0
PCB-1232	0.11	U	0.11	1.0
PCB-1242	0.18	U	0.18	1.0
PCB-1248	0.36	U	0.36	1.0
PCB-1254	0.26	U	0.26	1.0
PCB-1260	0.20	U	0.20	1.0
PCB-1262	0.24	U	0.24	1.0
Toxaphene	0.50	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	49	14 - 115
Tetrachloro-m-xylene	57	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	46	14 - 115
Tetrachloro-m-xylene	46	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Lab Control Sample - Batch: 680-173854

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: LCS 680-173854/14-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1737
Date Prepared: 07/12/2010 1434

Analysis Batch: 680-174139
Prep Batch: 680-173854
Units: ug/L

Instrument ID: SGM
Lab File ID: mg13010.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	0.200	0.294	147	37 - 179	
4,4'-DDE	0.200	0.131	65	33 - 142	
4,4'-DDT	0.200	0.184	92	27 - 141	
Aldrin	0.100	0.0333	33	32 - 114	J
alpha-BHC	0.100	0.0629	63	29 - 112	
beta-BHC	0.100	0.158	158	15 - 204	
delta-BHC	0.100	0.0621	62	25 - 123	
Dieldrin	0.200	0.150	75	45 - 137	
Endosulfan I	0.100	0.0741	74	31 - 134	
Endosulfan II	0.200	0.206	103	24 - 144	
Endosulfan sulfate	0.200	0.203	101	44 - 128	
Endrin	0.200	0.165	83	38 - 144	M
Endrin aldehyde	0.200	0.256	128	37 - 135	
gamma-BHC (Lindane)	0.100	0.0676	68	31 - 118	
Heptachlor	0.100	0.0500	50	30 - 133	
Heptachlor epoxide	0.100	0.0747	75	34 - 126	
Methoxychlor	0.200	0.178	89	10 - 243	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	55	14 - 115
Tetrachloro-m-xylene	64	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	49	14 - 115
Tetrachloro-m-xylene	47	35 - 120

Lab Control Sample - Batch: 680-173854

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: LCS 680-173854/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1756
Date Prepared: 07/12/2010 1434

Analysis Batch: 680-174139
Prep Batch: 680-173854
Units: ug/L

Instrument ID: SGM
Lab File ID: mg13011.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
PCB-1016	10.0	11.3	113	57 - 124	
PCB-1260	10.0	11.2	112	58 - 124	

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	54	14 - 115
Tetrachloro-m-xylene	60	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	51	14 - 115
Tetrachloro-m-xylene	44	35 - 120

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	39	42	14 - 115
Tetrachloro-m-xylene	63	64	35 - 120

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	30	32	14 - 115
Tetrachloro-m-xylene	44	45	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173854

Method: 8081B/8082A
Preparation: 3520C

MS Lab Sample ID:	680-59057-4	Analysis Batch: 680-174139	Instrument ID: SGM
Client Matrix:	Water	Prep Batch: 680-173854	Lab File ID: mg13035.d
Dilution:	1.0		Initial Weight/Volume: 500 mL
Date Analyzed:	07/14/2010 0807		Final Weight/Volume: 5 mL
Date Prepared:	07/12/2010 1434		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-59057-4	Analysis Batch: 680-174139	Instrument ID: SGM
Client Matrix:	Water	Prep Batch: 680-173854	Lab File ID: mg13036.d
Dilution:	1.0		Initial Weight/Volume: 500 mL
Date Analyzed:	07/14/2010 0826		Final Weight/Volume: 5 mL
Date Prepared:	07/12/2010 1434		Injection Volume: 2 uL
			Column ID: PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	116	82	37 - 179	35	40	H	H J
4,4'-DDE	78	56	33 - 142	32	40	H	H J
4,4'-DDT	121	76	27 - 141	46	40	H	H J
Aldrin	28	50	32 - 114	55	40	H J	H J
alpha-BHC	66	56	29 - 112	16	40	H J	H J
beta-BHC	147	193	15 - 204	27	40	H J	H
delta-BHC	96	77	25 - 123	23	40	H J	H J
Dieldrin	70	67	45 - 137	4	40	H J	H J
Endosulfan I	62	69	31 - 134	10	40	H J	H J
Endosulfan II	95	61	24 - 144	43	40	H	H J
Endosulfan sulfate	96	105	44 - 128	9	40	H	H
Endrin	111	73	38 - 144	41	40	H	H J
Endrin aldehyde	145	76	37 - 135	63	40	H J	H J
gamma-BHC (Lindane)	116	69	31 - 118	51	40	H	H J
Heptachlor	83	107	30 - 133	25	40	H	H
Heptachlor epoxide	74	0	34 - 126	NC	40	H J	U H J
Methoxychlor	73	78	10 - 243	6	40	H J	H J

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	45	42	14 - 115
Tetrachloro-m-xylene	46	61	35 - 120

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	41	33	14 - 115
Tetrachloro-m-xylene	32 J	47	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173431

Method: 8141B
Preparation: 3520C

Lab Sample ID: MB 680-173431/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/09/2010 0305
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173885
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGO
Lab File ID: og08036.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Diazinon	0.50	U	0.50	1.0
Dimethoate	1.0	U	1.0	2.0
Disulfoton	1.0	U	1.0	2.0
Famphur	1.0	U	1.0	2.0
Methyl parathion	0.50	U	0.50	0.50
Ethyl Parathion	0.50	U	0.50	1.0
Phorate	0.50	U	0.50	1.0
Ronnel	0.50	U	0.50	1.0
Sulfotepp	0.50	U	0.50	0.50
Thionazin	0.50	U	0.50	1.0

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	95	26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Lab Control Sample - Batch: 680-173431

Method: 8141B
Preparation: 3520C

Lab Sample ID: LCS 680-173431/28-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/09/2010 0330
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173885
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGO
Lab File ID: og08037.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Diazinon	8.00	7.33	92	53 - 138	
Methyl parathion	8.00	7.93	99	31 - 130	
Ronnel	8.00	7.26	91	46 - 142	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	97	26 - 134

Lab Control Sample - Batch: 680-173431

Method: 8141B
Preparation: 3520C

Lab Sample ID: LCS 680-173431/31-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/09/2010 0354
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173885
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGO
Lab File ID: og08038.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ethyl Parathion	8.00	7.67	96	45 - 132	
Thionazin	8.00	6.05	76	37 - 134	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	97	26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173431

Method: 8141B
Preparation: 3520C

MS Lab Sample ID:	680-59057-4	Analysis Batch: 680-173885	Instrument ID: SGO
Client Matrix:	Water	Prep Batch: 680-173431	Lab File ID: og08048.d
Dilution:	1.0		Initial Weight/Volume: 500 mL
Date Analyzed:	07/09/2010 0802		Final Weight/Volume: 5 mL
Date Prepared:	07/07/2010 1343		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-59057-4	Analysis Batch: 680-173885	Instrument ID: SGO
Client Matrix:	Water	Prep Batch: 680-173431	Lab File ID: og08049.d
Dilution:	1.0		Initial Weight/Volume: 500 mL
Date Analyzed:	07/09/2010 0827		Final Weight/Volume: 5 mL
Date Prepared:	07/07/2010 1343		Injection Volume: 2 uL
			Column ID: PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Diazinon	89	88	53 - 138	1	40		
Methyl parathion	100	96	31 - 130	4	40		
Ronnel	75	84	46 - 142	11	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Triphenylphosphate	91	99	26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173431

Method: 8141B
Preparation: 3520C

MS Lab Sample ID:	680-59057-4	Analysis Batch: 680-173885	Instrument ID: SGO
Client Matrix:	Water	Prep Batch: 680-173431	Lab File ID: og08050.d
Dilution:	1.0		Initial Weight/Volume: 500 mL
Date Analyzed:	07/09/2010 0852		Final Weight/Volume: 5 mL
Date Prepared:	07/07/2010 1343		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-59057-4	Analysis Batch: 680-173885	Instrument ID: SGO
Client Matrix:	Water	Prep Batch: 680-173431	Lab File ID: og08051.d
Dilution:	1.0		Initial Weight/Volume: 500 mL
Date Analyzed:	07/09/2010 0916		Final Weight/Volume: 5 mL
Date Prepared:	07/07/2010 1343		Injection Volume: 2 uL
			Column ID: PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ethyl Parathion	94	89	45 - 132	5	40		
Thionazin	75	74	37 - 134	1	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Triphenylphosphate	94	92	26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-174022

Method: 6020A
Preparation: 3030C

Lab Sample ID:	MB 680-174022/1-A	Analysis Batch:	680-174604	Instrument ID:	ICPMSA
Client Matrix:	Water	Prep Batch:	680-174022	Lab File ID:	174022.chr
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0153			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result	Qual	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	0.40	U	0.40	1.0
Barium	0.15	U	0.15	1.0
Beryllium	0.070	U	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.16	U	0.16	1.0
Cobalt	0.078	U	0.078	0.20
Copper	0.21	U	0.21	1.0
Lead	0.080	U	0.080	0.30
Nickel	0.40	U	0.40	1.0
Selenium	0.21	U	0.21	0.50
Silver	0.10	U	0.10	0.20
Thallium	0.10	U	0.10	0.20
Tin	0.40	U	0.40	1.0
Vanadium	1.4	U	1.4	5.0
Zinc	2.6	U	2.6	10

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Lab Control Sample - Batch: 680-174022

Method: 6020A
Preparation: 3030C

Lab Sample ID: LCS 680-174022/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/18/2010 0200
Date Prepared: 07/13/2010 1429

Analysis Batch: 680-174604
Prep Batch: 680-174022
Units: ug/L

Instrument ID: ICPMSA
Lab File ID: 174022.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	10.0	11.3	113	75 - 125	
Arsenic	20.0	21.1	106	75 - 125	
Barium	20.0	20.8	104	75 - 125	
Beryllium	10.0	10.8	108	75 - 125	
Cadmium	10.0	10.9	109	75 - 125	
Chromium	20.0	20.0	100	75 - 125	
Cobalt	10.0	9.18	92	75 - 125	
Copper	20.0	21.4	107	75 - 125	
Lead	10.0	10.2	102	75 - 125	
Nickel	20.0	20.9	105	75 - 125	
Selenium	20.0	21.7	108	75 - 125	
Silver	10.0	10.4	104	75 - 125	
Thallium	8.00	8.12	101	75 - 125	
Tin	20.0	20.7	103	75 - 125	
Vanadium	20.0	19.8	99	75 - 125	
Zinc	20.0	21.3	106	75 - 125	

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-174022

Method: 6020A
Preparation: 3030C

MS Lab Sample ID:	680-59057-4	Analysis Batch:	680-174604	Instrument ID:	ICPMSA
Client Matrix:	Water	Prep Batch:	680-174022	Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0252			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

MSD Lab Sample ID:	680-59057-4	Analysis Batch:	680-174604	Instrument ID:	ICPMSA
Client Matrix:	Water	Prep Batch:	680-174022	Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0259			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	115	107	75 - 125	7	20	H	H
Arsenic	104	95	75 - 125	9	20	H	H
Barium	103	97	75 - 125	4	20	H	H
Beryllium	112	103	75 - 125	9	20	H	H
Cadmium	109	101	75 - 125	8	20	H	H
Chromium	98	92	75 - 125	6	20	H	H
Cobalt	89	84	75 - 125	5	20	H	H
Copper	104	98	75 - 125	6	20	H	H
Lead	104	98	75 - 125	6	20	H	H
Nickel	103	97	75 - 125	6	20	H	H
Selenium	111	97	75 - 125	13	20	H	H
Silver	104	98	75 - 125	5	20	H	H
Thallium	104	98	75 - 125	5	20	H	H
Tin	104	99	75 - 125	5	20	H	H
Vanadium	96	91	75 - 125	5	20	H	H
Zinc	112	102	75 - 125	8	20	H	H

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173437

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 680-173437/23-A	Analysis Batch:	680-173649	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-173437	Lab File ID:	b070810.chr
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1559			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result	Qual	MDL	RL
Mercury	0.091	U	0.091	0.20

Lab Control Sample - Batch: 680-173437

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 680-173437/24-A	Analysis Batch:	680-173649	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-173437	Lab File ID:	b070810.chr
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1602			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.48	99	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173437

Method: 7470A
Preparation: 7470A

MS Lab Sample ID:	680-59057-4	Analysis Batch:	680-173649	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-173437	Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1649			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

MSD Lab Sample ID:	680-59057-4	Analysis Batch:	680-173649	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-173437	Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1653			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	111	105	80 - 120	5	20		

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173209

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 680-173209/2
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 07/01/2010 1213
Date Prepared: N/A

Analysis Batch: 680-173209
Prep Batch: N/A
Units: mg/L

Instrument ID: ICG
Lab File ID: 0005.d
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Nitrate as NO3	0.36	U	0.36	1.1
Nitrite as NO2	0.28	U	0.28	0.85

Lab Control Sample - Batch: 680-173209

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 680-173209/3
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 07/01/2010 1226
Date Prepared: N/A

Analysis Batch: 680-173209
Prep Batch: N/A
Units: mg/L

Instrument ID: ICG
Lab File ID: 0006.d
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as NO3	11.0	10.9	98	90 - 110	
Nitrite as NO2	8.25	8.23	100	90 - 110	

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173209

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	680-59057-4	Analysis Batch:	680-173209	Instrument ID:	ICG
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	0017.d
Dilution:	5.0			Initial Weight/Volume:	1.0 mL
Date Analyzed:	07/01/2010 1608			Final Weight/Volume:	5 mL
Date Prepared:	N/A				1 uL

MSD Lab Sample ID:	680-59057-4	Analysis Batch:	680-173209	Instrument ID:	ICG
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	0018.d
Dilution:	5.0			Initial Weight/Volume:	1.0 mL
Date Analyzed:	07/01/2010 1621			Final Weight/Volume:	5 mL
Date Prepared:	N/A				1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate as NO3	105	100	90 - 110	5	30		
Nitrite as NO2	104	99	90 - 110	5	30		

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173507

Method: 335.4
Preparation: Distill/CN

Lab Sample ID:	MB 680-173507/1-A	Analysis Batch:	680-173665	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-173507	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/09/2010 0958			Final Weight/Volume:	50 mL
Date Prepared:	07/08/2010 0624				

Analyte	Result	Qual	MDL	RL
Cyanide, Total	0.0025	U	0.0025	0.010

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-173507

Method: 335.4
Preparation: Distill/CN

LCS Lab Sample ID:	LCS 680-173507/2-A	Analysis Batch:	680-173665	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-173507	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/09/2010 0958			Final Weight/Volume:	50 mL
Date Prepared:	07/08/2010 0624				

LCSD Lab Sample ID:	LCSD 680-173507/3-A	Analysis Batch:	680-173665	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-173507	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/09/2010 0958			Final Weight/Volume:	50 mL
Date Prepared:	07/08/2010 0624				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Cyanide, Total	100	92	90 - 110	8	20		

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173507

Method: 335.4
Preparation: Distill/CN

MS Lab Sample ID:	680-59057-4	Analysis Batch:	680-173665	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-173507	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/09/2010 0958			Final Weight/Volume:	50 mL
Date Prepared:	07/08/2010 0624				

MSD Lab Sample ID:	680-59057-4	Analysis Batch:	680-173665	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-173507	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/09/2010 0958			Final Weight/Volume:	50 mL
Date Prepared:	07/08/2010 0624				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Total	99	97	90 - 110	2	20		

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Method Blank - Batch: 680-173401

Method: 9034
Preparation: 9030B

Lab Sample ID:	MB 680-173401/1-A	Analysis Batch:	680-173427	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	680-173401	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	6 mL
Date Analyzed:	07/07/2010 1026			Final Weight/Volume:	6 mL
Date Prepared:	07/07/2010 0741				

Analyte	Result	Qual	RL	RL
Sulfide	10	U	10	10

Lab Control Sample - Batch: 680-173401

Method: 9034
Preparation: 9030B

Lab Sample ID:	LCS 680-173401/2-A	Analysis Batch:	680-173427	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	680-173401	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	6 mL
Date Analyzed:	07/07/2010 1026			Final Weight/Volume:	6 mL
Date Prepared:	07/07/2010 0741				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfide	394	371	94	50 - 150	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-173401

Method: 9034
Preparation: 9030B

MS Lab Sample ID:	680-59057-4	Analysis Batch:	680-173427	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	680-173401	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	6 mL
Date Analyzed:	07/07/2010 1026			Final Weight/Volume:	6 mL
Date Prepared:	07/07/2010 0741				

MSD Lab Sample ID:	680-59057-4	Analysis Batch:	680-173427	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	680-173401	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	6 mL
Date Analyzed:	07/07/2010 1026			Final Weight/Volume:	6 mL
Date Prepared:	07/07/2010 0741				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Sulfide	94	94	50 - 150	0	50		

Serial Number 030235

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: Fort Bragg Longtract	PROJECT NO.: 0008	PROJECT LOCATION (STATE): NC
TAL (LAB) PROJECT MANAGER: Kathy Smith	P.O. NUMBER: W912HN-10-A	CONTRACT NO.:
CLIENT (SITE) PM: Kevin Haborak	CLIENT PHONE: 912652-6087	CLIENT FAX:
CLIENT NAME: USACE	CLIENT E-MAIL:	
CLIENT ADDRESS: 100 W. Oglethorpe Avenue, 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, ...)	8260B VOC (ICE)	8081A (ICE)	8041 (ICE)	8270C SVOC (ICE)	Metals (HNO3)	Metals (HNO3)	Hg (ICE)	Cyanide (NaOH)	Sulfide (NaOH, Zn Ac)	REMARKS
30 June 2010	1040	GW - LSMW-7-6-10	GW					3	2	2	2	1	1	1	1	2	
30 June 2010	1215	GW - LSMW-8-6-10						3	0	0	0	1	1	1	1	2	1L bottles not filled
30 June 2010	1435	GW - LSMW-6-6-10						3	2	2	2	1	1	1	1	2	
30 June 2010	1445	GW - LSMW-13-6-10						6	4	4	4	2	2	2	2	4	MS/MSD Taken
30 June 2010	1200	GW - LSMW-Dup#6-10						3	2	2	2	1	1	1	1	2	
30 June 2010	1500	GW - LSMW-Dup2-6-10						3	2	2	2	1	1	1	1	2	
30 June 2010		Trip Blank						2									

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	30 June 2010	1310						
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]	7/1/10	1310	YES ◯ NO ◯		680-59057	0.6/0.7°C/0.2°C/0.8/0.4

Login Sample Receipt Check List

Client: U.S. Army Corps of Engineers

Job Number: 680-59057-1

Login Number: 59057

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is 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?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	Label IDs do not exactly match COC
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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	

ANALYTICAL REPORT

Job Number: 680-59085-1

Job Description: Ft. Bragg Longstreet Landfill

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

Attention: Mr. Kevin Haborak

Approved for release.
Kathryn Smith
Project Manager I
7/28/2010 2:18 PM

Kathryn Smith
Project Manager I
kathye.smith@testamericainc.com
07/28/2010

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

Job Narrative
680-59085-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

GC/MS Semi VOA
No analytical or quality issues were noted.

GC Semi VOA
Method(s) 8081A_8082, 8081B/8082A: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits: W27C (680-59305-4). These results have been reported and qualified.

Method(s) 8081B/8082A: Surrogate recovery for the following sample(s) was outside control limits: SLMW-10-7-10 (680-59085-4), SLMW-9-7-10 (680-59085-3). Re-extraction and/or re-analysis was performed with concurring results. Both sets of data have been reported.

No other analytical or quality issues were noted.

Metals
Method(s) 6020A: Reanalysis of the following sample(s) was performed outside of the analytical holding time: GW-LSMW-13-6-10 (680-59057-4), SLMW-10-7-10 (680-59085-4), SLMW-11R-7-10 (680-59085-1), SLMW-9-7-10 (680-59085-3), SLMW-BLK-6-10 (680-59085-5). Samples were redigested outside of holding time due to the lab spike recovering outside of control limits in the original batch.

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

METHOD SUMMARY

Client: U.S. Army Corps of Engineers | Job Number: 680-59085-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL SAV	SW846 8270D	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081B/8082A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	TAL SAV	SW846 8141B	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Metals (ICP/MS)	TAL SAV	SW846 6020A	
Preparation, Extractable Metals	TAL SAV		SM 3030C
Mercury (CVAA)	TAL SAV	SW846 7470A	
Preparation, Mercury	TAL SAV		SW846 7470A
Anions, Ion Chromatography	TAL SAV	MCAWW 300.0	
Cyanide, Total	TAL SAV	MCAWW 335.4	
Distillation, Cyanide	TAL SAV		Distill/CN
Sulfide, Acid Soluble and Insoluble (Titrimetric)	TAL SAV	SW846 9034	
Sulfide, Distillation (Acid Soluble and Insoluble)	TAL SAV		SW846 9030B

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

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

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

METHOD / ANALYST SUMMARY

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8260B	Cowart, Judson	WJC
SW846 8270D	Haynes, Carion	CRH
SW846 8081B/8082A	Eason, William T	WTE
SW846 8081B/8082A	Meincke, Griffin	GM
SW846 8141B	Hao, Lili	LH
SW846 6020A	Robertson, Bryn	BR
SW846 7470A	Eaton, Cliff	CE
MCAWW 300.0	Brazell, Connie	CB
MCAWW 335.4	McDonald, Debbie	DAM
SW846 9034	McDonald, Debbie	DAM

SAMPLE SUMMARY

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-59085-1	SLMW-11R-7-10	Water	07/01/2010 0835	07/02/2010 0911
680-59085-2TB	Trip Blank	Water	07/01/2010 0000	07/02/2010 0911
680-59085-3	SLMW-9-7-10	Water	07/01/2010 1125	07/02/2010 0911
680-59085-4	SLMW-10-7-10	Water	07/01/2010 1315	07/02/2010 0911
680-59085-5FB	SLMW-BLK-6-10	Water	07/01/2010 1410	07/02/2010 0911

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-11R-7-10**

Lab Sample ID: 680-59085-1

Client Matrix: Water

Date Sampled: 07/01/2010 0835

Date Received: 07/02/2010 0911

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173497	Instrument ID:	MSA2
Preparation:	5030B		Lab File ID:	a135.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1939		Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1939			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	0.81	J	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	2.9		0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.13	U	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	1.2		0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	1.4		0.13	1.0
Trichlorofluoromethane	0.54	J	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U Q	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-11R-7-10**

Lab Sample ID: 680-59085-1

Client Matrix: Water

Date Sampled: 07/01/2010 0835

Date Received: 07/02/2010 0911

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173497	Instrument ID:	MSA2
Preparation:	5030B		Lab File ID:	a135.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1939		Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1939			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	1.6		0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.37	J	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	103		75 - 120
4-Bromofluorobenzene	102		75 - 120
Dibromofluoromethane	110		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 680-59085-2TB

Client Matrix: Water

Date Sampled: 07/01/2010 0000

Date Received: 07/02/2010 0911

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173480	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0607.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1438		Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1438			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	0.25	U	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.13	U	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 680-59085-2TB

Client Matrix: Water

Date Sampled: 07/01/2010 0000

Date Received: 07/02/2010 0911

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173480	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0607.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1438		Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1438			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	102		75 - 120
4-Bromofluorobenzene	99		75 - 120
Dibromofluoromethane	110		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-9-7-10**

Lab Sample ID: 680-59085-3

Client Matrix: Water

Date Sampled: 07/01/2010 1125

Date Received: 07/02/2010 0911

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173497	Instrument ID:	MSA2
Preparation:	5030B		Lab File ID:	a136.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 2001		Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 2001			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	1.8		0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	1.4		0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	4.6		0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.37	J	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.68	J	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.68	J	0.13	1.0
Trichlorofluoromethane	0.31	J	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U Q	0.28	2.0
Vinyl chloride	2.1		0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-9-7-10**

Lab Sample ID: 680-59085-3

Client Matrix: Water

Date Sampled: 07/01/2010 1125

Date Received: 07/02/2010 0911

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173497	Instrument ID:	MSA2
Preparation:	5030B		Lab File ID:	a136.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 2001		Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 2001			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	2.3		0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.97	J	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	103		75 - 120
4-Bromofluorobenzene	103		75 - 120
Dibromofluoromethane	109		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-10-7-10**

Lab Sample ID: 680-59085-4

Client Matrix: Water

Date Sampled: 07/01/2010 1315

Date Received: 07/02/2010 0911

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173497	Instrument ID:	MSA2
Preparation:	5030B		Lab File ID:	a137.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 2023		Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 2023			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	0.94	J	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.49	J	0.25	1.0
1,2-Dichloroethane	0.20	J	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	1.7		0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.52	J	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.84	J Q	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-10-7-10**

Lab Sample ID: 680-59085-4

Client Matrix: Water

Date Sampled: 07/01/2010 1315

Date Received: 07/02/2010 0911

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173497	Instrument ID:	MSA2
Preparation:	5030B		Lab File ID:	a137.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 2023		Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 2023			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	5.8		0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	5.2		0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	105		75 - 120
4-Bromofluorobenzene	103		75 - 120
Dibromofluoromethane	109		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-BLK-6-10**

Lab Sample ID: 680-59085-5FB

Client Matrix: Water

Date Sampled: 07/01/2010 1410

Date Received: 07/02/2010 0911

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173480	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0623.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1826		Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1826			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetonitrile	10	U	10	40
Acetone	6.9	J	5.0	25
Benzene	0.25	U	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.13	U	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.2	J	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-BLK-6-10**

Lab Sample ID: 680-59085-5FB

Client Matrix: Water

Date Sampled: 07/01/2010 1410

Date Received: 07/02/2010 0911

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-173480	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0623.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1826		Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1826			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Toluene-d8 (Surr)	102		75 - 120
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	110		75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-11R-7-10**

Lab Sample ID: 680-59085-1

Client Matrix: Water

Date Sampled: 07/01/2010 0835

Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8194.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1544			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.72	U	0.72	9.5
Acenaphthylene	0.81	U	0.81	9.5
Acetophenone	0.54	U	0.54	9.5
2-Acetylaminofluorene	1.5	U	1.5	9.5
4-Aminobiphenyl	1.1	U	1.1	9.5
Anthracene	0.66	U	0.66	9.5
Benzo[a]anthracene	0.52	U	0.52	9.5
Benzo[a]pyrene	0.68	U	0.68	9.5
Benzo[b]fluoranthene	2.5	U	2.5	9.5
Benzo[g,h,i]perylene	0.83	U	0.83	9.5
Benzo[k]fluoranthene	1.1	U	1.1	9.5
Benzyl alcohol	1.0	U	1.0	9.5
Bis(2-chloroethoxy)methane	0.90	U	0.90	9.5
Bis(2-chloroethyl)ether	1.0	U	1.0	9.5
bis(chloroisopropyl) ether	0.74	U	0.74	9.5
Bis(2-ethylhexyl) phthalate	1.5	U	1.5	9.5
4-Bromophenyl phenyl ether	0.73	U	0.73	9.5
Butyl benzyl phthalate	1.1	U	1.1	9.5
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.95	U	0.95	9.5
2-Chloronaphthalene	0.76	U	0.76	9.5
2-Chlorophenol	0.83	U	0.83	9.5
4-Chlorophenyl phenyl ether	0.80	U	0.80	9.5
Chrysene	0.49	U	0.49	9.5
Diallate	0.74	U	0.74	9.5
Dibenz(a,h)anthracene	0.95	U	0.95	9.5
Dibenzofuran	0.75	U	0.75	9.5
3,3'-Dichlorobenzidine	29	U	29	57
2,4-Dichlorophenol	1.0	U	1.0	9.5
2,6-Dichlorophenol	0.70	U	0.70	9.5
Diethyl phthalate	0.84	U	0.84	9.5
Dimethoate	0.71	U	0.71	9.5
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.5
3,3'-Dimethylbenzidine	9.5	U	9.5	19
2,4-Dimethylphenol	3.8	U	3.8	9.5
Dimethyl phthalate	0.94	U	0.94	9.5
Di-n-butyl phthalate	0.79	U	0.79	9.5
1,3-Dinitrobenzene	0.57	U	0.57	9.5
4,6-Dinitro-2-methylphenol	9.5	U	9.5	48
2,4-Dinitrophenol	9.5	U	9.5	48
2,4-Dinitrotoluene	1.1	U	1.1	9.5
2,6-Dinitrotoluene	1.0	U	1.0	9.5
Di-n-octyl phthalate	1.3	U	1.3	9.5
Dinoseb	4.8	U	4.8	9.5
Disulfoton	0.75	U	0.75	9.5
Ethyl methanesulfonate	0.91	U	0.91	9.5

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-11R-7-10**

Lab Sample ID: 680-59085-1

Client Matrix: Water

Date Sampled: 07/01/2010 0835

Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8194.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1544			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.2	U	1.2	9.5
Famphur	1.0	U	1.0	9.5
Fluoranthene	0.70	U	0.70	9.5
Fluorene	0.91	U	0.91	9.5
Hexachlorobenzene	0.75	U	0.75	9.5
Hexachlorobutadiene	0.59	U	0.59	9.5
Hexachlorocyclopentadiene	2.4	U	2.4	9.5
Hexachloroethane	0.72	U	0.72	9.5
Hexachloropropene	1.3	U	1.3	9.5
Indeno[1,2,3-cd]pyrene	0.95	U	0.95	9.5
Isophorone	0.86	U	0.86	9.5
Isosafrole	0.48	U	0.48	9.5
Methapyrilene	2.6	U	2.6	1900
3-Methylcholanthrene	1.3	U	1.3	9.5
Methyl methanesulfonate	0.57	U	0.57	9.5
2-Methylnaphthalene	0.74	U	0.74	9.5
Methyl parathion	0.84	U	0.84	9.5
2-Methylphenol	0.85	U	0.85	9.5
3 & 4 Methylphenol	1.2	U	1.2	9.5
Naphthalene	0.67	U	0.67	9.5
1,4-Naphthoquinone	0.59	U	0.59	9.5
1-Naphthylamine	1.0	U	1.0	9.5
2-Naphthylamine	1.4	U	1.4	9.5
2-Nitroaniline	1.2	U	1.2	48
3-Nitroaniline	4.8	U	4.8	48
4-Nitroaniline	4.8	U	4.8	48
Nitrobenzene	0.70	U	0.70	9.5
2-Nitrophenol	0.72	U	0.72	9.5
4-Nitrophenol	1.8	U	1.8	48
N-Nitro-o-toluidine	1.4	U	1.4	9.5
N-Nitrosodiethylamine	0.89	U	0.89	9.5
N-Nitrosodimethylamine	2.7	U	2.7	9.5
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.5
N-Nitrosodi-n-propylamine	0.69	U	0.69	9.5
N-Nitrosodiphenylamine	0.88	U	0.88	9.5
N-Nitrosomethylethylamine	3.1	U	3.1	9.5
N-Nitrosopiperidine	0.84	U	0.84	9.5
N-Nitrosopyrrolidine	0.95	U	0.95	9.5
o,o',o"-Triethylphosphorothioate	0.95	U	0.95	9.5
p-Dimethylamino azobenzene	0.75	U	0.75	9.5
Pentachlorobenzene	0.50	U	0.50	9.5
Pentachloronitrobenzene	0.74	U	0.74	9.5
Pentachlorophenol	1.9	U	1.9	48
Phenacetin	1.3	U	1.3	9.5
Phenanthrene	0.73	U	0.73	9.5
Phenol	0.79	U	0.79	9.5

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-11R-7-10**

Lab Sample ID: 680-59085-1

Client Matrix: Water

Date Sampled: 07/01/2010 0835

Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8194.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1544			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phorate	0.83	U	0.83	9.5
p-Phenylene diamine	9.5	U	9.5	1900
Pronamide	0.85	U	0.85	9.5
Pyrene	0.60	U	0.60	9.5
Safrole, Total	0.76	U	0.76	9.5
Sulfotepp	0.50	U	0.50	9.5
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.5
2,3,4,6-Tetrachlorophenol	0.69	U	0.69	9.5
Thionazin	0.87	U	0.87	9.5
2-Toluidine	1.3	U	1.3	9.5
2,4,5-Trichlorophenol	1.1	U	1.1	9.5
2,4,6-Trichlorophenol	0.81	U	0.81	9.5
1,3,5-Trinitrobenzene	1.9	U	1.9	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	72		50 - 113
2-Fluorophenol	66		36 - 110
Nitrobenzene-d5	78		45 - 112
Phenol-d5	72		38 - 116
Terphenyl-d14	88		10 - 121
2,4,6-Tribromophenol	77		40 - 139

Client: U.S. Army Corps of Engineers | Job Number: 680-59085-1

Client Sample ID: **SLMW-9-7-10**

Lab Sample ID: 680-59085-3 | Date Sampled: 07/01/2010 1125
Client Matrix: Water | Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8195.d
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	07/13/2010 1607			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.74	U	0.74	9.7
Acenaphthylene	0.83	U	0.83	9.7
Acetophenone	0.55	U	0.55	9.7
2-Acetylaminofluorene	1.6	U	1.6	9.7
4-Aminobiphenyl	1.2	U	1.2	9.7
Anthracene	0.67	U	0.67	9.7
Benzo[a]anthracene	0.53	U	0.53	9.7
Benzo[a]pyrene	0.69	U	0.69	9.7
Benzo[b]fluoranthene	2.5	U	2.5	9.7
Benzo[g,h,i]perylene	0.84	U	0.84	9.7
Benzo[k]fluoranthene	1.2	U	1.2	9.7
Benzyl alcohol	1.1	U	1.1	9.7
Bis(2-chloroethoxy)methane	0.91	U	0.91	9.7
Bis(2-chloroethyl)ether	1.1	U	1.1	9.7
bis(chloroisopropyl) ether	0.76	U	0.76	9.7
Bis(2-ethylhexyl) phthalate	1.6	U	1.6	9.7
4-Bromophenyl phenyl ether	0.75	U	0.75	9.7
Butyl benzyl phthalate	1.2	U	1.2	9.7
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.97	U	0.97	9.7
2-Chloronaphthalene	0.78	U	0.78	9.7
2-Chlorophenol	0.84	U	0.84	9.7
4-Chlorophenyl phenyl ether	0.82	U	0.82	9.7
Chrysene	0.50	U	0.50	9.7
Diallate	0.76	U	0.76	9.7
Dibenz(a,h)anthracene	0.97	U	0.97	9.7
Dibenzofuran	0.77	U	0.77	9.7
3,3'-Dichlorobenzidine	29	U	29	58
2,4-Dichlorophenol	1.1	U	1.1	9.7
2,6-Dichlorophenol	0.71	U	0.71	9.7
Diethyl phthalate	0.85	U	0.85	9.7
Dimethoate	0.73	U	0.73	9.7
7,12-Dimethylbenz(a)anthracene	1.2	U	1.2	9.7
3,3'-Dimethylbenzidine	9.7	U	9.7	19
2,4-Dimethylphenol	3.9	U	3.9	9.7
Dimethyl phthalate	0.96	U	0.96	9.7
Di-n-butyl phthalate	0.81	U	0.81	9.7
1,3-Dinitrobenzene	0.58	U	0.58	9.7
4,6-Dinitro-2-methylphenol	9.7	U	9.7	49
2,4-Dinitrophenol	9.7	U	9.7	49
2,4-Dinitrotoluene	1.2	U	1.2	9.7
2,6-Dinitrotoluene	1.1	U	1.1	9.7
Di-n-octyl phthalate	1.4	U	1.4	9.7
Dinoseb	4.9	U	4.9	9.7
Disulfoton	0.77	U	0.77	9.7
Ethyl methanesulfonate	0.93	U	0.93	9.7

Client: U.S. Army Corps of Engineers | Job Number: 680-59085-1

Client Sample ID: **SLMW-9-7-10**

Lab Sample ID: 680-59085-3 | Date Sampled: 07/01/2010 1125
Client Matrix: Water | Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8195.d
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	07/13/2010 1607			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.3	U	1.3	9.7
Famphur	1.1	U	1.1	9.7
Fluoranthene	0.72	U	0.72	9.7
Fluorene	0.93	U	0.93	9.7
Hexachlorobenzene	0.77	U	0.77	9.7
Hexachlorobutadiene	0.60	U	0.60	9.7
Hexachlorocyclopentadiene	2.4	U	2.4	9.7
Hexachloroethane	0.74	U	0.74	9.7
Hexachloropropene	1.4	U	1.4	9.7
Indeno[1,2,3-cd]pyrene	0.97	U	0.97	9.7
Isophorone	0.87	U	0.87	9.7
Isosafrole	0.49	U	0.49	9.7
Methapyrilene	2.6	U	2.6	1900
3-Methylcholanthrene	1.4	U	1.4	9.7
Methyl methanesulfonate	0.58	U	0.58	9.7
2-Methylnaphthalene	0.76	U	0.76	9.7
Methyl parathion	0.85	U	0.85	9.7
2-Methylphenol	0.86	U	0.86	9.7
3 & 4 Methylphenol	1.3	U	1.3	9.7
Naphthalene	0.68	U	0.68	9.7
1,4-Naphthoquinone	0.60	U	0.60	9.7
1-Naphthylamine	1.1	U	1.1	9.7
2-Naphthylamine	1.5	U	1.5	9.7
2-Nitroaniline	1.3	U	1.3	49
3-Nitroaniline	4.9	U	4.9	49
4-Nitroaniline	4.9	U	4.9	49
Nitrobenzene	0.71	U	0.71	9.7
2-Nitrophenol	0.74	U	0.74	9.7
4-Nitrophenol	1.8	U	1.8	49
N-Nitro-o-toluidine	1.5	U	1.5	9.7
N-Nitrosodiethylamine	0.90	U	0.90	9.7
N-Nitrosodimethylamine	2.7	U	2.7	9.7
N-Nitrosodi-n-butylamine	0.93	U	0.93	9.7
N-Nitrosodi-n-propylamine	0.70	U	0.70	9.7
N-Nitrosodiphenylamine	0.89	U	0.89	9.7
N-Nitrosomethylethylamine	3.2	U	3.2	9.7
N-Nitrosopiperidine	0.85	U	0.85	9.7
N-Nitrosopyrrolidine	0.97	U	0.97	9.7
o,o',o"-Triethylphosphorothioate	0.97	U	0.97	9.7
p-Dimethylamino azobenzene	0.77	U	0.77	9.7
Pentachlorobenzene	0.50	U	0.50	9.7
Pentachloronitrobenzene	0.76	U	0.76	9.7
Pentachlorophenol	1.9	U	1.9	49
Phenacetin	1.4	U	1.4	9.7
Phenanthrene	0.75	U	0.75	9.7
Phenol	0.81	U	0.81	9.7

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-9-7-10**

Lab Sample ID: 680-59085-3

Client Matrix: Water

Date Sampled: 07/01/2010 1125

Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8195.d
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	07/13/2010 1607			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phorate	0.84	U	0.84	9.7
p-Phenylene diamine	9.7	U	9.7	1900
Pronamide	0.86	U	0.86	9.7
Pyrene	0.61	U	0.61	9.7
Safrole, Total	0.78	U	0.78	9.7
Sulfotepp	0.51	U	0.51	9.7
1,2,4,5-Tetrachlorobenzene	0.74	U	0.74	9.7
2,3,4,6-Tetrachlorophenol	0.70	U	0.70	9.7
Thionazin	0.88	U	0.88	9.7
2-Toluidine	1.4	U	1.4	9.7
2,4,5-Trichlorophenol	1.2	U	1.2	9.7
2,4,6-Trichlorophenol	0.83	U	0.83	9.7
1,3,5-Trinitrobenzene	1.9	U	1.9	9.7

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	71		50 - 113
2-Fluorophenol	61		36 - 110
Nitrobenzene-d5	72		45 - 112
Phenol-d5	67		38 - 116
Terphenyl-d14	67		10 - 121
2,4,6-Tribromophenol	89		40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-10-7-10**

Lab Sample ID: 680-59085-4

Client Matrix: Water

Date Sampled: 07/01/2010 1315

Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8196.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1631			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.72	U	0.72	9.5
Acenaphthylene	0.81	U	0.81	9.5
Acetophenone	0.54	U	0.54	9.5
2-Acetylaminofluorene	1.5	U	1.5	9.5
4-Aminobiphenyl	1.1	U	1.1	9.5
Anthracene	0.66	U	0.66	9.5
Benzo[a]anthracene	0.52	U	0.52	9.5
Benzo[a]pyrene	0.68	U	0.68	9.5
Benzo[b]fluoranthene	2.5	U	2.5	9.5
Benzo[g,h,i]perylene	0.83	U	0.83	9.5
Benzo[k]fluoranthene	1.1	U	1.1	9.5
Benzyl alcohol	1.0	U	1.0	9.5
Bis(2-chloroethoxy)methane	0.90	U	0.90	9.5
Bis(2-chloroethyl)ether	1.0	U	1.0	9.5
bis(chloroisopropyl) ether	0.74	U	0.74	9.5
Bis(2-ethylhexyl) phthalate	1.5	U	1.5	9.5
4-Bromophenyl phenyl ether	0.73	U	0.73	9.5
Butyl benzyl phthalate	1.1	U	1.1	9.5
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.95	U	0.95	9.5
2-Chloronaphthalene	0.76	U	0.76	9.5
2-Chlorophenol	0.83	U	0.83	9.5
4-Chlorophenyl phenyl ether	0.80	U	0.80	9.5
Chrysene	0.49	U	0.49	9.5
Diallate	0.74	U	0.74	9.5
Dibenz(a,h)anthracene	0.95	U	0.95	9.5
Dibenzofuran	0.75	U	0.75	9.5
3,3'-Dichlorobenzidine	29	U	29	57
2,4-Dichlorophenol	1.0	U	1.0	9.5
2,6-Dichlorophenol	0.70	U	0.70	9.5
Diethyl phthalate	0.84	U	0.84	9.5
Dimethoate	0.71	U	0.71	9.5
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.5
3,3'-Dimethylbenzidine	9.5	U	9.5	19
2,4-Dimethylphenol	3.8	U	3.8	9.5
Dimethyl phthalate	0.94	U	0.94	9.5
Di-n-butyl phthalate	0.79	U	0.79	9.5
1,3-Dinitrobenzene	0.57	U	0.57	9.5
4,6-Dinitro-2-methylphenol	9.5	U	9.5	48
2,4-Dinitrophenol	9.5	U	9.5	48
2,4-Dinitrotoluene	1.1	U	1.1	9.5
2,6-Dinitrotoluene	1.0	U	1.0	9.5
Di-n-octyl phthalate	1.3	U	1.3	9.5
Dinoseb	4.8	U	4.8	9.5
Disulfoton	0.75	U	0.75	9.5
Ethyl methanesulfonate	0.91	U	0.91	9.5

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-10-7-10**

Lab Sample ID: 680-59085-4

Client Matrix: Water

Date Sampled: 07/01/2010 1315

Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8196.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1631			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.2	U	1.2	9.5
Famphur	1.0	U	1.0	9.5
Fluoranthene	0.70	U	0.70	9.5
Fluorene	0.91	U	0.91	9.5
Hexachlorobenzene	0.75	U	0.75	9.5
Hexachlorobutadiene	0.59	U	0.59	9.5
Hexachlorocyclopentadiene	2.4	U	2.4	9.5
Hexachloroethane	0.72	U	0.72	9.5
Hexachloropropene	1.3	U	1.3	9.5
Indeno[1,2,3-cd]pyrene	0.95	U	0.95	9.5
Isophorone	0.86	U	0.86	9.5
Isosafrole	0.48	U	0.48	9.5
Methapyrilene	2.6	U	2.6	1900
3-Methylcholanthrene	1.3	U	1.3	9.5
Methyl methanesulfonate	0.57	U	0.57	9.5
2-Methylnaphthalene	0.74	U	0.74	9.5
Methyl parathion	0.84	U	0.84	9.5
2-Methylphenol	0.85	U	0.85	9.5
3 & 4 Methylphenol	1.2	U	1.2	9.5
Naphthalene	0.67	U	0.67	9.5
1,4-Naphthoquinone	0.59	U	0.59	9.5
1-Naphthylamine	1.0	U	1.0	9.5
2-Naphthylamine	1.4	U	1.4	9.5
2-Nitroaniline	1.2	U	1.2	48
3-Nitroaniline	4.8	U	4.8	48
4-Nitroaniline	4.8	U	4.8	48
Nitrobenzene	0.70	U	0.70	9.5
2-Nitrophenol	0.72	U	0.72	9.5
4-Nitrophenol	1.8	U	1.8	48
N-Nitro-o-toluidine	1.4	U	1.4	9.5
N-Nitrosodiethylamine	0.89	U	0.89	9.5
N-Nitrosodimethylamine	2.7	U	2.7	9.5
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.5
N-Nitrosodi-n-propylamine	0.69	U	0.69	9.5
N-Nitrosodiphenylamine	0.88	U	0.88	9.5
N-Nitrosomethylethylamine	3.1	U	3.1	9.5
N-Nitrosopiperidine	0.84	U	0.84	9.5
N-Nitrosopyrrolidine	0.95	U	0.95	9.5
o,o',o"-Triethylphosphorothioate	0.95	U	0.95	9.5
p-Dimethylamino azobenzene	0.75	U	0.75	9.5
Pentachlorobenzene	0.50	U	0.50	9.5
Pentachloronitrobenzene	0.74	U	0.74	9.5
Pentachlorophenol	1.9	U	1.9	48
Phenacetin	1.3	U	1.3	9.5
Phenanthrene	0.73	U	0.73	9.5
Phenol	0.79	U	0.79	9.5

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-10-7-10**

Lab Sample ID: 680-59085-4

Client Matrix: Water

Date Sampled: 07/01/2010 1315

Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8196.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1631			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phorate	0.83	U	0.83	9.5
p-Phenylene diamine	9.5	U	9.5	1900
Pronamide	0.85	U	0.85	9.5
Pyrene	0.60	U	0.60	9.5
Safrole, Total	0.76	U	0.76	9.5
Sulfotepp	0.50	U	0.50	9.5
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.5
2,3,4,6-Tetrachlorophenol	0.69	U	0.69	9.5
Thionazin	0.87	U	0.87	9.5
2-Toluidine	1.3	U	1.3	9.5
2,4,5-Trichlorophenol	1.1	U	1.1	9.5
2,4,6-Trichlorophenol	0.81	U	0.81	9.5
1,3,5-Trinitrobenzene	1.9	U	1.9	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	69		50 - 113
2-Fluorophenol	61		36 - 110
Nitrobenzene-d5	72		45 - 112
Phenol-d5	68		38 - 116
Terphenyl-d14	68		10 - 121
2,4,6-Tribromophenol	90		40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-BLK-6-10**

Lab Sample ID: 680-59085-5FB

Client Matrix: Water

Date Sampled: 07/01/2010 1410

Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8197.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1654			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.72	U	0.72	9.5
Acenaphthylene	0.81	U	0.81	9.5
Acetophenone	0.74	J	0.54	9.5
2-Acetylaminofluorene	1.5	U	1.5	9.5
4-Aminobiphenyl	1.1	U	1.1	9.5
Anthracene	0.66	U	0.66	9.5
Benzo[a]anthracene	0.52	U	0.52	9.5
Benzo[a]pyrene	0.68	U	0.68	9.5
Benzo[b]fluoranthene	2.5	U	2.5	9.5
Benzo[g,h,i]perylene	0.83	U	0.83	9.5
Benzo[k]fluoranthene	1.1	U	1.1	9.5
Benzyl alcohol	1.0	U	1.0	9.5
Bis(2-chloroethoxy)methane	0.90	U	0.90	9.5
Bis(2-chloroethyl)ether	1.0	U	1.0	9.5
bis(chloroisopropyl) ether	0.74	U	0.74	9.5
Bis(2-ethylhexyl) phthalate	1.5	U	1.5	9.5
4-Bromophenyl phenyl ether	0.73	U	0.73	9.5
Butyl benzyl phthalate	1.1	U	1.1	9.5
4-Chloroaniline	2.1	U	2.1	19
4-Chloro-3-methylphenol	0.95	U	0.95	9.5
2-Chloronaphthalene	0.76	U	0.76	9.5
2-Chlorophenol	0.83	U	0.83	9.5
4-Chlorophenyl phenyl ether	0.80	U	0.80	9.5
Chrysene	0.49	U	0.49	9.5
Diallate	0.74	U	0.74	9.5
Dibenz(a,h)anthracene	0.95	U	0.95	9.5
Dibenzofuran	0.75	U	0.75	9.5
3,3'-Dichlorobenzidine	29	U	29	57
2,4-Dichlorophenol	1.0	U	1.0	9.5
2,6-Dichlorophenol	0.70	U	0.70	9.5
Diethyl phthalate	0.84	U	0.84	9.5
Dimethoate	0.71	U	0.71	9.5
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.5
3,3'-Dimethylbenzidine	9.5	U	9.5	19
2,4-Dimethylphenol	3.8	U	3.8	9.5
Dimethyl phthalate	0.94	U	0.94	9.5
Di-n-butyl phthalate	0.79	U	0.79	9.5
1,3-Dinitrobenzene	0.57	U	0.57	9.5
4,6-Dinitro-2-methylphenol	9.5	U	9.5	48
2,4-Dinitrophenol	9.5	U	9.5	48
2,4-Dinitrotoluene	1.1	U	1.1	9.5
2,6-Dinitrotoluene	1.0	U	1.0	9.5
Di-n-octyl phthalate	1.3	U	1.3	9.5
Dinoseb	4.8	U	4.8	9.5
Disulfoton	0.75	U	0.75	9.5
Ethyl methanesulfonate	0.91	U	0.91	9.5

Client: U.S. Army Corps of Engineers | Job Number: 680-59085-1

Client Sample ID: **SLMW-BLK-6-10**

Lab Sample ID: 680-59085-5FB | Date Sampled: 07/01/2010 1410
Client Matrix: Water | Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8197.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1654			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Ethyl Parathion	1.2	U	1.2	9.5
Famphur	1.0	U	1.0	9.5
Fluoranthene	0.70	U	0.70	9.5
Fluorene	0.91	U	0.91	9.5
Hexachlorobenzene	0.75	U	0.75	9.5
Hexachlorobutadiene	0.59	U	0.59	9.5
Hexachlorocyclopentadiene	2.4	U	2.4	9.5
Hexachloroethane	0.72	U	0.72	9.5
Hexachloropropene	1.3	U	1.3	9.5
Indeno[1,2,3-cd]pyrene	0.95	U	0.95	9.5
Isophorone	0.86	U	0.86	9.5
Isosafrole	0.48	U	0.48	9.5
Methapyrilene	2.6	U	2.6	1900
3-Methylcholanthrene	1.3	U	1.3	9.5
Methyl methanesulfonate	0.57	U	0.57	9.5
2-Methylnaphthalene	0.74	U	0.74	9.5
Methyl parathion	0.84	U	0.84	9.5
2-Methylphenol	0.85	U	0.85	9.5
3 & 4 Methylphenol	1.2	U	1.2	9.5
Naphthalene	0.67	U	0.67	9.5
1,4-Naphthoquinone	0.59	U	0.59	9.5
1-Naphthylamine	1.0	U	1.0	9.5
2-Naphthylamine	1.4	U	1.4	9.5
2-Nitroaniline	1.2	U	1.2	48
3-Nitroaniline	4.8	U	4.8	48
4-Nitroaniline	4.8	U	4.8	48
Nitrobenzene	0.70	U	0.70	9.5
2-Nitrophenol	0.72	U	0.72	9.5
4-Nitrophenol	1.8	U	1.8	48
N-Nitro-o-toluidine	1.4	U	1.4	9.5
N-Nitrosodiethylamine	0.89	U	0.89	9.5
N-Nitrosodimethylamine	2.7	U	2.7	9.5
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.5
N-Nitrosodi-n-propylamine	0.69	U	0.69	9.5
N-Nitrosodiphenylamine	0.88	U	0.88	9.5
N-Nitrosomethylethylamine	3.1	U	3.1	9.5
N-Nitrosopiperidine	0.84	U	0.84	9.5
N-Nitrosopyrrolidine	0.95	U	0.95	9.5
o,o',o"-Triethylphosphorothioate	0.95	U	0.95	9.5
p-Dimethylamino azobenzene	0.75	U	0.75	9.5
Pentachlorobenzene	0.50	U	0.50	9.5
Pentachloronitrobenzene	0.74	U	0.74	9.5
Pentachlorophenol	1.9	U	1.9	48
Phenacetin	1.3	U	1.3	9.5
Phenanthrene	0.73	U	0.73	9.5
Phenol	0.79	U	0.79	9.5

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-BLK-6-10**

Lab Sample ID: 680-59085-5FB

Client Matrix: Water

Date Sampled: 07/01/2010 1410

Date Received: 07/02/2010 0911

8270D Semivolatile Organic Compounds (GC/MS)

Method:	8270D	Analysis Batch: 680-174014		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-173430		Lab File ID:	n8197.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	07/13/2010 1654			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phorate	0.83	U	0.83	9.5
p-Phenylene diamine	9.5	U	9.5	1900
Pronamide	0.85	U	0.85	9.5
Pyrene	0.60	U	0.60	9.5
Safrole, Total	0.76	U	0.76	9.5
Sulfotepp	0.50	U	0.50	9.5
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.5
2,3,4,6-Tetrachlorophenol	0.69	U	0.69	9.5
Thionazin	0.87	U	0.87	9.5
2-Toluidine	1.3	U	1.3	9.5
2,4,5-Trichlorophenol	1.1	U	1.1	9.5
2,4,6-Trichlorophenol	0.81	U	0.81	9.5
1,3,5-Trinitrobenzene	1.9	U	1.9	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	74		50 - 113
2-Fluorophenol	66		36 - 110
Nitrobenzene-d5	80		45 - 112
Phenol-d5	71		38 - 116
Terphenyl-d14	87		10 - 121
2,4,6-Tribromophenol	84		40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-11R-7-10**

Lab Sample ID: 680-59085-1

Client Matrix: Water

Date Sampled: 07/01/2010 0835

Date Received: 07/02/2010 0911

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0000		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0061	U	0.0061	0.094
4,4'-DDE	0.0073	U	0.0073	0.094
4,4'-DDT	0.0092	U	0.0092	0.094
Aldrin	0.0066	U	0.0066	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
delta-BHC	0.0045	U	0.0045	0.047
Dieldrin	0.0086	U	0.0086	0.094
Endosulfan I	0.0040	U	0.0040	0.047
Endosulfan II	0.0092	U	0.0092	0.094
Endosulfan sulfate	0.0064	U	0.0064	0.094
Endrin	0.0092	U	0.0092	0.094
Endrin aldehyde	0.015	U	0.015	0.094
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
Isodrin	0.047	U	0.047	0.047
Methoxychlor	0.012	U	0.012	0.094
PCB-1016	0.067	U	0.067	0.94
PCB-1221	0.26	U	0.26	1.9
PCB-1232	0.10	U	0.10	0.94
PCB-1242	0.17	U	0.17	0.94
PCB-1248	0.34	U	0.34	0.94
PCB-1254	0.25	U	0.25	0.94
PCB-1260	0.19	U	0.19	0.94
PCB-1262	0.23	U	0.23	0.94
Toxaphene	0.47	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	32		14 - 115
Tetrachloro-m-xylene	69		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-11R-7-10**

Lab Sample ID: 680-59085-1

Client Matrix: Water

Date Sampled: 07/01/2010 0835

Date Received: 07/02/2010 0911

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0000		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	29		14 - 115
Tetrachloro-m-xylene	63		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-9-7-10**

Lab Sample ID: 680-59085-3

Client Matrix: Water

Date Sampled: 07/01/2010 1125

Date Received: 07/02/2010 0911

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0019			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0061	U	0.0061	0.094
4,4'-DDE	0.0073	U	0.0073	0.094
4,4'-DDT	0.0092	U	0.0092	0.094
Aldrin	0.0066	U	0.0066	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
delta-BHC	0.0045	U	0.0045	0.047
Dieldrin	0.0086	U	0.0086	0.094
Endosulfan I	0.0040	U	0.0040	0.047
Endosulfan II	0.0092	U	0.0092	0.094
Endosulfan sulfate	0.0064	U	0.0064	0.094
Endrin	0.0092	U	0.0092	0.094
Endrin aldehyde	0.015	U	0.015	0.094
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
Isodrin	0.047	U	0.047	0.047
Methoxychlor	0.012	U	0.012	0.094
PCB-1016	0.067	U	0.067	0.94
PCB-1221	0.26	U	0.26	1.9
PCB-1232	0.10	U	0.10	0.94
PCB-1242	0.17	U	0.17	0.94
PCB-1248	0.34	U	0.34	0.94
PCB-1254	0.25	U	0.25	0.94
PCB-1260	0.19	U	0.19	0.94
PCB-1262	0.23	U	0.23	0.94
Toxaphene	0.47	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	8	J	14 - 115
Tetrachloro-m-xylene	61		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-9-7-10**

Lab Sample ID: 680-59085-3

Client Matrix: Water

Date Sampled: 07/01/2010 1125

Date Received: 07/02/2010 0911

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0019			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	7	J	14 - 115
Tetrachloro-m-xylene	49		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-9-7-10**

Lab Sample ID: 680-59085-3

Client Matrix: Water

Date Sampled: 07/01/2010 1125

Date Received: 07/02/2010 0911

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-174139		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173854		Initial Weight/Volume:	1050 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/13/2010 2344	Run Type:	RE	Injection Volume:	2 uL
Date Prepared:	07/12/2010 1434			Result Type:	SECONDARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0062	U H	0.0062	0.095
4,4'-DDE	0.0073	U H	0.0073	0.095
4,4'-DDT	0.0092	U H	0.0092	0.095
Aldrin	0.0067	U H	0.0067	0.048
alpha-BHC	0.0054	U H	0.0054	0.048
beta-BHC	0.0064	U H	0.0064	0.048
Chlordane (technical)	0.095	U H	0.095	0.48
Chlorobenzilate	0.48	U H	0.48	0.48
delta-BHC	0.0046	U H	0.0046	0.048
Dieldrin	0.0087	U H	0.0087	0.095
Endosulfan I	0.0040	U H	0.0040	0.048
Endosulfan II	0.0093	U H	0.0093	0.095
Endosulfan sulfate	0.0065	U H	0.0065	0.095
Endrin	0.0092	U H	0.0092	0.095
Endrin aldehyde	0.015	U H	0.015	0.095
gamma-BHC (Lindane)	0.0056	U H	0.0056	0.048
Heptachlor	0.0067	U H	0.0067	0.048
Heptachlor epoxide	0.0057	U H	0.0057	0.048
Isodrin	0.048	U H Q	0.048	0.048
Methoxychlor	0.012	U H	0.012	0.095
PCB-1016	0.068	U H	0.068	0.95
PCB-1221	0.27	U H	0.27	1.9
PCB-1232	0.10	U H	0.10	0.95
PCB-1242	0.17	U H	0.17	0.95
PCB-1248	0.34	U H	0.34	0.95
PCB-1254	0.25	U H	0.25	0.95
PCB-1260	0.19	U H	0.19	0.95
PCB-1262	0.23	U H	0.23	0.95
Toxaphene	0.48	U H	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	8	J	14 - 115
DCB Decachlorobiphenyl	8	J	14 - 115
Tetrachloro-m-xylene	56		35 - 120
Tetrachloro-m-xylene	60		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-10-7-10**

Lab Sample ID: 680-59085-4

Client Matrix: Water

Date Sampled: 07/01/2010 1315

Date Received: 07/02/2010 0911

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0039		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0061	U	0.0061	0.094
4,4'-DDE	0.0073	U	0.0073	0.094
4,4'-DDT	0.0092	U	0.0092	0.094
Aldrin	0.0066	U	0.0066	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
delta-BHC	0.0045	U	0.0045	0.047
Dieldrin	0.0086	U	0.0086	0.094
Endosulfan I	0.0040	U	0.0040	0.047
Endosulfan II	0.0092	U	0.0092	0.094
Endosulfan sulfate	0.0064	U	0.0064	0.094
Endrin	0.0092	U	0.0092	0.094
Endrin aldehyde	0.015	U	0.015	0.094
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
Isodrin	0.047	U	0.047	0.047
Methoxychlor	0.012	U	0.012	0.094
PCB-1016	0.067	U	0.067	0.94
PCB-1221	0.26	U	0.26	1.9
PCB-1232	0.10	U	0.10	0.94
PCB-1242	0.17	U	0.17	0.94
PCB-1248	0.34	U	0.34	0.94
PCB-1254	0.25	U	0.25	0.94
PCB-1260	0.19	U	0.19	0.94
PCB-1262	0.23	U	0.23	0.94
Toxaphene	0.47	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	5	J	14 - 115
Tetrachloro-m-xylene	35		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-10-7-10**

Lab Sample ID: 680-59085-4

Client Matrix: Water

Date Sampled: 07/01/2010 1315

Date Received: 07/02/2010 0911

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0039			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	4	J	14 - 115
Tetrachloro-m-xylene	30	J	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-10-7-10**

Lab Sample ID: 680-59085-4

Client Matrix: Water

Date Sampled: 07/01/2010 1315

Date Received: 07/02/2010 0911

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-174139		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173854		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/14/2010 0004	Run Type:	RE	Injection Volume:	2 uL
Date Prepared:	07/12/2010 1434			Result Type:	SECONDARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0061	U H	0.0061	0.094
4,4'-DDE	0.0073	U H	0.0073	0.094
4,4'-DDT	0.0092	U H	0.0092	0.094
Aldrin	0.0066	U H	0.0066	0.047
alpha-BHC	0.0054	U H	0.0054	0.047
beta-BHC	0.0063	U H	0.0063	0.047
Chlordane (technical)	0.094	U H	0.094	0.47
Chlorobenzilate	0.47	U H	0.47	0.47
delta-BHC	0.0045	U H	0.0045	0.047
Dieldrin	0.0086	U H	0.0086	0.094
Endosulfan I	0.0040	U H	0.0040	0.047
Endosulfan II	0.0092	U H	0.0092	0.094
Endosulfan sulfate	0.0064	U H	0.0064	0.094
Endrin	0.0092	U H	0.0092	0.094
Endrin aldehyde	0.015	U H	0.015	0.094
gamma-BHC (Lindane)	0.0056	U H	0.0056	0.047
Heptachlor	0.0066	U H	0.0066	0.047
Heptachlor epoxide	0.0057	U H	0.0057	0.047
Isodrin	0.047	U H Q	0.047	0.047
Methoxychlor	0.012	U H	0.012	0.094
PCB-1016	0.067	U H	0.067	0.94
PCB-1221	0.26	U H	0.26	1.9
PCB-1232	0.10	U H	0.10	0.94
PCB-1242	0.17	U H	0.17	0.94
PCB-1248	0.34	U H	0.34	0.94
PCB-1254	0.25	U H	0.25	0.94
PCB-1260	0.19	U H	0.19	0.94
PCB-1262	0.23	U H	0.23	0.94

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	2	J	14 - 115
DCB Decachlorobiphenyl	3	J	14 - 115
Tetrachloro-m-xylene	36		35 - 120
Tetrachloro-m-xylene	49		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-BLK-6-10**

Lab Sample ID: 680-59085-5FB

Client Matrix: Water

Date Sampled: 07/01/2010 1410

Date Received: 07/02/2010 0911

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0058		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0061	U	0.0061	0.094
4,4'-DDE	0.0073	U	0.0073	0.094
4,4'-DDT	0.0092	U	0.0092	0.094
Aldrin	0.0066	U	0.0066	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
delta-BHC	0.0045	U	0.0045	0.047
Dieldrin	0.0086	U	0.0086	0.094
Endosulfan I	0.0040	U	0.0040	0.047
Endosulfan II	0.0092	U	0.0092	0.094
Endosulfan sulfate	0.0064	U	0.0064	0.094
Endrin	0.0092	U	0.0092	0.094
Endrin aldehyde	0.015	U	0.015	0.094
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
Isodrin	0.047	U	0.047	0.047
Methoxychlor	0.012	U	0.012	0.094
PCB-1016	0.067	U	0.067	0.94
PCB-1221	0.26	U	0.26	1.9
PCB-1232	0.10	U	0.10	0.94
PCB-1242	0.17	U	0.17	0.94
PCB-1248	0.34	U	0.34	0.94
PCB-1254	0.25	U	0.25	0.94
PCB-1260	0.19	U	0.19	0.94
PCB-1262	0.23	U	0.23	0.94
Toxaphene	0.47	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	81		14 - 115
Tetrachloro-m-xylene	65		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-BLK-6-10**

Lab Sample ID: 680-59085-5FB

Client Matrix: Water

Date Sampled: 07/01/2010 1410

Date Received: 07/02/2010 0911

8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-173682	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-173431	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0058		Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	60		14 - 115
Tetrachloro-m-xylene	54		35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-11R-7-10**

Lab Sample ID: 680-59085-1

Client Matrix: Water

Date Sampled: 07/01/2010 0835

Date Received: 07/02/2010 0911

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-173885		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0623			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Demeton-O	1.2	U Q	1.2	2.4
Demeton-S	1.2	U	1.2	2.4
Dimethoate	0.94	U	0.94	1.9
Disulfoton	0.94	U	0.94	1.9
Ethyl Parathion	0.47	U	0.47	0.94
Famphur	0.94	U	0.94	1.9
Methyl parathion	0.47	U	0.47	0.47
Phorate	0.47	U	0.47	0.94
Sulfotepp	0.47	U	0.47	0.47
Thionazin	0.47	U	0.47	0.94

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	94		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-9-7-10**

Lab Sample ID: 680-59085-3

Client Matrix: Water

Date Sampled: 07/01/2010 1125

Date Received: 07/02/2010 0911

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-173885		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0648			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Demeton-O	1.2	U Q	1.2	2.4
Demeton-S	1.2	U	1.2	2.4
Dimethoate	0.94	U	0.94	1.9
Disulfoton	0.94	U	0.94	1.9
Ethyl Parathion	0.47	U	0.47	0.94
Famphur	0.94	U	0.94	1.9
Methyl parathion	0.47	U	0.47	0.47
Phorate	0.47	U	0.47	0.94
Sulfotepp	0.47	U	0.47	0.47
Thionazin	0.47	U	0.47	0.94

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	91		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-10-7-10**

Lab Sample ID: 680-59085-4

Client Matrix: Water

Date Sampled: 07/01/2010 1315

Date Received: 07/02/2010 0911

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-173885		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0713			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Demeton-O	1.2	U Q	1.2	2.4
Demeton-S	1.2	U	1.2	2.4
Dimethoate	0.94	U	0.94	1.9
Disulfoton	0.94	U	0.94	1.9
Ethyl Parathion	0.47	U	0.47	0.94
Famphur	0.94	U	0.94	1.9
Methyl parathion	0.47	U	0.47	0.47
Phorate	0.47	U	0.47	0.94
Sulfotepp	0.47	U	0.47	0.47
Thionazin	0.47	U	0.47	0.94

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	69		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-BLK-6-10**

Lab Sample ID: 680-59085-5FB

Client Matrix: Water

Date Sampled: 07/01/2010 1410

Date Received: 07/02/2010 0911

8141B Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Method:	8141B	Analysis Batch: 680-173885		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-173431		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	07/09/2010 0737			Injection Volume:	2 uL
Date Prepared:	07/07/2010 1343			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Demeton-O	1.2	U Q	1.2	2.4
Demeton-S	1.2	U	1.2	2.4
Dimethoate	0.94	U	0.94	1.9
Disulfoton	0.94	U	0.94	1.9
Ethyl Parathion	0.47	U	0.47	0.94
Famphur	0.94	U	0.94	1.9
Methyl parathion	0.47	U	0.47	0.47
Phorate	0.47	U	0.47	0.94
Sulfotepp	0.47	U	0.47	0.47
Thionazin	0.47	U	0.47	0.94

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	92		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-11R-7-10**

Lab Sample ID: 680-59085-1

Client Matrix: Water

Date Sampled: 07/01/2010 0835

Date Received: 07/02/2010 0911

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-174604		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-174022		Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0336			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U H	0.99	2.0
Arsenic	1.7	H	0.40	1.0
Barium	18	H	0.15	1.0
Beryllium	0.070	U H	0.070	0.20
Cadmium	0.20	U H	0.20	0.50
Chromium	0.18	J H	0.16	1.0
Cobalt	0.58	H	0.078	0.20
Copper	0.60	J H	0.21	1.0
Lead	0.080	U H	0.080	0.30
Nickel	0.62	J H	0.40	1.0
Selenium	0.21	U H	0.21	0.50
Silver	0.10	U H	0.10	0.20
Thallium	0.10	U H	0.10	0.20
Tin	0.40	U H	0.40	1.0
Vanadium	1.4	U H	1.4	5.0
Zinc	6.9	J H	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-173649		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-173437		Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1708			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-9-7-10**

Lab Sample ID: 680-59085-3

Client Matrix: Water

Date Sampled: 07/01/2010 1125

Date Received: 07/02/2010 0911

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-174604		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-174022		Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0343			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U H	0.99	2.0
Arsenic	10	H	0.40	1.0
Barium	45	H	0.15	1.0
Beryllium	0.070	U H	0.070	0.20
Cadmium	0.20	U H	0.20	0.50
Chromium	0.23	J H	0.16	1.0
Cobalt	0.73	H	0.078	0.20
Copper	1.0	H	0.21	1.0
Lead	0.080	U H	0.080	0.30
Nickel	0.53	J H	0.40	1.0
Selenium	0.21	U H	0.21	0.50
Silver	0.10	U H	0.10	0.20
Thallium	0.10	U H	0.10	0.20
Tin	0.57	J H	0.40	1.0
Vanadium	1.4	U H	1.4	5.0
Zinc	3.6	J H	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-173649		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-173437		Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1711			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-10-7-10**

Lab Sample ID: 680-59085-4

Client Matrix: Water

Date Sampled: 07/01/2010 1315

Date Received: 07/02/2010 0911

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-174604		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-174022		Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0350			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U H	0.99	2.0
Arsenic	4.2	H	0.40	1.0
Barium	160	H	0.15	1.0
Beryllium	0.070	U H	0.070	0.20
Cadmium	0.20	U H	0.20	0.50
Chromium	0.16	J H	0.16	1.0
Cobalt	2.7	H	0.078	0.20
Copper	0.93	J H	0.21	1.0
Lead	0.080	U H	0.080	0.30
Nickel	0.40	U H	0.40	1.0
Selenium	0.28	J H	0.21	0.50
Silver	0.10	U H	0.10	0.20
Thallium	0.10	U H	0.10	0.20
Tin	0.40	U H	0.40	1.0
Vanadium	1.5	J H	1.4	5.0
Zinc	220	H	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-173649		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-173437		Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1714			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Client Sample ID: **SLMW-BLK-6-10**

Lab Sample ID: 680-59085-5FB

Client Matrix: Water

Date Sampled: 07/01/2010 1410

Date Received: 07/02/2010 0911

6020A Metals (ICP/MS)

Method:	6020A	Analysis Batch: 680-174604		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-174022		Lab File ID:	174022.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0358			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U H	0.99	2.0
Arsenic	0.40	U H	0.40	1.0
Barium	0.15	U H	0.15	1.0
Beryllium	0.070	U H	0.070	0.20
Cadmium	0.20	U H	0.20	0.50
Chromium	0.16	U H	0.16	1.0
Cobalt	0.078	U H	0.078	0.20
Copper	0.66	J H	0.21	1.0
Lead	0.080	U H	0.080	0.30
Nickel	0.40	U H	0.40	1.0
Selenium	0.21	U H	0.21	0.50
Silver	0.10	U H	0.10	0.20
Thallium	0.10	U H	0.10	0.20
Tin	0.40	U H	0.40	1.0
Vanadium	1.4	U H	1.4	5.0
Zinc	2.6	U H	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-173649		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-173437		Lab File ID:	b070810.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1717			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.091	U	0.091	0.20

General Chemistry

Client Sample ID: **SLMW-11R-7-10**

Lab Sample ID: 680-59085-1

Client Matrix: Water

Date Sampled: 07/01/2010 0835

Date Received: 07/02/2010 0911

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.55	J	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-173416	Date Analyzed: 07/02/2010 1727						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-173665	Date Analyzed: 07/09/2010 0958						
Prep Batch: 680-173507	Date Prepared: 07/08/2010 1120						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-173427	Date Analyzed: 07/07/2010 1026						
Prep Batch: 680-173401	Date Prepared: 07/07/2010 0741						

General Chemistry

Client Sample ID: **SLMW-9-7-10**

Lab Sample ID: 680-59085-3

Client Matrix: Water

Date Sampled: 07/01/2010 1125

Date Received: 07/02/2010 0911

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-173416	Date Analyzed: 07/02/2010 1817						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-173665	Date Analyzed: 07/09/2010 0958						
Prep Batch: 680-173507	Date Prepared: 07/08/2010 1120						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-173427	Date Analyzed: 07/07/2010 1026						
Prep Batch: 680-173401	Date Prepared: 07/07/2010 0741						

General Chemistry

Client Sample ID: **SLMW-10-7-10**

Lab Sample ID: 680-59085-4

Client Matrix: Water

Date Sampled: 07/01/2010 1315

Date Received: 07/02/2010 0911

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-173416	Date Analyzed: 07/02/2010 1842						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-173665	Date Analyzed: 07/09/2010 0958						
Prep Batch: 680-173507	Date Prepared: 07/08/2010 1120						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-173427	Date Analyzed: 07/07/2010 1026						
Prep Batch: 680-173401	Date Prepared: 07/07/2010 0741						

General Chemistry

Client Sample ID: **SLMW-BLK-6-10**

Lab Sample ID: 680-59085-5FB

Client Matrix: Water

Date Sampled: 07/01/2010 1410

Date Received: 07/02/2010 0911

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U M	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-173416	Date Analyzed: 07/02/2010 1907						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-173665	Date Analyzed: 07/09/2010 0958						
Prep Batch: 680-173507	Date Prepared: 07/08/2010 1120						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	10	U	mg/L	10	10	1.0	9034
Analysis Batch: 680-173427	Date Analyzed: 07/07/2010 1026						
Prep Batch: 680-173401	Date Prepared: 07/07/2010 0741						

DATA REPORTING QUALIFIERS

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	Q	One or more quality control criteria failed.
	U	Undetected at the Limit of Detection.
GC/MS Semi VOA		
	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.
	Q	One or more quality control criteria failed.
	U	Undetected at the Limit of Detection.
GC Semi VOA		
	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.
	M	Manual integrated compound.
	Q	One or more quality control criteria failed.
	H	Sample was prepped or analyzed beyond the specified holding time
	U	Undetected at the Limit of Detection.

DATA REPORTING QUALIFIERS

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Section	Qualifier	Description
Metals		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	H	Sample was prepped or analyzed beyond the specified holding time
	U	Undetected at the Limit of Detection.
General Chemistry		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	M	Manual integrated compound.
	U	Undetected at the Limit of Detection.

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173480

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-173480/10	Analysis Batch:	680-173480	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq303.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1312			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1312				

Analyte	Result	Qual	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	0.25	U	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.13	U	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173480

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-173480/10	Analysis Batch:	680-173480	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq303.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1312			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1312				

Analyte	Result	Qual	MDL	RL
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	% Rec	Acceptance Limits
Toluene-d8 (Surr)	101	75 - 120
4-Bromofluorobenzene	99	75 - 120
Dibromofluoromethane	107	75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-173480

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-173480/7	Analysis Batch:	680-173480	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq295.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1118			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1118				

LCSD Lab Sample ID:	LCSD 680-173480/8	Analysis Batch:	680-173480	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq297.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1146			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1146				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	105	102	17 - 175	3	50		
Benzene	99	99	77 - 119	1	30		
Dichlorobromomethane	100	99	78 - 127	1	30		
Bromomethane	71	88	12 - 184	22	50		
Carbon disulfide	117	115	55 - 131	2	30		
Chlorobenzene	102	99	85 - 116	3	30		
Chlorodibromomethane	108	103	75 - 133	5	30		
Chloroethane	145	106	40 - 165	31	50		
Chloromethane	82	84	48 - 142	2	50		
Chloroform	107	107	82 - 120	1	30		
1,2-Dibromo-3-Chloropropane	101	96	49 - 140	5	30		
Ethylene Dibromide	99	100	80 - 121	1	30		
Dichlorodifluoromethane	120	116	34 - 154	3	30		
1,1-Dichloroethane	111	108	74 - 127	2	30		
1,2-Dichloroethane	89	89	66 - 132	0	30		
trans-1,2-Dichloroethene	111	108	72 - 131	2	30		
1,1-Dichloroethene	114	110	62 - 141	3	30		
Methylene Chloride	123	122	70 - 125	1	30		
1,2-Dichloropropane	99	99	73 - 124	0	30		
cis-1,3-Dichloropropene	104	102	76 - 126	2	30		
trans-1,3-Dichloropropene	100	99	73 - 128	2	30		
Ethylbenzene	103	100	86 - 116	3	30		
2-Butanone (MEK)	98	95	33 - 157	3	30		
4-Methyl-2-pentanone (MIBK)	85	84	40 - 151	2	30		
Styrene	101	98	82 - 122	3	30		
1,1,1,2-Tetrachloroethane	105	101	81 - 128	4	30		
1,1,2,2-Tetrachloroethane	92	89	69 - 129	3	30		
Tetrachloroethene	104	101	76 - 126	3	30		
Carbon tetrachloride	107	104	71 - 135	3	30		
Toluene	98	98	81 - 117	0	30		
Bromoform	103	100	62 - 133	3	30		
1,1,2-Trichloroethane	95	95	75 - 121	1	30		
1,1,1-Trichloroethane	102	101	76 - 127	1	30		

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-173480

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-173480/7	Analysis Batch:	680-173480	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq295.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1118			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1118				

LCSD Lab Sample ID:	LCSD 680-173480/8	Analysis Batch:	680-173480	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq297.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1146			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1146				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Trichloroethene	102	100	84 - 115	2	30		
Trichlorofluoromethane	90	89	58 - 149	1	50		
1,2,3-Trichloropropane	95	94	70 - 130	1	30		
Vinyl acetate	110	108	10 - 217	1	30		
Vinyl chloride	84	82	59 - 144	2	50		
Xylenes, Total	101	98	84 - 118	3	30		
2-Hexanone	89	86	34 - 161	3	30		
Chlorobromomethane	102	102	10 - 150	0	30		
cis-1,2-Dichloroethene	111	110	69 - 134	1	30		
1,3-Dichloropropane	94	94	75 - 120	1	30		
2,2-Dichloropropane	120	117	55 - 157	3	30		
1,1-Dichloropropene	99	96	77 - 122	3	30		
1,2-Dichlorobenzene	101	98	79 - 124	3	30		
1,3-Dichlorobenzene	104	100	78 - 125	4	30		
1,4-Dichlorobenzene	103	98	81 - 122	5	30		
1,2,4-Trichlorobenzene	110	105	60 - 135	5	30		
Dibromomethane	97	94	78 - 119	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Toluene-d8 (Surr)	100	99	75 - 120
4-Bromofluorobenzene	102	99	75 - 120
Dibromofluoromethane	112	110	75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173497

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-173497/8	Analysis Batch:	680-173497	Instrument ID:	MSA2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	aq365.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1617			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1617				

Analyte	Result	Qual	MDL	RL
Acetonitrile	10	U	10	40
Acetone	5.0	U	5.0	25
Benzene	0.25	U	0.25	1.0
Dichlorobromomethane	0.25	U	0.25	1.0
Bromomethane	0.80	U	0.80	1.0
Carbon disulfide	0.60	U	0.60	2.0
Chlorobenzene	0.25	U	0.25	1.0
Chlorodibromomethane	0.10	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloromethane	0.33	U	0.33	1.0
Chloroform	0.14	U	0.14	1.0
3-Chloro-1-propene	0.20	U	0.20	1.0
1,2-Dibromo-3-Chloropropane	0.44	U	0.44	1.0
Ethylene Dibromide	0.25	U	0.25	1.0
trans-1,4-Dichloro-2-butene	0.50	U	0.50	2.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.25	U	0.25	1.0
1,2-Dichloroethane	0.10	U	0.10	1.0
trans-1,2-Dichloroethene	0.20	U	0.20	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
Methylene Chloride	1.0	U	1.0	5.0
1,2-Dichloropropane	0.13	U	0.13	1.0
cis-1,3-Dichloropropene	0.11	U	0.11	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0
Ethylbenzene	0.11	U	0.11	1.0
2-Butanone (MEK)	1.0	U	1.0	10
Iodomethane	1.0	U	1.0	5.0
Methacrylonitrile	3.3	U	3.3	20
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0	10
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U	0.33	1.0
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.15	U	0.15	1.0
Carbon tetrachloride	0.50	U	0.50	1.0
Toluene	0.33	U	0.33	1.0
Bromoform	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
1,1,1-Trichloroethane	0.50	U	0.50	1.0
Trichloroethene	0.13	U	0.13	1.0
Trichlorofluoromethane	0.25	U	0.25	1.0
1,2,3-Trichloropropane	0.41	U	0.41	1.0
Vinyl acetate	0.28	U	0.28	2.0
Vinyl chloride	0.18	U	0.18	1.0

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173497

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-173497/8	Analysis Batch:	680-173497	Instrument ID:	MSA2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	aq365.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1617			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1617				

Analyte	Result	Qual	MDL	RL
Xylenes, Total	0.20	U	0.20	2.0
2-Hexanone	1.0	U	1.0	10
Propionitrile	4.6	U	4.6	20
Methyl methacrylate	0.48	U	0.48	1.0
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Ethyl methacrylate	0.25	U	0.25	1.0
Isobutyl alcohol	11	U	11	40
Chlorobromomethane	0.14	U	0.14	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
1,3-Dichloropropane	0.13	U	0.13	1.0
2,2-Dichloropropane	0.12	U	0.12	1.0
1,1-Dichloropropene	0.25	U	0.25	1.0
2-Chloro-1,3-butadiene	0.30	U	0.30	1.0
1,2-Dichlorobenzene	0.21	U	0.21	1.0
1,3-Dichlorobenzene	0.25	U	0.25	1.0
1,4-Dichlorobenzene	0.28	U	0.28	1.0
1,2,4-Trichlorobenzene	0.25	U	0.25	1.0
Dibromomethane	0.20	U	0.20	1.0

Surrogate	% Rec	Acceptance Limits
Toluene-d8 (Surr)	105	75 - 120
4-Bromofluorobenzene	102	75 - 120
Dibromofluoromethane	112	75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-173497

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-173497/5	Analysis Batch:	680-173497	Instrument ID:	MSA2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	aq361.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1450			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1450				

LCSD Lab Sample ID:	LCSD 680-173497/6	Analysis Batch:	680-173497	Instrument ID:	MSA2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	aq362.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1512			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1512				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	95	92	17 - 175	4	50		
Benzene	101	99	77 - 119	2	30		
Dichlorobromomethane	98	95	78 - 127	3	30		
Bromomethane	91	124	12 - 184	31	50		
Carbon disulfide	99	98	55 - 131	1	30		
Chlorobenzene	96	96	85 - 116	0	30		
Chlorodibromomethane	90	89	75 - 133	1	30		
Chloroethane	127	112	40 - 165	12	50		
Chloromethane	120	115	48 - 142	4	50		
Chloroform	110	105	82 - 120	5	30		
1,2-Dibromo-3-Chloropropane	85	89	49 - 140	4	30		
Ethylene Dibromide	99	103	80 - 121	5	30		
Dichlorodifluoromethane	100	98	34 - 154	2	30		
1,1-Dichloroethane	101	82	74 - 127	20	30		
1,2-Dichloroethane	95	94	66 - 132	1	30		
trans-1,2-Dichloroethene	95	97	72 - 131	3	30		
1,1-Dichloroethene	97	96	62 - 141	2	30		
Methylene Chloride	119	105	70 - 125	12	30		
1,2-Dichloropropane	99	98	73 - 124	1	30		
cis-1,3-Dichloropropene	97	96	76 - 126	1	30		
trans-1,3-Dichloropropene	104	106	73 - 128	2	30		
Ethylbenzene	91	92	86 - 116	2	30		
2-Butanone (MEK)	108	117	33 - 157	8	30		
4-Methyl-2-pentanone (MIBK)	103	118	40 - 151	13	30		
Styrene	97	98	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	90	89	81 - 128	2	30		
1,1,2,2-Tetrachloroethane	101	108	69 - 129	7	30		
Tetrachloroethene	102	99	76 - 126	3	30		
Carbon tetrachloride	99	91	71 - 135	8	30		
Toluene	104	103	81 - 117	1	30		
Bromoform	105	104	62 - 133	1	30		
1,1,2-Trichloroethane	104	106	75 - 121	2	30		
1,1,1-Trichloroethane	104	99	76 - 127	4	30		

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-173497

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-173497/5	Analysis Batch:	680-173497	Instrument ID:	MSA2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	aq361.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1450			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1450				

LCSD Lab Sample ID:	LCSD 680-173497/6	Analysis Batch:	680-173497	Instrument ID:	MSA2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	aq362.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/07/2010 1512			Final Weight/Volume:	5 mL
Date Prepared:	07/07/2010 1512				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Trichloroethene	97	96	84 - 115	1	30		
Trichlorofluoromethane	106	102	58 - 149	3	50		
1,2,3-Trichloropropane	96	103	70 - 130	8	30		
Vinyl acetate	129	78	10 - 217	49	30		Q
Vinyl chloride	107	106	59 - 144	1	50		
Xylenes, Total	96	96	84 - 118	0	30		
2-Hexanone	91	102	34 - 161	11	30		
Chlorobromomethane	104	104	10 - 150	0	30		
cis-1,2-Dichloroethene	106	98	69 - 134	8	30		
1,3-Dichloropropane	103	105	75 - 120	2	30		
2,2-Dichloropropane	127	121	55 - 157	5	30		
1,1-Dichloropropene	102	99	77 - 122	3	30		
1,2-Dichlorobenzene	89	90	79 - 124	2	30		
1,3-Dichlorobenzene	90	89	78 - 125	1	30		
1,4-Dichlorobenzene	90	90	81 - 122	0	30		
1,2,4-Trichlorobenzene	94	92	60 - 135	1	30		
Dibromomethane	99	96	78 - 119	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Toluene-d8 (Surr)	109	111	75 - 120
4-Bromofluorobenzene	94	98	75 - 120
Dibromofluoromethane	114	109	75 - 121

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173430

Method: 8270D
Preparation: 3520C

Lab Sample ID:	MB 680-173430/11-A	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8179.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	07/13/2010 0902			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Acenaphthene	0.76	U	0.76	10
Acenaphthylene	0.85	U	0.85	10
Acetophenone	0.57	U	0.57	10
2-Acetylaminofluorene	1.6	U	1.6	10
4-Aminobiphenyl	1.2	U	1.2	10
Anthracene	0.69	U	0.69	10
Benzo[a]anthracene	0.55	U	0.55	10
Benzo[a]pyrene	0.71	U	0.71	10
Benzo[b]fluoranthene	2.6	U	2.6	10
Benzo[g,h,i]perylene	0.87	U	0.87	10
Benzo[k]fluoranthene	1.2	U	1.2	10
Benzyl alcohol	1.1	U	1.1	10
Bis(2-chloroethoxy)methane	0.94	U	0.94	10
Bis(2-chloroethyl)ether	1.1	U	1.1	10
bis(chloroisopropyl) ether	0.78	U	0.78	10
Bis(2-ethylhexyl) phthalate	1.6	U	1.6	10
4-Bromophenyl phenyl ether	0.77	U	0.77	10
Butyl benzyl phthalate	1.2	U	1.2	10
4-Chloroaniline	2.2	U	2.2	20
4-Chloro-3-methylphenol	1.0	U	1.0	10
2-Chloronaphthalene	0.80	U	0.80	10
2-Chlorophenol	0.87	U	0.87	10
4-Chlorophenyl phenyl ether	0.84	U	0.84	10
Chrysene	0.51	U	0.51	10
Diallate	0.78	U	0.78	10
Dibenz(a,h)anthracene	1.0	U	1.0	10
Dibenzofuran	0.79	U	0.79	10
3,3'-Dichlorobenzidine	30	U	30	60
2,4-Dichlorophenol	1.1	U	1.1	10
2,6-Dichlorophenol	0.73	U	0.73	10
Diethyl phthalate	0.88	U	0.88	10
Dimethoate	0.75	U	0.75	10
7,12-Dimethylbenz(a)anthracene	1.2	U	1.2	10
3,3'-Dimethylbenzidine	10	U	10	20
2,4-Dimethylphenol	4.0	U	4.0	10
Dimethyl phthalate	0.99	U	0.99	10
Di-n-butyl phthalate	0.83	U	0.83	10
1,3-Dinitrobenzene	0.60	U	0.60	10
4,6-Dinitro-2-methylphenol	10	U	10	50
2,4-Dinitrophenol	10	U	10	50
2,4-Dinitrotoluene	1.2	U	1.2	10
2,6-Dinitrotoluene	1.1	U	1.1	10
Di-n-octyl phthalate	1.4	U	1.4	10

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173430

Method: 8270D
Preparation: 3520C

Lab Sample ID:	MB 680-173430/11-A	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8179.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	07/13/2010 0902			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Dinoseb	5.0	U	5.0	10
Disulfoton	0.79	U	0.79	10
Ethyl methanesulfonate	0.96	U	0.96	10
Ethyl Parathion	1.3	U	1.3	10
Famphur	1.1	U	1.1	10
Fluoranthene	0.74	U	0.74	10
Fluorene	0.96	U	0.96	10
Hexachlorobenzene	0.79	U	0.79	10
Hexachlorobutadiene	0.62	U	0.62	10
Hexachlorocyclopentadiene	2.5	U	2.5	10
Hexachloroethane	0.76	U	0.76	10
Hexachloropropene	1.4	U	1.4	10
Indeno[1,2,3-cd]pyrene	1.0	U	1.0	10
Isophorone	0.90	U	0.90	10
Isosafrole	0.50	U	0.50	10
Methapyrilene	2.7	U	2.7	2000
3-Methylcholanthrene	1.4	U	1.4	10
Methyl methanesulfonate	0.60	U	0.60	10
2-Methylnaphthalene	0.78	U	0.78	10
Methyl parathion	0.88	U	0.88	10
2-Methylphenol	0.89	U	0.89	10
3 & 4 Methylphenol	1.3	U	1.3	10
Naphthalene	0.70	U	0.70	10
1,4-Naphthoquinone	0.62	U	0.62	10
1-Naphthylamine	1.1	U	1.1	10
2-Naphthylamine	1.5	U	1.5	10
2-Nitroaniline	1.3	U	1.3	50
3-Nitroaniline	5.0	U	5.0	50
4-Nitroaniline	5.0	U	5.0	50
Nitrobenzene	0.73	U	0.73	10
2-Nitrophenol	0.76	U	0.76	10
4-Nitrophenol	1.9	U	1.9	50
N-Nitro-o-toluidine	1.5	U	1.5	10
N-Nitrosodiethylamine	0.93	U	0.93	10
N-Nitrosodimethylamine	2.8	U	2.8	10
N-Nitrosodi-n-butylamine	0.96	U	0.96	10
N-Nitrosodi-n-propylamine	0.72	U	0.72	10
N-Nitrosodiphenylamine	0.92	U	0.92	10
N-Nitrosomethylethylamine	3.3	U	3.3	10
N-Nitrosopiperidine	0.88	U	0.88	10
N-Nitrosopyrrolidine	1.0	U	1.0	10
o,o',o"-Triethylphosphorothioate	1.0	U	1.0	10
p-Dimethylamino azobenzene	0.79	U	0.79	10

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173430

Method: 8270D
Preparation: 3520C

Lab Sample ID:	MB 680-173430/11-A	Analysis Batch:	680-174014	Instrument ID:	MSN
Client Matrix:	Water	Prep Batch:	680-173430	Lab File ID:	n8179.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	07/13/2010 0902			Final Weight/Volume:	1 mL
Date Prepared:	07/07/2010 1343			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Pentachlorobenzene	0.52	U	0.52	10
Pentachloronitrobenzene	0.78	U	0.78	10
Pentachlorophenol	2.0	U	2.0	50
Phenacetin	1.4	U	1.4	10
Phenanthrene	0.77	U	0.77	10
Phenol	0.83	U	0.83	10
Phorate	0.87	U	0.87	10
p-Phenylene diamine	10	U	10	2000
Pronamide	0.89	U	0.89	10
Pyrene	0.63	U	0.63	10
Safrole, Total	0.80	U	0.80	10
Sulfotepp	0.53	U	0.53	10
1,2,4,5-Tetrachlorobenzene	0.76	U	0.76	10
2,3,4,6-Tetrachlorophenol	0.72	U	0.72	10
Thionazin	0.91	U	0.91	10
2-Toluidine	1.4	U	1.4	10
2,4,5-Trichlorophenol	1.2	U	1.2	10
2,4,6-Trichlorophenol	0.85	U	0.85	10
1,3,5-Trinitrobenzene	2.0	U	2.0	10

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	87	50 - 113
2-Fluorophenol	78	36 - 110
Nitrobenzene-d5	91	45 - 112
Phenol-d5	90	38 - 116
Terphenyl-d14	96	10 - 121
2,4,6-Tribromophenol	100	40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Control Sample - Batch: 680-173430

Method: 8270D
Preparation: 3520C

Lab Sample ID: LCS 680-173430/12-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 0925
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-174014
Prep Batch: 680-173430
Units: ug/L

Instrument ID: MSN
Lab File ID: n8180.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	100	87.3	87	45 - 117	
Acenaphthylene	100	87.8	88	51 - 112	
Anthracene	100	91.4	91	52 - 116	
Benzo[a]anthracene	100	94.6	95	49 - 124	
Benzo[a]pyrene	100	109	109	48 - 120	
Benzo[b]fluoranthene	100	84.7	85	46 - 126	
Benzo[g,h,i]perylene	100	97.9	98	51 - 117	
Benzo[k]fluoranthene	100	106	106	47 - 126	
Benzyl alcohol	100	92.6	93	34 - 113	
Bis(2-chloroethoxy)methane	100	97.6	98	50 - 112	
Bis(2-chloroethyl)ether	100	89.2	89	43 - 110	
bis(chloroisopropyl) ether	100	88.3	88	42 - 110	
Bis(2-ethylhexyl) phthalate	100	98.5	98	47 - 134	
4-Bromophenyl phenyl ether	100	97.9	98	42 - 110	
Butyl benzyl phthalate	100	105	105	52 - 135	
4-Chloroaniline	100	82.1	82	10 - 110	
4-Chloro-3-methylphenol	100	94.4	94	46 - 118	
2-Chloronaphthalene	100	80.7	81	47 - 110	
2-Chlorophenol	100	86.2	86	47 - 110	
4-Chlorophenyl phenyl ether	100	93.8	94	46 - 114	
Chrysene	100	95.5	95	51 - 123	
Dibenz(a,h)anthracene	100	95.8	96	46 - 124	
Dibenzofuran	100	83.7	84	50 - 112	
3,3'-Dichlorobenzidine	100	89.7	90	10 - 113	
2,4-Dichlorophenol	100	87.5	88	46 - 115	
Diethyl phthalate	100	93.7	94	51 - 119	
2,4-Dimethylphenol	100	68.3	68	36 - 110	
Dimethyl phthalate	100	94.7	95	50 - 116	
Di-n-butyl phthalate	100	92.7	93	49 - 123	
4,6-Dinitro-2-methylphenol	100	102	102	29 - 167	
2,4-Dinitrophenol	100	112	112	10 - 189	
2,4-Dinitrotoluene	100	95.3	95	49 - 128	
2,6-Dinitrotoluene	100	94.2	94	45 - 131	
Di-n-octyl phthalate	100	104	104	44 - 134	
Fluoranthene	100	90.4	90	50 - 120	
Fluorene	100	88.7	89	50 - 115	
Hexachlorobenzene	100	90.0	90	48 - 119	
Hexachlorobutadiene	100	57.7	58	40 - 110	
Hexachlorocyclopentadiene	100	44.2	44	10 - 110	
Hexachloroethane	100	42.5	43	33 - 110	
Indeno[1,2,3-cd]pyrene	100	97.4	97	40 - 126	
Isophorone	100	87.2	87	50 - 111	
2-Methylnaphthalene	100	83.2	83	46 - 110	

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Control Sample - Batch: 680-173430

Method: 8270D
Preparation: 3520C

Lab Sample ID: LCS 680-173430/12-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 0925
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-174014
Prep Batch: 680-173430
Units: ug/L

Instrument ID: MSN
Lab File ID: n8180.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2-Methylphenol	100	90.1	90	46 - 110	
3 & 4 Methylphenol	100	99.6	100	43 - 110	
Naphthalene	100	72.0	72	41 - 110	
2-Nitroaniline	100	96.8	97	45 - 122	
3-Nitroaniline	100	91.8	92	30 - 116	
4-Nitroaniline	100	96.0	96	36 - 125	
Nitrobenzene	100	83.5	83	46 - 110	
2-Nitrophenol	100	85.5	85	42 - 120	
4-Nitrophenol	100	106	106	30 - 122	
N-Nitrosodimethylamine	100	96.9	97	33 - 110	
N-Nitrosodi-n-propylamine	100	101	101	45 - 112	
N-Nitrosodiphenylamine	100	97.4	97	47 - 119	
Pentachlorophenol	100	91.3	91	37 - 132	
Phenanthrene	100	92.4	92	52 - 117	
Phenol	100	89.7	90	39 - 110	
Pyrene	100	97.2	97	52 - 125	
2,4,5-Trichlorophenol	100	94.0	94	47 - 122	
2,4,6-Trichlorophenol	100	90.3	90	46 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	80	50 - 113
2-Fluorophenol	77	36 - 110
Nitrobenzene-d5	84	45 - 112
Phenol-d5	87	38 - 116
Terphenyl-d14	91	10 - 121
2,4,6-Tribromophenol	93	40 - 139

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2-Fluorobiphenyl	81	72	50 - 113
2-Fluorophenol	73	62	36 - 110
Nitrobenzene-d5	82	75	45 - 112
Phenol-d5	81	66	38 - 116
Terphenyl-d14	94	81	10 - 121
2,4,6-Tribromophenol	98	85	40 - 139

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173431

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: MB 680-173431/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/08/2010 2007
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173682
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGM
Lab File ID: mg08013.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.0065	U	0.0065	0.10
4,4'-DDE	0.0077	U	0.0077	0.10
4,4'-DDT	0.0097	U	0.0097	0.10
Aldrin	0.0070	U	0.0070	0.050
alpha-BHC	0.0057	U	0.0057	0.050
beta-BHC	0.0067	U	0.0067	0.050
Chlordane (technical)	0.10	U	0.10	0.50
Chlorobenzilate	0.50	U	0.50	0.50
delta-BHC	0.0048	U	0.0048	0.050
Dieldrin	0.0091	U	0.0091	0.10
Endosulfan I	0.0042	U	0.0042	0.050
Endosulfan II	0.0098	U	0.0098	0.10
Endosulfan sulfate	0.0068	U	0.0068	0.10
Endrin	0.0097	U	0.0097	0.10
Endrin aldehyde	0.016	U	0.016	0.10
gamma-BHC (Lindane)	0.0059	U	0.0059	0.050
Heptachlor	0.0070	U	0.0070	0.050
Heptachlor epoxide	0.0060	U	0.0060	0.050
Isodrin	0.050	U	0.050	0.050
Methoxychlor	0.013	U	0.013	0.10
PCB-1016	0.071	U	0.071	1.0
PCB-1221	0.28	U	0.28	2.0
PCB-1232	0.11	U	0.11	1.0
PCB-1242	0.18	U	0.18	1.0
PCB-1248	0.36	U	0.36	1.0
PCB-1254	0.26	U	0.26	1.0
PCB-1260	0.20	U	0.20	1.0
PCB-1262	0.24	U	0.24	1.0
Toxaphene	0.50	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	98	14 - 115
Tetrachloro-m-xylene	72	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	87	14 - 115
Tetrachloro-m-xylene	69	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Control Sample - Batch: 680-173431

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: LCS 680-173431/18-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/08/2010 2027
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173682
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGM
Lab File ID: mg08014.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	0.200	0.236	118	37 - 179	
4,4'-DDE	0.200	0.166	83	33 - 142	
4,4'-DDT	0.200	0.238	119	27 - 141	
Aldrin	0.100	0.0553	55	32 - 114	
alpha-BHC	0.100	0.0968	97	29 - 112	
beta-BHC	0.100	0.106	106	15 - 204	
delta-BHC	0.100	0.118	118	25 - 123	
Dieldrin	0.200	0.207	103	45 - 137	
Endosulfan I	0.100	0.114	114	31 - 134	
Endosulfan II	0.200	0.178	89	24 - 144	
Endosulfan sulfate	0.200	0.196	98	44 - 128	
Endrin	0.200	0.198	99	38 - 144	
Endrin aldehyde	0.200	0.235	117	37 - 135	
gamma-BHC (Lindane)	0.100	0.102	102	31 - 118	
Heptachlor	0.100	0.0778	78	30 - 133	
Heptachlor epoxide	0.100	0.107	107	34 - 126	
Methoxychlor	0.200	0.188	94	10 - 243	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	83	14 - 115
Tetrachloro-m-xylene	67	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	73	14 - 115
Tetrachloro-m-xylene	66	35 - 120

Lab Control Sample - Batch: 680-173431

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: LCS 680-173431/21-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/08/2010 2046
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173682
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGM
Lab File ID: mg08015.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
PCB-1016	10.0	8.49	85	57 - 124	
PCB-1260	10.0	10.1	101	58 - 124	

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	84	14 - 115
Tetrachloro-m-xylene	61	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	78	14 - 115
Tetrachloro-m-xylene	59	35 - 120

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	84	76	14 - 115
Tetrachloro-m-xylene	69	68	35 - 120

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	81	75	14 - 115
Tetrachloro-m-xylene	68	68	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173854

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: MB 680-173854/13-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1637
Date Prepared: 07/12/2010 1434

Analysis Batch: 680-174139
Prep Batch: 680-173854
Units: ug/L

Instrument ID: SGM
Lab File ID: mg13007.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.0065	U	0.0065	0.10
4,4'-DDE	0.0077	U	0.0077	0.10
4,4'-DDT	0.0097	U	0.0097	0.10
Aldrin	0.0070	U	0.0070	0.050
alpha-BHC	0.0057	U	0.0057	0.050
beta-BHC	0.0067	U	0.0067	0.050
Chlordane (technical)	0.10	U	0.10	0.50
Chlorobenzilate	0.50	U	0.50	0.50
delta-BHC	0.0048	U	0.0048	0.050
Dieldrin	0.0091	U	0.0091	0.10
Endosulfan I	0.0042	U	0.0042	0.050
Endosulfan II	0.0098	U	0.0098	0.10
Endosulfan sulfate	0.0068	U	0.0068	0.10
Endrin	0.0097	U	0.0097	0.10
Endrin aldehyde	0.016	U	0.016	0.10
gamma-BHC (Lindane)	0.0059	U	0.0059	0.050
Heptachlor	0.0070	U	0.0070	0.050
Heptachlor epoxide	0.0060	U	0.0060	0.050
Isodrin	0.050	U	0.050	0.050
Methoxychlor	0.013	U	0.013	0.10
PCB-1016	0.071	U	0.071	1.0
PCB-1221	0.28	U	0.28	2.0
PCB-1232	0.11	U	0.11	1.0
PCB-1242	0.18	U	0.18	1.0
PCB-1248	0.36	U	0.36	1.0
PCB-1254	0.26	U	0.26	1.0
PCB-1260	0.20	U	0.20	1.0
PCB-1262	0.24	U	0.24	1.0
Toxaphene	0.50	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	49	14 - 115
Tetrachloro-m-xylene	57	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	46	14 - 115
Tetrachloro-m-xylene	46	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Control Sample - Batch: 680-173854

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: LCS 680-173854/14-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1737
Date Prepared: 07/12/2010 1434

Analysis Batch: 680-174139
Prep Batch: 680-173854
Units: ug/L

Instrument ID: SGM
Lab File ID: mg13010.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	0.200	0.294	147	37 - 179	
4,4'-DDE	0.200	0.131	65	33 - 142	
4,4'-DDT	0.200	0.184	92	27 - 141	
Aldrin	0.100	0.0333	33	32 - 114	J
alpha-BHC	0.100	0.0629	63	29 - 112	
beta-BHC	0.100	0.158	158	15 - 204	
delta-BHC	0.100	0.0621	62	25 - 123	
Dieldrin	0.200	0.150	75	45 - 137	
Endosulfan I	0.100	0.0741	74	31 - 134	
Endosulfan II	0.200	0.206	103	24 - 144	
Endosulfan sulfate	0.200	0.203	101	44 - 128	
Endrin	0.200	0.165	83	38 - 144	M
Endrin aldehyde	0.200	0.256	128	37 - 135	
gamma-BHC (Lindane)	0.100	0.0676	68	31 - 118	
Heptachlor	0.100	0.0500	50	30 - 133	
Heptachlor epoxide	0.100	0.0747	75	34 - 126	
Methoxychlor	0.200	0.178	89	10 - 243	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	55	14 - 115
Tetrachloro-m-xylene	64	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	49	14 - 115
Tetrachloro-m-xylene	47	35 - 120

Lab Control Sample - Batch: 680-173854

Method: 8081B/8082A
Preparation: 3520C

Lab Sample ID: LCS 680-173854/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/13/2010 1756
Date Prepared: 07/12/2010 1434

Analysis Batch: 680-174139
Prep Batch: 680-173854
Units: ug/L

Instrument ID: SGM
Lab File ID: mg13011.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
PCB-1016	10.0	11.3	113	57 - 124	
PCB-1260	10.0	11.2	112	58 - 124	

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	54	14 - 115
Tetrachloro-m-xylene	60	35 - 120

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	51	14 - 115
Tetrachloro-m-xylene	44	35 - 120

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	39	42	14 - 115
Tetrachloro-m-xylene	63	64	35 - 120

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	30	32	14 - 115
Tetrachloro-m-xylene	44	45	35 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173431

Method: 8141B
Preparation: 3520C

Lab Sample ID: MB 680-173431/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/09/2010 0305
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173885
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGO
Lab File ID: og08036.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Demeton-O	1.3	U	1.3	2.5
Demeton-S	1.3	U	1.3	2.5
Diazinon	0.50	U	0.50	1.0
Dimethoate	1.0	U	1.0	2.0
Disulfoton	1.0	U	1.0	2.0
Ethyl Parathion	0.50	U	0.50	1.0
Famphur	1.0	U	1.0	2.0
Methyl parathion	0.50	U	0.50	0.50
Phorate	0.50	U	0.50	1.0
Ronnel	0.50	U	0.50	1.0
Sulfotepp	0.50	U	0.50	0.50
Thionazin	0.50	U	0.50	1.0

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	95	26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Control Sample - Batch: 680-173431

Method: 8141B
Preparation: 3520C

Lab Sample ID: LCS 680-173431/28-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/09/2010 0330
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173885
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGO
Lab File ID: og08037.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Diazinon	8.00	7.33	92	53 - 138	
Methyl parathion	8.00	7.93	99	31 - 130	
Ronnel	8.00	7.26	91	46 - 142	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	97	26 - 134

Lab Control Sample - Batch: 680-173431

Method: 8141B
Preparation: 3520C

Lab Sample ID: LCS 680-173431/31-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/09/2010 0354
Date Prepared: 07/07/2010 1343

Analysis Batch: 680-173885
Prep Batch: 680-173431
Units: ug/L

Instrument ID: SGO
Lab File ID: og08038.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ethyl Parathion	8.00	7.67	96	45 - 132	
Thionazin	8.00	6.05	76	37 - 134	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	97	26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-174022

Method: 6020A
Preparation: 3030C

Lab Sample ID:	MB 680-174022/1-A	Analysis Batch:	680-174604	Instrument ID:	ICPMSA
Client Matrix:	Water	Prep Batch:	680-174022	Lab File ID:	174022.chr
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/18/2010 0153			Final Weight/Volume:	50 mL
Date Prepared:	07/13/2010 1429				

Analyte	Result	Qual	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	0.40	U	0.40	1.0
Barium	0.15	U	0.15	1.0
Beryllium	0.070	U	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.16	U	0.16	1.0
Cobalt	0.078	U	0.078	0.20
Copper	0.21	U	0.21	1.0
Lead	0.080	U	0.080	0.30
Nickel	0.40	U	0.40	1.0
Selenium	0.21	U	0.21	0.50
Silver	0.10	U	0.10	0.20
Thallium	0.10	U	0.10	0.20
Tin	0.40	U	0.40	1.0
Vanadium	1.4	U	1.4	5.0
Zinc	2.6	U	2.6	10

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Lab Control Sample - Batch: 680-174022

Method: 6020A
Preparation: 3030C

Lab Sample ID: LCS 680-174022/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/18/2010 0200
Date Prepared: 07/13/2010 1429

Analysis Batch: 680-174604
Prep Batch: 680-174022
Units: ug/L

Instrument ID: ICPMSA
Lab File ID: 174022.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	10.0	11.3	113	75 - 125	
Arsenic	20.0	21.1	106	75 - 125	
Barium	20.0	20.8	104	75 - 125	
Beryllium	10.0	10.8	108	75 - 125	
Cadmium	10.0	10.9	109	75 - 125	
Chromium	20.0	20.0	100	75 - 125	
Cobalt	10.0	9.18	92	75 - 125	
Copper	20.0	21.4	107	75 - 125	
Lead	10.0	10.2	102	75 - 125	
Nickel	20.0	20.9	105	75 - 125	
Selenium	20.0	21.7	108	75 - 125	
Silver	10.0	10.4	104	75 - 125	
Thallium	8.00	8.12	101	75 - 125	
Tin	20.0	20.7	103	75 - 125	
Vanadium	20.0	19.8	99	75 - 125	
Zinc	20.0	21.3	106	75 - 125	

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173437

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 680-173437/23-A	Analysis Batch:	680-173649	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-173437	Lab File ID:	b070810.chr
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1559			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Result	Qual	MDL	RL
Mercury	0.091	U	0.091	0.20

Lab Control Sample - Batch: 680-173437

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 680-173437/24-A	Analysis Batch:	680-173649	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-173437	Lab File ID:	b070810.chr
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/08/2010 1602			Final Weight/Volume:	50 mL
Date Prepared:	07/07/2010 1111				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.48	99	80 - 120	

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173416

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 680-173416/2
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 07/02/2010 1703
Date Prepared: N/A

Analysis Batch: 680-173416
Prep Batch: N/A
Units: mg/L

Instrument ID: ICG
Lab File ID: 0005.d
Initial Weight/Volume: 1 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Nitrate as NO3	0.36	U	0.36	1.1

Lab Control Sample - Batch: 680-173416

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 680-173416/3
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 07/02/2010 1715
Date Prepared: N/A

Analysis Batch: 680-173416
Prep Batch: N/A
Units: mg/L

Instrument ID: ICG
Lab File ID: 0006.d
Initial Weight/Volume: 1 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as NO3	11.0	10.9	99	90 - 110	

Matrix Spike - Batch: 680-173416

Method: 300.0
Preparation: N/A

Lab Sample ID: 680-59085-1
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 07/02/2010 1740
Date Prepared: N/A

Analysis Batch: 680-173416
Prep Batch: N/A
Units: mg/L

Instrument ID: ICG
Lab File ID: 0008.d
Initial Weight/Volume: 1 mL
Final Weight/Volume: 5 mL
1 uL

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as NO3	0.55	J	22.1	23.7	105	90 - 110	

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173507

Method: 335.4
Preparation: Distill/CN

Lab Sample ID:	MB 680-173507/1-A	Analysis Batch:	680-173665	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-173507	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/09/2010 0958			Final Weight/Volume:	50 mL
Date Prepared:	07/08/2010 0624				

Analyte	Result	Qual	MDL	RL
Cyanide, Total	0.0025	U	0.0025	0.010

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-173507

Method: 335.4
Preparation: Distill/CN

LCS Lab Sample ID:	LCS 680-173507/2-A	Analysis Batch:	680-173665	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-173507	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/09/2010 0958			Final Weight/Volume:	50 mL
Date Prepared:	07/08/2010 0624				

LCSD Lab Sample ID:	LCSD 680-173507/3-A	Analysis Batch:	680-173665	Instrument ID:	LATCHAT
Client Matrix:	Water	Prep Batch:	680-173507	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/09/2010 0958			Final Weight/Volume:	50 mL
Date Prepared:	07/08/2010 0624				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Cyanide, Total	100	92	90 - 110	8	20		

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Method Blank - Batch: 680-173401

Method: 9034
Preparation: 9030B

Lab Sample ID: MB 680-173401/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/07/2010 1026
Date Prepared: 07/07/2010 0741

Analysis Batch: 680-173427
Prep Batch: 680-173401
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 6 mL
Final Weight/Volume: 6 mL

Analyte	Result	Qual	RL	RL
Sulfide	10	U	10	10

Lab Control Sample - Batch: 680-173401

Method: 9034
Preparation: 9030B

Lab Sample ID: LCS 680-173401/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/07/2010 1026
Date Prepared: 07/07/2010 0741

Analysis Batch: 680-173427
Prep Batch: 680-173401
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 6 mL
Final Weight/Volume: 6 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfide	394	371	94	50 - 150	

Serial Number 031190

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)
Fort Bragg Longstreet	W912HN-10-A	NC
TAL (LAB) PROJECT MANAGER: Kathy Smith	P.O. NUMBER: 0008	CONTRACT NO.
CLIENT (SITE) PM: Kevin Halbrook	CLIENT PHONE: 912 652 6083	CLIENT FAX
CLIENT NAME: USACE	CLIENT E-MAIL	
CLIENT ADDRESS: 100 West Oglethorpe Avenue Savannah GA 31401		
COMPANY CONTRACTING THIS WORK (if applicable): N/A		

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	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	8260C	8081A	8011	8270C	Methane Ethane Ethene	Methane Ethane Ethene	300.0 Nitrate	Chloride	Sulfide		REMARKS
								ICE	ICE	ICE	ICE	HCl	HCl	ICE	NaOH	NaOH Zn Ac		
								NUMBER OF CONTAINERS SUBMITTED										
7·1·10	0835	SCMW-11R-6-10	G	W				3	2	2	2	1	1	1	1	2		
		Trip Blank						2										
7·1·10	1125	SCMW-9-6-10	G	W				3	2	2	2	1	1	1	1	2		
11	1315	SCMW-10-6-10	G	W				3	2	2	2	1	1	1	1	2		
7·1·10	1410	SCMW-BLK-6-10	G	W				3	2	2	2	1	1	1	1	2		

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
George W Lewis	7·1·10	1800	FEDEX					
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
George Rh	7/2/10	0911	YES ◯ NO ◯		680-59085	0.8/0.6/0-2

TAL8240-680 (1207)

Login Sample Receipt Check List

Client: U.S. Army Corps of Engineers

Job Number: 680-59085-1

Login Number: 59085

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is 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?	True	
There are no discrepancies between the sample IDs on the containers 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.	False	Client returned HCL Trip Blank
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	

APPENDIX D

STATISTICAL REPORTS
(Electronic Only)

Statistical Analysis of Ground-Water Data
Longstreet Road MSW Landfill
Fort Bragg, North Carolina
Rounds N1 through N27

EXECUTIVE SUMMARY

Fort Bragg authorized the U.S. Army Corps of Engineers, Savannah District to perform required sampling of the Longstreet Road Municipal Solid Waste (MSW) Landfill. Sampling activities for the twenty-sixth round of sampling (N=27) were conducted June 2010. All background and compliance wells were sampled. Ground-water data were statistically analyzed to determine if the mean concentration for each analyte deviated significantly from the mean concentration of the analytes detected in the background well. Appendix II analysis was performed on all ground-water samples collected. Any analyte with a detection since the beginning of the study was analyzed with the Kruskal Wallis Tests. Any analyte detection during this event was tested to determine if the detection was a statistically significant increase (SSI) over background levels.

Analysis of the 1,1-dichloroethane data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells MW-8, MW-9, MW-10, MW-11R, and MW-12AR. The possible SSIs were not confirmed by the Mann-Kendall Trend Analysis. The Shewhart-CUSUM Control Chart confirmed an SSI for MW-9. The data for MW-8, MW-10, MW-11R, and MW-12AR are not considered to be SSIs. Since the statistical tests are inconclusive for MW-9, further data is needed to confirm the SSI.

Analysis of the 1,2-dichloropropane data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-10. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the acetone data in monitoring well MW-10 are not SSIs.

Analysis of the 1,4-dichlorobenzene data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-10. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the acetone data in monitoring well MW-10 are not SSIs.

Analysis of the acetone data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-7. The SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the acetone data in monitoring well MW-7 are not SSIs.

Analysis of the arsenic data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-9. The SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the acetone data in monitoring well MW-9 are not SSIs.

Analysis of the barium 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 indicated possible SSIs for wells MW-8 and MW-10. The possible SSIs were not confirmed by the Mann-Kendall Trend Analysis. The Shewhart-CUSUM Control Chart confirmed an SSI for MW-10. The data for MW-8 are not considered to be SSIs. Since the statistical tests are inconclusive for MW-10, further data is needed to confirm the SSI.

Analysis of the benzene data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells MW-8, MW-9, MW-10, and MW-11R. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysisor the Shewhart-CUSUM Control Chart. The benzene data for MW-8, MW-9, MW-10, and MW-11R are not considered to contain SSIs.

Analysis of the chlorobenzene data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-9. The SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the chlorobenzene data in monitoring well MW-9 are not SSIs.

Analysis of the cis-1,2,-dichloroethene data using the Kruskal-Wallis test indicated a possible SSI in wells MW-8, MW-10, and MW-11R. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysisor the Shewhart-CUSUM Control Chart. The cis-1,2,-dichloroethene data for MW-8, MW-10, and MW-11R are not considered to contain SSIs.

Analysis of the manganese data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells MW-12AR and MW-12BR. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the manganesee data in monitoring wells MW-12AR and MW-12BR are not SSIs.

Analysis of the tetrachloroethene data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells MW-8 and MW-11R. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the tetrachloroethene data in the monitoring wells are not SSIs.

Analysis of the toluene 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 possible SSIs for any of the wells.

Analysis of the trans-1,2,-dichloroethene data using the Kruskal-Wallis test indicated a possible SSI in well MW-8. The possible SSI was not confirmed by either the Mann-Kendall Trend Analysisor the Shewhart-CUSUM Control Chart. The trans-1,2,-dichloroethene data for MW-8 are not considered to contain SSIs.

Analysis of the trichloroethene data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells MW-8, MW-10, and MW-11R. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the trichloroethene data in the monitoring wells are not SSIs.

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 possible SSIs for any of the wells.

Analysis of the vanadium data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-7. The possible SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the toluene data in the monitoring well do not contain SSIs.

Analysis of the vinyl chloride data using the Kruskal-Wallis test indicated possible SSIs in monitoring wells MW-8, MW-9, and MW-10. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the vinyl chloride data in the monitoring wells are not SSIs.

The results of the statistical analysis indicate that the compliance well concentrations do not vary significantly from background concentrations for any of the other parameters analyzed. Future analytical results will be evaluated using the same procedures.

The 1,1-dichloroethane and barium results 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.

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: June, 2010

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1.0 BACKGROUND

Fort Bragg authorized the U.S. Army Corps of Engineers, Savannah District to perform the required sampling of the Longstreet Road MSW Landfill. Sampling activities for the twenty-fourth round of sampling (N=27) were conducted June 2010. The landfill is a Municipal Solid Waste Landfill Facility (MSWLF) located north of Longstreet 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 as required. 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 and non-parametric Wilcoxin Rank-Sum Test, parametric ANOVA Tests and non-parametric Kruskal-Wallis Test, Tolerance and Prediction Intervals' and Control Charts.

2.0 DETERMINATION OF APPROPRIATE DISTRIBUTION 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 conforms 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 II organics and inorganics. Monitoring well MW-13 serves as the background well. The eight compliance wells (MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12A and MW-12B) were compared to the background concentrations by means of the applicable statistical procedure. These monitoring wells are listed on Table 1.

Table 1. Ground-Water Monitoring Network

WELL NAME	STATUS
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-10	**Active - Compliance Monitoring Well**
MW-11R	**Active - Compliance Monitoring Well**
MW-12AR	**Active - Compliance Monitoring Well**
MW-12BR	**Active - Compliance Monitoring Well**
MW-13	**Active - Compliance Monitoring Well (Background)**

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 will occur, but this variation does not necessarily represent contamination. The statistical test used for this report will predict 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 tests the hypothesis that all background and compliance wells have the same median concentration of a constituent. If the hypothesis of equal medians is rejected, then additional calculations are required to determine which compliance wells show evidence of contamination.

Different statistical tests are used as appropriate for the different distribution 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. 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.

The ANOVA Test assumes that there are at least three groups of data (including background), with a minimum of four samples per group. It also assumes that the results are normally or lognormally distributed. This test calculates the F-statistic and its corresponding significance probability. If the computed F-statistic is not significant (less than the tabulated F-statistic), it is concluded that there is no significant difference between the average background

concentration and the average concentrations of compliance wells. If the F-statistic is significant, it is concluded that at least one pair of well groups is probably different. In this case, ANOVA proceeds to make individual comparisons between background and compliance well data to isolate which well(s) show 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 four. 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.

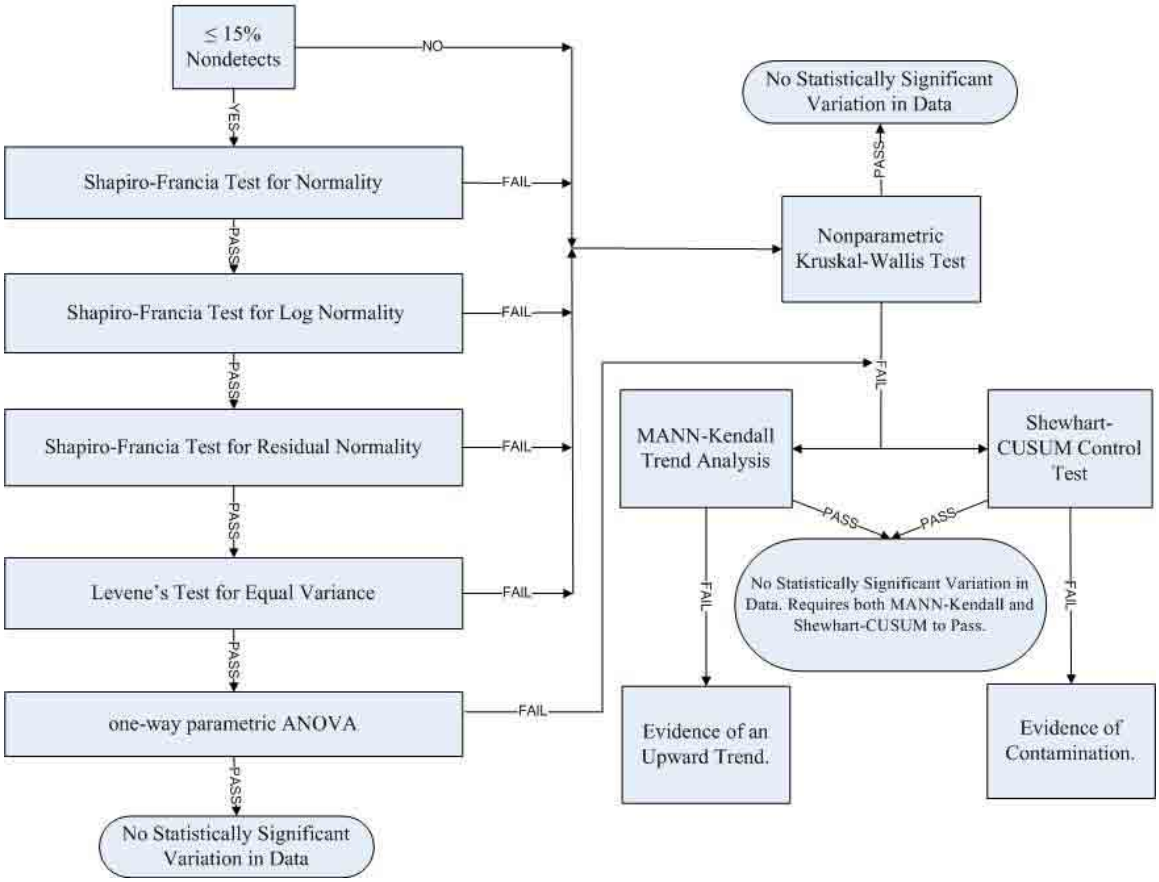
In this case, the Kruskal-Wallis Test performs post-hoc comparisons between background and compliance well data to determine which wells, if any, show evidence of contamination. If the difference between the average ranks and the mean background rank of any individual well exceeds the critical difference 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 analyzes can help to determine the validity of the positive results. Intra-well comparisons comparing 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 Charts 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 an upward trend, a downward 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

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 June, 2010. 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 analyte deviated significantly from the mean concentration from the background well data. 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 1,1-dichloroethane data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells MW-8, MW-9, MW-10, MW-11R, and MW-12AR. The possible SSIs were not confirmed by the Mann-Kendall Trend Analysis. The Shewhart-CUSUM Control Chart confirmed an SSI for MW-9. The data for MW-8, MW-10, MW-11R, and MW-12AR are not considered to be SSIs. Since the statistical tests are inconclusive for MW-9, further data is needed to confirm the SSI.

Analysis of the 1,2-dichloropropane data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-10. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the acetone data in monitoring well MW-10 are not SSIs.

Analysis of the 1,4-dichlorobenzene data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-10. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the acetone data in monitoring well MW-10 are not SSIs.

Analysis of the acetone data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-7. The SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the acetone data in monitoring well MW-7 are not SSIs.

Analysis of the arsenic data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-9. The SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the acetone data in monitoring well MW-9 are not SSIs.

Analysis of the barium 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 indicated possible SSIs for wells MW-8 and MW-10. The possible SSIs were not confirmed by the Mann-Kendall Trend Analysis. The Shewhart-CUSUM Control Chart confirmed an SSI for MW-10. The data for MW-8 are not considered to be SSIs. Since the statistical tests are inconclusive for MW-10, further data is needed to confirm the SSI.

Analysis of the benzene data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells MW-8, MW-9, MW-10, and MW-11R. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysisor the Shewhart-CUSUM Control Chart. The benzene data for MW-8, MW-9, MW-10, and MW-11R are not considered to contain SSIs.

Analysis of the chlorobenzene data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-9. The SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the chlorobenzene data in monitoring well MW-9 are not SSIs.

Analysis of the cis-1,2,-dichloroethene data using the Kruskal-Wallis test indicated a possible SSI in wells MW-8, MW-10, and MW-11R. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysisor the Shewhart-CUSUM Control Chart. The cis-1,2,-dichloroethene data for MW-8, MW-10, and MW-11R are not considered to contain SSIs.

Analysis of the manganese data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells MW-12AR and MW-12BR. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the manganesee data in monitoring wells MW-12AR and MW-12BR are not SSIs.

Analysis of the tetrachloroethene data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells MW-8 and MW-11R. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the tetrachloroethene data in the monitoring wells are not SSIs.

Analysis of the toluene 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 possible SSIs for any of the wells.

Analysis of the trans-1,2,-dichloroethene data using the Kruskal-Wallis test indicated a possible SSI in well MW-8. The possible SSI was not confirmed by either the Mann-Kendall Trend Analysisor the Shewhart-CUSUM Control Chart. The trans-1,2,-dichloroethene data for MW-8 are not considered to contain SSIs.

Analysis of the trichloroethene data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells MW-8, MW-10, and MW-11R. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the trichloroethene data in the monitoring wells are not SSIs.

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 possible SSIs for any of the wells.

Analysis of the vanadium data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-7. The possible SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the toluene data in the monitoring well do not contain SSIs.

Analysis of the vinyl chloride data using the Kruskal-Wallis test indicated possible SSIs in monitoring wells MW-8, MW-9, and MW-10. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the vinyl chloride data in the monitoring wells are not SSIs.

The results of the statistical analysis indicate that the compliance well concentrations do not vary significantly from background concentrations for any of the other parameters analyzed. Future analytical results will be evaluated using the same procedures.

6.0 CONCLUSIONS

The 1,1-dichloroethane and barium results 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.

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.

Attachment A

Statistical Calculation

Concentrations (ppb)

Parameter: 1,1-Dichloroethane

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 115
Percent Non-Detects: 54.2453%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.25	ND<0.25
			11/16/2009	ND<0.25	ND<0.25
			6/30/2010	ND<0.25	ND<0.25

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-7	27	19 (70.3704%)	7/20/1995	1.6 J	1.6 J
			8/24/1995	1.1 J	1.1 J
			9/28/1995	1 J	1 J
			10/26/1995	2	2
			11/19/1996	ND<2	ND<2
			12/19/1996	9	9
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	12	12
			9/23/1998	12	12
			3/16/1999	ND<2	ND<2
			9/23/1999	5.9	5.9
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2

			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.25		ND<0.25
			11/16/2009	ND<0.25		ND<0.25
			6/30/2010	ND<0.25		ND<0.25
MW-12AR		17	6 (35.2941%)	3/16/1999		ND<2 ND<2
			9/23/1999	ND<2	ND<2	
			3/15/2000	7.2	7.2	
			9/24/2003	6.9	6.9	
			3/11/2004	6.1	6.1	
			10/12/2004	6.3	6.3	
			4/1/2005	ND<2	ND<2	
			10/25/2005	1.21 J	1.21 J	
			4/29/2006	1.39 J	1.39 J	
			11/18/2006	0.83 J	0.83 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	1.15 J	1.15 J	
			6/5/2008	1.25 J	1.25 J	
			11/20/2008	0.62 J	0.62 J	
			6/11/2009	ND<0.25		ND<0.25
			11/16/2009	0.35 J	0.35 J	
			6/30/2010	ND<0.25		ND<0.25
MW-8	26	6 (23.0769%)	7/20/1995		0.47 J	0.47 J
			8/24/1995	12	12	
			9/28/1995	11	11	
			10/26/1995	1 J	1 J	
			11/19/1996	ND<2	ND<2	
			12/19/1996	19	19	
			3/24/1997	18	18	
			9/24/1997	22	22	
			4/7/1998	16	16	
			9/23/1998	28	28	
			3/16/1999	16.3	16.3	
			9/23/1999	16.2	16.2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	1.91 J	1.91 J	
			10/25/2005	3.43	3.43	
			4/29/2006	2.11	2.11	
			11/18/2006	2.86	2.86	
			5/23/2007	ND<2	ND<2	
			11/28/2007	4.11	4.11	
			6/5/2008	4.43	4.43	
			11/20/2008	3.08	3.08	
			6/11/2009	5.2	5.2	
			6/30/2010	2.5	2.5	
MW-10	27	8 (29.6296%)	7/20/1995		0.8 J	0.8 J
			8/24/1995	3.5	3.5	
			9/28/1995	7	7	
			10/26/1995	6	6	
			11/19/1996	ND<2	ND<2	
			12/19/1996	5	5	
			3/24/1997	14	14	
			9/24/1997	5.8	5.8	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	4.7	4.7	
			9/23/1999	2.6	2.6	

			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	1.25 J	1.25 J	
			10/25/2005	1.6 J	1.6 J	
			4/29/2006	1.91 J	1.91 J	
			11/18/2006	1.12 J	1.12 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	1.35	1.35	
			6/5/2008	1.26 J	1.26 J	
			11/20/2008	0.92 J	0.92 J	
			6/11/2009	0.97 J	0.97 J	
			11/16/2009	1.1	1.1	
			6/30/2010	0.49 J	0.49 J	
MW-11R	27	7 (25.9259%)	7/20/1995	8.5	8.5	
			8/24/1995	21	21	
			9/28/1995	19	19	
			10/26/1995	22	22	
			11/19/1996	ND<2	ND<2	
			12/19/1996	19	19	
			3/24/1997	ND<2	ND<2	
			9/24/1997	5.1	5.1	
			4/7/1998	8.4	8.4	
			9/23/1998	13	13	
			3/16/1999	10.8	10.8	
			9/23/1999	5.5	5.5	
			3/15/2000	9.9	9.9	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	3.86	3.86	
			10/25/2005	2.18	2.18	
			4/29/2006	1.68 J	1.68 J	
			11/18/2006	2.07	2.07	
			5/23/2007	ND<2	ND<2	
			11/28/2007	4.05	4.05	
			6/5/2008	ND<2	ND<2	
			11/20/2008	0.56 J	0.56 J	
			6/11/2009	2.9	2.9	
			11/16/2009	0.42 J	0.42 J	
			6/30/2010	2.9	2.9	
MW-9	27	11 (40.7407%)	7/20/1995	0.84 J	0.84 J	
			8/24/1995	0.84 J	0.84 J	
			9/28/1995	2	2	
			10/26/1995	3	3	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	5.3	5.3	
			3/16/1999	3.6	3.6	
			9/23/1999	3.5	3.5	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	2.99	2.99	
			10/25/2005	2.04	2.04	

			4/29/2006	1.38 J	1.38 J		
			11/18/2006	ND<2	ND<2		
			5/23/2007	ND<2	ND<2		
			11/28/2007	3.17	3.17		
			6/5/2008	3.24	3.24		
			11/20/2008	3.11	3.11		
			6/11/2009	7.6	7.6		
			11/16/2009	4.8	4.8		
			6/30/2010	4.6	4.6		
MW-12BR		17	14 (82.3529%)	3/16/1999		7.3	7.3
			9/23/1999	5.7	5.7		
			3/15/2000	ND<2	ND<2		
			9/24/2003	ND<2	ND<2		
			3/11/2004	ND<2	ND<2		
			10/12/2004	ND<2	ND<2		
			4/1/2005	4.25	4.25		
			10/25/2005	ND<2	ND<2		
			4/29/2006	ND<2	ND<2		
			11/18/2006	ND<2	ND<2		
			5/23/2007	ND<2	ND<2		
			11/28/2007	ND<2	ND<2		
			6/5/2008	ND<2	ND<2		
			11/20/2008	ND<2	ND<2		
			6/11/2009	ND<0.25		ND<0.25	
			11/16/2009	ND<0.25		ND<0.25	
			6/30/2010	ND<0.25		ND<0.25	
MW-6	27	27 (100%)	7/20/1995		ND<2	ND<2	
			8/24/1995	ND<2	ND<2		
			9/28/1995	ND<2	ND<2		
			10/26/1995	ND<2	ND<2		
			11/19/1996	ND<2	ND<2		
			12/19/1996	ND<2	ND<2		
			3/24/1997	ND<2	ND<2		
			9/24/1997	ND<2	ND<2		
			4/7/1998	ND<2	ND<2		
			9/23/1998	ND<2	ND<2		
			3/16/1999	ND<2	ND<2		
			9/23/1999	ND<2	ND<2		
			3/15/2000	ND<2	ND<2		
			9/24/2003	ND<2	ND<2		
			3/11/2004	ND<2	ND<2		
			10/12/2004	ND<2	ND<2		
			4/1/2005	ND<2	ND<2		
			10/25/2005	ND<2	ND<2		
			4/29/2006	ND<2	ND<2		
			11/18/2006	ND<2	ND<2		
			5/23/2007	ND<2	ND<2		
			11/28/2007	ND<2	ND<2		
			6/5/2008	ND<2	ND<2		
			11/20/2008	ND<2	ND<2		
			6/11/2009	ND<0.25		ND<0.25	
			11/16/2009	ND<0.25		ND<0.25	
			6/30/2010	ND<0.25		ND<0.25	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: 1,1-Dichloroethane

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.125	-2.65209	7.03356	-0.331511
2	0.125	-2.365	11.2629	7 -0.627213
3	0.125	-2.197	28.1457	8 -0.901873
4	0.125	-2.096	32.8549	-1.16399
5	0.125	-1.995	39.2583	65 -1.41341
6	0.125	-1.911	03.2948	85 -1.65229
7	0.125	-1.852	18.3219	1 -1.88381
8	0.125	-1.786	13.6.111	-2.10714
9	0.125	-1.727	93.3909	68 -2.32313
10	0.125	-1.684	94.4193	58 -2.53375
11	0.125	-1.635	24.4460	98 -2.73815
12	0.125	-1.589	27.4713	56 -2.93681
13	0.125	-1.546	43.527	-3.13012
14	0.125	-1.514	1 51.8195	-3.31938
15	0.35	-1.475	79.5399	75 -3.83591
16	0.42	-1.439	53.5606	98 -4.44051
17	0.47	-1.411	83.063	-5.10407
18	0.49	-1.378	66.9637	-5.77961
19	0.56	-1.346	94.61.778	-6.5339
20	0.62	-1.322	51.63.527	-7.35385
21	0.8	-1.293	03.6519	89 -8.38828
22	0.83	-1.264	64.6679	82 -9.43793
23	0.84	-1.242	64.6834	24 -10.4818
24	0.84	-1.215	96.69.821	-11.5032
25	0.92	-1.190	12.7123	73 -12.5981
26	0.97	-1.165	05.7259	47 -13.7282
27	1	-1.145	1 73.9069	-14.8737
28	1	-1.121	68.75.165	-15.9953
29	1	-1.098	47.7637	16 -17.0938
30	1	-1.080	32.7538	7 -18.1741
31	1	-1.058	12.7658	4 -19.2323
32	1	-1.036	43.7932	6 -20.2687
33	1	-1.019	43.7771	8 -21.2881
34	1	-0.998575	81.7689	-22.2867
35	1	-0.978	158.7257	-23.2648
36	1	-0.958125	83.6437	-24.223
37	1	-0.942375	84.5318	-25.1653
38	1	-0.923014	85.3837	-26.0884
39	1	-0.903992	86.201	-26.9923
40	1	-0.889006	86.9913	-27.8814
41	1	-0.870	558.7491	-28.7519
42	1	-0.852385	88.4757	-29.6043
43	1	-0.838054	89.178	-30.4423
44	1	-0.820379	89.8511	-31.2627
45	1	-0.802956	90.4958	-32.0657
46	1	-0.789191	91.1186	-32.8549
47	1	-0.772193	91.7149	-33.6271
48	1	-0.755415	92.2856	-34.3825
49	1	-0.738846	92.8314	-35.1213

50	1	-0.725736	93.3581	-35.8471
51	1	-0.709522	93.8616	-36.5566
52	1	-0.693493	94.3425	-37.2501
53	1	-0.680797	94.806	-37.9309
54	1	-0.665079	95.2483	-38.596
55	1	-0.649522	95.6702	-39.2455
56	1	-0.637192	96.0762	-39.8827
57	1	-0.621911	96.463	-40.5046
58	1	-0.606775	96.8312	-41.1114
59	1	-0.594766	97.1849	-41.7061
60	1	-0.579873	97.5212	-42.286
61	1	-0.565108	97.8405	-42.8511
62	1	-0.550465	98.1435	-43.4016
63	1	-0.538836	98.4339	-43.9404
64	1	-0.524401	98.7088	-44.4648
65	1	-0.510074	98.969	-44.9749
66	1	-0.498687	99.2177	-45.4736
67	1	-0.484544	99.4525	-45.9581
68	1	-0.470498	99.6739	-46.4286
69	1	-0.459327	99.8848	-46.8879
70	1	-0.445443	100.083	-47.3334
71	1	-0.431644	100.27	-47.765
72	1	-0.417928	100.444	-48.1829
73	1	-0.40701	100.61	-48.59
74	1	-0.393433	100.765	-48.9834
75	1	-0.379927	100.909	-49.3633
76	1	-0.369171	101.045	-49.7325
77	1	-0.355788	101.172	-50.0883
78	1	-0.342466	101.289	-50.4307
79	1	-0.331854	101.399	-50.7626
80	1	-0.318639	101.501	-51.0812
81	1	-0.305481	101.594	-51.3867
82	1	-0.294992	101.681	-51.6817
83	1	-0.281926	101.761	-51.9636
84	1	-0.268908	101.833	-52.2325
85	1	-0.255936	101.898	-52.4885
86	1	-0.24559	101.959	-52.7341
87	1	-0.232693	102.013	-52.9668
88	1	-0.219834	102.061	-53.1866
89	1	-0.209575	102.105	-53.3962
90	1	-0.196779	102.144	-53.5929
91	1	-0.184017	102.178	-53.777
92	1	-0.173829	102.208	-53.9508
93	1	-0.161119	102.234	-54.1119
94	1	-0.148434	102.256	-54.2603
95	1	-0.135774	102.274	-54.3961
96	1	-0.125661	102.29	-54.5218
97	1	-0.113039	102.303	-54.6348
98	1	-0.100433	102.313	-54.7353
99	1	-0.0903606	102.321	-54.8256
100	1	-0.0777834	102.327	-54.9034
101	1	-0.0652187	102.332	-54.9686
102	1	-0.0551734	102.335	-55.0238
103	1	-0.0426257	102.336	-55.0664
104	1	-0.0300838	102.337	-55.0965
105	1	-0.0200544	102.338	-55.1166
106	1	-0.00751925	102.338	-55.1241
107	1	0.00751925	102.338	-55.1166
108	1	0.0200544	102.338	-55.0965
109	1	0.0300838	102.339	-55.0664
110	1	0.0426257	102.341	-55.0238
111	1	0.0551734	102.344	-54.9686

112	1	0.0652187	102.348	-54.9034
113	1	0.0777834	102.354	-54.8256
114	1	0.0903606	102.362	-54.7353
115	1	0.100433	102.373	-54.6348
116	1	0.113039	102.385	-54.5218
117	1	0.125661	102.401	-54.3961
118	1	0.135774	102.42	-54.2603
119	1	0.148434	102.442	-54.1119
120	1	0.161119	102.468	-53.9508
121	1	0.173829	102.498	-53.777
122	1	0.184017	102.532	-53.5929
123	1	0.196779	102.57	-53.3962
124	1	0.209575	102.614	-53.1866
125	1	0.219834	102.663	-52.9668
126	1	0.232693	102.717	-52.7341
127	1	0.24559	102.777	-52.4885
128	1	0.255936	102.843	-52.2325
129	1	0.268908	102.915	-51.9636
130	1.1	0.281926	102.994	-51.6535
131	1.1	0.294992	103.081	-51.329
132	1.12	0.305481	103.175	-50.9869
133	1.15	0.318639	103.276	-50.6204
134	1.21	0.331854	103.386	-50.2189
135	1.25	0.342466	103.504	-49.7908
136	1.25	0.355788	103.63	-49.3461
137	1.26	0.369171	103.767	-48.8809
138	1.35	0.379927	103.911	-48.368
139	1.38	0.393433	104.066	-47.8251
140	1.39	0.40701	104.231	-47.2594
141	1.6	0.417928	104.406	-46.5907
142	1.6	0.431644	104.592	-45.9
143	1.68	0.445443	104.791	-45.1517
144	1.91	0.459327	105.002	-44.2744
145	1.91	0.470498	105.223	-43.3757
146	2	0.484544	105.458	-42.4066
147	2	0.498687	105.707	-41.4093
148	2.04	0.510074	105.967	-40.3687
149	2.07	0.524401	106.242	-39.2832
150	2.11	0.538836	106.532	-38.1463
151	2.18	0.550465	106.835	-36.9462
152	2.5	0.565108	107.154	-35.5335
153	2.6	0.579873	107.491	-34.0258
154	2.86	0.594766	107.844	-32.3248
155	2.9	0.606775	108.213	-30.5651
156	2.9	0.621911	108.599	-28.7616
157	2.99	0.637192	109.005	-26.8564
158	3	0.649522	109.427	-24.9078
159	3.08	0.665079	109.87	-22.8594
160	3.11	0.680797	110.333	-20.7421
161	3.17	0.693493	110.814	-18.5437
162	3.24	0.709522	111.317	-16.2449
163	3.43	0.725736	111.844	-13.7556
164	3.5	0.738846	112.39	-11.1696
165	3.5	0.755415	112.961	-8.52568
166	3.6	0.772193	113.557	-5.74579
167	3.86	0.789191	114.18	-2.69951
168	4.05	0.802956	114.824	0.552467
169	4.11	0.820379	115.498	3.92422
170	4.25	0.838054	116.2	7.48595
171	4.43	0.852385	116.926	11.262
172	4.6	0.87055	117.684	15.2666
173	4.7	0.889006	118.475	19.4449

174	4.8	0.903992		119.292	23.784
175	5	0.923014		120.144	28.3991
176	5.1	0.942375		121.032	33.2052
177	5.2	0.958125		121.95	38.1875
178	5.3	0.97815	122.907	43.3717	
179	5.5	0.998575		123.904	48.8638
180	5.7	1.01943	124.943	54.6746	
181	5.8	1.03643	126.017	60.6859	
182	5.9	1.05812	127.137	66.9288	
183	6	1.08032	128.304	73.4107	
184	6.1	1.09847	129.511	80.1114	
185	6.3	1.12168	130.769	87.178	
186	6.9	1.1455	132.081	95.0819	
187	7	1.16505	133.438	103.237	
188	7.2	1.19012	134.855	111.806	
189	7.3	1.21596	136.333	120.683	
190	7.6	1.24264	137.877	130.127	
191	8.4	1.26464	139.477	140.75	
192	8.5	1.29303	141.149	151.74	
193	9	1.32251	142.898	163.643	
194	9.9	1.34694	144.712	176.978	
195	10.8	1.37866	146.613	191.867	
196	11	1.41183	148.606	207.397	
197	12	1.43953	150.678	224.672	
198	12	1.47579	152.856	242.381	
199	12	1.5141	155.149	260.55	
200	13	1.54643	157.54	280.654	
201	14	1.58927	160.066	302.904	
202	16	1.63524	162.74	329.068	
203	16.2	1.68494	165.579	356.364	
204	16.3	1.72793	168.564	384.529	
205	18	1.78661	171.756	416.688	
206	19	1.85218	175.187	451.879	
207	19	1.91103	178.839	488.189	
208	19	1.99539	182.821	526.101	
209	21	2.09693	187.218	570.137	
210	22	2.19728	192.046	618.477	
211	22	2.36561	197.642	670.521	
212	28	2.65209	204.676	744.779	

Data Set Standard Deviation = 4.73791
Numerator = 554696
Denominator = 969441
W Statistic = 0.572181 = 554696 / 969441

5% Critical value of 0.976 exceeds 0.572181
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.572181
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: 1,1-Dichloroethane

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.07944	-2.65209	7.03356	5.51486
2	-2.07944	-2.36561	12.6297	10.434
3	-2.07944	-2.19728	17.4578	15.0031
4	-2.07944	-2.09693	21.8549	19.3636
5	-2.07944	-1.99539	25.8365	23.5129
6	-2.07944	-1.91103	29.4885	27.4868
7	-2.07944	-1.85218	32.9191	31.3383
8	-2.07944	-1.78661	36.111	35.0534
9	-2.07944	-1.72793	39.0968	38.6465
10	-2.07944	-1.68494	41.9358	42.1503
11	-2.07944	-1.63524	44.6098	45.5507
12	-2.07944	-1.58927	47.1356	48.8554
13	-2.07944	-1.54643	49.527	52.0712
14	-2.07944	-1.5141	51.8195	55.2197
15	-1.04982	-1.47579	53.9975	56.769
16	-0.867501	-1.43953	56.0698	58.0178
17	-0.755023	-1.41183	58.063	59.0837
18	-0.71335	-1.37866	59.9637	60.0672
19	-0.579818	-1.34694	61.778	60.8482
20	-0.478036	-1.32251	63.527	61.4804
21	-0.223144	-1.29303	65.1989	61.7689
22	-0.18633	-1.26464	66.7982	62.0046
23	-0.174353	-1.24264	68.3424	62.2212
24	-0.174353	-1.21596	69.821	62.4332
25	-0.0833816	-1.19012	71.2373	62.5325
26	-0.0304592	-1.16505	72.5947	62.5679
27	0	-1.1455	73.9069	62.5679
28	0	-1.12168	75.165	62.5679
29	0	-1.09847	76.3716	62.5679
30	0	-1.08032	77.5387	62.5679
31	0	-1.05812	78.6584	62.5679
32	0	-1.03643	79.7326	62.5679
33	0	-1.01943	80.7718	62.5679
34	0	-0.998575	81.7689	62.5679
35	0	-0.97815	82.7257	62.5679
36	0	-0.958125	83.6437	62.5679
37	0	-0.942375	84.5318	62.5679
38	0	-0.923014	85.3837	62.5679
39	0	-0.903992	86.201	62.5679
40	0	-0.889006	86.9913	62.5679
41	0	-0.87055	87.7491	62.5679
42	0	-0.852385	88.4757	62.5679
43	0	-0.838054	89.178	62.5679
44	0	-0.820379	89.8511	62.5679
45	0	-0.802956	90.4958	62.5679
46	0	-0.789191	91.1186	62.5679
47	0	-0.772193	91.7149	62.5679
48	0	-0.755415	92.2856	62.5679
49	0	-0.738846	92.8314	62.5679

50	0	-0.725736	93.3581	62.5679
51	0	-0.709522	93.8616	62.5679
52	0	-0.693493	94.3425	62.5679
53	0	-0.680797	94.806	62.5679
54	0	-0.665079	95.2483	62.5679
55	0	-0.649522	95.6702	62.5679
56	0	-0.637192	96.0762	62.5679
57	0	-0.621911	96.463	62.5679
58	0	-0.606775	96.8312	62.5679
59	0	-0.594766	97.1849	62.5679
60	0	-0.579873	97.5212	62.5679
61	0	-0.565108	97.8405	62.5679
62	0	-0.550465	98.1435	62.5679
63	0	-0.538836	98.4339	62.5679
64	0	-0.524401	98.7088	62.5679
65	0	-0.510074	98.969	62.5679
66	0	-0.498687	99.2177	62.5679
67	0	-0.484544	99.4525	62.5679
68	0	-0.470498	99.6739	62.5679
69	0	-0.459327	99.8848	62.5679
70	0	-0.445443	100.083	62.5679
71	0	-0.431644	100.27	62.5679
72	0	-0.417928	100.444	62.5679
73	0	-0.40701	100.61	62.5679
74	0	-0.393433	100.765	62.5679
75	0	-0.379927	100.909	62.5679
76	0	-0.369171	101.045	62.5679
77	0	-0.355788	101.172	62.5679
78	0	-0.342466	101.289	62.5679
79	0	-0.331854	101.399	62.5679
80	0	-0.318639	101.501	62.5679
81	0	-0.305481	101.594	62.5679
82	0	-0.294992	101.681	62.5679
83	0	-0.281926	101.761	62.5679
84	0	-0.268908	101.833	62.5679
85	0	-0.255936	101.898	62.5679
86	0	-0.24559	101.959	62.5679
87	0	-0.232693	102.013	62.5679
88	0	-0.219834	102.061	62.5679
89	0	-0.209575	102.105	62.5679
90	0	-0.196779	102.144	62.5679
91	0	-0.184017	102.178	62.5679
92	0	-0.173829	102.208	62.5679
93	0	-0.161119	102.234	62.5679
94	0	-0.148434	102.256	62.5679
95	0	-0.135774	102.274	62.5679
96	0	-0.125661	102.29	62.5679
97	0	-0.113039	102.303	62.5679
98	0	-0.100433	102.313	62.5679
99	0	-0.0903606	102.321	62.5679
100	0	-0.0777834	102.327	62.5679
101	0	-0.0652187	102.332	62.5679
102	0	-0.0551734	102.335	62.5679
103	0	-0.0426257	102.336	62.5679
104	0	-0.0300838	102.337	62.5679
105	0	-0.0200544	102.338	62.5679
106	0	-0.00751925	102.338	62.5679
107	0	0.00751925	102.338	62.5679
108	0	0.0200544	102.338	62.5679
109	0	0.0300838	102.339	62.5679
110	0	0.0426257	102.341	62.5679
111	0	0.0551734	102.344	62.5679

112	0	0.0652187	102.348	62.5679
113	0	0.0777834	102.354	62.5679
114	0	0.0903606	102.362	62.5679
115	0	0.100433	102.373	62.5679
116	0	0.113039	102.385	62.5679
117	0	0.125661	102.401	62.5679
118	0	0.135774	102.42	62.5679
119	0	0.148434	102.442	62.5679
120	0	0.161119	102.468	62.5679
121	0	0.173829	102.498	62.5679
122	0	0.184017	102.532	62.5679
123	0	0.196779	102.57	62.5679
124	0	0.209575	102.614	62.5679
125	0	0.219834	102.663	62.5679
126	0	0.232693	102.717	62.5679
127	0	0.24559	102.777	62.5679
128	0	0.255936	102.843	62.5679
129	0	0.268908	102.915	62.5679
130	0.0953102	0.281926	102.994	62.5948
131	0.0953102	0.294992	103.081	62.6229
132	0.113329	0.305481	103.175	62.6575
133	0.139762	0.318639	103.276	62.7021
134	0.19062	0.331854	103.386	62.7653
135	0.223144	0.342466	103.504	62.8418
136	0.223144	0.355788	103.63	62.9211
137	0.231112	0.369171	103.767	63.0065
138	0.300105	0.379927	103.911	63.1205
139	0.322083	0.393433	104.066	63.2472
140	0.329304	0.40701	104.231	63.3812
141	0.470004	0.417928	104.406	63.5777
142	0.470004	0.431644	104.592	63.7805
143	0.518794	0.445443	104.791	64.0116
144	0.647103	0.459327	105.002	64.3089
145	0.647103	0.470498	105.223	64.6133
146	0.693147	0.484544	105.458	64.9492
147	0.693147	0.498687	105.707	65.2948
148	0.71295	0.510074	105.967	65.6585
149	0.727549	0.524401	106.242	66.04
150	0.746688	0.538836	106.532	66.4424
151	0.779325	0.550465	106.835	66.8714
152	0.916291	0.565108	107.154	67.3892
153	0.955511	0.579873	107.491	67.9432
154	1.05082	0.594766	107.844	68.5682
155	1.06471	0.606775	108.213	69.2143
156	1.06471	0.621911	108.599	69.8764
157	1.09527	0.637192	109.005	70.5743
158	1.09861	0.649522	109.427	71.2879
159	1.12493	0.665079	109.87	72.0361
160	1.13462	0.680797	110.333	72.8085
161	1.15373	0.693493	110.814	73.6086
162	1.17557	0.709522	111.317	74.4427
163	1.23256	0.725736	111.844	75.3372
164	1.25276	0.738846	112.39	76.2628
165	1.25276	0.755415	112.961	77.2092
166	1.28093	0.772193	113.557	78.1983
167	1.35067	0.789191	114.18	79.2642
168	1.39872	0.802956	114.824	80.3874
169	1.41342	0.820379	115.498	81.5469
170	1.44692	0.838054	116.2	82.7595
171	1.4884	0.852385	116.926	84.0282
172	1.52606	0.87055	117.684	85.3567
173	1.54756	0.889006	118.475	86.7325

174	1.56862	0.903992		119.292	88.1505
175	1.60944	0.923014		120.144	89.636
176	1.62924	0.942375		121.032	91.1714
177	1.64866	0.958125		121.95	92.751
178	1.66771	0.97815	122.907	94.3823	
179	1.70475	0.998575		123.904	96.0846
180	1.74047	1.01943	124.943	97.8589	
181	1.75786	1.03643	126.017	99.6808	
182	1.77495	1.05812	127.137	101.559	
183	1.79176	1.08032	128.304	103.495	
184	1.80829	1.09847	129.511	105.481	
185	1.84055	1.12168	130.769	107.545	
186	1.93152	1.1455	132.081	109.758	
187	1.94591	1.16505	133.438	112.025	
188	1.97408	1.19012	134.855	114.374	
189	1.98787	1.21596	136.333	116.792	
190	2.02815	1.24264	137.877	119.312	
191	2.12823	1.26464	139.477	122.003	
192	2.14007	1.29303	141.149	124.771	
193	2.19722	1.32251	142.898	127.676	
194	2.29253	1.34694	144.712	130.764	
195	2.37955	1.37866	146.613	134.045	
196	2.3979	1.41183	148.606	137.43	
197	2.48491	1.43953	150.678	141.007	
198	2.48491	1.47579	152.856	144.675	
199	2.48491	1.5141	155.149	148.437	
200	2.56495	1.54643	157.54	152.404	
201	2.63906	1.58927	160.066	156.598	
202	2.77259	1.63524	162.74	161.132	
203	2.78501	1.68494	165.579	165.824	
204	2.79117	1.72793	168.564	170.647	
205	2.89037	1.78661	171.756	175.811	
206	2.94444	1.85218	175.187	181.265	
207	2.94444	1.91103	178.839	186.892	
208	2.94444	1.99539	182.821	192.767	
209	3.04452	2.09693	187.218	199.151	
210	3.09104	2.19728	192.046	205.943	
211	3.09104	2.36561	197.642	213.255	
212	3.3322	2.65209	204.676	222.092	

Data Set Standard Deviation = 1.14907
Numerator = 49325
Denominator = 57021.4
W Statistic = 0.865027 = 49325 / 57021.4

5% Critical value of 0.976 exceeds 0.865027
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.865027
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: 1,1-Dichloroethane

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	58
	9/23/1999	ND<0	58
	3/15/2000	ND<0	58
	9/24/2003	ND<0	58
	3/11/2004	ND<0	58
	10/12/2004	ND<0	58
	4/1/2005	ND<0	58
	10/25/2005	ND<0	58
	4/29/2006	ND<0	58
	11/18/2006	ND<0	58
	5/23/2007	ND<0	58
	11/28/2007	ND<0	58
	6/5/2008	ND<0	58
	11/20/2008	ND<0	58
	6/11/2009	ND<-2.07944	58
	11/16/2009	ND<-2.07944	58
	6/30/2010	ND<-2.07944	58

Rank Sum = 986
Rank Mean = 58

Background Rank Sum = 986
Background Rank Mean = 58

Compliance Wells

Well ID	Date	Result	Rank
MW-7	7/20/1995	0.470004 J	141
	8/24/1995	0.0953102 J	130
	9/28/1995	0 J	128
	10/26/1995	0.693147	146
	11/19/1996	ND<0	58
	12/19/1996	2.19722	193
	3/24/1997	ND<0	58
	9/24/1997	ND<0	58
	4/7/1998	2.48491	197
	9/23/1998	2.48491	198
	3/16/1999	ND<0	58
	9/23/1999	1.77495	182
	3/15/2000	ND<0	58
	9/24/2003	ND<0	58
	3/11/2004	ND<0	58
	10/12/2004	ND<0	58
	4/1/2005	ND<0	58
	10/25/2005	ND<0	58
	4/29/2006	ND<0	58
	11/18/2006	ND<0	58
	5/23/2007	ND<0	58

	11/28/2007	ND<0	58	
	6/5/2008	ND<0	58	
	11/20/2008	ND<0	58	
	6/11/2009	ND<-2.07944		58
	11/16/2009	ND<-2.07944		58
	6/30/2010	ND<-2.07944		58

Rank Sum = 2417
Rank Mean = 89.5185

MW-12AR	3/16/1999	ND<0	58	
	9/23/1999	ND<0	58	
	3/15/2000	1.97408		188
	9/24/2003	1.93152		186
	3/11/2004	1.80829		184
	10/12/2004	1.84055		185
	4/1/2005	ND<0	58	
	10/25/2005	0.19062 J		134
	4/29/2006	0.329304 J		140
	11/18/2006	-0.18633 J		123
	5/23/2007	ND<0	58	
	11/28/2007	0.139762 J		133
	6/5/2008	0.223144 J	135	
	11/20/2008	-0.478036 J		121
	6/11/2009	ND<-2.07944		58
	11/16/2009	-1.04982 J		116
	6/30/2010	ND<-2.07944		58

Rank Sum = 1993
Rank Mean = 117.235

MW-8	7/20/1995	-0.755023 J		118
	8/24/1995	2.48491		199
	9/28/1995	2.3979	196	
	10/26/1995	0 J	129	
	11/19/1996	ND<0	58	
	12/19/1996	2.94444		206
	3/24/1997	2.89037		205
	9/24/1997	3.09104		210
	4/7/1998	2.77259	202	
	9/23/1998	3.3322	212	
	3/16/1999	2.79117		204
	9/23/1999	2.78501		203
	3/15/2000	ND<0	58	
	9/24/2003	ND<0	58	
	3/11/2004	ND<0	58	
	10/12/2004	ND<0	58	
	4/1/2005	0.647103 J	144	
	10/25/2005	1.23256		163
	4/29/2006	0.746688		150
	11/18/2006	1.05082		154
	5/23/2007	ND<0	58	
	11/28/2007	1.41342		169
	6/5/2008	1.4884	171	
	11/20/2008	1.12493		159
	6/11/2009	1.64866		177
	6/30/2010	0.916291		152

Rank Sum = 3871
Rank Mean = 148.885

MW-10	7/20/1995	-0.223144 J		122
	8/24/1995	1.25276		164
	9/28/1995	1.94591		187
	10/26/1995	1.79176		183

	11/19/1996	ND<0		58
	12/19/1996	1.60944		175
	3/24/1997	2.63906		201
	9/24/1997	1.75786		181
	4/7/1998	ND<0		58
	9/23/1998	ND<0		58
	3/16/1999	1.54756		173
	9/23/1999	0.955511		153
	3/15/2000	ND<0		58
	9/24/2003	ND<0		58
	3/11/2004	ND<0		58
	10/12/2004	ND<0		58
	4/1/2005	0.223144	J	136
	10/25/2005	0.470004	J	142
	4/29/2006	0.647103	J	145
	11/18/2006	0.113329	J	132
	5/23/2007	ND<0		58
	11/28/2007	0.300105		138
	6/5/2008	0.231112	J	137
	11/20/2008	-0.0833816	J	126
	6/11/2009	-0.0304592	J	127
	11/16/2009	0.0953102		131
	6/30/2010	-0.71335	J	119

Rank Sum = 3336
Rank Mean = 123.556

MW-11R	7/20/1995	2.14007		192
	8/24/1995	3.04452		209
	9/28/1995	2.94444		207
	10/26/1995	3.09104		211
	11/19/1996	ND<0		58
	12/19/1996	2.94444		208
	3/24/1997	ND<0		58
	9/24/1997	1.62924		176
	4/7/1998	2.12823		191
	9/23/1998	2.56495		200
	3/16/1999	2.37955		195
	9/23/1999	1.70475		179
	3/15/2000	2.29253		194
	9/24/2003	ND<0		58
	3/11/2004	ND<0		58
	10/12/2004	ND<0		58
	4/1/2005	1.35067		167
	10/25/2005	0.779325		151
	4/29/2006	0.518794	J	143
	11/18/2006	0.727549		149
	5/23/2007	ND<0		58
	11/28/2007	1.39872		168
	6/5/2008	ND<0		58
	11/20/2008	-0.579818	J	120
	6/11/2009	1.06471		155
	11/16/2009	-0.867501	J	117
	6/30/2010	1.06471		156

Rank Sum = 3894
Rank Mean = 144.222

MW-9	7/20/1995	-0.174353	J	124
	8/24/1995	-0.174353	J	125
	9/28/1995	0.693147		147
	10/26/1995	1.09861		158
	11/19/1996	ND<0		58
	12/19/1996	ND<0		58

	3/24/1997	ND<0	58	
	9/24/1997	ND<0	58	
	4/7/1998	ND<0	58	
	9/23/1998	1.66771		178
	3/16/1999	1.28093		166
	9/23/1999	1.25276		165
	3/15/2000	ND<0	58	
	9/24/2003	ND<0	58	
	3/11/2004	ND<0	58	
	10/12/2004	ND<0	58	
	4/1/2005	1.09527		157
	10/25/2005	0.71295		148
	4/29/2006	0.322083	J	139
	11/18/2006	ND<0	58	
	5/23/2007	ND<0	58	
	11/28/2007	1.15373		161
	6/5/2008	1.17557		162
	11/20/2008	1.13462		160
	6/11/2009	2.02815		190
	11/16/2009	1.56862		174
	6/30/2010	1.52606		172

Rank Sum = 3164
Rank Mean = 117.185

MW-12BR	3/16/1999	1.98787		189
	9/23/1999	1.74047		180
	3/15/2000	ND<0	58	
	9/24/2003	ND<0	58	
	3/11/2004	ND<0	58	
	10/12/2004	ND<0	58	
	4/1/2005	1.44692		170
	10/25/2005	ND<0	58	
	4/29/2006	ND<0	58	
	11/18/2006	ND<0	58	
	5/23/2007	ND<0	58	
	11/28/2007	ND<0	58	
	6/5/2008	ND<0	58	
	11/20/2008	ND<0	58	
	6/11/2009	ND<-2.07944		58
	11/16/2009	ND<-2.07944		58
	6/30/2010	ND<-2.07944		58

Rank Sum = 1351
Rank Mean = 79.4706

MW-6	7/20/1995	ND<0	58
	8/24/1995	ND<0	58
	9/28/1995	ND<0	58
	10/26/1995	ND<0	58
	11/19/1996	ND<0	58
	12/19/1996	ND<0	58
	3/24/1997	ND<0	58
	9/24/1997	ND<0	58
	4/7/1998	ND<0	58
	9/23/1998	ND<0	58
	3/16/1999	ND<0	58
	9/23/1999	ND<0	58
	3/15/2000	ND<0	58
	9/24/2003	ND<0	58
	3/11/2004	ND<0	58
	10/12/2004	ND<0	58
	4/1/2005	ND<0	58
	10/25/2005	ND<0	58

4/29/2006	ND<0	58	
11/18/2006	ND<0	58	
5/23/2007	ND<0	58	
11/28/2007	ND<0	58	
6/5/2008	ND<0	58	
11/20/2008	ND<0	58	
6/11/2009	ND<-2.07944	58	
11/16/2009	ND<-2.07944	58	
6/30/2010	ND<-2.07944	58	

Rank Sum = 1566
Rank Mean = 58

Calculation Results:

Kruskal-Wallis H Statistic = 58.9234
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 70.1145
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
58.9234 > 15.5073 indicating a significant group difference at 5% significance level
70.1145 > 15.5073 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 58

Well	Mean Rank		Dif from Bkg	Critical Value
MW-7	89.5185	31.5185	44.1836	
MW-12AR		117.235	59.2353	48.9476
MW-8	148.885	90.8846	44.5106	
MW-10	123.556	65.5556	44.1836	
MW-11R	144.222	86.2222	44.1836	
MW-9	117.185	59.1852	44.1836	
MW-12BR		79.4706	21.4706	48.9476
MW-6	58	0	44.1836	

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 58

Well	Mean Rank		Dif from Bkg	Critical Value
MW-7	89.5185	31.5185	47.7122	
MW-12AR		117.235	59.2353	52.8567
MW-8	148.885	90.8846	48.0654	
MW-10	123.556	65.5556	47.7122	
MW-11R	144.222	86.2222	47.7122	
MW-9	117.185	59.1852	47.7122	
MW-12BR		79.4706	21.4706	52.8567
MW-6	58	0	47.7122	

Mann-Kendall Trend Analysis

Parameter: 1,1-Dichloroethane

Location: MW-12AR

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		
1.97408		ND<0	1.97408	1	0	
1.93152		ND<0	1.93152	2	0	
1.80829		ND<0	1.80829	3	0	
1.84055		ND<0	1.84055	4	0	
ND<0	ND<0	0	4	0		
0.19062 J		ND<0	0.19062	5	0	
0.329304 J		ND<0	0.329304	6	0	
-0.18633 J		ND<0	-0.186336	1		
ND<0	ND<0	0	6	1		
0.139762 J		ND<0	0.139762	7	1	
0.223144 J		ND<0	0.223144	8	1	
-0.478036 J		ND<0	-0.478036	8	2	
ND<-2.07944		ND<0	-2.079448	3		
-1.04982 J		ND<0	-1.049828	4		
ND<-2.07944		ND<0	-2.079448	5		
1.97408		ND<0	1.97408	9	5	
1.93152		ND<0	1.93152	10	5	
1.80829		ND<0	1.80829	11	5	
1.84055		ND<0	1.84055	12	5	
ND<0	ND<0	0	12	5		
0.19062 J		ND<0	0.19062	13	5	
0.329304 J		ND<0	0.329304	14	5	
-0.18633 J		ND<0	-0.186314	6		
ND<0	ND<0	0	14	6		
0.139762 J		ND<0	0.139762	15	6	
0.223144 J		ND<0	0.223144	16	6	
-0.478036 J		ND<0	-0.478036	16	7	
ND<-2.07944		ND<0	-2.079416	8		
-1.04982 J		ND<0	-1.049816	9		
ND<-2.07944		ND<0	-2.079416	10		
1.93152		1.97408	-0.0425	596	16	11
1.80829		1.97408	-0.165	792	16	12
1.84055		1.97408	-0.133	531	16	13
ND<0	1.97408		-1.974	0816	14	
0.19062 J		1.97408	-1.783	4616	15	
0.329304 J		1.97408	-1.644	7816	16	
-0.18633 J		1.97408	-2.160	4116	17	
ND<0	1.97408		-1.974	0816	18	
0.139762 J		1.97408	-1.834	3216	19	
0.223144 J		1.97408	-1.750	9416	20	
-0.478036 J		1.97408	-2.452	1216	21	
ND<-2.07944		1.97408	-4.053	5216	22	
-1.04982 J		1.97408	-3.0239	16	23	
ND<-2.07944		1.97408	-4.053	5216	24	

1.80829	1.93152	-0.123233	16	25
1.84055	1.93152	-0.0909718	16	26
ND<0	1.93152	-1.9315216	27	
0.19062 J	1.93152	-1.7409 16	28	
0.329304 J	1.93152	-1.6022216	29	
-0.18633 J	1.93152	-2.1178516	30	
ND<0	1.93152	-1.9315216	31	
0.139762 J	1.93152	-1.7917616	32	
0.223144 J	1.93152	-1.7083816	33	
-0.478036 J	1.93152	-2.4095616	34	
ND<-2.07944	1.93152	-4.0109616	35	
-1.04982 J	1.93152	-2.9813416	36	
ND<-2.07944	1.93152	-4.0109616	37	
1.84055	1.80829	0.0322609	17	37
ND<0	1.80829	-1.8082917	38	
0.19062 J	1.80829	-1.6176717	39	
0.329304 J	1.80829	-1.4789917	40	
-0.18633 J	1.80829	-1.9946217	41	
ND<0	1.80829	-1.8082917	42	
0.139762 J	1.80829	-1.6685317	43	
0.223144 J	1.80829	-1.5851517	44	
-0.478036 J	1.80829	-2.2863217	45	
ND<-2.07944	1.80829	-3.8877317	46	
-1.04982 J	1.80829	-2.8581117	47	
ND<-2.07944	1.80829	-3.8877317	48	
ND<0	1.84055	-1.8405517	49	
0.19062 J	1.84055	-1.6499317	50	
0.329304 J	1.84055	-1.5112517	51	
-0.18633 J	1.84055	-2.0268817	52	
ND<0	1.84055	-1.8405517	53	
0.139762 J	1.84055	-1.7007917	54	
0.223144 J	1.84055	-1.6174117	55	
-0.478036 J	1.84055	-2.3185917	56	
ND<-2.07944	1.84055	-3.9199917	57	
-1.04982 J	1.84055	-2.8903717	58	
ND<-2.07944	1.84055	-3.9199917	59	
0.19062 J	ND<0	0.19062 18	59	
0.329304 J	ND<0	0.329304	19	59
-0.18633 J	ND<0	-0.1863319	60	
ND<0	ND<0	0 19	60	
0.139762 J	ND<0	0.139762	20	60
0.223144 J	ND<0	0.223144	21	60
-0.478036 J	ND<0	-0.478036	21	61
ND<-2.07944	ND<0	-2.0794421	62	
-1.04982 J	ND<0	-1.0498221	63	
ND<-2.07944	ND<0	-2.0794421	64	
0.329304 J	0.19062 J	0.138683	22	64
-0.18633 J	0.19062 J	-0.3769522	65	
ND<0	0.19062 J	-0.1906222	66	
0.139762 J	0.19062 J	-0.0508584	22	67
0.223144 J	0.19062 J	0.0325232	23	67
-0.478036 J	0.19062 J	-0.668656	23	68
ND<-2.07944	0.19062 J	-2.2700623	69	
-1.04982 J	0.19062 J	-1.2404423	70	
ND<-2.07944	0.19062 J	-2.2700623	71	
-0.18633 J	0.329304 J	-0.515633	23	72
ND<0	0.329304 J	-0.329304	23	73

0.139762 J	0.329304 J	-0.189542	23	74
0.223144 J	0.329304 J	-0.1061623	75	
-0.478036 J	0.329304 J	-0.8073423	76	
ND<-2.07944	0.329304 J	-2.4087523	77	
-1.04982 J	0.329304 J	-1.3791323	78	
ND<-2.07944	0.329304 J	-2.4087523	79	

ND<0	-0.18633 J	0.18633	24	79
0.139762 J	-0.18633 J	0.326092	25	79
0.223144 J	-0.18633 J	0.409473	26	79
-0.478036 J	-0.18633 J	-0.291706	26	80
ND<-2.07944	-0.18633 J	-1.8931126	81	
-1.04982 J	-0.18633 J	-0.863493	26	82
ND<-2.07944	-0.18633 J	-1.8931126	83	

0.139762 J	ND<0	0.139762	27	83
0.223144 J	ND<0	0.223144	28	83
-0.478036 J	ND<0	-0.478036	28	84
ND<-2.07944	ND<0	-2.0794428	85	
-1.04982 J	ND<0	-1.0498228	86	
ND<-2.07944	ND<0	-2.0794428	87	

0.223144 J	0.139762 J	0.0833816	29	87
-0.478036 J	0.139762 J	-0.617798	29	88
ND<-2.07944	0.139762 J	-2.2192 29	89	
-1.04982 J	0.139762 J	-1.1895829	90	
ND<-2.07944	0.139762 J	-2.2192 29	91	

-0.478036 J	0.223144 J	-0.701179	29	92
ND<-2.07944	0.223144 J	-2.3025929	93	
-1.04982 J	0.223144 J	-1.2729729	94	
ND<-2.07944	0.223144 J	-2.3025929	95	

ND<-2.07944	-0.478036 J	-1.6014129	96	
-1.04982 J	-0.478036 J	-0.571786	29	97
ND<-2.07944	-0.478036 J	-1.6014129	98	

-1.04982 J	ND<-2.07944	1.02962	30	98
ND<-2.07944	ND<-2.07944	0	30	98

ND<-2.07944	-1.04982 J	-1.0296230	99	

S Statistic = 30 - 99 = -69

Tied Group	Value	Members
1	0	4
2	-2.07944	2

Time Period		Observations
3/16/1999		1
9/23/1999		1
3/15/2000		1
9/24/2003		1
3/11/2004		1
10/12/2004		1
4/1/2005	1	
10/25/2005		1
4/29/2006		1
11/18/2006		1

5/23/2007		1
11/28/2007		1
6/5/2008	1	
11/20/2008		1
6/11/2009		1
11/16/2009		1
6/30/2010		1

There are 0 time periods with multiple data

A = 174
B = 0
C = 24
D = 0
E = 14
F = 0
a = 10608
b = 36720
c = 544
Group Variance = 579.667
Z-Score = -2.82436
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.82436| > 1.97737 indicating a trend

Mann-Kendall Trend Analysis

Parameter: 1,1-Dichloroethane

Location: MW-8

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
2.48491	-0.755023 J	3.23993	1	0
2.3979	-0.755023 J	3.15292	2	0
0 J	-0.755023 J	0.755023	3	0
ND<0	-0.755023 J	0.755023	4	0
2.94444	-0.755023 J	3.69946	5	0
2.89037	-0.755023 J	3.64539	6	0
3.09104	-0.755023 J	3.84607	7	0
2.77259	-0.755023 J	3.52761	8	0
3.3322	-0.755023 J	4.08723	9	0
2.79117	-0.755023 J	3.54619	10	0
2.78501	-0.755023 J	3.54003	11	0
ND<0	-0.755023 J	0.755023	12	0
ND<0	-0.755023 J	0.755023	13	0
ND<0	-0.755023 J	0.755023	14	0
ND<0	-0.755023 J	0.755023	15	0
0.647103 J	-0.755023 J	1.40213	16	0
1.23256	-0.755023 J	1.98758	17	0
0.746688	-0.755023 J	1.50171	18	0
1.05082	-0.755023 J	1.80584	19	0
ND<0	-0.755023 J	0.755023	20	0
1.41342	-0.755023 J	2.16845	21	0
1.4884	-0.755023 J	2.24342	22	0
1.12493	-0.755023 J	1.87995	23	0
1.64866	-0.755023 J	2.40368	24	0
0.916291	-0.755023 J	1.67131	25	0
2.3979	2.48491	-0.0870114	25	1
0 J	2.48491	-2.4849125	2	
ND<0	2.48491	-2.4849125	3	
2.94444	2.48491	0.459532	26	3
2.89037	2.48491	0.405465	27	3
3.09104	2.48491	0.606136	28	3
2.77259	2.48491	0.287682	29	3
3.3322	2.48491	0.847298	30	3
2.79117	2.48491	0.306258	31	3
2.78501	2.48491	0.300105	32	3
ND<0	2.48491	-2.4849132	4	
ND<0	2.48491	-2.4849132	5	
ND<0	2.48491	-2.4849132	6	
ND<0	2.48491	-2.4849132	7	
0.647103 J	2.48491	-1.8378	32	8
1.23256	2.48491	-1.2523532	9	
0.746688	2.48491	-1.7382232	10	
1.05082	2.48491	-1.4340932	11	
ND<0	2.48491	-2.4849132	12	
1.41342	2.48491	-1.0714832	13	
1.4884	2.48491	-0.996507	32	14
1.12493	2.48491	-1.3599832	15	

1.64866		2.48491		-0.836248	32	16
0.916291		2.48491		-1.5686232	17	
0 J	2.3979	-2.3979	32	18		
ND<0	2.3979	-2.3979	32	19		
2.94444		2.3979	0.546544		33	19
2.89037		2.3979	0.492476		34	19
3.09104		2.3979	0.693147		35	19
2.77259		2.3979	0.374693		36	19
3.3322	2.3979	0.934309		37	19	
2.79117		2.3979	0.39327	38	19	
2.78501		2.3979	0.387116		39	19
ND<0	2.3979	-2.3979	39	20		
ND<0	2.3979	-2.3979	39	21		
ND<0	2.3979	-2.3979	39	22		
ND<0	2.3979	-2.3979	39	23		
0.647103 J		2.3979	-1.7507	39	24	
1.23256		2.3979	-1.1653	39	25	
0.746688		2.3979	-1.6512	39	26	
1.05082		2.3979	-1.3470	39	27	
ND<0	2.3979	-2.3979	39	28		
1.41342		2.3979	-0.984472		39	29
1.4884	2.3979	-0.909496		39	30	
1.12493		2.3979	-1.2729	39	31	
1.64866		2.3979	-0.749237		39	32
0.916291		2.3979	-1.4816	39	33	
ND<0	0 J	0	39	33		
2.94444		0 J	2.94444	40	33	
2.89037		0 J	2.89037	41	33	
3.09104		0 J	3.09104	42	33	
2.77259		0 J	2.77259	43	33	
3.3322	0 J	3.3322	44	33		
2.79117		0 J	2.79117	45	33	
2.78501		0 J	2.78501	46	33	
ND<0	0 J	0	46	33		
ND<0	0 J	0	46	33		
ND<0	0 J	0	46	33		
ND<0	0 J	0	46	33		
0.647103 J		0 J	0.647103		47	33
1.23256		0 J	1.23256	48	33	
0.746688		0 J	0.746688		49	33
1.05082		0 J	1.05082	50	33	
ND<0	0 J	0	50	33		
1.41342		0 J	1.41342	51	33	
1.4884	0 J	1.4884	52	33		
1.12493		0 J	1.12493	53	33	
1.64866		0 J	1.64866	54	33	
0.916291		0 J	0.916291		55	33
2.94444		ND<0	2.94444	56	33	
2.89037		ND<0	2.89037	57	33	
3.09104		ND<0	3.09104	58	33	
2.77259		ND<0	2.77259	59	33	
3.3322	ND<0	3.3322	60	33		
2.79117		ND<0	2.79117	61	33	
2.78501		ND<0	2.78501	62	33	
ND<0	ND<0	0	62	33		
ND<0	ND<0	0	62	33		
ND<0	ND<0	0	62	33		
ND<0	ND<0	0	62	33		
0.647103 J		ND<0	0.647103		63	33

1.23256		ND<0	1.23256	64	33	
0.746688		ND<0	0.746688		65	33
1.05082		ND<0	1.05082	66	33	
ND<0	ND<0	0	66	33		
1.41342		ND<0	1.41342	67	33	
1.4884	ND<0	1.4884	68	33		
1.12493		ND<0	1.12493	69	33	
1.64866		ND<0	1.64866	70	33	
0.916291		ND<0	0.916291		71	33
2.89037		2.94444	-0.0540672		71	34
3.09104		2.94444	0.146603		72	34
2.77259		2.94444	-0.1718572		35	
3.3322	2.94444	0.387766		73	35	
2.79117		2.94444	-0.153274		73	36
2.78501		2.94444	-0.159428		73	37
ND<0	2.94444	-2.9444473		38		
ND<0	2.94444	-2.9444473		39		
ND<0	2.94444	-2.9444473		40		
ND<0	2.94444	-2.9444473		41		
0.647103 J		2.94444	-2.2973473		42	
1.23256		2.94444	-1.7118873		43	
0.746688		2.94444	-2.1977573		44	
1.05082		2.94444	-1.8936273		45	
ND<0	2.94444	-2.9444473		46		
1.41342		2.94444	-1.5310273		47	
1.4884	2.94444	-1.4560473		48		
1.12493		2.94444	-1.8195173		49	
1.64866		2.94444	-1.2957873		50	
0.916291		2.94444	-2.0281573		51	
3.09104		2.89037	0.200671		74	51
2.77259		2.89037	-0.117783		74	52
3.3322	2.89037	0.441833		75	52	
2.79117		2.89037	-0.0992067		75	53
2.78501		2.89037	-0.105361		75	54
ND<0	2.89037	-2.8903775		55		
ND<0	2.89037	-2.8903775		56		
ND<0	2.89037	-2.8903775		57		
ND<0	2.89037	-2.8903775		58		
0.647103 J		2.89037	-2.2432775		59	
1.23256		2.89037	-1.6578175		60	
0.746688		2.89037	-2.1436875		61	
1.05082		2.89037	-1.8395575		62	
ND<0	2.89037	-2.8903775		63		
1.41342		2.89037	-1.4769575		64	
1.4884	2.89037	-1.4019775		65		
1.12493		2.89037	-1.7654475		66	
1.64866		2.89037	-1.2417175		67	
0.916291		2.89037	-1.9740875		68	
2.77259		3.09104	-0.318454		75	69
3.3322	3.09104	0.241162		76	69	
2.79117		3.09104	-0.299877		76	70
2.78501		3.09104	-0.306031		76	71
ND<0	3.09104	-3.0910476		72		
ND<0	3.09104	-3.0910476		73		
ND<0	3.09104	-3.0910476		74		
ND<0	3.09104	-3.0910476		75		
0.647103 J		3.09104	-2.4439476		76	
1.23256		3.09104	-1.8584876		77	
0.746688		3.09104	-2.3443576		78	

1.05082		3.09104		-2.0402276	79	
ND<0	3.09104		-3.0910476	80		
1.41342		3.09104		-1.6776276	81	
1.4884	3.09104		-1.6026476	82		
1.12493		3.09104		-1.9661176	83	
1.64866		3.09104		-1.4423876	84	
0.916291		3.09104		-2.1747576	85	
3.3322	2.77259		0.559616	77	85	
2.79117		2.77259		0.0185764	78	85
2.78501		2.77259		0.0124225	79	85
ND<0	2.77259		-2.7725979	86		
ND<0	2.77259		-2.7725979	87		
ND<0	2.77259		-2.7725979	88		
ND<0	2.77259		-2.7725979	89		
0.647103 J		2.77259		-2.1254979	90	
1.23256		2.77259		-1.5400379	91	
0.746688		2.77259		-2.0259 79	92	
1.05082		2.77259		-1.7217779	93	
ND<0	2.77259		-2.7725979	94		
1.41342		2.77259		-1.3591779	95	
1.4884	2.77259		-1.2841979	96		
1.12493		2.77259		-1.6476679	97	
1.64866		2.77259		-1.1239379	98	
0.916291		2.77259		-1.8563 79	99	
2.79117		3.3322	-0.541039	79	100	
2.78501		3.3322	-0.547193	79	101	
ND<0	3.3322	-3.3322	79	102		
ND<0	3.3322	-3.3322	79	103		
ND<0	3.3322	-3.3322	79	104		
ND<0	3.3322	-3.3322	79	105		
0.647103 J		3.3322	-2.6851 79	106		
1.23256		3.3322	-2.0996479	107		
0.746688		3.3322	-2.5855279	108		
1.05082		3.3322	-2.2813879	109		
ND<0	3.3322	-3.3322	79	110		
1.41342		3.3322	-1.9187879	111		
1.4884	3.3322	-1.8438	79	112		
1.12493		3.3322	-2.2072779	113		
1.64866		3.3322	-1.6835579	114		
0.916291		3.3322	-2.4159179	115		
2.78501		2.79117		-0.00615387	79	116
ND<0	2.79117		-2.7911779	117		
ND<0	2.79117		-2.7911779	118		
ND<0	2.79117		-2.7911779	119		
ND<0	2.79117		-2.7911779	120		
0.647103 J		2.79117		-2.1440679	121	
1.23256		2.79117		-1.5586 79	122	
0.746688		2.79117		-2.0444879	123	
1.05082		2.79117		-1.7403479	124	
ND<0	2.79117		-2.7911779	125		
1.41342		2.79117		-1.3777479	126	
1.4884	2.79117		-1.3027779	127		
1.12493		2.79117		-1.6662479	128	
1.64866		2.79117		-1.1425179	129	
0.916291		2.79117		-1.8748779	130	
ND<0	2.78501		-2.7850179	131		
ND<0	2.78501		-2.7850179	132		
ND<0	2.78501		-2.7850179	133		

ND<0	2.78501		-2.7850	179	134	
0.647103 J		2.78501		-2.1379	179	135
1.23256		2.78501		-1.5524	579	136
0.746688		2.78501		-2.0383	279	137
1.05082		2.78501		-1.7341	979	138
ND<0	2.78501		-2.7850	179	139	
1.41342		2.78501		-1.3715	979	140
1.4884	2.78501		-1.2966	179	141	
1.12493		2.78501		-1.6600	879	142
1.64866		2.78501		-1.1363	579	143
0.916291		2.78501		-1.8687	279	144

ND<0	ND<0	0	79	144		
ND<0	ND<0	0	79	144		
ND<0	ND<0	0	79	144		
0.647103 J		ND<0	0.647103		80	144
1.23256		ND<0	1.23256	81	144	
0.746688		ND<0	0.746688		82	144
1.05082		ND<0	1.05082	83	144	
ND<0	ND<0	0	83	144		
1.41342		ND<0	1.41342	84	144	
1.4884	ND<0	1.4884	85	144		
1.12493		ND<0	1.12493	86	144	
1.64866		ND<0	1.64866	87	144	
0.916291		ND<0	0.916291		88	144

ND<0	ND<0	0	88	144		
ND<0	ND<0	0	88	144		
0.647103 J		ND<0	0.647103		89	144
1.23256		ND<0	1.23256	90	144	
0.746688		ND<0	0.746688		91	144
1.05082		ND<0	1.05082	92	144	
ND<0	ND<0	0	92	144		
1.41342		ND<0	1.41342	93	144	
1.4884	ND<0	1.4884	94	144		
1.12493		ND<0	1.12493	95	144	
1.64866		ND<0	1.64866	96	144	
0.916291		ND<0	0.916291		97	144

ND<0	ND<0	0	97	144		
0.647103 J		ND<0	0.647103		98	144
1.23256		ND<0	1.23256	99	144	
0.746688		ND<0	0.746688		100	144
1.05082		ND<0	1.05082	101	144	
ND<0	ND<0	0	101	144		
1.41342		ND<0	1.41342	102	144	
1.4884	ND<0	1.4884	103	144		
1.12493		ND<0	1.12493	104	144	
1.64866		ND<0	1.64866	105	144	
0.916291		ND<0	0.916291		106	144

0.647103 J		ND<0	0.647103		107	144
1.23256		ND<0	1.23256	108	144	
0.746688		ND<0	0.746688		109	144
1.05082		ND<0	1.05082	110	144	
ND<0	ND<0	0	110	144		
1.41342		ND<0	1.41342	111	144	
1.4884	ND<0	1.4884	112	144		
1.12493		ND<0	1.12493	113	144	
1.64866		ND<0	1.64866	114	144	
0.916291		ND<0	0.916291		115	144

1.23256	0.647103 J	0.585457	116	144	
0.746688	0.647103 J	0.0995847	117	144	
1.05082	0.647103 J	0.403718	118	144	
ND<0	0.647103 J	-0.647103	118	145	
1.41342	0.647103 J	0.76632	119	145	
1.4884	0.647103 J	0.841296	120	145	
1.12493	0.647103 J	0.477826	121	145	
1.64866	0.647103 J	1.00156	122	145	
0.916291	0.647103 J	0.269187	123	145	
0.746688	1.23256	-0.485872	123	146	
1.05082	1.23256	-0.181739	123	147	
ND<0	1.23256	-1.23256	123	148	
1.41342	1.23256	0.180863	124	148	
1.4884	1.23256	0.255839	125	148	
1.12493	1.23256	-0.107631	125	149	
1.64866	1.23256	0.416098	126	149	
0.916291	1.23256	-0.31627	126	150	
1.05082	0.746688	0.304134	127	150	
ND<0	0.746688	-0.746688	127	151	
1.41342	0.746688	0.666735	128	151	
1.4884	0.746688	0.741712	129	151	
1.12493	0.746688	0.378242	130	151	
1.64866	0.746688	0.901971	131	151	
0.916291	0.746688	0.169603	132	151	
ND<0	1.05082	-1.05082	132	152	
1.41342	1.05082	0.362601	133	152	
1.4884	1.05082	0.437578	134	152	
1.12493	1.05082	0.074108	135	152	
1.64866	1.05082	0.597837	136	152	
0.916291	1.05082	-0.134531	136	153	
1.41342	ND<0	1.41342	137	153	
1.4884	ND<0	1.4884	138	153	
1.12493	ND<0	1.12493	139	153	
1.64866	ND<0	1.64866	140	153	
0.916291	ND<0	0.916291	141	153	
1.4884	1.41342	0.0749766	142	153	
1.12493	1.41342	-0.288493	142	154	
1.64866	1.41342	0.235236	143	154	
0.916291	1.41342	-0.497132	143	155	
1.12493	1.4884	-0.36347	143	156	
1.64866	1.4884	0.160259	144	156	
0.916291	1.4884	-0.572109	144	157	
1.64866	1.12493	0.523729	145	157	
0.916291	1.12493	-0.208639	145	158	
0.916291	1.64866	-0.732368	145	159	

S Statistic = 145 - 159 = -14

Tied Group	Value	Members
1	0	7

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 798
B = 0
C = 210
D = 0
E = 42
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 2014
Z-Score = -0.289677
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.289677| <= 1.97737 indicating no evidence of a trend

Mann-Kendall Trend Analysis

Parameter: 1,1-Dichloroethane

Location: MW-10

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
1.25276	-0.223144 J	1.47591	1	0
1.94591	-0.223144 J	2.16905	2	0
1.79176	-0.223144 J	2.0149	3	0
ND<0	-0.223144 J	0.223144	4	0
1.60944	-0.223144 J	1.83258	5	0
2.63906	-0.223144 J	2.8622	6	0
1.75786	-0.223144 J	1.981	7	0
ND<0	-0.223144 J	0.223144	8	0
ND<0	-0.223144 J	0.223144	9	0
1.54756	-0.223144 J	1.77071	10	0
0.955511	-0.223144 J	1.17865	11	0
ND<0	-0.223144 J	0.223144	12	0
ND<0	-0.223144 J	0.223144	13	0
ND<0	-0.223144 J	0.223144	14	0
ND<0	-0.223144 J	0.223144	15	0
0.223144 J	-0.223144 J	0.446287	16	0
0.470004 J	-0.223144 J	0.693147	17	0
0.647103 J	-0.223144 J	0.870247	18	0
0.113329 J	-0.223144 J	0.336472	19	0
ND<0	-0.223144 J	0.223144	20	0
0.300105	-0.223144 J	0.523248	21	0
0.231112 J	-0.223144 J	0.454255	22	0
-0.0833816 J	-0.223144 J	0.139762	23	0
-0.0304592 J	-0.223144 J	0.192684	24	0
0.0953102	-0.223144 J	0.318454	25	0
-0.71335 J	-0.223144 J	-0.490206	25	1
1.94591	1.25276	0.693147	26	1
1.79176	1.25276	0.538997	27	1
ND<0	1.25276	-1.2527627	2	
1.60944	1.25276	0.356675	28	2
2.63906	1.25276	1.38629	29	2
1.75786	1.25276	0.505095	30	2
ND<0	1.25276	-1.2527630	3	
ND<0	1.25276	-1.2527630	4	
1.54756	1.25276	0.2948	31	4
0.955511	1.25276	-0.297252	31	5
ND<0	1.25276	-1.2527631	6	
ND<0	1.25276	-1.2527631	7	
ND<0	1.25276	-1.2527631	8	
ND<0	1.25276	-1.2527631	9	
0.223144 J	1.25276	-1.0296231	10	
0.470004 J	1.25276	-0.782759	31	11
0.647103 J	1.25276	-0.6056631	12	
0.113329 J	1.25276	-1.1394331	13	
ND<0	1.25276	-1.2527631	14	
0.300105	1.25276	-0.952658	31	15
0.231112 J	1.25276	-1.0216531	16	

-0.0833816 J	1.25276	-1.3361431	17	
-0.0304592 J	1.25276	-1.2832231	18	
0.0953102	1.25276	-1.1574531	19	
-0.71335 J	1.25276	-1.9661131	20	
1.79176	1.94591	-0.154151	31	21
ND<0	1.94591	-1.9459131	22	
1.60944	1.94591	-0.336472	31	23
2.63906	1.94591	0.693147	32	23
1.75786	1.94591	-0.188052	32	24
ND<0	1.94591	-1.9459132	25	
ND<0	1.94591	-1.9459132	26	
1.54756	1.94591	-0.398348	32	27
0.955511	1.94591	-0.990399	32	28
ND<0	1.94591	-1.9459132	29	
ND<0	1.94591	-1.9459132	30	
ND<0	1.94591	-1.9459132	31	
ND<0	1.94591	-1.9459132	32	
0.223144 J	1.94591	-1.7227732	33	
0.470004 J	1.94591	-1.4759132	34	
0.647103 J	1.94591	-1.2988132	35	
0.113329 J	1.94591	-1.8325832	36	
ND<0	1.94591	-1.9459132	37	
0.300105	1.94591	-1.6458132	38	
0.231112 J	1.94591	-1.7148 32	39	
-0.0833816 J	1.94591	-2.0292932	40	
-0.0304592 J	1.94591	-1.9763732	41	
0.0953102	1.94591	-1.8506 32	42	
-0.71335 J	1.94591	-2.6592632	43	
ND<0	1.79176	-1.7917632	44	
1.60944	1.79176	-0.182322	32	45
2.63906	1.79176	0.847298	33	45
1.75786	1.79176	-0.0339016	33	46
ND<0	1.79176	-1.7917633	47	
ND<0	1.79176	-1.7917633	48	
1.54756	1.79176	-0.244197	33	49
0.955511	1.79176	-0.836248	33	50
ND<0	1.79176	-1.7917633	51	
ND<0	1.79176	-1.7917633	52	
ND<0	1.79176	-1.7917633	53	
ND<0	1.79176	-1.7917633	54	
0.223144 J	1.79176	-1.5686233	55	
0.470004 J	1.79176	-1.3217633	56	
0.647103 J	1.79176	-1.1446633	57	
0.113329 J	1.79176	-1.6784333	58	
ND<0	1.79176	-1.7917633	59	
0.300105	1.79176	-1.4916533	60	
0.231112 J	1.79176	-1.5606533	61	
-0.0833816 J	1.79176	-1.8751433	62	
-0.0304592 J	1.79176	-1.8222233	63	
0.0953102	1.79176	-1.6964533	64	
-0.71335 J	1.79176	-2.5051133	65	
1.60944	ND<0	1.60944 34	65	
2.63906	ND<0	2.63906 35	65	
1.75786	ND<0	1.75786 36	65	
ND<0	ND<0	0 36	65	
ND<0	ND<0	0 36	65	
1.54756	ND<0	1.54756 37	65	
0.955511	ND<0	0.955511	38	65
ND<0	ND<0	0 38	65	

ND<0	ND<0	0	38	65		
ND<0	ND<0	0	38	65		
ND<0	ND<0	0	38	65		
0.223144 J		ND<0	0.223144	39	65	
0.470004 J		ND<0	0.470004	40	65	
0.647103 J		ND<0	0.647103	41	65	
0.113329 J		ND<0	0.113329	42	65	
ND<0	ND<0	0	42	65		
0.300105		ND<0	0.300105	43	65	
0.231112 J		ND<0	0.231112	44	65	
-0.0833816 J		ND<0	-0.0833816	44	66	
-0.0304592 J		ND<0	-0.0304592	44	67	
0.0953102		ND<0	0.0953102	45	67	
-0.71335 J		ND<0	-0.7133545	68		
2.63906		1.60944	1.02962	46	68	
1.75786		1.60944	0.14842	47	68	
ND<0	1.60944		-1.6094447	69		
ND<0	1.60944		-1.6094447	70		
1.54756		1.60944	-0.0618754	47	71	
0.955511		1.60944	-0.653926	47	72	
ND<0	1.60944		-1.6094447	73		
ND<0	1.60944		-1.6094447	74		
ND<0	1.60944		-1.6094447	75		
ND<0	1.60944		-1.6094447	76		
0.223144 J		1.60944	-1.3862947	77		
0.470004 J		1.60944	-1.1394347	78		
0.647103 J		1.60944	-0.962335	47	79	
0.113329 J		1.60944	-1.4961147	80		
ND<0	1.60944		-1.6094447	81		
0.300105		1.60944	-1.3093347	82		
0.231112 J		1.60944	-1.3783347	83		
-0.0833816 J		1.60944	-1.6928247	84		
-0.0304592 J		1.60944	-1.6399 47	85		
0.0953102		1.60944	-1.5141347	86		
-0.71335 J		1.60944	-2.3227947	87		
1.75786		2.63906	-0.881199	47	88	
ND<0	2.63906		-2.6390647	89		
ND<0	2.63906		-2.6390647	90		
1.54756		2.63906	-1.0914947	91		
0.955511		2.63906	-1.6835547	92		
ND<0	2.63906		-2.6390647	93		
ND<0	2.63906		-2.6390647	94		
ND<0	2.63906		-2.6390647	95		
ND<0	2.63906		-2.6390647	96		
0.223144 J		2.63906	-2.4159147	97		
0.470004 J		2.63906	-2.1690547	98		
0.647103 J		2.63906	-1.9919547	99		
0.113329 J		2.63906	-2.5257347	100		
ND<0	2.63906		-2.6390647	101		
0.300105		2.63906	-2.3389547	102		
0.231112 J		2.63906	-2.4079547	103		
-0.0833816 J		2.63906	-2.7224447	104		
-0.0304592 J		2.63906	-2.6695247	105		
0.0953102		2.63906	-2.5437547	106		
-0.71335 J		2.63906	-3.3524147	107		
ND<0	1.75786		-1.7578647	108		
ND<0	1.75786		-1.7578647	109		
1.54756		1.75786	-0.210295	47	110	
0.955511		1.75786	-0.802346	47	111	

ND<0	1.75786		-1.7578647	112		
ND<0	1.75786		-1.7578647	113		
ND<0	1.75786		-1.7578647	114		
ND<0	1.75786		-1.7578647	115		
0.223144 J	1.75786		-1.5347147	116		
0.470004 J	1.75786		-1.2878547	117		
0.647103 J	1.75786		-1.1107547	118		
0.113329 J	1.75786		-1.6445347	119		
ND<0	1.75786		-1.7578647	120		
0.300105	1.75786		-1.4577547	121		
0.231112 J	1.75786		-1.5267547	122		
-0.0833816 J	1.75786		-1.8412447	123		
-0.0304592 J	1.75786		-1.7883247	124		
0.0953102	1.75786		-1.6625547	125		
-0.71335 J	1.75786		-2.4712147	126		
ND<0	ND<0	0	47	126		
1.54756		ND<0	1.54756	48	126	
0.955511		ND<0	0.955511		49	126
ND<0	ND<0	0	49	126		
ND<0	ND<0	0	49	126		
ND<0	ND<0	0	49	126		
ND<0	ND<0	0	49	126		
0.223144 J		ND<0	0.223144		50	126
0.470004 J		ND<0	0.470004		51	126
0.647103 J		ND<0	0.647103		52	126
0.113329 J		ND<0	0.113329		53	126
ND<0	ND<0	0	53	126		
0.300105		ND<0	0.300105		54	126
0.231112 J		ND<0	0.231112		55	126
-0.0833816 J		ND<0	-0.0833816		55	127
-0.0304592 J		ND<0	-0.0304592		55	128
0.0953102		ND<0	0.0953102		56	128
-0.71335 J		ND<0	-0.7133556		129	
1.54756		ND<0	1.54756	57	129	
0.955511		ND<0	0.955511		58	129
ND<0	ND<0	0	58	129		
ND<0	ND<0	0	58	129		
ND<0	ND<0	0	58	129		
ND<0	ND<0	0	58	129		
0.223144 J		ND<0	0.223144		59	129
0.470004 J		ND<0	0.470004		60	129
0.647103 J		ND<0	0.647103		61	129
0.113329 J		ND<0	0.113329		62	129
ND<0	ND<0	0	62	129		
0.300105		ND<0	0.300105		63	129
0.231112 J		ND<0	0.231112		64	129
-0.0833816 J		ND<0	-0.0833816		64	130
-0.0304592 J		ND<0	-0.0304592		64	131
0.0953102		ND<0	0.0953102		65	131
-0.71335 J		ND<0	-0.7133565		132	
0.955511	1.54756		-0.592051		65	133
ND<0	1.54756		-1.5475665	134		
ND<0	1.54756		-1.5475665	135		
ND<0	1.54756		-1.5475665	136		
ND<0	1.54756		-1.5475665	137		
0.223144 J	1.54756		-1.3244265	138		
0.470004 J	1.54756		-1.0775665	139		
0.647103 J	1.54756		-0.900459	65	140	
0.113329 J	1.54756		-1.4342365	141		

ND<0	1.54756	-1.5475	65	142	
0.300105	1.54756	-1.2474	65	143	
0.231112 J	1.54756	-1.3164	565	144	
-0.0833816 J	1.54756	-1.6309	465	145	
-0.0304592 J	1.54756	-1.5780	265	146	
0.0953102	1.54756	-1.4522	565	147	
-0.71335 J	1.54756	-2.2609	165	148	
ND<0	0.955511	-0.955511	65	149	
ND<0	0.955511	-0.955511	65	150	
ND<0	0.955511	-0.955511	65	151	
ND<0	0.955511	-0.955511	65	152	
0.223144 J	0.955511	-0.732368	65	153	
0.470004 J	0.955511	-0.485508	65	154	
0.647103 J	0.955511	-0.308408	65	155	
0.113329 J	0.955511	-0.842183	65	156	
ND<0	0.955511	-0.955511	65	157	
0.300105	0.955511	-0.655407	65	158	
0.231112 J	0.955511	-0.7244	65	159	
-0.0833816 J	0.955511	-1.0388	965	160	
-0.0304592 J	0.955511	-0.985971	65	161	
0.0953102	0.955511	-0.860201	65	162	
-0.71335 J	0.955511	-1.6688	665	163	
ND<0	ND<0	0	65	163	
ND<0	ND<0	0	65	163	
ND<0	ND<0	0	65	163	
0.223144 J	ND<0	0.223144	66	163	
0.470004 J	ND<0	0.470004	67	163	
0.647103 J	ND<0	0.647103	68	163	
0.113329 J	ND<0	0.113329	69	163	
ND<0	ND<0	0	69	163	
0.300105	ND<0	0.300105	70	163	
0.231112 J	ND<0	0.231112	71	163	
-0.0833816 J	ND<0	-0.0833816	71	164	
-0.0304592 J	ND<0	-0.0304592	71	165	
0.0953102	ND<0	0.0953102	72	165	
-0.71335 J	ND<0	-0.713357	2	166	
ND<0	ND<0	0	72	166	
ND<0	ND<0	0	72	166	
0.223144 J	ND<0	0.223144	73	166	
0.470004 J	ND<0	0.470004	74	166	
0.647103 J	ND<0	0.647103	75	166	
0.113329 J	ND<0	0.113329	76	166	
ND<0	ND<0	0	76	166	
0.300105	ND<0	0.300105	77	166	
0.231112 J	ND<0	0.231112	78	166	
-0.0833816 J	ND<0	-0.0833816	78	167	
-0.0304592 J	ND<0	-0.0304592	78	168	
0.0953102	ND<0	0.0953102	79	168	
-0.71335 J	ND<0	-0.713357	9	169	
ND<0	ND<0	0	79	169	
0.223144 J	ND<0	0.223144	80	169	
0.470004 J	ND<0	0.470004	81	169	
0.647103 J	ND<0	0.647103	82	169	
0.113329 J	ND<0	0.113329	83	169	
ND<0	ND<0	0	83	169	
0.300105	ND<0	0.300105	84	169	
0.231112 J	ND<0	0.231112	85	169	
-0.0833816 J	ND<0	-0.0833816	85	170	

-0.0304592 J	ND<0	-0.0304592	85	171	
0.0953102	ND<0	0.0953102	86	171	
-0.71335 J	ND<0	-0.7133586	172		
0.223144 J	ND<0	0.223144	87	172	
0.470004 J	ND<0	0.470004	88	172	
0.647103 J	ND<0	0.647103	89	172	
0.113329 J	ND<0	0.113329	90	172	
ND<0	ND<0	0	90	172	
0.300105	ND<0	0.300105	91	172	
0.231112 J	ND<0	0.231112	92	172	
-0.0833816 J	ND<0	-0.0833816	92	173	
-0.0304592 J	ND<0	-0.0304592	92	174	
0.0953102	ND<0	0.0953102	93	174	
-0.71335 J	ND<0	-0.7133593	175		
0.470004 J	0.223144 J	0.24686	94	175	
0.647103 J	0.223144 J	0.42396	95	175	
0.113329 J	0.223144 J	-0.109815	95	176	
ND<0	0.223144 J	-0.223144	95	177	
0.300105	0.223144 J	0.076961	96	177	
0.231112 J	0.223144 J	0.00796817	97	177	
-0.0833816 J	0.223144 J	-0.306525	97	178	
-0.0304592 J	0.223144 J	-0.253603	97	179	
0.0953102	0.223144 J	-0.127833	97	180	
-0.71335 J	0.223144 J	-0.936493	97	181	
0.647103 J	0.470004 J	0.1771	98	181	
0.113329 J	0.470004 J	-0.356675	98	182	
ND<0	0.470004 J	-0.470004	98	183	
0.300105	0.470004 J	-0.169899	98	184	
0.231112 J	0.470004 J	-0.238892	98	185	
-0.0833816 J	0.470004 J	-0.553385	98	186	
-0.0304592 J	0.470004 J	-0.500463	98	187	
0.0953102	0.470004 J	-0.374693	98	188	
-0.71335 J	0.470004 J	-1.1833598	189		
0.113329 J	0.647103 J	-0.533775	98	190	
ND<0	0.647103 J	-0.647103	98	191	
0.300105	0.647103 J	-0.346999	98	192	
0.231112 J	0.647103 J	-0.415992	98	193	
-0.0833816 J	0.647103 J	-0.730485	98	194	
-0.0304592 J	0.647103 J	-0.677562	98	195	
0.0953102	0.647103 J	-0.551793	98	196	
-0.71335 J	0.647103 J	-1.3604598	197		
ND<0	0.113329 J	-0.113329	98	198	
0.300105	0.113329 J	0.186776	99	198	
0.231112 J	0.113329 J	0.117783	100	198	
-0.0833816 J	0.113329 J	-0.19671100	199		
-0.0304592 J	0.113329 J	-0.143788	100	200	
0.0953102	0.113329 J	-0.0180185	100	201	
-0.71335 J	0.113329 J	-0.826679	100	202	
0.300105	ND<0	0.300105	101	202	
0.231112 J	ND<0	0.231112	102	202	
-0.0833816 J	ND<0	-0.0833816	102	203	
-0.0304592 J	ND<0	-0.0304592	102	204	
0.0953102	ND<0	0.0953102	103	204	
-0.71335 J	ND<0	-0.71335103	205		

0.231112 J	0.300105	-0.0689929	103	206
-0.0833816 J	0.300105	-0.383486	103	207
-0.0304592 J	0.300105	-0.330564	103	208
0.0953102	0.300105	-0.204794	103	209
-0.71335 J	0.300105	-1.01345103	210	
-0.0833816 J	0.231112 J	-0.314493	103	211
-0.0304592 J	0.231112 J	-0.261571	103	212
0.0953102	0.231112 J	-0.135802	103	213
-0.71335 J	0.231112 J	-0.944462	103	214
-0.0304592 J	-0.0833816 J	0.0529224	104	214
0.0953102	-0.0833816 J	0.178692	105	214
-0.71335 J	-0.0833816 J	-0.629968	105	215
0.0953102	-0.0304592 J	0.125769	106	215
-0.71335 J	-0.0304592 J	-0.682891	106	216
-0.71335 J	0.0953102	-0.80866106	217	

S Statistic = 106 - 217 = -111

Tied Group	Value	Members
1	0	8

Time Period		Observations
7/20/1995		1
8/24/1995		1
9/28/1995		1
10/26/1995		1
11/19/1996		1
12/19/1996		1
3/24/1997		1
9/24/1997		1
4/7/1998	1	
9/23/1998		1
3/16/1999		1
9/23/1999		1
3/15/2000		1
9/24/2003		1
3/11/2004		1
10/12/2004		1
4/1/2005	1	
10/25/2005		1
4/29/2006		1
11/18/2006		1
5/23/2007		1
11/28/2007		1
6/5/2008	1	
11/20/2008		1
6/11/2009		1
11/16/2009		1
6/30/2010		1

There are 0 time periods with multiple data

A = 1176
B = 0
C = 336
D = 0

E = 56
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 2235.67
Z-Score = -2.32643
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.32643| > 1.97737 indicating a trend

Mann-Kendall Trend Analysis

Parameter: 1,1-Dichloroethane

Location: MW-11R

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
3.04452	2.14007	0.904456	1	0
2.94444	2.14007	0.804373	2	0
3.09104	2.14007	0.950976	3	0
ND<0	2.14007	-2.140073	1	
2.94444	2.14007	0.804373	4	1
ND<0	2.14007	-2.140074	2	
1.62924	2.14007	-0.510826	4	3
2.12823	2.14007	-0.0118345	4	4
2.56495	2.14007	0.424883	5	4
2.37955	2.14007	0.23948	6	4
1.70475	2.14007	-0.435318	6	5
2.29253	2.14007	0.152469	7	5
ND<0	2.14007	-2.140077	6	
ND<0	2.14007	-2.140077	7	
ND<0	2.14007	-2.140077	8	
1.35067	2.14007	-0.789399	7	9
0.779325	2.14007	-1.360747	10	
0.518794 J	2.14007	-1.621277	11	
0.727549	2.14007	-1.412527	12	
ND<0	2.14007	-2.140077	13	
1.39872	2.14007	-0.741349	7	14
ND<0	2.14007	-2.140077	15	
-0.579818 J	2.14007	-2.719887	16	
1.06471	2.14007	-1.075367	17	
-0.867501 J	2.14007	-3.007577	18	
1.06471	2.14007	-1.075367	19	
2.94444	3.04452	-0.100083	7	20
3.09104	3.04452	0.04652	8	20
ND<0	3.04452	-3.044528	21	
2.94444	3.04452	-0.100083	8	22
ND<0	3.04452	-3.044528	23	
1.62924	3.04452	-1.415288	24	
2.12823	3.04452	-0.916291	8	25
2.56495	3.04452	-0.479573	8	26
2.37955	3.04452	-0.664976	8	27
1.70475	3.04452	-1.339778	28	
2.29253	3.04452	-0.751988	8	29
ND<0	3.04452	-3.044528	30	
ND<0	3.04452	-3.044528	31	
ND<0	3.04452	-3.044528	32	
1.35067	3.04452	-1.693868	33	
0.779325	3.04452	-2.2652	8	34
0.518794 J	3.04452	-2.525738	35	
0.727549	3.04452	-2.316978	36	
ND<0	3.04452	-3.044528	37	
1.39872	3.04452	-1.645818	38	
ND<0	3.04452	-3.044528	39	

-0.579818 J	3.04452	-3.624348	40	
1.06471	3.04452	-1.979818	41	
-0.867501 J	3.04452	-3.912028	42	
1.06471	3.04452	-1.979818	43	
3.09104	2.94444	0.146603	9	43
ND<0	2.94444	-2.944449	44	
2.94444	2.94444	0	9	44
ND<0	2.94444	-2.944449	45	
1.62924	2.94444	-1.3152	9	46
2.12823	2.94444	-0.816207	9	47
2.56495	2.94444	-0.379499	48	
2.37955	2.94444	-0.564893	9	49
1.70475	2.94444	-1.239699	50	
2.29253	2.94444	-0.651904	9	51
ND<0	2.94444	-2.944449	52	
ND<0	2.94444	-2.944449	53	
ND<0	2.94444	-2.944449	54	
1.35067	2.94444	-1.593779	55	
0.779325	2.94444	-2.165119	56	
0.518794 J	2.94444	-2.425659	57	
0.727549	2.94444	-2.216899	58	
ND<0	2.94444	-2.944449	59	
1.39872	2.94444	-1.545729	60	
ND<0	2.94444	-2.944449	61	
-0.579818 J	2.94444	-3.524269	62	
1.06471	2.94444	-1.879739	63	
-0.867501 J	2.94444	-3.811949	64	
1.06471	2.94444	-1.879739	65	
ND<0	3.09104	-3.091049	66	
2.94444	3.09104	-0.146603	9	67
ND<0	3.09104	-3.091049	68	
1.62924	3.09104	-1.4618	9	69
2.12823	3.09104	-0.962811	9	70
2.56495	3.09104	-0.526093	9	71
2.37955	3.09104	-0.711496	9	72
1.70475	3.09104	-1.386299	73	
2.29253	3.09104	-0.798508	9	74
ND<0	3.09104	-3.091049	75	
ND<0	3.09104	-3.091049	76	
ND<0	3.09104	-3.091049	77	
1.35067	3.09104	-1.740389	78	
0.779325	3.09104	-2.311729	79	
0.518794 J	3.09104	-2.572259	80	
0.727549	3.09104	-2.363499	81	
ND<0	3.09104	-3.091049	82	
1.39872	3.09104	-1.692339	83	
ND<0	3.09104	-3.091049	84	
-0.579818 J	3.09104	-3.670869	85	
1.06471	3.09104	-2.026339	86	
-0.867501 J	3.09104	-3.958549	87	
1.06471	3.09104	-2.026339	88	
2.94444	ND<0	2.94444	10	88
ND<0	ND<0	0	10	88
1.62924	ND<0	1.62924	11	88
2.12823	ND<0	2.12823	12	88
2.56495	ND<0	2.56495	13	88
2.37955	ND<0	2.37955	14	88
1.70475	ND<0	1.70475	15	88
2.29253	ND<0	2.29253	16	88

ND<0	ND<0	0	16	88			
ND<0	ND<0	0	16	88			
ND<0	ND<0	0	16	88			
1.35067		ND<0	1.35067	17	88		
0.779325		ND<0	0.779325		18	88	
0.518794 J		ND<0	0.518794		19	88	
0.727549		ND<0	0.727549		20	88	
ND<0	ND<0	0	20	88			
1.39872		ND<0	1.39872	21	88		
ND<0	ND<0	0	21	88			
-0.579818 J		ND<0	-0.579818		21	89	
1.06471		ND<0	1.06471	22	89		
-0.867501 J		ND<0	-0.867501		22	90	
1.06471		ND<0	1.06471	23	90		
ND<0	2.94444		-2.9444	23	91		
1.62924		2.94444		-1.3152	23	92	
2.12823		2.94444		-0.816207		23	93
2.56495		2.94444		-0.379492	3	94	
2.37955		2.94444		-0.564893		23	95
1.70475		2.94444		-1.239692	3	96	
2.29253		2.94444		-0.651904		23	97
ND<0	2.94444		-2.9444	23	98		
ND<0	2.94444		-2.9444	23	99		
ND<0	2.94444		-2.9444	23	100		
1.35067		2.94444		-1.593723		101	
0.779325		2.94444		-2.165123		102	
0.518794 J		2.94444		-2.425623		103	
0.727549		2.94444		-2.216823		104	
ND<0	2.94444		-2.9444	23	105		
1.39872		2.94444		-1.545723		106	
ND<0	2.94444		-2.9444	23	107		
-0.579818 J		2.94444		-3.524223		108	
1.06471		2.94444		-1.879723		109	
-0.867501 J		2.94444		-3.811923		110	
1.06471		2.94444		-1.879723		111	
1.62924		ND<0	1.62924	24	111		
2.12823		ND<0	2.12823	25	111		
2.56495		ND<0	2.56495	26	111		
2.37955		ND<0	2.37955	27	111		
1.70475		ND<0	1.70475	28	111		
2.29253		ND<0	2.29253	29	111		
ND<0	ND<0	0	29	111			
ND<0	ND<0	0	29	111			
ND<0	ND<0	0	29	111			
1.35067		ND<0	1.35067	30	111		
0.779325		ND<0	0.779325		31	111	
0.518794 J		ND<0	0.518794		32	111	
0.727549		ND<0	0.727549		33	111	
ND<0	ND<0	0	33	111			
1.39872		ND<0	1.39872	34	111		
ND<0	ND<0	0	34	111			
-0.579818 J		ND<0	-0.579818		34	112	
1.06471		ND<0	1.06471	35	112		
-0.867501 J		ND<0	-0.867501		35	113	
1.06471		ND<0	1.06471	36	113		
2.12823		1.62924		0.498991		37	113
2.56495		1.62924		0.935709		38	113
2.37955		1.62924		0.750306		39	113
1.70475		1.62924		0.0755076		40	113

2.29253	1.62924	0.663294	41	113
ND<0	1.62924	-1.6292441	114	
ND<0	1.62924	-1.6292441	115	
ND<0	1.62924	-1.6292441	116	
1.35067	1.62924	-0.278573	41	117
0.779325	1.62924	-0.849916	41	118
0.518794 J	1.62924	-1.1104541	119	
0.727549	1.62924	-0.901692	41	120
ND<0	1.62924	-1.6292441	121	
1.39872	1.62924	-0.230524	41	122
ND<0	1.62924	-1.6292441	123	
-0.579818 J	1.62924	-2.2090641	124	
1.06471	1.62924	-0.5645341	125	
-0.867501 J	1.62924	-2.4967441	126	
1.06471	1.62924	-0.5645341	127	
2.56495	2.12823	0.436718	42	127
2.37955	2.12823	0.251314	43	127
1.70475	2.12823	-0.423484	43	128
2.29253	2.12823	0.164303	44	128
ND<0	2.12823	-2.1282344	129	
ND<0	2.12823	-2.1282344	130	
ND<0	2.12823	-2.1282344	131	
1.35067	2.12823	-0.777565	44	132
0.779325	2.12823	-1.3489144	133	
0.518794 J	2.12823	-1.6094444	134	
0.727549	2.12823	-1.4006844	135	
ND<0	2.12823	-2.1282344	136	
1.39872	2.12823	-0.729515	44	137
ND<0	2.12823	-2.1282344	138	
-0.579818 J	2.12823	-2.7080544	139	
1.06471	2.12823	-1.0635244	140	
-0.867501 J	2.12823	-2.9957344	141	
1.06471	2.12823	-1.0635244	142	
2.37955	2.56495	-0.185403	44	143
1.70475	2.56495	-0.860201	44	144
2.29253	2.56495	-0.272415	44	145
ND<0	2.56495	-2.5649544	146	
ND<0	2.56495	-2.5649544	147	
ND<0	2.56495	-2.5649544	148	
1.35067	2.56495	-1.2142844	149	
0.779325	2.56495	-1.7856244	150	
0.518794 J	2.56495	-2.0461644	151	
0.727549	2.56495	-1.8374 44	152	
ND<0	2.56495	-2.5649544	153	
1.39872	2.56495	-1.1662344	154	
ND<0	2.56495	-2.5649544	155	
-0.579818 J	2.56495	-3.1447744	156	
1.06471	2.56495	-1.5002444	157	
-0.867501 J	2.56495	-3.4324544	158	
1.06471	2.56495	-1.5002444	159	
1.70475	2.37955	-0.674798	44	160
2.29253	2.37955	-0.0870114	44	161
ND<0	2.37955	-2.3795544	162	
ND<0	2.37955	-2.3795544	163	
ND<0	2.37955	-2.3795544	164	
1.35067	2.37955	-1.0288844	165	
0.779325	2.37955	-1.6002244	166	
0.518794 J	2.37955	-1.8607544	167	
0.727549	2.37955	-1.652 44	168	

ND<0	2.37955	-2.3795544	169		
1.39872	2.37955	-0.980829	44	170	
ND<0	2.37955	-2.3795544	171		
-0.579818 J	2.37955	-2.9593644	172		
1.06471	2.37955	-1.3148444	173		
-0.867501 J	2.37955	-3.2470544	174		
1.06471	2.37955	-1.3148444	175		
2.29253	1.70475	0.587787	45	175	
ND<0	1.70475	-1.7047545	176		
ND<0	1.70475	-1.7047545	177		
ND<0	1.70475	-1.7047545	178		
1.35067	1.70475	-0.354081	45	179	
0.779325	1.70475	-0.925423	45	180	
0.518794 J	1.70475	-1.1859545	181		
0.727549	1.70475	-0.977199	45	182	
ND<0	1.70475	-1.7047545	183		
1.39872	1.70475	-0.306031	45	184	
ND<0	1.70475	-1.7047545	185		
-0.579818 J	1.70475	-2.2845745	186		
1.06471	1.70475	-0.640037	45	187	
-0.867501 J	1.70475	-2.5722545	188		
1.06471	1.70475	-0.640037	45	189	
ND<0	2.29253	-2.2925345	190		
ND<0	2.29253	-2.2925345	191		
ND<0	2.29253	-2.2925345	192		
1.35067	2.29253	-0.941868	45	193	
0.779325	2.29253	-1.5132145	194		
0.518794 J	2.29253	-1.7737445	195		
0.727549	2.29253	-1.5649945	196		
ND<0	2.29253	-2.2925345	197		
1.39872	2.29253	-0.893818	45	198	
ND<0	2.29253	-2.2925345	199		
-0.579818 J	2.29253	-2.8723545	200		
1.06471	2.29253	-1.2278245	201		
-0.867501 J	2.29253	-3.1600445	202		
1.06471	2.29253	-1.2278245	203		
ND<0	ND<0	0	45	203	
ND<0	ND<0	0	45	203	
1.35067	ND<0	1.35067	46	203	
0.779325	ND<0	0.779325	47	203	
0.518794 J	ND<0	0.518794	48	203	
0.727549	ND<0	0.727549	49	203	
ND<0	ND<0	0	49	203	
1.39872	ND<0	1.39872	50	203	
ND<0	ND<0	0	50	203	
-0.579818 J	ND<0	-0.579818	50	204	
1.06471	ND<0	1.06471	51	204	
-0.867501 J	ND<0	-0.867501	51	205	
1.06471	ND<0	1.06471	52	205	
ND<0	ND<0	0	52	205	
1.35067	ND<0	1.35067	53	205	
0.779325	ND<0	0.779325	54	205	
0.518794 J	ND<0	0.518794	55	205	
0.727549	ND<0	0.727549	56	205	
ND<0	ND<0	0	56	205	
1.39872	ND<0	1.39872	57	205	
ND<0	ND<0	0	57	205	
-0.579818 J	ND<0	-0.579818	57	206	

1.06471 ND<0 1.06471 58 206
-0.867501 J ND<0 -0.867501 58 207
1.06471 ND<0 1.06471 59 207

1.35067 ND<0 1.35067 60 207
0.779325 ND<0 0.779325 61 207
0.518794 J ND<0 0.518794 62 207
0.727549 ND<0 0.727549 63 207
ND<0 ND<0 0 63 207
1.39872 ND<0 1.39872 64 207
ND<0 ND<0 0 64 207
-0.579818 J ND<0 -0.579818 64 208
1.06471 ND<0 1.06471 65 208
-0.867501 J ND<0 -0.867501 65 209
1.06471 ND<0 1.06471 66 209

0.779325 1.35067 -0.571342 66 210
0.518794 J 1.35067 -0.831873 66 211
0.727549 1.35067 -0.623119 66 212
ND<0 1.35067 -1.350676 6 213
1.39872 1.35067 0.0480497 67 213
ND<0 1.35067 -1.350676 7 214
-0.579818 J 1.35067 -1.930496 7 215
1.06471 1.35067 -0.285956 67 216
-0.867501 J 1.35067 -2.218176 7 217
1.06471 1.35067 -0.285956 67 218

0.518794 J 0.779325 -0.260531 67 219
0.727549 0.779325 -0.051776 3 67 220
ND<0 0.779325 -0.779325 67 221
1.39872 0.779325 0.619392 68 221
ND<0 0.779325 -0.779325 68 222
-0.579818 J 0.779325 -1.359146 8 223
1.06471 0.779325 0.285386 69 223
-0.867501 J 0.779325 -1.646836 9 224
1.06471 0.779325 0.285386 70 224

0.727549 0.518794 J 0.208755 71 224
ND<0 0.518794 J -0.518794 71 225
1.39872 0.518794 J 0.879923 72 225
ND<0 0.518794 J -0.518794 72 226
-0.579818 J 0.518794 J -1.098617 2 227
1.06471 0.518794 J 0.545917 73 227
-0.867501 J 0.518794 J -1.386297 3 228
1.06471 0.518794 J 0.545917 74 228

ND<0 0.727549 -0.727549 74 229
1.39872 0.727549 0.671168 75 229
ND<0 0.727549 -0.727549 75 230
-0.579818 J 0.727549 -1.307377 5 231
1.06471 0.727549 0.337162 76 231
-0.867501 J 0.727549 -1.595057 6 232
1.06471 0.727549 0.337162 77 232

1.39872 ND<0 1.39872 78 232
ND<0 ND<0 0 78 232
-0.579818 J ND<0 -0.579818 78 233
1.06471 ND<0 1.06471 79 233
-0.867501 J ND<0 -0.867501 79 234
1.06471 ND<0 1.06471 80 234

ND<0	1.39872	-1.3987	280	235	
-0.579818 J	1.39872	-1.9785	480	236	
1.06471	1.39872	-0.334006	80	237	
-0.867501 J	1.39872	-2.2662	280	238	
1.06471	1.39872	-0.334006	80	239	
-0.579818 J	ND<0	-0.579818	80	240	
1.06471	ND<0	1.06471	81	240	
-0.867501 J	ND<0	-0.867501	81	241	
1.06471	ND<0	1.06471	82	241	
1.06471	-0.579818 J	1.64453	83	241	
-0.867501 J	-0.579818 J	-0.287682	83	242	
1.06471	-0.579818 J	1.64453	84	242	
-0.867501 J	1.06471	-1.93221	84	243	
1.06471	1.06471	0	84	243	
1.06471	-0.867501 J	1.93221	85	243	

S Statistic = 85 - 243 = -158

Tied Group	Value	Members
1	2.94444	2
2	0	7
3	1.06471	2

Time Period		Observations
7/20/1995		1
8/24/1995		1
9/28/1995		1
10/26/1995		1
11/19/1996		1
12/19/1996		1
3/24/1997		1
9/24/1997		1
4/7/1998	1	
9/23/1998		1
3/16/1999		1
9/23/1999		1
3/15/2000		1
9/24/2003		1
3/11/2004		1
10/12/2004		1
4/1/2005	1	
10/25/2005		1
4/29/2006		1
11/18/2006		1
5/23/2007		1
11/28/2007		1
6/5/2008	1	
11/20/2008		1
6/11/2009		1
11/16/2009		1
6/30/2010		1

There are 0 time periods with multiple data

A = 834
B = 0

C = 210
D = 0
E = 46
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 2254.67
Z-Score = -3.30642
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.30642| > 1.97737 indicating a trend

Mann-Kendall Trend Analysis

Parameter: 1,1-Dichloroethane

Location: MW-9

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives		Negatives	
-0.174353 J		-0.174353 J	0	0	0	
0.693147		-0.174353 J	0.867501		1	0
1.09861		-0.174353 J	1.27297	2	0	
ND<0	-0.174353 J	0.174353		3	0	
ND<0	-0.174353 J	0.174353		4	0	
ND<0	-0.174353 J	0.174353		5	0	
ND<0	-0.174353 J	0.174353		6	0	
ND<0	-0.174353 J	0.174353		7	0	
1.66771		-0.174353 J	1.84206	8	0	
1.28093		-0.174353 J	1.45529	9	0	
1.25276		-0.174353 J	1.42712	10	0	
ND<0	-0.174353 J	0.174353		11	0	
ND<0	-0.174353 J	0.174353		12	0	
ND<0	-0.174353 J	0.174353		13	0	
ND<0	-0.174353 J	0.174353		14	0	
1.09527		-0.174353 J	1.26963	15	0	
0.71295		-0.174353 J	0.887303		16	0
0.322083 J		-0.174353 J	0.496437		17	0
ND<0	-0.174353 J	0.174353		18	0	
ND<0	-0.174353 J	0.174353		19	0	
1.15373		-0.174353 J	1.32808	20	0	
1.17557		-0.174353 J	1.34993	21	0	
1.13462		-0.174353 J	1.30898	22	0	
2.02815		-0.174353 J	2.2025	23	0	
1.56862		-0.174353 J	1.74297	24	0	
1.52606		-0.174353 J	1.70041	25	0	
0.693147		-0.174353 J	0.867501		26	0
1.09861		-0.174353 J	1.27297	27	0	
ND<0	-0.174353 J	0.174353		28	0	
ND<0	-0.174353 J	0.174353		29	0	
ND<0	-0.174353 J	0.174353		30	0	
ND<0	-0.174353 J	0.174353		31	0	
ND<0	-0.174353 J	0.174353		32	0	
1.66771		-0.174353 J	1.84206	33	0	
1.28093		-0.174353 J	1.45529	34	0	
1.25276		-0.174353 J	1.42712	35	0	
ND<0	-0.174353 J	0.174353		36	0	
ND<0	-0.174353 J	0.174353		37	0	
ND<0	-0.174353 J	0.174353		38	0	
ND<0	-0.174353 J	0.174353		39	0	
1.09527		-0.174353 J	1.26963	40	0	
0.71295		-0.174353 J	0.887303		41	0
0.322083 J		-0.174353 J	0.496437		42	0
ND<0	-0.174353 J	0.174353		43	0	
ND<0	-0.174353 J	0.174353		44	0	
1.15373		-0.174353 J	1.32808	45	0	
1.17557		-0.174353 J	1.34993	46	0	

1.13462	-0.174353 J	1.30898	47	0
2.02815	-0.174353 J	2.2025	48	0
1.56862	-0.174353 J	1.74297	49	0
1.52606	-0.174353 J	1.70041	50	0

1.09861	0.693147	0.405465	51	0
ND<0	0.693147	-0.693147	51	1
ND<0	0.693147	-0.693147	51	2
ND<0	0.693147	-0.693147	51	3
ND<0	0.693147	-0.693147	51	4
ND<0	0.693147	-0.693147	51	5
1.66771	0.693147	0.97456	52	5
1.28093	0.693147	0.587787	53	5
1.25276	0.693147	0.559616	54	5
ND<0	0.693147	-0.693147	54	6
ND<0	0.693147	-0.693147	54	7
ND<0	0.693147	-0.693147	54	8
ND<0	0.693147	-0.693147	54	9
1.09527	0.693147	0.402126	55	9
0.71295	0.693147	0.0198026	56	9
0.322083 J	0.693147	-0.371064	56	10
ND<0	0.693147	-0.693147	56	11
ND<0	0.693147	-0.693147	56	12
1.15373	0.693147	0.460584	57	12
1.17557	0.693147	0.482426	58	12
1.13462	0.693147	0.441476	59	12
2.02815	0.693147	1.335	60	12
1.56862	0.693147	0.875469	61	12
1.52606	0.693147	0.832909	62	12

ND<0	1.09861	-1.0986162	13	
ND<0	1.09861	-1.0986162	14	
ND<0	1.09861	-1.0986162	15	
ND<0	1.09861	-1.0986162	16	
ND<0	1.09861	-1.0986162	17	
1.66771	1.09861	0.569095	63	17
1.28093	1.09861	0.182322	64	17
1.25276	1.09861	0.154151	65	17
ND<0	1.09861	-1.0986165	18	
ND<0	1.09861	-1.0986165	19	
ND<0	1.09861	-1.0986165	20	
ND<0	1.09861	-1.0986165	21	
1.09527	1.09861	-0.0033389	65	22
0.71295	1.09861	-0.385662	65	23
0.322083 J	1.09861	-0.776529	65	24
ND<0	1.09861	-1.0986165	25	
ND<0	1.09861	-1.0986165	26	
1.15373	1.09861	0.0551193	66	26
1.17557	1.09861	0.076961	67	26
1.13462	1.09861	0.0360104	68	26
2.02815	1.09861	0.929536	69	26
1.56862	1.09861	0.470004	70	26
1.52606	1.09861	0.427444	71	26

ND<0	ND<0	0	71	26
ND<0	ND<0	0	71	26
ND<0	ND<0	0	71	26
ND<0	ND<0	0	71	26
1.66771	ND<0	1.66771	72	26
1.28093	ND<0	1.28093	73	26
1.25276	ND<0	1.25276	74	26
ND<0	ND<0	0	74	26

ND<0	ND<0	0	74	26		
ND<0	ND<0	0	74	26		
ND<0	ND<0	0	74	26		
1.09527		ND<0	1.09527	75	26	
0.71295		ND<0	0.71295	76	26	
0.322083	J	ND<0	0.322083		77	26
ND<0	ND<0	0	77	26		
ND<0	ND<0	0	77	26		
1.15373		ND<0	1.15373	78	26	
1.17557		ND<0	1.17557	79	26	
1.13462		ND<0	1.13462	80	26	
2.02815		ND<0	2.02815	81	26	
1.56862		ND<0	1.56862	82	26	
1.52606		ND<0	1.52606	83	26	
ND<0	ND<0	0	83	26		
ND<0	ND<0	0	83	26		
ND<0	ND<0	0	83	26		
1.66771		ND<0	1.66771	84	26	
1.28093		ND<0	1.28093	85	26	
1.25276		ND<0	1.25276	86	26	
ND<0	ND<0	0	86	26		
ND<0	ND<0	0	86	26		
ND<0	ND<0	0	86	26		
ND<0	ND<0	0	86	26		
1.09527		ND<0	1.09527	87	26	
0.71295		ND<0	0.71295	88	26	
0.322083	J	ND<0	0.322083		89	26
ND<0	ND<0	0	89	26		
ND<0	ND<0	0	89	26		
1.15373		ND<0	1.15373	90	26	
1.17557		ND<0	1.17557	91	26	
1.13462		ND<0	1.13462	92	26	
2.02815		ND<0	2.02815	93	26	
1.56862		ND<0	1.56862	94	26	
1.52606		ND<0	1.52606	95	26	
ND<0	ND<0	0	95	26		
ND<0	ND<0	0	95	26		
1.66771		ND<0	1.66771	96	26	
1.28093		ND<0	1.28093	97	26	
1.25276		ND<0	1.25276	98	26	
ND<0	ND<0	0	98	26		
ND<0	ND<0	0	98	26		
ND<0	ND<0	0	98	26		
ND<0	ND<0	0	98	26		
1.09527		ND<0	1.09527	99	26	
0.71295		ND<0	0.71295	100	26	
0.322083	J	ND<0	0.322083		101	26
ND<0	ND<0	0	101	26		
ND<0	ND<0	0	101	26		
1.15373		ND<0	1.15373	102	26	
1.17557		ND<0	1.17557	103	26	
1.13462		ND<0	1.13462	104	26	
2.02815		ND<0	2.02815	105	26	
1.56862		ND<0	1.56862	106	26	
1.52606		ND<0	1.52606	107	26	
ND<0	ND<0	0	107	26		
1.66771		ND<0	1.66771	108	26	
1.28093		ND<0	1.28093	109	26	
1.25276		ND<0	1.25276	110	26	

ND<0	ND<0	0	110	26		
ND<0	ND<0	0	110	26		
ND<0	ND<0	0	110	26		
ND<0	ND<0	0	110	26		
1.09527		ND<0	1.09527	111	26	
0.71295		ND<0	0.71295	112	26	
0.322083	J	ND<0	0.322083	113	26	
ND<0	ND<0	0	113	26		
ND<0	ND<0	0	113	26		
1.15373		ND<0	1.15373	114	26	
1.17557		ND<0	1.17557	115	26	
1.13462		ND<0	1.13462	116	26	
2.02815		ND<0	2.02815	117	26	
1.56862		ND<0	1.56862	118	26	
1.52606		ND<0	1.52606	119	26	
1.66771		ND<0	1.66771	120	26	
1.28093		ND<0	1.28093	121	26	
1.25276		ND<0	1.25276	122	26	
ND<0	ND<0	0	122	26		
ND<0	ND<0	0	122	26		
ND<0	ND<0	0	122	26		
ND<0	ND<0	0	122	26		
1.09527		ND<0	1.09527	123	26	
0.71295		ND<0	0.71295	124	26	
0.322083	J	ND<0	0.322083	125	26	
ND<0	ND<0	0	125	26		
ND<0	ND<0	0	125	26		
1.15373		ND<0	1.15373	126	26	
1.17557		ND<0	1.17557	127	26	
1.13462		ND<0	1.13462	128	26	
2.02815		ND<0	2.02815	129	26	
1.56862		ND<0	1.56862	130	26	
1.52606		ND<0	1.52606	131	26	
1.28093		1.66771	-0.386773	131	27	
1.25276		1.66771	-0.414944	131	28	
ND<0	1.66771	-1.66771	131	29		
ND<0	1.66771	-1.66771	131	30		
ND<0	1.66771	-1.66771	131	31		
ND<0	1.66771	-1.66771	131	32		
1.09527		1.66771	-0.572433	131	33	
0.71295		1.66771	-0.954757	131	34	
0.322083	J	1.66771	-1.34562	131	35	
ND<0	1.66771	-1.66771	131	36		
ND<0	1.66771	-1.66771	131	37		
1.15373		1.66771	-0.513975	131	38	
1.17557		1.66771	-0.492133	131	39	
1.13462		1.66771	-0.533084	131	40	
2.02815		1.66771	0.360441	132	40	
1.56862		1.66771	-0.0990909	132	41	
1.52606		1.66771	-0.141651	132	42	
1.25276		1.28093	-0.0281709	132	43	
ND<0	1.28093	-1.28093	132	44		
ND<0	1.28093	-1.28093	132	45		
ND<0	1.28093	-1.28093	132	46		
ND<0	1.28093	-1.28093	132	47		
1.09527		1.28093	-0.18566	132	48	
0.71295		1.28093	-0.567984	132	49	
0.322083	J	1.28093	-0.95885	132	50	
ND<0	1.28093	-1.28093	132	51		

ND<0	1.28093		-1.28093	132	52	
1.15373		1.28093		-0.127202	132	53
1.17557		1.28093		-0.105361	132	54
1.13462		1.28093		-0.146311	132	55
2.02815		1.28093		0.747214	133	55
1.56862		1.28093		0.287682	134	55
1.52606		1.28093		0.245122	135	55
ND<0	1.25276		-1.25276	135	56	
ND<0	1.25276		-1.25276	135	57	
ND<0	1.25276		-1.25276	135	58	
ND<0	1.25276		-1.25276	135	59	
1.09527		1.25276		-0.15749	135	60
0.71295		1.25276		-0.539813	135	61
0.322083 J		1.25276		-0.930679	135	62
ND<0	1.25276		-1.25276	135	63	
ND<0	1.25276		-1.25276	135	64	
1.15373		1.25276		-0.0990314	135	65
1.17557		1.25276		-0.0771896	135	66
1.13462		1.25276		-0.11814	135	67
2.02815		1.25276		0.775385	136	67
1.56862		1.25276		0.315853	137	67
1.52606		1.25276		0.273293	138	67
ND<0	ND<0	0	138	67		
ND<0	ND<0	0	138	67		
ND<0	ND<0	0	138	67		
1.09527		ND<0	1.09527	139	67	
0.71295		ND<0	0.71295	140	67	
0.322083 J		ND<0	0.322083		141	67
ND<0	ND<0	0	141	67		
ND<0	ND<0	0	141	67		
1.15373		ND<0	1.15373	142	67	
1.17557		ND<0	1.17557	143	67	
1.13462		ND<0	1.13462	144	67	
2.02815		ND<0	2.02815	145	67	
1.56862		ND<0	1.56862	146	67	
1.52606		ND<0	1.52606	147	67	
ND<0	ND<0	0	147	67		
ND<0	ND<0	0	147	67		
1.09527		ND<0	1.09527	148	67	
0.71295		ND<0	0.71295	149	67	
0.322083 J		ND<0	0.322083		150	67
ND<0	ND<0	0	150	67		
ND<0	ND<0	0	150	67		
1.15373		ND<0	1.15373	151	67	
1.17557		ND<0	1.17557	152	67	
1.13462		ND<0	1.13462	153	67	
2.02815		ND<0	2.02815	154	67	
1.56862		ND<0	1.56862	155	67	
1.52606		ND<0	1.52606	156	67	
ND<0	ND<0	0	156	67		
1.09527		ND<0	1.09527	157	67	
0.71295		ND<0	0.71295	158	67	
0.322083 J		ND<0	0.322083		159	67
ND<0	ND<0	0	159	67		
ND<0	ND<0	0	159	67		
1.15373		ND<0	1.15373	160	67	
1.17557		ND<0	1.17557	161	67	
1.13462		ND<0	1.13462	162	67	

2.02815	ND<0	2.02815	163	67
1.56862	ND<0	1.56862	164	67
1.52606	ND<0	1.52606	165	67
1.09527	ND<0	1.09527	166	67
0.71295	ND<0	0.71295	167	67
0.322083 J	ND<0	0.322083	168	67
ND<0	ND<0	0	168	67
ND<0	ND<0	0	168	67
1.15373	ND<0	1.15373	169	67
1.17557	ND<0	1.17557	170	67
1.13462	ND<0	1.13462	171	67
2.02815	ND<0	2.02815	172	67
1.56862	ND<0	1.56862	173	67
1.52606	ND<0	1.52606	174	67
0.71295	1.09527	-0.382324	174	68
0.322083 J	1.09527	-0.77319	174	69
ND<0	1.09527	-1.09527	174	70
ND<0	1.09527	-1.09527	174	71
1.15373	1.09527	0.0584582	175	71
1.17557	1.09527	0.0802999	176	71
1.13462	1.09527	0.0393493	177	71
2.02815	1.09527	0.932875	178	71
1.56862	1.09527	0.473343	179	71
1.52606	1.09527	0.430783	180	71
0.322083 J	0.71295	-0.390866	180	72
ND<0	0.71295	-0.71295	180	73
ND<0	0.71295	-0.71295	180	74
1.15373	0.71295	0.440782	181	74
1.17557	0.71295	0.462624	182	74
1.13462	0.71295	0.421673	183	74
2.02815	0.71295	1.3152	184	74
1.56862	0.71295	0.855666	185	74
1.52606	0.71295	0.813106	186	74
ND<0	0.322083 J	-0.322083	186	75
ND<0	0.322083 J	-0.322083	186	76
1.15373	0.322083 J	0.831648	187	76
1.17557	0.322083 J	0.85349	188	76
1.13462	0.322083 J	0.812539	189	76
2.02815	0.322083 J	1.70606	190	76
1.56862	0.322083 J	1.24653	191	76
1.52606	0.322083 J	1.20397	192	76
ND<0	ND<0	0	192	76
1.15373	ND<0	1.15373	193	76
1.17557	ND<0	1.17557	194	76
1.13462	ND<0	1.13462	195	76
2.02815	ND<0	2.02815	196	76
1.56862	ND<0	1.56862	197	76
1.52606	ND<0	1.52606	198	76
1.15373	ND<0	1.15373	199	76
1.17557	ND<0	1.17557	200	76
1.13462	ND<0	1.13462	201	76
2.02815	ND<0	2.02815	202	76
1.56862	ND<0	1.56862	203	76
1.52606	ND<0	1.52606	204	76

1.17557	1.15373	0.0218417	205	76
1.13462	1.15373	-0.0191089	205	77
2.02815	1.15373	0.874417	206	77
1.56862	1.15373	0.414884	207	77
1.52606	1.15373	0.372325	208	77
1.13462	1.17557	-0.0409506	208	78
2.02815	1.17557	0.852575	209	78
1.56862	1.17557	0.393043	210	78
1.52606	1.17557	0.350483	211	78
2.02815	1.13462	0.893526	212	78
1.56862	1.13462	0.433993	213	78
1.52606	1.13462	0.391434	214	78
1.56862	2.02815	-0.459532	214	79
1.52606	2.02815	-0.502092	214	80
1.52606	1.56862	-0.0425596	214	81

S Statistic = 214 - 81 = 133

Tied Group	Value	Members
1	-0.174353	2
2	0	11

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 2988
B = 0
C = 990

D = 0
E = 112
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 2135
Z-Score = 2.85677
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|2.85677| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: 1,2-Dichloroethane

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 206
Percent Non-Detects: 97.1698%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.1	ND<0.1
			11/16/2009	ND<0.1	ND<0.1
			6/30/2010	ND<0.1	ND<0.1

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-6	27	27 (100%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2

			6/11/2009	ND<0.1	ND<0.1
			11/16/2009	ND<0.1	ND<0.1
			6/30/2010	ND<0.1	ND<0.1
MW-7	27	27 (100%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.1	ND<0.1
			11/16/2009	ND<0.1	ND<0.1
			6/30/2010	ND<0.1	ND<0.1
MW-8	26	26 (100%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.1	ND<0.1
			6/30/2010	ND<0.1	ND<0.1
MW-10	27	22 (81.4815%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2

			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	0.58 J	0.58 J	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.42 J	0.42 J	
			6/5/2008	0.67 J	0.67 J	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.1	ND<0.1	
			11/16/2009	0.45 J	0.45 J	
			6/30/2010	0.2 J	0.2 J	
MW-11R	27	27 (100%)	7/20/1995	ND<2	ND<2	
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.1	ND<0.1	
			11/16/2009	ND<0.1	ND<0.1	
			6/30/2010	ND<0.1	ND<0.1	
MW-12AR	17	17 (100%)	3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	

			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.1	ND<0.1	
			11/16/2009	ND<0.1	ND<0.1	
			6/30/2010	ND<0.1	ND<0.1	
MW-12BR		17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.1	ND<0.1	
			11/16/2009	ND<0.1	ND<0.1	
			6/30/2010	ND<0.1	ND<0.1	
MW-9	27	26 (96.2963%)	7/20/1995	ND<2	ND<2	
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	1.39 J	1.39 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.1	ND<0.1	
			11/16/2009	ND<0.1	ND<0.1	
			6/30/2010	ND<0.1	ND<0.1	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: 1,2-Dichloroethane

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.05	-2.65209	7.03356	-0.132604
2	0.05	-2.365	11.2629	-0.250885
3	0.05	-2.197	28.1457	-0.360749
4	0.05	-2.096	43.2185	-0.465596
5	0.05	-1.995	39.2583	-0.565366
6	0.05	-1.911	32.9488	-0.660917
7	0.05	-1.852	18.3291	-0.753526
8	0.05	-1.786	13.6111	-0.842856
9	0.05	-1.727	33.9096	-0.929253
10	0.05	-1.684	44.1935	-1.0135
11	0.05	-1.635	24.4609	-1.09526
12	0.05	-1.589	27.1356	-1.17473
13	0.05	-1.546	43.9527	-1.25205
14	0.05	-1.514	1.8195	-1.32775
15	0.05	-1.475	7.9975	-1.40154
16	0.05	-1.439	5.0698	-1.47352
17	0.05	-1.411	8.063	-1.54411
18	0.05	-1.378	6.9637	-1.61304
19	0.05	-1.346	46.778	-1.68039
20	0.05	-1.322	51.63	-1.74651
21	0.05	-1.293	36.1989	-1.81117
22	0.05	-1.264	66.7982	-1.8744
23	0.05	-1.242	68.3424	-1.93653
24	0.05	-1.215	96.821	-1.99733
25	0.2	-1.190	127.2373	-2.23535
26	0.42	-1.165	57.2947	-2.72467
27	0.45	-1.145	3.9069	-3.24015
28	0.58	-1.121	68.75	-3.89072
29	0.67	-1.098	47.3716	-4.6267
30	1	-1.080	32.7538	-5.70702
31	1	-1.058	12.6584	-6.76514
32	1	-1.036	43.7326	-7.80157
33	1	-1.019	43.7718	-8.821
34	1	-0.998575		81.7689 -9.81957
35	1	-0.978	158.7257	-10.7977
36	1	-0.958125		83.6437 -11.7559
37	1	-0.942375		84.5318 -12.6982
38	1	-0.923014		85.3837 -13.6212
39	1	-0.903992		86.201 -14.5252
40	1	-0.889006		86.9913 -15.4142
41	1	-0.870	558.7491	-16.2848
42	1	-0.852385		88.4757 -17.1372
43	1	-0.838054		89.178 -17.9752
44	1	-0.820379		89.8511 -18.7956
45	1	-0.802956		90.4958 -19.5986
46	1	-0.789191		91.1186 -20.3878
47	1	-0.772193		91.7149 -21.1599
48	1	-0.755415		92.2856 -21.9154
49	1	-0.738846		92.8314 -22.6542

50	1	-0.725736	93.3581	-23.3799
51	1	-0.709522	93.8616	-24.0895
52	1	-0.693493	94.3425	-24.783
53	1	-0.680797	94.806	-25.4638
54	1	-0.665079	95.2483	-26.1288
55	1	-0.649522	95.6702	-26.7784
56	1	-0.637192	96.0762	-27.4155
57	1	-0.621911	96.463	-28.0375
58	1	-0.606775	96.8312	-28.6442
59	1	-0.594766	97.1849	-29.239
60	1	-0.579873	97.5212	-29.8189
61	1	-0.565108	97.8405	-30.384
62	1	-0.550465	98.1435	-30.9344
63	1	-0.538836	98.4339	-31.4733
64	1	-0.524401	98.7088	-31.9977
65	1	-0.510074	98.969	-32.5078
66	1	-0.498687	99.2177	-33.0064
67	1	-0.484544	99.4525	-33.491
68	1	-0.470498	99.6739	-33.9615
69	1	-0.459327	99.8848	-34.4208
70	1	-0.445443	100.083	-34.8663
71	1	-0.431644	100.27	-35.2979
72	1	-0.417928	100.444	-35.7158
73	1	-0.40701	100.61	-36.1228
74	1	-0.393433	100.765	-36.5163
75	1	-0.379927	100.909	-36.8962
76	1	-0.369171	101.045	-37.2654
77	1	-0.355788	101.172	-37.6212
78	1	-0.342466	101.289	-37.9636
79	1	-0.331854	101.399	-38.2955
80	1	-0.318639	101.501	-38.6141
81	1	-0.305481	101.594	-38.9196
82	1	-0.294992	101.681	-39.2146
83	1	-0.281926	101.761	-39.4965
84	1	-0.268908	101.833	-39.7654
85	1	-0.255936	101.898	-40.0214
86	1	-0.24559	101.959	-40.2669
87	1	-0.232693	102.013	-40.4996
88	1	-0.219834	102.061	-40.7195
89	1	-0.209575	102.105	-40.9291
90	1	-0.196779	102.144	-41.1258
91	1	-0.184017	102.178	-41.3098
92	1	-0.173829	102.208	-41.4837
93	1	-0.161119	102.234	-41.6448
94	1	-0.148434	102.256	-41.7932
95	1	-0.135774	102.274	-41.929
96	1	-0.125661	102.29	-42.0547
97	1	-0.113039	102.303	-42.1677
98	1	-0.100433	102.313	-42.2681
99	1	-0.0903606	102.321	-42.3585
100	1	-0.0777834	102.327	-42.4363
101	1	-0.0652187	102.332	-42.5015
102	1	-0.0551734	102.335	-42.5567
103	1	-0.0426257	102.336	-42.5993
104	1	-0.0300838	102.337	-42.6294
105	1	-0.0200544	102.338	-42.6494
106	1	-0.00751925	102.338	-42.657
107	1	0.00751925	102.338	-42.6494
108	1	0.0200544	102.338	-42.6294
109	1	0.0300838	102.339	-42.5993
110	1	0.0426257	102.341	-42.5567
111	1	0.0551734	102.344	-42.5015

112	1	0.0652187	102.348	-42.4363
113	1	0.0777834	102.354	-42.3585
114	1	0.0903606	102.362	-42.2681
115	1	0.100433	102.373	-42.1677
116	1	0.113039	102.385	-42.0547
117	1	0.125661	102.401	-41.929
118	1	0.135774	102.42	-41.7932
119	1	0.148434	102.442	-41.6448
120	1	0.161119	102.468	-41.4837
121	1	0.173829	102.498	-41.3098
122	1	0.184017	102.532	-41.1258
123	1	0.196779	102.57	-40.9291
124	1	0.209575	102.614	-40.7195
125	1	0.219834	102.663	-40.4996
126	1	0.232693	102.717	-40.2669
127	1	0.24559	102.777	-40.0214
128	1	0.255936	102.843	-39.7654
129	1	0.268908	102.915	-39.4965
130	1	0.281926	102.994	-39.2146
131	1	0.294992	103.081	-38.9196
132	1	0.305481	103.175	-38.6141
133	1	0.318639	103.276	-38.2955
134	1	0.331854	103.386	-37.9636
135	1	0.342466	103.504	-37.6212
136	1	0.355788	103.63	-37.2654
137	1	0.369171	103.767	-36.8962
138	1	0.379927	103.911	-36.5163
139	1	0.393433	104.066	-36.1228
140	1	0.40701	104.231	-35.7158
141	1	0.417928	104.406	-35.2979
142	1	0.431644	104.592	-34.8663
143	1	0.445443	104.791	-34.4208
144	1	0.459327	105.002	-33.9615
145	1	0.470498	105.223	-33.491
146	1	0.484544	105.458	-33.0064
147	1	0.498687	105.707	-32.5078
148	1	0.510074	105.967	-31.9977
149	1	0.524401	106.242	-31.4733
150	1	0.538836	106.532	-30.9344
151	1	0.550465	106.835	-30.384
152	1	0.565108	107.154	-29.8189
153	1	0.579873	107.491	-29.239
154	1	0.594766	107.844	-28.6442
155	1	0.606775	108.213	-28.0375
156	1	0.621911	108.599	-27.4155
157	1	0.637192	109.005	-26.7784
158	1	0.649522	109.427	-26.1288
159	1	0.665079	109.87	-25.4638
160	1	0.680797	110.333	-24.783
161	1	0.693493	110.814	-24.0895
162	1	0.709522	111.317	-23.3799
163	1	0.725736	111.844	-22.6542
164	1	0.738846	112.39	-21.9154
165	1	0.755415	112.961	-21.1599
166	1	0.772193	113.557	-20.3878
167	1	0.789191	114.18	-19.5986
168	1	0.802956	114.824	-18.7956
169	1	0.820379	115.498	-17.9752
170	1	0.838054	116.2	-17.1372
171	1	0.852385	116.926	-16.2848
172	1	0.87055	117.684	-15.4142
173	1	0.889006	118.475	-14.5252

174	1	0.903992	119.292	-13.6212
175	1	0.923014	120.144	-12.6982
176	1	0.942375	121.032	-11.7559
177	1	0.958125	121.95	-10.7977
178	1	0.97815	122.907	-9.81957
179	1	0.998575	123.904	-8.821
180	1	1.01943	124.943	-7.80157
181	1	1.03643	126.017	-6.76514
182	1	1.05812	127.137	-5.70702
183	1	1.08032	128.304	-4.6267
184	1	1.09847	129.511	-3.52823
185	1	1.12168	130.769	-2.40655
186	1	1.1455	132.081	-1.26105
187	1	1.16505	133.438	-0.0959986
188	1	1.19012	134.855	1.09412
189	1	1.21596	136.333	2.31008
190	1	1.24264	137.877	3.55272
191	1	1.26464	139.477	4.81736
192	1	1.29303	141.149	6.1104
193	1	1.32251	142.898	7.4329
194	1	1.34694	144.712	8.77984
195	1	1.37866	146.613	10.1585
196	1	1.41183	148.606	11.5703
197	1	1.43953	150.678	13.0099
198	1	1.47579	152.856	14.4857
199	1	1.5141	155.149	15.9998
200	1	1.54643	157.54	17.5462
201	1	1.58927	160.066	19.1355
202	1	1.63524	162.74	20.7707
203	1	1.68494	165.579	22.4556
204	1	1.72793	168.564	24.1836
205	1	1.78661	171.756	25.9702
206	1	1.85218	175.187	27.8224
207	1	1.91103	178.839	29.7334
208	1	1.99539	182.821	31.7288
209	1	2.09693	187.218	33.8257
210	1	2.19728	192.046	36.023
211	1	2.36561	197.642	38.3886
212	1.39	2.65209	204.676	42.075

Data Set Standard Deviation = 0.310991
Numerator = 1770.31
Denominator = 4176.8
W Statistic = 0.423843 = 1770.31 / 4176.8

5% Critical value of 0.976 exceeds 0.423843
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.423843
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: 1,2-Dichloroethane

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.99573	-2.65209	7.03356	7.94494
2	-2.99573	-2.36561	12.6297	15.0317
3	-2.99573	-2.19728	17.4578	21.6142
4	-2.99573	-2.09693	21.8549	27.896
5	-2.99573	-1.99539	25.8365	33.8737
6	-2.99573	-1.91103	29.4885	39.5986
7	-2.99573	-1.85218	32.9191	45.1472
8	-2.99573	-1.78661	36.111	50.4994
9	-2.99573	-1.72793	39.0968	55.6759
10	-2.99573	-1.68494	41.9358	60.7235
11	-2.99573	-1.63524	44.6098	65.6222
12	-2.99573	-1.58927	47.1356	70.3832
13	-2.99573	-1.54643	49.527	75.0159
14	-2.99573	-1.5141	51.8195	79.5518
15	-2.99573	-1.47579	53.9975	83.9729
16	-2.99573	-1.43953	56.0698	88.2853
17	-2.99573	-1.41183	58.063	92.5148
18	-2.99573	-1.37866	59.9637	96.6449
19	-2.99573	-1.34694	61.778	100.68
20	-2.99573	-1.32251	63.527	104.642
21	-2.99573	-1.29303	65.1989	108.515
22	-2.99573	-1.26464	66.7982	112.304
23	-2.99573	-1.24264	68.3424	116.027
24	-2.99573	-1.21596	69.821	119.669
25	-1.60944	-1.19012	71.2373	121.585
26	-0.867501	-1.16505	72.5947	122.595
27	-0.798508	-1.1455	73.9069	123.51
28	-0.544727	-1.12168	75.165	124.121
29	-0.400478	-1.09847	76.3716	124.561
30	0	-1.08032	77.5387	124.561
31	0	-1.05812	78.6584	124.561
32	0	-1.03643	79.7326	124.561
33	0	-1.01943	80.7718	124.561
34	0	-0.998575	81.7689	124.561
35	0	-0.97815	82.7257	124.561
36	0	-0.958125	83.6437	124.561
37	0	-0.942375	84.5318	124.561
38	0	-0.923014	85.3837	124.561
39	0	-0.903992	86.201	124.561
40	0	-0.889006	86.9913	124.561
41	0	-0.87055	87.7491	124.561
42	0	-0.852385	88.4757	124.561
43	0	-0.838054	89.178	124.561
44	0	-0.820379	89.8511	124.561
45	0	-0.802956	90.4958	124.561
46	0	-0.789191	91.1186	124.561
47	0	-0.772193	91.7149	124.561
48	0	-0.755415	92.2856	124.561
49	0	-0.738846	92.8314	124.561

50	0	-0.725736	93.3581	124.561
51	0	-0.709522	93.8616	124.561
52	0	-0.693493	94.3425	124.561
53	0	-0.680797	94.806	124.561
54	0	-0.665079	95.2483	124.561
55	0	-0.649522	95.6702	124.561
56	0	-0.637192	96.0762	124.561
57	0	-0.621911	96.463	124.561
58	0	-0.606775	96.8312	124.561
59	0	-0.594766	97.1849	124.561
60	0	-0.579873	97.5212	124.561
61	0	-0.565108	97.8405	124.561
62	0	-0.550465	98.1435	124.561
63	0	-0.538836	98.4339	124.561
64	0	-0.524401	98.7088	124.561
65	0	-0.510074	98.969	124.561
66	0	-0.498687	99.2177	124.561
67	0	-0.484544	99.4525	124.561
68	0	-0.470498	99.6739	124.561
69	0	-0.459327	99.8848	124.561
70	0	-0.445443	100.083	124.561
71	0	-0.431644	100.27	124.561
72	0	-0.417928	100.444	124.561
73	0	-0.40701	100.61	124.561
74	0	-0.393433	100.765	124.561
75	0	-0.379927	100.909	124.561
76	0	-0.369171	101.045	124.561
77	0	-0.355788	101.172	124.561
78	0	-0.342466	101.289	124.561
79	0	-0.331854	101.399	124.561
80	0	-0.318639	101.501	124.561
81	0	-0.305481	101.594	124.561
82	0	-0.294992	101.681	124.561
83	0	-0.281926	101.761	124.561
84	0	-0.268908	101.833	124.561
85	0	-0.255936	101.898	124.561
86	0	-0.24559	101.959	124.561
87	0	-0.232693	102.013	124.561
88	0	-0.219834	102.061	124.561
89	0	-0.209575	102.105	124.561
90	0	-0.196779	102.144	124.561
91	0	-0.184017	102.178	124.561
92	0	-0.173829	102.208	124.561
93	0	-0.161119	102.234	124.561
94	0	-0.148434	102.256	124.561
95	0	-0.135774	102.274	124.561
96	0	-0.125661	102.29	124.561
97	0	-0.113039	102.303	124.561
98	0	-0.100433	102.313	124.561
99	0	-0.0903606	102.321	124.561
100	0	-0.0777834	102.327	124.561
101	0	-0.0652187	102.332	124.561
102	0	-0.0551734	102.335	124.561
103	0	-0.0426257	102.336	124.561
104	0	-0.0300838	102.337	124.561
105	0	-0.0200544	102.338	124.561
106	0	-0.00751925	102.338	124.561
107	0	0.00751925	102.338	124.561
108	0	0.0200544	102.338	124.561
109	0	0.0300838	102.339	124.561
110	0	0.0426257	102.341	124.561
111	0	0.0551734	102.344	124.561

112	0	0.0652187	102.348	124.561
113	0	0.0777834	102.354	124.561
114	0	0.0903606	102.362	124.561
115	0	0.100433	102.373	124.561
116	0	0.113039	102.385	124.561
117	0	0.125661	102.401	124.561
118	0	0.135774	102.42	124.561
119	0	0.148434	102.442	124.561
120	0	0.161119	102.468	124.561
121	0	0.173829	102.498	124.561
122	0	0.184017	102.532	124.561
123	0	0.196779	102.57	124.561
124	0	0.209575	102.614	124.561
125	0	0.219834	102.663	124.561
126	0	0.232693	102.717	124.561
127	0	0.24559	102.777	124.561
128	0	0.255936	102.843	124.561
129	0	0.268908	102.915	124.561
130	0	0.281926	102.994	124.561
131	0	0.294992	103.081	124.561
132	0	0.305481	103.175	124.561
133	0	0.318639	103.276	124.561
134	0	0.331854	103.386	124.561
135	0	0.342466	103.504	124.561
136	0	0.355788	103.63	124.561
137	0	0.369171	103.767	124.561
138	0	0.379927	103.911	124.561
139	0	0.393433	104.066	124.561
140	0	0.40701	104.231	124.561
141	0	0.417928	104.406	124.561
142	0	0.431644	104.592	124.561
143	0	0.445443	104.791	124.561
144	0	0.459327	105.002	124.561
145	0	0.470498	105.223	124.561
146	0	0.484544	105.458	124.561
147	0	0.498687	105.707	124.561
148	0	0.510074	105.967	124.561
149	0	0.524401	106.242	124.561
150	0	0.538836	106.532	124.561
151	0	0.550465	106.835	124.561
152	0	0.565108	107.154	124.561
153	0	0.579873	107.491	124.561
154	0	0.594766	107.844	124.561
155	0	0.606775	108.213	124.561
156	0	0.621911	108.599	124.561
157	0	0.637192	109.005	124.561
158	0	0.649522	109.427	124.561
159	0	0.665079	109.87	124.561
160	0	0.680797	110.333	124.561
161	0	0.693493	110.814	124.561
162	0	0.709522	111.317	124.561
163	0	0.725736	111.844	124.561
164	0	0.738846	112.39	124.561
165	0	0.755415	112.961	124.561
166	0	0.772193	113.557	124.561
167	0	0.789191	114.18	124.561
168	0	0.802956	114.824	124.561
169	0	0.820379	115.498	124.561
170	0	0.838054	116.2	124.561
171	0	0.852385	116.926	124.561
172	0	0.87055	117.684	124.561
173	0	0.889006	118.475	124.561

174	0	0.903992		119.292	124.561
175	0	0.923014		120.144	124.561
176	0	0.942375		121.032	124.561
177	0	0.958125		121.95	124.561
178	0	0.97815	122.907	124.561	
179	0	0.998575		123.904	124.561
180	0	1.01943	124.943	124.561	
181	0	1.03643	126.017	124.561	
182	0	1.05812	127.137	124.561	
183	0	1.08032	128.304	124.561	
184	0	1.09847	129.511	124.561	
185	0	1.12168	130.769	124.561	
186	0	1.1455	132.081	124.561	
187	0	1.16505	133.438	124.561	
188	0	1.19012	134.855	124.561	
189	0	1.21596	136.333	124.561	
190	0	1.24264	137.877	124.561	
191	0	1.26464	139.477	124.561	
192	0	1.29303	141.149	124.561	
193	0	1.32251	142.898	124.561	
194	0	1.34694	144.712	124.561	
195	0	1.37866	146.613	124.561	
196	0	1.41183	148.606	124.561	
197	0	1.43953	150.678	124.561	
198	0	1.47579	152.856	124.561	
199	0	1.5141	155.149	124.561	
200	0	1.54643	157.54	124.561	
201	0	1.58927	160.066	124.561	
202	0	1.63524	162.74	124.561	
203	0	1.68494	165.579	124.561	
204	0	1.72793	168.564	124.561	
205	0	1.78661	171.756	124.561	
206	0	1.85218	175.187	124.561	
207	0	1.91103	178.839	124.561	
208	0	1.99539	182.821	124.561	
209	0	2.09693	187.218	124.561	
210	0	2.19728	192.046	124.561	
211	0	2.36561	197.642	124.561	
212	0.329304		2.65209	204.676	125.434

Data Set Standard Deviation = 0.955993
Numerator = 15733.8
Denominator = 39469.2
W Statistic = 0.398634 = 15733.8 / 39469.2

5% Critical value of 0.976 exceeds 0.398634
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.398634
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: 1,2-Dichloroethane

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

Total Percent Non-Detects = 97.1698%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 17
Maximum Background Concentration = 0
Confidence Level = 68%
False Positive Rate = 32%

Location	Date	Samples	Mean	Significant
MW-6	6/30/2010	1	-2.99573	FALSE
MW-7	6/30/2010	1	-2.99573	FALSE
MW-8	6/30/2010	1	-2.99573	FALSE
MW-10	6/30/2010	1	-1.60944	FALSE
MW-11R	6/30/2010	1	-2.99573	FALSE
MW-12AR	6/30/2010	1	-2.99573	FALSE
MW-12BR	6/30/2010	1	-2.99573	FALSE
MW-9	6/30/2010	1	-2.99573	FALSE

Concentrations (ppb)

Parameter: 1,2-Dichloropropane

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 182
Percent Non-Detects: 85.8491%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.13	ND<0.13
			11/16/2009	ND<0.13	ND<0.13
			6/30/2010	ND<0.13	ND<0.13

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-8	26	26 (100%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2

			6/11/2009	ND<0.13		ND<0.13
			6/30/2010	ND<0.13		ND<0.13
MW-12AR	17	17 (100%)	3/16/1999		ND<2	ND<2
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.13		ND<0.13
			11/16/2009	ND<0.13		ND<0.13
			6/30/2010	ND<0.13		ND<0.13
MW-12BR	17	17 (100%)	3/16/1999		ND<2	ND<2
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.13		ND<0.13
			11/16/2009	ND<0.13		ND<0.13
			6/30/2010	ND<0.13		ND<0.13
MW-9	27	23 (85.1852%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.23 J	0.23 J	
			6/5/2008	ND<2	ND<2	

			11/20/2008	0.24 J	0.24 J	
			6/11/2009	ND<0.13		ND<0.13
			11/16/2009	0.33 J	0.33 J	
			6/30/2010	0.37 J	0.37 J	
MW-11R	27	19 (70.3704%)	7/20/1995		1.2 J	1.2 J
			8/24/1995	4.3	4.3	
			9/28/1995	3	3	
			10/26/1995	4	4	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	1.3 J	1.3 J	
			10/25/2005	ND<2	ND<2	
			4/29/2006	0.5 J	0.5 J	
			11/18/2006	0.6 J	0.6 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.95 J	0.95 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.13		ND<0.13
			11/16/2009	ND<0.13		ND<0.13
			6/30/2010	ND<0.13		ND<0.13
MW-10	27	9 (33.3333%)	7/20/1995		0.42 J	0.42 J
			8/24/1995	3.1	3.1	
			9/28/1995	5	5	
			10/26/1995	3	3	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	6	6	
			9/24/1997	7.7	7.7	
			4/7/1998	ND<2	ND<2	
			9/23/1998	5.6	5.6	
			3/16/1999	9.1	9.1	
			9/23/1999	5.6	5.6	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	2.12	2.12	
			10/25/2005	3.32	3.32	
			4/29/2006	3.97	3.97	
			11/18/2006	2.93	2.93	
			5/23/2007	ND<2	ND<2	
			11/28/2007	3.78	3.78	
			6/5/2008	3.51	3.51	
			11/20/2008	ND<2	ND<2	
			6/11/2009	2.2	2.2	
			11/16/2009	2.8	2.8	
			6/30/2010	1.7	1.7	
MW-7	27	27 (100%)	7/20/1995		ND<2	ND<2

			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.13		ND<0.13
			11/16/2009	ND<0.13		ND<0.13
			6/30/2010	ND<0.13		ND<0.13
MW-6	27	27 (100%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.13		ND<0.13
			11/16/2009	ND<0.13		ND<0.13
			6/30/2010	ND<0.13		ND<0.13

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: 1,2-Dichloropropane

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.065	-2.65209	7.03356	-0.172386
2	0.065	-2.365	11.2629 7	-0.326151
3	0.065	-2.197	28.1745 8	-0.468974
4	0.065	-2.096	32.8549	-0.605275
5	0.065	-1.995	39.2583 5	-0.734975
6	0.065	-1.911	03.2948 5	-0.859192
7	0.065	-1.852	18.3291 9	-0.979584
8	0.065	-1.786	13.6111	-1.09571
9	0.065	-1.727	93.3909 68	-1.20803
10	0.065	-1.684	94.1935 8	-1.31755
11	0.065	-1.635	24.4444 6098	-1.42384
12	0.065	-1.589	27.4713 56	-1.52714
13	0.065	-1.546	43.4952 7	-1.62766
14	0.065	-1.514	1 51.8195	-1.72608
15	0.065	-1.475	79.5399 75	-1.822
16	0.065	-1.439	53.5606 98	-1.91557
17	0.065	-1.411	83.5806 3	-2.00734
18	0.065	-1.378	65.9637	-2.09696
19	0.065	-1.346	94.6177 8	-2.18451
20	0.065	-1.322	51.6352 7	-2.27047
21	0.065	-1.293	03.6519 89	-2.35452
22	0.23	-1.264	64.6679 82	-2.64538
23	0.24	-1.242	64.6834 24	-2.94362
24	0.33	-1.215	96.6982 1	-3.34488
25	0.37	-1.190	12.7123 73	-3.78523
26	0.42	-1.165	05.7259 47	-4.27455
27	0.5	-1.145	5 73.9069	-4.8473
28	0.6	-1.121	68.7165	-5.52031
29	0.95	-1.098	47.7637 16	-6.56385
30	1	-1.080	32.7753 87	-7.64417
31	1	-1.058	12.7865 84	-8.7023
32	1	-1.036	43.7973 26	-9.73873
33	1	-1.019	43.8077 18	-10.7582
34	1	-0.998575	81.7689	-11.7567
35	1	-0.978	15.8272 57	-12.7349
36	1	-0.958125	83.6437	-13.693
37	1	-0.942375	84.5318	-14.6354
38	1	-0.923014	85.3837	-15.5584
39	1	-0.903992	86.201	-16.4624
40	1	-0.889006	86.9913	-17.3514
41	1	-0.870	55.8749 91	-18.2219
42	1	-0.852385	88.4757	-19.0743
43	1	-0.838054	89.178	-19.9124
44	1	-0.820379	89.8511	-20.7328
45	1	-0.802956	90.4958	-21.5357
46	1	-0.789191	91.1186	-22.3249
47	1	-0.772193	91.7149	-23.0971
48	1	-0.755415	92.2856	-23.8525
49	1	-0.738846	92.8314	-24.5914

50	1	-0.725736	93.3581	-25.3171
51	1	-0.709522	93.8616	-26.0266
52	1	-0.693493	94.3425	-26.7201
53	1	-0.680797	94.806	-27.4009
54	1	-0.665079	95.2483	-28.066
55	1	-0.649522	95.6702	-28.7155
56	1	-0.637192	96.0762	-29.3527
57	1	-0.621911	96.463	-29.9746
58	1	-0.606775	96.8312	-30.5814
59	1	-0.594766	97.1849	-31.1762
60	1	-0.579873	97.5212	-31.756
61	1	-0.565108	97.8405	-32.3211
62	1	-0.550465	98.1435	-32.8716
63	1	-0.538836	98.4339	-33.4104
64	1	-0.524401	98.7088	-33.9348
65	1	-0.510074	98.969	-34.4449
66	1	-0.498687	99.2177	-34.9436
67	1	-0.484544	99.4525	-35.4281
68	1	-0.470498	99.6739	-35.8986
69	1	-0.459327	99.8848	-36.358
70	1	-0.445443	100.083	-36.8034
71	1	-0.431644	100.27	-37.2351
72	1	-0.417928	100.444	-37.653
73	1	-0.40701	100.61	-38.06
74	1	-0.393433	100.765	-38.4534
75	1	-0.379927	100.909	-38.8334
76	1	-0.369171	101.045	-39.2025
77	1	-0.355788	101.172	-39.5583
78	1	-0.342466	101.289	-39.9008
79	1	-0.331854	101.399	-40.2326
80	1	-0.318639	101.501	-40.5513
81	1	-0.305481	101.594	-40.8568
82	1	-0.294992	101.681	-41.1517
83	1	-0.281926	101.761	-41.4337
84	1	-0.268908	101.833	-41.7026
85	1	-0.255936	101.898	-41.9585
86	1	-0.24559	101.959	-42.2041
87	1	-0.232693	102.013	-42.4368
88	1	-0.219834	102.061	-42.6566
89	1	-0.209575	102.105	-42.8662
90	1	-0.196779	102.144	-43.063
91	1	-0.184017	102.178	-43.247
92	1	-0.173829	102.208	-43.4208
93	1	-0.161119	102.234	-43.582
94	1	-0.148434	102.256	-43.7304
95	1	-0.135774	102.274	-43.8662
96	1	-0.125661	102.29	-43.9918
97	1	-0.113039	102.303	-44.1049
98	1	-0.100433	102.313	-44.2053
99	1	-0.0903606	102.321	-44.2957
100	1	-0.0777834	102.327	-44.3734
101	1	-0.0652187	102.332	-44.4387
102	1	-0.0551734	102.335	-44.4938
103	1	-0.0426257	102.336	-44.5365
104	1	-0.0300838	102.337	-44.5665
105	1	-0.0200544	102.338	-44.5866
106	1	-0.00751925	102.338	-44.5941
107	1	0.00751925	102.338	-44.5866
108	1	0.0200544	102.338	-44.5665
109	1	0.0300838	102.339	-44.5365
110	1	0.0426257	102.341	-44.4938
111	1	0.0551734	102.344	-44.4387

112	1	0.0652187	102.348	-44.3734
113	1	0.0777834	102.354	-44.2957
114	1	0.0903606	102.362	-44.2053
115	1	0.100433	102.373	-44.1049
116	1	0.113039	102.385	-43.9918
117	1	0.125661	102.401	-43.8662
118	1	0.135774	102.42	-43.7304
119	1	0.148434	102.442	-43.582
120	1	0.161119	102.468	-43.4208
121	1	0.173829	102.498	-43.247
122	1	0.184017	102.532	-43.063
123	1	0.196779	102.57	-42.8662
124	1	0.209575	102.614	-42.6566
125	1	0.219834	102.663	-42.4368
126	1	0.232693	102.717	-42.2041
127	1	0.24559	102.777	-41.9585
128	1	0.255936	102.843	-41.7026
129	1	0.268908	102.915	-41.4337
130	1	0.281926	102.994	-41.1517
131	1	0.294992	103.081	-40.8568
132	1	0.305481	103.175	-40.5513
133	1	0.318639	103.276	-40.2326
134	1	0.331854	103.386	-39.9008
135	1	0.342466	103.504	-39.5583
136	1	0.355788	103.63	-39.2025
137	1	0.369171	103.767	-38.8334
138	1	0.379927	103.911	-38.4534
139	1	0.393433	104.066	-38.06
140	1	0.40701	104.231	-37.653
141	1	0.417928	104.406	-37.2351
142	1	0.431644	104.592	-36.8034
143	1	0.445443	104.791	-36.358
144	1	0.459327	105.002	-35.8986
145	1	0.470498	105.223	-35.4281
146	1	0.484544	105.458	-34.9436
147	1	0.498687	105.707	-34.4449
148	1	0.510074	105.967	-33.9348
149	1	0.524401	106.242	-33.4104
150	1	0.538836	106.532	-32.8716
151	1	0.550465	106.835	-32.3211
152	1	0.565108	107.154	-31.756
153	1	0.579873	107.491	-31.1762
154	1	0.594766	107.844	-30.5814
155	1	0.606775	108.213	-29.9746
156	1	0.621911	108.599	-29.3527
157	1	0.637192	109.005	-28.7155
158	1	0.649522	109.427	-28.066
159	1	0.665079	109.87	-27.4009
160	1	0.680797	110.333	-26.7201
161	1	0.693493	110.814	-26.0266
162	1	0.709522	111.317	-25.3171
163	1	0.725736	111.844	-24.5914
164	1	0.738846	112.39	-23.8525
165	1	0.755415	112.961	-23.0971
166	1	0.772193	113.557	-22.3249
167	1	0.789191	114.18	-21.5357
168	1	0.802956	114.824	-20.7328
169	1	0.820379	115.498	-19.9124
170	1	0.838054	116.2	-19.0743
171	1	0.852385	116.926	-18.2219
172	1	0.87055	117.684	-17.3514
173	1	0.889006	118.475	-16.4624

174	1	0.903992	119.292	-15.5584
175	1	0.923014	120.144	-14.6354
176	1	0.942375	121.032	-13.693
177	1	0.958125	121.95	-12.7349
178	1	0.97815	122.907	-11.7567
179	1	0.998575	123.904	-10.7582
180	1	1.01943	124.943	-9.73873
181	1	1.03643	126.017	-8.7023
182	1	1.05812	127.137	-7.64417
183	1	1.08032	128.304	-6.56385
184	1	1.09847	129.511	-5.46538
185	1	1.12168	130.769	-4.34371
186	1	1.1455	132.081	-3.1982
187	1	1.16505	133.438	-2.03316
188	1	1.19012	134.855	-0.843036
189	1	1.21596	136.333	0.372924
190	1	1.24264	137.877	1.61557
191	1.2	1.26464	139.477	3.13314
192	1.3	1.29303	141.149	4.81408
193	1.7	1.32251	142.898	7.06234
194	2.12	1.34694	144.712	9.91785
195	2.2	1.37866	146.613	12.9509
196	2.8	1.41183	148.606	16.904
197	2.93	1.43953	150.678	21.1218
198	3	1.47579	152.856	25.5492
199	3	1.5141	155.149	30.0915
200	3.1	1.54643	157.54	34.8855
201	3.32	1.58927	160.066	40.1618
202	3.51	1.63524	162.74	45.9015
203	3.78	1.68494	165.579	52.2706
204	3.97	1.72793	168.564	59.1305
205	4	1.78661	171.756	66.2769
206	4.3	1.85218	175.187	74.2413
207	5	1.91103	178.839	83.7964
208	5.6	1.99539	182.821	94.9706
209	5.6	2.09693	187.218	106.713
210	6	2.19728	192.046	119.897
211	7.7	2.36561	197.642	138.112
212	9.1	2.65209	204.676	162.246

Data Set Standard Deviation = 1.14886
Numerator = 26323.9
Denominator = 57000.9
W Statistic = 0.461816 = 26323.9 / 57000.9

5% Critical value of 0.976 exceeds 0.461816
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.461816
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: 1,2-Dichloropropane

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.73337	-2.65209	7.03356	7.24913
2	-2.73337	-2.36561	12.6297	13.7152
3	-2.73337	-2.19728	17.4578	19.7212
4	-2.73337	-2.09693	21.8549	25.4529
5	-2.73337	-1.99539	25.8365	30.907
6	-2.73337	-1.91103	29.4885	36.1306
7	-2.73337	-1.85218	32.9191	41.1933
8	-2.73337	-1.78661	36.111	46.0767
9	-2.73337	-1.72793	39.0968	50.7998
10	-2.73337	-1.68494	41.9358	55.4054
11	-2.73337	-1.63524	44.6098	59.8751
12	-2.73337	-1.58927	47.1356	64.2191
13	-2.73337	-1.54643	49.527	68.4461
14	-2.73337	-1.5141	51.8195	72.5847
15	-2.73337	-1.47579	53.9975	76.6186
16	-2.73337	-1.43953	56.0698	80.5533
17	-2.73337	-1.41183	58.063	84.4124
18	-2.73337	-1.37866	59.9637	88.1808
19	-2.73337	-1.34694	61.778	91.8625
20	-2.73337	-1.32251	63.527	95.4773
21	-2.73337	-1.29303	65.1989	99.0117
22	-1.46968	-1.26464	66.7982	100.87
23	-1.42712	-1.24264	68.3424	102.644
24	-1.10866	-1.21596	69.821	103.992
25	-0.994252	-1.19012	71.2373	105.175
26	-0.867501	-1.16505	72.5947	106.186
27	-0.693147	-1.1455	73.9069	106.98
28	-0.510826	-1.12168	75.165	107.553
29	-0.0512933	-1.09847	76.3716	107.609
30	0	-1.08032	77.5387	107.609
31	0	-1.05812	78.6584	107.609
32	0	-1.03643	79.7326	107.609
33	0	-1.01943	80.7718	107.609
34	0	-0.998575	81.7689	107.609
35	0	-0.97815	82.7257	107.609
36	0	-0.958125	83.6437	107.609
37	0	-0.942375	84.5318	107.609
38	0	-0.923014	85.3837	107.609
39	0	-0.903992	86.201	107.609
40	0	-0.889006	86.9913	107.609
41	0	-0.87055	87.7491	107.609
42	0	-0.852385	88.4757	107.609
43	0	-0.838054	89.178	107.609
44	0	-0.820379	89.8511	107.609
45	0	-0.802956	90.4958	107.609
46	0	-0.789191	91.1186	107.609
47	0	-0.772193	91.7149	107.609
48	0	-0.755415	92.2856	107.609
49	0	-0.738846	92.8314	107.609

50	0	-0.725736	93.3581	107.609
51	0	-0.709522	93.8616	107.609
52	0	-0.693493	94.3425	107.609
53	0	-0.680797	94.806	107.609
54	0	-0.665079	95.2483	107.609
55	0	-0.649522	95.6702	107.609
56	0	-0.637192	96.0762	107.609
57	0	-0.621911	96.463	107.609
58	0	-0.606775	96.8312	107.609
59	0	-0.594766	97.1849	107.609
60	0	-0.579873	97.5212	107.609
61	0	-0.565108	97.8405	107.609
62	0	-0.550465	98.1435	107.609
63	0	-0.538836	98.4339	107.609
64	0	-0.524401	98.7088	107.609
65	0	-0.510074	98.969	107.609
66	0	-0.498687	99.2177	107.609
67	0	-0.484544	99.4525	107.609
68	0	-0.470498	99.6739	107.609
69	0	-0.459327	99.8848	107.609
70	0	-0.445443	100.083	107.609
71	0	-0.431644	100.27	107.609
72	0	-0.417928	100.444	107.609
73	0	-0.40701	100.61	107.609
74	0	-0.393433	100.765	107.609
75	0	-0.379927	100.909	107.609
76	0	-0.369171	101.045	107.609
77	0	-0.355788	101.172	107.609
78	0	-0.342466	101.289	107.609
79	0	-0.331854	101.399	107.609
80	0	-0.318639	101.501	107.609
81	0	-0.305481	101.594	107.609
82	0	-0.294992	101.681	107.609
83	0	-0.281926	101.761	107.609
84	0	-0.268908	101.833	107.609
85	0	-0.255936	101.898	107.609
86	0	-0.24559	101.959	107.609
87	0	-0.232693	102.013	107.609
88	0	-0.219834	102.061	107.609
89	0	-0.209575	102.105	107.609
90	0	-0.196779	102.144	107.609
91	0	-0.184017	102.178	107.609
92	0	-0.173829	102.208	107.609
93	0	-0.161119	102.234	107.609
94	0	-0.148434	102.256	107.609
95	0	-0.135774	102.274	107.609
96	0	-0.125661	102.29	107.609
97	0	-0.113039	102.303	107.609
98	0	-0.100433	102.313	107.609
99	0	-0.0903606	102.321	107.609
100	0	-0.0777834	102.327	107.609
101	0	-0.0652187	102.332	107.609
102	0	-0.0551734	102.335	107.609
103	0	-0.0426257	102.336	107.609
104	0	-0.0300838	102.337	107.609
105	0	-0.0200544	102.338	107.609
106	0	-0.00751925	102.338	107.609
107	0	0.00751925	102.338	107.609
108	0	0.0200544	102.338	107.609
109	0	0.0300838	102.339	107.609
110	0	0.0426257	102.341	107.609
111	0	0.0551734	102.344	107.609

112	0	0.0652187	102.348	107.609
113	0	0.0777834	102.354	107.609
114	0	0.0903606	102.362	107.609
115	0	0.100433	102.373	107.609
116	0	0.113039	102.385	107.609
117	0	0.125661	102.401	107.609
118	0	0.135774	102.42	107.609
119	0	0.148434	102.442	107.609
120	0	0.161119	102.468	107.609
121	0	0.173829	102.498	107.609
122	0	0.184017	102.532	107.609
123	0	0.196779	102.57	107.609
124	0	0.209575	102.614	107.609
125	0	0.219834	102.663	107.609
126	0	0.232693	102.717	107.609
127	0	0.24559	102.777	107.609
128	0	0.255936	102.843	107.609
129	0	0.268908	102.915	107.609
130	0	0.281926	102.994	107.609
131	0	0.294992	103.081	107.609
132	0	0.305481	103.175	107.609
133	0	0.318639	103.276	107.609
134	0	0.331854	103.386	107.609
135	0	0.342466	103.504	107.609
136	0	0.355788	103.63	107.609
137	0	0.369171	103.767	107.609
138	0	0.379927	103.911	107.609
139	0	0.393433	104.066	107.609
140	0	0.40701	104.231	107.609
141	0	0.417928	104.406	107.609
142	0	0.431644	104.592	107.609
143	0	0.445443	104.791	107.609
144	0	0.459327	105.002	107.609
145	0	0.470498	105.223	107.609
146	0	0.484544	105.458	107.609
147	0	0.498687	105.707	107.609
148	0	0.510074	105.967	107.609
149	0	0.524401	106.242	107.609
150	0	0.538836	106.532	107.609
151	0	0.550465	106.835	107.609
152	0	0.565108	107.154	107.609
153	0	0.579873	107.491	107.609
154	0	0.594766	107.844	107.609
155	0	0.606775	108.213	107.609
156	0	0.621911	108.599	107.609
157	0	0.637192	109.005	107.609
158	0	0.649522	109.427	107.609
159	0	0.665079	109.87	107.609
160	0	0.680797	110.333	107.609
161	0	0.693493	110.814	107.609
162	0	0.709522	111.317	107.609
163	0	0.725736	111.844	107.609
164	0	0.738846	112.39	107.609
165	0	0.755415	112.961	107.609
166	0	0.772193	113.557	107.609
167	0	0.789191	114.18	107.609
168	0	0.802956	114.824	107.609
169	0	0.820379	115.498	107.609
170	0	0.838054	116.2	107.609
171	0	0.852385	116.926	107.609
172	0	0.87055	117.684	107.609
173	0	0.889006	118.475	107.609

174	0		0.903992	119.292	107.609
175	0		0.923014	120.144	107.609
176	0		0.942375	121.032	107.609
177	0		0.958125	121.95	107.609
178	0		0.97815	122.907	107.609
179	0		0.998575	123.904	107.609
180	0		1.01943	124.943	107.609
181	0		1.03643	126.017	107.609
182	0		1.05812	127.137	107.609
183	0		1.08032	128.304	107.609
184	0		1.09847	129.511	107.609
185	0		1.12168	130.769	107.609
186	0		1.1455	132.081	107.609
187	0		1.16505	133.438	107.609
188	0		1.19012	134.855	107.609
189	0		1.21596	136.333	107.609
190	0		1.24264	137.877	107.609
191	0.182322		1.26464	139.477	107.84
192	0.262364		1.29303	141.149	108.179
193	0.530628		1.32251	142.898	108.881
194	0.751416		1.34694	144.712	109.893
195	0.788457		1.37866	146.613	110.98
196	1.02962	1.41183	148.606	112.433	
197	1.075	1.43953	150.678	113.981	
198	1.09861	1.47579	152.856	115.602	
199	1.09861	1.5141	155.149	117.266	
200	1.1314	1.54643	157.54	119.015	
201	1.19996	1.58927	160.066	120.922	
202	1.25562	1.63524	162.74	122.976	
203	1.32972	1.68494	165.579	125.216	
204	1.37877	1.72793	168.564	127.598	
205	1.38629	1.78661	171.756	130.075	
206	1.45862	1.85218	175.187	132.777	
207	1.60944	1.91103	178.839	135.853	
208	1.72277	1.99539	182.821	139.29	
209	1.72277	2.09693	187.218	142.903	
210	1.79176	2.19728	192.046	146.84	
211	2.04122	2.36561	197.642	151.668	
212	2.20827	2.65209	204.676	157.525	

Data Set Standard Deviation = 0.966697
Numerator = 24814.1
Denominator = 40357.9
W Statistic = 0.614851 = 24814.1 / 40357.9

5% Critical value of 0.976 exceeds 0.614851
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.614851
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: 1,2-Dichloropropane

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	91.5
	9/23/1999	ND<0	91.5
	3/15/2000	ND<0	91.5
	9/24/2003	ND<0	91.5
	3/11/2004	ND<0	91.5
	10/12/2004	ND<0	91.5
	4/1/2005	ND<0	91.5
	10/25/2005	ND<0	91.5
	4/29/2006	ND<0	91.5
	11/18/2006	ND<0	91.5
	5/23/2007	ND<0	91.5
	11/28/2007	ND<0	91.5
	6/5/2008	ND<0	91.5
	11/20/2008	ND<0	91.5
	6/11/2009	ND<-2.73337	91.5
	11/16/2009	ND<-2.73337	91.5
	6/30/2010	ND<-2.73337	91.5

Rank Sum = 1555.5
Rank Mean = 91.5

Background Rank Sum = 1555.5
Background Rank Mean = 91.5

Compliance Wells

Well ID	Date	Result	Rank
MW-8	7/20/1995	ND<0	91.5
	8/24/1995	ND<0	91.5
	9/28/1995	ND<0	91.5
	10/26/1995	ND<0	91.5
	11/19/1996	ND<0	91.5
	12/19/1996	ND<0	91.5
	3/24/1997	ND<0	91.5
	9/24/1997	ND<0	91.5
	4/7/1998	ND<0	91.5
	9/23/1998	ND<0	91.5
	3/16/1999	ND<0	91.5
	9/23/1999	ND<0	91.5
	3/15/2000	ND<0	91.5
	9/24/2003	ND<0	91.5
	3/11/2004	ND<0	91.5
	10/12/2004	ND<0	91.5
	4/1/2005	ND<0	91.5
	10/25/2005	ND<0	91.5
	4/29/2006	ND<0	91.5
	11/18/2006	ND<0	91.5
	5/23/2007	ND<0	91.5

	11/28/2007	ND<0	91.5	
	6/5/2008	ND<0	91.5	
	11/20/2008	ND<0	91.5	
	6/11/2009	ND<-2.73337		91.5
	6/30/2010	ND<-2.73337		91.5

Rank Sum = 2379
Rank Mean = 91.5

MW-12AR	3/16/1999	ND<0	91.5	
	9/23/1999	ND<0	91.5	
	3/15/2000	ND<0	91.5	
	9/24/2003	ND<0	91.5	
	3/11/2004	ND<0	91.5	
	10/12/2004	ND<0	91.5	
	4/1/2005	ND<0	91.5	
	10/25/2005	ND<0	91.5	
	4/29/2006	ND<0	91.5	
	11/18/2006	ND<0	91.5	
	5/23/2007	ND<0	91.5	
	11/28/2007	ND<0	91.5	
	6/5/2008	ND<0	91.5	
	11/20/2008	ND<0	91.5	
	6/11/2009	ND<-2.73337		91.5
	11/16/2009	ND<-2.73337		91.5
	6/30/2010	ND<-2.73337		91.5

Rank Sum = 1555.5
Rank Mean = 91.5

MW-12BR	3/16/1999	ND<0	91.5	
	9/23/1999	ND<0	91.5	
	3/15/2000	ND<0	91.5	
	9/24/2003	ND<0	91.5	
	3/11/2004	ND<0	91.5	
	10/12/2004	ND<0	91.5	
	4/1/2005	ND<0	91.5	
	10/25/2005	ND<0	91.5	
	4/29/2006	ND<0	91.5	
	11/18/2006	ND<0	91.5	
	5/23/2007	ND<0	91.5	
	11/28/2007	ND<0	91.5	
	6/5/2008	ND<0	91.5	
	11/20/2008	ND<0	91.5	
	6/11/2009	ND<-2.73337		91.5
	11/16/2009	ND<-2.73337		91.5
	6/30/2010	ND<-2.73337		91.5

Rank Sum = 1555.5
Rank Mean = 91.5

MW-9	7/20/1995	ND<0	91.5
	8/24/1995	ND<0	91.5
	9/28/1995	ND<0	91.5
	10/26/1995	ND<0	91.5
	11/19/1996	ND<0	91.5
	12/19/1996	ND<0	91.5
	3/24/1997	ND<0	91.5
	9/24/1997	ND<0	91.5
	4/7/1998	ND<0	91.5
	9/23/1998	ND<0	91.5
	3/16/1999	ND<0	91.5
	9/23/1999	ND<0	91.5
	3/15/2000	ND<0	91.5
	9/24/2003	ND<0	91.5

	3/11/2004	ND<0	91.5	
	10/12/2004	ND<0	91.5	
	4/1/2005	ND<0	91.5	
	10/25/2005	ND<0	91.5	
	4/29/2006	ND<0	91.5	
	11/18/2006	ND<0	91.5	
	5/23/2007	ND<0	91.5	
	11/28/2007	-1.46968	J	183
	6/5/2008	ND<0	91.5	
	11/20/2008	-1.42712	J	184
	6/11/2009	ND<-2.73337		91.5
	11/16/2009	-1.10866	J	185
	6/30/2010	-0.994252	J	186

Rank Sum = 2842.5
Rank Mean = 105.278

MW-11R	7/20/1995	0.182322	J	191
	8/24/1995	1.45862		206
	9/28/1995	1.09861		198
	10/26/1995	1.38629		205
	11/19/1996	ND<0	91.5	
	12/19/1996	ND<0	91.5	
	3/24/1997	ND<0	91.5	
	9/24/1997	ND<0	91.5	
	4/7/1998	ND<0	91.5	
	9/23/1998	ND<0	91.5	
	3/16/1999	ND<0	91.5	
	9/23/1999	ND<0	91.5	
	3/15/2000	ND<0	91.5	
	9/24/2003	ND<0	91.5	
	3/11/2004	ND<0	91.5	
	10/12/2004	ND<0	91.5	
	4/1/2005	0.262364	J	192
	10/25/2005	ND<0	91.5	
	4/29/2006	-0.693147	J	188
	11/18/2006	-0.510826	J	189
	5/23/2007	ND<0	91.5	
	11/28/2007	-0.0512933	J	190
	6/5/2008	ND<0	91.5	
	11/20/2008	ND<0	91.5	
	6/11/2009	ND<-2.73337		91.5
	11/16/2009	ND<-2.73337		91.5
	6/30/2010	ND<-2.73337		91.5

Rank Sum = 3297.5
Rank Mean = 122.13

MW-10	7/20/1995	-0.867501	J	187
	8/24/1995	1.1314	200	
	9/28/1995	1.60944		207
	10/26/1995	1.09861		199
	11/19/1996	ND<0	91.5	
	12/19/1996	ND<0	91.5	
	3/24/1997	1.79176		210
	9/24/1997	2.04122		211
	4/7/1998	ND<0	91.5	
	9/23/1998	1.72277		208
	3/16/1999	2.20827		212
	9/23/1999	1.72277		209
	3/15/2000	ND<0	91.5	
	9/24/2003	ND<0	91.5	
	3/11/2004	ND<0	91.5	
	10/12/2004	ND<0	91.5	

	4/1/2005	0.751416	194	
	10/25/2005	1.19996		201
	4/29/2006	1.37877		204
	11/18/2006	1.075	197	
	5/23/2007	ND<0	91.5	
	11/28/2007	1.32972		203
	6/5/2008	1.25562	202	
	11/20/2008	ND<0	91.5	
	6/11/2009	0.788457		195
	11/16/2009	1.02962		196
	6/30/2010	0.530628		193

Rank Sum = 4451.5
Rank Mean = 164.87

MW-7	7/20/1995	ND<0	91.5	
	8/24/1995	ND<0	91.5	
	9/28/1995	ND<0	91.5	
	10/26/1995	ND<0	91.5	
	11/19/1996	ND<0	91.5	
	12/19/1996	ND<0	91.5	
	3/24/1997	ND<0	91.5	
	9/24/1997	ND<0	91.5	
	4/7/1998	ND<0	91.5	
	9/23/1998	ND<0	91.5	
	3/16/1999	ND<0	91.5	
	9/23/1999	ND<0	91.5	
	3/15/2000	ND<0	91.5	
	9/24/2003	ND<0	91.5	
	3/11/2004	ND<0	91.5	
	10/12/2004	ND<0	91.5	
	4/1/2005	ND<0	91.5	
	10/25/2005	ND<0	91.5	
	4/29/2006	ND<0	91.5	
	11/18/2006	ND<0	91.5	
	5/23/2007	ND<0	91.5	
	11/28/2007	ND<0	91.5	
	6/5/2008	ND<0	91.5	
	11/20/2008	ND<0	91.5	
	6/11/2009	ND<-2.73337		91.5
	11/16/2009	ND<-2.73337		91.5
	6/30/2010	ND<-2.73337		91.5

Rank Sum = 2470.5
Rank Mean = 91.5

MW-6	7/20/1995	ND<0	91.5
	8/24/1995	ND<0	91.5
	9/28/1995	ND<0	91.5
	10/26/1995	ND<0	91.5
	11/19/1996	ND<0	91.5
	12/19/1996	ND<0	91.5
	3/24/1997	ND<0	91.5
	9/24/1997	ND<0	91.5
	4/7/1998	ND<0	91.5
	9/23/1998	ND<0	91.5
	3/16/1999	ND<0	91.5
	9/23/1999	ND<0	91.5
	3/15/2000	ND<0	91.5
	9/24/2003	ND<0	91.5
	3/11/2004	ND<0	91.5
	10/12/2004	ND<0	91.5
	4/1/2005	ND<0	91.5
	10/25/2005	ND<0	91.5

4/29/2006	ND<0	91.5	
11/18/2006	ND<0	91.5	
5/23/2007	ND<0	91.5	
11/28/2007	ND<0	91.5	
6/5/2008	ND<0	91.5	
11/20/2008	ND<0	91.5	
6/11/2009	ND<-2.73337	91.5	
11/16/2009	ND<-2.73337	91.5	
6/30/2010	ND<-2.73337	91.5	

Rank Sum = 2470.5
Rank Mean = 91.5

Calculation Results:

Kruskal-Wallis H Statistic = 34.0427
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 92.6856
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
34.0427 > 15.5073 indicating a significant group difference at 5% significance level
92.6856 > 15.5073 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 91.5

Well	Mean Rank	Dif from Bkg	Critical Value
MW-8	91.5	0	44.5106
MW-12AR	91.5	0	48.9476
MW-12BR	91.5	0	48.9476
MW-9	105.278	13.7778	44.1836
MW-11R	122.13	30.6296	44.1836
MW-10	164.87	73.3704	44.1836
MW-7	91.5	0	44.1836
MW-6	91.5	0	44.1836

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 91.5

Well	Mean Rank	Dif from Bkg	Critical Value
MW-8	91.5	0	48.0654
MW-12AR	91.5	0	52.8567
MW-12BR	91.5	0	52.8567
MW-9	105.278	13.7778	47.7122
MW-11R	122.13	30.6296	47.7122
MW-10	164.87	73.3704	47.7122
MW-7	91.5	0	47.7122
MW-6	91.5	0	47.7122

Mann-Kendall Trend Analysis

Parameter: 1,2-Dichloropropane

Location: MW-10

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

95% Confidence Level

Xj	Xk	Xj - Xk		Positives	Negatives
1.1314	-0.867501	J	1.9989	1	0
1.60944		-0.867501	J	2.47694	2	0
1.09861		-0.867501	J	1.96611	3	0
ND<0	-0.867501	J	0.867501		4	0
ND<0	-0.867501	J	0.867501		5	0
1.79176		-0.867501	J	2.65926	6	0
2.04122		-0.867501	J	2.90872	7	0
ND<0	-0.867501	J	0.867501		8	0
1.72277		-0.867501	J	2.59027	9	0
2.20827		-0.867501	J	3.07577	10	0
1.72277		-0.867501	J	2.59027	11	0
ND<0	-0.867501	J	0.867501		12	0
ND<0	-0.867501	J	0.867501		13	0
ND<0	-0.867501	J	0.867501		14	0
ND<0	-0.867501	J	0.867501		15	0
0.751416		-0.867501	J	1.61892	16	0
1.19996		-0.867501	J	2.06747	17	0
1.37877		-0.867501	J	2.24627	18	0
1.075	-0.867501	J	1.9425	19	0	
ND<0	-0.867501	J	0.867501		20	0
1.32972		-0.867501	J	2.19722	21	0
1.25562		-0.867501	J	2.12312	22	0
ND<0	-0.867501	J	0.867501		23	0
0.788457		-0.867501	J	1.65596	24	0
1.02962		-0.867501	J	1.89712	25	0
0.530628		-0.867501	J	1.39813	26	0
1.60944		1.1314	0.478036		27	0
1.09861		1.1314	-0.0327898		27	1
ND<0	1.1314	-1.1314	27	2		
ND<0	1.1314	-1.1314	27	3		
1.79176		1.1314	0.660357		28	3
2.04122		1.1314	0.909818		29	3
ND<0	1.1314	-1.1314	29	4		
1.72277		1.1314	0.591364		30	4
2.20827		1.1314	1.07687	31	4	
1.72277		1.1314	0.591364		32	4
ND<0	1.1314	-1.1314	32	5		
ND<0	1.1314	-1.1314	32	6		
ND<0	1.1314	-1.1314	32	7		
ND<0	1.1314	-1.1314	32	8		
0.751416		1.1314	-0.379986		32	9
1.19996		1.1314	0.0685627		33	9
1.37877		1.1314	0.247364		34	9
1.075	1.1314	-0.0563997		34	10	
ND<0	1.1314	-1.1314	34	11		
1.32972		1.1314	0.198322		35	11
1.25562		1.1314	0.124214		36	11

ND<0	1.1314	-1.1314	36	12		
0.788457		1.1314	-0.342945	36	13	
1.02962		1.1314	-0.101783	36	14	
0.530628		1.1314	-0.600774	36	15	
1.09861		1.60944	-0.510826	36	16	
ND<0	1.60944	-1.6094436	17			
ND<0	1.60944	-1.6094436	18			
1.79176		1.60944	0.182322	37	18	
2.04122		1.60944	0.431782	38	18	
ND<0	1.60944	-1.6094438	19			
1.72277		1.60944	0.113329	39	19	
2.20827		1.60944	0.598837	40	19	
1.72277		1.60944	0.113329	41	19	
ND<0	1.60944	-1.6094441	20			
ND<0	1.60944	-1.6094441	21			
ND<0	1.60944	-1.6094441	22			
ND<0	1.60944	-1.6094441	23			
0.751416		1.60944	-0.858022	41	24	
1.19996		1.60944	-0.409473	41	25	
1.37877		1.60944	-0.230672	41	26	
1.075	1.60944	-0.534435	41	27		
ND<0	1.60944	-1.6094441	28			
1.32972		1.60944	-0.279714	41	29	
1.25562		1.60944	-0.353822	41	30	
ND<0	1.60944	-1.6094441	31			
0.788457		1.60944	-0.820981	41	32	
1.02962		1.60944	-0.579818	41	33	
0.530628		1.60944	-1.0788141	34		
ND<0	1.09861	-1.0986141	35			
ND<0	1.09861	-1.0986141	36			
1.79176		1.09861	0.693147	42	36	
2.04122		1.09861	0.942608	43	36	
ND<0	1.09861	-1.0986143	37			
1.72277		1.09861	0.624154	44	37	
2.20827		1.09861	1.10966	45	37	
1.72277		1.09861	0.624154	46	37	
ND<0	1.09861	-1.0986146	38			
ND<0	1.09861	-1.0986146	39			
ND<0	1.09861	-1.0986146	40			
ND<0	1.09861	-1.0986146	41			
0.751416		1.09861	-0.347196	46	42	
1.19996		1.09861	0.101352	47	42	
1.37877		1.09861	0.280154	48	42	
1.075	1.09861	-0.0236099	48	43		
ND<0	1.09861	-1.0986148	44			
1.32972		1.09861	0.231112	49	44	
1.25562		1.09861	0.157004	50	44	
ND<0	1.09861	-1.0986150	45			
0.788457		1.09861	-0.310155	50	46	
1.02962		1.09861	-0.0689929	50	47	
0.530628		1.09861	-0.567984	50	48	
ND<0	ND<0	0	50	48		
1.79176		ND<0	1.79176	51	48	
2.04122		ND<0	2.04122	52	48	
ND<0	ND<0	0	52	48		
1.72277		ND<0	1.72277	53	48	
2.20827		ND<0	2.20827	54	48	
1.72277		ND<0	1.72277	55	48	
ND<0	ND<0	0	55	48		

ND<0	ND<0	0	55	48		
ND<0	ND<0	0	55	48		
ND<0	ND<0	0	55	48		
0.751416		ND<0	0.751416	56	48	
1.19996		ND<0	1.19996	57	48	
1.37877		ND<0	1.37877	58	48	
1.075	ND<0	1.075	59	48		
ND<0	ND<0	0	59	48		
1.32972		ND<0	1.32972	60	48	
1.25562		ND<0	1.25562	61	48	
ND<0	ND<0	0	61	48		
0.788457		ND<0	0.788457	62	48	
1.02962		ND<0	1.02962	63	48	
0.530628		ND<0	0.530628	64	48	
1.79176		ND<0	1.79176	65	48	
2.04122		ND<0	2.04122	66	48	
ND<0	ND<0	0	66	48		
1.72277		ND<0	1.72277	67	48	
2.20827		ND<0	2.20827	68	48	
1.72277		ND<0	1.72277	69	48	
ND<0	ND<0	0	69	48		
ND<0	ND<0	0	69	48		
ND<0	ND<0	0	69	48		
ND<0	ND<0	0	69	48		
0.751416		ND<0	0.751416	70	48	
1.19996		ND<0	1.19996	71	48	
1.37877		ND<0	1.37877	72	48	
1.075	ND<0	1.075	73	48		
ND<0	ND<0	0	73	48		
1.32972		ND<0	1.32972	74	48	
1.25562		ND<0	1.25562	75	48	
ND<0	ND<0	0	75	48		
0.788457		ND<0	0.788457	76	48	
1.02962		ND<0	1.02962	77	48	
0.530628		ND<0	0.530628	78	48	
2.04122		1.79176	0.249461	79	48	
ND<0	1.79176	-1.79176	79	49		
1.72277		1.79176	-0.0689929	79	50	
2.20827		1.79176	0.416515	80	50	
1.72277		1.79176	-0.0689929	80	51	
ND<0	1.79176	-1.79176	80	52		
ND<0	1.79176	-1.79176	80	53		
ND<0	1.79176	-1.79176	80	54		
ND<0	1.79176	-1.79176	80	55		
0.751416		1.79176	-1.04034	80	56	
1.19996		1.79176	-0.591795	80	57	
1.37877		1.79176	-0.412993	80	58	
1.075	1.79176	-0.716757	80	59		
ND<0	1.79176	-1.79176	80	60		
1.32972		1.79176	-0.462035	80	61	
1.25562		1.79176	-0.536143	80	62	
ND<0	1.79176	-1.79176	80	63		
0.788457		1.79176	-1.0033	80	64	
1.02962		1.79176	-0.76214	80	65	
0.530628		1.79176	-1.26113	80	66	
ND<0	2.04122	-2.04122	80	67		
1.72277		2.04122	-0.318454	80	68	
2.20827		2.04122	0.167054	81	68	
1.72277		2.04122	-0.318454	81	69	

ND<0	2.04122	-2.0412281	70			
ND<0	2.04122	-2.0412281	71			
ND<0	2.04122	-2.0412281	72			
ND<0	2.04122	-2.0412281	73			
0.751416	2.04122	-1.2898	81	74		
1.19996	2.04122	-0.841256	81	75		
1.37877	2.04122	-0.662454	81	76		
1.075	2.04122	-0.966218	81	77		
ND<0	2.04122	-2.0412281	78			
1.32972	2.04122	-0.711496	81	79		
1.25562	2.04122	-0.785604	81	80		
ND<0	2.04122	-2.0412281	81			
0.788457	2.04122	-1.2527681	82			
1.02962	2.04122	-1.0116	81	83		
0.530628	2.04122	-1.5105981	84			
1.72277	ND<0	1.72277	82	84		
2.20827	ND<0	2.20827	83	84		
1.72277	ND<0	1.72277	84	84		
ND<0	ND<0	0	84	84		
ND<0	ND<0	0	84	84		
ND<0	ND<0	0	84	84		
ND<0	ND<0	0	84	84		
0.751416	ND<0	0.751416	85	84		
1.19996	ND<0	1.19996	86	84		
1.37877	ND<0	1.37877	87	84		
1.075	ND<0	1.075	88	84		
ND<0	ND<0	0	88	84		
1.32972	ND<0	1.32972	89	84		
1.25562	ND<0	1.25562	90	84		
ND<0	ND<0	0	90	84		
0.788457	ND<0	0.788457	91	84		
1.02962	ND<0	1.02962	92	84		
0.530628	ND<0	0.530628	93	84		
2.20827	1.72277	0.485508	94	84		
1.72277	1.72277	0	94	84		
ND<0	1.72277	-1.7227794	85			
ND<0	1.72277	-1.7227794	86			
ND<0	1.72277	-1.7227794	87			
ND<0	1.72277	-1.7227794	88			
0.751416	1.72277	-0.971351	94	89		
1.19996	1.72277	-0.522802	94	90		
1.37877	1.72277	-0.344001	94	91		
1.075	1.72277	-0.647764	94	92		
ND<0	1.72277	-1.7227794	93			
1.32972	1.72277	-0.393043	94	94		
1.25562	1.72277	-0.467151	94	95		
ND<0	1.72277	-1.7227794	96			
0.788457	1.72277	-0.934309	94	97		
1.02962	1.72277	-0.693147	94	98		
0.530628	1.72277	-1.1921494	99			
1.72277	2.20827	-0.485508	94	100		
ND<0	2.20827	-2.2082794	101			
ND<0	2.20827	-2.2082794	102			
ND<0	2.20827	-2.2082794	103			
ND<0	2.20827	-2.2082794	104			
0.751416	2.20827	-1.4568694	105			
1.19996	2.20827	-1.0083194	106			
1.37877	2.20827	-0.829508	94	107		
1.075	2.20827	-1.1332794	108			

ND<0	2.20827	-2.2082794	109		
1.32972	2.20827	-0.8785594	110		
1.25562	2.20827	-0.952658	94	111	
ND<0	2.20827	-2.2082794	112		
0.788457	2.20827	-1.4198294	113		
1.02962	2.20827	-1.1786594	114		
0.530628	2.20827	-1.6776594	115		
ND<0	1.72277	-1.7227794	116		
ND<0	1.72277	-1.7227794	117		
ND<0	1.72277	-1.7227794	118		
ND<0	1.72277	-1.7227794	119		
0.751416	1.72277	-0.971351	94	120	
1.19996	1.72277	-0.522802	94	121	
1.37877	1.72277	-0.344001	94	122	
1.075	1.72277	-0.647764	94	123	
ND<0	1.72277	-1.7227794	124		
1.32972	1.72277	-0.393043	94	125	
1.25562	1.72277	-0.467151	94	126	
ND<0	1.72277	-1.7227794	127		
0.788457	1.72277	-0.934309	94	128	
1.02962	1.72277	-0.693147	94	129	
0.530628	1.72277	-1.1921494	130		
ND<0	ND<0	0	94	130	
ND<0	ND<0	0	94	130	
ND<0	ND<0	0	94	130	
0.751416	ND<0	0.751416	95	130	
1.19996	ND<0	1.19996	96	130	
1.37877	ND<0	1.37877	97	130	
1.075	ND<0	1.075	98	130	
ND<0	ND<0	0	98	130	
1.32972	ND<0	1.32972	99	130	
1.25562	ND<0	1.25562	100	130	
ND<0	ND<0	0	100	130	
0.788457	ND<0	0.788457	101	130	
1.02962	ND<0	1.02962	102	130	
0.530628	ND<0	0.530628	103	130	
ND<0	ND<0	0	103	130	
ND<0	ND<0	0	103	130	
0.751416	ND<0	0.751416	104	130	
1.19996	ND<0	1.19996	105	130	
1.37877	ND<0	1.37877	106	130	
1.075	ND<0	1.075	107	130	
ND<0	ND<0	0	107	130	
1.32972	ND<0	1.32972	108	130	
1.25562	ND<0	1.25562	109	130	
ND<0	ND<0	0	109	130	
0.788457	ND<0	0.788457	110	130	
1.02962	ND<0	1.02962	111	130	
0.530628	ND<0	0.530628	112	130	
ND<0	ND<0	0	112	130	
0.751416	ND<0	0.751416	113	130	
1.19996	ND<0	1.19996	114	130	
1.37877	ND<0	1.37877	115	130	
1.075	ND<0	1.075	116	130	
ND<0	ND<0	0	116	130	
1.32972	ND<0	1.32972	117	130	
1.25562	ND<0	1.25562	118	130	
ND<0	ND<0	0	118	130	

0.788457	ND<0	0.788457	119	130	
1.02962	ND<0	1.02962	120	130	
0.530628	ND<0	0.530628	121	130	
0.751416	ND<0	0.751416	122	130	
1.19996	ND<0	1.19996	123	130	
1.37877	ND<0	1.37877	124	130	
1.075	ND<0	1.075	125	130	
ND<0	ND<0	0	125	130	
1.32972	ND<0	1.32972	126	130	
1.25562	ND<0	1.25562	127	130	
ND<0	ND<0	0	127	130	
0.788457	ND<0	0.788457	128	130	
1.02962	ND<0	1.02962	129	130	
0.530628	ND<0	0.530628	130	130	
1.19996	0.751416	0.448549	131	130	
1.37877	0.751416	0.62735	132	130	
1.075	0.751416	0.323586	133	130	
ND<0	0.751416	-0.751416	133	131	
1.32972	0.751416	0.578308	134	131	
1.25562	0.751416	0.5042	135	131	
ND<0	0.751416	-0.751416	135	132	
0.788457	0.751416	0.0370413	136	132	
1.02962	0.751416	0.278203	137	132	
0.530628	0.751416	-0.220788	137	133	
1.37877	1.19996	0.178801	138	133	
1.075	1.19996	-0.124962	138	134	
ND<0	1.19996	-1.19996	138	135	
1.32972	1.19996	0.129759	139	135	
1.25562	1.19996	0.0556513	140	135	
ND<0	1.19996	-1.19996	140	136	
0.788457	1.19996	-0.411507	140	137	
1.02962	1.19996	-0.170345	140	138	
0.530628	1.19996	-0.669337	140	139	
1.075	1.37877	-0.303764	140	140	
ND<0	1.37877	-1.37877	140	141	
1.32972	1.37877	-0.0490421	140	142	
1.25562	1.37877	-0.12315	140	143	
ND<0	1.37877	-1.37877	140	144	
0.788457	1.37877	-0.590309	140	145	
1.02962	1.37877	-0.349147	140	146	
0.530628	1.37877	-0.848138	140	147	
ND<0	1.075	-1.075	140	148	
1.32972	1.075	0.254722	141	148	
1.25562	1.075	0.180614	142	148	
ND<0	1.075	-1.075	142	149	
0.788457	1.075	-0.286545	142	150	
1.02962	1.075	-0.045383	142	151	
0.530628	1.075	-0.544374	142	152	
1.32972	ND<0	1.32972	143	152	
1.25562	ND<0	1.25562	144	152	
ND<0	ND<0	0	144	152	
0.788457	ND<0	0.788457	145	152	
1.02962	ND<0	1.02962	146	152	
0.530628	ND<0	0.530628	147	152	

1.25562	1.32972	-0.074108	147	153
ND<0	1.32972	-1.32972	147	154
0.788457	1.32972	-0.541267	147	155
1.02962	1.32972	-0.300105	147	156
0.530628	1.32972	-0.799096	147	157
ND<0	1.25562	-1.25562	147	158
0.788457	1.25562	-0.467159	147	159
1.02962	1.25562	-0.225997	147	160
0.530628	1.25562	-0.724988	147	161
0.788457	ND<0	0.788457	148	161
1.02962	ND<0	1.02962	149	161
0.530628	ND<0	0.530628	150	161
1.02962	0.788457	0.241162	151	161
0.530628	0.788457	-0.257829	151	162
0.530628	1.02962	-0.498991	151	163

S Statistic = 151 - 163 = -12

Tied Group	Value	Members
1	0	9
2	1.72277	2

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 1674
B = 0
C = 504

D = 0
E = 74
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 2208
Z-Score = -0.234096
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.234096| <= 1.97737 indicating no evidence of a trend

Concentrations (ppb)

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 220
Total Non-Detect: 175
Percent Non-Detects: 79.5455%
Total Background Measurements: 18
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	18	18 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.28	ND<0.28
			11/16/2009	ND<0.51	ND<0.51
			6/30/2010	ND<0.28	ND<0.28
			6/30/2010	ND<0.74	ND<0.74

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-6	28	28 (100%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2

			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.28		ND<0.28
			11/16/2009	ND<0.51		ND<0.51
			6/30/2010	ND<0.74		ND<0.74
			6/30/2010	ND<0.28		ND<0.28
MW-7	28	28 (100%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.28		ND<0.28
			11/16/2009	ND<0.47		ND<0.47
			6/30/2010	ND<0.28		ND<0.28
			6/30/2010	ND<0.76		ND<0.76
MW-8	26	20 (76.9231%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	0.28 J	0.28 J	
			4/29/2006	0.36 J	0.36 J	
			11/18/2006	0.43 J	0.43 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.28 J	0.28 J	
			6/5/2008	0.32 J	0.32 J	
			11/20/2008	ND<2	ND<2	
			6/11/2009	0.62 J	0.62 J	
			6/30/2010	ND<0.28		ND<0.28

MW-10	28	14 (50%)	7/20/1995	ND<2	ND<2	
			8/24/1995	1.5 J	1.5 J	
			9/28/1995	4	4	
			10/26/1995	2	2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	8.8	8.8	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	2.75	2.75	
			10/25/2005	3.99	3.99	
			4/29/2006	5.6	5.6	
			11/18/2006	3.9	3.9	
			5/23/2007	4.1	4.1	
			11/28/2007	5.99	5.99	
			6/5/2008	6.45	6.45	
			11/20/2008	ND<2	ND<2	
			6/11/2009	3.4	3.4	
			11/16/2009	6.9 J	6.9 J	
			6/30/2010	5.2	5.2	
			6/30/2010	ND<0.74	ND<0.74	
MW-11R	28	22 (78.5714%)	7/20/1995	ND<2	ND<2	
			8/24/1995	2.2	2.2	
			9/28/1995	2	2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	5.4	5.4	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.3 J	0.3 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	0.48 J	0.48 J	
			11/16/2009	ND<0.47	ND<0.47	
			6/30/2010	0.37 J	0.37 J	
			6/30/2010	ND<0.74	ND<0.74	
MW-12AR	18	12 (66.6667%)	3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	

			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	1.05 J	1.05 J	
			4/29/2006	1.14 J	1.14 J	
			11/18/2006	0.84 J	0.84 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.78 J	0.78 J	
			6/5/2008	0.97 J	0.97 J	
			11/20/2008	0.49 J	0.49 J	
			6/11/2009	ND<0.28		ND<0.28
			11/16/2009	ND<0.47		ND<0.47
			6/30/2010	ND<0.28		ND<0.28
			6/30/2010	ND<0.74		ND<0.74
MW-9	28	17 (60.7143%)	7/20/1995		ND<2	ND<2
			8/24/1995	0.51 J	0.51 J	
			9/28/1995	0.6 J	0.6 J	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	0.91 J	0.91 J	
			10/25/2005	0.54 J	0.54 J	
			4/29/2006	0.43 J	0.43 J	
			11/18/2006	0.4 J	0.4 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.66 J	0.66 J	
			6/5/2008	0.47 J	0.47 J	
			11/20/2008	0.54 J	0.54 J	
			6/11/2009	0.44 J	0.44 J	
			11/16/2009	ND<0.51		ND<0.51
			6/30/2010	0.97 J	0.97 J	
			6/30/2010	ND<0.76		ND<0.76
MW-12BR	18	16 (88.8889%)	3/16/1999		ND<2	ND<2
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	1.11 J	1.11 J	
			10/25/2005	ND<2	ND<2	
			4/29/2006	1.98 J	1.98 J	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.28		ND<0.28
			11/16/2009	ND<0.47		ND<0.47
			6/30/2010	ND<0.74		ND<0.74
			6/30/2010	ND<0.28		ND<0.28

There are 0 unused locations

Loc.	Meas. ND	Date	Conc. Original

Shapiro-Francia Test of Normality

Parameter: 1,4-Dichlorobenzene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 220

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.14	-2.65209	7.03356	-0.371292
2	0.14	-2.36561	12.6297	-0.702478
3	0.14	-2.22621	17.5857	-1.01415
4	0.14	-2.09693	21.9828	-1.30772
5	0.14	-2.01409	26.0394	-1.58969
6	0.14	-1.92684	29.7521	-1.85945
7	0.14	-1.86629	33.2351	-2.12073
8	0.14	-1.79912	36.472	-2.37261
9	0.14	-1.75069	39.5369	-2.6177
10	0.14	-1.6954	42.4112	-2.85506
11	0.14	-1.65463	45.149	-3.0867
12	0.235	-1.60725	47.7323	-3.46441
13	0.235	-1.57179	50.2028	-3.83378
14	0.235	-1.53007	52.5439	-4.19334
15	0.235	-1.49852	54.7894	-4.5455
16	0.255	-1.46106	56.9241	-4.91806
17	0.255	-1.4325	58.9762	-5.28335
18	0.255	-1.39838	60.9316	-5.63994
19	0.28	-1.3722	62.8146	-6.02416
20	0.28	-1.34075	64.6122	-6.39957
21	0.3	-1.31058	66.3298	-6.79274
22	0.32	-1.28727	67.9869	-7.20467
23	0.36	-1.25908	69.5722	-7.65794
24	0.37	-1.23724	71.1029	-8.11572
25	0.37	-1.21073	72.5688	-8.56369
26	0.37	-1.19012	73.9852	-9.00403
27	0.37	-1.16505	75.3425	-9.4351
28	0.37	-1.1455	76.6547	-9.85893
29	0.37	-1.12168	77.9129	-10.274
30	0.37	-1.10306	79.1296	-10.6821
31	0.38	-1.08032	80.2967	-11.0926
32	0.38	-1.06252	81.4257	-11.4964
33	0.4	-1.04073	82.5088	-11.9127
34	0.43	-1.02365	83.5566	-12.3528
35	0.43	-1.00271	84.5621	-12.784
36	0.44	-0.986272	85.5348	-13.218
37	0.47	-0.966088	86.4681	-13.672
38	0.48	-0.950222	87.3711	-14.1281
39	0.49	-0.930718	88.2373	-14.5842
40	0.51	-0.915365	89.0752	-15.051
41	0.54	-0.896473	89.8788	-15.5351
42	0.54	-0.877897	90.6496	-16.0092
43	0.6	-0.863249	91.3947	-16.5271
44	0.62	-0.845198	92.1091	-17.0511
45	0.66	-0.830953	92.7996	-17.5996
46	0.78	-0.813379	93.4612	-18.234
47	0.84	-0.7995	94.1004	-18.9056
48	0.91	-0.782366	94.7125	-19.6175
49	0.97	-0.768821	95.3036	-20.3633

50	0.97	-0.752084	95.8692	-21.0928
51	1	-0.738846	96.4151	-21.8317
52	1	-0.722479	96.9371	-22.5541
53	1	-0.709522	97.4405	-23.2637
54	1	-0.693493	97.9214	-23.9572
55	1	-0.680797	98.3849	-24.638
56	1	-0.665079	98.8272	-25.303
57	1	-0.652622	99.2531	-25.9557
58	1	-0.637192	99.6592	-26.5928
59	1	-0.624956	100.05	-27.2178
60	1	-0.609791	100.422	-27.8276
61	1	-0.594766	100.775	-28.4224
62	1	-0.582841	101.115	-29.0052
63	1	-0.568052	101.438	-29.5733
64	1	-0.556308	101.747	-30.1296
65	1	-0.541736	102.041	-30.6713
66	1	-0.530162	102.322	-31.2015
67	1	-0.515791	102.588	-31.7173
68	1	-0.504372	102.842	-32.2216
69	1	-0.490189	103.082	-32.7118
70	1	-0.478914	103.312	-33.1907
71	1	-0.464904	103.528	-33.6556
72	1	-0.453763	103.734	-34.1094
73	1	-0.439913	103.927	-34.5493
74	1	-0.428895	104.111	-34.9782
75	1	-0.415193	104.284	-35.3934
76	1	-0.40429	104.447	-35.7977
77	1	-0.390726	104.6	-36.1884
78	1	-0.379927	104.744	-36.5683
79	1	-0.36649	104.878	-36.9348
80	1	-0.355788	105.005	-37.2906
81	1	-0.342466	105.122	-37.6331
82	1	-0.329206	105.231	-37.9623
83	1	-0.318639	105.332	-38.2809
84	1	-0.305481	105.426	-38.5864
85	1	-0.294992	105.513	-38.8814
86	1	-0.281926	105.592	-39.1633
87	1	-0.271509	105.666	-39.4348
88	1	-0.258527	105.733	-39.6934
89	1	-0.248174	105.794	-39.9415
90	1	-0.235269	105.85	-40.1768
91	1	-0.224974	105.9	-40.4018
92	1	-0.212137	105.945	-40.6139
93	1	-0.201894	105.986	-40.8158
94	1	-0.189118	106.022	-41.0049
95	1	-0.17892	106.054	-41.1838
96	1	-0.166199	106.081	-41.35
97	1	-0.156042	106.106	-41.5061
98	1	-0.143367	106.126	-41.6495
99	1	-0.133244	106.144	-41.7827
100	1	-0.12061	106.159	-41.9033
101	1	-0.107995	106.17	-42.0113
102	1	-0.0979139	106.18	-42.1092
103	1	-0.0853288	106.187	-42.1945
104	1	-0.0752698	106.193	-42.2698
105	1	-0.0627062	106.197	-42.3325
106	1	-0.0526632	106.199	-42.3852
107	1	-0.0401167	106.201	-42.4253
108	1	-0.0300838	106.202	-42.4554
109	1	-0.0175476	106.202	-42.4729
110	1	-0.00751925	106.202	-42.4805
111	1	0.00751925	106.202	-42.4729

112	1	0.0175476	106.203	-42.4554
113	1	0.0300838	106.204	-42.4253
114	1	0.0401167	106.205	-42.3852
115	1	0.0526632	106.208	-42.3325
116	1	0.0627062	106.212	-42.2698
117	1	0.0752698	106.218	-42.1945
118	1	0.0853288	106.225	-42.1092
119	1	0.0979139	106.234	-42.0113
120	1	0.107995	106.246	-41.9033
121	1	0.12061	106.261	-41.7827
122	1	0.133244	106.278	-41.6495
123	1	0.143367	106.299	-41.5061
124	1	0.156042	106.323	-41.35
125	1	0.166199	106.351	-41.1838
126	1	0.17892	106.383	-41.0049
127	1	0.189118	106.419	-40.8158
128	1	0.201894	106.459	-40.6139
129	1	0.212137	106.504	-40.4018
130	1	0.224974	106.555	-40.1768
131	1	0.235269	106.61	-39.9415
132	1	0.248174	106.672	-39.6934
133	1	0.258527	106.739	-39.4348
134	1	0.271509	106.813	-39.1633
135	1	0.281926	106.892	-38.8814
136	1	0.294992	106.979	-38.5864
137	1	0.305481	107.072	-38.2809
138	1	0.318639	107.174	-37.9623
139	1	0.329206	107.282	-37.6331
140	1	0.342466	107.4	-37.2906
141	1	0.355788	107.526	-36.9348
142	1	0.36649	107.661	-36.5683
143	1	0.379927	107.805	-36.1884
144	1	0.390726	107.958	-35.7977
145	1	0.40429	108.121	-35.3934
146	1	0.415193	108.293	-34.9782
147	1	0.428895	108.477	-34.5493
148	1	0.439913	108.671	-34.1094
149	1	0.453763	108.877	-33.6556
150	1	0.464904	109.093	-33.1907
151	1	0.478914	109.322	-32.7118
152	1	0.490189	109.563	-32.2216
153	1	0.504372	109.817	-31.7173
154	1	0.515791	110.083	-31.2015
155	1	0.530162	110.364	-30.6713
156	1	0.541736	110.657	-30.1296
157	1	0.556308	110.967	-29.5733
158	1	0.568052	111.29	-29.0052
159	1	0.582841	111.629	-28.4224
160	1	0.594766	111.983	-27.8276
161	1	0.609791	112.355	-27.2178
162	1	0.624956	112.746	-26.5928
163	1	0.637192	113.152	-25.9557
164	1	0.652622	113.577	-25.303
165	1	0.665079	114.02	-24.638
166	1	0.680797	114.483	-23.9572
167	1	0.693493	114.964	-23.2637
168	1	0.709522	115.468	-22.5541
169	1	0.722479	115.99	-21.8317
170	1	0.738846	116.535	-21.0928
171	1	0.752084	117.101	-20.3407
172	1	0.768821	117.692	-19.5719
173	1	0.782366	118.304	-18.7895

174	1	0.7995	118.943	-17.99
175	1	0.813379	119.605	-17.1767
176	1	0.830953	120.296	-16.3457
177	1	0.845198	121.01	-15.5005
178	1	0.863249	121.755	-14.6373
179	1	0.877897	122.526	-13.7594
180	1	0.896473	123.329	-12.8629
181	1	0.915365	124.167	-11.9475
182	1	0.930718	125.034	-11.0168
183	1	0.950222	125.937	-10.0666
184	1	0.966088	126.87	-9.10051
185	1	0.986272	127.843	-8.11423
186	1	1.00271	128.848	-7.11152
187	1	1.02365	129.896	-6.08787
188	1	1.04073	130.979	-5.04714
189	1	1.06252	132.108	-3.98462
190	1	1.08032	133.275	-2.9043
191	1	1.10306	134.492	-1.80124
192	1	1.12168	135.75	-0.679558
193	1	1.1455	137.062	0.465946
194	1	1.16505	138.419	1.63099
195	1	1.19012	139.836	2.82111
196	1	1.21073	141.302	4.03184
197	1	1.23724	142.832	5.26908
198	1	1.25908	144.418	6.52816
199	1	1.28727	146.075	7.81543
200	1.05	1.31058	147.792	9.19154
201	1.11	1.34075	149.59	10.6798
202	1.14	1.3722	151.473	12.2441
203	1.5	1.39838	153.428	14.3417
204	1.98	1.4325	155.481	17.178
205	2	1.46106	157.615	20.1001
206	2	1.49852	159.861	23.0972
207	2.2	1.53007	162.202	26.4633
208	2.75	1.57179	164.672	30.7857
209	3.4	1.60725	167.256	36.2504
210	3.9	1.65463	169.993	42.7034
211	3.99	1.6954	172.868	49.4681
212	4	1.75069	175.933	56.4708
213	4.1	1.79912	179.17	63.8472
214	5.2	1.86629	182.653	73.5519
215	5.4	1.92684	186.365	83.9568
216	5.6	2.01409	190.422	95.2357
217	5.99	2.09693	194.819	107.796
218	6.45	2.22621	199.775	122.155
219	6.9	2.36561	205.371	138.478
220	8.8	2.65209	212.405	161.816

Data Set Standard Deviation = 1.12219
Numerator = 26184.6
Denominator = 58578.6
W Statistic = 0.446999 = 26184.6 / 58578.6

5% Critical value of 0.976 exceeds 0.446999
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.446999
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: 1,4-Dichlorobenzene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 220

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.96611	-2.65209	7.03356	5.2143
2	-1.96611	-2.36561	12.6297	9.86537
3	-1.96611	-2.22621	17.5857	14.2423
4	-1.96611	-2.09693	21.9828	18.3651
5	-1.96611	-2.01409	26.0394	22.3251
6	-1.96611	-1.92684	29.7521	26.1135
7	-1.96611	-1.86629	33.2351	29.7828
8	-1.96611	-1.79912	36.472	33.3201
9	-1.96611	-1.75069	39.5369	36.7621
10	-1.96611	-1.6954	42.4112	40.0955
11	-1.96611	-1.65463	45.149	43.3486
12	-1.44817	-1.60725	47.7323	45.6762
13	-1.44817	-1.57179	50.2028	47.9524
14	-1.44817	-1.53007	52.5439	50.1682
15	-1.44817	-1.49852	54.7894	52.3383
16	-1.36649	-1.46106	56.9241	54.3348
17	-1.36649	-1.4325	58.9762	56.2924
18	-1.36649	-1.39838	60.9316	58.2032
19	-1.27297	-1.3722	62.8146	59.95
20	-1.27297	-1.34075	64.6122	61.6567
21	-1.20397	-1.31058	66.3298	63.2346
22	-1.13943	-1.28727	67.9869	64.7014
23	-1.02165	-1.25908	69.5722	65.9877
24	-0.994252	-1.23724	71.1029	67.2179
25	-0.994252	-1.21073	72.5688	68.4216
26	-0.994252	-1.19012	73.9852	69.6049
27	-0.994252	-1.16505	75.3425	70.7633
28	-0.994252	-1.1455	76.6547	71.9022
29	-0.994252	-1.12168	77.9129	73.0174
30	-0.994252	-1.10306	79.1296	74.1141
31	-0.967584	-1.08032	80.2967	75.1594
32	-0.967584	-1.06252	81.4257	76.1875
33	-0.916291	-1.04073	82.5088	77.1411
34	-0.84397	-1.02365	83.5566	78.0051
35	-0.84397	-1.00271	84.5621	78.8513
36	-0.820981	-0.986272	85.5348	79.661
37	-0.755023	-0.966088	86.4681	80.3904
38	-0.733969	-0.950222	87.3711	81.0879
39	-0.71335	-0.930718	88.2373	81.7518
40	-0.673345	-0.915365	89.0752	82.3682
41	-0.616186	-0.896473	89.8788	82.9206
42	-0.616186	-0.877897	90.6496	83.4615
43	-0.510826	-0.863249	91.3947	83.9025
44	-0.478036	-0.845198	92.1091	84.3065
45	-0.415515	-0.830953	92.7996	84.6518
46	-0.248461	-0.813379	93.4612	84.8539
47	-0.174353	-0.7995	94.1004	84.9933
48	-0.0943107	-0.782366	94.7125	85.0671
49	-0.0304592	-0.768821	95.3036	85.0905

50	-0.0304592	-0.752084	95.8692	85.1134
51	0	-0.738846	96.4151	85.1134
52	0	-0.722479	96.9371	85.1134
53	0	-0.709522	97.4405	85.1134
54	0	-0.693493	97.9214	85.1134
55	0	-0.680797	98.3849	85.1134
56	0	-0.665079	98.8272	85.1134
57	0	-0.652622	99.2531	85.1134
58	0	-0.637192	99.6592	85.1134
59	0	-0.624956	100.05	85.1134
60	0	-0.609791	100.422	85.1134
61	0	-0.594766	100.775	85.1134
62	0	-0.582841	101.115	85.1134
63	0	-0.568052	101.438	85.1134
64	0	-0.556308	101.747	85.1134
65	0	-0.541736	102.041	85.1134
66	0	-0.530162	102.322	85.1134
67	0	-0.515791	102.588	85.1134
68	0	-0.504372	102.842	85.1134
69	0	-0.490189	103.082	85.1134
70	0	-0.478914	103.312	85.1134
71	0	-0.464904	103.528	85.1134
72	0	-0.453763	103.734	85.1134
73	0	-0.439913	103.927	85.1134
74	0	-0.428895	104.111	85.1134
75	0	-0.415193	104.284	85.1134
76	0	-0.40429	104.447	85.1134
77	0	-0.390726	104.6	85.1134
78	0	-0.379927	104.744	85.1134
79	0	-0.36649	104.878	85.1134
80	0	-0.355788	105.005	85.1134
81	0	-0.342466	105.122	85.1134
82	0	-0.329206	105.231	85.1134
83	0	-0.318639	105.332	85.1134
84	0	-0.305481	105.426	85.1134
85	0	-0.294992	105.513	85.1134
86	0	-0.281926	105.592	85.1134
87	0	-0.271509	105.666	85.1134
88	0	-0.258527	105.733	85.1134
89	0	-0.248174	105.794	85.1134
90	0	-0.235269	105.85	85.1134
91	0	-0.224974	105.9	85.1134
92	0	-0.212137	105.945	85.1134
93	0	-0.201894	105.986	85.1134
94	0	-0.189118	106.022	85.1134
95	0	-0.17892	106.054	85.1134
96	0	-0.166199	106.081	85.1134
97	0	-0.156042	106.106	85.1134
98	0	-0.143367	106.126	85.1134
99	0	-0.133244	106.144	85.1134
100	0	-0.12061	106.159	85.1134
101	0	-0.107995	106.17	85.1134
102	0	-0.0979139	106.18	85.1134
103	0	-0.0853288	106.187	85.1134
104	0	-0.0752698	106.193	85.1134
105	0	-0.0627062	106.197	85.1134
106	0	-0.0526632	106.199	85.1134
107	0	-0.0401167	106.201	85.1134
108	0	-0.0300838	106.202	85.1134
109	0	-0.0175476	106.202	85.1134
110	0	-0.00751925	106.202	85.1134
111	0	0.00751925	106.202	85.1134

112	0	0.0175476	106.203	85.1134
113	0	0.0300838	106.204	85.1134
114	0	0.0401167	106.205	85.1134
115	0	0.0526632	106.208	85.1134
116	0	0.0627062	106.212	85.1134
117	0	0.0752698	106.218	85.1134
118	0	0.0853288	106.225	85.1134
119	0	0.0979139	106.234	85.1134
120	0	0.107995	106.246	85.1134
121	0	0.12061	106.261	85.1134
122	0	0.133244	106.278	85.1134
123	0	0.143367	106.299	85.1134
124	0	0.156042	106.323	85.1134
125	0	0.166199	106.351	85.1134
126	0	0.17892	106.383	85.1134
127	0	0.189118	106.419	85.1134
128	0	0.201894	106.459	85.1134
129	0	0.212137	106.504	85.1134
130	0	0.224974	106.555	85.1134
131	0	0.235269	106.61	85.1134
132	0	0.248174	106.672	85.1134
133	0	0.258527	106.739	85.1134
134	0	0.271509	106.813	85.1134
135	0	0.281926	106.892	85.1134
136	0	0.294992	106.979	85.1134
137	0	0.305481	107.072	85.1134
138	0	0.318639	107.174	85.1134
139	0	0.329206	107.282	85.1134
140	0	0.342466	107.4	85.1134
141	0	0.355788	107.526	85.1134
142	0	0.36649	107.661	85.1134
143	0	0.379927	107.805	85.1134
144	0	0.390726	107.958	85.1134
145	0	0.40429	108.121	85.1134
146	0	0.415193	108.293	85.1134
147	0	0.428895	108.477	85.1134
148	0	0.439913	108.671	85.1134
149	0	0.453763	108.877	85.1134
150	0	0.464904	109.093	85.1134
151	0	0.478914	109.322	85.1134
152	0	0.490189	109.563	85.1134
153	0	0.504372	109.817	85.1134
154	0	0.515791	110.083	85.1134
155	0	0.530162	110.364	85.1134
156	0	0.541736	110.657	85.1134
157	0	0.556308	110.967	85.1134
158	0	0.568052	111.29	85.1134
159	0	0.582841	111.629	85.1134
160	0	0.594766	111.983	85.1134
161	0	0.609791	112.355	85.1134
162	0	0.624956	112.746	85.1134
163	0	0.637192	113.152	85.1134
164	0	0.652622	113.577	85.1134
165	0	0.665079	114.02	85.1134
166	0	0.680797	114.483	85.1134
167	0	0.693493	114.964	85.1134
168	0	0.709522	115.468	85.1134
169	0	0.722479	115.99	85.1134
170	0	0.738846	116.535	85.1134
171	0	0.752084	117.101	85.1134
172	0	0.768821	117.692	85.1134
173	0	0.782366	118.304	85.1134

174	0	0.7995	118.943	85.1134	
175	0	0.813379		119.605	85.1134
176	0	0.830953		120.296	85.1134
177	0	0.845198		121.01	85.1134
178	0	0.863249		121.755	85.1134
179	0	0.877897		122.526	85.1134
180	0	0.896473		123.329	85.1134
181	0	0.915365		124.167	85.1134
182	0	0.930718		125.034	85.1134
183	0	0.950222		125.937	85.1134
184	0	0.966088		126.87	85.1134
185	0	0.986272		127.843	85.1134
186	0	1.00271	128.848	85.1134	
187	0	1.02365	129.896	85.1134	
188	0	1.04073	130.979	85.1134	
189	0	1.06252	132.108	85.1134	
190	0	1.08032	133.275	85.1134	
191	0	1.10306	134.492	85.1134	
192	0	1.12168	135.75	85.1134	
193	0	1.1455	137.062	85.1134	
194	0	1.16505	138.419	85.1134	
195	0	1.19012	139.836	85.1134	
196	0	1.21073	141.302	85.1134	
197	0	1.23724	142.832	85.1134	
198	0	1.25908	144.418	85.1134	
199	0	1.28727	146.075	85.1134	
200	0.0487902		1.31058	147.792	85.1773
201	0.10436	1.34075	149.59	85.3172	
202	0.131028		1.3722	151.473	85.497
203	0.405465		1.39838	153.428	86.064
204	0.683097		1.4325	155.481	87.0426
205	0.693147		1.46106	157.615	88.0553
206	0.693147		1.49852	159.861	89.094
207	0.788457		1.53007	162.202	90.3004
208	1.0116	1.57179	164.672	91.8904	
209	1.22378	1.60725	167.256	93.8573	
210	1.36098	1.65463	169.993	96.1092	
211	1.38379	1.6954	172.868	98.4553	
212	1.38629	1.75069	175.933	100.882	
213	1.41099	1.79912	179.17	103.421	
214	1.64866	1.86629	182.653	106.498	
215	1.6864	1.92684	186.365	109.747	
216	1.72277	2.01409	190.422	113.217	
217	1.79009	2.09693	194.819	116.971	
218	1.86408	2.22621	199.775	121.12	
219	1.93152	2.36561	205.371	125.69	
220	2.17475	2.65209	212.405	131.457	

Data Set Standard Deviation = 0.710064
Numerator = 17281
Denominator = 23453.3
W Statistic = 0.736828 = 17281 / 23453.3

5% Critical value of 0.976 exceeds 0.736828
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.736828
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: 1,4-Dichlorobenzene

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	88
	9/23/1999	ND<0	88
	3/15/2000	ND<0	88
	9/24/2003	ND<0	88
	3/11/2004	ND<0	88
	10/12/2004	ND<0	88
	4/1/2005	ND<0	88
	10/25/2005	ND<0	88
	4/29/2006	ND<0	88
	11/18/2006	ND<0	88
	5/23/2007	ND<0	88
	11/28/2007	ND<0	88
	6/5/2008	ND<0	88
	11/20/2008	ND<0	88
	6/11/2009	ND<-1.96611	88
	11/16/2009	ND<-1.36649	88
	6/30/2010	ND<-1.96611	88
	6/30/2010	ND<-0.994252	88

Rank Sum = 1584
Rank Mean = 88

Background Rank Sum = 1584
Background Rank Mean = 88

Compliance Wells

Well ID	Date	Result	Rank
MW-6	7/20/1995	ND<0	88
	8/24/1995	ND<0	88
	9/28/1995	ND<0	88
	10/26/1995	ND<0	88
	11/19/1996	ND<0	88
	12/19/1996	ND<0	88
	3/24/1997	ND<0	88
	9/24/1997	ND<0	88
	4/7/1998	ND<0	88
	9/23/1998	ND<0	88
	3/16/1999	ND<0	88
	9/23/1999	ND<0	88
	3/15/2000	ND<0	88
	9/24/2003	ND<0	88
	3/11/2004	ND<0	88
	10/12/2004	ND<0	88
	4/1/2005	ND<0	88
	10/25/2005	ND<0	88
	4/29/2006	ND<0	88
	11/18/2006	ND<0	88

	5/23/2007	ND<0	88
	11/28/2007	ND<0	88
	6/5/2008	ND<0	88
	11/20/2008	ND<0	88
	6/11/2009	ND<-1.96611	88
	11/16/2009	ND<-1.36649	88
	6/30/2010	ND<-0.994252	88
	6/30/2010	ND<-1.96611	88

Rank Sum = 2464
Rank Mean = 88

MW-7	7/20/1995	ND<0	88
	8/24/1995	ND<0	88
	9/28/1995	ND<0	88
	10/26/1995	ND<0	88
	11/19/1996	ND<0	88
	12/19/1996	ND<0	88
	3/24/1997	ND<0	88
	9/24/1997	ND<0	88
	4/7/1998	ND<0	88
	9/23/1998	ND<0	88
	3/16/1999	ND<0	88
	9/23/1999	ND<0	88
	3/15/2000	ND<0	88
	9/24/2003	ND<0	88
	3/11/2004	ND<0	88
	10/12/2004	ND<0	88
	4/1/2005	ND<0	88
	10/25/2005	ND<0	88
	4/29/2006	ND<0	88
	11/18/2006	ND<0	88
	5/23/2007	ND<0	88
	11/28/2007	ND<0	88
	6/5/2008	ND<0	88
	11/20/2008	ND<0	88
	6/11/2009	ND<-1.96611	88
	11/16/2009	ND<-1.44817	88
	6/30/2010	ND<-1.96611	88
	6/30/2010	ND<-0.967584	88

Rank Sum = 2464
Rank Mean = 88

MW-8	7/20/1995	ND<0	88
	8/24/1995	ND<0	88
	9/28/1995	ND<0	88
	10/26/1995	ND<0	88
	11/19/1996	ND<0	88
	12/19/1996	ND<0	88
	3/24/1997	ND<0	88
	9/24/1997	ND<0	88
	4/7/1998	ND<0	88
	9/23/1998	ND<0	88
	3/16/1999	ND<0	88
	9/23/1999	ND<0	88
	3/15/2000	ND<0	88
	9/24/2003	ND<0	88
	3/11/2004	ND<0	88
	10/12/2004	ND<0	88
	4/1/2005	ND<0	88
	10/25/2005	-1.27297 J	176
	4/29/2006	-1.02165 J	180
	11/18/2006	-0.84397 J	183

	5/23/2007	ND<0	88	
	11/28/2007	-1.27297	J	177
	6/5/2008	-1.13943	J	179
	11/20/2008	ND<0	88	
	6/11/2009	-0.478036	J	193
	6/30/2010	ND<-1.96611		88

Rank Sum = 2848
Rank Mean = 109.538

MW-10	7/20/1995	ND<0	88	
	8/24/1995	0.405465	J	203
	9/28/1995	1.38629		212
	10/26/1995	0.693147		205
	11/19/1996	ND<0	88	
	12/19/1996	ND<0	88	
	3/24/1997	ND<0	88	
	9/24/1997	ND<0	88	
	4/7/1998	ND<0	88	
	9/23/1998	ND<0	88	
	3/16/1999	2.17475		220
	9/23/1999	ND<0	88	
	3/15/2000	ND<0	88	
	9/24/2003	ND<0	88	
	3/11/2004	ND<0	88	
	10/12/2004	ND<0	88	
	4/1/2005	1.0116	208	
	10/25/2005	1.38379		211
	4/29/2006	1.72277		216
	11/18/2006	1.36098		210
	5/23/2007	1.41099		213
	11/28/2007	1.79009		217
	6/5/2008	1.86408		218
	11/20/2008	ND<0	88	
	6/11/2009	1.22378		209
	11/16/2009	1.93152	J	219
	6/30/2010	1.64866		214
	6/30/2010	ND<-0.994252		88

Rank Sum = 4207
Rank Mean = 150.25

MW-11R	7/20/1995	ND<0	88	
	8/24/1995	0.788457		207
	9/28/1995	0.693147		206
	10/26/1995	ND<0	88	
	11/19/1996	ND<0	88	
	12/19/1996	ND<0	88	
	3/24/1997	ND<0	88	
	9/24/1997	ND<0	88	
	4/7/1998	ND<0	88	
	9/23/1998	ND<0	88	
	3/16/1999	ND<0	88	
	9/23/1999	ND<0	88	
	3/15/2000	ND<0	88	
	9/24/2003	1.6864	215	
	3/11/2004	ND<0	88	
	10/12/2004	ND<0	88	
	4/1/2005	ND<0	88	
	10/25/2005	ND<0	88	
	4/29/2006	ND<0	88	
	11/18/2006	ND<0	88	
	5/23/2007	ND<0	88	
	11/28/2007	-1.20397	J	178

	6/5/2008	ND<0	88	
	11/20/2008	ND<0	88	
	6/11/2009	-0.733969	J	187
	11/16/2009	ND<-1.44817		88
	6/30/2010	-0.994252	J	181
	6/30/2010	ND<-0.994252		88

Rank Sum = 3110
Rank Mean = 111.071

MW-12AR	3/16/1999	ND<0	88	
	9/23/1999	ND<0	88	
	3/15/2000	ND<0	88	
	9/24/2003	ND<0	88	
	3/11/2004	ND<0	88	
	10/12/2004	ND<0	88	
	4/1/2005	ND<0	88	
	10/25/2005	0.0487902	J	200
	4/29/2006	0.131028	J	202
	11/18/2006	-0.174353	J	196
	5/23/2007	ND<0	88	
	11/28/2007	-0.248461	J	195
	6/5/2008	-0.0304592	J	198
	11/20/2008	-0.71335	J	188
	6/11/2009	ND<-1.96611		88
	11/16/2009	ND<-1.44817		88
	6/30/2010	ND<-1.96611		88
	6/30/2010	ND<-0.994252		88

Rank Sum = 2235
Rank Mean = 124.167

MW-9	7/20/1995	ND<0	88	
	8/24/1995	-0.673345	J	189
	9/28/1995	-0.510826	J	192
	10/26/1995	ND<0	88	
	11/19/1996	ND<0	88	
	12/19/1996	ND<0	88	
	3/24/1997	ND<0	88	
	9/24/1997	ND<0	88	
	4/7/1998	ND<0	88	
	9/23/1998	ND<0	88	
	3/16/1999	ND<0	88	
	9/23/1999	ND<0	88	
	3/15/2000	ND<0	88	
	9/24/2003	ND<0	88	
	3/11/2004	ND<0	88	
	10/12/2004	ND<0	88	
	4/1/2005	-0.0943107	J	197
	10/25/2005	-0.616186	J	190
	4/29/2006	-0.84397	J	184
	11/18/2006	-0.916291	J	182
	5/23/2007	ND<0	88	
	11/28/2007	-0.415515	J	194
	6/5/2008	-0.755023	J	186
	11/20/2008	-0.616186	J	191
	6/11/2009	-0.820981	J	185
	11/16/2009	ND<-1.36649		88
	6/30/2010	-0.0304592	J	199
	6/30/2010	ND<-0.967584		88

Rank Sum = 3585
Rank Mean = 128.036

MW-12BR	3/16/1999	ND<0	88	

9/23/1999	ND<0	88	
3/15/2000	ND<0	88	
9/24/2003	ND<0	88	
3/11/2004	ND<0	88	
10/12/2004	ND<0	88	
4/1/2005	0.10436 J	201	
10/25/2005	ND<0	88	
4/29/2006	0.683097 J		204
11/18/2006	ND<0	88	
5/23/2007	ND<0	88	
11/28/2007	ND<0	88	
6/5/2008	ND<0	88	
11/20/2008	ND<0	88	
6/11/2009	ND<-1.96611	88	
11/16/2009	ND<-1.44817	88	
6/30/2010	ND<-0.994252	88	
6/30/2010	ND<-1.96611	88	

Rank Sum = 1813
Rank Mean = 100.722

Calculation Results:

Kruskal-Wallis H Statistic = 23.5534
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 47.4212
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
23.5534 > 15.5073 indicating a significant group difference at 5% significance level
47.4212 > 15.5073 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 88

Well	Mean Rank	Dif from Bkg	Critical Value
MW-6	88	0	44.7357
MW-7	88	0	44.7357
MW-8	109.538	21.5385	45.404
MW-10	150.25	62.25	44.7357
MW-11R	111.071	23.0714	44.7357
MW-12AR	124.167	36.1667	49.3593
MW-9	128.036	40.0357	44.7357
MW-12BR	100.722	12.7222	49.3593

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 88

Well	Mean Rank	Dif from Bkg	Critical Value
MW-6	88	0	48.3085
MW-7	88	0	48.3085
MW-8	109.538	21.5385	49.0301
MW-10	150.25	62.25	48.3085
MW-11R	111.071	23.0714	48.3085
MW-12AR	124.167	36.1667	53.3014
MW-9	128.036	40.0357	48.3085
MW-12BR	100.722	12.7222	53.3014

Mann-Kendall Trend Analysis

Parameter: 1,4-Dichlorobenzene

Location: MW-10

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
0.405465 J	ND<0	0.405465	1	0
1.38629	ND<0	1.38629	2	0
0.693147	ND<0	0.693147	3	0
ND<0	ND<0	0	3	0
ND<0	ND<0	0	3	0
ND<0	ND<0	0	3	0
ND<0	ND<0	0	3	0
ND<0	ND<0	0	3	0
ND<0	ND<0	0	3	0
2.17475	ND<0	2.17475	4	0
ND<0	ND<0	0	4	0
ND<0	ND<0	0	4	0
ND<0	ND<0	0	4	0
ND<0	ND<0	0	4	0
ND<0	ND<0	0	4	0
1.0116	ND<0	1.0116	5	0
1.38379	ND<0	1.38379	6	0
1.72277	ND<0	1.72277	7	0
1.36098	ND<0	1.36098	8	0
1.41099	ND<0	1.41099	9	0
1.79009	ND<0	1.79009	10	0
1.86408	ND<0	1.86408	11	0
ND<0	ND<0	0	11	0
1.22378	ND<0	1.22378	12	0
1.93152 J	ND<0	1.93152	13	0
1.64866	ND<0	1.64866	14	0
ND<-0.994252	ND<0	-0.994252	14	1
1.38629	0.405465 J	0.980829	15	1
0.693147	0.405465 J	0.287682	16	1
ND<0	0.405465 J	-0.405465	16	2
ND<0	0.405465 J	-0.405465	16	3
ND<0	0.405465 J	-0.405465	16	4
ND<0	0.405465 J	-0.405465	16	5
ND<0	0.405465 J	-0.405465	16	6
ND<0	0.405465 J	-0.405465	16	7
2.17475	0.405465 J	1.76929	17	7
ND<0	0.405465 J	-0.405465	17	8
ND<0	0.405465 J	-0.405465	17	9
ND<0	0.405465 J	-0.405465	17	10
ND<0	0.405465 J	-0.405465	17	11
ND<0	0.405465 J	-0.405465	17	12
1.0116	0.405465 J	0.606136	18	12
1.38379	0.405465 J	0.978326	19	12
1.72277	0.405465 J	1.3173	20	12
1.36098	0.405465 J	0.955511	21	12
1.41099	0.405465 J	1.00552	22	12
1.79009	0.405465 J	1.38463	23	12

1.86408		0.405465 J		1.45862	24	12
ND<0	0.405465 J		-0.405465		24	13
1.22378		0.405465 J		0.81831	25	13
1.93152 J		0.405465 J		1.52606	26	13
1.64866		0.405465 J		1.24319	27	13
ND<-0.994252		0.405465 J		-1.3997227		14
0.693147		1.38629		-0.693147	27	15
ND<0	1.38629		-1.3862927		16	
ND<0	1.38629		-1.3862927		17	
ND<0	1.38629		-1.3862927		18	
ND<0	1.38629		-1.3862927		19	
ND<0	1.38629		-1.3862927		20	
ND<0	1.38629		-1.3862927		21	
2.17475		1.38629		0.788457	28	21
ND<0	1.38629		-1.3862928		22	
ND<0	1.38629		-1.3862928		23	
ND<0	1.38629		-1.3862928		24	
ND<0	1.38629		-1.3862928		25	
ND<0	1.38629		-1.3862928		26	
1.0116	1.38629		-0.374693		28	27
1.38379		1.38629		-0.00250313	28	28
1.72277		1.38629		0.336472	29	28
1.36098		1.38629		-0.0253178	29	29
1.41099		1.38629		0.0246926	30	29
1.79009		1.38629		0.403797	31	29
1.86408		1.38629		0.477786	32	29
ND<0	1.38629		-1.3862932		30	
1.22378		1.38629		-0.162519	32	31
1.93152 J		1.38629		0.545227	33	31
1.64866		1.38629		0.262364	34	31
ND<-0.994252		1.38629		-2.3805534	32	
ND<0	0.693147		-0.693147		34	33
ND<0	0.693147		-0.693147		34	34
ND<0	0.693147		-0.693147		34	35
ND<0	0.693147		-0.693147		34	36
ND<0	0.693147		-0.693147		34	37
ND<0	0.693147		-0.693147		34	38
2.17475		0.693147		1.4816	35	38
ND<0	0.693147		-0.693147		35	39
ND<0	0.693147		-0.693147		35	40
ND<0	0.693147		-0.693147		35	41
ND<0	0.693147		-0.693147		35	42
ND<0	0.693147		-0.693147		35	43
1.0116	0.693147		0.318454		36	43
1.38379		0.693147		0.690644	37	43
1.72277		0.693147		1.02962	38	43
1.36098		0.693147		0.667829	39	43
1.41099		0.693147		0.71784	40	43
1.79009		0.693147		1.09694	41	43
1.86408		0.693147		1.17093	42	43
ND<0	0.693147		-0.693147		42	44
1.22378		0.693147		0.530628	43	44
1.93152 J		0.693147		1.23837	44	44
1.64866		0.693147		0.955511	45	44
ND<-0.994252		0.693147		-1.6874	45	45
ND<0	ND<0	0	45	45		
ND<0	ND<0	0	45	45		
ND<0	ND<0	0	45	45		
ND<0	ND<0	0	45	45		

ND<0	ND<0	0	45	45		
2.17475		ND<0	2.17475	46	45	
ND<0	ND<0	0	46	45		
ND<0	ND<0	0	46	45		
ND<0	ND<0	0	46	45		
ND<0	ND<0	0	46	45		
ND<0	ND<0	0	46	45		
1.0116	ND<0	1.0116	47	45		
1.38379		ND<0	1.38379	48	45	
1.72277		ND<0	1.72277	49	45	
1.36098		ND<0	1.36098	50	45	
1.41099		ND<0	1.41099	51	45	
1.79009		ND<0	1.79009	52	45	
1.86408		ND<0	1.86408	53	45	
ND<0	ND<0	0	53	45		
1.22378		ND<0	1.22378	54	45	
1.93152 J		ND<0	1.93152	55	45	
1.64866		ND<0	1.64866	56	45	
ND<-0.994252		ND<0	-0.994252		56	46
ND<0	ND<0	0	56	46		
ND<0	ND<0	0	56	46		
ND<0	ND<0	0	56	46		
ND<0	ND<0	0	56	46		
2.17475		ND<0	2.17475	57	46	
ND<0	ND<0	0	57	46		
ND<0	ND<0	0	57	46		
ND<0	ND<0	0	57	46		
ND<0	ND<0	0	57	46		
ND<0	ND<0	0	57	46		
1.0116	ND<0	1.0116	58	46		
1.38379		ND<0	1.38379	59	46	
1.72277		ND<0	1.72277	60	46	
1.36098		ND<0	1.36098	61	46	
1.41099		ND<0	1.41099	62	46	
1.79009		ND<0	1.79009	63	46	
1.86408		ND<0	1.86408	64	46	
ND<0	ND<0	0	64	46		
1.22378		ND<0	1.22378	65	46	
1.93152 J		ND<0	1.93152	66	46	
1.64866		ND<0	1.64866	67	46	
ND<-0.994252		ND<0	-0.994252		67	47
ND<0	ND<0	0	67	47		
ND<0	ND<0	0	67	47		
ND<0	ND<0	0	67	47		
2.17475		ND<0	2.17475	68	47	
ND<0	ND<0	0	68	47		
ND<0	ND<0	0	68	47		
ND<0	ND<0	0	68	47		
ND<0	ND<0	0	68	47		
ND<0	ND<0	0	68	47		
1.0116	ND<0	1.0116	69	47		
1.38379		ND<0	1.38379	70	47	
1.72277		ND<0	1.72277	71	47	
1.36098		ND<0	1.36098	72	47	
1.41099		ND<0	1.41099	73	47	
1.79009		ND<0	1.79009	74	47	
1.86408		ND<0	1.86408	75	47	
ND<0	ND<0	0	75	47		
1.22378		ND<0	1.22378	76	47	
1.93152 J		ND<0	1.93152	77	47	

1.64866		ND<0	1.64866	78	47	
ND<-0.994252		ND<0	-0.994252		78	48
ND<0	ND<0	0	78	48		
ND<0	ND<0	0	78	48		
2.17475		ND<0	2.17475	79	48	
ND<0	ND<0	0	79	48		
ND<0	ND<0	0	79	48		
ND<0	ND<0	0	79	48		
ND<0	ND<0	0	79	48		
ND<0	ND<0	0	79	48		
1.0116	ND<0	1.0116	80	48		
1.38379		ND<0	1.38379	81	48	
1.72277		ND<0	1.72277	82	48	
1.36098		ND<0	1.36098	83	48	
1.41099		ND<0	1.41099	84	48	
1.79009		ND<0	1.79009	85	48	
1.86408		ND<0	1.86408	86	48	
ND<0	ND<0	0	86	48		
1.22378		ND<0	1.22378	87	48	
1.93152 J		ND<0	1.93152	88	48	
1.64866		ND<0	1.64866	89	48	
ND<-0.994252		ND<0	-0.994252		89	49
ND<0	ND<0	0	89	49		
2.17475		ND<0	2.17475	90	49	
ND<0	ND<0	0	90	49		
ND<0	ND<0	0	90	49		
ND<0	ND<0	0	90	49		
ND<0	ND<0	0	90	49		
ND<0	ND<0	0	90	49		
1.0116	ND<0	1.0116	91	49		
1.38379		ND<0	1.38379	92	49	
1.72277		ND<0	1.72277	93	49	
1.36098		ND<0	1.36098	94	49	
1.41099		ND<0	1.41099	95	49	
1.79009		ND<0	1.79009	96	49	
1.86408		ND<0	1.86408	97	49	
ND<0	ND<0	0	97	49		
1.22378		ND<0	1.22378	98	49	
1.93152 J		ND<0	1.93152	99	49	
1.64866		ND<0	1.64866	100	49	
ND<-0.994252		ND<0	-0.994252		100	50
2.17475		ND<0	2.17475	101	50	
ND<0	ND<0	0	101	50		
ND<0	ND<0	0	101	50		
ND<0	ND<0	0	101	50		
ND<0	ND<0	0	101	50		
ND<0	ND<0	0	101	50		
1.0116	ND<0	1.0116	102	50		
1.38379		ND<0	1.38379	103	50	
1.72277		ND<0	1.72277	104	50	
1.36098		ND<0	1.36098	105	50	
1.41099		ND<0	1.41099	106	50	
1.79009		ND<0	1.79009	107	50	
1.86408		ND<0	1.86408	108	50	
ND<0	ND<0	0	108	50		
1.22378		ND<0	1.22378	109	50	
1.93152 J		ND<0	1.93152	110	50	
1.64866		ND<0	1.64866	111	50	
ND<-0.994252		ND<0	-0.994252		111	51

ND<0	2.17475		-2.17475	111	52	
ND<0	2.17475		-2.17475	111	53	
ND<0	2.17475		-2.17475	111	54	
ND<0	2.17475		-2.17475	111	55	
ND<0	2.17475		-2.17475	111	56	
1.0116	2.17475		-1.16315	111	57	
1.38379		2.17475		-0.79096	111	58
1.72277		2.17475		-0.451985	111	59
1.36098		2.17475		-0.813775	111	60
1.41099		2.17475		-0.763765	111	61
1.79009		2.17475		-0.38466	111	62
1.86408		2.17475		-0.310672	111	63
ND<0	2.17475		-2.17475	111	64	
1.22378		2.17475		-0.950976	111	65
1.93152 J		2.17475		-0.24323	111	66
1.64866		2.17475		-0.526093	111	67
ND<-0.994252		2.17475		-3.169	111	68

ND<0	ND<0	0	111	68		
ND<0	ND<0	0	111	68		
ND<0	ND<0	0	111	68		
ND<0	ND<0	0	111	68		
1.0116	ND<0	1.0116	112	68		
1.38379		ND<0	1.38379	113	68	
1.72277		ND<0	1.72277	114	68	
1.36098		ND<0	1.36098	115	68	
1.41099		ND<0	1.41099	116	68	
1.79009		ND<0	1.79009	117	68	
1.86408		ND<0	1.86408	118	68	
ND<0	ND<0	0	118	68		
1.22378		ND<0	1.22378	119	68	
1.93152 J		ND<0	1.93152	120	68	
1.64866		ND<0	1.64866	121	68	
ND<-0.994252		ND<0	-0.994252		121	69

ND<0	ND<0	0	121	69		
ND<0	ND<0	0	121	69		
ND<0	ND<0	0	121	69		
1.0116	ND<0	1.0116	122	69		
1.38379		ND<0	1.38379	123	69	
1.72277		ND<0	1.72277	124	69	
1.36098		ND<0	1.36098	125	69	
1.41099		ND<0	1.41099	126	69	
1.79009		ND<0	1.79009	127	69	
1.86408		ND<0	1.86408	128	69	
ND<0	ND<0	0	128	69		
1.22378		ND<0	1.22378	129	69	
1.93152 J		ND<0	1.93152	130	69	
1.64866		ND<0	1.64866	131	69	
ND<-0.994252		ND<0	-0.994252		131	70

ND<0	ND<0	0	131	70		
ND<0	ND<0	0	131	70		
1.0116	ND<0	1.0116	132	70		
1.38379		ND<0	1.38379	133	70	
1.72277		ND<0	1.72277	134	70	
1.36098		ND<0	1.36098	135	70	
1.41099		ND<0	1.41099	136	70	
1.79009		ND<0	1.79009	137	70	
1.86408		ND<0	1.86408	138	70	
ND<0	ND<0	0	138	70		

1.22378		ND<0	1.22378	139	70	
1.93152 J		ND<0	1.93152	140	70	
1.64866		ND<0	1.64866	141	70	
ND<-0.994252		ND<0	-0.994252		141	71
ND<0	ND<0	0	141	71		
1.0116	ND<0	1.0116	142	71		
1.38379		ND<0	1.38379	143	71	
1.72277		ND<0	1.72277	144	71	
1.36098		ND<0	1.36098	145	71	
1.41099		ND<0	1.41099	146	71	
1.79009		ND<0	1.79009	147	71	
1.86408		ND<0	1.86408	148	71	
ND<0	ND<0	0	148	71		
1.22378		ND<0	1.22378	149	71	
1.93152 J		ND<0	1.93152	150	71	
1.64866		ND<0	1.64866	151	71	
ND<-0.994252		ND<0	-0.994252		151	72
1.0116	ND<0	1.0116	152	72		
1.38379		ND<0	1.38379	153	72	
1.72277		ND<0	1.72277	154	72	
1.36098		ND<0	1.36098	155	72	
1.41099		ND<0	1.41099	156	72	
1.79009		ND<0	1.79009	157	72	
1.86408		ND<0	1.86408	158	72	
ND<0	ND<0	0	158	72		
1.22378		ND<0	1.22378	159	72	
1.93152 J		ND<0	1.93152	160	72	
1.64866		ND<0	1.64866	161	72	
ND<-0.994252		ND<0	-0.994252		161	73
1.38379		1.0116	0.37219	162	73	
1.72277		1.0116	0.711166		163	73
1.36098		1.0116	0.349376		164	73
1.41099		1.0116	0.399386		165	73
1.79009		1.0116	0.778491		166	73
1.86408		1.0116	0.852479		167	73
ND<0	1.0116	-1.0116	167	74		
1.22378		1.0116	0.212175		168	74
1.93152 J		1.0116	0.91992	169	74	
1.64866		1.0116	0.637058		170	74
ND<-0.994252		1.0116	-2.00585	170	75	
1.72277		1.38379	0.338975		171	75
1.36098		1.38379	-0.0228147		171	76
1.41099		1.38379	0.0271957		172	76
1.79009		1.38379	0.4063	173	76	
1.86408		1.38379	0.480289		174	76
ND<0	1.38379		-1.38379	174	77	
1.22378		1.38379	-0.160016		174	78
1.93152 J		1.38379	0.54773	175	78	
1.64866		1.38379	0.264867		176	78
ND<-0.994252		1.38379	-2.37804	176	79	
1.36098		1.72277	-0.36179	176	80	
1.41099		1.72277	-0.31178	176	81	
1.79009		1.72277	0.0673248		177	81
1.86408		1.72277	0.141314		178	81
ND<0	1.72277		-1.72277	178	82	
1.22378		1.72277	-0.498991		178	83
1.93152 J		1.72277	0.208755		179	83

1.64866	1.72277	-0.074108	179	84
ND<-0.994252	1.72277	-2.71702179	85	
1.41099	1.36098	0.0500104	180	85
1.79009	1.36098	0.429115	181	85
1.86408	1.36098	0.503104	182	85
ND<0	1.36098	-1.36098182	86	
1.22378	1.36098	-0.137201	182	87
1.93152 J	1.36098	0.570545	183	87
1.64866	1.36098	0.287682	184	87
ND<-0.994252	1.36098	-2.35523184	88	
1.79009	1.41099	0.379104	185	88
1.86408	1.41099	0.453093	186	88
ND<0	1.41099	-1.41099186	89	
1.22378	1.41099	-0.187212	186	90
1.93152 J	1.41099	0.520534	187	90
1.64866	1.41099	0.237672	188	90
ND<-0.994252	1.41099	-2.40524188	91	
1.86408	1.79009	0.0739887	189	91
ND<0	1.79009	-1.79009189	92	
1.22378	1.79009	-0.566316	189	93
1.93152 J	1.79009	0.14143 190	93	
1.64866	1.79009	-0.141433	190	94
ND<-0.994252	1.79009	-2.78434190	95	
ND<0	1.86408	-1.86408190	96	
1.22378	1.86408	-0.640305	190	97
1.93152 J	1.86408	0.0674413	191	97
1.64866	1.86408	-0.215422	191	98
ND<-0.994252	1.86408	-2.85833191	99	
1.22378	ND<0	1.22378 192	99	
1.93152 J	ND<0	1.93152 193	99	
1.64866	ND<0	1.64866 194	99	
ND<-0.994252	ND<0	-0.994252	194	100
1.93152 J	1.22378	0.707746	195	100
1.64866	1.22378	0.424883	196	100
ND<-0.994252	1.22378	-2.21803196	101	
1.64866	1.93152 J	-0.282863	196	102
ND<-0.994252	1.93152 J	-2.92577196	103	
ND<-0.994252	1.64866	Same Date	196	103

S Statistic = 196 - 103 = 93

Tied Group	Value	Members
1	0	13

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1

3/24/1997		1
9/24/1997		1
4/7/1998	1	
9/23/1998		1
3/16/1999		1
9/23/1999		1
3/15/2000		1
9/24/2003		1
3/11/2004		1
10/12/2004		1
4/1/2005	1	
10/25/2005		1
4/29/2006		1
11/18/2006		1
5/23/2007		1
11/28/2007		1
6/5/2008	1	
11/20/2008		1
6/11/2009		1
11/16/2009		1
6/30/2010		2

There are 1 time periods with multiple data

A = 4836
B = 18
C = 1716
D = 0
E = 156
F = 2
a = 46116
b = 176904
c = 1512
Group Variance = 2292.54
Z-Score = 1.92145
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|1.92145| <= 1.97737 indicating no evidence of a trend

Concentrations (ppb)

Parameter: Acetone

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 176
Percent Non-Detects: 83.0189%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<4	ND<4
			9/23/1999	ND<4	ND<4
			3/15/2000	ND<4	ND<4
			9/24/2003	ND<4	ND<4
			3/11/2004	ND<4	ND<4
			10/12/2004	ND<4	ND<4
			4/1/2005	ND<4	ND<4
			10/25/2005	ND<4	ND<4
			4/29/2006	ND<4	ND<4
			11/18/2006	ND<4	ND<4
			5/23/2007	ND<4	ND<4
			11/28/2007	ND<4	ND<4
			6/5/2008	ND<4	ND<4
			11/20/2008	ND<4	ND<4
			6/11/2009	ND<5	ND<5
			11/16/2009	ND<5	ND<5
			6/30/2010	ND<5	ND<5

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-10	27	25 (92.5926%)	7/20/1995	ND<4	ND<4
			8/24/1995	ND<4	ND<4
			9/28/1995	ND<4	ND<4
			10/26/1995	ND<4	ND<4
			11/19/1996	ND<4	ND<4
			12/19/1996	ND<4	ND<4
			3/24/1997	ND<4	ND<4
			9/24/1997	ND<4	ND<4
			4/7/1998	ND<4	ND<4
			9/23/1998	ND<4	ND<4
			3/16/1999	67.2	67.2
			9/23/1999	ND<4	ND<4
			3/15/2000	ND<4	ND<4
			9/24/2003	ND<4	ND<4
			3/11/2004	ND<4	ND<4
			10/12/2004	ND<4	ND<4
			4/1/2005	ND<4	ND<4
			10/25/2005	ND<4	ND<4
			4/29/2006	ND<4	ND<4
			11/18/2006	ND<4	ND<4
			5/23/2007	ND<4	ND<4
			11/28/2007	ND<4	ND<4
			6/5/2008	ND<4	ND<4
			11/20/2008	ND<4	ND<4

			6/11/2009	ND<5	ND<5		
			11/16/2009	26	26		
			6/30/2010	ND<5	ND<5		
MW-9	27	23 (85.1852%)	7/20/1995		ND<4	ND<4	
			8/24/1995	10	10		
			9/28/1995	ND<4	ND<4		
			10/26/1995	ND<4	ND<4		
			11/19/1996	ND<4	ND<4		
			12/19/1996	ND<4	ND<4		
			3/24/1997	ND<4	ND<4		
			9/24/1997	ND<4	ND<4		
			4/7/1998	120	120		
			9/23/1998	ND<4	ND<4		
			3/16/1999	38.3	38.3		
			9/23/1999	ND<4	ND<4		
			3/15/2000	ND<4	ND<4		
			9/24/2003	ND<4	ND<4		
			3/11/2004	ND<4	ND<4		
			10/12/2004	ND<4	ND<4		
			4/1/2005	ND<4	ND<4		
			10/25/2005	ND<4	ND<4		
			4/29/2006	ND<4	ND<4		
			11/18/2006	ND<4	ND<4		
			5/23/2007	ND<4	ND<4		
			11/28/2007	2.74 J	2.74 J		
			6/5/2008	ND<4	ND<4		
			11/20/2008	ND<4	ND<4		
			6/11/2009	ND<5	ND<5		
			11/16/2009	ND<5	ND<5		
			6/30/2010	ND<5	ND<5		
MW-12BR		17	17 (100%)	3/16/1999		ND<4	ND<4
			9/23/1999	ND<4	ND<4		
			3/15/2000	ND<4	ND<4		
			9/24/2003	ND<4	ND<4		
			3/11/2004	ND<4	ND<4		
			10/12/2004	ND<4	ND<4		
			4/1/2005	ND<4	ND<4		
			10/25/2005	ND<4	ND<4		
			4/29/2006	ND<4	ND<4		
			11/18/2006	ND<4	ND<4		
			5/23/2007	ND<4	ND<4		
			11/28/2007	ND<4	ND<4		
			6/5/2008	ND<4	ND<4		
			11/20/2008	ND<4	ND<4		
			6/11/2009	ND<5	ND<5		
			11/16/2009	ND<5	ND<5		
			6/30/2010	ND<5	ND<5		
MW-12AR		17	17 (100%)	3/16/1999		ND<4	ND<4
			9/23/1999	ND<4	ND<4		
			3/15/2000	ND<4	ND<4		
			9/24/2003	ND<4	ND<4		
			3/11/2004	ND<4	ND<4		
			10/12/2004	ND<4	ND<4		
			4/1/2005	ND<4	ND<4		
			10/25/2005	ND<4	ND<4		
			4/29/2006	ND<4	ND<4		
			11/18/2006	ND<4	ND<4		
			5/23/2007	ND<4	ND<4		
			11/28/2007	ND<4	ND<4		

			6/5/2008	ND<4	ND<4	
			11/20/2008		ND<4	ND<4
			6/11/2009		ND<5	ND<5
			11/16/2009		ND<5	ND<5
			6/30/2010		ND<5	ND<5
MW-11R	27	19 (70.3704%)	7/20/1995		ND<4	ND<4
			8/24/1995		ND<4	ND<4
			9/28/1995		16	16
			10/26/1995		ND<4	ND<4
			11/19/1996		ND<4	ND<4
			12/19/1996		ND<4	ND<4
			3/24/1997		ND<4	ND<4
			9/24/1997		ND<4	ND<4
			4/7/1998	ND<4	ND<4	
			9/23/1998		ND<4	ND<4
			3/16/1999		350	350
			9/23/1999		ND<4	ND<4
			3/15/2000		ND<4	ND<4
			9/24/2003		320	320
			3/11/2004		400	400
			10/12/2004		2400	2400
			4/1/2005	ND<4	ND<4	
			10/25/2005		ND<4	ND<4
			4/29/2006		ND<4	ND<4
			11/18/2006		13.9	13.9
			5/23/2007		100	100
			11/28/2007		6.72	6.72
			6/5/2008	ND<4	ND<4	
			11/20/2008		ND<4	ND<4
			6/11/2009		ND<5	ND<5
			11/16/2009		ND<5	ND<5
			6/30/2010		ND<5	ND<5
MW-8	26	19 (73.0769%)	7/20/1995		ND<4	ND<4
			8/24/1995		ND<4	ND<4
			9/28/1995		ND<4	ND<4
			10/26/1995		ND<4	ND<4
			11/19/1996		ND<4	ND<4
			12/19/1996		ND<4	ND<4
			3/24/1997		ND<4	ND<4
			9/24/1997		ND<4	ND<4
			4/7/1998	ND<4	ND<4	
			9/23/1998		ND<4	ND<4
			3/16/1999		35.2	35.2
			9/23/1999		136	136
			3/15/2000		ND<4	ND<4
			9/24/2003		ND<4	ND<4
			3/11/2004		ND<4	ND<4
			10/12/2004		160	160
			4/1/2005	ND<4	ND<4	
			10/25/2005		1.27 J	1.27 J
			4/29/2006		ND<4	ND<4
			11/18/2006		ND<4	ND<4
			5/23/2007		ND<4	ND<4
			11/28/2007		ND<4	ND<4
			6/5/2008	ND<4	ND<4	
			11/20/2008		9.72	9.72
			6/11/2009		9.8 J	9.8 J
			6/30/2010		5.3 J	5.3 J
MW-6	27	24 (88.8889%)	7/20/1995		ND<4	ND<4

			8/24/1995	3.9 J	3.9 J	
			9/28/1995	ND<4	ND<4	
			10/26/1995	ND<4	ND<4	
			11/19/1996	ND<4	ND<4	
			12/19/1996	ND<4	ND<4	
			3/24/1997	ND<4	ND<4	
			9/24/1997	ND<4	ND<4	
			4/7/1998 ND<4	ND<4		
			9/23/1998	ND<4	ND<4	
			3/16/1999	ND<4	ND<4	
			9/23/1999	ND<4	ND<4	
			3/15/2000	ND<4	ND<4	
			9/24/2003	ND<4	ND<4	
			3/11/2004	ND<4	ND<4	
			10/12/2004	ND<4	ND<4	
			4/1/2005 ND<4	ND<4		
			10/25/2005	2.2 J	2.2 J	
			4/29/2006	ND<4	ND<4	
			11/18/2006	ND<4	ND<4	
			5/23/2007	ND<4	ND<4	
			11/28/2007	ND<4	ND<4	
			6/5/2008 ND<4	ND<4		
			11/20/2008	ND<4	ND<4	
			6/11/2009	7.6 J	7.6 J	
			11/16/2009	ND<5	ND<5	
			6/30/2010	ND<5	ND<5	
MW-7	27	15 (55.5556%)	7/20/1995		ND<4	ND<4
			8/24/1995	ND<4	ND<4	
			9/28/1995	ND<4	ND<4	
			10/26/1995	ND<4	ND<4	
			11/19/1996	ND<4	ND<4	
			12/19/1996	ND<4	ND<4	
			3/24/1997	260	260	
			9/24/1997	ND<4	ND<4	
			4/7/1998 ND<4	ND<4		
			9/23/1998	ND<4	ND<4	
			3/16/1999	4260	4260	
			9/23/1999	95.4	95.4	
			3/15/2000	130	130	
			9/24/2003	ND<4	ND<4	
			3/11/2004	ND<4	ND<4	
			10/12/2004	200	200	
			4/1/2005 ND<4	ND<4		
			10/25/2005	6.97	6.97	
			4/29/2006	ND<4	ND<4	
			11/18/2006	1.34 J	1.34 J	
			5/23/2007	ND<4	ND<4	
			11/28/2007	11.6	11.6	
			6/5/2008 932	932		
			11/20/2008	24	24	
			6/11/2009	52	52	
			11/16/2009	6 J	6 J	
			6/30/2010	ND<5	ND<5	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Acetone

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1.27	-2.65209	7.03356	-3.36815
2	1.34	-2.365	6.6297	-6.53807
3	2	-2.197	8.4578	-10.9326
4	2	-2.096	9.8549	-15.1265
5	2	-1.995	3.8365	-19.1173
6	2	-1.911	0.4885	-22.9394
7	2	-1.852	3.9191	-26.6437
8	2	-1.786	6.111	-30.2169
9	2	-1.727	9.0968	-33.6728
10	2	-1.684	4.9358	-37.0427
11	2	-1.635	4.6098	-40.3131
12	2	-1.589	7.1356	-43.4917
13	2	-1.546	4.9527	-46.5845
14	2	-1.514	1.8195	-49.6128
15	2	-1.475	3.9975	-52.5643
16	2	-1.439	5.0698	-55.4434
17	2	-1.411	8.063	-58.2671
18	2	-1.378	6.9637	-61.0244
19	2	-1.346	1.778	-63.7183
20	2	-1.322	5.163	-66.3633
21	2	-1.293	6.1989	-68.9493
22	2	-1.264	6.7982	-71.4786
23	2	-1.242	6.3424	-73.9639
24	2	-1.215	9.821	-76.3958
25	2	-1.190	1.2373	-78.7761
26	2	-1.165	0.5947	-81.1061
27	2	-1.145	3.9069	-83.3972
28	2	-1.121	6.165	-85.6405
29	2	-1.098	4.3716	-87.8374
30	2	-1.080	7.5387	-89.9981
31	2	-1.058	8.6584	-92.1143
32	2	-1.036	4.7326	-94.1872
33	2	-1.019	4.7718	-96.2261
34	2	-0.998	575	81.7689	-98.2232
35	2	-0.978	2.7257	-100.18
36	2	-0.958	125	83.6437	-102.096
37	2	-0.942	375	84.5318	-103.981
38	2	-0.923	014	85.3837	-105.827
39	2	-0.903	992	86.201	-107.635
40	2	-0.889	006	86.9913	-109.413
41	2	-0.870	5.7491	-111.154
42	2	-0.852	385	88.4757	-112.858
43	2	-0.838	054	89.178	-114.535
44	2	-0.820	379	89.8511	-116.175
45	2	-0.802	956	90.4958	-117.781
46	2	-0.789	191	91.1186	-119.36
47	2	-0.772	193	91.7149	-120.904
48	2	-0.755	415	92.2856	-122.415
49	2	-0.738	846	92.8314	-123.892

50	2	-0.725736	93.3581	-125.344
51	2	-0.709522	93.8616	-126.763
52	2	-0.693493	94.3425	-128.15
53	2	-0.680797	94.806	-129.512
54	2	-0.665079	95.2483	-130.842
55	2	-0.649522	95.6702	-132.141
56	2	-0.637192	96.0762	-133.415
57	2	-0.621911	96.463	-134.659
58	2	-0.606775	96.8312	-135.873
59	2	-0.594766	97.1849	-137.062
60	2	-0.579873	97.5212	-138.222
61	2	-0.565108	97.8405	-139.352
62	2	-0.550465	98.1435	-140.453
63	2	-0.538836	98.4339	-141.531
64	2	-0.524401	98.7088	-142.579
65	2	-0.510074	98.969	-143.6
66	2	-0.498687	99.2177	-144.597
67	2	-0.484544	99.4525	-145.566
68	2	-0.470498	99.6739	-146.507
69	2	-0.459327	99.8848	-147.426
70	2	-0.445443	100.083	-148.317
71	2	-0.431644	100.27	-149.18
72	2	-0.417928	100.444	-150.016
73	2	-0.40701	100.61	-150.83
74	2	-0.393433	100.765	-151.617
75	2	-0.379927	100.909	-152.376
76	2	-0.369171	101.045	-153.115
77	2	-0.355788	101.172	-153.826
78	2	-0.342466	101.289	-154.511
79	2	-0.331854	101.399	-155.175
80	2	-0.318639	101.501	-155.812
81	2	-0.305481	101.594	-156.423
82	2	-0.294992	101.681	-157.013
83	2	-0.281926	101.761	-157.577
84	2	-0.268908	101.833	-158.115
85	2	-0.255936	101.898	-158.627
86	2	-0.24559	101.959	-159.118
87	2	-0.232693	102.013	-159.583
88	2	-0.219834	102.061	-160.023
89	2	-0.209575	102.105	-160.442
90	2	-0.196779	102.144	-160.836
91	2	-0.184017	102.178	-161.204
92	2	-0.173829	102.208	-161.551
93	2	-0.161119	102.234	-161.874
94	2	-0.148434	102.256	-162.171
95	2	-0.135774	102.274	-162.442
96	2	-0.125661	102.29	-162.693
97	2	-0.113039	102.303	-162.919
98	2	-0.100433	102.313	-163.12
99	2	-0.0903606	102.321	-163.301
100	2	-0.0777834	102.327	-163.457
101	2	-0.0652187	102.332	-163.587
102	2	-0.0551734	102.335	-163.697
103	2	-0.0426257	102.336	-163.783
104	2	-0.0300838	102.337	-163.843
105	2	-0.0200544	102.338	-163.883
106	2	-0.00751925	102.338	-163.898
107	2	0.00751925	102.338	-163.883
108	2	0.0200544	102.338	-163.843
109	2	0.0300838	102.339	-163.783
110	2	0.0426257	102.341	-163.697
111	2	0.0551734	102.344	-163.587

112	2	0.0652187	102.348	-163.457
113	2	0.0777834	102.354	-163.301
114	2	0.0903606	102.362	-163.12
115	2	0.100433	102.373	-162.919
116	2	0.113039	102.385	-162.693
117	2	0.125661	102.401	-162.442
118	2	0.135774	102.42	-162.171
119	2	0.148434	102.442	-161.874
120	2	0.161119	102.468	-161.551
121	2	0.173829	102.498	-161.204
122	2	0.184017	102.532	-160.836
123	2	0.196779	102.57	-160.442
124	2	0.209575	102.614	-160.023
125	2	0.219834	102.663	-159.583
126	2	0.232693	102.717	-159.118
127	2	0.24559	102.777	-158.627
128	2	0.255936	102.843	-158.115
129	2	0.268908	102.915	-157.577
130	2	0.281926	102.994	-157.013
131	2	0.294992	103.081	-156.423
132	2	0.305481	103.175	-155.812
133	2	0.318639	103.276	-155.175
134	2	0.331854	103.386	-154.511
135	2	0.342466	103.504	-153.826
136	2	0.355788	103.63	-153.115
137	2	0.369171	103.767	-152.376
138	2	0.379927	103.911	-151.617
139	2	0.393433	104.066	-150.83
140	2	0.40701	104.231	-150.016
141	2	0.417928	104.406	-149.18
142	2	0.431644	104.592	-148.317
143	2	0.445443	104.791	-147.426
144	2	0.459327	105.002	-146.507
145	2	0.470498	105.223	-145.566
146	2	0.484544	105.458	-144.597
147	2	0.498687	105.707	-143.6
148	2	0.510074	105.967	-142.579
149	2	0.524401	106.242	-141.531
150	2	0.538836	106.532	-140.453
151	2	0.550465	106.835	-139.352
152	2	0.565108	107.154	-138.222
153	2	0.579873	107.491	-137.062
154	2	0.594766	107.844	-135.873
155	2	0.606775	108.213	-134.659
156	2	0.621911	108.599	-133.415
157	2	0.637192	109.005	-132.141
158	2	0.649522	109.427	-130.842
159	2.2	0.665079	109.87	-129.379
160	2.5	0.680797	110.333	-127.677
161	2.5	0.693493	110.814	-125.943
162	2.5	0.709522	111.317	-124.169
163	2.5	0.725736	111.844	-122.355
164	2.5	0.738846	112.39	-120.508
165	2.5	0.755415	112.961	-118.619
166	2.5	0.772193	113.557	-116.689
167	2.5	0.789191	114.18	-114.716
168	2.5	0.802956	114.824	-112.708
169	2.5	0.820379	115.498	-110.657
170	2.5	0.838054	116.2	-108.562
171	2.5	0.852385	116.926	-106.431
172	2.5	0.87055	117.684	-104.255
173	2.5	0.889006	118.475	-102.032

174	2.5	0.903992	119.292	-99.7723
175	2.5	0.923014	120.144	-97.4647
176	2.5	0.942375	121.032	-95.1088
177	2.5	0.958125	121.95	-92.7135
178	2.5	0.97815	122.907	-90.2681
179	2.5	0.998575	123.904	-87.7717
180	2.74	1.01943	124.943	-84.9784
181	3.9	1.03643	126.017	-80.9363
182	5.3	1.05812	127.137	-75.3283
183	6	1.08032	128.304	-68.8464
184	6.72	1.09847	129.511	-61.4647
185	6.97	1.12168	130.769	-53.6466
186	7.6	1.1455	132.081	-44.9407
187	9.72	1.16505	133.438	-33.6165
188	9.8	1.19012	134.855	-21.9533
189	10	1.21596	136.333	-9.79371
190	11.6	1.24264	137.877	4.62095
191	13.9	1.26464	139.477	22.1995
192	16	1.29303	141.149	42.888
193	24	1.32251	142.898	74.6281
194	26	1.34694	144.712	109.649
195	35.2	1.37866	146.613	158.177
196	38.3	1.41183	148.606	212.25
197	52	1.43953	150.678	287.106
198	67.2	1.47579	152.856	386.279
199	95.4	1.5141	155.149	530.725
200	100	1.54643	157.54	685.368
201	120	1.58927	160.066	876.08
202	130	1.63524	162.74	1088.66
203	136	1.68494	165.579	1317.81
204	160	1.72793	168.564	1594.28
205	200	1.78661	171.756	1951.6
206	260	1.85218	175.187	2433.17
207	320	1.91103	178.839	3044.7
208	350	1.99539	182.821	3743.09
209	400	2.09693	187.218	4581.86
210	932	2.19728	192.046	6629.73
211	2400	2.36561	197.642	12307.2
212	4260	2.65209	204.676	23605.1

Data Set Standard Deviation = 343.166
Numerator = 5.572e+008
Denominator = 5.08577e+009
W Statistic = 0.109561 = 5.572e+008 / 5.08577e+009

5% Critical value of 0.976 exceeds 0.109561
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.109561
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Acetone

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.239017	-2.65209	7.03356	-0.633894
2	0.29267	-2.36561	12.6297	-1.32624
3	0.693147	-2.19728	17.4578	-2.84928
4	0.693147	-2.09693	21.8549	-4.30276
5	0.693147	-1.99539	25.8365	-5.68586
6	0.693147	-1.91103	29.4885	-7.01049
7	0.693147	-1.85218	32.9191	-8.29432
8	0.693147	-1.78661	36.111	-9.5327
9	0.693147	-1.72793	39.0968	-10.7304
10	0.693147	-1.68494	41.9358	-11.8983
11	0.693147	-1.63524	44.6098	-13.0318
12	0.693147	-1.58927	47.1356	-14.1334
13	0.693147	-1.54643	49.527	-15.2053
14	0.693147	-1.5141	51.8195	-16.2548
15	0.693147	-1.47579	53.9975	-17.2777
16	0.693147	-1.43953	56.0698	-18.2755
17	0.693147	-1.41183	58.063	-19.2541
18	0.693147	-1.37866	59.9637	-20.2097
19	0.693147	-1.34694	61.778	-21.1434
20	0.693147	-1.32251	63.527	-22.0601
21	0.693147	-1.29303	65.1989	-22.9563
22	0.693147	-1.26464	66.7982	-23.8329
23	0.693147	-1.24264	68.3424	-24.6942
24	0.693147	-1.21596	69.821	-25.5371
25	0.693147	-1.19012	71.2373	-26.362
26	0.693147	-1.16505	72.5947	-27.1696
27	0.693147	-1.1455	73.9069	-27.9636
28	0.693147	-1.12168	75.165	-28.7411
29	0.693147	-1.09847	76.3716	-29.5025
30	0.693147	-1.08032	77.5387	-30.2513
31	0.693147	-1.05812	78.6584	-30.9847
32	0.693147	-1.03643	79.7326	-31.7031
33	0.693147	-1.01943	80.7718	-32.4097
34	0.693147	-0.998575	81.7689	-33.1019
35	0.693147	-0.97815	82.7257	-33.7799
36	0.693147	-0.958125	83.6437	-34.444
37	0.693147	-0.942375	84.5318	-35.0972
38	0.693147	-0.923014	85.3837	-35.737
39	0.693147	-0.903992	86.201	-36.3636
40	0.693147	-0.889006	86.9913	-36.9798
41	0.693147	-0.87055	87.7491	-37.5832
42	0.693147	-0.852385	88.4757	-38.1741
43	0.693147	-0.838054	89.178	-38.755
44	0.693147	-0.820379	89.8511	-39.3236
45	0.693147	-0.802956	90.4958	-39.8802
46	0.693147	-0.789191	91.1186	-40.4272
47	0.693147	-0.772193	91.7149	-40.9624
48	0.693147	-0.755415	92.2856	-41.486
49	0.693147	-0.738846	92.8314	-41.9982

50	0.693147	-0.725736	93.3581	-42.5012
51	0.693147	-0.709522	93.8616	-42.993
52	0.693147	-0.693493	94.3425	-43.4737
53	0.693147	-0.680797	94.806	-43.9456
54	0.693147	-0.665079	95.2483	-44.4066
55	0.693147	-0.649522	95.6702	-44.8568
56	0.693147	-0.637192	96.0762	-45.2985
57	0.693147	-0.621911	96.463	-45.7296
58	0.693147	-0.606775	96.8312	-46.1501
59	0.693147	-0.594766	97.1849	-46.5624
60	0.693147	-0.579873	97.5212	-46.9643
61	0.693147	-0.565108	97.8405	-47.356
62	0.693147	-0.550465	98.1435	-47.7376
63	0.693147	-0.538836	98.4339	-48.1111
64	0.693147	-0.524401	98.7088	-48.4746
65	0.693147	-0.510074	98.969	-48.8281
66	0.693147	-0.498687	99.2177	-49.1738
67	0.693147	-0.484544	99.4525	-49.5097
68	0.693147	-0.470498	99.6739	-49.8358
69	0.693147	-0.459327	99.8848	-50.1542
70	0.693147	-0.445443	100.083	-50.4629
71	0.693147	-0.431644	100.27	-50.7621
72	0.693147	-0.417928	100.444	-51.0518
73	0.693147	-0.40701100.61	-51.3339	
74	0.693147	-0.393433	100.765	-51.6066
75	0.693147	-0.379927	100.909	-51.87
76	0.693147	-0.369171	101.045	-52.1259
77	0.693147	-0.355788	101.172	-52.3725
78	0.693147	-0.342466	101.289	-52.6098
79	0.693147	-0.331854	101.399	-52.8399
80	0.693147	-0.318639	101.501	-53.0607
81	0.693147	-0.305481	101.594	-53.2725
82	0.693147	-0.294992	101.681	-53.477
83	0.693147	-0.281926	101.761	-53.6724
84	0.693147	-0.268908	101.833	-53.8588
85	0.693147	-0.255936	101.898	-54.0362
86	0.693147	-0.24559101.959	-54.2064	
87	0.693147	-0.232693	102.013	-54.3677
88	0.693147	-0.219834	102.061	-54.5201
89	0.693147	-0.209575	102.105	-54.6653
90	0.693147	-0.196779	102.144	-54.8017
91	0.693147	-0.184017	102.178	-54.9293
92	0.693147	-0.173829	102.208	-55.0498
93	0.693147	-0.161119	102.234	-55.1614
94	0.693147	-0.148434	102.256	-55.2643
95	0.693147	-0.135774	102.274	-55.3584
96	0.693147	-0.125661	102.29	-55.4455
97	0.693147	-0.113039	102.303	-55.5239
98	0.693147	-0.100433	102.313	-55.5935
99	0.693147	-0.0903606	102.321	-55.6561
100	0.693147	-0.0777834	102.327	-55.7101
101	0.693147	-0.0652187	102.332	-55.7553
102	0.693147	-0.0551734	102.335	-55.7935
103	0.693147	-0.0426257	102.336	-55.8231
104	0.693147	-0.0300838	102.337	-55.8439
105	0.693147	-0.0200544	102.338	-55.8578
106	0.693147	-0.00751925	102.338	-55.863
107	0.693147	0.00751925	102.338	-55.8578
108	0.693147	0.0200544	102.338	-55.8439
109	0.693147	0.0300838	102.339	-55.8231
110	0.693147	0.0426257	102.341	-55.7935
111	0.693147	0.0551734	102.344	-55.7553

112	0.693147	0.0652187	102.348	-55.7101
113	0.693147	0.0777834	102.354	-55.6561
114	0.693147	0.0903606	102.362	-55.5935
115	0.693147	0.100433	102.373	-55.5239
116	0.693147	0.113039	102.385	-55.4455
117	0.693147	0.125661	102.401	-55.3584
118	0.693147	0.135774	102.42	-55.2643
119	0.693147	0.148434	102.442	-55.1614
120	0.693147	0.161119	102.468	-55.0498
121	0.693147	0.173829	102.498	-54.9293
122	0.693147	0.184017	102.532	-54.8017
123	0.693147	0.196779	102.57	-54.6653
124	0.693147	0.209575	102.614	-54.5201
125	0.693147	0.219834	102.663	-54.3677
126	0.693147	0.232693	102.717	-54.2064
127	0.693147	0.24559	102.777	-54.0362
128	0.693147	0.255936	102.843	-53.8588
129	0.693147	0.268908	102.915	-53.6724
130	0.693147	0.281926	102.994	-53.477
131	0.693147	0.294992	103.081	-53.2725
132	0.693147	0.305481	103.175	-53.0607
133	0.693147	0.318639	103.276	-52.8399
134	0.693147	0.331854	103.386	-52.6098
135	0.693147	0.342466	103.504	-52.3725
136	0.693147	0.355788	103.63	-52.1259
137	0.693147	0.369171	103.767	-51.87
138	0.693147	0.379927	103.911	-51.6066
139	0.693147	0.393433	104.066	-51.3339
140	0.693147	0.40701	104.231	-51.0518
141	0.693147	0.417928	104.406	-50.7621
142	0.693147	0.431644	104.592	-50.4629
143	0.693147	0.445443	104.791	-50.1542
144	0.693147	0.459327	105.002	-49.8358
145	0.693147	0.470498	105.223	-49.5097
146	0.693147	0.484544	105.458	-49.1738
147	0.693147	0.498687	105.707	-48.8281
148	0.693147	0.510074	105.967	-48.4746
149	0.693147	0.524401	106.242	-48.1111
150	0.693147	0.538836	106.532	-47.7376
151	0.693147	0.550465	106.835	-47.356
152	0.693147	0.565108	107.154	-46.9643
153	0.693147	0.579873	107.491	-46.5624
154	0.693147	0.594766	107.844	-46.1501
155	0.693147	0.606775	108.213	-45.7296
156	0.693147	0.621911	108.599	-45.2985
157	0.693147	0.637192	109.005	-44.8568
158	0.693147	0.649522	109.427	-44.4066
159	0.788457	0.665079	109.87	-43.8822
160	0.916291	0.680797	110.333	-43.2584
161	0.916291	0.693493	110.814	-42.623
162	0.916291	0.709522	111.317	-41.9728
163	0.916291	0.725736	111.844	-41.3079
164	0.916291	0.738846	112.39	-40.6309
165	0.916291	0.755415	112.961	-39.9387
166	0.916291	0.772193	113.557	-39.2311
167	0.916291	0.789191	114.18	-38.508
168	0.916291	0.802956	114.824	-37.7723
169	0.916291	0.820379	115.498	-37.0205
170	0.916291	0.838054	116.2	-36.2526
171	0.916291	0.852385	116.926	-35.4716
172	0.916291	0.87055	117.684	-34.6739
173	0.916291	0.889006	118.475	-33.8593

174	0.916291	0.903992	119.292	-33.031
175	0.916291	0.923014	120.144	-32.1853
176	0.916291	0.942375	121.032	-31.3218
177	0.916291	0.958125	121.95	-30.4439
178	0.916291	0.97815	122.907	-29.5476
179	0.916291	0.998575	123.904	-28.6326
180	1.00796	1.01943	124.943	-27.6051
181	1.36098	1.03643	126.017	-26.1945
182	1.66771	1.05812	127.137	-24.4299
183	1.79176	1.08032	128.304	-22.4942
184	1.90509	1.09847	129.511	-20.4015
185	1.94162	1.12168	130.769	-18.2237
186	2.02815	1.1455	132.081	-15.9004
187	2.27419	1.16505	133.438	-13.2509
188	2.28238	1.19012	134.855	-10.5346
189	2.30259	1.21596	136.333	-7.73471
190	2.45101	1.24264	137.877	-4.68898
191	2.63189	1.26464	139.477	-1.36059
192	2.77259	1.29303	141.149	2.22446
193	3.17805	1.32251	142.898	6.42745
194	3.2581	1.34694	144.712	10.8159
195	3.56105	1.37866	146.613	15.7254
196	3.64545	1.41183	148.606	20.8721
197	3.95124	1.43953	150.678	26.5601
198	4.20767	1.47579	152.856	32.7697
199	4.55808	1.5141	155.149	39.6711
200	4.60517	1.54643	157.54	46.7927
201	4.78749	1.58927	160.066	54.4013
202	4.86753	1.63524	162.74	62.3609
203	4.91265	1.68494	165.579	70.6384
204	5.07517	1.72793	168.564	79.408
205	5.29832	1.78661	171.756	88.874
206	5.56068	1.85218	175.187	99.1734
207	5.76832	1.91103	178.839	110.197
208	5.85793	1.99539	182.821	121.886
209	5.99146	2.09693	187.218	134.449
210	6.83733	2.19728	192.046	149.473
211	7.78322	2.36561	197.642	167.885
212	8.35702	2.65209	204.676	190.049

Data Set Standard Deviation = 1.37267
Numerator = 36118.5
Denominator = 81372.8
W Statistic = 0.443864 = 36118.5 / 81372.8

5% Critical value of 0.976 exceeds 0.443864
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.443864
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Acetone

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0.693147	88.5
	9/23/1999	ND<0.693147	88.5
	3/15/2000	ND<0.693147	88.5
	9/24/2003	ND<0.693147	88.5
	3/11/2004	ND<0.693147	88.5
	10/12/2004	ND<0.693147	88.5
	4/1/2005	ND<0.693147	88.5
	10/25/2005	ND<0.693147	88.5
	4/29/2006	ND<0.693147	88.5
	11/18/2006	ND<0.693147	88.5
	5/23/2007	ND<0.693147	88.5
	11/28/2007	ND<0.693147	88.5
	6/5/2008	ND<0.693147	88.5
	11/20/2008	ND<0.693147	88.5
	6/11/2009	ND<0.916291	88.5
	11/16/2009	ND<0.916291	88.5
	6/30/2010	ND<0.916291	88.5

Rank Sum = 1504.5
Rank Mean = 88.5

Background Rank Sum = 1504.5
Background Rank Mean = 88.5

Compliance Wells

Well ID	Date	Result	Rank
MW-10	7/20/1995	ND<0.693147	88.5
	8/24/1995	ND<0.693147	88.5
	9/28/1995	ND<0.693147	88.5
	10/26/1995	ND<0.693147	88.5
	11/19/1996	ND<0.693147	88.5
	12/19/1996	ND<0.693147	88.5
	3/24/1997	ND<0.693147	88.5
	9/24/1997	ND<0.693147	88.5
	4/7/1998	ND<0.693147	88.5
	9/23/1998	ND<0.693147	88.5
	3/16/1999	4.20767	198
	9/23/1999	ND<0.693147	88.5
	3/15/2000	ND<0.693147	88.5
	9/24/2003	ND<0.693147	88.5
	3/11/2004	ND<0.693147	88.5
	10/12/2004	ND<0.693147	88.5
	4/1/2005	ND<0.693147	88.5
	10/25/2005	ND<0.693147	88.5
	4/29/2006	ND<0.693147	88.5
	11/18/2006	ND<0.693147	88.5
	5/23/2007	ND<0.693147	88.5

	11/28/2007	ND<0.693147	88.5
	6/5/2008	ND<0.693147	88.5
	11/20/2008	ND<0.693147	88.5
	6/11/2009	ND<0.916291	88.5
	11/16/2009	3.2581	194
	6/30/2010	ND<0.916291	88.5

Rank Sum = 2604.5
Rank Mean = 96.463

MW-9	7/20/1995	ND<0.693147	88.5
	8/24/1995	2.30259	189
	9/28/1995	ND<0.693147	88.5
	10/26/1995	ND<0.693147	88.5
	11/19/1996	ND<0.693147	88.5
	12/19/1996	ND<0.693147	88.5
	3/24/1997	ND<0.693147	88.5
	9/24/1997	ND<0.693147	88.5
	4/7/1998	4.78749	201
	9/23/1998	ND<0.693147	88.5
	3/16/1999	3.64545	196
	9/23/1999	ND<0.693147	88.5
	3/15/2000	ND<0.693147	88.5
	9/24/2003	ND<0.693147	88.5
	3/11/2004	ND<0.693147	88.5
	10/12/2004	ND<0.693147	88.5
	4/1/2005	ND<0.693147	88.5
	10/25/2005	ND<0.693147	88.5
	4/29/2006	ND<0.693147	88.5
	11/18/2006	ND<0.693147	88.5
	5/23/2007	ND<0.693147	88.5
	11/28/2007	1.00796 J	180
	6/5/2008	ND<0.693147	88.5
	11/20/2008	ND<0.693147	88.5
	6/11/2009	ND<0.916291	88.5
	11/16/2009	ND<0.916291	88.5
	6/30/2010	ND<0.916291	88.5

Rank Sum = 2801.5
Rank Mean = 103.759

MW-12BR	3/16/1999	ND<0.693147	88.5
	9/23/1999	ND<0.693147	88.5
	3/15/2000	ND<0.693147	88.5
	9/24/2003	ND<0.693147	88.5
	3/11/2004	ND<0.693147	88.5
	10/12/2004	ND<0.693147	88.5
	4/1/2005	ND<0.693147	88.5
	10/25/2005	ND<0.693147	88.5
	4/29/2006	ND<0.693147	88.5
	11/18/2006	ND<0.693147	88.5
	5/23/2007	ND<0.693147	88.5
	11/28/2007	ND<0.693147	88.5
	6/5/2008	ND<0.693147	88.5
	11/20/2008	ND<0.693147	88.5
	6/11/2009	ND<0.916291	88.5
	11/16/2009	ND<0.916291	88.5
	6/30/2010	ND<0.916291	88.5

Rank Sum = 1504.5
Rank Mean = 88.5

MW-12AR	3/16/1999	ND<0.693147	88.5
	9/23/1999	ND<0.693147	88.5
	3/15/2000	ND<0.693147	88.5

	9/24/2003	ND<0.693147	88.5
	3/11/2004	ND<0.693147	88.5
	10/12/2004	ND<0.693147	88.5
	4/1/2005	ND<0.693147	88.5
	10/25/2005	ND<0.693147	88.5
	4/29/2006	ND<0.693147	88.5
	11/18/2006	ND<0.693147	88.5
	5/23/2007	ND<0.693147	88.5
	11/28/2007	ND<0.693147	88.5
	6/5/2008	ND<0.693147	88.5
	11/20/2008	ND<0.693147	88.5
	6/11/2009	ND<0.916291	88.5
	11/16/2009	ND<0.916291	88.5
	6/30/2010	ND<0.916291	88.5

Rank Sum = 1504.5
Rank Mean = 88.5

MW-11R	7/20/1995	ND<0.693147	88.5
	8/24/1995	ND<0.693147	88.5
	9/28/1995	2.77259	192
	10/26/1995	ND<0.693147	88.5
	11/19/1996	ND<0.693147	88.5
	12/19/1996	ND<0.693147	88.5
	3/24/1997	ND<0.693147	88.5
	9/24/1997	ND<0.693147	88.5
	4/7/1998	ND<0.693147	88.5
	9/23/1998	ND<0.693147	88.5
	3/16/1999	5.85793	208
	9/23/1999	ND<0.693147	88.5
	3/15/2000	ND<0.693147	88.5
	9/24/2003	5.76832	207
	3/11/2004	5.99146	209
	10/12/2004	7.78322	211
	4/1/2005	ND<0.693147	88.5
	10/25/2005	ND<0.693147	88.5
	4/29/2006	ND<0.693147	88.5
	11/18/2006	2.63189	191
	5/23/2007	4.60517	200
	11/28/2007	1.90509	184
	6/5/2008	ND<0.693147	88.5
	11/20/2008	ND<0.693147	88.5
	6/11/2009	ND<0.916291	88.5
	11/16/2009	ND<0.916291	88.5
	6/30/2010	ND<0.916291	88.5

Rank Sum = 3283.5
Rank Mean = 121.611

MW-8	7/20/1995	ND<0.693147	88.5
	8/24/1995	ND<0.693147	88.5
	9/28/1995	ND<0.693147	88.5
	10/26/1995	ND<0.693147	88.5
	11/19/1996	ND<0.693147	88.5
	12/19/1996	ND<0.693147	88.5
	3/24/1997	ND<0.693147	88.5
	9/24/1997	ND<0.693147	88.5
	4/7/1998	ND<0.693147	88.5
	9/23/1998	ND<0.693147	88.5
	3/16/1999	3.56105	195
	9/23/1999	4.91265	203
	3/15/2000	ND<0.693147	88.5
	9/24/2003	ND<0.693147	88.5
	3/11/2004	ND<0.693147	88.5

	10/12/2004	5.07517	204
	4/1/2005	ND<0.693147	88.5
	10/25/2005	0.239017 J	177
	4/29/2006	ND<0.693147	88.5
	11/18/2006	ND<0.693147	88.5
	5/23/2007	ND<0.693147	88.5
	11/28/2007	ND<0.693147	88.5
	6/5/2008	ND<0.693147	88.5
	11/20/2008	2.27419	187
	6/11/2009	2.28238 J	188
	6/30/2010	1.66771 J	182

Rank Sum = 3017.5
Rank Mean = 116.058

MW-6	7/20/1995	ND<0.693147	88.5
	8/24/1995	1.36098 J	181
	9/28/1995	ND<0.693147	88.5
	10/26/1995	ND<0.693147	88.5
	11/19/1996	ND<0.693147	88.5
	12/19/1996	ND<0.693147	88.5
	3/24/1997	ND<0.693147	88.5
	9/24/1997	ND<0.693147	88.5
	4/7/1998	ND<0.693147	88.5
	9/23/1998	ND<0.693147	88.5
	3/16/1999	ND<0.693147	88.5
	9/23/1999	ND<0.693147	88.5
	3/15/2000	ND<0.693147	88.5
	9/24/2003	ND<0.693147	88.5
	3/11/2004	ND<0.693147	88.5
	10/12/2004	ND<0.693147	88.5
	4/1/2005	ND<0.693147	88.5
	10/25/2005	0.788457 J	179
	4/29/2006	ND<0.693147	88.5
	11/18/2006	ND<0.693147	88.5
	5/23/2007	ND<0.693147	88.5
	11/28/2007	ND<0.693147	88.5
	6/5/2008	ND<0.693147	88.5
	11/20/2008	ND<0.693147	88.5
	6/11/2009	2.02815 J	186
	11/16/2009	ND<0.916291	88.5
	6/30/2010	ND<0.916291	88.5

Rank Sum = 2670
Rank Mean = 98.8889

MW-7	7/20/1995	ND<0.693147	88.5
	8/24/1995	ND<0.693147	88.5
	9/28/1995	ND<0.693147	88.5
	10/26/1995	ND<0.693147	88.5
	11/19/1996	ND<0.693147	88.5
	12/19/1996	ND<0.693147	88.5
	3/24/1997	5.56068	206
	9/24/1997	ND<0.693147	88.5
	4/7/1998	ND<0.693147	88.5
	9/23/1998	ND<0.693147	88.5
	3/16/1999	8.35702	212
	9/23/1999	4.55808	199
	3/15/2000	4.86753	202
	9/24/2003	ND<0.693147	88.5
	3/11/2004	ND<0.693147	88.5
	10/12/2004	5.29832	205
	4/1/2005	ND<0.693147	88.5
	10/25/2005	1.94162	185

4/29/2006	ND<0.693147	88.5
11/18/2006	0.29267 J	178
5/23/2007	ND<0.693147	88.5
11/28/2007	2.45101	190
6/5/2008	6.83733	210
11/20/2008	3.17805	193
6/11/2009	3.95124	197
11/16/2009	1.79176 J	183
6/30/2010	ND<0.916291	88.5

Rank Sum = 3687.5
Rank Mean = 136.574

Calculation Results:

Kruskal-Wallis H Statistic = 14.3427
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 33.5244
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
14.3427 < 15.5073 indicating no significant group difference at 5% significance level
33.5244 > 15.5073 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 88.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	96.463	7.96296	44.1836	
MW-9	103.759	15.2593	44.1836	
MW-12BR	88.5	0	48.9476	
MW-12AR	88.5	0	48.9476	
MW-11R	121.611	33.1111	44.1836	
MW-8	116.058	27.5577	44.5106	
MW-6	98.8889	10.3889	44.1836	
MW-7	136.574	48.0741	44.1836	

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 88.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	96.463	7.96296	47.7122	
MW-9	103.759	15.2593	47.7122	
MW-12BR	88.5	0	52.8567	
MW-12AR	88.5	0	52.8567	
MW-11R	121.611	33.1111	47.7122	
MW-8	116.058	27.5577	48.0654	
MW-6	98.8889	10.3889	47.7122	
MW-7	136.574	48.0741	47.7122	

Mann-Kendall Trend Analysis

Parameter: Acetone

Location: MW-7

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	
5.56068		ND<0.693147	4.86753	1	0	
ND<0.693147		ND<0.693147	0	1	0	
ND<0.693147		ND<0.693147	0	1	0	
ND<0.693147		ND<0.693147	0	1	0	
8.35702		ND<0.693147	7.66388	2	0	
4.55808		ND<0.693147	3.86493	3	0	
4.86753		ND<0.693147	4.17439	4	0	
ND<0.693147		ND<0.693147	0	4	0	
ND<0.693147		ND<0.693147	0	4	0	
5.29832		ND<0.693147	4.60517	5	0	
ND<0.693147		ND<0.693147	0	5	0	
1.94162		ND<0.693147	1.24847	6	0	
ND<0.693147		ND<0.693147	0	6	0	
0.29267 J		ND<0.693147	-0.400478		6	1
ND<0.693147		ND<0.693147	0	6	1	
2.45101		ND<0.693147	1.75786	7	1	
6.83733		ND<0.693147	6.14419	8	1	
3.17805		ND<0.693147	2.48491	9	1	
3.95124		ND<0.693147	3.2581	10	1	
1.79176 J		ND<0.693147	1.09861	11	1	
ND<0.916291		ND<0.693147	0.223144		12	1
ND<0.693147		ND<0.693147	0	12	1	
ND<0.693147		ND<0.693147	0	12	1	
ND<0.693147		ND<0.693147	0	12	1	
ND<0.693147		ND<0.693147	0	12	1	
5.56068		ND<0.693147	4.86753	13	1	
ND<0.693147		ND<0.693147	0	13	1	
ND<0.693147		ND<0.693147	0	13	1	
ND<0.693147		ND<0.693147	0	13	1	
8.35702		ND<0.693147	7.66388	14	1	
4.55808		ND<0.693147	3.86493	15	1	
4.86753		ND<0.693147	4.17439	16	1	
ND<0.693147		ND<0.693147	0	16	1	
ND<0.693147		ND<0.693147	0	16	1	
5.29832		ND<0.693147	4.60517	17	1	
ND<0.693147		ND<0.693147	0	17	1	
1.94162		ND<0.693147	1.24847	18	1	
ND<0.693147		ND<0.693147	0	18	1	
0.29267 J		ND<0.693147	-0.400478		18	2
ND<0.693147		ND<0.693147	0	18	2	
2.45101		ND<0.693147	1.75786	19	2	
6.83733		ND<0.693147	6.14419	20	2	

3.17805	ND<0.693147	2.48491	21	2	
3.95124	ND<0.693147	3.2581	22	2	
1.79176 J	ND<0.693147	1.09861	23	2	
ND<0.916291	ND<0.693147	0.223144		24	2
ND<0.693147	ND<0.693147	0	24	2	
ND<0.693147	ND<0.693147	0	24	2	
ND<0.693147	ND<0.693147	0	24	2	
5.56068	ND<0.693147	4.86753	25	2	
ND<0.693147	ND<0.693147	0	25	2	
ND<0.693147	ND<0.693147	0	25	2	
ND<0.693147	ND<0.693147	0	25	2	
8.35702	ND<0.693147	7.66388	26	2	
4.55808	ND<0.693147	3.86493	27	2	
4.86753	ND<0.693147	4.17439	28	2	
ND<0.693147	ND<0.693147	0	28	2	
ND<0.693147	ND<0.693147	0	28	2	
5.29832	ND<0.693147	4.60517	29	2	
ND<0.693147	ND<0.693147	0	29	2	
1.94162	ND<0.693147	1.24847	30	2	
ND<0.693147	ND<0.693147	0	30	2	
0.29267 J	ND<0.693147	-0.400478		30	3
ND<0.693147	ND<0.693147	0	30	3	
2.45101	ND<0.693147	1.75786	31	3	
6.83733	ND<0.693147	6.14419	32	3	
3.17805	ND<0.693147	2.48491	33	3	
3.95124	ND<0.693147	3.2581	34	3	
1.79176 J	ND<0.693147	1.09861	35	3	
ND<0.916291	ND<0.693147	0.223144		36	3
ND<0.693147	ND<0.693147	0	36	3	
ND<0.693147	ND<0.693147	0	36	3	
5.56068	ND<0.693147	4.86753	37	3	
ND<0.693147	ND<0.693147	0	37	3	
ND<0.693147	ND<0.693147	0	37	3	
ND<0.693147	ND<0.693147	0	37	3	
8.35702	ND<0.693147	7.66388	38	3	
4.55808	ND<0.693147	3.86493	39	3	
4.86753	ND<0.693147	4.17439	40	3	
ND<0.693147	ND<0.693147	0	40	3	
ND<0.693147	ND<0.693147	0	40	3	
5.29832	ND<0.693147	4.60517	41	3	
ND<0.693147	ND<0.693147	0	41	3	
1.94162	ND<0.693147	1.24847	42	3	
ND<0.693147	ND<0.693147	0	42	3	
0.29267 J	ND<0.693147	-0.400478		42	4
ND<0.693147	ND<0.693147	0	42	4	
2.45101	ND<0.693147	1.75786	43	4	
6.83733	ND<0.693147	6.14419	44	4	
3.17805	ND<0.693147	2.48491	45	4	
3.95124	ND<0.693147	3.2581	46	4	
1.79176 J	ND<0.693147	1.09861	47	4	
ND<0.916291	ND<0.693147	0.223144		48	4
ND<0.693147	ND<0.693147	0	48	4	
5.56068	ND<0.693147	4.86753	49	4	
ND<0.693147	ND<0.693147	0	49	4	
ND<0.693147	ND<0.693147	0	49	4	
ND<0.693147	ND<0.693147	0	49	4	
8.35702	ND<0.693147	7.66388	50	4	
4.55808	ND<0.693147	3.86493	51	4	
4.86753	ND<0.693147	4.17439	52	4	

ND<0.693147	ND<0.693147	0	52	4	
ND<0.693147	ND<0.693147	0	52	4	
5.29832	ND<0.693147	4.60517	53	4	
ND<0.693147	ND<0.693147	0	53	4	
1.94162	ND<0.693147	1.24847	54	4	
ND<0.693147	ND<0.693147	0	54	4	
0.29267 J	ND<0.693147	-0.400478		54	5
ND<0.693147	ND<0.693147	0	54	5	
2.45101	ND<0.693147	1.75786	55	5	
6.83733	ND<0.693147	6.14419	56	5	
3.17805	ND<0.693147	2.48491	57	5	
3.95124	ND<0.693147	3.2581	58	5	
1.79176 J	ND<0.693147	1.09861	59	5	
ND<0.916291	ND<0.693147	0.223144		60	5
5.56068	ND<0.693147	4.86753	61	5	
ND<0.693147	ND<0.693147	0	61	5	
ND<0.693147	ND<0.693147	0	61	5	
ND<0.693147	ND<0.693147	0	61	5	
8.35702	ND<0.693147	7.66388	62	5	
4.55808	ND<0.693147	3.86493	63	5	
4.86753	ND<0.693147	4.17439	64	5	
ND<0.693147	ND<0.693147	0	64	5	
ND<0.693147	ND<0.693147	0	64	5	
5.29832	ND<0.693147	4.60517	65	5	
ND<0.693147	ND<0.693147	0	65	5	
1.94162	ND<0.693147	1.24847	66	5	
ND<0.693147	ND<0.693147	0	66	5	
0.29267 J	ND<0.693147	-0.400478		66	6
ND<0.693147	ND<0.693147	0	66	6	
2.45101	ND<0.693147	1.75786	67	6	
6.83733	ND<0.693147	6.14419	68	6	
3.17805	ND<0.693147	2.48491	69	6	
3.95124	ND<0.693147	3.2581	70	6	
1.79176 J	ND<0.693147	1.09861	71	6	
ND<0.916291	ND<0.693147	0.223144		72	6
ND<0.693147	5.56068	-4.867537	2	7	
ND<0.693147	5.56068	-4.867537	2	8	
ND<0.693147	5.56068	-4.867537	2	9	
8.35702	5.56068	2.79634	73	9	
4.55808	5.56068	-1.0026	73	10	
4.86753	5.56068	-0.693147		73	11
ND<0.693147	5.56068	-4.867537	3	12	
ND<0.693147	5.56068	-4.867537	3	13	
5.29832	5.56068	-0.262364		73	14
ND<0.693147	5.56068	-4.867537	3	15	
1.94162	5.56068	-3.619077	3	16	
ND<0.693147	5.56068	-4.867537	3	17	
0.29267 J	5.56068	-5.268017	3	18	
ND<0.693147	5.56068	-4.867537	3	19	
2.45101	5.56068	-3.109687	3	20	
6.83733	5.56068	1.27665	74	20	
3.17805	5.56068	-2.382637	4	21	
3.95124	5.56068	-1.609447	4	22	
1.79176 J	5.56068	-3.768927	4	23	
ND<0.916291	5.56068	-4.644397	4	24	
ND<0.693147	ND<0.693147	0	74	24	
ND<0.693147	ND<0.693147	0	74	24	
8.35702	ND<0.693147	7.66388	75	24	
4.55808	ND<0.693147	3.86493	76	24	

4.86753	ND<0.693147	4.17439	77	24	
ND<0.693147	ND<0.693147	0	77	24	
ND<0.693147	ND<0.693147	0	77	24	
5.29832	ND<0.693147	4.60517	78	24	
ND<0.693147	ND<0.693147	0	78	24	
1.94162	ND<0.693147	1.24847	79	24	
ND<0.693147	ND<0.693147	0	79	24	
0.29267 J	ND<0.693147	-0.400478		79	25
ND<0.693147	ND<0.693147	0	79	25	
2.45101	ND<0.693147	1.75786	80	25	
6.83733	ND<0.693147	6.14419	81	25	
3.17805	ND<0.693147	2.48491	82	25	
3.95124	ND<0.693147	3.2581	83	25	
1.79176 J	ND<0.693147	1.09861	84	25	
ND<0.916291	ND<0.693147	0.223144		85	25
ND<0.693147	ND<0.693147	0	85	25	
8.35702	ND<0.693147	7.66388	86	25	
4.55808	ND<0.693147	3.86493	87	25	
4.86753	ND<0.693147	4.17439	88	25	
ND<0.693147	ND<0.693147	0	88	25	
ND<0.693147	ND<0.693147	0	88	25	
5.29832	ND<0.693147	4.60517	89	25	
ND<0.693147	ND<0.693147	0	89	25	
1.94162	ND<0.693147	1.24847	90	25	
ND<0.693147	ND<0.693147	0	90	25	
0.29267 J	ND<0.693147	-0.400478		90	26
ND<0.693147	ND<0.693147	0	90	26	
2.45101	ND<0.693147	1.75786	91	26	
6.83733	ND<0.693147	6.14419	92	26	
3.17805	ND<0.693147	2.48491	93	26	
3.95124	ND<0.693147	3.2581	94	26	
1.79176 J	ND<0.693147	1.09861	95	26	
ND<0.916291	ND<0.693147	0.223144		96	26
8.35702	ND<0.693147	7.66388	97	26	
4.55808	ND<0.693147	3.86493	98	26	
4.86753	ND<0.693147	4.17439	99	26	
ND<0.693147	ND<0.693147	0	99	26	
ND<0.693147	ND<0.693147	0	99	26	
5.29832	ND<0.693147	4.60517	100	26	
ND<0.693147	ND<0.693147	0	100	26	
1.94162	ND<0.693147	1.24847	101	26	
ND<0.693147	ND<0.693147	0	101	26	
0.29267 J	ND<0.693147	-0.400478		101	27
ND<0.693147	ND<0.693147	0	101	27	
2.45101	ND<0.693147	1.75786	102	27	
6.83733	ND<0.693147	6.14419	103	27	
3.17805	ND<0.693147	2.48491	104	27	
3.95124	ND<0.693147	3.2581	105	27	
1.79176 J	ND<0.693147	1.09861	106	27	
ND<0.916291	ND<0.693147	0.223144		107	27
4.55808	8.35702	-3.79895	107	28	
4.86753	8.35702	-3.48949	107	29	
ND<0.693147	8.35702	-7.66388	107	30	
ND<0.693147	8.35702	-7.66388	107	31	
5.29832	8.35702	-3.05871	107	32	
ND<0.693147	8.35702	-7.66388	107	33	
1.94162	8.35702	-6.41541	107	34	
ND<0.693147	8.35702	-7.66388	107	35	
0.29267 J	8.35702	-8.06435	107	36	

ND<0.693147	8.35702	-7.66388	107	37
2.45101	8.35702	-5.90602	107	38
6.83733	8.35702	-1.51969	107	39
3.17805	8.35702	-5.17897	107	40
3.95124	8.35702	-4.40578	107	41
1.79176 J	8.35702	-6.56526	107	42
ND<0.916291	8.35702	-7.44073	107	43
4.86753	4.55808	0.309456	108	43
ND<0.693147	4.55808	-3.86493	108	44
ND<0.693147	4.55808	-3.86493	108	45
5.29832	4.55808	0.740239	109	45
ND<0.693147	4.55808	-3.86493	109	46
1.94162	4.55808	-2.61646	109	47
ND<0.693147	4.55808	-3.86493	109	48
0.29267 J	4.55808	-4.26541	109	49
ND<0.693147	4.55808	-3.86493	109	50
2.45101	4.55808	-2.10707	109	51
6.83733	4.55808	2.27925	110	51
3.17805	4.55808	-1.38002	110	52
3.95124	4.55808	-0.606835	110	53
1.79176 J	4.55808	-2.76632	110	54
ND<0.916291	4.55808	-3.64179	110	55
ND<0.693147	4.86753	-4.17439	110	56
ND<0.693147	4.86753	-4.17439	110	57
5.29832	4.86753	0.430783	111	57
ND<0.693147	4.86753	-4.17439	111	58
1.94162	4.86753	-2.92592	111	59
ND<0.693147	4.86753	-4.17439	111	60
0.29267 J	4.86753	-4.57486	111	61
ND<0.693147	4.86753	-4.17439	111	62
2.45101	4.86753	-2.41653	111	63
6.83733	4.86753	1.9698	112	63
3.17805	4.86753	-1.68948	112	64
3.95124	4.86753	-0.916291	112	65
1.79176 J	4.86753	-3.07577	112	66
ND<0.916291	4.86753	-3.95124	112	67
ND<0.693147	ND<0.693147	0	112	67
5.29832	ND<0.693147	4.60517	113	67
ND<0.693147	ND<0.693147	0	113	67
1.94162	ND<0.693147	1.24847	114	67
ND<0.693147	ND<0.693147	0	114	67
0.29267 J	ND<0.693147	-0.400478	114	68
ND<0.693147	ND<0.693147	0	114	68
2.45101	ND<0.693147	1.75786	115	68
6.83733	ND<0.693147	6.14419	116	68
3.17805	ND<0.693147	2.48491	117	68
3.95124	ND<0.693147	3.2581	118	68
1.79176 J	ND<0.693147	1.09861	119	68
ND<0.916291	ND<0.693147	0.223144	120	68
5.29832	ND<0.693147	4.60517	121	68
ND<0.693147	ND<0.693147	0	121	68
1.94162	ND<0.693147	1.24847	122	68
ND<0.693147	ND<0.693147	0	122	68
0.29267 J	ND<0.693147	-0.400478	122	69
ND<0.693147	ND<0.693147	0	122	69
2.45101	ND<0.693147	1.75786	123	69
6.83733	ND<0.693147	6.14419	124	69
3.17805	ND<0.693147	2.48491	125	69

3.95124	ND<0.693147	3.2581	126	69
1.79176 J	ND<0.693147	1.09861	127	69
ND<0.916291	ND<0.693147	0.223144	128	69
ND<0.693147	5.29832	-4.60517	128	70
1.94162	5.29832	-3.3567	128	71
ND<0.693147	5.29832	-4.60517	128	72
0.29267 J	5.29832	-5.00565	128	73
ND<0.693147	5.29832	-4.60517	128	74
2.45101	5.29832	-2.84731	128	75
6.83733	5.29832	1.53902	129	75
3.17805	5.29832	-2.12026	129	76
3.95124	5.29832	-1.34707	129	77
1.79176 J	5.29832	-3.50656	129	78
ND<0.916291	5.29832	-4.38203	129	79
1.94162	ND<0.693147	1.24847	130	79
ND<0.693147	ND<0.693147	0	130	79
0.29267 J	ND<0.693147	-0.400478	130	80
ND<0.693147	ND<0.693147	0	130	80
2.45101	ND<0.693147	1.75786	131	80
6.83733	ND<0.693147	6.14419	132	80
3.17805	ND<0.693147	2.48491	133	80
3.95124	ND<0.693147	3.2581	134	80
1.79176 J	ND<0.693147	1.09861	135	80
ND<0.916291	ND<0.693147	0.223144	136	80
ND<0.693147	1.94162	-1.24847	136	81
0.29267 J	1.94162	-1.64895	136	82
ND<0.693147	1.94162	-1.24847	136	83
2.45101	1.94162	0.50939	137	83
6.83733	1.94162	4.89572	138	83
3.17805	1.94162	1.23644	139	83
3.95124	1.94162	2.00963	140	83
1.79176 J	1.94162	-0.149856	140	84
ND<0.916291	1.94162	-1.02532	140	85
0.29267 J	ND<0.693147	-0.400478	140	86
ND<0.693147	ND<0.693147	0	140	86
2.45101	ND<0.693147	1.75786	141	86
6.83733	ND<0.693147	6.14419	142	86
3.17805	ND<0.693147	2.48491	143	86
3.95124	ND<0.693147	3.2581	144	86
1.79176 J	ND<0.693147	1.09861	145	86
ND<0.916291	ND<0.693147	0.223144	146	86
ND<0.693147	0.29267 J	0.400478	147	86
2.45101	0.29267 J	2.15834	148	86
6.83733	0.29267 J	6.54466	149	86
3.17805	0.29267 J	2.88538	150	86
3.95124	0.29267 J	3.65857	151	86
1.79176 J	0.29267 J	1.49909	152	86
ND<0.916291	0.29267 J	0.623621	153	86
2.45101	ND<0.693147	1.75786	154	86
6.83733	ND<0.693147	6.14419	155	86
3.17805	ND<0.693147	2.48491	156	86
3.95124	ND<0.693147	3.2581	157	86
1.79176 J	ND<0.693147	1.09861	158	86
ND<0.916291	ND<0.693147	0.223144	159	86

6.83733	2.45101	4.38633 160	86	
3.17805	2.45101	0.727049	161	86
3.95124	2.45101	1.50024 162	86	
1.79176 J	2.45101	-0.659246	162	87
ND<0.916291	2.45101	-1.53471162	88	
3.17805	6.83733	-3.65928162	89	
3.95124	6.83733	-2.88609162	90	
1.79176 J	6.83733	-5.04557162	91	
ND<0.916291	6.83733	-5.92104162	92	
3.95124	3.17805	0.77319 163	92	
1.79176 J	3.17805	-1.38629163	93	
ND<0.916291	3.17805	-2.26176163	94	
1.79176 J	3.95124	-2.15948163	95	
ND<0.916291	3.95124	-3.03495163	96	
ND<0.916291	1.79176 J	-0.875469	163	97

S Statistic = 163 - 97 = 66

Tied Group	Value	Members
1	0.693147	14

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 6006
B = 0
C = 2184
D = 0

E = 182
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 1967.33
Z-Score = 1.46546
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|1.46546| <= 1.97737 indicating no evidence of a trend

Concentrations (ppb)

Parameter: Arsenic

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 130
Percent Non-Detects: 61.3208%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	14 (82.3529%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	37	37
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	1.11 J	1.11 J
			11/28/2007	ND<2	ND<2
			6/5/2008	1.45 J	1.45 J
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.4	ND<0.4
			11/16/2009	ND<0.4	ND<0.4
			6/30/2010	ND<0.4	ND<0.4

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-8	26	13 (50%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	12.2	12.2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	2	2
			9/23/1999	40	40
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	5.17	5.17
			10/25/2005	6.67	6.67
			4/29/2006	4.63	4.63
			11/18/2006	3.32	3.32
			5/23/2007	5.92	5.92
			11/28/2007	5.85	5.85
			6/5/2008	2.23	2.23
			11/20/2008	1.05 J	1.05 J

			6/11/2009	3.6	3.6	
			6/30/2010	1.7 H	1.7 H	
MW-9	27	10 (37.037%)	7/20/1995	ND<2	ND<2	
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	17	17	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	17	17	
			3/16/1999	5	5	
			9/23/1999	5	5	
			3/15/2000	17	17	
			9/24/2003	13	13	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	3.91	3.91	
			10/25/2005	6.28	6.28	
			4/29/2006	11	11	
			11/18/2006	11.4	11.4	
			5/23/2007	10.8	10.8	
			11/28/2007	8.98	8.98	
			6/5/2008	8.48	8.48	
			11/20/2008	13.8	13.8	
			6/11/2009	8.6	8.6	
			11/16/2009	8.7	8.7	
			6/30/2010	10 H	10 H	
MW-6	27	23 (85.1852%)	7/20/1995	ND<2	ND<2	
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	5	5	
			9/23/1999	2	2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	1.09 J	1.09 J	
			11/20/2008	5.75	5.75	
			6/11/2009	ND<0.4	ND<0.4	
			11/16/2009	ND<0.4	ND<0.4	
			6/30/2010	ND<0.4	ND<0.4	
MW-7	27	13 (48.1481%)	7/20/1995	ND<2	ND<2	
			8/24/1995	ND<2	ND<2	
			9/28/1995	12.7	12.7	

			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	11.7	11.7	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	5	5	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	5.76	5.76	
			10/25/2005	8.44	8.44	
			4/29/2006	9.41	9.41	
			11/18/2006	4.84	4.84	
			5/23/2007	9.45	9.45	
			11/28/2007	12.3	12.3	
			6/5/2008	8.8	8.8	
			11/20/2008	5.73	5.73	
			6/11/2009	5.2	5.2	
			11/16/2009	2.6	2.6	
			6/30/2010	6.7 H	6.7 H	
MW-10	27	16 (59.2593%)	7/20/1995	ND<2	ND<2	
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	4	4	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	1.13 J	1.13 J	
			10/25/2005	ND<2	ND<2	
			4/29/2006	1.31 J	1.31 J	
			11/18/2006	1.88 J	1.88 J	
			5/23/2007	3.62	3.62	
			11/28/2007	4.82	4.82	
			6/5/2008	2.23	2.23	
			11/20/2008	2.11	2.11	
			6/11/2009	3.1	3.1	
			11/16/2009	3.6	3.6	
			6/30/2010	4.2 H	4.2 H	
MW-11R	27	18 (66.6667%)	7/20/1995	ND<2	ND<2	
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	

		9/23/1998	ND<2	ND<2		
		3/16/1999	ND<2	ND<2		
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	17	17		
		3/11/2004	ND<2	ND<2		
		10/12/2004	15	15		
		4/1/2005	10.4	10.4		
		10/25/2005	7.5	7.5		
		4/29/2006	7.92	7.92		
		11/18/2006	2.65	2.65		
		5/23/2007	25.5	25.5		
		11/28/2007	4.87	4.87		
		6/5/2008	ND<2	ND<2		
		11/20/2008	ND<2	ND<2		
		6/11/2009	ND<0.4	ND<0.4		
		11/16/2009	ND<0.4	ND<0.4		
		6/30/2010	1.7 H	1.7 H		
MW-12BR	17	15 (88.2353%)	3/16/1999		ND<2	ND<2
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	1.95 J	1.95 J		
		10/25/2005	ND<2	ND<2		
		4/29/2006	ND<2	ND<2		
		11/18/2006	ND<2	ND<2		
		5/23/2007	ND<2	ND<2		
		11/28/2007	ND<2	ND<2		
		6/5/2008	1.92 J	1.92 J		
		11/20/2008	ND<2	ND<2		
		6/11/2009	ND<0.4	ND<0.4		
		11/16/2009	ND<0.4	ND<0.4		
		6/30/2010	ND<0.4	ND<0.4		
MW-12AR	17	8 (47.0588%)	3/16/1999		ND<2	ND<2
		9/23/1999	5	5		
		3/15/2000	16	16		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	ND<2	ND<2		
		10/25/2005	2.02	2.02		
		4/29/2006	1.48 J	1.48 J		
		11/18/2006	1.05 J	1.05 J		
		5/23/2007	1.05 J	1.05 J		
		11/28/2007	ND<2	ND<2		
		6/5/2008	ND<2	ND<2		
		11/20/2008	ND<2	ND<2		
		6/11/2009	0.42 J	0.42 J		
		11/16/2009	0.5 J	0.5 J		
		6/30/2010	0.54 J	0.54 J		

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.2	-2.65209	7.03356	-0.530417
2	0.2	-2.365	11.2629	7 -1.00354
3	0.2	-2.197	28.1457	8 -1.443
4	0.2	-2.096	32.8549	-1.86238
5	0.2	-1.995	39.8365	-2.26146
6	0.2	-1.911	03.2948	85 -2.64367
7	0.2	-1.852	18.3219	91 -3.0141
8	0.2	-1.786	13.6111	-3.37143
9	0.2	-1.727	93.3909	68 -3.71701
10	0.2	-1.684	94.4193	58 -4.054
11	0.2	-1.635	24.4460	98 -4.38105
12	0.42	-1.589	27.4713	56 -5.04854
13	0.5	-1.546	43.4952	7 -5.82176
14	0.54	-1.514	1 51.8195	-6.63937
15	1	-1.475	79.5399	75 -8.11516
16	1	-1.439	53.5606	98 -9.55469
17	1	-1.411	83.5806	3 -10.9665
18	1	-1.378	65.9637	-12.3452
19	1	-1.346	94.6177	8 -13.6921
20	1	-1.322	51.6352	7 -15.0146
21	1	-1.293	03.6519	89 -16.3077
22	1	-1.264	64.6679	82 -17.5723
23	1	-1.242	64.6834	24 -18.8149
24	1	-1.215	96.6921	-20.0309
25	1	-1.190	12.7123	73 -21.221
26	1	-1.165	05.7259	47 -22.3861
27	1	-1.1455	73.9069	-23.5316
28	1	-1.121	68.7516	5 -24.6533
29	1	-1.098	47.7637	16 -25.7517
30	1	-1.080	32.7753	87 -26.832
31	1	-1.058	12.7865	84 -27.8902
32	1	-1.036	43.7973	26 -28.9266
33	1	-1.019	43.8077	18 -29.946
34	1	-0.998575	81.7689	-30.9446
35	1	-0.978	15.8172	57 -31.9227
36	1	-0.958125	83.6437	-32.8809
37	1	-0.942375	84.5318	-33.8233
38	1	-0.923014	85.3837	-34.7463
39	1	-0.903992	86.201	-35.6503
40	1	-0.889006	86.9913	-36.5393
41	1	-0.870	55.8747	91 -37.4098
42	1	-0.852385	88.4757	-38.2622
43	1	-0.838054	89.178	-39.1003
44	1	-0.820379	89.8511	-39.9206
45	1	-0.802956	90.4958	-40.7236
46	1	-0.789191	91.1186	-41.5128
47	1	-0.772193	91.7149	-42.285
48	1	-0.755415	92.2856	-43.0404
49	1	-0.738846	92.8314	-43.7792

50	1	-0.725736	93.3581	-44.505
51	1	-0.709522	93.8616	-45.2145
52	1	-0.693493	94.3425	-45.908
53	1	-0.680797	94.806	-46.5888
54	1	-0.665079	95.2483	-47.2539
55	1	-0.649522	95.6702	-47.9034
56	1	-0.637192	96.0762	-48.5406
57	1	-0.621911	96.463	-49.1625
58	1	-0.606775	96.8312	-49.7693
59	1	-0.594766	97.1849	-50.364
60	1	-0.579873	97.5212	-50.9439
61	1	-0.565108	97.8405	-51.509
62	1	-0.550465	98.1435	-52.0595
63	1	-0.538836	98.4339	-52.5983
64	1	-0.524401	98.7088	-53.1227
65	1	-0.510074	98.969	-53.6328
66	1	-0.498687	99.2177	-54.1315
67	1	-0.484544	99.4525	-54.616
68	1	-0.470498	99.6739	-55.0865
69	1	-0.459327	99.8848	-55.5458
70	1	-0.445443	100.083	-55.9913
71	1	-0.431644	100.27	-56.4229
72	1	-0.417928	100.444	-56.8409
73	1	-0.40701	100.61	-57.2479
74	1	-0.393433	100.765	-57.6413
75	1	-0.379927	100.909	-58.0212
76	1	-0.369171	101.045	-58.3904
77	1	-0.355788	101.172	-58.7462
78	1	-0.342466	101.289	-59.0886
79	1	-0.331854	101.399	-59.4205
80	1	-0.318639	101.501	-59.7391
81	1	-0.305481	101.594	-60.0446
82	1	-0.294992	101.681	-60.3396
83	1	-0.281926	101.761	-60.6215
84	1	-0.268908	101.833	-60.8904
85	1	-0.255936	101.898	-61.1464
86	1	-0.24559	101.959	-61.392
87	1	-0.232693	102.013	-61.6247
88	1	-0.219834	102.061	-61.8445
89	1	-0.209575	102.105	-62.0541
90	1	-0.196779	102.144	-62.2509
91	1	-0.184017	102.178	-62.4349
92	1	-0.173829	102.208	-62.6087
93	1	-0.161119	102.234	-62.7698
94	1	-0.148434	102.256	-62.9183
95	1	-0.135774	102.274	-63.054
96	1	-0.125661	102.29	-63.1797
97	1	-0.113039	102.303	-63.2927
98	1	-0.100433	102.313	-63.3932
99	1	-0.0903606	102.321	-63.4835
100	1	-0.0777834	102.327	-63.5613
101	1	-0.0652187	102.332	-63.6265
102	1	-0.0551734	102.335	-63.6817
103	1	-0.0426257	102.336	-63.7243
104	1	-0.0300838	102.337	-63.7544
105	1	-0.0200544	102.338	-63.7745
106	1	-0.00751925	102.338	-63.782
107	1	0.00751925	102.338	-63.7745
108	1	0.0200544	102.338	-63.7544
109	1	0.0300838	102.339	-63.7243
110	1	0.0426257	102.341	-63.6817
111	1	0.0551734	102.344	-63.6265

112	1	0.0652187	102.348	-63.5613
113	1	0.0777834	102.354	-63.4835
114	1	0.0903606	102.362	-63.3932
115	1	0.100433	102.373	-63.2927
116	1	0.113039	102.385	-63.1797
117	1	0.125661	102.401	-63.054
118	1	0.135774	102.42	-62.9183
119	1	0.148434	102.442	-62.7698
120	1	0.161119	102.468	-62.6087
121	1	0.173829	102.498	-62.4349
122	1	0.184017	102.532	-62.2509
123	1	0.196779	102.57	-62.0541
124	1	0.209575	102.614	-61.8445
125	1	0.219834	102.663	-61.6247
126	1	0.232693	102.717	-61.392
127	1	0.24559	102.777	-61.1464
128	1	0.255936	102.843	-60.8904
129	1	0.268908	102.915	-60.6215
130	1	0.281926	102.994	-60.3396
131	1	0.294992	103.081	-60.0446
132	1	0.305481	103.175	-59.7391
133	1	0.318639	103.276	-59.4205
134	1.05	0.331854	103.386	-59.0721
135	1.05	0.342466	103.504	-58.7125
136	1.05	0.355788	103.63	-58.3389
137	1.09	0.369171	103.767	-57.9365
138	1.11	0.379927	103.911	-57.5148
139	1.13	0.393433	104.066	-57.0702
140	1.31	0.40701	104.231	-56.537
141	1.45	0.417928	104.406	-55.931
142	1.48	0.431644	104.592	-55.2922
143	1.7	0.445443	104.791	-54.5349
144	1.7	0.459327	105.002	-53.7541
145	1.88	0.470498	105.223	-52.8695
146	1.92	0.484544	105.458	-51.9392
147	1.95	0.498687	105.707	-50.9668
148	2	0.510074	105.967	-49.9466
149	2	0.524401	106.242	-48.8978
150	2.02	0.538836	106.532	-47.8094
151	2.11	0.550465	106.835	-46.6479
152	2.23	0.565108	107.154	-45.3877
153	2.23	0.579873	107.491	-44.0946
154	2.6	0.594766	107.844	-42.5482
155	2.65	0.606775	108.213	-40.9402
156	3.1	0.621911	108.599	-39.0123
157	3.32	0.637192	109.005	-36.8968
158	3.6	0.649522	109.427	-34.5586
159	3.6	0.665079	109.87	-32.1643
160	3.62	0.680797	110.333	-29.6998
161	3.91	0.693493	110.814	-26.9882
162	4	0.709522	111.317	-24.1501
163	4.2	0.725736	111.844	-21.1021
164	4.63	0.738846	112.39	-17.6812
165	4.82	0.755415	112.961	-14.0401
166	4.84	0.772193	113.557	-10.3027
167	4.87	0.789191	114.18	-6.45932
168	5	0.802956	114.824	-2.44454
169	5	0.820379	115.498	1.65736
170	5	0.838054	116.2	5.84763
171	5	0.852385	116.926	10.1096
172	5	0.87055	117.684	14.4623
173	5.17	0.889006	118.475	19.0585

174	5.2	0.903992		119.292	23.7592
175	5.73	0.923014		120.144	29.0481
176	5.75	0.942375		121.032	34.4668
177	5.76	0.958125		121.95	39.9856
178	5.85	0.97815	122.907	45.7077	
179	5.92	0.998575		123.904	51.6193
180	6.28	1.01943	124.943	58.0213	
181	6.67	1.03643	126.017	64.9343	
182	6.7	1.05812	127.137	72.0237	
183	7.5	1.08032	128.304	80.1261	
184	7.92	1.09847	129.511	88.826	
185	8.44	1.12168	130.769	98.293	
186	8.48	1.1455	132.081	108.007	
187	8.6	1.16505	133.438	118.026	
188	8.7	1.19012	134.855	128.38	
189	8.8	1.21596	136.333	139.081	
190	8.98	1.24264	137.877	150.24	
191	9.41	1.26464	139.477	162.14	
192	9.45	1.29303	141.149	174.359	
193	10	1.32251	142.898	187.584	
194	10.4	1.34694	144.712	201.592	
195	10.8	1.37866	146.613	216.482	
196	11	1.41183	148.606	232.012	
197	11.4	1.43953	150.678	248.423	
198	11.7	1.47579	152.856	265.689	
199	12.2	1.5141	155.149	284.161	
200	12.3	1.54643	157.54	303.183	
201	12.7	1.58927	160.066	323.366	
202	13	1.63524	162.74	344.624	
203	13.8	1.68494	165.579	367.876	
204	15	1.72793	168.564	393.795	
205	16	1.78661	171.756	422.381	
206	17	1.85218	175.187	453.868	
207	17	1.91103	178.839	486.356	
208	17	1.99539	182.821	520.277	
209	17	2.09693	187.218	555.925	
210	25.5	2.19728	192.046	611.956	
211	37	2.36561	197.642	699.484	
212	40	2.65209	204.676	805.567	

Data Set Standard Deviation = 5.3442
Numerator = 648939
Denominator = 1.23343e+006
W Statistic = 0.526126 = 648939 / 1.23343e+006

5% Critical value of 0.976 exceeds 0.526126
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.526126
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.60944	-2.65209	7.03356	4.26837
2	-1.60944	-2.36561	12.6297	8.07568
3	-1.60944	-2.19728	17.4578	11.6121
4	-1.60944	-2.09693	21.8549	14.987
5	-1.60944	-1.99539	25.8365	18.1984
6	-1.60944	-1.91103	29.4885	21.2741
7	-1.60944	-1.85218	32.9191	24.2551
8	-1.60944	-1.78661	36.111	27.1305
9	-1.60944	-1.72793	39.0968	29.9115
10	-1.60944	-1.68494	41.9358	32.6233
11	-1.60944	-1.63524	44.6098	35.2551
12	-0.867501	-1.58927	47.1356	36.6338
13	-0.693147	-1.54643	49.527	37.7057
14	-0.616186	-1.5141	51.8195	38.6387
15	0	-1.47579	53.9975	38.6387
16	0	-1.43953	56.0698	38.6387
17	0	-1.41183	58.063	38.6387
18	0	-1.37866	59.9637	38.6387
19	0	-1.34694	61.778	38.6387
20	0	-1.32251	63.527	38.6387
21	0	-1.29303	65.1989	38.6387
22	0	-1.26464	66.7982	38.6387
23	0	-1.24264	68.3424	38.6387
24	0	-1.21596	69.821	38.6387
25	0	-1.19012	71.2373	38.6387
26	0	-1.16505	72.5947	38.6387
27	0	-1.1455	73.9069	38.6387
28	0	-1.12168	75.165	38.6387
29	0	-1.09847	76.3716	38.6387
30	0	-1.08032	77.5387	38.6387
31	0	-1.05812	78.6584	38.6387
32	0	-1.03643	79.7326	38.6387
33	0	-1.01943	80.7718	38.6387
34	0	-0.998575	81.7689	38.6387
35	0	-0.97815	82.7257	38.6387
36	0	-0.958125	83.6437	38.6387
37	0	-0.942375	84.5318	38.6387
38	0	-0.923014	85.3837	38.6387
39	0	-0.903992	86.201	38.6387
40	0	-0.889006	86.9913	38.6387
41	0	-0.87055	87.7491	38.6387
42	0	-0.852385	88.4757	38.6387
43	0	-0.838054	89.178	38.6387
44	0	-0.820379	89.8511	38.6387
45	0	-0.802956	90.4958	38.6387
46	0	-0.789191	91.1186	38.6387
47	0	-0.772193	91.7149	38.6387
48	0	-0.755415	92.2856	38.6387
49	0	-0.738846	92.8314	38.6387

50	0	-0.725736	93.3581	38.6387
51	0	-0.709522	93.8616	38.6387
52	0	-0.693493	94.3425	38.6387
53	0	-0.680797	94.806	38.6387
54	0	-0.665079	95.2483	38.6387
55	0	-0.649522	95.6702	38.6387
56	0	-0.637192	96.0762	38.6387
57	0	-0.621911	96.463	38.6387
58	0	-0.606775	96.8312	38.6387
59	0	-0.594766	97.1849	38.6387
60	0	-0.579873	97.5212	38.6387
61	0	-0.565108	97.8405	38.6387
62	0	-0.550465	98.1435	38.6387
63	0	-0.538836	98.4339	38.6387
64	0	-0.524401	98.7088	38.6387
65	0	-0.510074	98.969	38.6387
66	0	-0.498687	99.2177	38.6387
67	0	-0.484544	99.4525	38.6387
68	0	-0.470498	99.6739	38.6387
69	0	-0.459327	99.8848	38.6387
70	0	-0.445443	100.083	38.6387
71	0	-0.431644	100.27	38.6387
72	0	-0.417928	100.444	38.6387
73	0	-0.40701	100.61	38.6387
74	0	-0.393433	100.765	38.6387
75	0	-0.379927	100.909	38.6387
76	0	-0.369171	101.045	38.6387
77	0	-0.355788	101.172	38.6387
78	0	-0.342466	101.289	38.6387
79	0	-0.331854	101.399	38.6387
80	0	-0.318639	101.501	38.6387
81	0	-0.305481	101.594	38.6387
82	0	-0.294992	101.681	38.6387
83	0	-0.281926	101.761	38.6387
84	0	-0.268908	101.833	38.6387
85	0	-0.255936	101.898	38.6387
86	0	-0.24559	101.959	38.6387
87	0	-0.232693	102.013	38.6387
88	0	-0.219834	102.061	38.6387
89	0	-0.209575	102.105	38.6387
90	0	-0.196779	102.144	38.6387
91	0	-0.184017	102.178	38.6387
92	0	-0.173829	102.208	38.6387
93	0	-0.161119	102.234	38.6387
94	0	-0.148434	102.256	38.6387
95	0	-0.135774	102.274	38.6387
96	0	-0.125661	102.29	38.6387
97	0	-0.113039	102.303	38.6387
98	0	-0.100433	102.313	38.6387
99	0	-0.0903606	102.321	38.6387
100	0	-0.0777834	102.327	38.6387
101	0	-0.0652187	102.332	38.6387
102	0	-0.0551734	102.335	38.6387
103	0	-0.0426257	102.336	38.6387
104	0	-0.0300838	102.337	38.6387
105	0	-0.0200544	102.338	38.6387
106	0	-0.00751925	102.338	38.6387
107	0	0.00751925	102.338	38.6387
108	0	0.0200544	102.338	38.6387
109	0	0.0300838	102.339	38.6387
110	0	0.0426257	102.341	38.6387
111	0	0.0551734	102.344	38.6387

112	0	0.0652187	102.348	38.6387
113	0	0.0777834	102.354	38.6387
114	0	0.0903606	102.362	38.6387
115	0	0.100433	102.373	38.6387
116	0	0.113039	102.385	38.6387
117	0	0.125661	102.401	38.6387
118	0	0.135774	102.42	38.6387
119	0	0.148434	102.442	38.6387
120	0	0.161119	102.468	38.6387
121	0	0.173829	102.498	38.6387
122	0	0.184017	102.532	38.6387
123	0	0.196779	102.57	38.6387
124	0	0.209575	102.614	38.6387
125	0	0.219834	102.663	38.6387
126	0	0.232693	102.717	38.6387
127	0	0.24559	102.777	38.6387
128	0	0.255936	102.843	38.6387
129	0	0.268908	102.915	38.6387
130	0	0.281926	102.994	38.6387
131	0	0.294992	103.081	38.6387
132	0	0.305481	103.175	38.6387
133	0	0.318639	103.276	38.6387
134	0.0487902	0.331854	103.386	38.6549
135	0.0487902	0.342466	103.504	38.6716
136	0.0487902	0.355788	103.63	38.6889
137	0.0861777	0.369171	103.767	38.7208
138	0.10436	0.379927	103.911	38.7604
139	0.122218	0.393433	104.066	38.8085
140	0.270027	0.40701	104.231	38.9184
141	0.371564	0.417928	104.406	39.0737
142	0.392042	0.431644	104.592	39.2429
143	0.530628	0.445443	104.791	39.4793
144	0.530628	0.459327	105.002	39.723
145	0.631272	0.470498	105.223	40.02
146	0.652325	0.484544	105.458	40.3361
147	0.667829	0.498687	105.707	40.6691
148	0.693147	0.510074	105.967	41.0227
149	0.693147	0.524401	106.242	41.3862
150	0.703098	0.538836	106.532	41.765
151	0.746688	0.550465	106.835	42.1761
152	0.802002	0.565108	107.154	42.6293
153	0.802002	0.579873	107.491	43.0943
154	0.955511	0.594766	107.844	43.6626
155	0.97456	0.606775	108.213	44.254
156	1.1314	0.621911	108.599	44.9576
157	1.19996	0.637192	109.005	45.7222
158	1.28093	0.649522	109.427	46.5542
159	1.28093	0.665079	109.87	47.4061
160	1.28647	0.680797	110.333	48.282
161	1.36354	0.693493	110.814	49.2276
162	1.38629	0.709522	111.317	50.2112
163	1.43508	0.725736	111.844	51.2527
164	1.53256	0.738846	112.39	52.385
165	1.57277	0.755415	112.961	53.5731
166	1.57691	0.772193	113.557	54.7908
167	1.58309	0.789191	114.18	56.0401
168	1.60944	0.802956	114.824	57.3324
169	1.60944	0.820379	115.498	58.6528
170	1.60944	0.838054	116.2	60.0016
171	1.60944	0.852385	116.926	61.3734
172	1.60944	0.87055	117.684	62.7745
173	1.64287	0.889006	118.475	64.2351

174	1.64866	0.903992		119.292	65.7254
175	1.74572	0.923014		120.144	67.3368
176	1.7492	0.942375		121.032	68.9852
177	1.75094	0.958125		121.95	70.6628
178	1.76644	0.97815	122.907	72.3906	
179	1.77834	0.998575		123.904	74.1664
180	1.83737	1.01943	124.943	76.0395	
181	1.89762	1.03643	126.017	78.0062	
182	1.90211	1.05812	127.137	80.0189	
183	2.0149	1.08032	128.304	82.1956	
184	2.06939	1.09847	129.511	84.4688	
185	2.13298	1.12168	130.769	86.8613	
186	2.13771	1.1455	132.081	89.3101	
187	2.15176	1.16505	133.438	91.817	
188	2.16332	1.19012	134.855	94.3916	
189	2.17475	1.21596	136.333	97.036	
190	2.195	1.24264	137.877	99.7636	
191	2.24177	1.26464	139.477	102.599	
192	2.24601	1.29303	141.149	105.503	
193	2.30259	1.32251	142.898	108.548	
194	2.34181	1.34694	144.712	111.702	
195	2.37955	1.37866	146.613	114.983	
196	2.3979	1.41183	148.606	118.368	
197	2.43361	1.43953	150.678	121.872	
198	2.45959	1.47579	152.856	125.501	
199	2.50144	1.5141	155.149	129.289	
200	2.5096	1.54643	157.54	133.17	
201	2.5416	1.58927	160.066	137.209	
202	2.56495	1.63524	162.74	141.403	
203	2.62467	1.68494	165.579	145.826	
204	2.70805	1.72793	168.564	150.505	
205	2.77259	1.78661	171.756	155.459	
206	2.83321	1.85218	175.187	160.706	
207	2.83321	1.91103	178.839	166.121	
208	2.83321	1.99539	182.821	171.774	
209	2.83321	2.09693	187.218	177.715	
210	3.23868	2.19728	192.046	184.831	
211	3.61092	2.36561	197.642	193.373	
212	3.68888	2.65209	204.676	203.157	

Data Set Standard Deviation = 1.08012
Numerator = 41272.6
Denominator = 50383.8
W Statistic = 0.819164 = 41272.6 / 50383.8

5% Critical value of 0.976 exceeds 0.819164
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.819164
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Arsenic

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	65.5
	9/23/1999	ND<0	65.5
	3/15/2000	3.61092	211
	9/24/2003	ND<0	65.5
	3/11/2004	ND<0	65.5
	10/12/2004	ND<0	65.5
	4/1/2005	ND<0	65.5
	10/25/2005	ND<0	65.5
	4/29/2006	ND<0	65.5
	11/18/2006	ND<0	65.5
	5/23/2007	0.10436 J	138
	11/28/2007	ND<0	65.5
	6/5/2008	0.371564 J	141
	11/20/2008	ND<0	65.5
	6/11/2009	ND<-1.60944	65.5
	11/16/2009	ND<-1.60944	65.5
	6/30/2010	ND<-1.60944	65.5

Rank Sum = 1407
Rank Mean = 82.7647

Background Rank Sum = 1407
Background Rank Mean = 82.7647

Compliance Wells

Well ID	Date	Result	Rank
MW-8	7/20/1995	ND<0	65.5
	8/24/1995	ND<0	65.5
	9/28/1995	2.50144	199
	10/26/1995	ND<0	65.5
	11/19/1996	ND<0	65.5
	12/19/1996	ND<0	65.5
	3/24/1997	ND<0	65.5
	9/24/1997	ND<0	65.5
	4/7/1998	ND<0	65.5
	9/23/1998	ND<0	65.5
	3/16/1999	0.693147	148
	9/23/1999	3.68888	212
	3/15/2000	ND<0	65.5
	9/24/2003	ND<0	65.5
	3/11/2004	ND<0	65.5
	10/12/2004	ND<0	65.5
	4/1/2005	1.64287	173
	10/25/2005	1.89762	181
	4/29/2006	1.53256	164
	11/18/2006	1.19996	157
	5/23/2007	1.77834	179

	11/28/2007	1.76644		178
	6/5/2008	0.802002	152	
	11/20/2008	0.0487902	J	134
	6/11/2009	1.28093		158
	6/30/2010	0.530628	H	143

Rank Sum = 3029.5
Rank Mean = 116.519

MW-9	7/20/1995	ND<0	65.5	
	8/24/1995	ND<0	65.5	
	9/28/1995	ND<0	65.5	
	10/26/1995	ND<0	65.5	
	11/19/1996	ND<0	65.5	
	12/19/1996	ND<0	65.5	
	3/24/1997	2.83321		206
	9/24/1997	ND<0	65.5	
	4/7/1998	ND<0	65.5	
	9/23/1998	2.83321		207
	3/16/1999	1.60944		168
	9/23/1999	1.60944		169
	3/15/2000	2.83321		208
	9/24/2003	2.56495		202
	3/11/2004	ND<0	65.5	
	10/12/2004	ND<0	65.5	
	4/1/2005	1.36354	161	
	10/25/2005	1.83737		180
	4/29/2006	2.3979	196	
	11/18/2006	2.43361		197
	5/23/2007	2.37955		195
	11/28/2007	2.195	190	
	6/5/2008	2.13771	186	
	11/20/2008	2.62467		203
	6/11/2009	2.15176		187
	11/16/2009	2.16332		188
	6/30/2010	2.30259	H	193

Rank Sum = 3891
Rank Mean = 144.111

MW-6	7/20/1995	ND<0	65.5	
	8/24/1995	ND<0	65.5	
	9/28/1995	ND<0	65.5	
	10/26/1995	ND<0	65.5	
	11/19/1996	ND<0	65.5	
	12/19/1996	ND<0	65.5	
	3/24/1997	ND<0	65.5	
	9/24/1997	ND<0	65.5	
	4/7/1998	ND<0	65.5	
	9/23/1998	ND<0	65.5	
	3/16/1999	1.60944		170
	9/23/1999	0.693147		149
	3/15/2000	ND<0	65.5	
	9/24/2003	ND<0	65.5	
	3/11/2004	ND<0	65.5	
	10/12/2004	ND<0	65.5	
	4/1/2005	ND<0	65.5	
	10/25/2005	ND<0	65.5	
	4/29/2006	ND<0	65.5	
	11/18/2006	ND<0	65.5	
	5/23/2007	ND<0	65.5	
	11/28/2007	ND<0	65.5	
	6/5/2008	0.0861777	J	137
	11/20/2008	1.7492	176	

	6/11/2009	ND<-1.60944		65.5
	11/16/2009	ND<-1.60944		65.5
	6/30/2010	ND<-1.60944		65.5

Rank Sum = 2138.5
Rank Mean = 79.2037

MW-7	7/20/1995	ND<0	65.5	
	8/24/1995	ND<0	65.5	
	9/28/1995	2.5416	201	
	10/26/1995	ND<0	65.5	
	11/19/1996	ND<0	65.5	
	12/19/1996	2.45959		198
	3/24/1997	ND<0	65.5	
	9/24/1997	ND<0	65.5	
	4/7/1998	ND<0	65.5	
	9/23/1998	ND<0	65.5	
	3/16/1999	1.60944		171
	9/23/1999	ND<0	65.5	
	3/15/2000	ND<0	65.5	
	9/24/2003	ND<0	65.5	
	3/11/2004	ND<0	65.5	
	10/12/2004	ND<0	65.5	
	4/1/2005	1.75094	177	
	10/25/2005	2.13298		185
	4/29/2006	2.24177		191
	11/18/2006	1.57691		166
	5/23/2007	2.24601		192
	11/28/2007	2.5096	200	
	6/5/2008	2.17475	189	
	11/20/2008	1.74572		175
	6/11/2009	1.64866		174
	11/16/2009	0.955511		154
	6/30/2010	1.90211 H		182

Rank Sum = 3406.5
Rank Mean = 126.167

MW-10	7/20/1995	ND<0	65.5	
	8/24/1995	ND<0	65.5	
	9/28/1995	ND<0	65.5	
	10/26/1995	ND<0	65.5	
	11/19/1996	ND<0	65.5	
	12/19/1996	ND<0	65.5	
	3/24/1997	ND<0	65.5	
	9/24/1997	ND<0	65.5	
	4/7/1998	ND<0	65.5	
	9/23/1998	ND<0	65.5	
	3/16/1999	1.38629		162
	9/23/1999	ND<0	65.5	
	3/15/2000	ND<0	65.5	
	9/24/2003	ND<0	65.5	
	3/11/2004	ND<0	65.5	
	10/12/2004	ND<0	65.5	
	4/1/2005	0.122218 J	139	
	10/25/2005	ND<0	65.5	
	4/29/2006	0.270027 J		140
	11/18/2006	0.631272 J		145
	5/23/2007	1.28647		160
	11/28/2007	1.57277		165
	6/5/2008	0.802002	153	
	11/20/2008	0.746688		151
	6/11/2009	1.1314	156	
	11/16/2009	1.28093		159

	6/30/2010	1.43508	H	163

Rank Sum = 2741
Rank Mean = 101.519

MW-11R	7/20/1995	ND<0	65.5	
	8/24/1995	ND<0	65.5	
	9/28/1995	ND<0	65.5	
	10/26/1995	ND<0	65.5	
	11/19/1996	ND<0	65.5	
	12/19/1996	ND<0	65.5	
	3/24/1997	ND<0	65.5	
	9/24/1997	ND<0	65.5	
	4/7/1998	ND<0	65.5	
	9/23/1998	ND<0	65.5	
	3/16/1999	ND<0	65.5	
	9/23/1999	ND<0	65.5	
	3/15/2000	ND<0	65.5	
	9/24/2003	2.83321		209
	3/11/2004	ND<0	65.5	
	10/12/2004	2.70805		204
	4/1/2005	2.34181	194	
	10/25/2005	2.0149	183	
	4/29/2006	2.06939		184
	11/18/2006	0.97456		155
	5/23/2007	3.23868		210
	11/28/2007	1.58309		167
	6/5/2008	ND<0	65.5	
	11/20/2008	ND<0	65.5	
	6/11/2009	ND<-1.60944		65.5
	11/16/2009	ND<-1.60944		65.5
	6/30/2010	0.530628	H	144

Rank Sum = 2829
Rank Mean = 104.778

MW-12BR	3/16/1999	ND<0	65.5	
	9/23/1999	ND<0	65.5	
	3/15/2000	ND<0	65.5	
	9/24/2003	ND<0	65.5	
	3/11/2004	ND<0	65.5	
	10/12/2004	ND<0	65.5	
	4/1/2005	0.667829	J	147
	10/25/2005	ND<0	65.5	
	4/29/2006	ND<0	65.5	
	11/18/2006	ND<0	65.5	
	5/23/2007	ND<0	65.5	
	11/28/2007	ND<0	65.5	
	6/5/2008	0.652325	J	146
	11/20/2008	ND<0	65.5	
	6/11/2009	ND<-1.60944		65.5
	11/16/2009	ND<-1.60944		65.5
	6/30/2010	ND<-1.60944		65.5

Rank Sum = 1275.5
Rank Mean = 75.0294

MW-12AR	3/16/1999	ND<0	65.5	
	9/23/1999	1.60944		172
	3/15/2000	2.77259		205
	9/24/2003	ND<0	65.5	
	3/11/2004	ND<0	65.5	
	10/12/2004	ND<0	65.5	
	4/1/2005	ND<0	65.5	
	10/25/2005	0.703098		150

4/29/2006	0.392042	J	142
11/18/2006	0.0487902	J	135
5/23/2007	0.0487902	J	136
11/28/2007	ND<0	65.5	
6/5/2008	ND<0	65.5	
11/20/2008	ND<0	65.5	
6/11/2009	-0.867501	J	131
11/16/2009	-0.693147	J	132
6/30/2010	-0.616186	J	133

Rank Sum = 1860
Rank Mean = 109.412

Calculation Results:

Kruskal-Wallis H Statistic = 26.2218
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 34.0796
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
26.2218 > 15.5073 indicating a significant group difference at 5% significance level
34.0796 > 15.5073 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 82.7647

Well	Mean Rank	Dif from Bkg	Critical Value
MW-8	116.519	33.7545	44.5106
MW-9	144.111	61.3464	44.1836
MW-6	79.2037	-3.561	44.1836
MW-7	126.167	43.402	44.1836
MW-10	101.519	18.7538	44.1836
MW-11R	104.778	22.0131	44.1836
MW-12BR	75.0294	-7.7352	48.9476
MW-12AR	109.412	26.6471	48.9476

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 82.7647

Well	Mean Rank	Dif from Bkg	Critical Value
MW-8	116.519	33.7545	48.0654
MW-9	144.111	61.3464	47.7122
MW-6	79.2037	-3.561	47.7122
MW-7	126.167	43.402	47.7122
MW-10	101.519	18.7538	47.7122
MW-11R	104.778	22.0131	47.7122
MW-12BR	75.0294	-7.7352	52.8567
MW-12AR	109.412	26.6471	52.8567

Mann-Kendall Trend Analysis

Parameter: Arsenic

Location: MW-9

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	
2.83321		ND<0	2.83321	1	0
ND<0	ND<0	0	1	0	
ND<0	ND<0	0	1	0	
2.83321		ND<0	2.83321	2	0
1.60944		ND<0	1.60944	3	0
1.60944		ND<0	1.60944	4	0
2.83321		ND<0	2.83321	5	0
2.56495		ND<0	2.56495	6	0
ND<0	ND<0	0	6	0	
ND<0	ND<0	0	6	0	
1.36354		ND<0	1.36354	7	0
1.83737		ND<0	1.83737	8	0
2.3979	ND<0	2.3979	9	0	
2.43361		ND<0	2.43361	10	0
2.37955		ND<0	2.37955	11	0
2.195	ND<0	2.195	12	0	
2.13771		ND<0	2.13771	13	0
2.62467		ND<0	2.62467	14	0
2.15176		ND<0	2.15176	15	0
2.16332		ND<0	2.16332	16	0
2.30259 H		ND<0	2.30259	17	0
ND<0	ND<0	0	17	0	
ND<0	ND<0	0	17	0	
ND<0	ND<0	0	17	0	
ND<0	ND<0	0	17	0	
2.83321		ND<0	2.83321	18	0
ND<0	ND<0	0	18	0	
ND<0	ND<0	0	18	0	
2.83321		ND<0	2.83321	19	0
1.60944		ND<0	1.60944	20	0
1.60944		ND<0	1.60944	21	0
2.83321		ND<0	2.83321	22	0
2.56495		ND<0	2.56495	23	0
ND<0	ND<0	0	23	0	
ND<0	ND<0	0	23	0	
1.36354		ND<0	1.36354	24	0
1.83737		ND<0	1.83737	25	0
2.3979	ND<0	2.3979	26	0	
2.43361		ND<0	2.43361	27	0
2.37955		ND<0	2.37955	28	0
2.195	ND<0	2.195	29	0	
2.13771		ND<0	2.13771	30	0

2.62467		ND<0	2.62467	31	0
2.15176		ND<0	2.15176	32	0
2.16332		ND<0	2.16332	33	0
2.30259	H	ND<0	2.30259	34	0
ND<0	ND<0	0	34	0	
ND<0	ND<0	0	34	0	
ND<0	ND<0	0	34	0	
2.83321		ND<0	2.83321	35	0
ND<0	ND<0	0	35	0	
ND<0	ND<0	0	35	0	
2.83321		ND<0	2.83321	36	0
1.60944		ND<0	1.60944	37	0
1.60944		ND<0	1.60944	38	0
2.83321		ND<0	2.83321	39	0
2.56495		ND<0	2.56495	40	0
ND<0	ND<0	0	40	0	
ND<0	ND<0	0	40	0	
1.36354		ND<0	1.36354	41	0
1.83737		ND<0	1.83737	42	0
2.3979	ND<0	2.3979	43	0	
2.43361		ND<0	2.43361	44	0
2.37955		ND<0	2.37955	45	0
2.195	ND<0	2.195	46	0	
2.13771		ND<0	2.13771	47	0
2.62467		ND<0	2.62467	48	0
2.15176		ND<0	2.15176	49	0
2.16332		ND<0	2.16332	50	0
2.30259	H	ND<0	2.30259	51	0
ND<0	ND<0	0	51	0	
ND<0	ND<0	0	51	0	
2.83321		ND<0	2.83321	52	0
ND<0	ND<0	0	52	0	
ND<0	ND<0	0	52	0	
2.83321		ND<0	2.83321	53	0
1.60944		ND<0	1.60944	54	0
1.60944		ND<0	1.60944	55	0
2.83321		ND<0	2.83321	56	0
2.56495		ND<0	2.56495	57	0
ND<0	ND<0	0	57	0	
ND<0	ND<0	0	57	0	
1.36354		ND<0	1.36354	58	0
1.83737		ND<0	1.83737	59	0
2.3979	ND<0	2.3979	60	0	
2.43361		ND<0	2.43361	61	0
2.37955		ND<0	2.37955	62	0
2.195	ND<0	2.195	63	0	
2.13771		ND<0	2.13771	64	0
2.62467		ND<0	2.62467	65	0
2.15176		ND<0	2.15176	66	0
2.16332		ND<0	2.16332	67	0
2.30259	H	ND<0	2.30259	68	0
ND<0	ND<0	0	68	0	
2.83321		ND<0	2.83321	69	0
ND<0	ND<0	0	69	0	
ND<0	ND<0	0	69	0	
2.83321		ND<0	2.83321	70	0
1.60944		ND<0	1.60944	71	0
1.60944		ND<0	1.60944	72	0
2.83321		ND<0	2.83321	73	0

2.56495		ND<0	2.56495	74	0		
ND<0	ND<0	0	74	0			
ND<0	ND<0	0	74	0			
1.36354		ND<0	1.36354	75	0		
1.83737		ND<0	1.83737	76	0		
2.3979	ND<0	2.3979	77	0			
2.43361		ND<0	2.43361	78	0		
2.37955		ND<0	2.37955	79	0		
2.195	ND<0	2.195	80	0			
2.13771		ND<0	2.13771	81	0		
2.62467		ND<0	2.62467	82	0		
2.15176		ND<0	2.15176	83	0		
2.16332		ND<0	2.16332	84	0		
2.30259	H	ND<0	2.30259	85	0		
2.83321		ND<0	2.83321	86	0		
ND<0	ND<0	0	86	0			
ND<0	ND<0	0	86	0			
2.83321		ND<0	2.83321	87	0		
1.60944		ND<0	1.60944	88	0		
1.60944		ND<0	1.60944	89	0		
2.83321		ND<0	2.83321	90	0		
2.56495		ND<0	2.56495	91	0		
ND<0	ND<0	0	91	0			
ND<0	ND<0	0	91	0			
1.36354		ND<0	1.36354	92	0		
1.83737		ND<0	1.83737	93	0		
2.3979	ND<0	2.3979	94	0			
2.43361		ND<0	2.43361	95	0		
2.37955		ND<0	2.37955	96	0		
2.195	ND<0	2.195	97	0			
2.13771		ND<0	2.13771	98	0		
2.62467		ND<0	2.62467	99	0		
2.15176		ND<0	2.15176	100	0		
2.16332		ND<0	2.16332	101	0		
2.30259	H	ND<0	2.30259	102	0		
ND<0	2.83321		-2.83321	102	1		
ND<0	2.83321		-2.83321	102	2		
2.83321		2.83321		0	102	2	
1.60944		2.83321		-1.22378	102	3	
1.60944		2.83321		-1.22378	102	4	
2.83321		2.83321		0	102	4	
2.56495		2.83321		-0.268264		102	5
ND<0	2.83321		-2.83321	102	6		
ND<0	2.83321		-2.83321	102	7		
1.36354		2.83321		-1.46968	102	8	
1.83737		2.83321		-0.995843		102	9
2.3979	2.83321		-0.435318		102	10	
2.43361		2.83321		-0.3996	102	11	
2.37955		2.83321		-0.453667		102	12
2.195	2.83321		-0.638213		102	13	
2.13771		2.83321		-0.695503		102	14
2.62467		2.83321		-0.208545		102	15
2.15176		2.83321		-0.681451		102	16
2.16332		2.83321		-0.66989	102	17	
2.30259	H	2.83321		-0.530628		102	18
ND<0	ND<0	0	102	18			
2.83321		ND<0	2.83321	103	18		
1.60944		ND<0	1.60944	104	18		
1.60944		ND<0	1.60944	105	18		

2.83321		ND<0	2.83321	106	18		
2.56495		ND<0	2.56495	107	18		
ND<0	ND<0	0	107	18			
ND<0	ND<0	0	107	18			
1.36354		ND<0	1.36354	108	18		
1.83737		ND<0	1.83737	109	18		
2.3979	ND<0	2.3979	110	18			
2.43361		ND<0	2.43361	111	18		
2.37955		ND<0	2.37955	112	18		
2.195	ND<0	2.195	113	18			
2.13771		ND<0	2.13771	114	18		
2.62467		ND<0	2.62467	115	18		
2.15176		ND<0	2.15176	116	18		
2.16332		ND<0	2.16332	117	18		
2.30259	H	ND<0	2.30259	118	18		
2.83321		ND<0	2.83321	119	18		
1.60944		ND<0	1.60944	120	18		
1.60944		ND<0	1.60944	121	18		
2.83321		ND<0	2.83321	122	18		
2.56495		ND<0	2.56495	123	18		
ND<0	ND<0	0	123	18			
ND<0	ND<0	0	123	18			
1.36354		ND<0	1.36354	124	18		
1.83737		ND<0	1.83737	125	18		
2.3979	ND<0	2.3979	126	18			
2.43361		ND<0	2.43361	127	18		
2.37955		ND<0	2.37955	128	18		
2.195	ND<0	2.195	129	18			
2.13771		ND<0	2.13771	130	18		
2.62467		ND<0	2.62467	131	18		
2.15176		ND<0	2.15176	132	18		
2.16332		ND<0	2.16332	133	18		
2.30259	H	ND<0	2.30259	134	18		
1.60944		2.83321		-1.22378	134	19	
1.60944		2.83321		-1.22378	134	20	
2.83321		2.83321		0	134	20	
2.56495		2.83321		-0.268264		134	21
ND<0	2.83321		-2.83321	134	22		
ND<0	2.83321		-2.83321	134	23		
1.36354		2.83321		-1.46968	134	24	
1.83737		2.83321		-0.995843		134	25
2.3979	2.83321		-0.435318		134	26	
2.43361		2.83321		-0.3996	134	27	
2.37955		2.83321		-0.453667		134	28
2.195	2.83321		-0.638213		134	29	
2.13771		2.83321		-0.695503		134	30
2.62467		2.83321		-0.208545		134	31
2.15176		2.83321		-0.681451		134	32
2.16332		2.83321		-0.66989	134	33	
2.30259	H	2.83321		-0.530628		134	34
1.60944		1.60944		0	134	34	
2.83321		1.60944		1.22378	135	34	
2.56495		1.60944		0.955511		136	34
ND<0	1.60944		-1.60944	136	35		
ND<0	1.60944		-1.60944	136	36		
1.36354		1.60944		-0.245901		136	37
1.83737		1.60944		0.227932		137	37
2.3979	1.60944		0.788457		138	37	
2.43361		1.60944		0.824175		139	37

2.37955		1.60944		0.770108	140	37
2.195	1.60944		0.585562		141	37
2.13771		1.60944		0.528273	142	37
2.62467		1.60944		1.01523	143	37
2.15176		1.60944		0.542324	144	37
2.16332		1.60944		0.553885	145	37
2.30259 H		1.60944		0.693147	146	37
2.83321		1.60944		1.22378	147	37
2.56495		1.60944		0.955511	148	37
ND<0	1.60944		-1.60944	148	38	
ND<0	1.60944		-1.60944	148	39	
1.36354		1.60944		-0.245901	148	40
1.83737		1.60944		0.227932	149	40
2.3979	1.60944		0.788457	150	40	
2.43361		1.60944		0.824175	151	40
2.37955		1.60944		0.770108	152	40
2.195	1.60944		0.585562	153	40	
2.13771		1.60944		0.528273	154	40
2.62467		1.60944		1.01523	155	40
2.15176		1.60944		0.542324	156	40
2.16332		1.60944		0.553885	157	40
2.30259 H		1.60944		0.693147	158	40
2.56495		2.83321		-0.268264	158	41
ND<0	2.83321		-2.83321	158	42	
ND<0	2.83321		-2.83321	158	43	
1.36354		2.83321		-1.46968	158	44
1.83737		2.83321		-0.995843	158	45
2.3979	2.83321		-0.435318	158	46	
2.43361		2.83321		-0.3996	158	47
2.37955		2.83321		-0.453667	158	48
2.195	2.83321		-0.638213	158	49	
2.13771		2.83321		-0.695503	158	50
2.62467		2.83321		-0.208545	158	51
2.15176		2.83321		-0.681451	158	52
2.16332		2.83321		-0.66989	158	53
2.30259 H		2.83321		-0.530628	158	54
ND<0	2.56495		-2.56495	158	55	
ND<0	2.56495		-2.56495	158	56	
1.36354		2.56495		-1.20141	158	57
1.83737		2.56495		-0.727579	158	58
2.3979	2.56495		-0.167054	158	59	
2.43361		2.56495		-0.131336	158	60
2.37955		2.56495		-0.185403	158	61
2.195	2.56495		-0.369949	158	62	
2.13771		2.56495		-0.427239	158	63
2.62467		2.56495		0.0597192	159	63
2.15176		2.56495		-0.413187	159	64
2.16332		2.56495		-0.401626	159	65
2.30259 H		2.56495		-0.262364	159	66
ND<0	ND<0	0	159	66		
1.36354		ND<0	1.36354	160	66	
1.83737		ND<0	1.83737	161	66	
2.3979	ND<0	2.3979	162	66		
2.43361		ND<0	2.43361	163	66	
2.37955		ND<0	2.37955	164	66	
2.195	ND<0	2.195	165	66		
2.13771		ND<0	2.13771	166	66	
2.62467		ND<0	2.62467	167	66	

2.15176		ND<0	2.15176	168	66	
2.16332		ND<0	2.16332	169	66	
2.30259	H	ND<0	2.30259	170	66	
1.36354		ND<0	1.36354	171	66	
1.83737		ND<0	1.83737	172	66	
2.3979	ND<0	2.3979	173	66		
2.43361		ND<0	2.43361	174	66	
2.37955		ND<0	2.37955	175	66	
2.195	ND<0	2.195	176	66		
2.13771		ND<0	2.13771	177	66	
2.62467		ND<0	2.62467	178	66	
2.15176		ND<0	2.15176	179	66	
2.16332		ND<0	2.16332	180	66	
2.30259	H	ND<0	2.30259	181	66	
1.83737		1.36354	0.473833	182	66	
2.3979	1.36354	1.03436	183	66		
2.43361		1.36354	1.07008	184	66	
2.37955		1.36354	1.01601	185	66	
2.195	1.36354	0.831463	186	66		
2.13771		1.36354	0.774173	187	66	
2.62467		1.36354	1.26113	188	66	
2.15176		1.36354	0.788225	189	66	
2.16332		1.36354	0.799786	190	66	
2.30259	H	1.36354	0.939048	191	66	
2.3979	1.83737	0.560525	192	66		
2.43361		1.83737	0.596243	193	66	
2.37955		1.83737	0.542176	194	66	
2.195	1.83737	0.35763	195	66		
2.13771		1.83737	0.30034	196	66	
2.62467		1.83737	0.787299	197	66	
2.15176		1.83737	0.314392	198	66	
2.16332		1.83737	0.325953	199	66	
2.30259	H	1.83737	0.465215	200	66	
2.43361		2.3979	0.0357181	201	66	
2.37955		2.3979	-0.0183491	201	67	
2.195	2.3979	-0.202895	201	68		
2.13771		2.3979	-0.260185	201	69	
2.62467		2.3979	0.226773	202	69	
2.15176		2.3979	-0.246133	202	70	
2.16332		2.3979	-0.234572	202	71	
2.30259	H	2.3979	-0.0953102	202	72	
2.37955		2.43361	-0.0540672	202	73	
2.195	2.43361	-0.238613	202	74		
2.13771		2.43361	-0.295903	202	75	
2.62467		2.43361	0.191055	203	75	
2.15176		2.43361	-0.281851	203	76	
2.16332		2.43361	-0.27029	203	77	
2.30259	H	2.43361	-0.131028	203	78	
2.195	2.37955	-0.184546	203	79		
2.13771		2.37955	-0.241836	203	80	
2.62467		2.37955	0.245122	204	80	
2.15176		2.37955	-0.227784	204	81	
2.16332		2.37955	-0.216223	204	82	
2.30259	H	2.37955	-0.076961	204	83	

2.13771	2.195	-0.0572894	204	84
2.62467	2.195	0.429669	205	84
2.15176	2.195	-0.0432377	205	85
2.16332	2.195	-0.0316769	205	86
2.30259 H	2.195	0.107585	206	86

2.62467	2.13771	0.486958	207	86
2.15176	2.13771	0.0140518	208	86
2.16332	2.13771	0.0256126	209	86
2.30259 H	2.13771	0.164875	210	86

2.15176	2.62467	-0.472906	210	87
2.16332	2.62467	-0.461346	210	88
2.30259 H	2.62467	-0.322083	210	89

2.16332	2.15176	0.0115608	211	89
2.30259 H	2.15176	0.150823	212	89

2.30259 H	2.16332	0.139262	213	89

S Statistic = 213 - 89 = 124

Tied Group	Value	Members
1	0	10
2	2.83321	3
3	1.60944	2

Time Period		Observations
7/20/1995		1
8/24/1995		1
9/28/1995		1
10/26/1995		1
11/19/1996		1
12/19/1996		1
3/24/1997		1
9/24/1997		1
4/7/1998	1	
9/23/1998		1
3/16/1999		1
9/23/1999		1
3/15/2000		1
9/24/2003		1
3/11/2004		1
10/12/2004		1
4/1/2005	1	
10/25/2005		1
4/29/2006		1
11/18/2006		1
5/23/2007		1
11/28/2007		1
6/5/2008	1	
11/20/2008		1
6/11/2009		1
11/16/2009		1
6/30/2010		1

There are 0 time periods with multiple data

A = 2334
B = 0

C = 726
D = 0
E = 98
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 2171.33
Z-Score = 2.63962
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|2.63962| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: Barium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 99
Percent Non-Detects: 46.6981%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	5 (29.4118%)	3/16/1999	50	50
			9/23/1999	28	28
			3/15/2000	ND<10	ND<10
			9/24/2003	ND<10	ND<10
			3/11/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	8.7 J	8.7 J
			10/25/2005	ND<10	ND<10
			4/29/2006	5 J	5 J
			11/18/2006	5.43 J	5.43 J
			5/23/2007	10.9	10.9
			11/28/2007	7 J	7 J
			6/5/2008	5.97 J	5.97 J
			11/20/2008	8 J	8 J
			6/11/2009	9	9
			11/16/2009	6.9	6.9
			6/30/2010	9.9 H	9.9 H

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-11R	27	15 (55.5556%)	7/20/1995	ND<10	ND<10
			8/24/1995	ND<10	ND<10
			9/28/1995	ND<10	ND<10
			10/26/1995	ND<10	ND<10
			11/19/1996	ND<10	ND<10
			12/19/1996	ND<10	ND<10
			3/24/1997	ND<10	ND<10
			9/24/1997	ND<10	ND<10
			4/7/1998	ND<10	ND<10
			9/23/1998	ND<10	ND<10
			3/16/1999	40	40
			9/23/1999	21	21
			3/15/2000	ND<10	ND<10
			9/24/2003	ND<10	ND<10
			3/11/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	28.8	28.8
			10/25/2005	19.1	19.1
			4/29/2006	30	30
			11/18/2006	116	116
			5/23/2007	50	50
			11/28/2007	34	34
			6/5/2008	ND<10	ND<10
			11/20/2008	10	10

			6/11/2009	11	11	
			11/16/2009	7.2	7.2	
			6/30/2010	18 H	18 H	
MW-6	27	15 (55.5556%)	7/20/1995	ND<10	ND<10	
			8/24/1995	ND<10	ND<10	
			9/28/1995	ND<10	ND<10	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	20	20	
			9/23/1999	7 J	7 J	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	5.7 J	5.7 J	
			10/25/2005	5.5 J	5.5 J	
			4/29/2006	ND<10	ND<10	
			11/18/2006	6.07 J	6.07 J	
			5/23/2007	7.22	7.22	
			11/28/2007	6.22 J	6.22 J	
			6/5/2008	6.44 J	6.44 J	
			11/20/2008	8 J	8 J	
			6/11/2009	7	7	
			11/16/2009	6.9	6.9	
			6/30/2010	7.9 H	7.9 H	
MW-7	27	14 (51.8519%)	7/20/1995	ND<10	ND<10	
			8/24/1995	ND<10	ND<10	
			9/28/1995	ND<10	ND<10	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	60	60	
			9/23/1999	74	74	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	46.8	46.8	
			10/25/2005	47.5	47.5	
			4/29/2006	50	50	
			11/18/2006	37.7	37.7	
			5/23/2007	63.2	63.2	
			11/28/2007	8.3 J	8.3 J	
			6/5/2008	43.8	43.8	
			11/20/2008	60	60	
			6/11/2009	47	47	
			11/16/2009	42	42	
			6/30/2010	45 H	45 H	
MW-10	27	14 (51.8519%)	7/20/1995	ND<10	ND<10	
			8/24/1995	ND<10	ND<10	

		9/28/1995	ND<10	ND<10		
		10/26/1995	ND<10	ND<10		
		11/19/1996	ND<10	ND<10		
		12/19/1996	ND<10	ND<10		
		3/24/1997	ND<10	ND<10		
		9/24/1997	ND<10	ND<10		
		4/7/1998	ND<10	ND<10		
		9/23/1998	ND<10	ND<10		
		3/16/1999	90	90		
		9/23/1999	72	72		
		3/15/2000	ND<10	ND<10		
		9/24/2003	ND<10	ND<10		
		3/11/2004	ND<10	ND<10		
		10/12/2004	ND<10	ND<10		
		4/1/2005	77.9	77.9		
		10/25/2005	76.8	76.8		
		4/29/2006	11	11		
		11/18/2006	123	123		
		5/23/2007	139	139		
		11/28/2007	118	118		
		6/5/2008	150	150		
		11/20/2008	150	150		
		6/11/2009	170	170		
		11/16/2009	130	130		
		6/30/2010	160 H	160 H		
MW-12AR	17	4 (23.5294%)	3/16/1999		40	40
		9/23/1999	40	40		
		3/15/2000	ND<10	ND<10		
		9/24/2003	ND<10	ND<10		
		3/11/2004	ND<10	ND<10		
		10/12/2004	ND<10	ND<10		
		4/1/2005	36	36		
		10/25/2005	27.7	27.7		
		4/29/2006	30	30		
		11/18/2006	33.2	33.2		
		5/23/2007	34.1	34.1		
		11/28/2007	42	42		
		6/5/2008	34.8	34.8		
		11/20/2008	45	45		
		6/11/2009	38	38		
		11/16/2009	41	41		
		6/30/2010	36	36		
MW-12BR	17	4 (23.5294%)	3/16/1999		30	30
		9/23/1999	33	33		
		3/15/2000	ND<10	ND<10		
		9/24/2003	ND<10	ND<10		
		3/11/2004	ND<10	ND<10		
		10/12/2004	ND<10	ND<10		
		4/1/2005	40.1	40.1		
		10/25/2005	35	35		
		4/29/2006	30	30		
		11/18/2006	34.5	34.5		
		5/23/2007	41.5	41.5		
		11/28/2007	40	40		
		6/5/2008	36.8	36.8		
		11/20/2008	43	43		
		6/11/2009	42	42		
		11/16/2009	37	37		
		6/30/2010	40	40		

MW-9	27	14 (51.8519%)	7/20/1995		ND<10	ND<10
			8/24/1995	ND<10	ND<10	
			9/28/1995	ND<10	ND<10	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	20	20	
			9/23/1999	52	52	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	40.7	40.7	
			10/25/2005	39	39	
			4/29/2006	40	40	
			11/18/2006	49.3	49.3	
			5/23/2007	70.4	70.4	
			11/28/2007	47	47	
			6/5/2008	44.8	44.8	
			11/20/2008	49	49	
			6/11/2009	46	46	
			11/16/2009	41	41	
			6/30/2010	45 H	45 H	
MW-8	26	14 (53.8462%)	7/20/1995		ND<10	ND<10
			8/24/1995	ND<10	ND<10	
			9/28/1995	ND<10	ND<10	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	60	60	
			9/23/1999	41	41	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	95.7	95.7	
			10/25/2005	65.2	65.2	
			4/29/2006	70	70	
			11/18/2006	85.5	85.5	
			5/23/2007	76.3	76.3	
			11/28/2007	100	100	
			6/5/2008	88.4	88.4	
			11/20/2008	64	64	
			6/11/2009	55	55	
			6/30/2010	67 H	67 H	

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	5	-2.65209	7.03356	-13.2604
2	5	-2.365	6.6297	-25.0885
3	5	-2.197	8.4578	-36.0749
4	5	-2.096	9.8549	-46.5596
5	5	-1.995	3.8365	-56.5366
6	5	-1.911	0.4885	-66.0917
7	5	-1.852	3.9191	-75.3526
8	5	-1.786	6.111	-84.2856
9	5	-1.727	9.0968	-92.9253
10	5	-1.684	4.9358	-101.35
11	5	-1.635	4.6098	-109.526
12	5	-1.589	7.1356	-117.473
13	5	-1.546	4.527	-125.205
14	5	-1.514	1.8195	-132.775
15	5	-1.475	3.9975	-140.154
16	5	-1.439	5.0698	-147.352
17	5	-1.411	8.063	-154.411
18	5	-1.378	6.9637	-161.304
19	5	-1.346	1.778	-168.039
20	5	-1.322	5.527	-174.651
21	5	-1.293	6.1989	-181.117
22	5	-1.264	6.7982	-187.44
23	5	-1.242	6.3424	-193.653
24	5	-1.215	9.821	-199.733
25	5	-1.190	1.2373	-205.683
26	5	-1.165	2.5947	-211.509
27	5	-1.145	3.9069	-217.236
28	5	-1.121	6.165	-222.845
29	5	-1.098	4.3716	-228.337
30	5	-1.080	7.5387	-233.739
31	5	-1.058	1.6584	-239.029
32	5	-1.036	4.7326	-244.211
33	5	-1.019	0.7718	-249.308
34	5	-0.998	575	81.7689	-254.301
35	5	-0.978	2.7257	-259.192
36	5	-0.958	125	83.6437	-263.983
37	5	-0.942	375	84.5318	-268.695
38	5	-0.923	014	85.3837	-273.31
39	5	-0.903	992	86.201	-277.83
40	5	-0.889	006	86.9913	-282.275
41	5	-0.870	5.7491	-286.627
42	5	-0.852	385	88.4757	-290.889
43	5	-0.838	054	89.178	-295.08
44	5	-0.820	379	89.8511	-299.181
45	5	-0.802	956	90.4958	-303.196
46	5	-0.789	191	91.1186	-307.142
47	5	-0.772	193	91.7149	-311.003
48	5	-0.755	415	92.2856	-314.78
49	5	-0.738	846	92.8314	-318.475

50	5	-0.725736	93.3581	-322.103
51	5	-0.709522	93.8616	-325.651
52	5	-0.693493	94.3425	-329.118
53	5	-0.680797	94.806	-332.522
54	5	-0.665079	95.2483	-335.848
55	5	-0.649522	95.6702	-339.095
56	5	-0.637192	96.0762	-342.281
57	5	-0.621911	96.463	-345.391
58	5	-0.606775	96.8312	-348.425
59	5	-0.594766	97.1849	-351.398
60	5	-0.579873	97.5212	-354.298
61	5	-0.565108	97.8405	-357.123
62	5	-0.550465	98.1435	-359.876
63	5	-0.538836	98.4339	-362.57
64	5	-0.524401	98.7088	-365.192
65	5	-0.510074	98.969	-367.742
66	5	-0.498687	99.2177	-370.236
67	5	-0.484544	99.4525	-372.658
68	5	-0.470498	99.6739	-375.011
69	5	-0.459327	99.8848	-377.308
70	5	-0.445443	100.083	-379.535
71	5	-0.431644	100.27	-381.693
72	5	-0.417928	100.444	-383.783
73	5	-0.40701	100.61	-385.818
74	5	-0.393433	100.765	-387.785
75	5	-0.379927	100.909	-389.684
76	5	-0.369171	101.045	-391.53
77	5	-0.355788	101.172	-393.309
78	5	-0.342466	101.289	-395.022
79	5	-0.331854	101.399	-396.681
80	5	-0.318639	101.501	-398.274
81	5	-0.305481	101.594	-399.801
82	5	-0.294992	101.681	-401.276
83	5	-0.281926	101.761	-402.686
84	5	-0.268908	101.833	-404.031
85	5	-0.255936	101.898	-405.31
86	5	-0.24559	101.959	-406.538
87	5	-0.232693	102.013	-407.702
88	5	-0.219834	102.061	-408.801
89	5	-0.209575	102.105	-409.849
90	5	-0.196779	102.144	-410.833
91	5	-0.184017	102.178	-411.753
92	5	-0.173829	102.208	-412.622
93	5	-0.161119	102.234	-413.427
94	5	-0.148434	102.256	-414.17
95	5	-0.135774	102.274	-414.848
96	5	-0.125661	102.29	-415.477
97	5	-0.113039	102.303	-416.042
98	5	-0.100433	102.313	-416.544
99	5	-0.0903606	102.321	-416.996
100	5	-0.0777834	102.327	-417.385
101	5.43	-0.0652187	102.332	-417.739
102	5.5	-0.0551734	102.335	-418.042
103	5.7	-0.0426257	102.336	-418.285
104	5.97	-0.0300838	102.337	-418.465
105	6.07	-0.0200544	102.338	-418.587
106	6.22	-0.00751925	102.338	-418.634
107	6.44	0.00751925	102.338	-418.585
108	6.9	0.0200544	102.338	-418.447
109	6.9	0.0300838	102.339	-418.239
110	7	0.0426257	102.341	-417.941
111	7	0.0551734	102.344	-417.555

112	7	0.0652187	102.348	-417.098
113	7.2	0.0777834	102.354	-416.538
114	7.22	0.0903606	102.362	-415.886
115	7.9	0.100433	102.373	-415.092
116	8	0.113039	102.385	-414.188
117	8	0.125661	102.401	-413.183
118	8.3	0.135774	102.42	-412.056
119	8.7	0.148434	102.442	-410.764
120	9	0.161119	102.468	-409.314
121	9.9	0.173829	102.498	-407.593
122	10	0.184017	102.532	-405.753
123	10.9	0.196779	102.57	-403.608
124	11	0.209575	102.614	-401.303
125	11	0.219834	102.663	-398.885
126	18	0.232693	102.717	-394.696
127	19.1	0.24559	102.777	-390.005
128	20	0.255936	102.843	-384.887
129	20	0.268908	102.915	-379.509
130	21	0.281926	102.994	-373.588
131	27.7	0.294992	103.081	-365.417
132	28	0.305481	103.175	-356.863
133	28.8	0.318639	103.276	-347.687
134	30	0.331854	103.386	-337.731
135	30	0.342466	103.504	-327.457
136	30	0.355788	103.63	-316.783
137	30	0.369171	103.767	-305.708
138	33	0.379927	103.911	-293.171
139	33.2	0.393433	104.066	-280.109
140	34	0.40701	104.231	-266.27
141	34.1	0.417928	104.406	-252.019
142	34.5	0.431644	104.592	-237.127
143	34.8	0.445443	104.791	-221.626
144	35	0.459327	105.002	-205.549
145	36	0.470498	105.223	-188.612
146	36	0.484544	105.458	-171.168
147	36.8	0.498687	105.707	-152.816
148	37	0.510074	105.967	-133.944
149	37.7	0.524401	106.242	-114.174
150	38	0.538836	106.532	-93.6978
151	39	0.550465	106.835	-72.2297
152	40	0.565108	107.154	-49.6254
153	40	0.579873	107.491	-26.4305
154	40	0.594766	107.844	-2.63981
155	40	0.606775	108.213	21.6312
156	40	0.621911	108.599	46.5076
157	40	0.637192	109.005	71.9953
158	40.1	0.649522	109.427	98.0412
159	40.7	0.665079	109.87	125.11
160	41	0.680797	110.333	153.023
161	41	0.693493	110.814	181.456
162	41	0.709522	111.317	210.546
163	41.5	0.725736	111.844	240.664
164	42	0.738846	112.39	271.696
165	42	0.755415	112.961	303.423
166	42	0.772193	113.557	335.855
167	43	0.789191	114.18	369.791
168	43.8	0.802956	114.824	404.96
169	44.8	0.820379	115.498	441.713
170	45	0.838054	116.2	479.425
171	45	0.852385	116.926	517.783
172	45	0.87055	117.684	556.958
173	46	0.889006	118.475	597.852

174	46.8	0.903992		119.292	640.159
175	47	0.923014		120.144	683.54
176	47	0.942375		121.032	727.832
177	47.5	0.958125		121.95	773.343
178	49	0.97815	122.907	821.272	
179	49.3	0.998575		123.904	870.502
180	50	1.01943	124.943	921.473	
181	50	1.03643	126.017	973.295	
182	50	1.05812	127.137	1026.2	
183	52	1.08032	128.304	1082.38	
184	55	1.09847	129.511	1142.79	
185	60	1.12168	130.769	1210.09	
186	60	1.1455	132.081	1278.82	
187	60	1.16505	133.438	1348.73	
188	63.2	1.19012	134.855	1423.94	
189	64	1.21596	136.333	1501.76	
190	65.2	1.24264	137.877	1582.78	
191	67	1.26464	139.477	1667.52	
192	70	1.29303	141.149	1758.03	
193	70.4	1.32251	142.898	1851.13	
194	72	1.34694	144.712	1948.11	
195	74	1.37866	146.613	2050.13	
196	76.3	1.41183	148.606	2157.86	
197	76.8	1.43953	150.678	2268.41	
198	77.9	1.47579	152.856	2383.38	
199	85.5	1.5141	155.149	2512.83	
200	88.4	1.54643	157.54	2649.54	
201	90	1.58927	160.066	2792.57	
202	95.7	1.63524	162.74	2949.06	
203	100	1.68494	165.579	3117.56	
204	116	1.72793	168.564	3318	
205	118	1.78661	171.756	3528.82	
206	123	1.85218	175.187	3756.63	
207	130	1.91103	178.839	4005.07	
208	139	1.99539	182.821	4282.43	
209	150	2.09693	187.218	4596.97	
210	150	2.19728	192.046	4926.56	
211	160	2.36561	197.642	5305.06	
212	170	2.65209	204.676	5755.91	

Data Set Standard Deviation = 33.1879
Numerator = 3.31305e+007
Denominator = 4.75672e+007
W Statistic = 0.696499 = 3.31305e+007 / 4.75672e+007

5% Critical value of 0.976 exceeds 0.696499
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.696499
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1.60944	-2.65209	7.03356	-4.26837
2	1.60944	-2.36561	12.6297	-8.07568
3	1.60944	-2.19728	17.4578	-11.6121
4	1.60944	-2.09693	21.8549	-14.987
5	1.60944	-1.99539	25.8365	-18.1984
6	1.60944	-1.91103	29.4885	-21.2741
7	1.60944	-1.85218	32.9191	-24.2551
8	1.60944	-1.78661	36.111	-27.1305
9	1.60944	-1.72793	39.0968	-29.9115
10	1.60944	-1.68494	41.9358	-32.6233
11	1.60944	-1.63524	44.6098	-35.2551
12	1.60944	-1.58927	47.1356	-37.8129
13	1.60944	-1.54643	49.527	-40.3018
14	1.60944	-1.5141	51.8195	-42.7387
15	1.60944	-1.47579	53.9975	-45.1139
16	1.60944	-1.43953	56.0698	-47.4307
17	1.60944	-1.41183	58.063	-49.703
18	1.60944	-1.37866	59.9637	-51.9218
19	1.60944	-1.34694	61.778	-54.0897
20	1.60944	-1.32251	63.527	-56.2181
21	1.60944	-1.29303	65.1989	-58.2992
22	1.60944	-1.26464	66.7982	-60.3346
23	1.60944	-1.24264	68.3424	-62.3345
24	1.60944	-1.21596	69.821	-64.2915
25	1.60944	-1.19012	71.2373	-66.2069
26	1.60944	-1.16505	72.5947	-68.082
27	1.60944	-1.1455	73.9069	-69.9256
28	1.60944	-1.12168	75.165	-71.7309
29	1.60944	-1.09847	76.3716	-73.4988
30	1.60944	-1.08032	77.5387	-75.2375
31	1.60944	-1.05812	78.6584	-76.9405
32	1.60944	-1.03643	79.7326	-78.6086
33	1.60944	-1.01943	80.7718	-80.2493
34	1.60944	-0.998575	81.7689	-81.8564
35	1.60944	-0.97815	82.7257	-83.4307
36	1.60944	-0.958125	83.6437	-84.9728
37	1.60944	-0.942375	84.5318	-86.4895
38	1.60944	-0.923014	85.3837	-87.975
39	1.60944	-0.903992	86.201	-89.4299
40	1.60944	-0.889006	86.9913	-90.8607
41	1.60944	-0.87055	87.7491	-92.2618
42	1.60944	-0.852385	88.4757	-93.6337
43	1.60944	-0.838054	89.178	-94.9825
44	1.60944	-0.820379	89.8511	-96.3028
45	1.60944	-0.802956	90.4958	-97.5951
46	1.60944	-0.789191	91.1186	-98.8653
47	1.60944	-0.772193	91.7149	-100.108
48	1.60944	-0.755415	92.2856	-101.324
49	1.60944	-0.738846	92.8314	-102.513

50	1.60944	-0.725736	93.3581	-103.681
51	1.60944	-0.709522	93.8616	-104.823
52	1.60944	-0.693493	94.3425	-105.939
53	1.60944	-0.680797	94.806	-107.035
54	1.60944	-0.665079	95.2483	-108.105
55	1.60944	-0.649522	95.6702	-109.151
56	1.60944	-0.637192	96.0762	-110.176
57	1.60944	-0.621911	96.463	-111.177
58	1.60944	-0.606775	96.8312	-112.154
59	1.60944	-0.594766	97.1849	-113.111
60	1.60944	-0.579873	97.5212	-114.044
61	1.60944	-0.565108	97.8405	-114.954
62	1.60944	-0.550465	98.1435	-115.84
63	1.60944	-0.538836	98.4339	-116.707
64	1.60944	-0.524401	98.7088	-117.551
65	1.60944	-0.510074	98.969	-118.372
66	1.60944	-0.498687	99.2177	-119.174
67	1.60944	-0.484544	99.4525	-119.954
68	1.60944	-0.470498	99.6739	-120.711
69	1.60944	-0.459327	99.8848	-121.451
70	1.60944	-0.445443	100.083	-122.168
71	1.60944	-0.431644	100.27	-122.862
72	1.60944	-0.417928	100.444	-123.535
73	1.60944	-0.40701	100.61	-124.19
74	1.60944	-0.393433	100.765	-124.823
75	1.60944	-0.379927	100.909	-125.435
76	1.60944	-0.369171	101.045	-126.029
77	1.60944	-0.355788	101.172	-126.601
78	1.60944	-0.342466	101.289	-127.153
79	1.60944	-0.331854	101.399	-127.687
80	1.60944	-0.318639	101.501	-128.199
81	1.60944	-0.305481	101.594	-128.691
82	1.60944	-0.294992	101.681	-129.166
83	1.60944	-0.281926	101.761	-129.62
84	1.60944	-0.268908	101.833	-130.052
85	1.60944	-0.255936	101.898	-130.464
86	1.60944	-0.24559	101.959	-130.86
87	1.60944	-0.232693	102.013	-131.234
88	1.60944	-0.219834	102.061	-131.588
89	1.60944	-0.209575	102.105	-131.925
90	1.60944	-0.196779	102.144	-132.242
91	1.60944	-0.184017	102.178	-132.538
92	1.60944	-0.173829	102.208	-132.818
93	1.60944	-0.161119	102.234	-133.077
94	1.60944	-0.148434	102.256	-133.316
95	1.60944	-0.135774	102.274	-133.535
96	1.60944	-0.125661	102.29	-133.737
97	1.60944	-0.113039	102.303	-133.919
98	1.60944	-0.100433	102.313	-134.08
99	1.60944	-0.0903606	102.321	-134.226
100	1.60944	-0.0777834	102.327	-134.351
101	1.69194	-0.0652187	102.332	-134.461
102	1.70475	-0.0551734	102.335	-134.555
103	1.74047	-0.0426257	102.336	-134.63
104	1.78675	-0.0300838	102.337	-134.683
105	1.80336	-0.0200544	102.338	-134.72
106	1.82777	-0.00751925	102.338	-134.733
107	1.86253	0.00751925	102.338	-134.719
108	1.93152	0.0200544	102.338	-134.681
109	1.93152	0.0300838	102.339	-134.622
110	1.94591	0.0426257	102.341	-134.539
111	1.94591	0.0551734	102.344	-134.432

112	1.94591	0.0652187	102.348	-134.305
113	1.97408	0.0777834	102.354	-134.152
114	1.97685	0.0903606	102.362	-133.973
115	2.06686	0.100433	102.373	-133.765
116	2.07944	0.113039	102.385	-133.53
117	2.07944	0.125661	102.401	-133.269
118	2.11626	0.135774	102.42	-132.982
119	2.16332	0.148434	102.442	-132.661
120	2.19722	0.161119	102.468	-132.307
121	2.29253	0.173829	102.498	-131.908
122	2.30259	0.184017	102.532	-131.484
123	2.38876	0.196779	102.57	-131.014
124	2.3979	0.209575	102.614	-130.512
125	2.3979	0.219834	102.663	-129.985
126	2.89037	0.232693	102.717	-129.312
127	2.94969	0.24559	102.777	-128.588
128	2.99573	0.255936	102.843	-127.821
129	2.99573	0.268908	102.915	-127.015
130	3.04452	0.281926	102.994	-126.157
131	3.32143	0.294992	103.081	-125.177
132	3.3322	0.305481	103.175	-124.159
133	3.36038	0.318639	103.276	-123.089
134	3.4012	0.331854	103.386	-121.96
135	3.4012	0.342466	103.504	-120.795
136	3.4012	0.355788	103.63	-119.585
137	3.4012	0.369171	103.767	-118.329
138	3.49651	0.379927	103.911	-117.001
139	3.50255	0.393433	104.066	-115.623
140	3.52636	0.40701	104.231	-114.188
141	3.5293	0.417928	104.406	-112.713
142	3.54096	0.431644	104.592	-111.184
143	3.54962	0.445443	104.791	-109.603
144	3.55535	0.459327	105.002	-107.97
145	3.58352	0.470498	105.223	-106.284
146	3.58352	0.484544	105.458	-104.548
147	3.6055	0.498687	105.707	-102.75
148	3.61092	0.510074	105.967	-100.908
149	3.62966	0.524401	106.242	-99.0044
150	3.63759	0.538836	106.532	-97.0443
151	3.66356	0.550465	106.835	-95.0276
152	3.68888	0.565108	107.154	-92.943
153	3.68888	0.579873	107.491	-90.8039
154	3.68888	0.594766	107.844	-88.6099
155	3.68888	0.606775	108.213	-86.3716
156	3.68888	0.621911	108.599	-84.0774
157	3.68888	0.637192	109.005	-81.7269
158	3.69138	0.649522	109.427	-79.3293
159	3.70623	0.665079	109.87	-76.8643
160	3.71357	0.680797	110.333	-74.3362
161	3.71357	0.693493	110.814	-71.7608
162	3.71357	0.709522	111.317	-69.126
163	3.72569	0.725736	111.844	-66.4221
164	3.73767	0.738846	112.39	-63.6605
165	3.73767	0.755415	112.961	-60.837
166	3.73767	0.772193	113.557	-57.9508
167	3.7612	0.789191	114.18	-54.9825
168	3.77963	0.802956	114.824	-51.9476
169	3.80221	0.820379	115.498	-48.8284
170	3.80666	0.838054	116.2	-45.6382
171	3.80666	0.852385	116.926	-42.3935
172	3.80666	0.87055	117.684	-39.0796
173	3.82864	0.889006	118.475	-35.6759

174	3.84588	0.903992		119.292	-32.1992
175	3.85015	0.923014		120.144	-28.6455
176	3.85015	0.942375		121.032	-25.0172
177	3.86073	0.958125		121.95	-21.3181
178	3.89182	0.97815	122.907	-17.5114	
179	3.89792	0.998575		123.904	-13.619
180	3.91202	1.01943	124.943	-9.63097	
181	3.91202	1.03643	126.017	-5.57642	
182	3.91202	1.05812	127.137	-1.43702	
183	3.95124	1.08032	128.304	2.83159	
184	4.00733	1.09847	129.511	7.23352	
185	4.09434	1.12168	130.769	11.8261	
186	4.09434	1.1455	132.081	16.5161	
187	4.09434	1.16505	133.438	21.2862	
188	4.1463	1.19012	134.855	26.2208	
189	4.15888	1.21596	136.333	31.2779	
190	4.17746	1.24264	137.877	36.469	
191	4.20469	1.26464	139.477	41.7864	
192	4.2485	1.29303	141.149	47.2798	
193	4.25419	1.32251	142.898	52.906	
194	4.27667	1.34694	144.712	58.6664	
195	4.30407	1.37866	146.613	64.6003	
196	4.33467	1.41183	148.606	70.7201	
197	4.3412	1.43953	150.678	76.9694	
198	4.35543	1.47579	152.856	83.3971	
199	4.44852	1.5141	155.149	90.1326	
200	4.48187	1.54643	157.54	97.0635	
201	4.49981	1.58927	160.066	104.215	
202	4.56122	1.63524	162.74	111.674	
203	4.60517	1.68494	165.579	119.433	
204	4.75359	1.72793	168.564	127.647	
205	4.77068	1.78661	171.756	136.17	
206	4.81218	1.85218	175.187	145.083	
207	4.86753	1.91103	178.839	154.385	
208	4.93447	1.99539	182.821	164.232	
209	5.01064	2.09693	187.218	174.738	
210	5.01064	2.19728	192.046	185.748	
211	5.07517	2.36561	197.642	197.754	
212	5.1358	2.65209	204.676	211.375	

Data Set Standard Deviation = 1.14613
Numerator = 44679.3
Denominator = 56730.9
W Statistic = 0.787565 = 44679.3 / 56730.9

5% Critical value of 0.976 exceeds 0.787565
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.787565
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Barium

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result		Rank
MW-13	3/16/1999	3.91202		180
	9/23/1999	3.3322	132	
	3/15/2000	ND<1.60944		50
	9/24/2003	ND<1.60944		50
	3/11/2004	ND<1.60944		50
	10/12/2004	ND<1.60944		50
	4/1/2005	2.16332 J	119	
	10/25/2005	ND<1.60944		50
	4/29/2006	1.60944 J		100
	11/18/2006	1.69194 J		101
	5/23/2007	2.38876		123
	11/28/2007	1.94591 J		110
	6/5/2008	1.78675 J	104	
	11/20/2008	2.07944 J		116
	6/11/2009	2.19722		120
	11/16/2009	1.93152		108
	6/30/2010	2.29253 H		121

Rank Sum = 1684
Rank Mean = 99.0588

Background Rank Sum = 1684
Background Rank Mean = 99.0588

Compliance Wells

Well ID	Date	Result		Rank
MW-11R	7/20/1995	ND<1.60944		50
	8/24/1995	ND<1.60944		50
	9/28/1995	ND<1.60944		50
	10/26/1995	ND<1.60944		50
	11/19/1996	ND<1.60944		50
	12/19/1996	ND<1.60944		50
	3/24/1997	ND<1.60944		50
	9/24/1997	ND<1.60944		50
	4/7/1998	ND<1.60944	50	
	9/23/1998	ND<1.60944		50
	3/16/1999	3.68888		152
	9/23/1999	3.04452		130
	3/15/2000	ND<1.60944		50
	9/24/2003	ND<1.60944		50
	3/11/2004	ND<1.60944		50
	10/12/2004	ND<1.60944		50
	4/1/2005	3.36038	133	
	10/25/2005	2.94969		127
	4/29/2006	3.4012	134	
	11/18/2006	4.75359		204
	5/23/2007	3.91202		181

	11/28/2007	3.52636		140
	6/5/2008	ND<1.60944		50
	11/20/2008	2.30259		122
	6/11/2009	2.3979		124
	11/16/2009	1.97408		113
	6/30/2010	2.89037	H	126

Rank Sum = 2436
Rank Mean = 90.2222

MW-6	7/20/1995	ND<1.60944		50
	8/24/1995	ND<1.60944		50
	9/28/1995	ND<1.60944		50
	10/26/1995	ND<1.60944		50
	11/19/1996	ND<1.60944		50
	12/19/1996	ND<1.60944		50
	3/24/1997	ND<1.60944		50
	9/24/1997	ND<1.60944		50
	4/7/1998	ND<1.60944		50
	9/23/1998	ND<1.60944		50
	3/16/1999	2.99573		128
	9/23/1999	1.94591	J	111
	3/15/2000	ND<1.60944		50
	9/24/2003	ND<1.60944		50
	3/11/2004	ND<1.60944		50
	10/12/2004	ND<1.60944		50
	4/1/2005	1.74047	J	103
	10/25/2005	1.70475	J	102
	4/29/2006	ND<1.60944		50
	11/18/2006	1.80336	J	105
	5/23/2007	1.97685		114
	11/28/2007	1.82777	J	106
	6/5/2008	1.86253	J	107
	11/20/2008	2.07944	J	117
	6/11/2009	1.94591		112
	11/16/2009	1.93152		109
	6/30/2010	2.06686	H	115

Rank Sum = 2079
Rank Mean = 77

MW-7	7/20/1995	ND<1.60944		50
	8/24/1995	ND<1.60944		50
	9/28/1995	ND<1.60944		50
	10/26/1995	ND<1.60944		50
	11/19/1996	ND<1.60944		50
	12/19/1996	ND<1.60944		50
	3/24/1997	ND<1.60944		50
	9/24/1997	ND<1.60944		50
	4/7/1998	ND<1.60944		50
	9/23/1998	ND<1.60944		50
	3/16/1999	4.09434		185
	9/23/1999	4.30407		195
	3/15/2000	ND<1.60944		50
	9/24/2003	ND<1.60944		50
	3/11/2004	ND<1.60944		50
	10/12/2004	ND<1.60944		50
	4/1/2005	3.84588		174
	10/25/2005	3.86073		177
	4/29/2006	3.91202		182
	11/18/2006	3.62966		149
	5/23/2007	4.1463		188
	11/28/2007	2.11626	J	118
	6/5/2008	3.77963		168

	11/20/2008	4.09434		186
	6/11/2009	3.85015		175
	11/16/2009	3.73767		164
	6/30/2010	3.80666	H	170

Rank Sum = 2931
Rank Mean = 108.556

MW-10	7/20/1995	ND<1.60944		50
	8/24/1995	ND<1.60944		50
	9/28/1995	ND<1.60944		50
	10/26/1995	ND<1.60944		50
	11/19/1996	ND<1.60944		50
	12/19/1996	ND<1.60944		50
	3/24/1997	ND<1.60944		50
	9/24/1997	ND<1.60944		50
	4/7/1998	ND<1.60944		50
	9/23/1998	ND<1.60944		50
	3/16/1999	4.49981		201
	9/23/1999	4.27667		194
	3/15/2000	ND<1.60944		50
	9/24/2003	ND<1.60944		50
	3/11/2004	ND<1.60944		50
	10/12/2004	ND<1.60944		50
	4/1/2005	4.35543		198
	10/25/2005	4.3412		197
	4/29/2006	2.3979		125
	11/18/2006	4.81218		206
	5/23/2007	4.93447		208
	11/28/2007	4.77068		205
	6/5/2008	5.01064		209
	11/20/2008	5.01064		210
	6/11/2009	5.1358		212
	11/16/2009	4.86753		207
	6/30/2010	5.07517	H	211

Rank Sum = 3283
Rank Mean = 121.593

MW-12AR	3/16/1999	3.68888		153
	9/23/1999	3.68888		154
	3/15/2000	ND<1.60944		50
	9/24/2003	ND<1.60944		50
	3/11/2004	ND<1.60944		50
	10/12/2004	ND<1.60944		50
	4/1/2005	3.58352		145
	10/25/2005	3.32143		131
	4/29/2006	3.4012		135
	11/18/2006	3.50255		139
	5/23/2007	3.5293		141
	11/28/2007	3.73767		165
	6/5/2008	3.54962		143
	11/20/2008	3.80666		171
	6/11/2009	3.63759		150
	11/16/2009	3.71357		160
	6/30/2010	3.58352		146

Rank Sum = 2133
Rank Mean = 125.471

MW-12BR	3/16/1999	3.4012		136
	9/23/1999	3.49651		138
	3/15/2000	ND<1.60944		50
	9/24/2003	ND<1.60944		50
	3/11/2004	ND<1.60944		50

	10/12/2004	ND<1.60944		50
	4/1/2005	3.69138		158
	10/25/2005	3.55535		144
	4/29/2006	3.4012		137
	11/18/2006	3.54096		142
	5/23/2007	3.72569		163
	11/28/2007	3.68888		155
	6/5/2008	3.6055		147
	11/20/2008	3.7612		167
	6/11/2009	3.73767		166
	11/16/2009	3.61092		148
	6/30/2010	3.68888		156

Rank Sum = 2157
Rank Mean = 126.882

MW-9	7/20/1995	ND<1.60944		50
	8/24/1995	ND<1.60944		50
	9/28/1995	ND<1.60944		50
	10/26/1995	ND<1.60944		50
	11/19/1996	ND<1.60944		50
	12/19/1996	ND<1.60944		50
	3/24/1997	ND<1.60944		50
	9/24/1997	ND<1.60944		50
	4/7/1998	ND<1.60944		50
	9/23/1998	ND<1.60944		50
	3/16/1999	2.99573		129
	9/23/1999	3.95124		183
	3/15/2000	ND<1.60944		50
	9/24/2003	ND<1.60944		50
	3/11/2004	ND<1.60944		50
	10/12/2004	ND<1.60944		50
	4/1/2005	3.70623		159
	10/25/2005	3.66356		151
	4/29/2006	3.68888		157
	11/18/2006	3.89792		179
	5/23/2007	4.25419		193
	11/28/2007	3.85015		176
	6/5/2008	3.80221		169
	11/20/2008	3.89182		178
	6/11/2009	3.82864		173
	11/16/2009	3.71357		161
	6/30/2010	3.80666	H	172

Rank Sum = 2880
Rank Mean = 106.667

MW-8	7/20/1995	ND<1.60944		50
	8/24/1995	ND<1.60944		50
	9/28/1995	ND<1.60944		50
	10/26/1995	ND<1.60944		50
	11/19/1996	ND<1.60944		50
	12/19/1996	ND<1.60944		50
	3/24/1997	ND<1.60944		50
	9/24/1997	ND<1.60944		50
	4/7/1998	ND<1.60944		50
	9/23/1998	ND<1.60944		50
	3/16/1999	4.09434		187
	9/23/1999	3.71357		162
	3/15/2000	ND<1.60944		50
	9/24/2003	ND<1.60944		50
	3/11/2004	ND<1.60944		50
	10/12/2004	ND<1.60944		50
	4/1/2005	4.56122		202

10/25/2005	4.17746		190
4/29/2006	4.2485	192	
11/18/2006	4.44852		199
5/23/2007	4.33467		196
11/28/2007	4.60517		203
6/5/2008	4.48187	200	
11/20/2008	4.15888		189
6/11/2009	4.00733		184
6/30/2010	4.20469	H	191

Rank Sum = 2995
Rank Mean = 115.192

Calculation Results:

Kruskal-Wallis H Statistic = 14.0851
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 15.6819
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
14.0851 < 15.5073 indicating no significant group difference at 5% significance level
15.6819 > 15.5073 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 99.0588

Well	Mean Rank	Dif from Bkg	Critical Value
MW-11R	90.2222	-8.8366	44.1836
MW-6	77	-22.0588	44.1836
MW-7	108.556	9.49673	44.1836
MW-10	121.593	22.5338	44.1836
MW-12AR	125.471	26.4118	48.9476
MW-12BR	126.882	27.8235	48.9476
MW-9	106.667	7.60784	44.1836
MW-8	115.192	16.1335	44.5106

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 99.0588

Well	Mean Rank	Dif from Bkg	Critical Value
MW-11R	90.2222	-8.8366	47.7122
MW-6	77	-22.0588	47.7122
MW-7	108.556	9.49673	47.7122
MW-10	121.593	22.5338	47.7122
MW-12AR	125.471	26.4118	52.8567
MW-12BR	126.882	27.8235	52.8567
MW-9	106.667	7.60784	47.7122
MW-8	115.192	16.1335	48.0654

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Barium

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

Total Percent Non-Detects = 46.6981%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 17
Maximum Background Concentration = 3.91202
Confidence Level = 68%
False Positive Rate = 32%

Location	Date	Samples	Mean	Significant
MW-11R	6/30/2010	1	2.89037	FALSE
MW-6	6/30/2010	1	2.06686	FALSE
MW-7	6/30/2010	1	3.80666	FALSE
MW-10	6/30/2010	1	5.07517	TRUE
MW-12AR	6/30/2010	1	3.58352	FALSE
MW-12BR	6/30/2010	1	3.68888	FALSE
MW-9	6/30/2010	1	3.80666	FALSE
MW-8	6/30/2010	1	4.20469	TRUE

Mann-Kendall Trend Analysis

Parameter: Barium

Location: MW-10

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
4.49981	ND<1.60944	2.89037	1	0
4.27667	ND<1.60944	2.66723	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
4.35543	ND<1.60944	2.74599	3	0
4.3412	ND<1.60944	2.73177	4	0
2.3979	ND<1.60944	0.788457	5	0
4.81218	ND<1.60944	3.20275	6	0
4.93447	ND<1.60944	3.32504	7	0
4.77068	ND<1.60944	3.16125	8	0
5.01064	ND<1.60944	3.4012	9	0
5.01064	ND<1.60944	3.4012	10	0
5.1358	ND<1.60944	3.52636	11	0
4.86753	ND<1.60944	3.2581	12	0
5.07517 H	ND<1.60944	3.46574	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
4.49981	ND<1.60944	2.89037	14	0
4.27667	ND<1.60944	2.66723	15	0
ND<1.60944	ND<1.60944	0	15	0
ND<1.60944	ND<1.60944	0	15	0
ND<1.60944	ND<1.60944	0	15	0
ND<1.60944	ND<1.60944	0	15	0
4.35543	ND<1.60944	2.74599	16	0
4.3412	ND<1.60944	2.73177	17	0
2.3979	ND<1.60944	0.788457	18	0
4.81218	ND<1.60944	3.20275	19	0
4.93447	ND<1.60944	3.32504	20	0
4.77068	ND<1.60944	3.16125	21	0
5.01064	ND<1.60944	3.4012	22	0

5.01064		ND<1.60944	3.4012	23	0
5.1358	ND<1.60944	3.52636	24	0	
4.86753		ND<1.60944	3.2581	25	0
5.07517 H		ND<1.60944	3.46574	26	0
ND<1.60944		ND<1.60944	0	26	0
ND<1.60944		ND<1.60944	0	26	0
ND<1.60944		ND<1.60944	0	26	0
ND<1.60944		ND<1.60944	0	26	0
ND<1.60944		ND<1.60944	0	26	0
ND<1.60944		ND<1.60944	0	26	0
ND<1.60944		ND<1.60944	0	26	0
4.49981		ND<1.60944	2.89037	27	0
4.27667		ND<1.60944	2.66723	28	0
ND<1.60944		ND<1.60944	0	28	0
ND<1.60944		ND<1.60944	0	28	0
ND<1.60944		ND<1.60944	0	28	0
ND<1.60944		ND<1.60944	0	28	0
4.35543		ND<1.60944	2.74599	29	0
4.3412	ND<1.60944	2.73177	30	0	
2.3979	ND<1.60944	0.788457		31	0
4.81218		ND<1.60944	3.20275	32	0
4.93447		ND<1.60944	3.32504	33	0
4.77068		ND<1.60944	3.16125	34	0
5.01064		ND<1.60944	3.4012	35	0
5.01064		ND<1.60944	3.4012	36	0
5.1358	ND<1.60944	3.52636	37	0	
4.86753		ND<1.60944	3.2581	38	0
5.07517 H		ND<1.60944	3.46574	39	0
ND<1.60944		ND<1.60944	0	39	0
ND<1.60944		ND<1.60944	0	39	0
ND<1.60944		ND<1.60944	0	39	0
ND<1.60944		ND<1.60944	0	39	0
ND<1.60944		ND<1.60944	0	39	0
ND<1.60944		ND<1.60944	0	39	0
4.49981		ND<1.60944	2.89037	40	0
4.27667		ND<1.60944	2.66723	41	0
ND<1.60944		ND<1.60944	0	41	0
ND<1.60944		ND<1.60944	0	41	0
ND<1.60944		ND<1.60944	0	41	0
ND<1.60944		ND<1.60944	0	41	0
4.35543		ND<1.60944	2.74599	42	0
4.3412	ND<1.60944	2.73177	43	0	
2.3979	ND<1.60944	0.788457		44	0
4.81218		ND<1.60944	3.20275	45	0
4.93447		ND<1.60944	3.32504	46	0
4.77068		ND<1.60944	3.16125	47	0
5.01064		ND<1.60944	3.4012	48	0
5.01064		ND<1.60944	3.4012	49	0
5.1358	ND<1.60944	3.52636	50	0	
4.86753		ND<1.60944	3.2581	51	0
5.07517 H		ND<1.60944	3.46574	52	0
ND<1.60944		ND<1.60944	0	52	0
ND<1.60944		ND<1.60944	0	52	0
ND<1.60944		ND<1.60944	0	52	0
ND<1.60944		ND<1.60944	0	52	0
ND<1.60944		ND<1.60944	0	52	0
4.49981		ND<1.60944	2.89037	53	0
4.27667		ND<1.60944	2.66723	54	0
ND<1.60944		ND<1.60944	0	54	0

ND<1.60944	ND<1.60944	0	54	0
ND<1.60944	ND<1.60944	0	54	0
ND<1.60944	ND<1.60944	0	54	0
4.35543	ND<1.60944	2.74599	55	0
4.3412	ND<1.60944	2.73177	56	0
2.3979	ND<1.60944	0.788457	57	0
4.81218	ND<1.60944	3.20275	58	0
4.93447	ND<1.60944	3.32504	59	0
4.77068	ND<1.60944	3.16125	60	0
5.01064	ND<1.60944	3.4012	61	0
5.01064	ND<1.60944	3.4012	62	0
5.1358	ND<1.60944	3.52636	63	0
4.86753	ND<1.60944	3.2581	64	0
5.07517 H	ND<1.60944	3.46574	65	0
ND<1.60944	ND<1.60944	0	65	0
ND<1.60944	ND<1.60944	0	65	0
ND<1.60944	ND<1.60944	0	65	0
ND<1.60944	ND<1.60944	0	65	0
4.49981	ND<1.60944	2.89037	66	0
4.27667	ND<1.60944	2.66723	67	0
ND<1.60944	ND<1.60944	0	67	0
ND<1.60944	ND<1.60944	0	67	0
ND<1.60944	ND<1.60944	0	67	0
ND<1.60944	ND<1.60944	0	67	0
4.35543	ND<1.60944	2.74599	68	0
4.3412	ND<1.60944	2.73177	69	0
2.3979	ND<1.60944	0.788457	70	0
4.81218	ND<1.60944	3.20275	71	0
4.93447	ND<1.60944	3.32504	72	0
4.77068	ND<1.60944	3.16125	73	0
5.01064	ND<1.60944	3.4012	74	0
5.01064	ND<1.60944	3.4012	75	0
5.1358	ND<1.60944	3.52636	76	0
4.86753	ND<1.60944	3.2581	77	0
5.07517 H	ND<1.60944	3.46574	78	0
ND<1.60944	ND<1.60944	0	78	0
ND<1.60944	ND<1.60944	0	78	0
ND<1.60944	ND<1.60944	0	78	0
4.49981	ND<1.60944	2.89037	79	0
4.27667	ND<1.60944	2.66723	80	0
ND<1.60944	ND<1.60944	0	80	0
ND<1.60944	ND<1.60944	0	80	0
ND<1.60944	ND<1.60944	0	80	0
ND<1.60944	ND<1.60944	0	80	0
4.35543	ND<1.60944	2.74599	81	0
4.3412	ND<1.60944	2.73177	82	0
2.3979	ND<1.60944	0.788457	83	0
4.81218	ND<1.60944	3.20275	84	0
4.93447	ND<1.60944	3.32504	85	0
4.77068	ND<1.60944	3.16125	86	0
5.01064	ND<1.60944	3.4012	87	0
5.01064	ND<1.60944	3.4012	88	0
5.1358	ND<1.60944	3.52636	89	0
4.86753	ND<1.60944	3.2581	90	0
5.07517 H	ND<1.60944	3.46574	91	0
ND<1.60944	ND<1.60944	0	91	0
ND<1.60944	ND<1.60944	0	91	0
4.49981	ND<1.60944	2.89037	92	0
4.27667	ND<1.60944	2.66723	93	0

ND<1.60944	ND<1.60944	0	93	0
ND<1.60944	ND<1.60944	0	93	0
ND<1.60944	ND<1.60944	0	93	0
ND<1.60944	ND<1.60944	0	93	0
4.35543	ND<1.60944	2.74599	94	0
4.3412	ND<1.60944	2.73177	95	0
2.3979	ND<1.60944	0.788457	96	0
4.81218	ND<1.60944	3.20275	97	0
4.93447	ND<1.60944	3.32504	98	0
4.77068	ND<1.60944	3.16125	99	0
5.01064	ND<1.60944	3.4012	100	0
5.01064	ND<1.60944	3.4012	101	0
5.1358	ND<1.60944	3.52636	102	0
4.86753	ND<1.60944	3.2581	103	0
5.07517 H	ND<1.60944	3.46574	104	0
ND<1.60944	ND<1.60944	0	104	0
4.49981	ND<1.60944	2.89037	105	0
4.27667	ND<1.60944	2.66723	106	0
ND<1.60944	ND<1.60944	0	106	0
ND<1.60944	ND<1.60944	0	106	0
ND<1.60944	ND<1.60944	0	106	0
ND<1.60944	ND<1.60944	0	106	0
4.35543	ND<1.60944	2.74599	107	0
4.3412	ND<1.60944	2.73177	108	0
2.3979	ND<1.60944	0.788457	109	0
4.81218	ND<1.60944	3.20275	110	0
4.93447	ND<1.60944	3.32504	111	0
4.77068	ND<1.60944	3.16125	112	0
5.01064	ND<1.60944	3.4012	113	0
5.01064	ND<1.60944	3.4012	114	0
5.1358	ND<1.60944	3.52636	115	0
4.86753	ND<1.60944	3.2581	116	0
5.07517 H	ND<1.60944	3.46574	117	0
4.49981	ND<1.60944	2.89037	118	0
4.27667	ND<1.60944	2.66723	119	0
ND<1.60944	ND<1.60944	0	119	0
ND<1.60944	ND<1.60944	0	119	0
ND<1.60944	ND<1.60944	0	119	0
ND<1.60944	ND<1.60944	0	119	0
4.35543	ND<1.60944	2.74599	120	0
4.3412	ND<1.60944	2.73177	121	0
2.3979	ND<1.60944	0.788457	122	0
4.81218	ND<1.60944	3.20275	123	0
4.93447	ND<1.60944	3.32504	124	0
4.77068	ND<1.60944	3.16125	125	0
5.01064	ND<1.60944	3.4012	126	0
5.01064	ND<1.60944	3.4012	127	0
5.1358	ND<1.60944	3.52636	128	0
4.86753	ND<1.60944	3.2581	129	0
5.07517 H	ND<1.60944	3.46574	130	0
4.27667	4.49981	-0.223144	130	1
ND<1.60944	4.49981	-2.89037	130	2
ND<1.60944	4.49981	-2.89037	130	3
ND<1.60944	4.49981	-2.89037	130	4
ND<1.60944	4.49981	-2.89037	130	5
4.35543	4.49981	-0.144384	130	6
4.3412	4.49981	-0.158605	130	7
2.3979	4.49981	-2.10191	130	8
4.81218	4.49981	0.312375	131	8

4.93447	4.49981	0.434664	132	8
4.77068	4.49981	0.270875	133	8
5.01064	4.49981	0.510826	134	8
5.01064	4.49981	0.510826	135	8
5.1358	4.49981	0.635989	136	8
4.86753	4.49981	0.367725	137	8
5.07517 H	4.49981	0.575364	138	8
ND<1.60944	4.27667	-2.66723	138	9
ND<1.60944	4.27667	-2.66723	138	10
ND<1.60944	4.27667	-2.66723	138	11
ND<1.60944	4.27667	-2.66723	138	12
4.35543	4.27667	0.0787598	139	12
4.3412	4.27667	0.0645385	140	12
2.3979	4.27667	-1.87877	140	13
4.81218	4.27667	0.535518	141	13
4.93447	4.27667	0.657808	142	13
4.77068	4.27667	0.494019	143	13
5.01064	4.27667	0.733969	144	13
5.01064	4.27667	0.733969	145	13
5.1358	4.27667	0.859132	146	13
4.86753	4.27667	0.590868	147	13
5.07517 H	4.27667	0.798508	148	13
ND<1.60944	ND<1.60944	0	148	13
ND<1.60944	ND<1.60944	0	148	13
ND<1.60944	ND<1.60944	0	148	13
4.35543	ND<1.60944	2.74599	149	13
4.3412	ND<1.60944	2.73177	150	13
2.3979	ND<1.60944	0.788457	151	13
4.81218	ND<1.60944	3.20275	152	13
4.93447	ND<1.60944	3.32504	153	13
4.77068	ND<1.60944	3.16125	154	13
5.01064	ND<1.60944	3.4012	155	13
5.01064	ND<1.60944	3.4012	156	13
5.1358	ND<1.60944	3.52636	157	13
4.86753	ND<1.60944	3.2581	158	13
5.07517 H	ND<1.60944	3.46574	159	13
ND<1.60944	ND<1.60944	0	159	13
ND<1.60944	ND<1.60944	0	159	13
4.35543	ND<1.60944	2.74599	160	13
4.3412	ND<1.60944	2.73177	161	13
2.3979	ND<1.60944	0.788457	162	13
4.81218	ND<1.60944	3.20275	163	13
4.93447	ND<1.60944	3.32504	164	13
4.77068	ND<1.60944	3.16125	165	13
5.01064	ND<1.60944	3.4012	166	13
5.01064	ND<1.60944	3.4012	167	13
5.1358	ND<1.60944	3.52636	168	13
4.86753	ND<1.60944	3.2581	169	13
5.07517 H	ND<1.60944	3.46574	170	13
ND<1.60944	ND<1.60944	0	170	13
4.35543	ND<1.60944	2.74599	171	13
4.3412	ND<1.60944	2.73177	172	13
2.3979	ND<1.60944	0.788457	173	13
4.81218	ND<1.60944	3.20275	174	13
4.93447	ND<1.60944	3.32504	175	13
4.77068	ND<1.60944	3.16125	176	13
5.01064	ND<1.60944	3.4012	177	13
5.01064	ND<1.60944	3.4012	178	13

5.1358	ND<1.60944	3.52636	179	13		
4.86753	ND<1.60944	3.2581	180	13		
5.07517 H	ND<1.60944	3.46574	181	13		
4.35543	ND<1.60944	2.74599	182	13		
4.3412	ND<1.60944	2.73177	183	13		
2.3979	ND<1.60944	0.788457	184	13		
4.81218	ND<1.60944	3.20275	185	13		
4.93447	ND<1.60944	3.32504	186	13		
4.77068	ND<1.60944	3.16125	187	13		
5.01064	ND<1.60944	3.4012	188	13		
5.01064	ND<1.60944	3.4012	189	13		
5.1358	ND<1.60944	3.52636	190	13		
4.86753	ND<1.60944	3.2581	191	13		
5.07517 H	ND<1.60944	3.46574	192	13		
4.3412	4.35543	-0.0142213	192	14		
2.3979	4.35543	-1.95753192	15			
4.81218	4.35543	0.456758	193	15		
4.93447	4.35543	0.579048	194	15		
4.77068	4.35543	0.415259	195	15		
5.01064	4.35543	0.655209	196	15		
5.01064	4.35543	0.655209	197	15		
5.1358	4.35543	0.780372	198	15		
4.86753	4.35543	0.512108	199	15		
5.07517 H	4.35543	0.719748	200	15		
2.3979	4.3412	-1.94331200	16			
4.81218	4.3412	0.47098	201	16		
4.93447	4.3412	0.593269	202	16		
4.77068	4.3412	0.42948	203	16		
5.01064	4.3412	0.669431	204	16		
5.01064	4.3412	0.669431	205	16		
5.1358	4.3412	0.794594	206	16		
4.86753	4.3412	0.52633	207	16		
5.07517 H	4.3412	0.733969	208	16		
4.81218	2.3979	2.41429	209	16		
4.93447	2.3979	2.53658	210	16		
4.77068	2.3979	2.37279	211	16		
5.01064	2.3979	2.61274	212	16		
5.01064	2.3979	2.61274	213	16		
5.1358	2.3979	2.7379	214	16		
4.86753	2.3979	2.46964	215	16		
5.07517 H	2.3979	2.67728	216	16		
4.93447	4.81218	0.12229	217	16		
4.77068	4.81218	-0.0414997	217	17		
5.01064	4.81218	0.198451	218	17		
5.01064	4.81218	0.198451	219	17		
5.1358	4.81218	0.323614	220	17		
4.86753	4.81218	0.0553501	221	17		
5.07517 H	4.81218	0.262989	222	17		
4.77068	4.93447	-0.163789	222	18		
5.01064	4.93447	0.0761614	223	18		
5.01064	4.93447	0.0761614	224	18		
5.1358	4.93447	0.201325	225	18		
4.86753	4.93447	-0.0669395	225	19		
5.07517 H	4.93447	0.1407	226	19		

5.01064		4.77068	0.239951	227	19
5.01064		4.77068	0.239951	228	19
5.1358	4.77068	0.365114	229	19	
4.86753		4.77068	0.0968498	230	19
5.07517	H	4.77068	0.304489	231	19
5.01064		5.01064	0	231	19
5.1358	5.01064	0.125163	232	19	
4.86753		5.01064	-0.143101	232	20
5.07517	H	5.01064	0.0645385	233	20
5.1358	5.01064	0.125163	234	20	
4.86753		5.01064	-0.143101	234	21
5.07517	H	5.01064	0.0645385	235	21
4.86753		5.1358	-0.268264	235	22
5.07517	H	5.1358	-0.0606246	235	23
5.07517	H	4.86753	0.207639	236	23

S Statistic = 236 - 23 = 213

Tied Group	Value	Members
1	1.60944	14
2	5.01064	2

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 6024
B = 0
C = 2184

D = 0
E = 184
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 1966.33
Z-Score = 4.78087
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|4.78087| > 1.97737 indicating a trend

Mann-Kendall Trend Analysis

Parameter: Barium

Location: MW-8

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives		Negatives
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
4.09434		ND<1.60944	2.48491	1	0
3.71357		ND<1.60944	2.10413	2	0
ND<1.60944		ND<1.60944	0	2	0
ND<1.60944		ND<1.60944	0	2	0
ND<1.60944		ND<1.60944	0	2	0
ND<1.60944		ND<1.60944	0	2	0
4.56122		ND<1.60944	2.95178	3	0
4.17746		ND<1.60944	2.56802	4	0
4.2485	ND<1.60944	2.63906	5	0	
4.44852		ND<1.60944	2.83908	6	0
4.33467		ND<1.60944	2.72524	7	0
4.60517		ND<1.60944	2.99573	8	0
4.48187		ND<1.60944	2.87243	9	0
4.15888		ND<1.60944	2.54945	10	0
4.00733		ND<1.60944	2.3979	11	0
4.20469 H		ND<1.60944	2.59525	12	0
ND<1.60944		ND<1.60944	0	12	0
ND<1.60944		ND<1.60944	0	12	0
ND<1.60944		ND<1.60944	0	12	0
ND<1.60944		ND<1.60944	0	12	0
ND<1.60944		ND<1.60944	0	12	0
ND<1.60944		ND<1.60944	0	12	0
ND<1.60944		ND<1.60944	0	12	0
ND<1.60944		ND<1.60944	0	12	0
4.09434		ND<1.60944	2.48491	13	0
3.71357		ND<1.60944	2.10413	14	0
ND<1.60944		ND<1.60944	0	14	0
ND<1.60944		ND<1.60944	0	14	0
ND<1.60944		ND<1.60944	0	14	0
ND<1.60944		ND<1.60944	0	14	0
4.56122		ND<1.60944	2.95178	15	0
4.17746		ND<1.60944	2.56802	16	0
4.2485	ND<1.60944	2.63906	17	0	
4.44852		ND<1.60944	2.83908	18	0
4.33467		ND<1.60944	2.72524	19	0
4.60517		ND<1.60944	2.99573	20	0
4.48187		ND<1.60944	2.87243	21	0
4.15888		ND<1.60944	2.54945	22	0

4.00733	ND<1.60944	2.3979	23	0
4.20469 H	ND<1.60944	2.59525	24	0
ND<1.60944	ND<1.60944	0	24	0
ND<1.60944	ND<1.60944	0	24	0
ND<1.60944	ND<1.60944	0	24	0
ND<1.60944	ND<1.60944	0	24	0
ND<1.60944	ND<1.60944	0	24	0
ND<1.60944	ND<1.60944	0	24	0
ND<1.60944	ND<1.60944	0	24	0
4.09434	ND<1.60944	2.48491	25	0
3.71357	ND<1.60944	2.10413	26	0
ND<1.60944	ND<1.60944	0	26	0
ND<1.60944	ND<1.60944	0	26	0
ND<1.60944	ND<1.60944	0	26	0
ND<1.60944	ND<1.60944	0	26	0
4.56122	ND<1.60944	2.95178	27	0
4.17746	ND<1.60944	2.56802	28	0
4.2485	ND<1.60944	2.63906	29	0
4.44852	ND<1.60944	2.83908	30	0
4.33467	ND<1.60944	2.72524	31	0
4.60517	ND<1.60944	2.99573	32	0
4.48187	ND<1.60944	2.87243	33	0
4.15888	ND<1.60944	2.54945	34	0
4.00733	ND<1.60944	2.3979	35	0
4.20469 H	ND<1.60944	2.59525	36	0
ND<1.60944	ND<1.60944	0	36	0
ND<1.60944	ND<1.60944	0	36	0
ND<1.60944	ND<1.60944	0	36	0
ND<1.60944	ND<1.60944	0	36	0
ND<1.60944	ND<1.60944	0	36	0
ND<1.60944	ND<1.60944	0	36	0
4.09434	ND<1.60944	2.48491	37	0
3.71357	ND<1.60944	2.10413	38	0
ND<1.60944	ND<1.60944	0	38	0
ND<1.60944	ND<1.60944	0	38	0
ND<1.60944	ND<1.60944	0	38	0
ND<1.60944	ND<1.60944	0	38	0
4.56122	ND<1.60944	2.95178	39	0
4.17746	ND<1.60944	2.56802	40	0
4.2485	ND<1.60944	2.63906	41	0
4.44852	ND<1.60944	2.83908	42	0
4.33467	ND<1.60944	2.72524	43	0
4.60517	ND<1.60944	2.99573	44	0
4.48187	ND<1.60944	2.87243	45	0
4.15888	ND<1.60944	2.54945	46	0
4.00733	ND<1.60944	2.3979	47	0
4.20469 H	ND<1.60944	2.59525	48	0
ND<1.60944	ND<1.60944	0	48	0
ND<1.60944	ND<1.60944	0	48	0
ND<1.60944	ND<1.60944	0	48	0
ND<1.60944	ND<1.60944	0	48	0
ND<1.60944	ND<1.60944	0	48	0
4.09434	ND<1.60944	2.48491	49	0
3.71357	ND<1.60944	2.10413	50	0
ND<1.60944	ND<1.60944	0	50	0
ND<1.60944	ND<1.60944	0	50	0
ND<1.60944	ND<1.60944	0	50	0
ND<1.60944	ND<1.60944	0	50	0
4.56122	ND<1.60944	2.95178	51	0

4.17746	ND<1.60944	2.56802	52	0
4.2485	ND<1.60944	2.63906	53	0
4.44852	ND<1.60944	2.83908	54	0
4.33467	ND<1.60944	2.72524	55	0
4.60517	ND<1.60944	2.99573	56	0
4.48187	ND<1.60944	2.87243	57	0
4.15888	ND<1.60944	2.54945	58	0
4.00733	ND<1.60944	2.3979	59	0
4.20469 H	ND<1.60944	2.59525	60	0
ND<1.60944	ND<1.60944	0	60	0
ND<1.60944	ND<1.60944	0	60	0
ND<1.60944	ND<1.60944	0	60	0
ND<1.60944	ND<1.60944	0	60	0
4.09434	ND<1.60944	2.48491	61	0
3.71357	ND<1.60944	2.10413	62	0
ND<1.60944	ND<1.60944	0	62	0
ND<1.60944	ND<1.60944	0	62	0
ND<1.60944	ND<1.60944	0	62	0
ND<1.60944	ND<1.60944	0	62	0
4.56122	ND<1.60944	2.95178	63	0
4.17746	ND<1.60944	2.56802	64	0
4.2485	ND<1.60944	2.63906	65	0
4.44852	ND<1.60944	2.83908	66	0
4.33467	ND<1.60944	2.72524	67	0
4.60517	ND<1.60944	2.99573	68	0
4.48187	ND<1.60944	2.87243	69	0
4.15888	ND<1.60944	2.54945	70	0
4.00733	ND<1.60944	2.3979	71	0
4.20469 H	ND<1.60944	2.59525	72	0
ND<1.60944	ND<1.60944	0	72	0
ND<1.60944	ND<1.60944	0	72	0
ND<1.60944	ND<1.60944	0	72	0
4.09434	ND<1.60944	2.48491	73	0
3.71357	ND<1.60944	2.10413	74	0
ND<1.60944	ND<1.60944	0	74	0
ND<1.60944	ND<1.60944	0	74	0
ND<1.60944	ND<1.60944	0	74	0
ND<1.60944	ND<1.60944	0	74	0
4.56122	ND<1.60944	2.95178	75	0
4.17746	ND<1.60944	2.56802	76	0
4.2485	ND<1.60944	2.63906	77	0
4.44852	ND<1.60944	2.83908	78	0
4.33467	ND<1.60944	2.72524	79	0
4.60517	ND<1.60944	2.99573	80	0
4.48187	ND<1.60944	2.87243	81	0
4.15888	ND<1.60944	2.54945	82	0
4.00733	ND<1.60944	2.3979	83	0
4.20469 H	ND<1.60944	2.59525	84	0
ND<1.60944	ND<1.60944	0	84	0
ND<1.60944	ND<1.60944	0	84	0
4.09434	ND<1.60944	2.48491	85	0
3.71357	ND<1.60944	2.10413	86	0
ND<1.60944	ND<1.60944	0	86	0
ND<1.60944	ND<1.60944	0	86	0
ND<1.60944	ND<1.60944	0	86	0
ND<1.60944	ND<1.60944	0	86	0
4.56122	ND<1.60944	2.95178	87	0
4.17746	ND<1.60944	2.56802	88	0
4.2485	ND<1.60944	2.63906	89	0

4.44852	ND<1.60944	2.83908	90	0
4.33467	ND<1.60944	2.72524	91	0
4.60517	ND<1.60944	2.99573	92	0
4.48187	ND<1.60944	2.87243	93	0
4.15888	ND<1.60944	2.54945	94	0
4.00733	ND<1.60944	2.3979	95	0
4.20469 H	ND<1.60944	2.59525	96	0
ND<1.60944	ND<1.60944	0	96	0
4.09434	ND<1.60944	2.48491	97	0
3.71357	ND<1.60944	2.10413	98	0
ND<1.60944	ND<1.60944	0	98	0
ND<1.60944	ND<1.60944	0	98	0
ND<1.60944	ND<1.60944	0	98	0
ND<1.60944	ND<1.60944	0	98	0
4.56122	ND<1.60944	2.95178	99	0
4.17746	ND<1.60944	2.56802	100	0
4.2485	ND<1.60944	2.63906	101	0
4.44852	ND<1.60944	2.83908	102	0
4.33467	ND<1.60944	2.72524	103	0
4.60517	ND<1.60944	2.99573	104	0
4.48187	ND<1.60944	2.87243	105	0
4.15888	ND<1.60944	2.54945	106	0
4.00733	ND<1.60944	2.3979	107	0
4.20469 H	ND<1.60944	2.59525	108	0
4.09434	ND<1.60944	2.48491	109	0
3.71357	ND<1.60944	2.10413	110	0
ND<1.60944	ND<1.60944	0	110	0
ND<1.60944	ND<1.60944	0	110	0
ND<1.60944	ND<1.60944	0	110	0
ND<1.60944	ND<1.60944	0	110	0
4.56122	ND<1.60944	2.95178	111	0
4.17746	ND<1.60944	2.56802	112	0
4.2485	ND<1.60944	2.63906	113	0
4.44852	ND<1.60944	2.83908	114	0
4.33467	ND<1.60944	2.72524	115	0
4.60517	ND<1.60944	2.99573	116	0
4.48187	ND<1.60944	2.87243	117	0
4.15888	ND<1.60944	2.54945	118	0
4.00733	ND<1.60944	2.3979	119	0
4.20469 H	ND<1.60944	2.59525	120	0
3.71357	4.09434	-0.380772	120	1
ND<1.60944	4.09434	-2.48491	120	2
ND<1.60944	4.09434	-2.48491	120	3
ND<1.60944	4.09434	-2.48491	120	4
ND<1.60944	4.09434	-2.48491	120	5
4.56122	4.09434	0.466874	121	5
4.17746	4.09434	0.0831149	122	5
4.2485	4.09434	0.154151	123	5
4.44852	4.09434	0.354172	124	5
4.33467	4.09434	0.240328	125	5
4.60517	4.09434	0.510826	126	5
4.48187	4.09434	0.387527	127	5
4.15888	4.09434	0.0645385	128	5
4.00733	4.09434	-0.0870114	128	6
4.20469 H	4.09434	0.110348	129	6
ND<1.60944	3.71357	-2.10413	129	7
ND<1.60944	3.71357	-2.10413	129	8
ND<1.60944	3.71357	-2.10413	129	9

ND<1.60944	3.71357	-2.10413	129	10
4.56122	3.71357	0.847646	130	10
4.17746	3.71357	0.463887	131	10
4.2485	3.71357	0.534923	132	10
4.44852	3.71357	0.734944	133	10
4.33467	3.71357	0.621101	134	10
4.60517	3.71357	0.891598	135	10
4.48187	3.71357	0.7683	136	10
4.15888	3.71357	0.445311	137	10
4.00733	3.71357	0.293761	138	10
4.20469 H	3.71357	0.491121	139	10

ND<1.60944	ND<1.60944	0	139	10
ND<1.60944	ND<1.60944	0	139	10
ND<1.60944	ND<1.60944	0	139	10
4.56122	ND<1.60944	2.95178	140	10
4.17746	ND<1.60944	2.56802	141	10
4.2485	ND<1.60944	2.63906	142	10
4.44852	ND<1.60944	2.83908	143	10
4.33467	ND<1.60944	2.72524	144	10
4.60517	ND<1.60944	2.99573	145	10
4.48187	ND<1.60944	2.87243	146	10
4.15888	ND<1.60944	2.54945	147	10
4.00733	ND<1.60944	2.3979	148	10
4.20469 H	ND<1.60944	2.59525	149	10

ND<1.60944	ND<1.60944	0	149	10
ND<1.60944	ND<1.60944	0	149	10
4.56122	ND<1.60944	2.95178	150	10
4.17746	ND<1.60944	2.56802	151	10
4.2485	ND<1.60944	2.63906	152	10
4.44852	ND<1.60944	2.83908	153	10
4.33467	ND<1.60944	2.72524	154	10
4.60517	ND<1.60944	2.99573	155	10
4.48187	ND<1.60944	2.87243	156	10
4.15888	ND<1.60944	2.54945	157	10
4.00733	ND<1.60944	2.3979	158	10
4.20469 H	ND<1.60944	2.59525	159	10

ND<1.60944	ND<1.60944	0	159	10
4.56122	ND<1.60944	2.95178	160	10
4.17746	ND<1.60944	2.56802	161	10
4.2485	ND<1.60944	2.63906	162	10
4.44852	ND<1.60944	2.83908	163	10
4.33467	ND<1.60944	2.72524	164	10
4.60517	ND<1.60944	2.99573	165	10
4.48187	ND<1.60944	2.87243	166	10
4.15888	ND<1.60944	2.54945	167	10
4.00733	ND<1.60944	2.3979	168	10
4.20469 H	ND<1.60944	2.59525	169	10

4.56122	ND<1.60944	2.95178	170	10
4.17746	ND<1.60944	2.56802	171	10
4.2485	ND<1.60944	2.63906	172	10
4.44852	ND<1.60944	2.83908	173	10
4.33467	ND<1.60944	2.72524	174	10
4.60517	ND<1.60944	2.99573	175	10
4.48187	ND<1.60944	2.87243	176	10
4.15888	ND<1.60944	2.54945	177	10
4.00733	ND<1.60944	2.3979	178	10
4.20469 H	ND<1.60944	2.59525	179	10

4.17746	4.56122	-0.383759	179	11
4.2485	4.56122	-0.312723	179	12
4.44852	4.56122	-0.112702	179	13
4.33467	4.56122	-0.226545	179	14
4.60517	4.56122	0.0439519	180	14
4.48187	4.56122	-0.0793463	180	15
4.15888	4.56122	-0.402335	180	16
4.00733	4.56122	-0.553885	180	17
4.20469 H	4.56122	-0.356526	180	18
4.2485	4.17746	0.0710358	181	18
4.44852	4.17746	0.271057	182	18
4.33467	4.17746	0.157213	183	18
4.60517	4.17746	0.427711	184	18
4.48187	4.17746	0.304413	185	18
4.15888	4.17746	-0.0185764	185	19
4.00733	4.17746	-0.170126	185	20
4.20469 H	4.17746	0.0272332	186	20
4.44852	4.2485	0.200021	187	20
4.33467	4.2485	0.0861777	188	20
4.60517	4.2485	0.356675	189	20
4.48187	4.2485	0.233377	190	20
4.15888	4.2485	-0.0896122	190	21
4.00733	4.2485	-0.241162	190	22
4.20469 H	4.2485	-0.0438026	190	23
4.33467	4.44852	-0.113843	190	24
4.60517	4.44852	0.156654	191	24
4.48187	4.44852	0.0333556	192	24
4.15888	4.44852	-0.289633	192	25
4.00733	4.44852	-0.441183	192	26
4.20469 H	4.44852	-0.243824	192	27
4.60517	4.33467	0.270497	193	27
4.48187	4.33467	0.147199	194	27
4.15888	4.33467	-0.17579194	28	
4.00733	4.33467	-0.32734194	29	
4.20469 H	4.33467	-0.12998194	30	
4.48187	4.60517	-0.123298	194	31
4.15888	4.60517	-0.446287	194	32
4.00733	4.60517	-0.597837	194	33
4.20469 H	4.60517	-0.400478	194	34
4.15888	4.48187	-0.322989	194	35
4.00733	4.48187	-0.474539	194	36
4.20469 H	4.48187	-0.277179	194	37
4.00733	4.15888	-0.15155194	38	
4.20469 H	4.15888	0.0458095	195	38
4.20469 H	4.00733	0.197359	196	38

S Statistic = 196 - 38 = 158

Tied Group Value Members

1	1.60944	14

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 6006
B = 0
C = 2184
D = 0
E = 182
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1724.67
Z-Score = 3.78048
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|3.78048| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: Benzene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 138
Percent Non-Detects: 65.0943%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.25	ND<0.25
			11/16/2009	ND<0.25	ND<0.25
			6/30/2010	ND<0.25	ND<0.25

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-8	26	12 (46.1538%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	5.4	5.4
			4/7/1998	ND<2	ND<2
			9/23/1998	5.6	5.6
			3/16/1999	3.5	3.5
			9/23/1999	3.6	3.6
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	3.22	3.22
			10/25/2005	4.99	4.99
			4/29/2006	2.54	2.54
			11/18/2006	4.03	4.03
			5/23/2007	3.2	3.2
			11/28/2007	4.5	4.5
			6/5/2008	4.07	4.07
			11/20/2008	2.72	2.72

			6/11/2009	3.6	3.6	
			6/30/2010	2.1	2.1	
MW-9	27	12 (44.4444%)	7/20/1995	2.5	2.5	
			8/24/1995	2.6	2.6	
			9/28/1995	3	3	
			10/26/1995	3	3	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	2.2	2.2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	1.92 J	1.92 J	
			10/25/2005	1.09 J	1.09 J	
			4/29/2006	0.71 J	0.71 J	
			11/18/2006	0.8 J	0.8 J	
			5/23/2007	2.2	2.2	
			11/28/2007	1.54 J	1.54 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	1.35 J	1.35 J	
			6/11/2009	1.9	1.9	
			11/16/2009	1.4	1.4	
			6/30/2010	1.8	1.8	
MW-12BR	17	15 (88.2353%)	3/16/1999	3.8	3.8	
			9/23/1999	3	3	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.25	ND<0.25	
			11/16/2009	ND<0.25	ND<0.25	
			6/30/2010	ND<0.25	ND<0.25	
MW-12AR	17	11 (64.7059%)	3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	1.03 J	1.03 J	
			4/29/2006	1.04 J	1.04 J	
			11/18/2006	0.76 J	0.76 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.84 J	0.84 J	
			6/5/2008	ND<2	ND<2	

			11/20/2008	0.53 J	0.53 J	
			6/11/2009	ND<0.25		ND<0.25
			11/16/2009	0.26 J	0.26 J	
			6/30/2010	ND<0.25		ND<0.25
MW-11R	27	12 (44.4444%)	7/20/1995		2.1	2.1
			8/24/1995	6.3	6.3	
			9/28/1995	6	6	
			10/26/1995	8	8	
			11/19/1996	ND<2	ND<2	
			12/19/1996	9	9	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	5	5	
			3/16/1999	5	5	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	4.58	4.58	
			10/25/2005	1.54 J	1.54 J	
			4/29/2006	0.83 J	0.83 J	
			11/18/2006	0.93 J	0.93 J	
			5/23/2007	2.1	2.1	
			11/28/2007	1.3 J	1.3 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	0.59 J	0.59 J	
			11/16/2009	ND<0.25		ND<0.25
			6/30/2010	0.81 J	0.81 J	
MW-7	27	19 (70.3704%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	0.51 J	0.51 J	
			4/29/2006	0.68 J	0.68 J	
			11/18/2006	0.36 J	0.36 J	
			5/23/2007	1.2	1.2	
			11/28/2007	0.5 J	0.5 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	1.02 J	1.02 J	
			6/11/2009	0.73 J	0.73 J	
			11/16/2009	ND<0.25		ND<0.25
			6/30/2010	0.72 J	0.72 J	
MW-6	27	26 (96.2963%)	7/20/1995		ND<2	ND<2

			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	1.2	1.2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.25		ND<0.25
			11/16/2009	ND<0.25		ND<0.25
			6/30/2010	ND<0.25		ND<0.25
MW-10	27	14 (51.8519%)	7/20/1995		ND<2	ND<2
			8/24/1995	1.2 J	1.2 J	
			9/28/1995	2	2	
			10/26/1995	2	2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	2.2	2.2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	1.8 J	1.8 J	
			10/25/2005	1.32 J	1.32 J	
			4/29/2006	1.31 J	1.31 J	
			11/18/2006	0.96 J	0.96 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	1.38	1.38	
			6/5/2008	ND<2	ND<2	
			11/20/2008	1 J	1 J	
			6/11/2009	1	1	
			11/16/2009	1.3	1.3	
			6/30/2010	0.94 J	0.94 J	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Benzene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.125	-2.65209	7.03356	-0.331511
2	0.125	-2.365	11.2629	7 -0.627213
3	0.125	-2.197	28.1745	78 -0.901873
4	0.125	-2.096	93.2185	49 -1.16399
5	0.125	-1.995	39.2583	65 -1.41341
6	0.125	-1.911	03.2948	85 -1.65229
7	0.125	-1.852	18.3291	91 -1.88381
8	0.125	-1.786	13.6111	-2.10714
9	0.125	-1.727	93.3909	68 -2.32313
10	0.125	-1.684	94.1935	8 -2.53375
11	0.125	-1.635	24.4609	8 -2.73815
12	0.125	-1.589	27.4713	56 -2.93681
13	0.125	-1.546	43.527	-3.13012
14	0.26	-1.514	1 51.8195	-3.52378
15	0.36	-1.475	79.5399	75 -4.05507
16	0.5	-1.439	53.0698	-4.77483
17	0.51	-1.411	83.063	-5.49487
18	0.53	-1.378	65.9637	-6.22556
19	0.59	-1.346	94.61.778	-7.02025
20	0.68	-1.322	51.63.527	-7.91955
21	0.71	-1.293	03.65.1989	-8.83761
22	0.72	-1.264	64.66.7982	-9.74815
23	0.73	-1.242	64.68.3424	-10.6553
24	0.76	-1.215	96.69.821	-11.5794
25	0.8	-1.190	12.71.2373	-12.5315
26	0.81	-1.165	05.72.5947	-13.4752
27	0.83	-1.1455	73.9069	-14.426
28	0.84	-1.121	68.75.165	-15.3682
29	0.93	-1.098	47.76.3716	-16.3897
30	0.94	-1.080	32.77.5387	-17.4052
31	0.96	-1.058	12.78.6584	-18.421
32	1	-1.036	43.79.7326	-19.4575
33	1	-1.019	43.80.7718	-20.4769
34	1	-0.998575	81.7689	-21.4755
35	1	-0.978	158.72.7257	-22.4536
36	1	-0.958125	83.6437	-23.4118
37	1	-0.942375	84.5318	-24.3541
38	1	-0.923014	85.3837	-25.2771
39	1	-0.903992	86.201	-26.1811
40	1	-0.889006	86.9913	-27.0701
41	1	-0.870	558.7491	-27.9407
42	1	-0.852385	88.4757	-28.7931
43	1	-0.838054	89.178	-29.6311
44	1	-0.820379	89.8511	-30.4515
45	1	-0.802956	90.4958	-31.2545
46	1	-0.789191	91.1186	-32.0437
47	1	-0.772193	91.7149	-32.8159
48	1	-0.755415	92.2856	-33.5713
49	1	-0.738846	92.8314	-34.3101

50	1	-0.725736	93.3581	-35.0358
51	1	-0.709522	93.8616	-35.7454
52	1	-0.693493	94.3425	-36.4389
53	1	-0.680797	94.806	-37.1197
54	1	-0.665079	95.2483	-37.7847
55	1	-0.649522	95.6702	-38.4343
56	1	-0.637192	96.0762	-39.0715
57	1	-0.621911	96.463	-39.6934
58	1	-0.606775	96.8312	-40.3001
59	1	-0.594766	97.1849	-40.8949
60	1	-0.579873	97.5212	-41.4748
61	1	-0.565108	97.8405	-42.0399
62	1	-0.550465	98.1435	-42.5904
63	1	-0.538836	98.4339	-43.1292
64	1	-0.524401	98.7088	-43.6536
65	1	-0.510074	98.969	-44.1637
66	1	-0.498687	99.2177	-44.6624
67	1	-0.484544	99.4525	-45.1469
68	1	-0.470498	99.6739	-45.6174
69	1	-0.459327	99.8848	-46.0767
70	1	-0.445443	100.083	-46.5222
71	1	-0.431644	100.27	-46.9538
72	1	-0.417928	100.444	-47.3717
73	1	-0.40701	100.61	-47.7787
74	1	-0.393433	100.765	-48.1722
75	1	-0.379927	100.909	-48.5521
76	1	-0.369171	101.045	-48.9213
77	1	-0.355788	101.172	-49.2771
78	1	-0.342466	101.289	-49.6195
79	1	-0.331854	101.399	-49.9514
80	1	-0.318639	101.501	-50.27
81	1	-0.305481	101.594	-50.5755
82	1	-0.294992	101.681	-50.8705
83	1	-0.281926	101.761	-51.1524
84	1	-0.268908	101.833	-51.4213
85	1	-0.255936	101.898	-51.6773
86	1	-0.24559	101.959	-51.9229
87	1	-0.232693	102.013	-52.1555
88	1	-0.219834	102.061	-52.3754
89	1	-0.209575	102.105	-52.585
90	1	-0.196779	102.144	-52.7817
91	1	-0.184017	102.178	-52.9658
92	1	-0.173829	102.208	-53.1396
93	1	-0.161119	102.234	-53.3007
94	1	-0.148434	102.256	-53.4491
95	1	-0.135774	102.274	-53.5849
96	1	-0.125661	102.29	-53.7106
97	1	-0.113039	102.303	-53.8236
98	1	-0.100433	102.313	-53.924
99	1	-0.0903606	102.321	-54.0144
100	1	-0.0777834	102.327	-54.0922
101	1	-0.0652187	102.332	-54.1574
102	1	-0.0551734	102.335	-54.2126
103	1	-0.0426257	102.336	-54.2552
104	1	-0.0300838	102.337	-54.2853
105	1	-0.0200544	102.338	-54.3053
106	1	-0.00751925	102.338	-54.3129
107	1	0.00751925	102.338	-54.3053
108	1	0.0200544	102.338	-54.2853
109	1	0.0300838	102.339	-54.2552
110	1	0.0426257	102.341	-54.2126
111	1	0.0551734	102.344	-54.1574

112	1	0.0652187	102.348	-54.0922
113	1	0.0777834	102.354	-54.0144
114	1	0.0903606	102.362	-53.924
115	1	0.100433	102.373	-53.8236
116	1	0.113039	102.385	-53.7106
117	1	0.125661	102.401	-53.5849
118	1	0.135774	102.42	-53.4491
119	1	0.148434	102.442	-53.3007
120	1	0.161119	102.468	-53.1396
121	1	0.173829	102.498	-52.9658
122	1	0.184017	102.532	-52.7817
123	1	0.196779	102.57	-52.585
124	1	0.209575	102.614	-52.3754
125	1	0.219834	102.663	-52.1555
126	1	0.232693	102.717	-51.9229
127	1	0.24559	102.777	-51.6773
128	1	0.255936	102.843	-51.4213
129	1	0.268908	102.915	-51.1524
130	1	0.281926	102.994	-50.8705
131	1	0.294992	103.081	-50.5755
132	1	0.305481	103.175	-50.27
133	1	0.318639	103.276	-49.9514
134	1	0.331854	103.386	-49.6195
135	1	0.342466	103.504	-49.2771
136	1	0.355788	103.63	-48.9213
137	1	0.369171	103.767	-48.5521
138	1	0.379927	103.911	-48.1722
139	1	0.393433	104.066	-47.7787
140	1	0.40701	104.231	-47.3717
141	1	0.417928	104.406	-46.9538
142	1	0.431644	104.592	-46.5222
143	1	0.445443	104.791	-46.0767
144	1	0.459327	105.002	-45.6174
145	1	0.470498	105.223	-45.1469
146	1	0.484544	105.458	-44.6624
147	1	0.498687	105.707	-44.1637
148	1	0.510074	105.967	-43.6536
149	1	0.524401	106.242	-43.1292
150	1	0.538836	106.532	-42.5904
151	1	0.550465	106.835	-42.0399
152	1	0.565108	107.154	-41.4748
153	1	0.579873	107.491	-40.8949
154	1	0.594766	107.844	-40.3001
155	1	0.606775	108.213	-39.6934
156	1	0.621911	108.599	-39.0715
157	1	0.637192	109.005	-38.4343
158	1	0.649522	109.427	-37.7847
159	1.02	0.665079	109.87	-37.1064
160	1.03	0.680797	110.333	-36.4051
161	1.04	0.693493	110.814	-35.6839
162	1.09	0.709522	111.317	-34.9105
163	1.2	0.725736	111.844	-34.0396
164	1.2	0.738846	112.39	-33.153
165	1.2	0.755415	112.961	-32.2465
166	1.3	0.772193	113.557	-31.2427
167	1.3	0.789191	114.18	-30.2167
168	1.31	0.802956	114.824	-29.1649
169	1.32	0.820379	115.498	-28.082
170	1.35	0.838054	116.2	-26.9506
171	1.38	0.852385	116.926	-25.7743
172	1.4	0.87055	117.684	-24.5555
173	1.54	0.889006	118.475	-23.1865

174	1.54	0.903992	119.292	-21.7943
175	1.8	0.923014	120.144	-20.1329
176	1.8	0.942375	121.032	-18.4366
177	1.9	0.958125	121.95	-16.6162
178	1.92	0.97815	122.907	-14.7381
179	2	0.998575	123.904	-12.741
180	2	1.01943	124.943	-10.7021
181	2.1	1.03643	126.017	-8.5256
182	2.1	1.05812	127.137	-6.30355
183	2.1	1.08032	128.304	-4.03487
184	2.2	1.09847	129.511	-1.61824
185	2.2	1.12168	130.769	0.84945
186	2.2	1.1455	132.081	3.36956
187	2.5	1.16505	133.438	6.28218
188	2.54	1.19012	134.855	9.30508
189	2.6	1.21596	136.333	12.4666
190	2.72	1.24264	137.877	15.8466
191	3	1.26464	139.477	19.6405
192	3	1.29303	141.149	23.5196
193	3	1.32251	142.898	27.4871
194	3.2	1.34694	144.712	31.7973
195	3.22	1.37866	146.613	36.2366
196	3.5	1.41183	148.606	41.178
197	3.6	1.43953	150.678	46.3603
198	3.6	1.47579	152.856	51.6732
199	3.8	1.5141	155.149	57.4267
200	4.03	1.54643	157.54	63.6589
201	4.07	1.58927	160.066	70.1272
202	4.5	1.63524	162.74	77.4858
203	4.58	1.68494	165.579	85.2028
204	4.99	1.72793	168.564	93.8251
205	5	1.78661	171.756	102.758
206	5	1.85218	175.187	112.019
207	5.4	1.91103	178.839	122.339
208	5.6	1.99539	182.821	133.513
209	6	2.09693	187.218	146.094
210	6.3	2.19728	192.046	159.937
211	8	2.36561	197.642	178.862
212	9	2.65209	204.676	202.731

Data Set Standard Deviation = 1.28657
Numerator = 41099.9
Denominator = 71485.1
W Statistic = 0.574943 = 41099.9 / 71485.1

5% Critical value of 0.976 exceeds 0.574943
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.574943
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Benzene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.07944	-2.65209	7.03356	5.51486
2	-2.07944	-2.36561	12.6297	10.434
3	-2.07944	-2.19728	17.4578	15.0031
4	-2.07944	-2.09693	21.8549	19.3636
5	-2.07944	-1.99539	25.8365	23.5129
6	-2.07944	-1.91103	29.4885	27.4868
7	-2.07944	-1.85218	32.9191	31.3383
8	-2.07944	-1.78661	36.111	35.0534
9	-2.07944	-1.72793	39.0968	38.6465
10	-2.07944	-1.68494	41.9358	42.1503
11	-2.07944	-1.63524	44.6098	45.5507
12	-2.07944	-1.58927	47.1356	48.8554
13	-2.07944	-1.54643	49.527	52.0712
14	-1.34707	-1.5141	51.8195	54.1108
15	-1.02165	-1.47579	53.9975	55.6185
16	-0.693147	-1.43953	56.0698	56.6163
17	-0.673345	-1.41183	58.063	57.567
18	-0.634878	-1.37866	59.9637	58.4423
19	-0.527633	-1.34694	61.778	59.1529
20	-0.385662	-1.32251	63.527	59.663
21	-0.34249	-1.29303	65.1989	60.1058
22	-0.328504	-1.26464	66.7982	60.5213
23	-0.314711	-1.24264	68.3424	60.9123
24	-0.274437	-1.21596	69.821	61.246
25	-0.223144	-1.19012	71.2373	61.5116
26	-0.210721	-1.16505	72.5947	61.7571
27	-0.18633	-1.1455	73.9069	61.9706
28	-0.174353	-1.12168	75.165	62.1661
29	-0.0725707	-1.09847	76.3716	62.2458
30	-0.0618754	-1.08032	77.5387	62.3127
31	-0.040822	-1.05812	78.6584	62.3559
32	0	-1.03643	79.7326	62.3559
33	0	-1.01943	80.7718	62.3559
34	0	-0.998575	81.7689	62.3559
35	0	-0.97815	82.7257	62.3559
36	0	-0.958125	83.6437	62.3559
37	0	-0.942375	84.5318	62.3559
38	0	-0.923014	85.3837	62.3559
39	0	-0.903992	86.201	62.3559
40	0	-0.889006	86.9913	62.3559
41	0	-0.87055	87.7491	62.3559
42	0	-0.852385	88.4757	62.3559
43	0	-0.838054	89.178	62.3559
44	0	-0.820379	89.8511	62.3559
45	0	-0.802956	90.4958	62.3559
46	0	-0.789191	91.1186	62.3559
47	0	-0.772193	91.7149	62.3559
48	0	-0.755415	92.2856	62.3559
49	0	-0.738846	92.8314	62.3559

50	0	-0.725736	93.3581	62.3559
51	0	-0.709522	93.8616	62.3559
52	0	-0.693493	94.3425	62.3559
53	0	-0.680797	94.806	62.3559
54	0	-0.665079	95.2483	62.3559
55	0	-0.649522	95.6702	62.3559
56	0	-0.637192	96.0762	62.3559
57	0	-0.621911	96.463	62.3559
58	0	-0.606775	96.8312	62.3559
59	0	-0.594766	97.1849	62.3559
60	0	-0.579873	97.5212	62.3559
61	0	-0.565108	97.8405	62.3559
62	0	-0.550465	98.1435	62.3559
63	0	-0.538836	98.4339	62.3559
64	0	-0.524401	98.7088	62.3559
65	0	-0.510074	98.969	62.3559
66	0	-0.498687	99.2177	62.3559
67	0	-0.484544	99.4525	62.3559
68	0	-0.470498	99.6739	62.3559
69	0	-0.459327	99.8848	62.3559
70	0	-0.445443	100.083	62.3559
71	0	-0.431644	100.27	62.3559
72	0	-0.417928	100.444	62.3559
73	0	-0.40701	100.61	62.3559
74	0	-0.393433	100.765	62.3559
75	0	-0.379927	100.909	62.3559
76	0	-0.369171	101.045	62.3559
77	0	-0.355788	101.172	62.3559
78	0	-0.342466	101.289	62.3559
79	0	-0.331854	101.399	62.3559
80	0	-0.318639	101.501	62.3559
81	0	-0.305481	101.594	62.3559
82	0	-0.294992	101.681	62.3559
83	0	-0.281926	101.761	62.3559
84	0	-0.268908	101.833	62.3559
85	0	-0.255936	101.898	62.3559
86	0	-0.24559	101.959	62.3559
87	0	-0.232693	102.013	62.3559
88	0	-0.219834	102.061	62.3559
89	0	-0.209575	102.105	62.3559
90	0	-0.196779	102.144	62.3559
91	0	-0.184017	102.178	62.3559
92	0	-0.173829	102.208	62.3559
93	0	-0.161119	102.234	62.3559
94	0	-0.148434	102.256	62.3559
95	0	-0.135774	102.274	62.3559
96	0	-0.125661	102.29	62.3559
97	0	-0.113039	102.303	62.3559
98	0	-0.100433	102.313	62.3559
99	0	-0.0903606	102.321	62.3559
100	0	-0.0777834	102.327	62.3559
101	0	-0.0652187	102.332	62.3559
102	0	-0.0551734	102.335	62.3559
103	0	-0.0426257	102.336	62.3559
104	0	-0.0300838	102.337	62.3559
105	0	-0.0200544	102.338	62.3559
106	0	-0.00751925	102.338	62.3559
107	0	0.00751925	102.338	62.3559
108	0	0.0200544	102.338	62.3559
109	0	0.0300838	102.339	62.3559
110	0	0.0426257	102.341	62.3559
111	0	0.0551734	102.344	62.3559

112	0	0.0652187	102.348	62.3559
113	0	0.0777834	102.354	62.3559
114	0	0.0903606	102.362	62.3559
115	0	0.100433	102.373	62.3559
116	0	0.113039	102.385	62.3559
117	0	0.125661	102.401	62.3559
118	0	0.135774	102.42	62.3559
119	0	0.148434	102.442	62.3559
120	0	0.161119	102.468	62.3559
121	0	0.173829	102.498	62.3559
122	0	0.184017	102.532	62.3559
123	0	0.196779	102.57	62.3559
124	0	0.209575	102.614	62.3559
125	0	0.219834	102.663	62.3559
126	0	0.232693	102.717	62.3559
127	0	0.24559	102.777	62.3559
128	0	0.255936	102.843	62.3559
129	0	0.268908	102.915	62.3559
130	0	0.281926	102.994	62.3559
131	0	0.294992	103.081	62.3559
132	0	0.305481	103.175	62.3559
133	0	0.318639	103.276	62.3559
134	0	0.331854	103.386	62.3559
135	0	0.342466	103.504	62.3559
136	0	0.355788	103.63	62.3559
137	0	0.369171	103.767	62.3559
138	0	0.379927	103.911	62.3559
139	0	0.393433	104.066	62.3559
140	0	0.40701	104.231	62.3559
141	0	0.417928	104.406	62.3559
142	0	0.431644	104.592	62.3559
143	0	0.445443	104.791	62.3559
144	0	0.459327	105.002	62.3559
145	0	0.470498	105.223	62.3559
146	0	0.484544	105.458	62.3559
147	0	0.498687	105.707	62.3559
148	0	0.510074	105.967	62.3559
149	0	0.524401	106.242	62.3559
150	0	0.538836	106.532	62.3559
151	0	0.550465	106.835	62.3559
152	0	0.565108	107.154	62.3559
153	0	0.579873	107.491	62.3559
154	0	0.594766	107.844	62.3559
155	0	0.606775	108.213	62.3559
156	0	0.621911	108.599	62.3559
157	0	0.637192	109.005	62.3559
158	0	0.649522	109.427	62.3559
159	0.0198026	0.665079	109.87	62.3691
160	0.0295588	0.680797	110.333	62.3892
161	0.0392207	0.693493	110.814	62.4164
162	0.0861777	0.709522	111.317	62.4775
163	0.182322	0.725736	111.844	62.6098
164	0.182322	0.738846	112.39	62.7445
165	0.182322	0.755415	112.961	62.8823
166	0.262364	0.772193	113.557	63.0849
167	0.262364	0.789191	114.18	63.2919
168	0.270027	0.802956	114.824	63.5087
169	0.277632	0.820379	115.498	63.7365
170	0.300105	0.838054	116.2	63.988
171	0.322083	0.852385	116.926	64.2626
172	0.336472	0.87055	117.684	64.5555
173	0.431782	0.889006	118.475	64.9393

174	0.431782		0.903992	119.292	65.3297
175	0.587787		0.923014	120.144	65.8722
176	0.587787		0.942375	121.032	66.4261
177	0.641854		0.958125	121.95	67.0411
178	0.652325		0.97815	122.907	67.6792
179	0.693147		0.998575	123.904	68.3713
180	0.693147		1.01943	124.943	69.0779
181	0.741937		1.03643	126.017	69.8469
182	0.741937		1.05812	127.137	70.632
183	0.741937		1.08032	128.304	71.4335
184	0.788457		1.09847	129.511	72.2996
185	0.788457		1.12168	130.769	73.184
186	0.788457		1.1455	132.081	74.0872
187	0.916291		1.16505	133.438	75.1547
188	0.932164		1.19012	134.855	76.2641
189	0.955511		1.21596	136.333	77.4259
190	1.00063	1.24264	137.877	78.6694	
191	1.09861	1.26464	139.477	80.0587	
192	1.09861	1.29303	141.149	81.4792	
193	1.09861	1.32251	142.898	82.9322	
194	1.16315	1.34694	144.712	84.4989	
195	1.16938	1.37866	146.613	86.111	
196	1.25276	1.41183	148.606	87.8797	
197	1.28093	1.43953	150.678	89.7237	
198	1.28093	1.47579	152.856	91.6141	
199	1.335	1.5141	155.149	93.6354	
200	1.39377	1.54643	157.54	95.7908	
201	1.40364	1.58927	160.066	98.0215	
202	1.50408	1.63524	162.74	100.481	
203	1.5217	1.68494	165.579	103.045	
204	1.60744	1.72793	168.564	105.823	
205	1.60944	1.78661	171.756	108.698	
206	1.60944	1.85218	175.187	111.679	
207	1.6864	1.91103	178.839	114.902	
208	1.72277	1.99539	182.821	118.339	
209	1.79176	2.09693	187.218	122.097	
210	1.84055	2.19728	192.046	126.141	
211	2.07944	2.36561	197.642	131.06	
212	2.19722	2.65209	204.676	136.887	

Data Set Standard Deviation = 0.760297
Numerator = 18738.1
Denominator = 24964.1
W Statistic = 0.750602 = 18738.1 / 24964.1

5% Critical value of 0.976 exceeds 0.750602
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.750602
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Benzene

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result		Rank
MW-13	3/16/1999	ND<0	69.5	
	9/23/1999	ND<0	69.5	
	3/15/2000	ND<0	69.5	
	9/24/2003	ND<0	69.5	
	3/11/2004	ND<0	69.5	
	10/12/2004	ND<0	69.5	
	4/1/2005	ND<0	69.5	
	10/25/2005	ND<0	69.5	
	4/29/2006	ND<0	69.5	
	11/18/2006	ND<0	69.5	
	5/23/2007	ND<0	69.5	
	11/28/2007	ND<0	69.5	
	6/5/2008	ND<0	69.5	
	11/20/2008	ND<0	69.5	
	6/11/2009	ND<-2.07944		69.5
	11/16/2009	ND<-2.07944		69.5
	6/30/2010	ND<-2.07944		69.5

Rank Sum = 1181.5
Rank Mean = 69.5

Background Rank Sum = 1181.5
Background Rank Mean = 69.5

Compliance Wells

Well ID	Date	Result		Rank
MW-8	7/20/1995	ND<0	69.5	
	8/24/1995	ND<0	69.5	
	9/28/1995	ND<0	69.5	
	10/26/1995	ND<0	69.5	
	11/19/1996	ND<0	69.5	
	12/19/1996	ND<0	69.5	
	3/24/1997	ND<0	69.5	
	9/24/1997	1.6864	207	
	4/7/1998	ND<0	69.5	
	9/23/1998	1.72277		208
	3/16/1999	1.25276		196
	9/23/1999	1.28093		197
	3/15/2000	ND<0	69.5	
	9/24/2003	ND<0	69.5	
	3/11/2004	ND<0	69.5	
	10/12/2004	ND<0	69.5	
	4/1/2005	1.16938	195	
	10/25/2005	1.60744		204
	4/29/2006	0.932164		188
	11/18/2006	1.39377		200
	5/23/2007	1.16315		194

	11/28/2007	1.50408	202
	6/5/2008	1.40364	201
	11/20/2008	1.00063	190
	6/11/2009	1.28093	198
	6/30/2010	0.741937	181

Rank Sum = 3595
Rank Mean = 138.269

MW-9	7/20/1995	0.916291	187
	8/24/1995	0.955511	189
	9/28/1995	1.09861	191
	10/26/1995	1.09861	192
	11/19/1996	ND<0	69.5
	12/19/1996	ND<0	69.5
	3/24/1997	ND<0	69.5
	9/24/1997	ND<0	69.5
	4/7/1998	ND<0	69.5
	9/23/1998	ND<0	69.5
	3/16/1999	0.788457	184
	9/23/1999	ND<0	69.5
	3/15/2000	ND<0	69.5
	9/24/2003	ND<0	69.5
	3/11/2004	ND<0	69.5
	10/12/2004	ND<0	69.5
	4/1/2005	0.652325 J	178
	10/25/2005	0.0861777 J	162
	4/29/2006	-0.34249 J	146
	11/18/2006	-0.223144 J	150
	5/23/2007	0.788457	185
	11/28/2007	0.431782 J	173
	6/5/2008	ND<0	69.5
	11/20/2008	0.300105 J	170
	6/11/2009	0.641854	177
	11/16/2009	0.336472	172
	6/30/2010	0.587787	175

Rank Sum = 3465
Rank Mean = 128.333

MW-12BR	3/16/1999	1.335	199
	9/23/1999	1.09861	193
	3/15/2000	ND<0	69.5
	9/24/2003	ND<0	69.5
	3/11/2004	ND<0	69.5
	10/12/2004	ND<0	69.5
	4/1/2005	ND<0	69.5
	10/25/2005	ND<0	69.5
	4/29/2006	ND<0	69.5
	11/18/2006	ND<0	69.5
	5/23/2007	ND<0	69.5
	11/28/2007	ND<0	69.5
	6/5/2008	ND<0	69.5
	11/20/2008	ND<0	69.5
	6/11/2009	ND<-2.07944	69.5
	11/16/2009	ND<-2.07944	69.5
	6/30/2010	ND<-2.07944	69.5

Rank Sum = 1434.5
Rank Mean = 84.3824

MW-12AR	3/16/1999	ND<0	69.5
	9/23/1999	ND<0	69.5
	3/15/2000	ND<0	69.5
	9/24/2003	ND<0	69.5

	3/11/2004	ND<0	69.5
	10/12/2004	ND<0	69.5
	4/1/2005	ND<0	69.5
	10/25/2005	0.0295588 J	160
	4/29/2006	0.0392207 J	161
	11/18/2006	-0.274437 J	149
	5/23/2007	ND<0	69.5
	11/28/2007	-0.174353 J	153
	6/5/2008	ND<0	69.5
	11/20/2008	-0.634878 J	143
	6/11/2009	ND<-2.07944	69.5
	11/16/2009	-1.34707 J	139
	6/30/2010	ND<-2.07944	69.5

Rank Sum = 1669.5
Rank Mean = 98.2059

MW-11R	7/20/1995	0.741937	182
	8/24/1995	1.84055	210
	9/28/1995	1.79176	209
	10/26/1995	2.07944	211
	11/19/1996	ND<0	69.5
	12/19/1996	2.19722	212
	3/24/1997	ND<0	69.5
	9/24/1997	ND<0	69.5
	4/7/1998	ND<0	69.5
	9/23/1998	1.60944	205
	3/16/1999	1.60944	206
	9/23/1999	ND<0	69.5
	3/15/2000	ND<0	69.5
	9/24/2003	ND<0	69.5
	3/11/2004	ND<0	69.5
	10/12/2004	ND<0	69.5
	4/1/2005	1.5217	203
	10/25/2005	0.431782 J	174
	4/29/2006	-0.18633 J	152
	11/18/2006	-0.0725707 J	154
	5/23/2007	0.741937	183
	11/28/2007	0.262364 J	166
	6/5/2008	ND<0	69.5
	11/20/2008	ND<0	69.5
	6/11/2009	-0.527633 J	144
	11/16/2009	ND<-2.07944	69.5
	6/30/2010	-0.210721 J	151

Rank Sum = 3596
Rank Mean = 133.185

MW-7	7/20/1995	ND<0	69.5
	8/24/1995	ND<0	69.5
	9/28/1995	ND<0	69.5
	10/26/1995	ND<0	69.5
	11/19/1996	ND<0	69.5
	12/19/1996	ND<0	69.5
	3/24/1997	ND<0	69.5
	9/24/1997	ND<0	69.5
	4/7/1998	ND<0	69.5
	9/23/1998	ND<0	69.5
	3/16/1999	ND<0	69.5
	9/23/1999	ND<0	69.5
	3/15/2000	ND<0	69.5
	9/24/2003	ND<0	69.5
	3/11/2004	ND<0	69.5
	10/12/2004	ND<0	69.5

	4/1/2005	ND<0	69.5
	10/25/2005	-0.673345 J	142
	4/29/2006	-0.385662 J	145
	11/18/2006	-1.02165 J	140
	5/23/2007	0.182322	163
	11/28/2007	-0.693147 J	141
	6/5/2008	ND<0	69.5
	11/20/2008	0.0198026 J	159
	6/11/2009	-0.314711 J	148
	11/16/2009	ND<-2.07944	69.5
	6/30/2010	-0.328504 J	147

Rank Sum = 2505.5
Rank Mean = 92.7963

MW-6	7/20/1995	ND<0	69.5
	8/24/1995	ND<0	69.5
	9/28/1995	ND<0	69.5
	10/26/1995	ND<0	69.5
	11/19/1996	ND<0	69.5
	12/19/1996	ND<0	69.5
	3/24/1997	ND<0	69.5
	9/24/1997	ND<0	69.5
	4/7/1998	ND<0	69.5
	9/23/1998	ND<0	69.5
	3/16/1999	ND<0	69.5
	9/23/1999	ND<0	69.5
	3/15/2000	ND<0	69.5
	9/24/2003	ND<0	69.5
	3/11/2004	ND<0	69.5
	10/12/2004	ND<0	69.5
	4/1/2005	ND<0	69.5
	10/25/2005	ND<0	69.5
	4/29/2006	ND<0	69.5
	11/18/2006	ND<0	69.5
	5/23/2007	0.182322	164
	11/28/2007	ND<0	69.5
	6/5/2008	ND<0	69.5
	11/20/2008	ND<0	69.5
	6/11/2009	ND<-2.07944	69.5
	11/16/2009	ND<-2.07944	69.5
	6/30/2010	ND<-2.07944	69.5

Rank Sum = 1971
Rank Mean = 73

MW-10	7/20/1995	ND<0	69.5
	8/24/1995	0.182322 J	165
	9/28/1995	0.693147	179
	10/26/1995	0.693147	180
	11/19/1996	ND<0	69.5
	12/19/1996	ND<0	69.5
	3/24/1997	ND<0	69.5
	9/24/1997	ND<0	69.5
	4/7/1998	ND<0	69.5
	9/23/1998	ND<0	69.5
	3/16/1999	0.788457	186
	9/23/1999	ND<0	69.5
	3/15/2000	ND<0	69.5
	9/24/2003	ND<0	69.5
	3/11/2004	ND<0	69.5
	10/12/2004	ND<0	69.5
	4/1/2005	0.587787 J	176
	10/25/2005	0.277632 J	169

4/29/2006	0.270027 J		168
11/18/2006	-0.040822 J		156
5/23/2007	ND<0	69.5	
11/28/2007	0.322083		171
6/5/2008	ND<0	69.5	
11/20/2008	0 J	157	
6/11/2009	0	158	
11/16/2009	0.262364		167
6/30/2010	-0.0618754 J		155

Rank Sum = 3160
Rank Mean = 117.037

Calculation Results:

Kruskal-Wallis H Statistic = 34.4051
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 47.5087
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
34.4051 > 15.5073 indicating a significant group difference at 5% significance level
47.5087 > 15.5073 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 69.5

Well	Mean Rank	Dif from Bkg	Critical Value
MW-8	138.269	68.7692	44.5106
MW-9	128.333	58.8333	44.1836
MW-12BR	84.3824	14.8824	48.9476
MW-12AR	98.2059	28.7059	48.9476
MW-11R	133.185	63.6852	44.1836
MW-7	92.7963	23.2963	44.1836
MW-6	73	3.5	44.1836
MW-10	117.037	47.537	44.1836

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 69.5

Well	Mean Rank	Dif from Bkg	Critical Value
MW-8	138.269	68.7692	48.0654
MW-9	128.333	58.8333	47.7122
MW-12BR	84.3824	14.8824	52.8567
MW-12AR	98.2059	28.7059	52.8567
MW-11R	133.185	63.6852	47.7122
MW-7	92.7963	23.2963	47.7122
MW-6	73	3.5	47.7122
MW-10	117.037	47.537	47.7122

Mann-Kendall Trend Analysis

Parameter: Benzene

Location: MW-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	
1.6864	ND<0	1.6864	1	0	
ND<0	ND<0	0	1	0	
1.72277		ND<0	1.72277	2	0
1.25276		ND<0	1.25276	3	0
1.28093		ND<0	1.28093	4	0
ND<0	ND<0	0	4	0	
ND<0	ND<0	0	4	0	
ND<0	ND<0	0	4	0	
ND<0	ND<0	0	4	0	
1.16938		ND<0	1.16938	5	0
1.60744		ND<0	1.60744	6	0
0.932164		ND<0	0.932164	7	0
1.39377		ND<0	1.39377	8	0
1.16315		ND<0	1.16315	9	0
1.50408		ND<0	1.50408	10	0
1.40364		ND<0	1.40364	11	0
1.00063		ND<0	1.00063	12	0
1.28093		ND<0	1.28093	13	0
0.741937		ND<0	0.741937	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	
1.6864	ND<0	1.6864	15	0	
ND<0	ND<0	0	15	0	
1.72277		ND<0	1.72277	16	0
1.25276		ND<0	1.25276	17	0
1.28093		ND<0	1.28093	18	0
ND<0	ND<0	0	18	0	
ND<0	ND<0	0	18	0	
ND<0	ND<0	0	18	0	
ND<0	ND<0	0	18	0	
1.16938		ND<0	1.16938	19	0
1.60744		ND<0	1.60744	20	0
0.932164		ND<0	0.932164	21	0
1.39377		ND<0	1.39377	22	0
1.16315		ND<0	1.16315	23	0
1.50408		ND<0	1.50408	24	0
1.40364		ND<0	1.40364	25	0
1.00063		ND<0	1.00063	26	0

1.28093		ND<0	1.28093	27	0	
0.741937		ND<0	0.741937		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		
1.6864	ND<0	1.6864	29	0		
ND<0	ND<0	0	29	0		
1.72277		ND<0	1.72277	30	0	
1.25276		ND<0	1.25276	31	0	
1.28093		ND<0	1.28093	32	0	
ND<0	ND<0	0	32	0		
ND<0	ND<0	0	32	0		
ND<0	ND<0	0	32	0		
ND<0	ND<0	0	32	0		
1.16938		ND<0	1.16938	33	0	
1.60744		ND<0	1.60744	34	0	
0.932164		ND<0	0.932164		35	0
1.39377		ND<0	1.39377	36	0	
1.16315		ND<0	1.16315	37	0	
1.50408		ND<0	1.50408	38	0	
1.40364		ND<0	1.40364	39	0	
1.00063		ND<0	1.00063	40	0	
1.28093		ND<0	1.28093	41	0	
0.741937		ND<0	0.741937		42	0
ND<0	ND<0	0	42	0		
ND<0	ND<0	0	42	0		
ND<0	ND<0	0	42	0		
1.6864	ND<0	1.6864	43	0		
ND<0	ND<0	0	43	0		
1.72277		ND<0	1.72277	44	0	
1.25276		ND<0	1.25276	45	0	
1.28093		ND<0	1.28093	46	0	
ND<0	ND<0	0	46	0		
ND<0	ND<0	0	46	0		
ND<0	ND<0	0	46	0		
ND<0	ND<0	0	46	0		
1.16938		ND<0	1.16938	47	0	
1.60744		ND<0	1.60744	48	0	
0.932164		ND<0	0.932164		49	0
1.39377		ND<0	1.39377	50	0	
1.16315		ND<0	1.16315	51	0	
1.50408		ND<0	1.50408	52	0	
1.40364		ND<0	1.40364	53	0	
1.00063		ND<0	1.00063	54	0	
1.28093		ND<0	1.28093	55	0	
0.741937		ND<0	0.741937		56	0
ND<0	ND<0	0	56	0		
ND<0	ND<0	0	56	0		
1.6864	ND<0	1.6864	57	0		
ND<0	ND<0	0	57	0		
1.72277		ND<0	1.72277	58	0	
1.25276		ND<0	1.25276	59	0	
1.28093		ND<0	1.28093	60	0	
ND<0	ND<0	0	60	0		
ND<0	ND<0	0	60	0		
ND<0	ND<0	0	60	0		
ND<0	ND<0	0	60	0		
1.16938		ND<0	1.16938	61	0	

1.60744		ND<0	1.60744	62	0
0.932164		ND<0	0.932164	63	0
1.39377		ND<0	1.39377	64	0
1.16315		ND<0	1.16315	65	0
1.50408		ND<0	1.50408	66	0
1.40364		ND<0	1.40364	67	0
1.00063		ND<0	1.00063	68	0
1.28093		ND<0	1.28093	69	0
0.741937		ND<0	0.741937	70	0
ND<0	ND<0	0	70	0	
1.6864	ND<0	1.6864	71	0	
ND<0	ND<0	0	71	0	
1.72277		ND<0	1.72277	72	0
1.25276		ND<0	1.25276	73	0
1.28093		ND<0	1.28093	74	0
ND<0	ND<0	0	74	0	
ND<0	ND<0	0	74	0	
ND<0	ND<0	0	74	0	
ND<0	ND<0	0	74	0	
1.16938		ND<0	1.16938	75	0
1.60744		ND<0	1.60744	76	0
0.932164		ND<0	0.932164	77	0
1.39377		ND<0	1.39377	78	0
1.16315		ND<0	1.16315	79	0
1.50408		ND<0	1.50408	80	0
1.40364		ND<0	1.40364	81	0
1.00063		ND<0	1.00063	82	0
1.28093		ND<0	1.28093	83	0
0.741937		ND<0	0.741937	84	0
1.6864	ND<0	1.6864	85	0	
ND<0	ND<0	0	85	0	
1.72277		ND<0	1.72277	86	0
1.25276		ND<0	1.25276	87	0
1.28093		ND<0	1.28093	88	0
ND<0	ND<0	0	88	0	
ND<0	ND<0	0	88	0	
ND<0	ND<0	0	88	0	
ND<0	ND<0	0	88	0	
1.16938		ND<0	1.16938	89	0
1.60744		ND<0	1.60744	90	0
0.932164		ND<0	0.932164	91	0
1.39377		ND<0	1.39377	92	0
1.16315		ND<0	1.16315	93	0
1.50408		ND<0	1.50408	94	0
1.40364		ND<0	1.40364	95	0
1.00063		ND<0	1.00063	96	0
1.28093		ND<0	1.28093	97	0
0.741937		ND<0	0.741937	98	0
ND<0	1.6864	-1.6864	98	1	
1.72277		1.6864	0.0363676	99	1
1.25276		1.6864	-0.433636	99	2
1.28093		1.6864	-0.405465	99	3
ND<0	1.6864	-1.6864	99	4	
ND<0	1.6864	-1.6864	99	5	
ND<0	1.6864	-1.6864	99	6	
ND<0	1.6864	-1.6864	99	7	
1.16938		1.6864	-0.517018	99	8
1.60744		1.6864	-0.078963	99	9
0.932164		1.6864	-0.754235	99	10

1.39377		1.6864	-0.292633		99	11
1.16315		1.6864	-0.523248		99	12
1.50408		1.6864	-0.182322		99	13
1.40364		1.6864	-0.282756		99	14
1.00063		1.6864	-0.685767		99	15
1.28093		1.6864	-0.405465		99	16
0.741937		1.6864	-0.944462		99	17
1.72277		ND<0	1.72277	100	17	
1.25276		ND<0	1.25276	101	17	
1.28093		ND<0	1.28093	102	17	
ND<0	ND<0	0	102	17		
ND<0	ND<0	0	102	17		
ND<0	ND<0	0	102	17		
ND<0	ND<0	0	102	17		
1.16938		ND<0	1.16938	103	17	
1.60744		ND<0	1.60744	104	17	
0.932164		ND<0	0.932164		105	17
1.39377		ND<0	1.39377	106	17	
1.16315		ND<0	1.16315	107	17	
1.50408		ND<0	1.50408	108	17	
1.40364		ND<0	1.40364	109	17	
1.00063		ND<0	1.00063	110	17	
1.28093		ND<0	1.28093	111	17	
0.741937		ND<0	0.741937		112	17
1.25276		1.72277		-0.470004	112	18
1.28093		1.72277		-0.441833	112	19
ND<0	1.72277		-1.72277	112	20	
ND<0	1.72277		-1.72277	112	21	
ND<0	1.72277		-1.72277	112	22	
ND<0	1.72277		-1.72277	112	23	
1.16938		1.72277		-0.553385	112	24
1.60744		1.72277		-0.115331	112	25
0.932164		1.72277		-0.790603	112	26
1.39377		1.72277		-0.329	112	27
1.16315		1.72277		-0.559616	112	28
1.50408		1.72277		-0.218689	112	29
1.40364		1.72277		-0.319124	112	30
1.00063		1.72277		-0.722135	112	31
1.28093		1.72277		-0.441833	112	32
0.741937		1.72277		-0.980829	112	33
1.28093		1.25276		0.0281709	113	33
ND<0	1.25276		-1.25276	113	34	
ND<0	1.25276		-1.25276	113	35	
ND<0	1.25276		-1.25276	113	36	
ND<0	1.25276		-1.25276	113	37	
1.16938		1.25276		-0.0833816	113	38
1.60744		1.25276		0.354673	114	38
0.932164		1.25276		-0.320599	114	39
1.39377		1.25276		0.141003	115	39
1.16315		1.25276		-0.0896122	115	40
1.50408		1.25276		0.251314	116	40
1.40364		1.25276		0.15088	117	40
1.00063		1.25276		-0.252131	117	41
1.28093		1.25276		0.0281709	118	41
0.741937		1.25276		-0.510826	118	42
ND<0	1.28093		-1.28093	118	43	
ND<0	1.28093		-1.28093	118	44	
ND<0	1.28093		-1.28093	118	45	

ND<0	1.28093	-1.28093	118	46		
1.16938	1.28093	-0.111552	118	47		
1.60744	1.28093	0.326502	119	47		
0.932164	1.28093	-0.34877	119	48		
1.39377	1.28093	0.112833	120	48		
1.16315	1.28093	-0.117783	120	49		
1.50408	1.28093	0.223144	121	49		
1.40364	1.28093	0.122709	122	49		
1.00063	1.28093	-0.280302	122	50		
1.28093	1.28093	0	122	50		
0.741937	1.28093	-0.538997	122	51		
ND<0	ND<0	0	122	51		
ND<0	ND<0	0	122	51		
ND<0	ND<0	0	122	51		
1.16938	ND<0	1.16938	123	51		
1.60744	ND<0	1.60744	124	51		
0.932164	ND<0	0.932164	125	51		
1.39377	ND<0	1.39377	126	51		
1.16315	ND<0	1.16315	127	51		
1.50408	ND<0	1.50408	128	51		
1.40364	ND<0	1.40364	129	51		
1.00063	ND<0	1.00063	130	51		
1.28093	ND<0	1.28093	131	51		
0.741937	ND<0	0.741937	132	51		
ND<0	ND<0	0	132	51		
ND<0	ND<0	0	132	51		
1.16938	ND<0	1.16938	133	51		
1.60744	ND<0	1.60744	134	51		
0.932164	ND<0	0.932164	135	51		
1.39377	ND<0	1.39377	136	51		
1.16315	ND<0	1.16315	137	51		
1.50408	ND<0	1.50408	138	51		
1.40364	ND<0	1.40364	139	51		
1.00063	ND<0	1.00063	140	51		
1.28093	ND<0	1.28093	141	51		
0.741937	ND<0	0.741937	142	51		
ND<0	ND<0	0	142	51		
1.16938	ND<0	1.16938	143	51		
1.60744	ND<0	1.60744	144	51		
0.932164	ND<0	0.932164	145	51		
1.39377	ND<0	1.39377	146	51		
1.16315	ND<0	1.16315	147	51		
1.50408	ND<0	1.50408	148	51		
1.40364	ND<0	1.40364	149	51		
1.00063	ND<0	1.00063	150	51		
1.28093	ND<0	1.28093	151	51		
0.741937	ND<0	0.741937	152	51		
1.16938	ND<0	1.16938	153	51		
1.60744	ND<0	1.60744	154	51		
0.932164	ND<0	0.932164	155	51		
1.39377	ND<0	1.39377	156	51		
1.16315	ND<0	1.16315	157	51		
1.50408	ND<0	1.50408	158	51		
1.40364	ND<0	1.40364	159	51		
1.00063	ND<0	1.00063	160	51		
1.28093	ND<0	1.28093	161	51		
0.741937	ND<0	0.741937	162	51		

1.60744	1.16938	0.438055	163	51
0.932164	1.16938	-0.237217	163	52
1.39377	1.16938	0.224385	164	52
1.16315	1.16938	-0.00623055	164	53
1.50408	1.16938	0.334696	165	53
1.40364	1.16938	0.234262	166	53
1.00063	1.16938	-0.168749	166	54
1.28093	1.16938	0.111552	167	54
0.741937	1.16938	-0.427444	167	55
0.932164	1.60744	-0.675272	167	56
1.39377	1.60744	-0.21367167	57	
1.16315	1.60744	-0.444285	167	58
1.50408	1.60744	-0.103359	167	59
1.40364	1.60744	-0.203793	167	60
1.00063	1.60744	-0.606804	167	61
1.28093	1.60744	-0.326502	167	62
0.741937	1.60744	-0.865499	167	63
1.39377	0.932164	0.461602	168	63
1.16315	0.932164	0.230987	169	63
1.50408	0.932164	0.571913	170	63
1.40364	0.932164	0.471479	171	63
1.00063	0.932164	0.0684678	172	63
1.28093	0.932164	0.34877 173	63	
0.741937	0.932164	-0.190227	173	64
1.16315	1.39377	-0.230616	173	65
1.50408	1.39377	0.110311	174	65
1.40364	1.39377	0.00987662	175	65
1.00063	1.39377	-0.393134	175	66
1.28093	1.39377	-0.112833	175	67
0.741937	1.39377	-0.651829	175	68
1.50408	1.16315	0.340927	176	68
1.40364	1.16315	0.240492	177	68
1.00063	1.16315	-0.162519	177	69
1.28093	1.16315	0.117783	178	69
0.741937	1.16315	-0.421213	178	70
1.40364	1.50408	-0.100434	178	71
1.00063	1.50408	-0.503446	178	72
1.28093	1.50408	-0.223144	178	73
0.741937	1.50408	-0.76214178	74	
1.00063	1.40364	-0.403011	178	75
1.28093	1.40364	-0.122709	178	76
0.741937	1.40364	-0.661706	178	77
1.28093	1.00063	0.280302	179	77
0.741937	1.00063	-0.258695	179	78
0.741937	1.28093	-0.538997	179	79

S Statistic = 179 - 79 = 100

Tied Group	Value	Members
1	0	12
2	1.28093	2

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 3846
B = 0
C = 1320
D = 0
E = 134
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1844.67
Z-Score = 2.30503
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|2.30503| > 1.97737 indicating a trend

Mann-Kendall Trend Analysis

Parameter: Benzene

Location: MW-9

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
0.955511	0.916291	0.0392207	1	0
1.09861	0.916291	0.182322	2	0
1.09861	0.916291	0.182322	3	0
ND<0	0.916291	-0.916291	3	1
ND<0	0.916291	-0.916291	3	2
ND<0	0.916291	-0.916291	3	3
ND<0	0.916291	-0.916291	3	4
ND<0	0.916291	-0.916291	3	5
ND<0	0.916291	-0.916291	3	6
0.788457	0.916291	-0.127833	3	7
ND<0	0.916291	-0.916291	3	8
ND<0	0.916291	-0.916291	3	9
ND<0	0.916291	-0.916291	3	10
ND<0	0.916291	-0.916291	3	11
ND<0	0.916291	-0.916291	3	12
0.652325 J	0.916291	-0.263966	3	13
0.0861777 J	0.916291	-0.830113	3	14
-0.34249 J	0.916291	-1.258783	15	
-0.223144 J	0.916291	-1.139433	16	
0.788457	0.916291	-0.127833	3	17
0.431782 J	0.916291	-0.484508	3	18
ND<0	0.916291	-0.916291	3	19
0.300105 J	0.916291	-0.616186	3	20
0.641854	0.916291	-0.274437	3	21
0.336472	0.916291	-0.579818	3	22
0.587787	0.916291	-0.328504	3	23
1.09861	0.955511	0.143101	4	23
1.09861	0.955511	0.143101	5	23
ND<0	0.955511	-0.955511	5	24
ND<0	0.955511	-0.955511	5	25
ND<0	0.955511	-0.955511	5	26
ND<0	0.955511	-0.955511	5	27
ND<0	0.955511	-0.955511	5	28
ND<0	0.955511	-0.955511	5	29
0.788457	0.955511	-0.167054	5	30
ND<0	0.955511	-0.955511	5	31
ND<0	0.955511	-0.955511	5	32
ND<0	0.955511	-0.955511	5	33
ND<0	0.955511	-0.955511	5	34
ND<0	0.955511	-0.955511	5	35
0.652325 J	0.955511	-0.303186	5	36
0.0861777 J	0.955511	-0.869334	5	37
-0.34249 J	0.955511	-1.298 5	38	
-0.223144 J	0.955511	-1.178655	39	
0.788457	0.955511	-0.167054	5	40
0.431782 J	0.955511	-0.523729	5	41
ND<0	0.955511	-0.955511	5	42

0.300105 J	0.955511	-0.655407	5	43
0.641854	0.955511	-0.313658	5	44
0.336472	0.955511	-0.619039	5	45
0.587787	0.955511	-0.367725	5	46

1.09861	1.09861	0	5	46
ND<0	1.09861	-1.098615	47	
ND<0	1.09861	-1.098615	48	
ND<0	1.09861	-1.098615	49	
ND<0	1.09861	-1.098615	50	
ND<0	1.09861	-1.098615	51	
ND<0	1.09861	-1.098615	52	
0.788457	1.09861	-0.310155	5	53
ND<0	1.09861	-1.098615	54	
ND<0	1.09861	-1.098615	55	
ND<0	1.09861	-1.098615	56	
ND<0	1.09861	-1.098615	57	
ND<0	1.09861	-1.098615	58	
0.652325 J	1.09861	-0.446287	5	59
0.0861777 J	1.09861	-1.012435	60	
-0.34249 J	1.09861	-1.4411 5	61	
-0.223144 J	1.09861	-1.321765	62	
0.788457	1.09861	-0.310155	5	63
0.431782 J	1.09861	-0.666835	64	
ND<0	1.09861	-1.098615	65	
0.300105 J	1.09861	-0.798508	5	66
0.641854	1.09861	-0.456758	5	67
0.336472	1.09861	-0.762145	68	
0.587787	1.09861	-0.510826	5	69

ND<0	1.09861	-1.098615	70
ND<0	1.09861	-1.098615	71
ND<0	1.09861	-1.098615	72
ND<0	1.09861	-1.098615	73
ND<0	1.09861	-1.098615	74
ND<0	1.09861	-1.098615	75
0.788457	1.09861	-0.310155	5	76
ND<0	1.09861	-1.098615	77
ND<0	1.09861	-1.098615	78
ND<0	1.09861	-1.098615	79
ND<0	1.09861	-1.098615	80
ND<0	1.09861	-1.098615	81
0.652325 J	1.09861	-0.446287	5	82
0.0861777 J	1.09861	-1.012435	83
-0.34249 J	1.09861	-1.4411 5	84
-0.223144 J	1.09861	-1.321765	85
0.788457	1.09861	-0.310155	5	86
0.431782 J	1.09861	-0.666835	87
ND<0	1.09861	-1.098615	88
0.300105 J	1.09861	-0.798508	5	89
0.641854	1.09861	-0.456758	5	90
0.336472	1.09861	-0.762145	91
0.587787	1.09861	-0.510826	5	92

ND<0	ND<0	0	5	92
ND<0	ND<0	0	5	92
ND<0	ND<0	0	5	92
ND<0	ND<0	0	5	92
ND<0	ND<0	0	5	92
0.788457	ND<0	0.788457	6	92
ND<0	ND<0	0	6	92
ND<0	ND<0	0	6	92

ND<0	ND<0	0	6	92		
ND<0	ND<0	0	6	92		
ND<0	ND<0	0	6	92		
0.652325 J		ND<0	0.652325		7	92
0.0861777 J		ND<0	0.0861777		8	92
-0.34249 J		ND<0	-0.342498		93	
-0.223144 J		ND<0	-0.223144		8	94
0.788457		ND<0	0.788457		9	94
0.431782 J		ND<0	0.431782		10	94
ND<0	ND<0	0	10	94		
0.300105 J		ND<0	0.300105		11	94
0.641854		ND<0	0.641854		12	94
0.336472		ND<0	0.336472		13	94
0.587787		ND<0	0.587787		14	94
ND<0	ND<0	0	14	94		
ND<0	ND<0	0	14	94		
ND<0	ND<0	0	14	94		
ND<0	ND<0	0	14	94		
0.788457		ND<0	0.788457		15	94
ND<0	ND<0	0	15	94		
ND<0	ND<0	0	15	94		
ND<0	ND<0	0	15	94		
ND<0	ND<0	0	15	94		
ND<0	ND<0	0	15	94		
0.652325 J		ND<0	0.652325		16	94
0.0861777 J		ND<0	0.0861777		17	94
-0.34249 J		ND<0	-0.3424917		95	
-0.223144 J		ND<0	-0.223144		17	96
0.788457		ND<0	0.788457		18	96
0.431782 J		ND<0	0.431782		19	96
ND<0	ND<0	0	19	96		
0.300105 J		ND<0	0.300105		20	96
0.641854		ND<0	0.641854		21	96
0.336472		ND<0	0.336472		22	96
0.587787		ND<0	0.587787		23	96
ND<0	ND<0	0	23	96		
ND<0	ND<0	0	23	96		
ND<0	ND<0	0	23	96		
0.788457		ND<0	0.788457		24	96
ND<0	ND<0	0	24	96		
ND<0	ND<0	0	24	96		
ND<0	ND<0	0	24	96		
ND<0	ND<0	0	24	96		
ND<0	ND<0	0	24	96		
0.652325 J		ND<0	0.652325		25	96
0.0861777 J		ND<0	0.0861777		26	96
-0.34249 J		ND<0	-0.3424926		97	
-0.223144 J		ND<0	-0.223144		26	98
0.788457		ND<0	0.788457		27	98
0.431782 J		ND<0	0.431782		28	98
ND<0	ND<0	0	28	98		
0.300105 J		ND<0	0.300105		29	98
0.641854		ND<0	0.641854		30	98
0.336472		ND<0	0.336472		31	98
0.587787		ND<0	0.587787		32	98
ND<0	ND<0	0	32	98		
ND<0	ND<0	0	32	98		
0.788457		ND<0	0.788457		33	98
ND<0	ND<0	0	33	98		

ND<0	ND<0	0	33	98			
ND<0	ND<0	0	33	98			
ND<0	ND<0	0	33	98			
ND<0	ND<0	0	33	98			
0.652325 J		ND<0	0.652325		34	98	
0.0861777 J		ND<0	0.0861777		35	98	
-0.34249 J		ND<0	-0.342493	5	99		
-0.223144 J		ND<0	-0.223144		35	100	
0.788457		ND<0	0.788457		36	100	
0.431782 J		ND<0	0.431782		37	100	
ND<0	ND<0	0	37	100			
0.300105 J		ND<0	0.300105		38	100	
0.641854		ND<0	0.641854		39	100	
0.336472		ND<0	0.336472		40	100	
0.587787		ND<0	0.587787		41	100	
ND<0	ND<0	0	41	100			
0.788457		ND<0	0.788457		42	100	
ND<0	ND<0	0	42	100			
ND<0	ND<0	0	42	100			
ND<0	ND<0	0	42	100			
ND<0	ND<0	0	42	100			
ND<0	ND<0	0	42	100			
0.652325 J		ND<0	0.652325		43	100	
0.0861777 J		ND<0	0.0861777		44	100	
-0.34249 J		ND<0	-0.342494	4	101		
-0.223144 J		ND<0	-0.223144		44	102	
0.788457		ND<0	0.788457		45	102	
0.431782 J		ND<0	0.431782		46	102	
ND<0	ND<0	0	46	102			
0.300105 J		ND<0	0.300105		47	102	
0.641854		ND<0	0.641854		48	102	
0.336472		ND<0	0.336472		49	102	
0.587787		ND<0	0.587787		50	102	
0.788457		ND<0	0.788457		51	102	
ND<0	ND<0	0	51	102			
ND<0	ND<0	0	51	102			
ND<0	ND<0	0	51	102			
ND<0	ND<0	0	51	102			
ND<0	ND<0	0	51	102			
0.652325 J		ND<0	0.652325		52	102	
0.0861777 J		ND<0	0.0861777		53	102	
-0.34249 J		ND<0	-0.342495	3	103		
-0.223144 J		ND<0	-0.223144		53	104	
0.788457		ND<0	0.788457		54	104	
0.431782 J		ND<0	0.431782		55	104	
ND<0	ND<0	0	55	104			
0.300105 J		ND<0	0.300105		56	104	
0.641854		ND<0	0.641854		57	104	
0.336472		ND<0	0.336472		58	104	
0.587787		ND<0	0.587787		59	104	
ND<0	0.788457		-0.788457		59	105	
ND<0	0.788457		-0.788457		59	106	
ND<0	0.788457		-0.788457		59	107	
ND<0	0.788457		-0.788457		59	108	
ND<0	0.788457		-0.788457		59	109	
0.652325 J		0.788457		-0.136132		59	110
0.0861777 J		0.788457		-0.702285	9	111	
-0.34249 J		0.788457		-1.130955	9	112	
-0.223144 J		0.788457		-1.0116	59	113	

0.788457	0.788457	0	59	113	
0.431782 J	0.788457	-0.356675	59	114	
ND<0	0.788457	-0.788457	59	115	
0.300105 J	0.788457	-0.488353	59	116	
0.641854	0.788457	-0.146603	59	117	
0.336472	0.788457	-0.451985	59	118	
0.587787	0.788457	-0.200671	59	119	

ND<0	ND<0	0	59	119	
ND<0	ND<0	0	59	119	
ND<0	ND<0	0	59	119	
ND<0	ND<0	0	59	119	
0.652325 J	ND<0	0.652325	60	119	
0.0861777 J	ND<0	0.0861777	61	119	
-0.34249 J	ND<0	-0.3424961	120		
-0.223144 J	ND<0	-0.223144	61	121	
0.788457	ND<0	0.788457	62	121	
0.431782 J	ND<0	0.431782	63	121	
ND<0	ND<0	0	63	121	
0.300105 J	ND<0	0.300105	64	121	
0.641854	ND<0	0.641854	65	121	
0.336472	ND<0	0.336472	66	121	
0.587787	ND<0	0.587787	67	121	

ND<0	ND<0	0	67	121	
ND<0	ND<0	0	67	121	
ND<0	ND<0	0	67	121	
0.652325 J	ND<0	0.652325	68	121	
0.0861777 J	ND<0	0.0861777	69	121	
-0.34249 J	ND<0	-0.3424969	122		
-0.223144 J	ND<0	-0.223144	69	123	
0.788457	ND<0	0.788457	70	123	
0.431782 J	ND<0	0.431782	71	123	
ND<0	ND<0	0	71	123	
0.300105 J	ND<0	0.300105	72	123	
0.641854	ND<0	0.641854	73	123	
0.336472	ND<0	0.336472	74	123	
0.587787	ND<0	0.587787	75	123	

ND<0	ND<0	0	75	123	
ND<0	ND<0	0	75	123	
0.652325 J	ND<0	0.652325	76	123	
0.0861777 J	ND<0	0.0861777	77	123	
-0.34249 J	ND<0	-0.3424977	124		
-0.223144 J	ND<0	-0.223144	77	125	
0.788457	ND<0	0.788457	78	125	
0.431782 J	ND<0	0.431782	79	125	
ND<0	ND<0	0	79	125	
0.300105 J	ND<0	0.300105	80	125	
0.641854	ND<0	0.641854	81	125	
0.336472	ND<0	0.336472	82	125	
0.587787	ND<0	0.587787	83	125	

ND<0	ND<0	0	83	125	
0.652325 J	ND<0	0.652325	84	125	
0.0861777 J	ND<0	0.0861777	85	125	
-0.34249 J	ND<0	-0.3424985	126		
-0.223144 J	ND<0	-0.223144	85	127	
0.788457	ND<0	0.788457	86	127	
0.431782 J	ND<0	0.431782	87	127	
ND<0	ND<0	0	87	127	
0.300105 J	ND<0	0.300105	88	127	

0.641854	ND<0	0.641854	89	127
0.336472	ND<0	0.336472	90	127
0.587787	ND<0	0.587787	91	127

0.652325 J	ND<0	0.652325	92	127
0.0861777 J	ND<0	0.0861777	93	127
-0.34249 J	ND<0	-0.3424993	128	
-0.223144 J	ND<0	-0.223144	93	129
0.788457	ND<0	0.788457	94	129
0.431782 J	ND<0	0.431782	95	129
ND<0	ND<0	0	95	129
0.300105 J	ND<0	0.300105	96	129
0.641854	ND<0	0.641854	97	129
0.336472	ND<0	0.336472	98	129
0.587787	ND<0	0.587787	99	129

0.0861777 J	0.652325 J	-0.566147	99	130
-0.34249 J	0.652325 J	-0.994815	99	131
-0.223144 J	0.652325 J	-0.875469	99	132
0.788457	0.652325 J	0.136132	100	132
0.431782 J	0.652325 J	-0.220543	100	133
ND<0	0.652325 J	-0.652325	100	134
0.300105 J	0.652325 J	-0.352221	100	135
0.641854	0.652325 J	-0.0104713	100	136
0.336472	0.652325 J	-0.315853	100	137
0.587787	0.652325 J	-0.0645385	100	138

-0.34249 J	0.0861777 J	-0.428668	100	139
-0.223144 J	0.0861777 J	-0.309321	100	140
0.788457	0.0861777 J	0.70228	101	140
0.431782 J	0.0861777 J	0.345605	102	140
ND<0	0.0861777 J	-0.0861777	102	141
0.300105 J	0.0861777 J	0.213927	103	141
0.641854	0.0861777 J	0.555676	104	141
0.336472	0.0861777 J	0.250295	105	141
0.587787	0.0861777 J	0.501609	106	141

-0.223144 J	-0.34249 J	0.119347	107	141
0.788457	-0.34249 J	1.13095	108	141
0.431782 J	-0.34249 J	0.774273	109	141
ND<0	-0.34249 J	0.34249	110	141
0.300105 J	-0.34249 J	0.642595	111	141
0.641854	-0.34249 J	0.984344	112	141
0.336472	-0.34249 J	0.678963	113	141
0.587787	-0.34249 J	0.930277	114	141

0.788457	-0.223144 J	1.0116	115	141
0.431782 J	-0.223144 J	0.654926	116	141
ND<0	-0.223144 J	0.223144	117	141
0.300105 J	-0.223144 J	0.523248	118	141
0.641854	-0.223144 J	0.864997	119	141
0.336472	-0.223144 J	0.559616	120	141
0.587787	-0.223144 J	0.81093	121	141

0.431782 J	0.788457	-0.356675	121	142
ND<0	0.788457	-0.788457	121	143
0.300105 J	0.788457	-0.488353	121	144
0.641854	0.788457	-0.146603	121	145
0.336472	0.788457	-0.451985	121	146
0.587787	0.788457	-0.200671	121	147

ND<0	0.431782 J	-0.431782	121	148	
0.300105 J	0.431782 J	-0.131678	121	149	
0.641854	0.431782 J	0.210071	122	149	
0.336472	0.431782 J	-0.0953102	122	150	
0.587787	0.431782 J	0.156004	123	150	
0.300105 J	ND<0	0.300105	124	150	
0.641854	ND<0	0.641854	125	150	
0.336472	ND<0	0.336472	126	150	
0.587787	ND<0	0.587787	127	150	
0.641854	0.300105 J	0.341749	128	150	
0.336472	0.300105 J	0.0363676	129	150	
0.587787	0.300105 J	0.287682	130	150	
0.336472	0.641854	-0.305382	130	151	
0.587787	0.641854	-0.0540672	130	152	
0.587787	0.336472	0.251314	131	152	

S Statistic = 131 - 152 = -21

Tied Group	Value	Members
1	1.09861	2
2	0	12
3	0.788457	2

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 3864
B = 0

C = 1320
D = 0
E = 136
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 2086.33
Z-Score = -0.437863
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.437863| <= 1.97737 indicating no evidence of a trend

Mann-Kendall Trend Analysis

Parameter: Benzene

Location: MW-11R

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
1.84055	0.741937	1.09861	1	0
1.79176	0.741937	1.04982	2	0
2.07944	0.741937	1.3375	3	0
ND<0	0.741937	-0.741937	3	1
2.19722	0.741937	1.45529	4	1
ND<0	0.741937	-0.741937	4	2
ND<0	0.741937	-0.741937	4	3
ND<0	0.741937	-0.741937	4	4
1.60944	0.741937	0.867501	5	4
1.60944	0.741937	0.867501	6	4
ND<0	0.741937	-0.741937	6	5
ND<0	0.741937	-0.741937	6	6
ND<0	0.741937	-0.741937	6	7
ND<0	0.741937	-0.741937	6	8
ND<0	0.741937	-0.741937	6	9
1.5217	0.741937	0.779762	7	9
0.431782 J	0.741937	-0.310155	7	10
-0.18633 J	0.741937	-0.928267	7	11
-0.0725707 J	0.741937	-0.814508	7	12
0.741937	0.741937	0	7	12
0.262364 J	0.741937	-0.479573	7	13
ND<0	0.741937	-0.741937	7	14
ND<0	0.741937	-0.741937	7	15
-0.527633 J	0.741937	-1.269577	7	16
ND<-2.07944	0.741937	-2.821387	7	17
-0.210721 J	0.741937	-0.952658	7	18
1.79176	1.84055	-0.0487902	7	19
2.07944	1.84055	0.238892	8	19
ND<0	1.84055	-1.840558	20	
2.19722	1.84055	0.356675	9	20
ND<0	1.84055	-1.840559	21	
ND<0	1.84055	-1.840559	22	
ND<0	1.84055	-1.840559	23	
1.60944	1.84055	-0.231112	9	24
1.60944	1.84055	-0.231112	9	25
ND<0	1.84055	-1.840559	26	
ND<0	1.84055	-1.840559	27	
ND<0	1.84055	-1.840559	28	
ND<0	1.84055	-1.840559	29	
ND<0	1.84055	-1.840559	30	
1.5217	1.84055	-0.318851	9	31
0.431782 J	1.84055	-1.408779	32	
-0.18633 J	1.84055	-2.026889	33	
-0.0725707 J	1.84055	-1.913129	34	
0.741937	1.84055	-1.098619	35	
0.262364 J	1.84055	-1.578199	36	
ND<0	1.84055	-1.840559	37	

ND<0	1.84055	-1.840559	38		
-0.527633 J	1.84055	-2.368189	39		
ND<-2.07944	1.84055	-3.919999	40		
-0.210721 J	1.84055	-2.051279	41		
2.07944	1.79176	0.287682	10	41	
ND<0	1.79176	-1.7917610	42		
2.19722	1.79176	0.405465	11	42	
ND<0	1.79176	-1.7917611	43		
ND<0	1.79176	-1.7917611	44		
ND<0	1.79176	-1.7917611	45		
1.60944	1.79176	-0.182322	11	46	
1.60944	1.79176	-0.182322	11	47	
ND<0	1.79176	-1.7917611	48		
ND<0	1.79176	-1.7917611	49		
ND<0	1.79176	-1.7917611	50		
ND<0	1.79176	-1.7917611	51		
ND<0	1.79176	-1.7917611	52		
1.5217	1.79176	-0.2700611	53		
0.431782 J	1.79176	-1.3599811	54		
-0.18633 J	1.79176	-1.9780911	55		
-0.0725707 J	1.79176	-1.8643311	56		
0.741937	1.79176	-1.0498211	57		
0.262364 J	1.79176	-1.5294 11	58		
ND<0	1.79176	-1.7917611	59		
ND<0	1.79176	-1.7917611	60		
-0.527633 J	1.79176	-2.3193911	61		
ND<-2.07944	1.79176	-3.8712 11	62		
-0.210721 J	1.79176	-2.0024811	63		
ND<0	2.07944	-2.0794411	64		
2.19722	2.07944	0.117783	12	64	
ND<0	2.07944	-2.0794412	65		
ND<0	2.07944	-2.0794412	66		
ND<0	2.07944	-2.0794412	67		
1.60944	2.07944	-0.470004	12	68	
1.60944	2.07944	-0.470004	12	69	
ND<0	2.07944	-2.0794412	70		
ND<0	2.07944	-2.0794412	71		
ND<0	2.07944	-2.0794412	72		
ND<0	2.07944	-2.0794412	73		
ND<0	2.07944	-2.0794412	74		
1.5217	2.07944	-0.557743	12	75	
0.431782 J	2.07944	-1.6476612	76		
-0.18633 J	2.07944	-2.2657712	77		
-0.0725707 J	2.07944	-2.1520112	78		
0.741937	2.07944	-1.3375 12	79		
0.262364 J	2.07944	-1.8170812	80		
ND<0	2.07944	-2.0794412	81		
ND<0	2.07944	-2.0794412	82		
-0.527633 J	2.07944	-2.6070712	83		
ND<-2.07944	2.07944	-4.1588812	84		
-0.210721 J	2.07944	-2.2901612	85		
2.19722	ND<0	2.19722 13	85		
ND<0	ND<0	0	13	85	
ND<0	ND<0	0	13	85	
ND<0	ND<0	0	13	85	
1.60944	ND<0	1.60944 14	85		
1.60944	ND<0	1.60944 15	85		
ND<0	ND<0	0	15	85	
ND<0	ND<0	0	15	85	

ND<0	ND<0	0	15	85		
ND<0	ND<0	0	15	85		
ND<0	ND<0	0	15	85		
1.5217	ND<0	1.5217	16	85		
0.431782 J		ND<0	0.431782		17	85
-0.18633 J		ND<0	-0.1863317		86	
-0.0725707 J		ND<0	-0.0725707		17	87
0.741937		ND<0	0.741937		18	87
0.262364 J		ND<0	0.262364		19	87
ND<0	ND<0	0	19	87		
ND<0	ND<0	0	19	87		
-0.527633 J		ND<0	-0.527633		19	88
ND<-2.07944		ND<0	-2.0794419		89	
-0.210721 J		ND<0	-0.210721		19	90
ND<0	2.19722		-2.1972219		91	
ND<0	2.19722		-2.1972219		92	
ND<0	2.19722		-2.1972219		93	
1.60944		2.19722		-0.587787	19	94
1.60944		2.19722		-0.587787	19	95
ND<0	2.19722		-2.1972219		96	
ND<0	2.19722		-2.1972219		97	
ND<0	2.19722		-2.1972219		98	
ND<0	2.19722		-2.1972219		99	
ND<0	2.19722		-2.1972219		100	
1.5217	2.19722		-0.675526		19	101
0.431782 J		2.19722		-1.7654419		102
-0.18633 J		2.19722		-2.3835519		103
-0.0725707 J		2.19722		-2.2698 19		104
0.741937		2.19722		-1.4552919		105
0.262364 J		2.19722		-1.9348619		106
ND<0	2.19722		-2.1972219		107	
ND<0	2.19722		-2.1972219		108	
-0.527633 J		2.19722		-2.7248619		109
ND<-2.07944		2.19722		-4.2766719		110
-0.210721 J		2.19722		-2.4079519		111
ND<0	ND<0	0	19	111		
ND<0	ND<0	0	19	111		
1.60944		ND<0	1.60944	20	111	
1.60944		ND<0	1.60944	21	111	
ND<0	ND<0	0	21	111		
ND<0	ND<0	0	21	111		
ND<0	ND<0	0	21	111		
ND<0	ND<0	0	21	111		
ND<0	ND<0	0	21	111		
1.5217	ND<0	1.5217	22	111		
0.431782 J		ND<0	0.431782		23	111
-0.18633 J		ND<0	-0.1863323		112	
-0.0725707 J		ND<0	-0.0725707		23	113
0.741937		ND<0	0.741937		24	113
0.262364 J		ND<0	0.262364		25	113
ND<0	ND<0	0	25	113		
ND<0	ND<0	0	25	113		
-0.527633 J		ND<0	-0.527633		25	114
ND<-2.07944		ND<0	-2.0794425		115	
-0.210721 J		ND<0	-0.210721		25	116
ND<0	ND<0	0	25	116		
1.60944		ND<0	1.60944	26	116	
1.60944		ND<0	1.60944	27	116	
ND<0	ND<0	0	27	116		

ND<0	ND<0	0	27	116		
ND<0	ND<0	0	27	116		
ND<0	ND<0	0	27	116		
ND<0	ND<0	0	27	116		
1.5217	ND<0	1.5217	28	116		
0.431782 J		ND<0	0.431782		29	116
-0.18633 J		ND<0	-0.1863329		117	
-0.0725707 J		ND<0	-0.0725707		29	118
0.741937		ND<0	0.741937		30	118
0.262364 J		ND<0	0.262364		31	118
ND<0	ND<0	0	31	118		
ND<0	ND<0	0	31	118		
-0.527633 J		ND<0	-0.527633		31	119
ND<-2.07944		ND<0	-2.0794431		120	
-0.210721 J		ND<0	-0.210721		31	121
1.60944		ND<0	1.60944	32	121	
1.60944		ND<0	1.60944	33	121	
ND<0	ND<0	0	33	121		
ND<0	ND<0	0	33	121		
ND<0	ND<0	0	33	121		
ND<0	ND<0	0	33	121		
ND<0	ND<0	0	33	121		
1.5217	ND<0	1.5217	34	121		
0.431782 J		ND<0	0.431782		35	121
-0.18633 J		ND<0	-0.1863335		122	
-0.0725707 J		ND<0	-0.0725707		35	123
0.741937		ND<0	0.741937		36	123
0.262364 J		ND<0	0.262364		37	123
ND<0	ND<0	0	37	123		
ND<0	ND<0	0	37	123		
-0.527633 J		ND<0	-0.527633		37	124
ND<-2.07944		ND<0	-2.0794437		125	
-0.210721 J		ND<0	-0.210721		37	126
1.60944		1.60944		0	37	126
ND<0	1.60944		-1.6094437		127	
ND<0	1.60944		-1.6094437		128	
ND<0	1.60944		-1.6094437		129	
ND<0	1.60944		-1.6094437		130	
ND<0	1.60944		-1.6094437		131	
1.5217	1.60944		-0.0877389		37	132
0.431782 J		1.60944		-1.1776637		133
-0.18633 J		1.60944		-1.7957737		134
-0.0725707 J		1.60944		-1.6820137		135
0.741937		1.60944		-0.867501	37	136
0.262364 J		1.60944		-1.3470737		137
ND<0	1.60944		-1.6094437		138	
ND<0	1.60944		-1.6094437		139	
-0.527633 J		1.60944		-2.1370737		140
ND<-2.07944		1.60944		-3.6888837		141
-0.210721 J		1.60944		-1.8201637		142
ND<0	1.60944		-1.6094437		143	
ND<0	1.60944		-1.6094437		144	
ND<0	1.60944		-1.6094437		145	
ND<0	1.60944		-1.6094437		146	
ND<0	1.60944		-1.6094437		147	
1.5217	1.60944		-0.0877389		37	148
0.431782 J		1.60944		-1.1776637		149
-0.18633 J		1.60944		-1.7957737		150
-0.0725707 J		1.60944		-1.6820137		151

0.741937	1.60944	-0.867501	37	152	
0.262364 J	1.60944	-1.3470737	153		
ND<0	1.60944	-1.6094437	154		
ND<0	1.60944	-1.6094437	155		
-0.527633 J	1.60944	-2.1370737	156		
ND<-2.07944	1.60944	-3.6888837	157		
-0.210721 J	1.60944	-1.8201637	158		

ND<0	ND<0	0	37	158
ND<0	ND<0	0	37	158
ND<0	ND<0	0	37	158
ND<0	ND<0	0	37	158
1.5217	ND<0	1.5217	38	158

0.431782 J	ND<0	0.431782	39	158
-0.18633 J	ND<0	-0.1863339	159	
-0.0725707 J	ND<0	-0.0725707	39	160
0.741937	ND<0	0.741937	40	160
0.262364 J	ND<0	0.262364	41	160

ND<0	ND<0	0	41	160
ND<0	ND<0	0	41	160

-0.527633 J	ND<0	-0.527633	41	161
ND<-2.07944	ND<0	-2.0794441	162	
-0.210721 J	ND<0	-0.210721	41	163

ND<0	ND<0	0	41	163
ND<0	ND<0	0	41	163
ND<0	ND<0	0	41	163
1.5217	ND<0	1.5217	42	163

0.431782 J	ND<0	0.431782	43	163
-0.18633 J	ND<0	-0.1863343	164	
-0.0725707 J	ND<0	-0.0725707	43	165
0.741937	ND<0	0.741937	44	165
0.262364 J	ND<0	0.262364	45	165

ND<0	ND<0	0	45	165
ND<0	ND<0	0	45	165

-0.527633 J	ND<0	-0.527633	45	166
ND<-2.07944	ND<0	-2.0794445	167	
-0.210721 J	ND<0	-0.210721	45	168

ND<0	ND<0	0	45	168
ND<0	ND<0	0	45	168
1.5217	ND<0	1.5217	46	168

0.431782 J	ND<0	0.431782	47	168
-0.18633 J	ND<0	-0.1863347	169	
-0.0725707 J	ND<0	-0.0725707	47	170
0.741937	ND<0	0.741937	48	170
0.262364 J	ND<0	0.262364	49	170

ND<0	ND<0	0	49	170
ND<0	ND<0	0	49	170

-0.527633 J	ND<0	-0.527633	49	171
ND<-2.07944	ND<0	-2.0794449	172	
-0.210721 J	ND<0	-0.210721	49	173

ND<0	ND<0	0	49	173
1.5217	ND<0	1.5217	50	173

0.431782 J	ND<0	0.431782	51	173
-0.18633 J	ND<0	-0.1863351	174	
-0.0725707 J	ND<0	-0.0725707	51	175
0.741937	ND<0	0.741937	52	175
0.262364 J	ND<0	0.262364	53	175

ND<0	ND<0	0	53	175
ND<0	ND<0	0	53	175

-0.527633 J	ND<0	-0.527633	53	176
ND<-2.07944	ND<0	-2.0794453	177	
-0.210721 J	ND<0	-0.210721	53	178

1.5217	ND<0	1.5217	54	178

0.431782 J	ND<0	0.431782	55	178
-0.18633 J	ND<0	-0.1863355	179	
-0.0725707 J	ND<0	-0.0725707	55	180
0.741937	ND<0	0.741937	56	180
0.262364 J	ND<0	0.262364	57	180

ND<0	ND<0	0	57	180
ND<0	ND<0	0	57	180

-0.527633 J	ND<0	-0.527633	57	181
ND<-2.07944	ND<0	-2.0794457	182	
-0.210721 J	ND<0	-0.210721	57	183

0.431782 J	1.5217	-1.0899257	184	
-0.18633 J	1.5217	-1.7080357	185	
-0.0725707 J	1.5217	-1.5942757	186	
0.741937	1.5217	-0.779762	57	187
0.262364 J	1.5217	-1.2593357	188	

ND<0	1.5217	-1.5217	57	189
ND<0	1.5217	-1.5217	57	190

-0.527633 J	1.5217	-2.0493357	191	
ND<-2.07944	1.5217	-3.6011457	192	
-0.210721 J	1.5217	-1.7324257	193	

-0.18633 J	0.431782 J	-0.618112	57	194
-0.0725707 J	0.431782 J	-0.504353	57	195
0.741937	0.431782 J	0.310155	58	195
0.262364 J	0.431782 J	-0.169418	58	196

ND<0	0.431782 J	-0.431782	58	197
ND<0	0.431782 J	-0.431782	58	198

-0.527633 J	0.431782 J	-0.959415	58	199
ND<-2.07944	0.431782 J	-2.5112258	200	
-0.210721 J	0.431782 J	-0.642503	58	201

-0.0725707 J	-0.18633 J	0.113759	59	201
0.741937	-0.18633 J	0.928267	60	201
0.262364 J	-0.18633 J	0.448694	61	201

ND<0	-0.18633 J	0.18633	62	201
ND<0	-0.18633 J	0.18633	63	201

-0.527633 J	-0.18633 J	-0.341303	63	202
ND<-2.07944	-0.18633 J	-1.8931163	203	
-0.210721 J	-0.18633 J	-0.0243915	63	204

0.741937	-0.0725707 J	0.814508	64	204
0.262364 J	-0.0725707 J	0.334935	65	204

ND<0	-0.0725707 J	0.0725707	66	204
ND<0	-0.0725707 J	0.0725707	67	204

-0.527633 J	-0.0725707 J	-0.455062	67	205
ND<-2.07944	-0.0725707 J	-2.0068767	206	
-0.210721 J	-0.0725707 J	-0.1381567	207	

0.262364 J	0.741937	-0.479573	67	208

ND<0	0.741937	-0.741937	67	209
ND<0	0.741937	-0.741937	67	210

-0.527633 J	0.741937	-1.2695767	211	
ND<-2.07944	0.741937	-2.8213867	212	
-0.210721 J	0.741937	-0.952658	67	213

ND<0	0.262364 J	-0.262364	67	214	
ND<0	0.262364 J	-0.262364	67	215	
-0.527633 J	0.262364 J	-0.789997	67	216	
ND<-2.07944	0.262364 J	-2.3418167	217		
-0.210721 J	0.262364 J	-0.473085	67	218	

ND<0	ND<0	0	67	218
-0.527633 J	ND<0	-0.527633	67	219
ND<-2.07944	ND<0	-2.0794467	220	
-0.210721 J	ND<0	-0.210721	67	221
-0.527633 J	ND<0	-0.527633	67	222
ND<-2.07944	ND<0	-2.0794467	223	
-0.210721 J	ND<0	-0.210721	67	224
ND<-2.07944	-0.527633 J	-1.5518167	225	
-0.210721 J	-0.527633 J	0.316912	68	225
-0.210721 J	ND<-2.07944	1.86872	69	225

S Statistic = 69 - 225 = -156

Tied Group	Value	Members
1	0.741937	2
2	0	11
3	1.60944	2

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 3006
B = 0

C = 990
D = 0
E = 114
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 2134
Z-Score = -3.35532
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.35532| > 1.97737 indicating a trend

Mann-Kendall Trend Analysis

Parameter: Benzene

Location: MW-10

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
0.182322 J	ND<0	0.182322	1	0
0.693147	ND<0	0.693147	2	0
0.693147	ND<0	0.693147	3	0
ND<0	ND<0	0	3	0
ND<0	ND<0	0	3	0
ND<0	ND<0	0	3	0
ND<0	ND<0	0	3	0
ND<0	ND<0	0	3	0
ND<0	ND<0	0	3	0
0.788457	ND<0	0.788457	4	0
ND<0	ND<0	0	4	0
ND<0	ND<0	0	4	0
ND<0	ND<0	0	4	0
ND<0	ND<0	0	4	0
ND<0	ND<0	0	4	0
0.587787 J	ND<0	0.587787	5	0
0.277632 J	ND<0	0.277632	6	0
0.270027 J	ND<0	0.270027	7	0
-0.040822 J	ND<0	-0.040822	7	1
ND<0	ND<0	0	7	1
0.322083	ND<0	0.322083	8	1
ND<0	ND<0	0	8	1
0 J	ND<0	0	8	1
0	ND<0	0	8	1
0.262364	ND<0	0.262364	9	1
-0.0618754 J	ND<0	-0.0618754	9	2
0.693147	0.182322 J	0.510826	10	2
0.693147	0.182322 J	0.510826	11	2
ND<0	0.182322 J	-0.182322	11	3
ND<0	0.182322 J	-0.182322	11	4
ND<0	0.182322 J	-0.182322	11	5
ND<0	0.182322 J	-0.182322	11	6
ND<0	0.182322 J	-0.182322	11	7
ND<0	0.182322 J	-0.182322	11	8
0.788457	0.182322 J	0.606136	12	8
ND<0	0.182322 J	-0.182322	12	9
ND<0	0.182322 J	-0.182322	12	10
ND<0	0.182322 J	-0.182322	12	11
ND<0	0.182322 J	-0.182322	12	12
ND<0	0.182322 J	-0.182322	12	13
0.587787 J	0.182322 J	0.405465	13	13
0.277632 J	0.182322 J	0.0953102	14	13
0.270027 J	0.182322 J	0.0877056	15	13
-0.040822 J	0.182322 J	-0.223144	15	14
ND<0	0.182322 J	-0.182322	15	15
0.322083	0.182322 J	0.139762	16	15
ND<0	0.182322 J	-0.182322	16	16

0 J	0.182322 J	-0.182322	16	17
0	0.182322 J	-0.182322	16	18
0.262364	0.182322 J	0.0800427	17	18
-0.0618754 J	0.182322 J	-0.244197	17	19
0.693147	0.693147	0	17	19
ND<0	0.693147	-0.693147	17	20
ND<0	0.693147	-0.693147	17	21
ND<0	0.693147	-0.693147	17	22
ND<0	0.693147	-0.693147	17	23
ND<0	0.693147	-0.693147	17	24
ND<0	0.693147	-0.693147	17	25
0.788457	0.693147	0.0953102	18	25
ND<0	0.693147	-0.693147	18	26
ND<0	0.693147	-0.693147	18	27
ND<0	0.693147	-0.693147	18	28
ND<0	0.693147	-0.693147	18	29
ND<0	0.693147	-0.693147	18	30
0.587787 J	0.693147	-0.105361	18	31
0.277632 J	0.693147	-0.415515	18	32
0.270027 J	0.693147	-0.4231218	33	
-0.040822 J	0.693147	-0.733969	18	34
ND<0	0.693147	-0.693147	18	35
0.322083	0.693147	-0.371064	18	36
ND<0	0.693147	-0.693147	18	37
0 J	0.693147	-0.693147	18	38
0	0.693147	-0.693147	18	39
0.262364	0.693147	-0.430783	18	40
-0.0618754 J	0.693147	-0.755023	18	41
ND<0	0.693147	-0.693147	18	42
ND<0	0.693147	-0.693147	18	43
ND<0	0.693147	-0.693147	18	44
ND<0	0.693147	-0.693147	18	45
ND<0	0.693147	-0.693147	18	46
ND<0	0.693147	-0.693147	18	47
0.788457	0.693147	0.0953102	19	47
ND<0	0.693147	-0.693147	19	48
ND<0	0.693147	-0.693147	19	49
ND<0	0.693147	-0.693147	19	50
ND<0	0.693147	-0.693147	19	51
ND<0	0.693147	-0.693147	19	52
0.587787 J	0.693147	-0.105361	19	53
0.277632 J	0.693147	-0.415515	19	54
0.270027 J	0.693147	-0.4231219	55	
-0.040822 J	0.693147	-0.733969	19	56
ND<0	0.693147	-0.693147	19	57
0.322083	0.693147	-0.371064	19	58
ND<0	0.693147	-0.693147	19	59
0 J	0.693147	-0.693147	19	60
0	0.693147	-0.693147	19	61
0.262364	0.693147	-0.430783	19	62
-0.0618754 J	0.693147	-0.755023	19	63
ND<0	ND<0	0	19	63
ND<0	ND<0	0	19	63
ND<0	ND<0	0	19	63
ND<0	ND<0	0	19	63
ND<0	ND<0	0	19	63
0.788457	ND<0	0.788457	20	63
ND<0	ND<0	0	20	63
ND<0	ND<0	0	20	63

ND<0	ND<0	0	20	63		
ND<0	ND<0	0	20	63		
ND<0	ND<0	0	20	63		
0.587787 J		ND<0	0.587787		21	63
0.277632 J		ND<0	0.277632		22	63
0.270027 J		ND<0	0.270027		23	63
-0.040822 J		ND<0	-0.040822		23	64
ND<0	ND<0	0	23	64		
0.322083		ND<0	0.322083		24	64
ND<0	ND<0	0	24	64		
0 J	ND<0	0	24	64		
0	ND<0	0	24	64		
0.262364		ND<0	0.262364		25	64
-0.0618754 J		ND<0	-0.0618754		25	65
ND<0	ND<0	0	25	65		
ND<0	ND<0	0	25	65		
ND<0	ND<0	0	25	65		
ND<0	ND<0	0	25	65		
0.788457		ND<0	0.788457		26	65
ND<0	ND<0	0	26	65		
ND<0	ND<0	0	26	65		
ND<0	ND<0	0	26	65		
ND<0	ND<0	0	26	65		
ND<0	ND<0	0	26	65		
0.587787 J		ND<0	0.587787		27	65
0.277632 J		ND<0	0.277632		28	65
0.270027 J		ND<0	0.270027		29	65
-0.040822 J		ND<0	-0.040822		29	66
ND<0	ND<0	0	29	66		
0.322083		ND<0	0.322083		30	66
ND<0	ND<0	0	30	66		
0 J	ND<0	0	30	66		
0	ND<0	0	30	66		
0.262364		ND<0	0.262364		31	66
-0.0618754 J		ND<0	-0.0618754		31	67
ND<0	ND<0	0	31	67		
ND<0	ND<0	0	31	67		
ND<0	ND<0	0	31	67		
0.788457		ND<0	0.788457		32	67
ND<0	ND<0	0	32	67		
ND<0	ND<0	0	32	67		
ND<0	ND<0	0	32	67		
ND<0	ND<0	0	32	67		
ND<0	ND<0	0	32	67		
0.587787 J		ND<0	0.587787		33	67
0.277632 J		ND<0	0.277632		34	67
0.270027 J		ND<0	0.270027		35	67
-0.040822 J		ND<0	-0.040822		35	68
ND<0	ND<0	0	35	68		
0.322083		ND<0	0.322083		36	68
ND<0	ND<0	0	36	68		
0 J	ND<0	0	36	68		
0	ND<0	0	36	68		
0.262364		ND<0	0.262364		37	68
-0.0618754 J		ND<0	-0.0618754		37	69
ND<0	ND<0	0	37	69		
ND<0	ND<0	0	37	69		
0.788457		ND<0	0.788457		38	69
ND<0	ND<0	0	38	69		

ND<0	ND<0	0	38	69		
ND<0	ND<0	0	38	69		
ND<0	ND<0	0	38	69		
ND<0	ND<0	0	38	69		
0.587787 J		ND<0	0.587787		39	69
0.277632 J		ND<0	0.277632		40	69
0.270027 J		ND<0	0.270027		41	69
-0.040822 J		ND<0	-0.040822		41	70
ND<0	ND<0	0	41	70		
0.322083		ND<0	0.322083		42	70
ND<0	ND<0	0	42	70		
0 J	ND<0	0	42	70		
0	ND<0	0	42	70		
0.262364		ND<0	0.262364		43	70
-0.0618754 J		ND<0	-0.0618754		43	71
ND<0	ND<0	0	43	71		
0.788457		ND<0	0.788457		44	71
ND<0	ND<0	0	44	71		
ND<0	ND<0	0	44	71		
ND<0	ND<0	0	44	71		
ND<0	ND<0	0	44	71		
ND<0	ND<0	0	44	71		
0.587787 J		ND<0	0.587787		45	71
0.277632 J		ND<0	0.277632		46	71
0.270027 J		ND<0	0.270027		47	71
-0.040822 J		ND<0	-0.040822		47	72
ND<0	ND<0	0	47	72		
0.322083		ND<0	0.322083		48	72
ND<0	ND<0	0	48	72		
0 J	ND<0	0	48	72		
0	ND<0	0	48	72		
0.262364		ND<0	0.262364		49	72
-0.0618754 J		ND<0	-0.0618754		49	73
0.788457		ND<0	0.788457		50	73
ND<0	ND<0	0	50	73		
ND<0	ND<0	0	50	73		
ND<0	ND<0	0	50	73		
ND<0	ND<0	0	50	73		
ND<0	ND<0	0	50	73		
0.587787 J		ND<0	0.587787		51	73
0.277632 J		ND<0	0.277632		52	73
0.270027 J		ND<0	0.270027		53	73
-0.040822 J		ND<0	-0.040822		53	74
ND<0	ND<0	0	53	74		
0.322083		ND<0	0.322083		54	74
ND<0	ND<0	0	54	74		
0 J	ND<0	0	54	74		
0	ND<0	0	54	74		
0.262364		ND<0	0.262364		55	74
-0.0618754 J		ND<0	-0.0618754		55	75
ND<0	0.788457		-0.788457		55	76
ND<0	0.788457		-0.788457		55	77
ND<0	0.788457		-0.788457		55	78
ND<0	0.788457		-0.788457		55	79
ND<0	0.788457		-0.788457		55	80
0.587787 J		0.788457		-0.200671	55	81
0.277632 J		0.788457		-0.510826	55	82
0.270027 J		0.788457		-0.5184355	83	
-0.040822 J		0.788457		-0.829279	55	84

ND<0	0.788457	-0.788457	55	85
0.322083	0.788457	-0.466374	55	86
ND<0	0.788457	-0.788457	55	87
0 J	0.788457	-0.788457	55	88
0	0.788457	-0.788457	55	89
0.262364	0.788457	-0.526093	55	90
-0.0618754 J	0.788457	-0.850333	55	91

ND<0	ND<0	0	55	91
ND<0	ND<0	0	55	91
ND<0	ND<0	0	55	91
ND<0	ND<0	0	55	91
0.587787 J	ND<0	0.587787	56	91
0.277632 J	ND<0	0.277632	57	91
0.270027 J	ND<0	0.270027	58	91
-0.040822 J	ND<0	-0.040822	58	92
ND<0	ND<0	0	58	92
0.322083	ND<0	0.322083	59	92
ND<0	ND<0	0	59	92
0 J	ND<0	0	59	92
0	ND<0	0	59	92
0.262364	ND<0	0.262364	60	92
-0.0618754 J	ND<0	-0.0618754	60	93

ND<0	ND<0	0	60	93
ND<0	ND<0	0	60	93
ND<0	ND<0	0	60	93
0.587787 J	ND<0	0.587787	61	93
0.277632 J	ND<0	0.277632	62	93
0.270027 J	ND<0	0.270027	63	93
-0.040822 J	ND<0	-0.040822	63	94
ND<0	ND<0	0	63	94
0.322083	ND<0	0.322083	64	94
ND<0	ND<0	0	64	94
0 J	ND<0	0	64	94
0	ND<0	0	64	94
0.262364	ND<0	0.262364	65	94
-0.0618754 J	ND<0	-0.0618754	65	95

ND<0	ND<0	0	65	95
ND<0	ND<0	0	65	95
0.587787 J	ND<0	0.587787	66	95
0.277632 J	ND<0	0.277632	67	95
0.270027 J	ND<0	0.270027	68	95
-0.040822 J	ND<0	-0.040822	68	96
ND<0	ND<0	0	68	96
0.322083	ND<0	0.322083	69	96
ND<0	ND<0	0	69	96
0 J	ND<0	0	69	96
0	ND<0	0	69	96
0.262364	ND<0	0.262364	70	96
-0.0618754 J	ND<0	-0.0618754	70	97

ND<0	ND<0	0	70	97
0.587787 J	ND<0	0.587787	71	97
0.277632 J	ND<0	0.277632	72	97
0.270027 J	ND<0	0.270027	73	97
-0.040822 J	ND<0	-0.040822	73	98
ND<0	ND<0	0	73	98
0.322083	ND<0	0.322083	74	98
ND<0	ND<0	0	74	98
0 J	ND<0	0	74	98

0	ND<0	0	74	98		
0.262364		ND<0	0.262364		75	98
-0.0618754 J		ND<0	-0.0618754		75	99
0.587787 J		ND<0	0.587787		76	99
0.277632 J		ND<0	0.277632		77	99
0.270027 J		ND<0	0.270027		78	99
-0.040822 J		ND<0	-0.040822		78	100
ND<0	ND<0	0	78	100		
0.322083		ND<0	0.322083		79	100
ND<0	ND<0	0	79	100		
0 J	ND<0	0	79	100		
0	ND<0	0	79	100		
0.262364		ND<0	0.262364		80	100
-0.0618754 J		ND<0	-0.0618754		80	101
0.277632 J		0.587787 J		-0.310155	80	102
0.270027 J		0.587787 J		-0.3177680	103	
-0.040822 J		0.587787 J		-0.628609	80	104
ND<0	0.587787 J		-0.587787		80	105
0.322083		0.587787 J		-0.265703	80	106
ND<0	0.587787 J		-0.587787		80	107
0 J	0.587787 J		-0.587787		80	108
0	0.587787 J		-0.587787		80	109
0.262364		0.587787 J		-0.325422	80	110
-0.0618754 J		0.587787 J		-0.649662	80	111
0.270027 J		0.277632 J		-0.0076046	80	112
-0.040822 J		0.277632 J		-0.318454	80	113
ND<0	0.277632 J		-0.277632		80	114
0.322083		0.277632 J		0.0444518	81	114
ND<0	0.277632 J		-0.277632		81	115
0 J	0.277632 J		-0.277632		81	116
0	0.277632 J		-0.277632		81	117
0.262364		0.277632 J		-0.0152675	81	118
-0.0618754 J		0.277632 J		-0.339507	81	119
-0.040822 J		0.270027 J		-0.310849	81	120
ND<0	0.270027 J		-0.270027		81	121
0.322083		0.270027 J		0.0520564	82	121
ND<0	0.270027 J		-0.270027		82	122
0 J	0.270027 J		-0.270027		82	123
0	0.270027 J		-0.270027		82	124
0.262364		0.270027 J		-0.00766287	82	125
-0.0618754 J		0.270027 J		-0.331903	82	126
ND<0	-0.040822 J		0.040822		83	126
0.322083		-0.040822 J		0.362905	84	126
ND<0	-0.040822 J		0.040822		85	126
0 J	-0.040822 J		0.040822		86	126
0	-0.040822 J		0.040822		87	126
0.262364		-0.040822 J		0.303186	88	126
-0.0618754 J		-0.040822 J		-0.0210534	88	127
0.322083		ND<0	0.322083		89	127
ND<0	ND<0	0	89	127		
0 J	ND<0	0	89	127		
0	ND<0	0	89	127		
0.262364		ND<0	0.262364		90	127
-0.0618754 J		ND<0	-0.0618754		90	128

ND<0	0.322083	-0.322083	90	129
0 J	0.322083	-0.322083	90	130
0	0.322083	-0.322083	90	131
0.262364	0.322083	-0.0597192	90	132
-0.0618754 J	0.322083	-0.383959	90	133

0 J	ND<0	0	90	133
0	ND<0	0	90	133
0.262364	ND<0	0.262364	91	133
-0.0618754 J	ND<0	-0.0618754	91	134

0	0 J	0	91	134
0.262364	0 J	0.262364	92	134
-0.0618754 J	0 J	-0.0618754	92	135

0.262364	0	0.262364	93	135
-0.0618754 J	0	-0.0618754	93	136

-0.0618754 J	0.262364	-0.3242493	137

S Statistic = 93 - 137 = -44

Tied Group	Value	Members
1	0	16
2	0.693147	2

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 8898
B = 0
C = 3360

D = 0
E = 242
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 1806.67
Z-Score = -1.01165
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-1.01165| <= 1.97737 indicating no evidence of a trend

Concentrations (ppb)

Parameter: Beryllium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 201
Percent Non-Detects: 94.8113%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	16 (94.1176%)	3/16/1999	ND<10	ND<10
			9/23/1999	ND<10	ND<10
			3/15/2000	2 J	2 J
			9/24/2003	ND<10	ND<10
			3/11/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/25/2005	ND<10	ND<10
			4/29/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			5/23/2007	ND<10	ND<10
			11/28/2007	ND<10	ND<10
			6/5/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			6/11/2009	ND<0.07	ND<0.07
			11/16/2009	ND<0.07	ND<0.07
			6/30/2010	ND<0.07	ND<0.07

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-9	27	26 (96.2963%)	7/20/1995	ND<10	ND<10
			8/24/1995	ND<10	ND<10
			9/28/1995	ND<10	ND<10
			10/26/1995	ND<10	ND<10
			11/19/1996	ND<10	ND<10
			12/19/1996	ND<10	ND<10
			3/24/1997	ND<10	ND<10
			9/24/1997	ND<10	ND<10
			4/7/1998	ND<10	ND<10
			9/23/1998	ND<10	ND<10
			3/16/1999	ND<10	ND<10
			9/23/1999	ND<10	ND<10
			3/15/2000	ND<10	ND<10
			9/24/2003	ND<10	ND<10
			3/11/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/25/2005	ND<10	ND<10
			4/29/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			5/23/2007	ND<10	ND<10
			11/28/2007	ND<10	ND<10
			6/5/2008	ND<10	ND<10
			11/20/2008	41	41

			6/11/2009	ND<0.07		ND<0.07
			11/16/2009	ND<0.07		ND<0.07
			6/30/2010	ND<0.07		ND<0.07
MW-6	27	27 (100%)	7/20/1995		ND<10	ND<10
			8/24/1995	ND<10	ND<10	
			9/28/1995	ND<10	ND<10	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	ND<10	ND<10	
			9/23/1999	ND<10	ND<10	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			6/11/2009	ND<0.07		ND<0.07
			11/16/2009	ND<0.07		ND<0.07
			6/30/2010	ND<0.07		ND<0.07
MW-7	27	26 (96.2963%)	7/20/1995		ND<10	ND<10
			8/24/1995	ND<10	ND<10	
			9/28/1995	ND<10	ND<10	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	ND<10	ND<10	
			9/23/1999	ND<10	ND<10	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008	44	44	
			6/11/2009	ND<0.07		ND<0.07
			11/16/2009	ND<0.07		ND<0.07
			6/30/2010	ND<0.07		ND<0.07
MW-8	26	25 (96.1538%)	7/20/1995		ND<10	ND<10
			8/24/1995	ND<10	ND<10	

			9/28/1995	ND<10	ND<10	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	ND<10	ND<10	
			9/23/1999	ND<10	ND<10	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008	46	46	
			6/11/2009	ND<0.07		ND<0.07
			6/30/2010	ND<0.07		ND<0.07
MW-10	27	26 (96.2963%)	7/20/1995	ND<10	ND<10	
			8/24/1995	ND<10	ND<10	
			9/28/1995	ND<10	ND<10	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	ND<10	ND<10	
			9/23/1999	ND<10	ND<10	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008	56	56	
			6/11/2009	ND<0.07		ND<0.07
			11/16/2009	ND<0.07		ND<0.07
			6/30/2010	ND<0.07		ND<0.07
MW-11R	27	27 (100%)	7/20/1995	ND<10	ND<10	
			8/24/1995	ND<10	ND<10	
			9/28/1995	ND<10	ND<10	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	

		9/23/1998	ND<10	ND<10		
		3/16/1999	ND<10	ND<10		
		9/23/1999	ND<10	ND<10		
		3/15/2000	ND<10	ND<10		
		9/24/2003	ND<10	ND<10		
		3/11/2004	ND<10	ND<10		
		10/12/2004	ND<10	ND<10		
		4/1/2005	ND<10	ND<10		
		10/25/2005	ND<10	ND<10		
		4/29/2006	ND<10	ND<10		
		11/18/2006	ND<10	ND<10		
		5/23/2007	ND<10	ND<10		
		11/28/2007	ND<10	ND<10		
		6/5/2008	ND<10	ND<10		
		11/20/2008	ND<10	ND<10		
		6/11/2009	ND<0.07		ND<0.07	
		11/16/2009	ND<0.07		ND<0.07	
		6/30/2010	ND<0.07		ND<0.07	
MW-12BR	17	14 (82.3529%)	3/16/1999		ND<10	ND<10
		9/23/1999	ND<10	ND<10		
		3/15/2000	ND<10	ND<10		
		9/24/2003	ND<10	ND<10		
		3/11/2004	ND<10	ND<10		
		10/12/2004	ND<10	ND<10		
		4/1/2005	ND<10	ND<10		
		10/25/2005	ND<10	ND<10		
		4/29/2006	ND<10	ND<10		
		11/18/2006	ND<10	ND<10		
		5/23/2007	ND<10	ND<10		
		11/28/2007	ND<10	ND<10		
		6/5/2008	ND<10	ND<10		
		11/20/2008	ND<10	ND<10		
		6/11/2009	0.36	0.36		
		11/16/2009	0.33	0.33		
		6/30/2010	0.37	0.37		
MW-12AR	17	14 (82.3529%)	3/16/1999		ND<10	ND<10
		9/23/1999	ND<10	ND<10		
		3/15/2000	ND<10	ND<10		
		9/24/2003	ND<10	ND<10		
		3/11/2004	ND<10	ND<10		
		10/12/2004	ND<10	ND<10		
		4/1/2005	ND<10	ND<10		
		10/25/2005	ND<10	ND<10		
		4/29/2006	ND<10	ND<10		
		11/18/2006	ND<10	ND<10		
		5/23/2007	ND<10	ND<10		
		11/28/2007	ND<10	ND<10		
		6/5/2008	ND<10	ND<10		
		11/20/2008	ND<10	ND<10		
		6/11/2009	0.13 J	0.13 J		
		11/16/2009	0.12 J	0.12 J		
		6/30/2010	0.12 J	0.12 J		

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.035	-2.65209	7.03356	-0.092823
2	0.035	-2.365	6.6297	-0.17562
3	0.035	-2.197	8.4578	-0.252524
4	0.035	-2.096	9.8549	-0.325917
5	0.035	-1.995	3.8365	-0.395756
6	0.035	-1.911	0.4885	-0.462642
7	0.035	-1.852	3.9191	-0.527468
8	0.035	-1.786	6.111	-0.59
9	0.035	-1.727	9.0968	-0.650477
10	0.035	-1.684	4.9358	-0.70945
11	0.035	-1.635	4.6098	-0.766683
12	0.035	-1.589	7.1356	-0.822308
13	0.035	-1.546	4.527	-0.876433
14	0.035	-1.514	1.8195	-0.929426
15	0.035	-1.475	3.9975	-0.981079
16	0.035	-1.439	5.0698	-1.03146
17	0.035	-1.411	8.063	-1.08088
18	0.035	-1.378	6.9637	-1.12913
19	0.035	-1.346	1.778	-1.17627
20	0.035	-1.322	5.527	-1.22256
21	0.12	-1.293	6.1989	-1.37772
22	0.12	-1.264	6.7982	-1.52948
23	0.13	-1.242	6.3424	-1.69102
24	0.33	-1.215	9.821	-2.09229
25	0.36	-1.190	1.2373	-2.52073
26	0.37	-1.165	0.5947	-2.9518
27	2	-1.145	3.9069	-5.24281
28	5	-1.121	6.875.165	-10.8512
29	5	-1.098	4.3716	-16.3435
30	5	-1.080	7.5387	-21.7451
31	5	-1.058	8.6584	-27.0358
32	5	-1.036	9.7326	-32.2179
33	5	-1.019	0.7718	-37.3151
34	5	-0.998575	81.7689	-42.3079
35	5	-0.978	2.7257	-47.1987
36	5	-0.958125	83.6437	-51.9893
37	5	-0.942375	84.5318	-56.7012
38	5	-0.923014	85.3837	-61.3163
39	5	-0.903992	86.201	-65.8362
40	5	-0.889006	86.9913	-70.2813
41	5	-0.870	5.7491	-74.634
42	5	-0.852385	88.4757	-78.8959
43	5	-0.838054	89.178	-83.0862
44	5	-0.820379	89.8511	-87.1881
45	5	-0.802956	90.4958	-91.2029
46	5	-0.789191	91.1186	-95.1488
47	5	-0.772193	91.7149	-99.0098
48	5	-0.755415	92.2856	-102.787
49	5	-0.738846	92.8314	-106.481

50	5	-0.725736	93.3581	-110.11
51	5	-0.709522	93.8616	-113.657
52	5	-0.693493	94.3425	-117.125
53	5	-0.680797	94.806	-120.529
54	5	-0.665079	95.2483	-123.854
55	5	-0.649522	95.6702	-127.102
56	5	-0.637192	96.0762	-130.288
57	5	-0.621911	96.463	-133.397
58	5	-0.606775	96.8312	-136.431
59	5	-0.594766	97.1849	-139.405
60	5	-0.579873	97.5212	-142.304
61	5	-0.565108	97.8405	-145.13
62	5	-0.550465	98.1435	-147.882
63	5	-0.538836	98.4339	-150.576
64	5	-0.524401	98.7088	-153.198
65	5	-0.510074	98.969	-155.749
66	5	-0.498687	99.2177	-158.242
67	5	-0.484544	99.4525	-160.665
68	5	-0.470498	99.6739	-163.017
69	5	-0.459327	99.8848	-165.314
70	5	-0.445443	100.083	-167.541
71	5	-0.431644	100.27	-169.7
72	5	-0.417928	100.444	-171.789
73	5	-0.40701	100.61	-173.824
74	5	-0.393433	100.765	-175.791
75	5	-0.379927	100.909	-177.691
76	5	-0.369171	101.045	-179.537
77	5	-0.355788	101.172	-181.316
78	5	-0.342466	101.289	-183.028
79	5	-0.331854	101.399	-184.687
80	5	-0.318639	101.501	-186.281
81	5	-0.305481	101.594	-187.808
82	5	-0.294992	101.681	-189.283
83	5	-0.281926	101.761	-190.693
84	5	-0.268908	101.833	-192.037
85	5	-0.255936	101.898	-193.317
86	5	-0.24559	101.959	-194.545
87	5	-0.232693	102.013	-195.708
88	5	-0.219834	102.061	-196.807
89	5	-0.209575	102.105	-197.855
90	5	-0.196779	102.144	-198.839
91	5	-0.184017	102.178	-199.759
92	5	-0.173829	102.208	-200.628
93	5	-0.161119	102.234	-201.434
94	5	-0.148434	102.256	-202.176
95	5	-0.135774	102.274	-202.855
96	5	-0.125661	102.29	-203.483
97	5	-0.113039	102.303	-204.049
98	5	-0.100433	102.313	-204.551
99	5	-0.0903606	102.321	-205.003
100	5	-0.0777834	102.327	-205.391
101	5	-0.0652187	102.332	-205.718
102	5	-0.0551734	102.335	-205.993
103	5	-0.0426257	102.336	-206.207
104	5	-0.0300838	102.337	-206.357
105	5	-0.0200544	102.338	-206.457
106	5	-0.00751925	102.338	-206.495
107	5	0.00751925	102.338	-206.457
108	5	0.0200544	102.338	-206.357
109	5	0.0300838	102.339	-206.207
110	5	0.0426257	102.341	-205.993
111	5	0.0551734	102.344	-205.718

112	5	0.0652187	102.348	-205.391
113	5	0.0777834	102.354	-205.003
114	5	0.0903606	102.362	-204.551
115	5	0.100433	102.373	-204.049
116	5	0.113039	102.385	-203.483
117	5	0.125661	102.401	-202.855
118	5	0.135774	102.42	-202.176
119	5	0.148434	102.442	-201.434
120	5	0.161119	102.468	-200.628
121	5	0.173829	102.498	-199.759
122	5	0.184017	102.532	-198.839
123	5	0.196779	102.57	-197.855
124	5	0.209575	102.614	-196.807
125	5	0.219834	102.663	-195.708
126	5	0.232693	102.717	-194.545
127	5	0.24559	102.777	-193.317
128	5	0.255936	102.843	-192.037
129	5	0.268908	102.915	-190.693
130	5	0.281926	102.994	-189.283
131	5	0.294992	103.081	-187.808
132	5	0.305481	103.175	-186.281
133	5	0.318639	103.276	-184.687
134	5	0.331854	103.386	-183.028
135	5	0.342466	103.504	-181.316
136	5	0.355788	103.63	-179.537
137	5	0.369171	103.767	-177.691
138	5	0.379927	103.911	-175.791
139	5	0.393433	104.066	-173.824
140	5	0.40701	104.231	-171.789
141	5	0.417928	104.406	-169.7
142	5	0.431644	104.592	-167.541
143	5	0.445443	104.791	-165.314
144	5	0.459327	105.002	-163.017
145	5	0.470498	105.223	-160.665
146	5	0.484544	105.458	-158.242
147	5	0.498687	105.707	-155.749
148	5	0.510074	105.967	-153.198
149	5	0.524401	106.242	-150.576
150	5	0.538836	106.532	-147.882
151	5	0.550465	106.835	-145.13
152	5	0.565108	107.154	-142.304
153	5	0.579873	107.491	-139.405
154	5	0.594766	107.844	-136.431
155	5	0.606775	108.213	-133.397
156	5	0.621911	108.599	-130.288
157	5	0.637192	109.005	-127.102
158	5	0.649522	109.427	-123.854
159	5	0.665079	109.87	-120.529
160	5	0.680797	110.333	-117.125
161	5	0.693493	110.814	-113.657
162	5	0.709522	111.317	-110.11
163	5	0.725736	111.844	-106.481
164	5	0.738846	112.39	-102.787
165	5	0.755415	112.961	-99.0098
166	5	0.772193	113.557	-95.1488
167	5	0.789191	114.18	-91.2029
168	5	0.802956	114.824	-87.1881
169	5	0.820379	115.498	-83.0862
170	5	0.838054	116.2	-78.8959
171	5	0.852385	116.926	-74.634
172	5	0.87055	117.684	-70.2813
173	5	0.889006	118.475	-65.8362

174	5	0.903992	119.292	-61.3163
175	5	0.923014	120.144	-56.7012
176	5	0.942375	121.032	-51.9893
177	5	0.958125	121.95	-47.1987
178	5	0.97815	122.907	-42.3079
179	5	0.998575	123.904	-37.3151
180	5	1.01943	124.943	-32.2179
181	5	1.03643	126.017	-27.0358
182	5	1.05812	127.137	-21.7451
183	5	1.08032	128.304	-16.3435
184	5	1.09847	129.511	-10.8512
185	5	1.12168	130.769	-5.24281
186	5	1.1455	132.081	0.48471
187	5	1.16505	133.438	6.30994
188	5	1.19012	134.855	12.2605
189	5	1.21596	136.333	18.3403
190	5	1.24264	137.877	24.5536
191	5	1.26464	139.477	30.8768
192	5	1.29303	141.149	37.3419
193	5	1.32251	142.898	43.9545
194	5	1.34694	144.712	50.6891
195	5	1.37866	146.613	57.5824
196	5	1.41183	148.606	64.6416
197	5	1.43953	150.678	71.8392
198	5	1.47579	152.856	79.2182
199	5	1.5141	155.149	86.7887
200	5	1.54643	157.54	94.5209
201	5	1.58927	160.066	102.467
202	5	1.63524	162.74	110.643
203	5	1.68494	165.579	119.068
204	5	1.72793	168.564	127.708
205	5	1.78661	171.756	136.641
206	5	1.85218	175.187	145.902
207	5	1.91103	178.839	155.457
208	5	1.99539	182.821	165.434
209	41	2.09693	187.218	251.408
210	44	2.19728	192.046	348.089
211	46	2.36561	197.642	456.907
212	56	2.65209	204.676	605.424

Data Set Standard Deviation = 6.05308
Numerator = 366538
Denominator = 1.58234e+006
W Statistic = 0.231642 = 366538 / 1.58234e+006

5% Critical value of 0.976 exceeds 0.231642
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.231642
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.35241	-2.65209	7.03356	8.89087
2	-3.35241	-2.36561	12.6297	16.8214
3	-3.35241	-2.19728	17.4578	24.1876
4	-3.35241	-2.09693	21.8549	31.2173
5	-3.35241	-1.99539	25.8365	37.9067
6	-3.35241	-1.91103	29.4885	44.3133
7	-3.35241	-1.85218	32.9191	50.5225
8	-3.35241	-1.78661	36.111	56.512
9	-3.35241	-1.72793	39.0968	62.3047
10	-3.35241	-1.68494	41.9358	67.9533
11	-3.35241	-1.63524	44.6098	73.4353
12	-3.35241	-1.58927	47.1356	78.7631
13	-3.35241	-1.54643	49.527	83.9474
14	-3.35241	-1.5141	51.8195	89.0233
15	-3.35241	-1.47579	53.9975	93.9708
16	-3.35241	-1.43953	56.0698	98.7967
17	-3.35241	-1.41183	58.063	103.53
18	-3.35241	-1.37866	59.9637	108.152
19	-3.35241	-1.34694	61.778	112.667
20	-3.35241	-1.32251	63.527	117.101
21	-2.12026	-1.29303	65.1989	119.842
22	-2.12026	-1.26464	66.7982	122.524
23	-2.04022	-1.24264	68.3424	125.059
24	-1.10866	-1.21596	69.821	126.407
25	-1.02165	-1.19012	71.2373	127.623
26	-0.994252	-1.16505	72.5947	128.781
27	0.693147	-1.1455	73.9069	127.987
28	1.60944	-1.12168	75.165	126.182
29	1.60944	-1.09847	76.3716	124.414
30	1.60944	-1.08032	77.5387	122.675
31	1.60944	-1.05812	78.6584	120.972
32	1.60944	-1.03643	79.7326	119.304
33	1.60944	-1.01943	80.7718	117.663
34	1.60944	-0.998575	81.7689	116.056
35	1.60944	-0.97815	82.7257	114.482
36	1.60944	-0.958125	83.6437	112.94
37	1.60944	-0.942375	84.5318	111.423
38	1.60944	-0.923014	85.3837	109.938
39	1.60944	-0.903992	86.201	108.483
40	1.60944	-0.889006	86.9913	107.052
41	1.60944	-0.87055	87.7491	105.651
42	1.60944	-0.852385	88.4757	104.279
43	1.60944	-0.838054	89.178	102.93
44	1.60944	-0.820379	89.8511	101.61
45	1.60944	-0.802956	90.4958	100.318
46	1.60944	-0.789191	91.1186	99.0475
47	1.60944	-0.772193	91.7149	97.8047
48	1.60944	-0.755415	92.2856	96.5889
49	1.60944	-0.738846	92.8314	95.3998

50	1.60944	-0.725736	93.3581	94.2317
51	1.60944	-0.709522	93.8616	93.0898
52	1.60944	-0.693493	94.3425	91.9737
53	1.60944	-0.680797	94.806	90.878
54	1.60944	-0.665079	95.2483	89.8076
55	1.60944	-0.649522	95.6702	88.7622
56	1.60944	-0.637192	96.0762	87.7367
57	1.60944	-0.621911	96.463	86.7357
58	1.60944	-0.606775	96.8312	85.7592
59	1.60944	-0.594766	97.1849	84.8019
60	1.60944	-0.579873	97.5212	83.8687
61	1.60944	-0.565108	97.8405	82.9592
62	1.60944	-0.550465	98.1435	82.0732
63	1.60944	-0.538836	98.4339	81.206
64	1.60944	-0.524401	98.7088	80.362
65	1.60944	-0.510074	98.969	79.5411
66	1.60944	-0.498687	99.2177	78.7385
67	1.60944	-0.484544	99.4525	77.9586
68	1.60944	-0.470498	99.6739	77.2014
69	1.60944	-0.459327	99.8848	76.4621
70	1.60944	-0.445443	100.083	75.7452
71	1.60944	-0.431644	100.27	75.0505
72	1.60944	-0.417928	100.444	74.3779
73	1.60944	-0.40701	100.61	73.7228
74	1.60944	-0.393433	100.765	73.0896
75	1.60944	-0.379927	100.909	72.4782
76	1.60944	-0.369171	101.045	71.884
77	1.60944	-0.355788	101.172	71.3114
78	1.60944	-0.342466	101.289	70.7602
79	1.60944	-0.331854	101.399	70.2261
80	1.60944	-0.318639	101.501	69.7133
81	1.60944	-0.305481	101.594	69.2216
82	1.60944	-0.294992	101.681	68.7468
83	1.60944	-0.281926	101.761	68.2931
84	1.60944	-0.268908	101.833	67.8603
85	1.60944	-0.255936	101.898	67.4484
86	1.60944	-0.24559	101.959	67.0531
87	1.60944	-0.232693	102.013	66.6786
88	1.60944	-0.219834	102.061	66.3248
89	1.60944	-0.209575	102.105	65.9875
90	1.60944	-0.196779	102.144	65.6708
91	1.60944	-0.184017	102.178	65.3747
92	1.60944	-0.173829	102.208	65.0949
93	1.60944	-0.161119	102.234	64.8356
94	1.60944	-0.148434	102.256	64.5967
95	1.60944	-0.135774	102.274	64.3782
96	1.60944	-0.125661	102.29	64.1759
97	1.60944	-0.113039	102.303	63.994
98	1.60944	-0.100433	102.313	63.8324
99	1.60944	-0.0903606	102.321	63.6869
100	1.60944	-0.0777834	102.327	63.5617
101	1.60944	-0.0652187	102.332	63.4568
102	1.60944	-0.0551734	102.335	63.368
103	1.60944	-0.0426257	102.336	63.2994
104	1.60944	-0.0300838	102.337	63.251
105	1.60944	-0.0200544	102.338	63.2187
106	1.60944	-0.00751925	102.338	63.2066
107	1.60944	0.00751925	102.338	63.2187
108	1.60944	0.0200544	102.338	63.251
109	1.60944	0.0300838	102.339	63.2994
110	1.60944	0.0426257	102.341	63.368
111	1.60944	0.0551734	102.344	63.4568

112	1.60944	0.0652187	102.348	63.5617
113	1.60944	0.0777834	102.354	63.6869
114	1.60944	0.0903606	102.362	63.8324
115	1.60944	0.100433	102.373	63.994
116	1.60944	0.113039	102.385	64.1759
117	1.60944	0.125661	102.401	64.3782
118	1.60944	0.135774	102.42	64.5967
119	1.60944	0.148434	102.442	64.8356
120	1.60944	0.161119	102.468	65.0949
121	1.60944	0.173829	102.498	65.3747
122	1.60944	0.184017	102.532	65.6708
123	1.60944	0.196779	102.57	65.9875
124	1.60944	0.209575	102.614	66.3248
125	1.60944	0.219834	102.663	66.6786
126	1.60944	0.232693	102.717	67.0531
127	1.60944	0.24559	102.777	67.4484
128	1.60944	0.255936	102.843	67.8603
129	1.60944	0.268908	102.915	68.2931
130	1.60944	0.281926	102.994	68.7468
131	1.60944	0.294992	103.081	69.2216
132	1.60944	0.305481	103.175	69.7133
133	1.60944	0.318639	103.276	70.2261
134	1.60944	0.331854	103.386	70.7602
135	1.60944	0.342466	103.504	71.3114
136	1.60944	0.355788	103.63	71.884
137	1.60944	0.369171	103.767	72.4782
138	1.60944	0.379927	103.911	73.0896
139	1.60944	0.393433	104.066	73.7228
140	1.60944	0.40701	104.231	74.3779
141	1.60944	0.417928	104.406	75.0505
142	1.60944	0.431644	104.592	75.7452
143	1.60944	0.445443	104.791	76.4621
144	1.60944	0.459327	105.002	77.2014
145	1.60944	0.470498	105.223	77.9586
146	1.60944	0.484544	105.458	78.7385
147	1.60944	0.498687	105.707	79.5411
148	1.60944	0.510074	105.967	80.362
149	1.60944	0.524401	106.242	81.206
150	1.60944	0.538836	106.532	82.0732
151	1.60944	0.550465	106.835	82.9592
152	1.60944	0.565108	107.154	83.8687
153	1.60944	0.579873	107.491	84.8019
154	1.60944	0.594766	107.844	85.7592
155	1.60944	0.606775	108.213	86.7357
156	1.60944	0.621911	108.599	87.7367
157	1.60944	0.637192	109.005	88.7622
158	1.60944	0.649522	109.427	89.8076
159	1.60944	0.665079	109.87	90.878
160	1.60944	0.680797	110.333	91.9737
161	1.60944	0.693493	110.814	93.0898
162	1.60944	0.709522	111.317	94.2317
163	1.60944	0.725736	111.844	95.3998
164	1.60944	0.738846	112.39	96.5889
165	1.60944	0.755415	112.961	97.8047
166	1.60944	0.772193	113.557	99.0475
167	1.60944	0.789191	114.18	100.318
168	1.60944	0.802956	114.824	101.61
169	1.60944	0.820379	115.498	102.93
170	1.60944	0.838054	116.2	104.279
171	1.60944	0.852385	116.926	105.651
172	1.60944	0.87055	117.684	107.052
173	1.60944	0.889006	118.475	108.483

174	1.60944	0.903992		119.292	109.938
175	1.60944	0.923014		120.144	111.423
176	1.60944	0.942375		121.032	112.94
177	1.60944	0.958125		121.95	114.482
178	1.60944	0.97815	122.907	116.056	
179	1.60944	0.998575		123.904	117.663
180	1.60944	1.01943	124.943	119.304	
181	1.60944	1.03643	126.017	120.972	
182	1.60944	1.05812	127.137	122.675	
183	1.60944	1.08032	128.304	124.414	
184	1.60944	1.09847	129.511	126.182	
185	1.60944	1.12168	130.769	127.987	
186	1.60944	1.1455	132.081	129.831	
187	1.60944	1.16505	133.438	131.706	
188	1.60944	1.19012	134.855	133.621	
189	1.60944	1.21596	136.333	135.578	
190	1.60944	1.24264	137.877	137.578	
191	1.60944	1.26464	139.477	139.614	
192	1.60944	1.29303	141.149	141.695	
193	1.60944	1.32251	142.898	143.823	
194	1.60944	1.34694	144.712	145.991	
195	1.60944	1.37866	146.613	148.21	
196	1.60944	1.41183	148.606	150.482	
197	1.60944	1.43953	150.678	152.799	
198	1.60944	1.47579	152.856	155.174	
199	1.60944	1.5141	155.149	157.611	
200	1.60944	1.54643	157.54	160.1	
201	1.60944	1.58927	160.066	162.658	
202	1.60944	1.63524	162.74	165.289	
203	1.60944	1.68494	165.579	168.001	
204	1.60944	1.72793	168.564	170.782	
205	1.60944	1.78661	171.756	173.658	
206	1.60944	1.85218	175.187	176.639	
207	1.60944	1.91103	178.839	179.714	
208	1.60944	1.99539	182.821	182.926	
209	3.71357	2.09693	187.218	190.713	
210	3.78419	2.19728	192.046	199.028	
211	3.82864	2.36561	197.642	208.085	
212	4.02535	2.65209	204.676	218.761	

Data Set Standard Deviation = 1.56683
Numerator = 47856.2
Denominator = 106022
W Statistic = 0.451381 = 47856.2 / 106022

5% Critical value of 0.976 exceeds 0.451381
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.451381
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Beryllium

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

Total Percent Non-Detects = 94.8113%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 17
Maximum Background Concentration = 1.60944
Confidence Level = 68%
False Positive Rate = 32%

Location	Date	Samples	Mean	Significant
MW-9	6/30/2010	1	-3.35241	FALSE
MW-6	6/30/2010	1	-3.35241	FALSE
MW-7	6/30/2010	1	-3.35241	FALSE
MW-8	6/30/2010	1	-3.35241	FALSE
MW-10	6/30/2010	1	-3.35241	FALSE
MW-11R	6/30/2010	1	-3.35241	FALSE
MW-12BR	6/30/2010	1	-0.994252	FALSE
MW-12AR	6/30/2010	1	-2.12026	FALSE

Concentrations (ppb)

Parameter: Chlorobenzene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 173
Percent Non-Detects: 81.6038%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.25	ND<0.25
			11/16/2009	ND<0.25	ND<0.25
			6/30/2010	ND<0.25	ND<0.25

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12BR	17	16 (94.1176%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	1.01 J	1.01 J
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.25	ND<0.25
			11/16/2009	ND<0.25	ND<0.25
			6/30/2010	ND<0.25	ND<0.25
MW-12AR	17	11 (64.7059%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2

			4/1/2005	ND<2	ND<2
			10/25/2005	0.57 J	0.57 J
			4/29/2006	0.62 J	0.62 J
			11/18/2006	0.53 J	0.53 J
			5/23/2007	ND<2	ND<2
			11/28/2007	0.56 J	0.56 J
			6/5/2008	0.65 J	0.65 J
			11/20/2008	0.4 J	0.4 J
			6/11/2009	ND<0.25	ND<0.25
			11/16/2009	ND<0.25	ND<0.25
			6/30/2010	ND<0.25	ND<0.25
MW-11R	27	27 (100%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.25	ND<0.25
			11/16/2009	ND<0.25	ND<0.25
			6/30/2010	ND<0.25	ND<0.25
MW-10	27	18 (66.6667%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	0.33 J	0.33 J
			10/25/2005	0.43 J	0.43 J
			4/29/2006	0.59 J	0.59 J
			11/18/2006	0.4 J	0.4 J
			5/23/2007	ND<2	ND<2
			11/28/2007	0.59 J	0.59 J

			6/5/2008	0.6 J	0.6 J	
			11/20/2008	0.62 J	0.62 J	
			6/11/2009	0.45 J	0.45 J	
			11/16/2009	0.63 J	0.63 J	
			6/30/2010	ND<0.25		ND<0.25
MW-8	26	18 (69.2308%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	2.75	2.75	
			4/29/2006	1.69 J	1.69 J	
			11/18/2006	3.46	3.46	
			5/23/2007	2.2	2.2	
			11/28/2007	3.36	3.36	
			6/5/2008	ND<2	ND<2	
			11/20/2008	2.18	2.18	
			6/11/2009	4.8	4.8	
			6/30/2010	1.9	1.9	
MW-7	27	25 (92.5926%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	0.29 J	0.29 J	
			6/11/2009	ND<0.25		ND<0.25
			11/16/2009	ND<0.25		ND<0.25
			6/30/2010	0.59 J	0.59 J	
MW-6	27	27 (100%)	7/20/1995		ND<2	ND<2

			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.25		ND<0.25
			11/16/2009	ND<0.25		ND<0.25
			6/30/2010	ND<0.25		ND<0.25
MW-9	27	14 (51.8519%)	7/20/1995		ND<2	ND<2
			8/24/1995	0.3 J	0.3 J	
			9/28/1995	ND<2	ND<2	
			10/26/1995	0.3 J	0.3 J	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	0.52 J	0.52 J	
			10/25/2005	0.34 J	0.34 J	
			4/29/2006	0.25 J	0.25 J	
			11/18/2006	0.28 J	0.28 J	
			5/23/2007	1.1	1.1	
			11/28/2007	0.74 J	0.74 J	
			6/5/2008	0.56 J	0.56 J	
			11/20/2008	0.65 J	0.65 J	
			6/11/2009	0.81 J	0.81 J	
			11/16/2009	0.8 J	0.8 J	
			6/30/2010	1.4	1.4	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Chlorobenzene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.125	-2.65209	7.03356	-0.331511
2	0.125	-2.365	11.2629	7 -0.627213
3	0.125	-2.197	28.1457	8 -0.901873
4	0.125	-2.096	32.8549	-1.16399
5	0.125	-1.995	39.8365	-1.41341
6	0.125	-1.911	03.4885	-1.65229
7	0.125	-1.852	18.9191	-1.88381
8	0.125	-1.786	13.6.111	-2.10714
9	0.125	-1.727	93.0968	-2.32313
10	0.125	-1.684	94.9358	-2.53375
11	0.125	-1.635	24.6098	-2.73815
12	0.125	-1.589	27.1356	-2.93681
13	0.125	-1.546	43.527	-3.13012
14	0.125	-1.514	1 51.8195	-3.31938
15	0.125	-1.475	79.9975	-3.50385
16	0.125	-1.439	53.0698	-3.6838
17	0.125	-1.411	83.063	-3.86027
18	0.125	-1.378	65.9637	-4.03261
19	0.25	-1.346	94.61.778	-4.36934
20	0.28	-1.322	51.63.527	-4.73964
21	0.29	-1.293	03.65.1989	-5.11462
22	0.3	-1.264	64.66.7982	-5.49401
23	0.3	-1.242	64.68.3424	-5.86681
24	0.33	-1.215	96.69.821	-6.26807
25	0.34	-1.190	12.71.2373	-6.67271
26	0.4	-1.165	05.72.5947	-7.13873
27	0.4	-1.145	5 73.9069	-7.59694
28	0.43	-1.121	68.75.165	-8.07926
29	0.45	-1.098	47.76.3716	-8.57357
30	0.52	-1.080	32.77.5387	-9.13533
31	0.53	-1.058	12.78.6584	-9.69614
32	0.56	-1.036	43.79.7326	-10.2765
33	0.56	-1.019	43.80.7718	-10.8474
34	0.57	-0.998575	81.7689	-11.4166
35	0.59	-0.978	15.82.7257	-11.9937
36	0.59	-0.958125	83.6437	-12.559
37	0.59	-0.942375	84.5318	-13.115
38	0.6	-0.923014	85.3837	-13.6688
39	0.62	-0.903992	86.201	-14.2293
40	0.62	-0.889006	86.9913	-14.7805
41	0.63	-0.870	55.87.7491	-15.3289
42	0.65	-0.852385	88.4757	-15.883
43	0.65	-0.838054	89.178	-16.4277
44	0.74	-0.820379	89.8511	-17.0348
45	0.8	-0.802956	90.4958	-17.6772
46	0.81	-0.789191	91.1186	-18.3164
47	1	-0.772193	91.7149	-19.0886
48	1	-0.755415	92.2856	-19.844
49	1	-0.738846	92.8314	-20.5829

50	1	-0.725736	93.3581	-21.3086
51	1	-0.709522	93.8616	-22.0181
52	1	-0.693493	94.3425	-22.7116
53	1	-0.680797	94.806	-23.3924
54	1	-0.665079	95.2483	-24.0575
55	1	-0.649522	95.6702	-24.707
56	1	-0.637192	96.0762	-25.3442
57	1	-0.621911	96.463	-25.9661
58	1	-0.606775	96.8312	-26.5729
59	1	-0.594766	97.1849	-27.1677
60	1	-0.579873	97.5212	-27.7475
61	1	-0.565108	97.8405	-28.3126
62	1	-0.550465	98.1435	-28.8631
63	1	-0.538836	98.4339	-29.4019
64	1	-0.524401	98.7088	-29.9263
65	1	-0.510074	98.969	-30.4364
66	1	-0.498687	99.2177	-30.9351
67	1	-0.484544	99.4525	-31.4196
68	1	-0.470498	99.6739	-31.8901
69	1	-0.459327	99.8848	-32.3495
70	1	-0.445443	100.083	-32.7949
71	1	-0.431644	100.27	-33.2265
72	1	-0.417928	100.444	-33.6445
73	1	-0.40701	100.61	-34.0515
74	1	-0.393433	100.765	-34.4449
75	1	-0.379927	100.909	-34.8248
76	1	-0.369171	101.045	-35.194
77	1	-0.355788	101.172	-35.5498
78	1	-0.342466	101.289	-35.8923
79	1	-0.331854	101.399	-36.2241
80	1	-0.318639	101.501	-36.5428
81	1	-0.305481	101.594	-36.8482
82	1	-0.294992	101.681	-37.1432
83	1	-0.281926	101.761	-37.4252
84	1	-0.268908	101.833	-37.6941
85	1	-0.255936	101.898	-37.95
86	1	-0.24559	101.959	-38.1956
87	1	-0.232693	102.013	-38.4283
88	1	-0.219834	102.061	-38.6481
89	1	-0.209575	102.105	-38.8577
90	1	-0.196779	102.144	-39.0545
91	1	-0.184017	102.178	-39.2385
92	1	-0.173829	102.208	-39.4123
93	1	-0.161119	102.234	-39.5734
94	1	-0.148434	102.256	-39.7219
95	1	-0.135774	102.274	-39.8577
96	1	-0.125661	102.29	-39.9833
97	1	-0.113039	102.303	-40.0964
98	1	-0.100433	102.313	-40.1968
99	1	-0.0903606	102.321	-40.2871
100	1	-0.0777834	102.327	-40.3649
101	1	-0.0652187	102.332	-40.4301
102	1	-0.0551734	102.335	-40.4853
103	1	-0.0426257	102.336	-40.5279
104	1	-0.0300838	102.337	-40.558
105	1	-0.0200544	102.338	-40.5781
106	1	-0.00751925	102.338	-40.5856
107	1	0.00751925	102.338	-40.5781
108	1	0.0200544	102.338	-40.558
109	1	0.0300838	102.339	-40.5279
110	1	0.0426257	102.341	-40.4853
111	1	0.0551734	102.344	-40.4301

112	1	0.0652187	102.348	-40.3649
113	1	0.0777834	102.354	-40.2871
114	1	0.0903606	102.362	-40.1968
115	1	0.100433	102.373	-40.0964
116	1	0.113039	102.385	-39.9833
117	1	0.125661	102.401	-39.8577
118	1	0.135774	102.42	-39.7219
119	1	0.148434	102.442	-39.5734
120	1	0.161119	102.468	-39.4123
121	1	0.173829	102.498	-39.2385
122	1	0.184017	102.532	-39.0545
123	1	0.196779	102.57	-38.8577
124	1	0.209575	102.614	-38.6481
125	1	0.219834	102.663	-38.4283
126	1	0.232693	102.717	-38.1956
127	1	0.24559	102.777	-37.95
128	1	0.255936	102.843	-37.6941
129	1	0.268908	102.915	-37.4252
130	1	0.281926	102.994	-37.1432
131	1	0.294992	103.081	-36.8482
132	1	0.305481	103.175	-36.5428
133	1	0.318639	103.276	-36.2241
134	1	0.331854	103.386	-35.8923
135	1	0.342466	103.504	-35.5498
136	1	0.355788	103.63	-35.194
137	1	0.369171	103.767	-34.8248
138	1	0.379927	103.911	-34.4449
139	1	0.393433	104.066	-34.0515
140	1	0.40701	104.231	-33.6445
141	1	0.417928	104.406	-33.2265
142	1	0.431644	104.592	-32.7949
143	1	0.445443	104.791	-32.3495
144	1	0.459327	105.002	-31.8901
145	1	0.470498	105.223	-31.4196
146	1	0.484544	105.458	-30.9351
147	1	0.498687	105.707	-30.4364
148	1	0.510074	105.967	-29.9263
149	1	0.524401	106.242	-29.4019
150	1	0.538836	106.532	-28.8631
151	1	0.550465	106.835	-28.3126
152	1	0.565108	107.154	-27.7475
153	1	0.579873	107.491	-27.1677
154	1	0.594766	107.844	-26.5729
155	1	0.606775	108.213	-25.9661
156	1	0.621911	108.599	-25.3442
157	1	0.637192	109.005	-24.707
158	1	0.649522	109.427	-24.0575
159	1	0.665079	109.87	-23.3924
160	1	0.680797	110.333	-22.7116
161	1	0.693493	110.814	-22.0181
162	1	0.709522	111.317	-21.3086
163	1	0.725736	111.844	-20.5829
164	1	0.738846	112.39	-19.844
165	1	0.755415	112.961	-19.0886
166	1	0.772193	113.557	-18.3164
167	1	0.789191	114.18	-17.5272
168	1	0.802956	114.824	-16.7243
169	1	0.820379	115.498	-15.9039
170	1	0.838054	116.2	-15.0658
171	1	0.852385	116.926	-14.2134
172	1	0.87055	117.684	-13.3429
173	1	0.889006	118.475	-12.4539

174	1	0.903992	119.292	-11.5499
175	1	0.923014	120.144	-10.6269
176	1	0.942375	121.032	-9.6845
177	1	0.958125	121.95	-8.72637
178	1	0.97815	122.907	-7.74822
179	1	0.998575	123.904	-6.74965
180	1	1.01943	124.943	-5.73022
181	1	1.03643	126.017	-4.69379
182	1	1.05812	127.137	-3.63567
183	1	1.08032	128.304	-2.55535
184	1	1.09847	129.511	-1.45688
185	1	1.12168	130.769	-0.335198
186	1	1.1455	132.081	0.810306
187	1	1.16505	133.438	1.97535
188	1	1.19012	134.855	3.16547
189	1	1.21596	136.333	4.38143
190	1	1.24264	137.877	5.62407
191	1	1.26464	139.477	6.88872
192	1	1.29303	141.149	8.18175
193	1	1.32251	142.898	9.50425
194	1	1.34694	144.712	10.8512
195	1	1.37866	146.613	12.2299
196	1	1.41183	148.606	13.6417
197	1	1.43953	150.678	15.0812
198	1	1.47579	152.856	16.557
199	1	1.5141	155.149	18.0711
200	1	1.54643	157.54	19.6175
201	1	1.58927	160.066	21.2068
202	1.01	1.63524	162.74	22.8584
203	1.1	1.68494	165.579	24.7118
204	1.4	1.72793	168.564	27.1309
205	1.69	1.78661	171.756	30.1503
206	1.9	1.85218	175.187	33.6694
207	2.18	1.91103	178.839	37.8355
208	2.2	1.99539	182.821	42.2254
209	2.75	2.09693	187.218	47.9919
210	3.36	2.19728	192.046	55.3748
211	3.46	2.36561	197.642	63.5598
212	4.8	2.65209	204.676	76.2898

Data Set Standard Deviation = 0.503546
Numerator = 5820.14
Denominator = 10950.3
W Statistic = 0.531505 = 5820.14 / 10950.3

5% Critical value of 0.976 exceeds 0.531505
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.531505
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Chlorobenzene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)	
1	-2.07944	-2.65209	7.03356	5.51486	
2	-2.07944	-2.36561	12.6297	10.434	
3	-2.07944	-2.19728	17.4578	15.0031	
4	-2.07944	-2.09693	21.8549	19.3636	
5	-2.07944	-1.99539	25.8365	23.5129	
6	-2.07944	-1.91103	29.4885	27.4868	
7	-2.07944	-1.85218	32.9191	31.3383	
8	-2.07944	-1.78661	36.111	35.0534	
9	-2.07944	-1.72793	39.0968	38.6465	
10	-2.07944	-1.68494	41.9358	42.1503	
11	-2.07944	-1.63524	44.6098	45.5507	
12	-2.07944	-1.58927	47.1356	48.8554	
13	-2.07944	-1.54643	49.527	52.0712	
14	-2.07944	-1.5141	51.8195	55.2197	
15	-2.07944	-1.47579	53.9975	58.2885	
16	-2.07944	-1.43953	56.0698	61.2819	
17	-2.07944	-1.41183	58.063	64.2177	
18	-2.07944	-1.37866	59.9637	67.0846	
19	-1.38629	-1.34694	61.778	68.9518	
20	-1.27297	-1.32251	63.527	70.6353	
21	-1.23787	-1.29303	65.1989	72.2359	
22	-1.20397	-1.26464	66.7982	73.7585	
23	-1.20397	-1.24264	68.3424	75.2546	
24	-1.10866	-1.21596	69.821	76.6027	
25	-1.07881	-1.19012	71.2373	77.8866	
26	-0.916291	-1.16505	72.5947	78.9541	
27	-0.916291	-1.1455	73.9069	80.0038	
28	-0.84397	-1.12168	75.165	80.9504	
29	-0.798508	-1.09847	76.3716	81.8276	
30	-0.653926	-1.08032	77.5387	82.534	
31	-0.634878	-1.05812	78.6584	83.2058	
32	-0.579818	-1.03643	79.7326	83.8067	
33	-0.579818	-1.01943	80.7718	84.3978	
34	-0.562119	-0.998575	81.7689	84.9591	
35	-0.527633	-0.97815	82.7257	85.4752	
36	-0.527633	-0.958125	83.6437	85.9808	
37	-0.527633	-0.942375	84.5318	86.478	
38	-0.510826	-0.923014	85.3837	86.9495	
39	-0.478036	-0.903992	86.201	87.3816	
40	-0.478036	-0.889006	86.9913	87.8066	
41	-0.462035	-0.87055	87.7491	88.2088	
42	-0.430783	-0.852385	88.4757	88.576	
43	-0.430783	-0.838054	89.178	88.9371	
44	-0.301105	-0.820379	89.8511	89.1841	
45	-0.223144	-0.802956	90.4958	89.3633	
46	-0.210721	-0.789191	91.1186	89.5296	
47	0	-0.772193	91.7149	89.5296	
48	0	-0.755415	92.2856	89.5296	
49	0	-0.738846	92.8314	89.5296	

50	0	-0.725736	93.3581	89.5296
51	0	-0.709522	93.8616	89.5296
52	0	-0.693493	94.3425	89.5296
53	0	-0.680797	94.806	89.5296
54	0	-0.665079	95.2483	89.5296
55	0	-0.649522	95.6702	89.5296
56	0	-0.637192	96.0762	89.5296
57	0	-0.621911	96.463	89.5296
58	0	-0.606775	96.8312	89.5296
59	0	-0.594766	97.1849	89.5296
60	0	-0.579873	97.5212	89.5296
61	0	-0.565108	97.8405	89.5296
62	0	-0.550465	98.1435	89.5296
63	0	-0.538836	98.4339	89.5296
64	0	-0.524401	98.7088	89.5296
65	0	-0.510074	98.969	89.5296
66	0	-0.498687	99.2177	89.5296
67	0	-0.484544	99.4525	89.5296
68	0	-0.470498	99.6739	89.5296
69	0	-0.459327	99.8848	89.5296
70	0	-0.445443	100.083	89.5296
71	0	-0.431644	100.27	89.5296
72	0	-0.417928	100.444	89.5296
73	0	-0.40701	100.61	89.5296
74	0	-0.393433	100.765	89.5296
75	0	-0.379927	100.909	89.5296
76	0	-0.369171	101.045	89.5296
77	0	-0.355788	101.172	89.5296
78	0	-0.342466	101.289	89.5296
79	0	-0.331854	101.399	89.5296
80	0	-0.318639	101.501	89.5296
81	0	-0.305481	101.594	89.5296
82	0	-0.294992	101.681	89.5296
83	0	-0.281926	101.761	89.5296
84	0	-0.268908	101.833	89.5296
85	0	-0.255936	101.898	89.5296
86	0	-0.24559	101.959	89.5296
87	0	-0.232693	102.013	89.5296
88	0	-0.219834	102.061	89.5296
89	0	-0.209575	102.105	89.5296
90	0	-0.196779	102.144	89.5296
91	0	-0.184017	102.178	89.5296
92	0	-0.173829	102.208	89.5296
93	0	-0.161119	102.234	89.5296
94	0	-0.148434	102.256	89.5296
95	0	-0.135774	102.274	89.5296
96	0	-0.125661	102.29	89.5296
97	0	-0.113039	102.303	89.5296
98	0	-0.100433	102.313	89.5296
99	0	-0.0903606	102.321	89.5296
100	0	-0.0777834	102.327	89.5296
101	0	-0.0652187	102.332	89.5296
102	0	-0.0551734	102.335	89.5296
103	0	-0.0426257	102.336	89.5296
104	0	-0.0300838	102.337	89.5296
105	0	-0.0200544	102.338	89.5296
106	0	-0.00751925	102.338	89.5296
107	0	0.00751925	102.338	89.5296
108	0	0.0200544	102.338	89.5296
109	0	0.0300838	102.339	89.5296
110	0	0.0426257	102.341	89.5296
111	0	0.0551734	102.344	89.5296

112	0	0.0652187	102.348	89.5296
113	0	0.0777834	102.354	89.5296
114	0	0.0903606	102.362	89.5296
115	0	0.100433	102.373	89.5296
116	0	0.113039	102.385	89.5296
117	0	0.125661	102.401	89.5296
118	0	0.135774	102.42	89.5296
119	0	0.148434	102.442	89.5296
120	0	0.161119	102.468	89.5296
121	0	0.173829	102.498	89.5296
122	0	0.184017	102.532	89.5296
123	0	0.196779	102.57	89.5296
124	0	0.209575	102.614	89.5296
125	0	0.219834	102.663	89.5296
126	0	0.232693	102.717	89.5296
127	0	0.24559	102.777	89.5296
128	0	0.255936	102.843	89.5296
129	0	0.268908	102.915	89.5296
130	0	0.281926	102.994	89.5296
131	0	0.294992	103.081	89.5296
132	0	0.305481	103.175	89.5296
133	0	0.318639	103.276	89.5296
134	0	0.331854	103.386	89.5296
135	0	0.342466	103.504	89.5296
136	0	0.355788	103.63	89.5296
137	0	0.369171	103.767	89.5296
138	0	0.379927	103.911	89.5296
139	0	0.393433	104.066	89.5296
140	0	0.40701	104.231	89.5296
141	0	0.417928	104.406	89.5296
142	0	0.431644	104.592	89.5296
143	0	0.445443	104.791	89.5296
144	0	0.459327	105.002	89.5296
145	0	0.470498	105.223	89.5296
146	0	0.484544	105.458	89.5296
147	0	0.498687	105.707	89.5296
148	0	0.510074	105.967	89.5296
149	0	0.524401	106.242	89.5296
150	0	0.538836	106.532	89.5296
151	0	0.550465	106.835	89.5296
152	0	0.565108	107.154	89.5296
153	0	0.579873	107.491	89.5296
154	0	0.594766	107.844	89.5296
155	0	0.606775	108.213	89.5296
156	0	0.621911	108.599	89.5296
157	0	0.637192	109.005	89.5296
158	0	0.649522	109.427	89.5296
159	0	0.665079	109.87	89.5296
160	0	0.680797	110.333	89.5296
161	0	0.693493	110.814	89.5296
162	0	0.709522	111.317	89.5296
163	0	0.725736	111.844	89.5296
164	0	0.738846	112.39	89.5296
165	0	0.755415	112.961	89.5296
166	0	0.772193	113.557	89.5296
167	0	0.789191	114.18	89.5296
168	0	0.802956	114.824	89.5296
169	0	0.820379	115.498	89.5296
170	0	0.838054	116.2	89.5296
171	0	0.852385	116.926	89.5296
172	0	0.87055	117.684	89.5296
173	0	0.889006	118.475	89.5296

174	0	0.903992		119.292	89.5296
175	0	0.923014		120.144	89.5296
176	0	0.942375		121.032	89.5296
177	0	0.958125		121.95	89.5296
178	0	0.97815	122.907	89.5296	
179	0	0.998575		123.904	89.5296
180	0	1.01943	124.943	89.5296	
181	0	1.03643	126.017	89.5296	
182	0	1.05812	127.137	89.5296	
183	0	1.08032	128.304	89.5296	
184	0	1.09847	129.511	89.5296	
185	0	1.12168	130.769	89.5296	
186	0	1.1455	132.081	89.5296	
187	0	1.16505	133.438	89.5296	
188	0	1.19012	134.855	89.5296	
189	0	1.21596	136.333	89.5296	
190	0	1.24264	137.877	89.5296	
191	0	1.26464	139.477	89.5296	
192	0	1.29303	141.149	89.5296	
193	0	1.32251	142.898	89.5296	
194	0	1.34694	144.712	89.5296	
195	0	1.37866	146.613	89.5296	
196	0	1.41183	148.606	89.5296	
197	0	1.43953	150.678	89.5296	
198	0	1.47579	152.856	89.5296	
199	0	1.5141	155.149	89.5296	
200	0	1.54643	157.54	89.5296	
201	0	1.58927	160.066	89.5296	
202	0.00995033		1.63524	162.74	89.5458
203	0.0953102		1.68494	165.579	89.7064
204	0.336472		1.72793	168.564	90.2878
205	0.524729		1.78661	171.756	91.2253
206	0.641854		1.85218	175.187	92.4141
207	0.779325		1.91103	178.839	93.9034
208	0.788457		1.99539	182.821	95.4767
209	1.0116	2.09693	187.218	97.598	
210	1.21194	2.19728	192.046	100.261	
211	1.24127	2.36561	197.642	103.197	
212	1.56862	2.65209	204.676	107.357	

Data Set Standard Deviation = 0.661877
Numerator = 11525.6
Denominator = 18919.2
W Statistic = 0.609202 = 11525.6 / 18919.2

5% Critical value of 0.976 exceeds 0.609202
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.609202
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Chlorobenzene

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	87
	9/23/1999	ND<0	87
	3/15/2000	ND<0	87
	9/24/2003	ND<0	87
	3/11/2004	ND<0	87
	10/12/2004	ND<0	87
	4/1/2005	ND<0	87
	10/25/2005	ND<0	87
	4/29/2006	ND<0	87
	11/18/2006	ND<0	87
	5/23/2007	ND<0	87
	11/28/2007	ND<0	87
	6/5/2008	ND<0	87
	11/20/2008	ND<0	87
	6/11/2009	ND<-2.07944	87
	11/16/2009	ND<-2.07944	87
	6/30/2010	ND<-2.07944	87

Rank Sum = 1479
Rank Mean = 87

Background Rank Sum = 1479
Background Rank Mean = 87

Compliance Wells

Well ID	Date	Result	Rank
MW-12BR	3/16/1999	ND<0	87
	9/23/1999	ND<0	87
	3/15/2000	ND<0	87
	9/24/2003	ND<0	87
	3/11/2004	ND<0	87
	10/12/2004	ND<0	87
	4/1/2005	0.00995033 J	202
	10/25/2005	ND<0	87
	4/29/2006	ND<0	87
	11/18/2006	ND<0	87
	5/23/2007	ND<0	87
	11/28/2007	ND<0	87
	6/5/2008	ND<0	87
	11/20/2008	ND<0	87
	6/11/2009	ND<-2.07944	87
	11/16/2009	ND<-2.07944	87
	6/30/2010	ND<-2.07944	87

Rank Sum = 1594
Rank Mean = 93.7647

MW-12AR	3/16/1999	ND<0	87
	9/23/1999	ND<0	87
	3/15/2000	ND<0	87
	9/24/2003	ND<0	87
	3/11/2004	ND<0	87
	10/12/2004	ND<0	87
	4/1/2005	ND<0	87
	10/25/2005	-0.562119 J	189
	4/29/2006	-0.478036 J	194
	11/18/2006	-0.634878 J	186
	5/23/2007	ND<0	87
	11/28/2007	-0.579818 J	187
	6/5/2008	-0.430783 J	197
	11/20/2008	-0.916291 J	181
	6/11/2009	ND<-2.07944	87
	11/16/2009	ND<-2.07944	87
	6/30/2010	ND<-2.07944	87

Rank Sum = 2091
Rank Mean = 123

MW-11R	7/20/1995	ND<0	87
	8/24/1995	ND<0	87
	9/28/1995	ND<0	87
	10/26/1995	ND<0	87
	11/19/1996	ND<0	87
	12/19/1996	ND<0	87
	3/24/1997	ND<0	87
	9/24/1997	ND<0	87
	4/7/1998	ND<0	87
	9/23/1998	ND<0	87
	3/16/1999	ND<0	87
	9/23/1999	ND<0	87
	3/15/2000	ND<0	87
	9/24/2003	ND<0	87
	3/11/2004	ND<0	87
	10/12/2004	ND<0	87
	4/1/2005	ND<0	87
	10/25/2005	ND<0	87
	4/29/2006	ND<0	87
	11/18/2006	ND<0	87
	5/23/2007	ND<0	87
	11/28/2007	ND<0	87
	6/5/2008	ND<0	87
	11/20/2008	ND<0	87
	6/11/2009	ND<-2.07944	87
	11/16/2009	ND<-2.07944	87
	6/30/2010	ND<-2.07944	87

Rank Sum = 2349
Rank Mean = 87

MW-10	7/20/1995	ND<0	87
	8/24/1995	ND<0	87
	9/28/1995	ND<0	87
	10/26/1995	ND<0	87
	11/19/1996	ND<0	87
	12/19/1996	ND<0	87
	3/24/1997	ND<0	87
	9/24/1997	ND<0	87
	4/7/1998	ND<0	87
	9/23/1998	ND<0	87
	3/16/1999	ND<0	87
	9/23/1999	ND<0	87

	3/15/2000	ND<0	87	
	9/24/2003	ND<0	87	
	3/11/2004	ND<0	87	
	10/12/2004	ND<0	87	
	4/1/2005	-1.10866 J	179	
	10/25/2005	-0.84397 J		183
	4/29/2006	-0.527633 J		190
	11/18/2006	-0.916291 J		182
	5/23/2007	ND<0	87	
	11/28/2007	-0.527633 J		191
	6/5/2008	-0.510826 J	193	
	11/20/2008	-0.478036 J		195
	6/11/2009	-0.798508 J		184
	11/16/2009	-0.462035 J		196
	6/30/2010	ND<-2.07944		87

Rank Sum = 3259
Rank Mean = 120.704

MW-8	7/20/1995	ND<0	87	
	8/24/1995	ND<0	87	
	9/28/1995	ND<0	87	
	10/26/1995	ND<0	87	
	11/19/1996	ND<0	87	
	12/19/1996	ND<0	87	
	3/24/1997	ND<0	87	
	9/24/1997	ND<0	87	
	4/7/1998	ND<0	87	
	9/23/1998	ND<0	87	
	3/16/1999	ND<0	87	
	9/23/1999	ND<0	87	
	3/15/2000	ND<0	87	
	9/24/2003	ND<0	87	
	3/11/2004	ND<0	87	
	10/12/2004	ND<0	87	
	4/1/2005	ND<0	87	
	10/25/2005	1.0116	209	
	4/29/2006	0.524729 J		205
	11/18/2006	1.24127		211
	5/23/2007	0.788457		208
	11/28/2007	1.21194		210
	6/5/2008	ND<0	87	
	11/20/2008	0.779325		207
	6/11/2009	1.56862		212
	6/30/2010	0.641854		206

Rank Sum = 3234
Rank Mean = 124.385

MW-7	7/20/1995	ND<0	87	
	8/24/1995	ND<0	87	
	9/28/1995	ND<0	87	
	10/26/1995	ND<0	87	
	11/19/1996	ND<0	87	
	12/19/1996	ND<0	87	
	3/24/1997	ND<0	87	
	9/24/1997	ND<0	87	
	4/7/1998	ND<0	87	
	9/23/1998	ND<0	87	
	3/16/1999	ND<0	87	
	9/23/1999	ND<0	87	
	3/15/2000	ND<0	87	
	9/24/2003	ND<0	87	
	3/11/2004	ND<0	87	

	10/12/2004	ND<0	87	
	4/1/2005	ND<0	87	
	10/25/2005	ND<0	87	
	4/29/2006	ND<0	87	
	11/18/2006	ND<0	87	
	5/23/2007	ND<0	87	
	11/28/2007	ND<0	87	
	6/5/2008	ND<0	87	
	11/20/2008	-1.23787	J	176
	6/11/2009	ND<-2.07944		87
	11/16/2009	ND<-2.07944		87
	6/30/2010	-0.527633	J	192

Rank Sum = 2543
Rank Mean = 94.1852

MW-6	7/20/1995	ND<0	87	
	8/24/1995	ND<0	87	
	9/28/1995	ND<0	87	
	10/26/1995	ND<0	87	
	11/19/1996	ND<0	87	
	12/19/1996	ND<0	87	
	3/24/1997	ND<0	87	
	9/24/1997	ND<0	87	
	4/7/1998	ND<0	87	
	9/23/1998	ND<0	87	
	3/16/1999	ND<0	87	
	9/23/1999	ND<0	87	
	3/15/2000	ND<0	87	
	9/24/2003	ND<0	87	
	3/11/2004	ND<0	87	
	10/12/2004	ND<0	87	
	4/1/2005	ND<0	87	
	10/25/2005	ND<0	87	
	4/29/2006	ND<0	87	
	11/18/2006	ND<0	87	
	5/23/2007	ND<0	87	
	11/28/2007	ND<0	87	
	6/5/2008	ND<0	87	
	11/20/2008	ND<0	87	
	6/11/2009	ND<-2.07944		87
	11/16/2009	ND<-2.07944		87
	6/30/2010	ND<-2.07944		87

Rank Sum = 2349
Rank Mean = 87

MW-9	7/20/1995	ND<0	87	
	8/24/1995	-1.20397	J	177
	9/28/1995	ND<0	87	
	10/26/1995	-1.20397	J	178
	11/19/1996	ND<0	87	
	12/19/1996	ND<0	87	
	3/24/1997	ND<0	87	
	9/24/1997	ND<0	87	
	4/7/1998	ND<0	87	
	9/23/1998	ND<0	87	
	3/16/1999	ND<0	87	
	9/23/1999	ND<0	87	
	3/15/2000	ND<0	87	
	9/24/2003	ND<0	87	
	3/11/2004	ND<0	87	
	10/12/2004	ND<0	87	
	4/1/2005	-0.653926	J	185

10/25/2005	-1.07881 J	180	
4/29/2006	-1.38629 J	174	
11/18/2006	-1.27297 J	175	
5/23/2007	0.0953102	203	
11/28/2007	-0.301105 J	199	
6/5/2008	-0.579818 J	188	
11/20/2008	-0.430783 J	198	
6/11/2009	-0.210721 J	201	
11/16/2009	-0.223144 J	200	
6/30/2010	0.336472	204	

Rank Sum = 3680
Rank Mean = 136.296

Calculation Results:

Kruskal-Wallis H Statistic = 20.2531
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 44.3571
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
20.2531 > 15.5073 indicating a significant group difference at 5% significance level
44.3571 > 15.5073 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 87

Well	Mean Rank	Dif from Bkg	Critical Value
MW-12BR	93.7647	6.76471	48.9476
MW-12AR	123	36	48.9476
MW-11R	87	0	44.1836
MW-10	120.704	33.7037	44.1836
MW-8	124.385	37.3846	44.5106
MW-7	94.1852	7.18519	44.1836
MW-6	87	0	44.1836
MW-9	136.296	49.2963	44.1836

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 87

Well	Mean Rank	Dif from Bkg	Critical Value
MW-12BR	93.7647	6.76471	52.8567
MW-12AR	123	36	52.8567
MW-11R	87	0	47.7122
MW-10	120.704	33.7037	47.7122
MW-8	124.385	37.3846	48.0654
MW-7	94.1852	7.18519	47.7122
MW-6	87	0	47.7122
MW-9	136.296	49.2963	47.7122

Mann-Kendall Trend Analysis

Parameter: Chlorobenzene

Location: MW-9

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
-1.20397 J	ND<0	-1.203970	1	
ND<0	ND<0	0	0	1
-1.20397 J	ND<0	-1.203970	2	
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
-0.653926 J	ND<0	-0.653926	0	3
-1.07881 J	ND<0	-1.078810	4	
-1.38629 J	ND<0	-1.386290	5	
-1.27297 J	ND<0	-1.272970	6	
0.0953102	ND<0	0.0953102	1	6
-0.301105 J	ND<0	-0.301105	1	7
-0.579818 J	ND<0	-0.579818	1	8
-0.430783 J	ND<0	-0.430783	1	9
-0.210721 J	ND<0	-0.210721	1	10
-0.223144 J	ND<0	-0.223144	1	11
0.336472	ND<0	0.336472	2	11
ND<0	-1.20397 J	1.20397	3	11
-1.20397 J	-1.20397 J	0	3	11
ND<0	-1.20397 J	1.20397	4	11
ND<0	-1.20397 J	1.20397	5	11
ND<0	-1.20397 J	1.20397	6	11
ND<0	-1.20397 J	1.20397	7	11
ND<0	-1.20397 J	1.20397	8	11
ND<0	-1.20397 J	1.20397	9	11
ND<0	-1.20397 J	1.20397	10	11
ND<0	-1.20397 J	1.20397	11	11
ND<0	-1.20397 J	1.20397	12	11
ND<0	-1.20397 J	1.20397	13	11
ND<0	-1.20397 J	1.20397	14	11
ND<0	-1.20397 J	1.20397	15	11
-0.653926 J	-1.20397 J	0.550046	16	11
-1.07881 J	-1.20397 J	0.125163	17	11
-1.38629 J	-1.20397 J	-0.182322	17	12
-1.27297 J	-1.20397 J	-0.0689929	17	13
0.0953102	-1.20397 J	1.29928	18	13
-0.301105 J	-1.20397 J	0.902868	19	13
-0.579818 J	-1.20397 J	0.624154	20	13

-0.430783 J	-1.20397 J	0.77319	21	13	
-0.210721 J	-1.20397 J	0.993252	22	13	
-0.223144 J	-1.20397 J	0.980829	23	13	
0.336472	-1.20397 J	1.54045	24	13	

-1.20397 J	ND<0	-1.2039	24	14	
ND<0	ND<0	0	24	14	
ND<0	ND<0	0	24	14	
ND<0	ND<0	0	24	14	
ND<0	ND<0	0	24	14	
ND<0	ND<0	0	24	14	
ND<0	ND<0	0	24	14	
ND<0	ND<0	0	24	14	
ND<0	ND<0	0	24	14	
ND<0	ND<0	0	24	14	
ND<0	ND<0	0	24	14	
ND<0	ND<0	0	24	14	
ND<0	ND<0	0	24	14	
-0.653926 J	ND<0	-0.653926	24	15	
-1.07881 J	ND<0	-1.0788	24	16	
-1.38629 J	ND<0	-1.3862	24	17	
-1.27297 J	ND<0	-1.2729	24	18	
0.0953102	ND<0	0.0953102	25	18	
-0.301105 J	ND<0	-0.301105	25	19	
-0.579818 J	ND<0	-0.579818	25	20	
-0.430783 J	ND<0	-0.430783	25	21	
-0.210721 J	ND<0	-0.210721	25	22	
-0.223144 J	ND<0	-0.223144	25	23	
0.336472	ND<0	0.336472	26	23	

ND<0	-1.20397 J	1.20397	27	23	
ND<0	-1.20397 J	1.20397	28	23	
ND<0	-1.20397 J	1.20397	29	23	
ND<0	-1.20397 J	1.20397	30	23	
ND<0	-1.20397 J	1.20397	31	23	
ND<0	-1.20397 J	1.20397	32	23	
ND<0	-1.20397 J	1.20397	33	23	
ND<0	-1.20397 J	1.20397	34	23	
ND<0	-1.20397 J	1.20397	35	23	
ND<0	-1.20397 J	1.20397	36	23	
ND<0	-1.20397 J	1.20397	37	23	
ND<0	-1.20397 J	1.20397	38	23	
-0.653926 J	-1.20397 J	0.550046	39	23	
-1.07881 J	-1.20397 J	0.125163	40	23	
-1.38629 J	-1.20397 J	-0.182322	40	24	
-1.27297 J	-1.20397 J	-0.0689929	40	25	
0.0953102	-1.20397 J	1.29928	41	25	
-0.301105 J	-1.20397 J	0.902868	42	25	
-0.579818 J	-1.20397 J	0.624154	43	25	
-0.430783 J	-1.20397 J	0.77319	44	25	
-0.210721 J	-1.20397 J	0.993252	45	25	
-0.223144 J	-1.20397 J	0.980829	46	25	
0.336472	-1.20397 J	1.54045	47	25	

ND<0	ND<0	0	47	25
ND<0	ND<0	0	47	25
ND<0	ND<0	0	47	25
ND<0	ND<0	0	47	25
ND<0	ND<0	0	47	25
ND<0	ND<0	0	47	25
ND<0	ND<0	0	47	25
ND<0	ND<0	0	47	25

ND<0	ND<0	0	47	25		
ND<0	ND<0	0	47	25		
ND<0	ND<0	0	47	25		
-0.653926 J		ND<0	-0.653926		47	26
-1.07881 J		ND<0	-1.0788147		27	
-1.38629 J		ND<0	-1.3862947		28	
-1.27297 J		ND<0	-1.2729747		29	
0.0953102		ND<0	0.0953102		48	29
-0.301105 J		ND<0	-0.301105		48	30
-0.579818 J		ND<0	-0.579818		48	31
-0.430783 J		ND<0	-0.430783		48	32
-0.210721 J		ND<0	-0.210721		48	33
-0.223144 J		ND<0	-0.223144		48	34
0.336472		ND<0	0.336472		49	34
ND<0	ND<0	0	49	34		
ND<0	ND<0	0	49	34		
ND<0	ND<0	0	49	34		
ND<0	ND<0	0	49	34		
ND<0	ND<0	0	49	34		
ND<0	ND<0	0	49	34		
ND<0	ND<0	0	49	34		
ND<0	ND<0	0	49	34		
ND<0	ND<0	0	49	34		
ND<0	ND<0	0	49	34		
-0.653926 J		ND<0	-0.653926		49	35
-1.07881 J		ND<0	-1.0788149		36	
-1.38629 J		ND<0	-1.3862949		37	
-1.27297 J		ND<0	-1.2729749		38	
0.0953102		ND<0	0.0953102		50	38
-0.301105 J		ND<0	-0.301105		50	39
-0.579818 J		ND<0	-0.579818		50	40
-0.430783 J		ND<0	-0.430783		50	41
-0.210721 J		ND<0	-0.210721		50	42
-0.223144 J		ND<0	-0.223144		50	43
0.336472		ND<0	0.336472		51	43
ND<0	ND<0	0	51	43		
ND<0	ND<0	0	51	43		
ND<0	ND<0	0	51	43		
ND<0	ND<0	0	51	43		
ND<0	ND<0	0	51	43		
ND<0	ND<0	0	51	43		
ND<0	ND<0	0	51	43		
ND<0	ND<0	0	51	43		
ND<0	ND<0	0	51	43		
-0.653926 J		ND<0	-0.653926		51	44
-1.07881 J		ND<0	-1.0788151		45	
-1.38629 J		ND<0	-1.3862951		46	
-1.27297 J		ND<0	-1.2729751		47	
0.0953102		ND<0	0.0953102		52	47
-0.301105 J		ND<0	-0.301105		52	48
-0.579818 J		ND<0	-0.579818		52	49
-0.430783 J		ND<0	-0.430783		52	50
-0.210721 J		ND<0	-0.210721		52	51
-0.223144 J		ND<0	-0.223144		52	52
0.336472		ND<0	0.336472		53	52
ND<0	ND<0	0	53	52		
ND<0	ND<0	0	53	52		
ND<0	ND<0	0	53	52		
ND<0	ND<0	0	53	52		

ND<0	ND<0	0	53	52		
ND<0	ND<0	0	53	52		
ND<0	ND<0	0	53	52		
ND<0	ND<0	0	53	52		
-0.653926 J		ND<0	-0.653926		53	53
-1.07881 J		ND<0	-1.0788153		54	
-1.38629 J		ND<0	-1.3862953		55	
-1.27297 J		ND<0	-1.2729753		56	
0.0953102		ND<0	0.0953102		54	56
-0.301105 J		ND<0	-0.301105		54	57
-0.579818 J		ND<0	-0.579818		54	58
-0.430783 J		ND<0	-0.430783		54	59
-0.210721 J		ND<0	-0.210721		54	60
-0.223144 J		ND<0	-0.223144		54	61
0.336472		ND<0	0.336472		55	61
ND<0	ND<0	0	55	61		
ND<0	ND<0	0	55	61		
ND<0	ND<0	0	55	61		
ND<0	ND<0	0	55	61		
ND<0	ND<0	0	55	61		
ND<0	ND<0	0	55	61		
ND<0	ND<0	0	55	61		
-0.653926 J		ND<0	-0.653926		55	62
-1.07881 J		ND<0	-1.0788155		63	
-1.38629 J		ND<0	-1.3862955		64	
-1.27297 J		ND<0	-1.2729755		65	
0.0953102		ND<0	0.0953102		56	65
-0.301105 J		ND<0	-0.301105		56	66
-0.579818 J		ND<0	-0.579818		56	67
-0.430783 J		ND<0	-0.430783		56	68
-0.210721 J		ND<0	-0.210721		56	69
-0.223144 J		ND<0	-0.223144		56	70
0.336472		ND<0	0.336472		57	70
ND<0	ND<0	0	57	70		
ND<0	ND<0	0	57	70		
ND<0	ND<0	0	57	70		
ND<0	ND<0	0	57	70		
ND<0	ND<0	0	57	70		
ND<0	ND<0	0	57	70		
-0.653926 J		ND<0	-0.653926		57	71
-1.07881 J		ND<0	-1.0788157		72	
-1.38629 J		ND<0	-1.3862957		73	
-1.27297 J		ND<0	-1.2729757		74	
0.0953102		ND<0	0.0953102		58	74
-0.301105 J		ND<0	-0.301105		58	75
-0.579818 J		ND<0	-0.579818		58	76
-0.430783 J		ND<0	-0.430783		58	77
-0.210721 J		ND<0	-0.210721		58	78
-0.223144 J		ND<0	-0.223144		58	79
0.336472		ND<0	0.336472		59	79
ND<0	ND<0	0	59	79		
ND<0	ND<0	0	59	79		
ND<0	ND<0	0	59	79		
ND<0	ND<0	0	59	79		
ND<0	ND<0	0	59	79		
-0.653926 J		ND<0	-0.653926		59	80
-1.07881 J		ND<0	-1.0788159		81	
-1.38629 J		ND<0	-1.3862959		82	
-1.27297 J		ND<0	-1.2729759		83	

0.0953102	ND<0	0.0953102	60	83
-0.301105 J	ND<0	-0.301105	60	84
-0.579818 J	ND<0	-0.579818	60	85
-0.430783 J	ND<0	-0.430783	60	86
-0.210721 J	ND<0	-0.210721	60	87
-0.223144 J	ND<0	-0.223144	60	88
0.336472	ND<0	0.336472	61	88

ND<0	ND<0	0	61	88
ND<0	ND<0	0	61	88
ND<0	ND<0	0	61	88
ND<0	ND<0	0	61	88
-0.653926 J	ND<0	-0.653926	61	89
-1.07881 J	ND<0	-1.0788161	90	
-1.38629 J	ND<0	-1.3862961	91	
-1.27297 J	ND<0	-1.2729761	92	
0.0953102	ND<0	0.0953102	62	92
-0.301105 J	ND<0	-0.301105	62	93
-0.579818 J	ND<0	-0.579818	62	94
-0.430783 J	ND<0	-0.430783	62	95
-0.210721 J	ND<0	-0.210721	62	96
-0.223144 J	ND<0	-0.223144	62	97
0.336472	ND<0	0.336472	63	97

ND<0	ND<0	0	63	97
ND<0	ND<0	0	63	97
ND<0	ND<0	0	63	97
-0.653926 J	ND<0	-0.653926	63	98
-1.07881 J	ND<0	-1.0788163	99	
-1.38629 J	ND<0	-1.3862963	100	
-1.27297 J	ND<0	-1.2729763	101	
0.0953102	ND<0	0.0953102	64	101
-0.301105 J	ND<0	-0.301105	64	102
-0.579818 J	ND<0	-0.579818	64	103
-0.430783 J	ND<0	-0.430783	64	104
-0.210721 J	ND<0	-0.210721	64	105
-0.223144 J	ND<0	-0.223144	64	106
0.336472	ND<0	0.336472	65	106

ND<0	ND<0	0	65	106
ND<0	ND<0	0	65	106
-0.653926 J	ND<0	-0.653926	65	107
-1.07881 J	ND<0	-1.0788165	108	
-1.38629 J	ND<0	-1.3862965	109	
-1.27297 J	ND<0	-1.2729765	110	
0.0953102	ND<0	0.0953102	66	110
-0.301105 J	ND<0	-0.301105	66	111
-0.579818 J	ND<0	-0.579818	66	112
-0.430783 J	ND<0	-0.430783	66	113
-0.210721 J	ND<0	-0.210721	66	114
-0.223144 J	ND<0	-0.223144	66	115
0.336472	ND<0	0.336472	67	115

ND<0	ND<0	0	67	115
-0.653926 J	ND<0	-0.653926	67	116
-1.07881 J	ND<0	-1.0788167	117	
-1.38629 J	ND<0	-1.3862967	118	
-1.27297 J	ND<0	-1.2729767	119	
0.0953102	ND<0	0.0953102	68	119
-0.301105 J	ND<0	-0.301105	68	120
-0.579818 J	ND<0	-0.579818	68	121
-0.430783 J	ND<0	-0.430783	68	122

-0.210721 J	ND<0	-0.210721	68	123
-0.223144 J	ND<0	-0.223144	68	124
0.336472	ND<0	0.336472	69	124
-0.653926 J	ND<0	-0.653926	69	125
-1.07881 J	ND<0	-1.0788169	126	
-1.38629 J	ND<0	-1.3862969	127	
-1.27297 J	ND<0	-1.2729769	128	
0.0953102	ND<0	0.0953102	70	128
-0.301105 J	ND<0	-0.301105	70	129
-0.579818 J	ND<0	-0.579818	70	130
-0.430783 J	ND<0	-0.430783	70	131
-0.210721 J	ND<0	-0.210721	70	132
-0.223144 J	ND<0	-0.223144	70	133
0.336472	ND<0	0.336472	71	133
-1.07881 J	-0.653926 J	-0.424883	71	134
-1.38629 J	-0.653926 J	-0.732368	71	135
-1.27297 J	-0.653926 J	-0.619039	71	136
0.0953102	-0.653926 J	0.749237	72	136
-0.301105 J	-0.653926 J	0.352821	73	136
-0.579818 J	-0.653926 J	0.074108	74	136
-0.430783 J	-0.653926 J	0.223144	75	136
-0.210721 J	-0.653926 J	0.443205	76	136
-0.223144 J	-0.653926 J	0.430783	77	136
0.336472	-0.653926 J	0.990399	78	136
-1.38629 J	-1.07881 J	-0.307485	78	137
-1.27297 J	-1.07881 J	-0.194156	78	138
0.0953102	-1.07881 J	1.17412 79	138	
-0.301105 J	-1.07881 J	0.777705	80	138
-0.579818 J	-1.07881 J	0.498991	81	138
-0.430783 J	-1.07881 J	0.648027	82	138
-0.210721 J	-1.07881 J	0.868089	83	138
-0.223144 J	-1.07881 J	0.855666	84	138
0.336472	-1.07881 J	1.41528 85	138	
-1.27297 J	-1.38629 J	0.113329	86	138
0.0953102	-1.38629 J	1.4816 87	138	
-0.301105 J	-1.38629 J	1.08519 88	138	
-0.579818 J	-1.38629 J	0.806476	89	138
-0.430783 J	-1.38629 J	0.955511	90	138
-0.210721 J	-1.38629 J	1.17557 91	138	
-0.223144 J	-1.38629 J	1.16315 92	138	
0.336472	-1.38629 J	1.72277 93	138	
0.0953102	-1.27297 J	1.36828 94	138	
-0.301105 J	-1.27297 J	0.971861	95	138
-0.579818 J	-1.27297 J	0.693147	96	138
-0.430783 J	-1.27297 J	0.842183	97	138
-0.210721 J	-1.27297 J	1.06224 98	138	
-0.223144 J	-1.27297 J	1.04982 99	138	
0.336472	-1.27297 J	1.60944 100	138	
-0.301105 J	0.0953102	-0.396415	100	139
-0.579818 J	0.0953102	-0.675129	100	140
-0.430783 J	0.0953102	-0.526093	100	141
-0.210721 J	0.0953102	-0.306031	100	142
-0.223144 J	0.0953102	-0.318454	100	143
0.336472	0.0953102	0.241162	101	143

-0.579818 J	-0.301105 J	-0.278713	101	144
-0.430783 J	-0.301105 J	-0.129678	101	145
-0.210721 J	-0.301105 J	0.0903841	102	145
-0.223144 J	-0.301105 J	0.0779615	103	145
0.336472	-0.301105 J	0.637577	104	145
-0.430783 J	-0.579818 J	0.149036	105	145
-0.210721 J	-0.579818 J	0.369097	106	145
-0.223144 J	-0.579818 J	0.356675	107	145
0.336472	-0.579818 J	0.916291	108	145
-0.210721 J	-0.430783 J	0.220062	109	145
-0.223144 J	-0.430783 J	0.207639	110	145
0.336472	-0.430783 J	0.767255	111	145
-0.223144 J	-0.210721 J	-0.0124225	111	146
0.336472	-0.210721 J	0.547193	112	146
0.336472	-0.223144 J	0.559616	113	146

S Statistic = 113 - 146 = -33

Tied Group	Value	Members
1	0	14
2	-1.203972	

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 6024
B = 0
C = 2184

D = 0
E = 184
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 1966.33
Z-Score = -0.721641
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.721641| <= 1.97737 indicating no evidence of a trend

Concentrations (ppb)

Parameter: Chloroform

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 196
Percent Non-Detects: 92.4528%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.14	ND<0.14
			11/16/2009	ND<0.14	ND<0.14
			6/30/2010	ND<0.14	ND<0.14

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-11R	27	22 (81.4815%)	7/20/1995	0.38 J	0.38 J
			8/24/1995	ND<2	ND<2
			9/28/1995	0.6 J	0.6 J
			10/26/1995	0.9 J	0.9 J
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	0.22 J	0.22 J

			6/11/2009	ND<0.14		ND<0.14
			11/16/2009	0.23 J	0.23 J	
			6/30/2010	ND<0.14		ND<0.14
MW-9	27	23 (85.1852%)	7/20/1995		0.96 J	0.96 J
			8/24/1995	0.6 J	0.6 J	
			9/28/1995	0.5 J	0.5 J	
			10/26/1995	0.5 J	0.5 J	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.14		ND<0.14
			11/16/2009	ND<0.14		ND<0.14
			6/30/2010	ND<0.14		ND<0.14
MW-12AR	17	17 (100%)	3/16/1999		ND<2	ND<2
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.14		ND<0.14
			11/16/2009	ND<0.14		ND<0.14
			6/30/2010	ND<0.14		ND<0.14
MW-10	27	27 (100%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	

			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.14		ND<0.14
			11/16/2009	ND<0.14		ND<0.14
			6/30/2010	ND<0.14		ND<0.14
MW-8	26	26 (100%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.14		ND<0.14
			6/30/2010	ND<0.14		ND<0.14
MW-7	27	27 (100%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	

			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.14		ND<0.14
			11/16/2009	ND<0.14		ND<0.14
			6/30/2010	ND<0.14		ND<0.14
MW-6	27	20 (74.0741%)	7/20/1995	ND<2	ND<2	
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	0.24 J	0.24 J	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.27 J	0.27 J	
			6/5/2008	0.21 J	0.21 J	
			11/20/2008	0.21 J	0.21 J	
			6/11/2009	0.31 J	0.31 J	
			11/16/2009	0.37 J	0.37 J	
			6/30/2010	0.44 J	0.44 J	
MW-12BR		17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.14		ND<0.14
			11/16/2009	ND<0.14		ND<0.14
			6/30/2010	ND<0.14		ND<0.14

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.07	-2.65209	7.03356	-0.185646
2	0.07	-2.365	11.2629	7 -0.351239
3	0.07	-2.197	28.1457	8 -0.505049
4	0.07	-2.096	32.8549	-0.651834
5	0.07	-1.995	39.2583	65 -0.791512
6	0.07	-1.911	0329.4885	-0.925284
7	0.07	-1.852	1832.9191	-1.05494
8	0.07	-1.786	6136.111	-1.18
9	0.07	-1.727	9339.0968	-1.30095
10	0.07	-1.684	9441.9358	-1.4189
11	0.07	-1.635	2444.6098	-1.53337
12	0.07	-1.589	2747.1356	-1.64462
13	0.07	-1.546	4349.527	-1.75287
14	0.07	-1.514	51.8195	-1.85885
15	0.07	-1.475	7953.9975	-1.96216
16	0.07	-1.439	5356.0698	-2.06293
17	0.07	-1.411	8358.063	-2.16175
18	0.07	-1.378	6659.9637	-2.25826
19	0.07	-1.346	9461.778	-2.35255
20	0.07	-1.322	5163.527	-2.44512
21	0.07	-1.293	0365.1989	-2.53563
22	0.07	-1.264	6466.7982	-2.62416
23	0.21	-1.242	6468.3424	-2.88511
24	0.21	-1.215	9669.821	-3.14046
25	0.22	-1.190	1271.2373	-3.40229
26	0.23	-1.165	0572.5947	-3.67025
27	0.24	-1.145	73.9069	-3.94517
28	0.27	-1.121	6875.165	-4.24803
29	0.31	-1.098	4776.3716	-4.58855
30	0.37	-1.080	3277.5387	-4.98827
31	0.38	-1.058	1278.6584	-5.39036
32	0.44	-1.036	4379.7326	-5.84639
33	0.5	-1.019	4380.7718	-6.3561
34	0.5	-0.998575	81.7689	-6.85539
35	0.6	-0.978	1582.7257	-7.44228
36	0.6	-0.958125	83.6437	-8.01715
37	0.9	-0.942375	84.5318	-8.86529
38	0.96	-0.923014	85.3837	-9.75138
39	1	-0.903992	86.201	-10.6554
40	1	-0.889006	86.9913	-11.5444
41	1	-0.870	5587.7491	-12.4149
42	1	-0.852385	88.4757	-13.2673
43	1	-0.838054	89.178	-14.1054
44	1	-0.820379	89.8511	-14.9258
45	1	-0.802956	90.4958	-15.7287
46	1	-0.789191	91.1186	-16.5179
47	1	-0.772193	91.7149	-17.2901
48	1	-0.755415	92.2856	-18.0455
49	1	-0.738846	92.8314	-18.7844

50	1	-0.725736	93.3581	-19.5101
51	1	-0.709522	93.8616	-20.2196
52	1	-0.693493	94.3425	-20.9131
53	1	-0.680797	94.806	-21.5939
54	1	-0.665079	95.2483	-22.259
55	1	-0.649522	95.6702	-22.9085
56	1	-0.637192	96.0762	-23.5457
57	1	-0.621911	96.463	-24.1676
58	1	-0.606775	96.8312	-24.7744
59	1	-0.594766	97.1849	-25.3691
60	1	-0.579873	97.5212	-25.949
61	1	-0.565108	97.8405	-26.5141
62	1	-0.550465	98.1435	-27.0646
63	1	-0.538836	98.4339	-27.6034
64	1	-0.524401	98.7088	-28.1278
65	1	-0.510074	98.969	-28.6379
66	1	-0.498687	99.2177	-29.1366
67	1	-0.484544	99.4525	-29.6211
68	1	-0.470498	99.6739	-30.0916
69	1	-0.459327	99.8848	-30.551
70	1	-0.445443	100.083	-30.9964
71	1	-0.431644	100.27	-31.428
72	1	-0.417928	100.444	-31.846
73	1	-0.40701	100.61	-32.253
74	1	-0.393433	100.765	-32.6464
75	1	-0.379927	100.909	-33.0263
76	1	-0.369171	101.045	-33.3955
77	1	-0.355788	101.172	-33.7513
78	1	-0.342466	101.289	-34.0938
79	1	-0.331854	101.399	-34.4256
80	1	-0.318639	101.501	-34.7443
81	1	-0.305481	101.594	-35.0497
82	1	-0.294992	101.681	-35.3447
83	1	-0.281926	101.761	-35.6267
84	1	-0.268908	101.833	-35.8956
85	1	-0.255936	101.898	-36.1515
86	1	-0.24559	101.959	-36.3971
87	1	-0.232693	102.013	-36.6298
88	1	-0.219834	102.061	-36.8496
89	1	-0.209575	102.105	-37.0592
90	1	-0.196779	102.144	-37.256
91	1	-0.184017	102.178	-37.44
92	1	-0.173829	102.208	-37.6138
93	1	-0.161119	102.234	-37.7749
94	1	-0.148434	102.256	-37.9234
95	1	-0.135774	102.274	-38.0591
96	1	-0.125661	102.29	-38.1848
97	1	-0.113039	102.303	-38.2978
98	1	-0.100433	102.313	-38.3983
99	1	-0.0903606	102.321	-38.4886
100	1	-0.0777834	102.327	-38.5664
101	1	-0.0652187	102.332	-38.6316
102	1	-0.0551734	102.335	-38.6868
103	1	-0.0426257	102.336	-38.7294
104	1	-0.0300838	102.337	-38.7595
105	1	-0.0200544	102.338	-38.7796
106	1	-0.00751925	102.338	-38.7871
107	1	0.00751925	102.338	-38.7796
108	1	0.0200544	102.338	-38.7595
109	1	0.0300838	102.339	-38.7294
110	1	0.0426257	102.341	-38.6868
111	1	0.0551734	102.344	-38.6316

112	1	0.0652187	102.348	-38.5664
113	1	0.0777834	102.354	-38.4886
114	1	0.0903606	102.362	-38.3983
115	1	0.100433	102.373	-38.2978
116	1	0.113039	102.385	-38.1848
117	1	0.125661	102.401	-38.0591
118	1	0.135774	102.42	-37.9234
119	1	0.148434	102.442	-37.7749
120	1	0.161119	102.468	-37.6138
121	1	0.173829	102.498	-37.44
122	1	0.184017	102.532	-37.256
123	1	0.196779	102.57	-37.0592
124	1	0.209575	102.614	-36.8496
125	1	0.219834	102.663	-36.6298
126	1	0.232693	102.717	-36.3971
127	1	0.24559	102.777	-36.1515
128	1	0.255936	102.843	-35.8956
129	1	0.268908	102.915	-35.6267
130	1	0.281926	102.994	-35.3447
131	1	0.294992	103.081	-35.0497
132	1	0.305481	103.175	-34.7443
133	1	0.318639	103.276	-34.4256
134	1	0.331854	103.386	-34.0938
135	1	0.342466	103.504	-33.7513
136	1	0.355788	103.63	-33.3955
137	1	0.369171	103.767	-33.0263
138	1	0.379927	103.911	-32.6464
139	1	0.393433	104.066	-32.253
140	1	0.40701	104.231	-31.846
141	1	0.417928	104.406	-31.428
142	1	0.431644	104.592	-30.9964
143	1	0.445443	104.791	-30.551
144	1	0.459327	105.002	-30.0916
145	1	0.470498	105.223	-29.6211
146	1	0.484544	105.458	-29.1366
147	1	0.498687	105.707	-28.6379
148	1	0.510074	105.967	-28.1278
149	1	0.524401	106.242	-27.6034
150	1	0.538836	106.532	-27.0646
151	1	0.550465	106.835	-26.5141
152	1	0.565108	107.154	-25.949
153	1	0.579873	107.491	-25.3691
154	1	0.594766	107.844	-24.7744
155	1	0.606775	108.213	-24.1676
156	1	0.621911	108.599	-23.5457
157	1	0.637192	109.005	-22.9085
158	1	0.649522	109.427	-22.259
159	1	0.665079	109.87	-21.5939
160	1	0.680797	110.333	-20.9131
161	1	0.693493	110.814	-20.2196
162	1	0.709522	111.317	-19.5101
163	1	0.725736	111.844	-18.7844
164	1	0.738846	112.39	-18.0455
165	1	0.755415	112.961	-17.2901
166	1	0.772193	113.557	-16.5179
167	1	0.789191	114.18	-15.7287
168	1	0.802956	114.824	-14.9258
169	1	0.820379	115.498	-14.1054
170	1	0.838054	116.2	-13.2673
171	1	0.852385	116.926	-12.4149
172	1	0.87055	117.684	-11.5444
173	1	0.889006	118.475	-10.6554

174	1	0.903992	119.292	-9.75138
175	1	0.923014	120.144	-8.82837
176	1	0.942375	121.032	-7.88599
177	1	0.958125	121.95	-6.92787
178	1	0.97815	122.907	-5.94972
179	1	0.998575	123.904	-4.95114
180	1	1.01943	124.943	-3.93172
181	1	1.03643	126.017	-2.89528
182	1	1.05812	127.137	-1.83716
183	1	1.08032	128.304	-0.756841
184	1	1.09847	129.511	0.341628
185	1	1.12168	130.769	1.46331
186	1	1.1455	132.081	2.60881
187	1	1.16505	133.438	3.77386
188	1	1.19012	134.855	4.96398
189	1	1.21596	136.333	6.17994
190	1	1.24264	137.877	7.42258
191	1	1.26464	139.477	8.68722
192	1	1.29303	141.149	9.98025
193	1	1.32251	142.898	11.3028
194	1	1.34694	144.712	12.6497
195	1	1.37866	146.613	14.0284
196	1	1.41183	148.606	15.4402
197	1	1.43953	150.678	16.8797
198	1	1.47579	152.856	18.3555
199	1	1.5141	155.149	19.8696
200	1	1.54643	157.54	21.416
201	1	1.58927	160.066	23.0053
202	1	1.63524	162.74	24.6405
203	1	1.68494	165.579	26.3255
204	1	1.72793	168.564	28.0534
205	1	1.78661	171.756	29.84
206	1	1.85218	175.187	31.6922
207	1	1.91103	178.839	33.6032
208	1	1.99539	182.821	35.5986
209	1	2.09693	187.218	37.6956
210	1	2.19728	192.046	39.8928
211	1	2.36561	197.642	42.2585
212	1	2.65209	204.676	44.9105

Data Set Standard Deviation = 0.314574
Numerator = 2016.96
Denominator = 4273.6
W Statistic = 0.471957 = 2016.96 / 4273.6

5% Critical value of 0.976 exceeds 0.471957
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.471957
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)	
1	-2.65926	-2.65209	7.03356	7.05259	
2	-2.65926	-2.36561	12.6297	13.3434	
3	-2.65926	-2.19728	17.4578	19.1865	
4	-2.65926	-2.09693	21.8549	24.7628	
5	-2.65926	-1.99539	25.8365	30.0691	
6	-2.65926	-1.91103	29.4885	35.151	
7	-2.65926	-1.85218	32.9191	40.0764	
8	-2.65926	-1.78661	36.111	44.8275	
9	-2.65926	-1.72793	39.0968	49.4225	
10	-2.65926	-1.68494	41.9358	53.9032	
11	-2.65926	-1.63524	44.6098	58.2517	
12	-2.65926	-1.58927	47.1356	62.478	
13	-2.65926	-1.54643	49.527	66.5904	
14	-2.65926	-1.5141	51.8195	70.6168	
15	-2.65926	-1.47579	53.9975	74.5413	
16	-2.65926	-1.43953	56.0698	78.3694	
17	-2.65926	-1.41183	58.063	82.1238	
18	-2.65926	-1.37866	59.9637	85.79	
19	-2.65926	-1.34694	61.778	89.3719	
20	-2.65926	-1.32251	63.527	92.8887	
21	-2.65926	-1.29303	65.1989	96.3272	
22	-2.65926	-1.26464	66.7982	99.6903	
23	-1.56065	-1.24264	68.3424	101.63	
24	-1.56065	-1.21596	69.821	103.527	
25	-1.51413	-1.19012	71.2373	105.329	
26	-1.46968	-1.16505	72.5947	107.042	
27	-1.42712	-1.1455	73.9069	108.676	
28	-1.30933	-1.12168	75.165	110.145	
29	-1.17118	-1.09847	76.3716	111.431	
30	-0.994252	-1.08032	77.5387	112.506	
31	-0.967584	-1.05812	78.6584	113.529	
32	-0.820981	-1.03643	79.7326	114.38	
33	-0.693147	-1.01943	80.7718	115.087	
34	-0.693147	-0.998575	81.7689	115.779	
35	-0.510826	-0.97815	82.7257	116.279	
36	-0.510826	-0.958125	83.6437	116.768	
37	-0.105361	-0.942375	84.5318	116.867	
38	-0.040822	-0.923014	85.3837	116.905	
39	0	-0.903992	86.201	116.905	
40	0	-0.889006	86.9913	116.905	
41	0	-0.870558	87.7491	116.905	
42	0	-0.852385	88.4757	116.905	
43	0	-0.838054	89.178	116.905	
44	0	-0.820379	89.8511	116.905	
45	0	-0.802956	90.4958	116.905	
46	0	-0.789191	91.1186	116.905	
47	0	-0.772193	91.7149	116.905	
48	0	-0.755415	92.2856	116.905	
49	0	-0.738846	92.8314	116.905	

50	0	-0.725736	93.3581	116.905
51	0	-0.709522	93.8616	116.905
52	0	-0.693493	94.3425	116.905
53	0	-0.680797	94.806	116.905
54	0	-0.665079	95.2483	116.905
55	0	-0.649522	95.6702	116.905
56	0	-0.637192	96.0762	116.905
57	0	-0.621911	96.463	116.905
58	0	-0.606775	96.8312	116.905
59	0	-0.594766	97.1849	116.905
60	0	-0.579873	97.5212	116.905
61	0	-0.565108	97.8405	116.905
62	0	-0.550465	98.1435	116.905
63	0	-0.538836	98.4339	116.905
64	0	-0.524401	98.7088	116.905
65	0	-0.510074	98.969	116.905
66	0	-0.498687	99.2177	116.905
67	0	-0.484544	99.4525	116.905
68	0	-0.470498	99.6739	116.905
69	0	-0.459327	99.8848	116.905
70	0	-0.445443	100.083	116.905
71	0	-0.431644	100.27	116.905
72	0	-0.417928	100.444	116.905
73	0	-0.40701	100.61	116.905
74	0	-0.393433	100.765	116.905
75	0	-0.379927	100.909	116.905
76	0	-0.369171	101.045	116.905
77	0	-0.355788	101.172	116.905
78	0	-0.342466	101.289	116.905
79	0	-0.331854	101.399	116.905
80	0	-0.318639	101.501	116.905
81	0	-0.305481	101.594	116.905
82	0	-0.294992	101.681	116.905
83	0	-0.281926	101.761	116.905
84	0	-0.268908	101.833	116.905
85	0	-0.255936	101.898	116.905
86	0	-0.24559	101.959	116.905
87	0	-0.232693	102.013	116.905
88	0	-0.219834	102.061	116.905
89	0	-0.209575	102.105	116.905
90	0	-0.196779	102.144	116.905
91	0	-0.184017	102.178	116.905
92	0	-0.173829	102.208	116.905
93	0	-0.161119	102.234	116.905
94	0	-0.148434	102.256	116.905
95	0	-0.135774	102.274	116.905
96	0	-0.125661	102.29	116.905
97	0	-0.113039	102.303	116.905
98	0	-0.100433	102.313	116.905
99	0	-0.0903606	102.321	116.905
100	0	-0.0777834	102.327	116.905
101	0	-0.0652187	102.332	116.905
102	0	-0.0551734	102.335	116.905
103	0	-0.0426257	102.336	116.905
104	0	-0.0300838	102.337	116.905
105	0	-0.0200544	102.338	116.905
106	0	-0.00751925	102.338	116.905
107	0	0.00751925	102.338	116.905
108	0	0.0200544	102.338	116.905
109	0	0.0300838	102.339	116.905
110	0	0.0426257	102.341	116.905
111	0	0.0551734	102.344	116.905

112	0	0.0652187	102.348	116.905
113	0	0.0777834	102.354	116.905
114	0	0.0903606	102.362	116.905
115	0	0.100433	102.373	116.905
116	0	0.113039	102.385	116.905
117	0	0.125661	102.401	116.905
118	0	0.135774	102.42	116.905
119	0	0.148434	102.442	116.905
120	0	0.161119	102.468	116.905
121	0	0.173829	102.498	116.905
122	0	0.184017	102.532	116.905
123	0	0.196779	102.57	116.905
124	0	0.209575	102.614	116.905
125	0	0.219834	102.663	116.905
126	0	0.232693	102.717	116.905
127	0	0.24559	102.777	116.905
128	0	0.255936	102.843	116.905
129	0	0.268908	102.915	116.905
130	0	0.281926	102.994	116.905
131	0	0.294992	103.081	116.905
132	0	0.305481	103.175	116.905
133	0	0.318639	103.276	116.905
134	0	0.331854	103.386	116.905
135	0	0.342466	103.504	116.905
136	0	0.355788	103.63	116.905
137	0	0.369171	103.767	116.905
138	0	0.379927	103.911	116.905
139	0	0.393433	104.066	116.905
140	0	0.40701	104.231	116.905
141	0	0.417928	104.406	116.905
142	0	0.431644	104.592	116.905
143	0	0.445443	104.791	116.905
144	0	0.459327	105.002	116.905
145	0	0.470498	105.223	116.905
146	0	0.484544	105.458	116.905
147	0	0.498687	105.707	116.905
148	0	0.510074	105.967	116.905
149	0	0.524401	106.242	116.905
150	0	0.538836	106.532	116.905
151	0	0.550465	106.835	116.905
152	0	0.565108	107.154	116.905
153	0	0.579873	107.491	116.905
154	0	0.594766	107.844	116.905
155	0	0.606775	108.213	116.905
156	0	0.621911	108.599	116.905
157	0	0.637192	109.005	116.905
158	0	0.649522	109.427	116.905
159	0	0.665079	109.87	116.905
160	0	0.680797	110.333	116.905
161	0	0.693493	110.814	116.905
162	0	0.709522	111.317	116.905
163	0	0.725736	111.844	116.905
164	0	0.738846	112.39	116.905
165	0	0.755415	112.961	116.905
166	0	0.772193	113.557	116.905
167	0	0.789191	114.18	116.905
168	0	0.802956	114.824	116.905
169	0	0.820379	115.498	116.905
170	0	0.838054	116.2	116.905
171	0	0.852385	116.926	116.905
172	0	0.87055	117.684	116.905
173	0	0.889006	118.475	116.905

174	0	0.903992	119.292	116.905
175	0	0.923014	120.144	116.905
176	0	0.942375	121.032	116.905
177	0	0.958125	121.95	116.905
178	0	0.97815	122.907	116.905
179	0	0.998575	123.904	116.905
180	0	1.01943	124.943	116.905
181	0	1.03643	126.017	116.905
182	0	1.05812	127.137	116.905
183	0	1.08032	128.304	116.905
184	0	1.09847	129.511	116.905
185	0	1.12168	130.769	116.905
186	0	1.1455	132.081	116.905
187	0	1.16505	133.438	116.905
188	0	1.19012	134.855	116.905
189	0	1.21596	136.333	116.905
190	0	1.24264	137.877	116.905
191	0	1.26464	139.477	116.905
192	0	1.29303	141.149	116.905
193	0	1.32251	142.898	116.905
194	0	1.34694	144.712	116.905
195	0	1.37866	146.613	116.905
196	0	1.41183	148.606	116.905
197	0	1.43953	150.678	116.905
198	0	1.47579	152.856	116.905
199	0	1.5141	155.149	116.905
200	0	1.54643	157.54	116.905
201	0	1.58927	160.066	116.905
202	0	1.63524	162.74	116.905
203	0	1.68494	165.579	116.905
204	0	1.72793	168.564	116.905
205	0	1.78661	171.756	116.905
206	0	1.85218	175.187	116.905
207	0	1.91103	178.839	116.905
208	0	1.99539	182.821	116.905
209	0	2.09693	187.218	116.905
210	0	2.19728	192.046	116.905
211	0	2.36561	197.642	116.905
212	0	2.65209	204.676	116.905

Data Set Standard Deviation = 0.83861
Numerator = 13666.8
Denominator = 30371.7
W Statistic = 0.449985 = 13666.8 / 30371.7

5% Critical value of 0.976 exceeds 0.449985
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.449985
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Chloroform

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

Total Percent Non-Detects = 92.4528%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 17
Maximum Background Concentration = 0
Confidence Level = 68%
False Positive Rate = 32%

Location	Date	Samples	Mean	Significant
MW-11R	6/30/2010	1	-2.65926	FALSE
MW-9	6/30/2010	1	-2.65926	FALSE
MW-12AR	6/30/2010	1	-2.65926	FALSE
MW-10	6/30/2010	1	-2.65926	FALSE
MW-8	6/30/2010	1	-2.65926	FALSE
MW-7	6/30/2010	1	-2.65926	FALSE
MW-6	6/30/2010	1	-0.820981	FALSE
MW-12BR	6/30/2010	1	-2.65926	FALSE

Concentrations (ppb)

Parameter: Chromium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 148
Percent Non-Detects: 69.8113%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	11 (64.7059%)	3/16/1999	40	40
			9/23/1999	14 J	14 J
			3/15/2000	150	150
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	ND<20	ND<20
			6/5/2008	5.63 J	5.63 J
			11/20/2008	ND<20	ND<20
			6/11/2009	0.17 J	0.17 J
			11/16/2009	0.19 J	0.19 J
			6/30/2010	ND<0.16	ND<0.16

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-9	27	23 (85.1852%)	7/20/1995	ND<20	ND<20
			8/24/1995	ND<20	ND<20
			9/28/1995	ND<20	ND<20
			10/26/1995	ND<20	ND<20
			11/19/1996	ND<20	ND<20
			12/19/1996	ND<20	ND<20
			3/24/1997	ND<20	ND<20
			9/24/1997	ND<20	ND<20
			4/7/1998	ND<20	ND<20
			9/23/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20
			9/23/1999	11 J	11 J
			3/15/2000	ND<20	ND<20
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	ND<20	ND<20
			6/5/2008	5.2 J	5.2 J
			11/20/2008	ND<20	ND<20

			6/11/2009	0.62 J	0.62 J	
			11/16/2009	ND<0.16		ND<0.16
			6/30/2010	0.23 J H	0.23 J H	
MW-12AR	17	11 (64.7059%)	3/16/1999		ND<20	ND<20
			9/23/1999	ND<20	ND<20	
			3/15/2000	82	82	
			9/24/2003	ND<20	ND<20	
			3/11/2004	12 J	12 J	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	4.5 J	4.5 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.3 J	0.3 J	
			11/16/2009	0.74 J B	0.74 J B	
			6/30/2010	0.4 J	0.4 J	
MW-10	27	20 (74.0741%)	7/20/1995		ND<20	ND<20
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	15 J	15 J	
			3/24/1997	ND<20	ND<20	
			9/24/1997	14	14	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	29	29	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	3.11 J	3.11 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.22 J	0.22 J	
			11/16/2009	0.27 J B	0.27 J B	
			6/30/2010	0.16 J H	0.16 J H	
MW-8	26	19 (73.0769%)	7/20/1995		ND<20	ND<20
			8/24/1995	ND<20	ND<20	
			9/28/1995	56.2	56.2	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	30.1	30.1	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	18 J	18 J	
			3/16/1999	ND<20	ND<20	
			9/23/1999	32	32	

			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	7.9 J	7.9 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.2 J	0.2 J	
			6/30/2010	0.24 J H	0.24 J H	
MW-6	27	19 (70.3704%)	7/20/1995	12.4 J	12.4 J	
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	13.8 J	13.8 J	
			11/19/1996	ND<20	ND<20	
			12/19/1996	16.1 J	16.1 J	
			3/24/1997	14 J	14 J	
			9/24/1997	ND<20	ND<20	
			4/7/1998	23	23	
			9/23/1998	14 J	14 J	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	32	32	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	5.12	5.12	
			11/20/2008	ND<20	ND<20	
			6/11/2009	ND<0.16	ND<0.16	
			11/16/2009	ND<0.16	ND<0.16	
			6/30/2010	ND<0.16	ND<0.16	
MW-12BR	17	13 (76.4706%)	3/16/1999	8 J	8 J	
			9/23/1999	12 J	12 J	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	5.66 J	5.66 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	ND<0.16	ND<0.16	
			11/16/2009	ND<0.16	ND<0.16	
			6/30/2010	0.32 J	0.32 J	
MW-7	27	15 (55.5556%)	7/20/1995	ND<20	ND<20	

			8/24/1995	12.8 J	12.8 J
			9/28/1995	79.9	79.9
			10/26/1995	ND<20	ND<20
			11/19/1996	ND<20	ND<20
			12/19/1996	36.6	36.6
			3/24/1997	ND<20	ND<20
			9/24/1997	14 J	14 J
			4/7/1998	28	28
			9/23/1998	ND<20	ND<20
			3/16/1999	40	40
			9/23/1999	42	42
			3/15/2000	10 J	10 J
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	ND<20	ND<20
			6/5/2008	8.11 J	8.11 J
			11/20/2008	ND<20	ND<20
			6/11/2009	0.71 J	0.71 J
			11/16/2009	0.67 J B	0.67 J B
			6/30/2010	0.32 J H	0.32 J H
MW-11R	27	17 (62.963%)	7/20/1995	ND<20	ND<20
			8/24/1995	ND<20	ND<20
			9/28/1995	ND<20	ND<20
			10/26/1995	25.8	25.8
			11/19/1996	ND<20	ND<20
			12/19/1996	16 J	16 J
			3/24/1997	ND<20	ND<20
			9/24/1997	ND<20	ND<20
			4/7/1998	14 J	14 J
			9/23/1998	ND<20	ND<20
			3/16/1999	7 J	7 J
			9/23/1999	11 J	11 J
			3/15/2000	12 J	12 J
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	4.61 J	4.61 J
			11/28/2007	ND<20	ND<20
			6/5/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	0.17 J	0.17 J
			11/16/2009	0.22 J B	0.22 J B
			6/30/2010	0.18 J H	0.18 J H

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.08	-2.65	2097.03356	-0.212167
2	0.08	-2.36	56112.6297	-0.401416
3	0.08	-2.197	2817.4578	-0.577199
4	0.08	-2.096	9321.8549	-0.744953
5	0.08	-1.995	3925.8365	-0.904585
6	0.08	-1.911	0329.4885	-1.05747
7	0.08	-1.852	1832.9191	-1.20564
8	0.16	-1.786	6136.111	-1.4915
9	0.17	-1.727	9339.0968	-1.78525
10	0.17	-1.684	9441.9358	-2.07169
11	0.18	-1.635	2444.6098	-2.36603
12	0.19	-1.589	2747.1356	-2.66799
13	0.2	-1.546	4349.527	-2.97728
14	0.22	-1.514	1 51.8195	-3.31038
15	0.22	-1.475	7953.9975	-3.63505
16	0.23	-1.439	5356.0698	-3.96615
17	0.24	-1.411	8358.063	-4.30499
18	0.27	-1.378	6659.9637	-4.67722
19	0.3	-1.346	9461.778	-5.0813
20	0.32	-1.322	5163.527	-5.50451
21	0.32	-1.293	0365.1989	-5.91828
22	0.4	-1.264	6466.7982	-6.42413
23	0.62	-1.242	6468.3424	-7.19457
24	0.67	-1.215	9669.821	-8.00927
25	0.71	-1.190	1271.2373	-8.85425
26	0.74	-1.165	0572.5947	-9.71638
27	3.11	-1.145	5 73.9069	-13.2789
28	4.5	-1.121	6875.165	-18.3265
29	4.61	-1.098	4776.3716	-23.3904
30	5.12	-1.080	3277.5387	-28.9216
31	5.2	-1.058	1278.6584	-34.4239
32	5.63	-1.036	4379.7326	-40.259
33	5.66	-1.019	4380.7718	-46.0289
34	7	-0.998	575	81.7689 -53.019
35	7.9	-0.978	1582.7257	-60.7464
36	8	-0.958	125	83.6437 -68.4114
37	8.11	-0.942	375	84.5318 -76.054
38	10	-0.923	014	85.3837 -85.2842
39	10	-0.903	992	86.201 -94.3241
40	10	-0.889	006	86.9913 -103.214
41	10	-0.870	5587.7491	-111.92
42	10	-0.852	385	88.4757 -120.444
43	10	-0.838	054	89.178 -128.824
44	10	-0.820	379	89.8511 -137.028
45	10	-0.802	956	90.4958 -145.057
46	10	-0.789	191	91.1186 -152.949
47	10	-0.772	193	91.7149 -160.671
48	10	-0.755	415	92.2856 -168.225
49	10	-0.738	846	92.8314 -175.614

50	10	-0.725736	93.3581	-182.871
51	10	-0.709522	93.8616	-189.966
52	10	-0.693493	94.3425	-196.901
53	10	-0.680797	94.806	-203.709
54	10	-0.665079	95.2483	-210.36
55	10	-0.649522	95.6702	-216.855
56	10	-0.637192	96.0762	-223.227
57	10	-0.621911	96.463	-229.446
58	10	-0.606775	96.8312	-235.514
59	10	-0.594766	97.1849	-241.462
60	10	-0.579873	97.5212	-247.261
61	10	-0.565108	97.8405	-252.912
62	10	-0.550465	98.1435	-258.416
63	10	-0.538836	98.4339	-263.805
64	10	-0.524401	98.7088	-269.049
65	10	-0.510074	98.969	-274.149
66	10	-0.498687	99.2177	-279.136
67	10	-0.484544	99.4525	-283.982
68	10	-0.470498	99.6739	-288.687
69	10	-0.459327	99.8848	-293.28
70	10	-0.445443	100.083	-297.734
71	10	-0.431644	100.27	-302.051
72	10	-0.417928	100.444	-306.23
73	10	-0.40701	100.61	-310.3
74	10	-0.393433	100.765	-314.234
75	10	-0.379927	100.909	-318.034
76	10	-0.369171	101.045	-321.725
77	10	-0.355788	101.172	-325.283
78	10	-0.342466	101.289	-328.708
79	10	-0.331854	101.399	-332.027
80	10	-0.318639	101.501	-335.213
81	10	-0.305481	101.594	-338.268
82	10	-0.294992	101.681	-341.218
83	10	-0.281926	101.761	-344.037
84	10	-0.268908	101.833	-346.726
85	10	-0.255936	101.898	-349.285
86	10	-0.24559	101.959	-351.741
87	10	-0.232693	102.013	-354.068
88	10	-0.219834	102.061	-356.267
89	10	-0.209575	102.105	-358.362
90	10	-0.196779	102.144	-360.33
91	10	-0.184017	102.178	-362.17
92	10	-0.173829	102.208	-363.909
93	10	-0.161119	102.234	-365.52
94	10	-0.148434	102.256	-367.004
95	10	-0.135774	102.274	-368.362
96	10	-0.125661	102.29	-369.618
97	10	-0.113039	102.303	-370.749
98	10	-0.100433	102.313	-371.753
99	10	-0.0903606	102.321	-372.657
100	10	-0.0777834	102.327	-373.435
101	10	-0.0652187	102.332	-374.087
102	10	-0.0551734	102.335	-374.639
103	10	-0.0426257	102.336	-375.065
104	10	-0.0300838	102.337	-375.366
105	10	-0.0200544	102.338	-375.566
106	10	-0.00751925	102.338	-375.641
107	10	0.00751925	102.338	-375.566
108	10	0.0200544	102.338	-375.366
109	10	0.0300838	102.339	-375.065
110	10	0.0426257	102.341	-374.639
111	10	0.0551734	102.344	-374.087

112	10	0.0652187	102.348	-373.435
113	10	0.0777834	102.354	-372.657
114	10	0.0903606	102.362	-371.753
115	10	0.100433	102.373	-370.749
116	10	0.113039	102.385	-369.618
117	10	0.125661	102.401	-368.362
118	10	0.135774	102.42	-367.004
119	10	0.148434	102.442	-365.52
120	10	0.161119	102.468	-363.909
121	10	0.173829	102.498	-362.17
122	10	0.184017	102.532	-360.33
123	10	0.196779	102.57	-358.362
124	10	0.209575	102.614	-356.267
125	10	0.219834	102.663	-354.068
126	10	0.232693	102.717	-351.741
127	10	0.24559	102.777	-349.285
128	10	0.255936	102.843	-346.726
129	10	0.268908	102.915	-344.037
130	10	0.281926	102.994	-341.218
131	10	0.294992	103.081	-338.268
132	10	0.305481	103.175	-335.213
133	10	0.318639	103.276	-332.027
134	10	0.331854	103.386	-328.708
135	10	0.342466	103.504	-325.283
136	10	0.355788	103.63	-321.725
137	10	0.369171	103.767	-318.034
138	10	0.379927	103.911	-314.234
139	10	0.393433	104.066	-310.3
140	10	0.40701	104.231	-306.23
141	10	0.417928	104.406	-302.051
142	10	0.431644	104.592	-297.734
143	10	0.445443	104.791	-293.28
144	10	0.459327	105.002	-288.687
145	10	0.470498	105.223	-283.982
146	10	0.484544	105.458	-279.136
147	10	0.498687	105.707	-274.149
148	10	0.510074	105.967	-269.049
149	10	0.524401	106.242	-263.805
150	10	0.538836	106.532	-258.416
151	10	0.550465	106.835	-252.912
152	10	0.565108	107.154	-247.261
153	10	0.579873	107.491	-241.462
154	10	0.594766	107.844	-235.514
155	10	0.606775	108.213	-229.446
156	10	0.621911	108.599	-223.227
157	10	0.637192	109.005	-216.855
158	10	0.649522	109.427	-210.36
159	10	0.665079	109.87	-203.709
160	10	0.680797	110.333	-196.901
161	10	0.693493	110.814	-189.966
162	10	0.709522	111.317	-182.871
163	10	0.725736	111.844	-175.614
164	10	0.738846	112.39	-168.225
165	10	0.755415	112.961	-160.671
166	10	0.772193	113.557	-152.949
167	10	0.789191	114.18	-145.057
168	10	0.802956	114.824	-137.028
169	10	0.820379	115.498	-128.824
170	10	0.838054	116.2	-120.444
171	10	0.852385	116.926	-111.92
172	10	0.87055	117.684	-103.214
173	10	0.889006	118.475	-94.3241

174	10	0.903992	119.292	-85.2842
175	10	0.923014	120.144	-76.054
176	10	0.942375	121.032	-66.6303
177	10	0.958125	121.95	-57.049
178	10	0.97815	122.907	-47.2675
179	10	0.998575	123.904	-37.2818
180	11	1.01943	124.943	-26.0681
181	11	1.03643	126.017	-14.6673
182	12	1.05812	127.137	-1.96984
183	12	1.08032	128.304	10.994
184	12	1.09847	129.511	24.1756
185	12.4	1.12168	130.769	38.0844
186	12.8	1.1455	132.081	52.7469
187	13.8	1.16505	133.438	68.8245
188	14	1.19012	134.855	85.4862
189	14	1.21596	136.333	102.51
190	14	1.24264	137.877	119.907
191	14	1.26464	139.477	137.612
192	14	1.29303	141.149	155.714
193	14	1.32251	142.898	174.229
194	15	1.34694	144.712	194.433
195	16	1.37866	146.613	216.492
196	16.1	1.41183	148.606	239.222
197	18	1.43953	150.678	265.134
198	23	1.47579	152.856	299.077
199	25.8	1.5141	155.149	338.141
200	28	1.54643	157.54	381.441
201	29	1.58927	160.066	427.53
202	30.1	1.63524	162.74	476.75
203	32	1.68494	165.579	530.668
204	32	1.72793	168.564	585.962
205	36.6	1.78661	171.756	651.352
206	40	1.85218	175.187	725.439
207	40	1.91103	178.839	801.88
208	42	1.99539	182.821	885.687
209	56.2	2.09693	187.218	1003.53
210	79.9	2.19728	192.046	1179.1
211	82	2.36561	197.642	1373.08
212	150	2.65209	204.676	1770.89

Data Set Standard Deviation = 13.8081
Numerator = 3.13605e+006
Denominator = 8.23408e+006
W Statistic = 0.380863 = 3.13605e+006 / 8.23408e+006

5% Critical value of 0.976 exceeds 0.380863
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.380863
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.52573	-2.65209	7.03356	6.69845
2	-2.52573	-2.36561	12.6297	12.6733
3	-2.52573	-2.19728	17.4578	18.2231
4	-2.52573	-2.09693	21.8549	23.5194
5	-2.52573	-1.99539	25.8365	28.5592
6	-2.52573	-1.91103	29.4885	33.3859
7	-2.52573	-1.85218	32.9191	38.064
8	-1.83258	-1.78661	36.111	41.3382
9	-1.77196	-1.72793	39.0968	44.4
10	-1.77196	-1.68494	41.9358	47.3856
11	-1.7148	-1.63524	44.6098	50.1897
12	-1.66073	-1.58927	47.1356	52.8291
13	-1.60944	-1.54643	49.527	55.3179
14	-1.51413	-1.5141	51.8195	57.6105
15	-1.51413	-1.47579	53.9975	59.845
16	-1.46968	-1.43953	56.0698	61.9607
17	-1.42712	-1.41183	58.063	63.9755
18	-1.30933	-1.37866	59.9637	65.7806
19	-1.20397	-1.34694	61.778	67.4023
20	-1.13943	-1.32251	63.527	68.9092
21	-1.13943	-1.29303	65.1989	70.3826
22	-0.916291	-1.26464	66.7982	71.5413
23	-0.478036	-1.24264	68.3424	72.1354
24	-0.400478	-1.21596	69.821	72.6223
25	-0.34249	-1.19012	71.2373	73.0299
26	-0.301105	-1.16505	72.5947	73.3807
27	1.13462	-1.1455	73.9069	72.081
28	1.50408	-1.12168	75.165	70.3939
29	1.52823	-1.09847	76.3716	68.7152
30	1.63315	-1.08032	77.5387	66.9509
31	1.64866	-1.05812	78.6584	65.2064
32	1.72811	-1.03643	79.7326	63.4153
33	1.73342	-1.01943	80.7718	61.6482
34	1.94591	-0.998575	81.7689	59.7051
35	2.06686	-0.97815	82.7257	57.6834
36	2.07944	-0.958125	83.6437	55.691
37	2.0931	-0.942375	84.5318	53.7185
38	2.30259	-0.923014	85.3837	51.5932
39	2.30259	-0.903992	86.201	49.5117
40	2.30259	-0.889006	86.9913	47.4647
41	2.30259	-0.870558	87.7491	45.4602
42	2.30259	-0.852385	88.4757	43.4975
43	2.30259	-0.838054	89.178	41.5678
44	2.30259	-0.820379	89.8511	39.6788
45	2.30259	-0.802956	90.4958	37.8299
46	2.30259	-0.789191	91.1186	36.0127
47	2.30259	-0.772193	91.7149	34.2347
48	2.30259	-0.755415	92.2856	32.4953
49	2.30259	-0.738846	92.8314	30.794

50	2.30259	-0.725736	93.3581	29.123
51	2.30259	-0.709522	93.8616	27.4892
52	2.30259	-0.693493	94.3425	25.8924
53	2.30259	-0.680797	94.806	24.3248
54	2.30259	-0.665079	95.2483	22.7934
55	2.30259	-0.649522	95.6702	21.2978
56	2.30259	-0.637192	96.0762	19.8306
57	2.30259	-0.621911	96.463	18.3986
58	2.30259	-0.606775	96.8312	17.0015
59	2.30259	-0.594766	97.1849	15.632
60	2.30259	-0.579873	97.5212	14.2968
61	2.30259	-0.565108	97.8405	12.9956
62	2.30259	-0.550465	98.1435	11.7281
63	2.30259	-0.538836	98.4339	10.4874
64	2.30259	-0.524401	98.7088	9.27989
65	2.30259	-0.510074	98.969	8.1054
66	2.30259	-0.498687	99.2177	6.95713
67	2.30259	-0.484544	99.4525	5.84143
68	2.30259	-0.470498	99.6739	4.75807
69	2.30259	-0.459327	99.8848	3.70043
70	2.30259	-0.445443	100.083	2.67476
71	2.30259	-0.431644	100.27	1.68086
72	2.30259	-0.417928	100.444	0.71855
73	2.30259	-0.40701	100.61	-0.218625
74	2.30259	-0.393433	100.765	-1.12454
75	2.30259	-0.379927	100.909	-1.99935
76	2.30259	-0.369171	101.045	-2.8494
77	2.30259	-0.355788	101.172	-3.66863
78	2.30259	-0.342466	101.289	-4.45719
79	2.30259	-0.331854	101.399	-5.22131
80	2.30259	-0.318639	101.501	-5.955
81	2.30259	-0.305481	101.594	-6.6584
82	2.30259	-0.294992	101.681	-7.33764
83	2.30259	-0.281926	101.761	-7.9868
84	2.30259	-0.268908	101.833	-8.60599
85	2.30259	-0.255936	101.898	-9.1953
86	2.30259	-0.24559	101.959	-9.76079
87	2.30259	-0.232693	102.013	-10.2966
88	2.30259	-0.219834	102.061	-10.8028
89	2.30259	-0.209575	102.105	-11.2853
90	2.30259	-0.196779	102.144	-11.7384
91	2.30259	-0.184017	102.178	-12.1622
92	2.30259	-0.173829	102.208	-12.5624
93	2.30259	-0.161119	102.234	-12.9334
94	2.30259	-0.148434	102.256	-13.2752
95	2.30259	-0.135774	102.274	-13.5878
96	2.30259	-0.125661	102.29	-13.8772
97	2.30259	-0.113039	102.303	-14.1374
98	2.30259	-0.100433	102.313	-14.3687
99	2.30259	-0.0903606	102.321	-14.5768
100	2.30259	-0.0777834	102.327	-14.7559
101	2.30259	-0.0652187	102.332	-14.906
102	2.30259	-0.0551734	102.335	-15.0331
103	2.30259	-0.0426257	102.336	-15.1312
104	2.30259	-0.0300838	102.337	-15.2005
105	2.30259	-0.0200544	102.338	-15.2467
106	2.30259	-0.00751925	102.338	-15.264
107	2.30259	0.00751925	102.338	-15.2467
108	2.30259	0.0200544	102.338	-15.2005
109	2.30259	0.0300838	102.339	-15.1312
110	2.30259	0.0426257	102.341	-15.0331
111	2.30259	0.0551734	102.344	-14.906

112	2.30259	0.0652187	102.348	-14.7559
113	2.30259	0.0777834	102.354	-14.5768
114	2.30259	0.0903606	102.362	-14.3687
115	2.30259	0.100433	102.373	-14.1374
116	2.30259	0.113039	102.385	-13.8772
117	2.30259	0.125661	102.401	-13.5878
118	2.30259	0.135774	102.42	-13.2752
119	2.30259	0.148434	102.442	-12.9334
120	2.30259	0.161119	102.468	-12.5624
121	2.30259	0.173829	102.498	-12.1622
122	2.30259	0.184017	102.532	-11.7384
123	2.30259	0.196779	102.57	-11.2853
124	2.30259	0.209575	102.614	-10.8028
125	2.30259	0.219834	102.663	-10.2966
126	2.30259	0.232693	102.717	-9.76079
127	2.30259	0.24559	102.777	-9.1953
128	2.30259	0.255936	102.843	-8.60599
129	2.30259	0.268908	102.915	-7.9868
130	2.30259	0.281926	102.994	-7.33764
131	2.30259	0.294992	103.081	-6.6584
132	2.30259	0.305481	103.175	-5.955
133	2.30259	0.318639	103.276	-5.22131
134	2.30259	0.331854	103.386	-4.45719
135	2.30259	0.342466	103.504	-3.66863
136	2.30259	0.355788	103.63	-2.8494
137	2.30259	0.369171	103.767	-1.99935
138	2.30259	0.379927	103.911	-1.12454
139	2.30259	0.393433	104.066	-0.218625
140	2.30259	0.40701	104.231	0.71855
141	2.30259	0.417928	104.406	1.68086
142	2.30259	0.431644	104.592	2.67476
143	2.30259	0.445443	104.791	3.70043
144	2.30259	0.459327	105.002	4.75807
145	2.30259	0.470498	105.223	5.84143
146	2.30259	0.484544	105.458	6.95713
147	2.30259	0.498687	105.707	8.1054
148	2.30259	0.510074	105.967	9.27989
149	2.30259	0.524401	106.242	10.4874
150	2.30259	0.538836	106.532	11.7281
151	2.30259	0.550465	106.835	12.9956
152	2.30259	0.565108	107.154	14.2968
153	2.30259	0.579873	107.491	15.632
154	2.30259	0.594766	107.844	17.0015
155	2.30259	0.606775	108.213	18.3986
156	2.30259	0.621911	108.599	19.8306
157	2.30259	0.637192	109.005	21.2978
158	2.30259	0.649522	109.427	22.7934
159	2.30259	0.665079	109.87	24.3248
160	2.30259	0.680797	110.333	25.8924
161	2.30259	0.693493	110.814	27.4892
162	2.30259	0.709522	111.317	29.123
163	2.30259	0.725736	111.844	30.794
164	2.30259	0.738846	112.39	32.4953
165	2.30259	0.755415	112.961	34.2347
166	2.30259	0.772193	113.557	36.0127
167	2.30259	0.789191	114.18	37.8299
168	2.30259	0.802956	114.824	39.6788
169	2.30259	0.820379	115.498	41.5678
170	2.30259	0.838054	116.2	43.4975
171	2.30259	0.852385	116.926	45.4602
172	2.30259	0.87055	117.684	47.4647
173	2.30259	0.889006	118.475	49.5117

174	2.30259	0.903992		119.292	51.5932
175	2.30259	0.923014		120.144	53.7185
176	2.30259	0.942375		121.032	55.8884
177	2.30259	0.958125		121.95	58.0946
178	2.30259	0.97815	122.907	60.3469	
179	2.30259	0.998575		123.904	62.6462
180	2.3979	1.01943	124.943	65.0907	
181	2.3979	1.03643	126.017	67.5759	
182	2.48491	1.05812	127.137	70.2053	
183	2.48491	1.08032	128.304	72.8898	
184	2.48491	1.09847	129.511	75.6193	
185	2.5177	1.12168	130.769	78.4434	
186	2.54945	1.1455	132.081	81.3638	
187	2.62467	1.16505	133.438	84.4217	
188	2.63906	1.19012	134.855	87.5624	
189	2.63906	1.21596	136.333	90.7714	
190	2.63906	1.24264	137.877	94.0508	
191	2.63906	1.26464	139.477	97.3883	
192	2.63906	1.29303	141.149	100.801	
193	2.63906	1.32251	142.898	104.291	
194	2.70805	1.34694	144.712	107.938	
195	2.77259	1.37866	146.613	111.761	
196	2.77882	1.41183	148.606	115.684	
197	2.89037	1.43953	150.678	119.845	
198	3.13549	1.47579	152.856	124.472	
199	3.25037	1.5141	155.149	129.394	
200	3.3322	1.54643	157.54	134.547	
201	3.3673	1.58927	160.066	139.898	
202	3.40453	1.63524	162.74	145.465	
203	3.46574	1.68494	165.579	151.305	
204	3.46574	1.72793	168.564	157.293	
205	3.60005	1.78661	171.756	163.725	
206	3.68888	1.85218	175.187	170.558	
207	3.68888	1.91103	178.839	177.607	
208	3.73767	1.99539	182.821	185.066	
209	4.02892	2.09693	187.218	193.514	
210	4.38078	2.19728	192.046	203.14	
211	4.40672	2.36561	197.642	213.564	
212	5.01064	2.65209	204.676	226.853	

Data Set Standard Deviation = 1.40475
Numerator = 51462.3
Denominator = 85220.8
W Statistic = 0.603869 = 51462.3 / 85220.8

5% Critical value of 0.976 exceeds 0.603869
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.603869
Evidence of non-normality at 99% level of significance

Concentrations (ppb)

Parameter: cis-1,2-Dichloroethene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 204
Total Non-Detect: 112
Percent Non-Detects: 54.902%
Total Background Measurements: 16
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	16	16 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.15	ND<0.15
			6/30/2010	ND<0.15	ND<0.15

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-6	26	26 (100%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.15	ND<0.15

			6/30/2010	ND<0.15		ND<0.15
MW-7	26	25 (96.1538%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	0.21 J	0.21 J	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.15		ND<0.15
			6/30/2010	ND<0.15		ND<0.15
MW-8	26	2 (7.69231%)	7/20/1995		1.1 J	1.1 J
			8/24/1995	20	20	
			9/28/1995	17	17	
			10/26/1995	2	2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	130	130	
			3/24/1997	160	160	
			9/24/1997	280	280	
			4/7/1998	180	180	
			9/23/1998	360	360	
			3/16/1999	159	159	
			9/23/1999	139	139	
			3/15/2000	330	330	
			9/24/2003	35	35	
			3/11/2004	130	130	
			10/12/2004	140	140	
			4/1/2005	55.9	55.9	
			10/25/2005	105	105	
			4/29/2006	42.5	42.5	
			11/18/2006	42.4	42.4	
			5/23/2007	25	25	
			11/28/2007	60.9	60.9	
			6/5/2008	ND<2	ND<2	
			11/20/2008	35	35	
			6/11/2009	39	39	
			6/30/2010	43	43	
MW-10	26	4 (15.3846%)	7/20/1995		4	4
			8/24/1995	15	15	
			9/28/1995	32	32	
			10/26/1995	26	26	
			11/19/1996	ND<2	ND<2	
			12/19/1996	40	40	

		3/24/1997	26	26		
		9/24/1997	38	38		
		4/7/1998	7.6	7.6		
		9/23/1998	32	32		
		3/16/1999	42.7	42.7		
		9/23/1999	24.9	24.9		
		3/15/2000	11	11		
		9/24/2003	11	11		
		3/11/2004	7.1	7.1		
		10/12/2004	ND<2	ND<2		
		4/1/2005	ND<2	ND<2		
		10/25/2005	13.4	13.4		
		4/29/2006	15.8	15.8		
		11/18/2006	8.96	8.96		
		5/23/2007	9.1	9.1		
		11/28/2007	13.6	13.6		
		6/5/2008	13.5	13.5		
		11/20/2008	ND<2	ND<2		
		6/11/2009	9	9		
		6/30/2010	5.8	5.8		
MW-11R	26	6 (23.0769%)	7/20/1995	5.4	5.4	
		8/24/1995	11	11		
		9/28/1995	10	10		
		10/26/1995	15	15		
		11/19/1996	ND<2	ND<2		
		12/19/1996	16	16		
		3/24/1997	12	12		
		9/24/1997	ND<2	ND<2		
		4/7/1998	5.2	5.2		
		9/23/1998	13	13		
		3/16/1999	11.1	11.1		
		9/23/1999	ND<2	ND<2		
		3/15/2000	12	12		
		9/24/2003	10	10		
		3/11/2004	11	11		
		10/12/2004	ND<2	ND<2		
		4/1/2005	9.47	9.47		
		10/25/2005	4.56	4.56		
		4/29/2006	2.88	2.88		
		11/18/2006	1.71 J	1.71 J		
		5/23/2007	5.7	5.7		
		11/28/2007	3.24	3.24		
		6/5/2008	ND<2	ND<2		
		11/20/2008	ND<2	ND<2		
		6/11/2009	1.3	1.3		
		6/30/2010	1.6	1.6		
MW-12AR	16	7 (43.75%)	3/16/1999	ND<2	ND<2	
		9/23/1999	ND<2	ND<2		
		3/15/2000	14	14		
		9/24/2003	10	10		
		3/11/2004	10	10		
		10/12/2004	9.4	9.4		
		4/1/2005	ND<2	ND<2		
		10/25/2005	2.9	2.9		
		4/29/2006	3.19	3.19		
		11/18/2006	1.09 J	1.09 J		
		5/23/2007	ND<2	ND<2		
		11/28/2007	1.22 J	1.22 J		
		6/5/2008	ND<2	ND<2		
		11/20/2008	0.83 J	0.83 J		

			6/11/2009	ND<0.15	ND<0.15	
			6/30/2010	ND<0.15	ND<0.15	
MW-9	26	12 (46.1538%)	7/20/1995	1.2 J	1.2 J	
			8/24/1995	1.1 J	1.1 J	
			9/28/1995	1 J	1 J	
			10/26/1995	1 J	1 J	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	64	64	
			10/12/2004	ND<2	ND<2	
			4/1/2005	1.78 J	1.78 J	
			10/25/2005	1.26 J	1.26 J	
			4/29/2006	0.88 J	0.88 J	
			11/18/2006	0.71 J	0.71 J	
			5/23/2007	3	3	
			11/28/2007	ND<0 J	ND<0 J	
			6/5/2008	0.5 J	0.5 J	
			11/20/2008	1.79 J	1.79 J	
			6/11/2009	2.3	2.3	
			6/30/2010	2.3	2.3	
MW-12BR	16	14 (87.5%)	3/16/1999	14.8	14.8	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	10.7	10.7	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.15	ND<0.15	
			6/30/2010	ND<0.15	ND<0.15	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: cis-1,2-Dichloroethene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 204

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0	-2.65209	7.03356	0
2	0.075	-2.3656	12.6297	-0.177421
3	0.075	-2.1972	17.4578	-0.342217
4	0.075	-2.0748	21.7627	-0.497831
5	0.075	-1.9773	25.6727	-0.646134
6	0.075	-1.8957	29.2664	-0.788311
7	0.075	-1.8250	32.597	-0.925186
8	0.075	-1.7624	35.7031	-1.05737
9	0.075	-1.7168	38.6508	-1.18613
10	0.075	-1.6645	41.4216	-1.31098
11	0.075	-1.6164	44.0345	-1.43221
12	0.21	-1.5717	46.505	-1.76228
13	0.5	-1.5300	48.8461	-2.52732
14	0.71	-1.4908	51.0687	-3.58582
15	0.83	-1.4538	53.1823	-4.79248
16	0.88	-1.4186	55.1948	-6.04089
17	1	-1.3917	57.1318	-7.43264
18	1	-1.3594	58.9799	-8.7921
19	1	-1.3285	60.745	-10.1206
20	1	-1.2988	62.4319	-11.4195
21	1	-1.2702	64.0454	-12.6897
22	1	-1.2426	65.5896	-13.9324
23	1	-1.2159	67.0682	-15.1483
24	1	-1.1901	68.4845	-16.3384
25	1	-1.17	69.8534	-17.5084
26	1	-1.1455	71.1656	-18.6539
27	1	-1.1216	72.4238	-19.7756
28	1	-1.0984	73.6304	-20.8741
29	1	-1.0758	74.7878	-21.9499
30	1	-1.0537	75.8982	-23.0037
31	1	-1.0321	76.9636	-24.0358
32	1	-1.0110	77.9858	-25.0469
33	1	-0.994457	78.9747	-26.0413
34	1	-0.974114	79.9236	-27.0154
35	1	-0.954165	80.834	-27.9696
36	1	-0.934598	81.7075	-28.9042
37	1	-0.915365	82.5454	-29.8196
38	1	-0.896473	83.349	-30.716
39	1	-0.877897	84.1197	-31.5939
40	1	-0.859618	84.8587	-32.4535
41	1	-0.841621	85.567	-33.2952
42	1	-0.827417	86.2516	-34.1226
43	1	-0.809896	86.9076	-34.9325
44	1	-0.792618	87.5358	-35.7251
45	1	-0.775574	88.1373	-36.5007
46	1	-0.758753	88.713	-37.2594
47	1	-0.742143	89.2638	-38.0016
48	1	-0.725736	89.7905	-38.7273
49	1	-0.709522	90.2939	-39.4368

50	1	-0.696684	90.7793	-40.1335
51	1	-0.680797	91.2428	-40.8143
52	1	-0.665079	91.6851	-41.4794
53	1	-0.649522	92.107	-42.1289
54	1	-0.634124	92.5091	-42.763
55	1	-0.618872	92.8921	-43.3819
56	1	-0.603765	93.2566	-43.9857
57	1	-0.588793	93.6033	-44.5745
58	1	-0.576911	93.9361	-45.1514
59	1	-0.5621794.2522	-45.7135	
60	1	-0.547551	94.552	-46.2611
61	1	-0.533048	94.8361	-46.7941
62	1	-0.518658	95.1051	-47.3128
63	1	-0.504372	95.3595	-47.8172
64	1	-0.490189	95.5998	-48.3074
65	1	-0.476105	95.8265	-48.7835
66	1	-0.464904	96.0426	-49.2484
67	1	-0.450985	96.246	-49.6993
68	1	-0.437153	96.4371	-50.1365
69	1	-0.423405	96.6164	-50.5599
70	1	-0.409735	96.7843	-50.9696
71	1	-0.396142	96.9412	-51.3658
72	1	-0.382622	97.0876	-51.7484
73	1	-0.369171	97.2239	-52.1176
74	1	-0.358459	97.3524	-52.476
75	1	-0.345126	97.4715	-52.8212
76	1	-0.331854	97.5816	-53.153
77	1	-0.318639	97.6831	-53.4717
78	1	-0.305481	97.7765	-53.7771
79	1	-0.292375	97.8619	-54.0695
80	1	-0.279319	97.94	-54.3488
81	1	-0.266311	98.0109	-54.6151
82	1	-0.253347	98.0751	-54.8685
83	1	-0.243007	98.1341	-55.1115
84	1	-0.230118	98.1871	-55.3416
85	1	-0.217267	98.2343	-55.5589
86	1	-0.204452	98.2761	-55.7633
87	1	-0.191671	98.3128	-55.955
88	1	-0.1789298.3448	-56.1339	
89	1	-0.166199	98.3724	-56.3001
90	1	-0.153505	98.396	-56.4536
91	1	-0.143367	98.4166	-56.597
92	1	-0.130716	98.4337	-56.7277
93	1	-0.118085	98.4476	-56.8458
94	1	-0.105474	98.4587	-56.9513
95	1	-0.0928787	98.4673	-57.0441
96	1	-0.0802981	98.4738	-57.1244
97	1	-0.0677301	98.4784	-57.1922
98	1	-0.0551734	98.4814	-57.2474
99	1	-0.0451348	98.4835	-57.2925
100	1	-0.0325917	98.4845	-57.3251
101	1	-0.0200544	98.4849	-57.3451
102	1	-0.00751925	98.485	-57.3527
103	1	0.00751925	98.485	-57.3451
104	1	0.0200544	98.4854	-57.3251
105	1	0.0325917	98.4865	-57.2925
106	1	0.0451348	98.4885	-57.2474
107	1	0.0551734	98.4916	-57.1922
108	1	0.0677301	98.4962	-57.1244
109	1	0.0802981	98.5026	-57.0441
110	1	0.0928787	98.5112	-56.9513
111	1	0.105474	98.5224	-56.8458

112	1	0.118085	98.5363	-56.7277
113	1	0.130716	98.5534	-56.597
114	1	0.143367	98.574	-56.4536
115	1	0.153505	98.5975	-56.3001
116	1	0.166199	98.6251	-56.1339
117	1	0.17892	98.6572	-55.955
118	1	0.191671	98.6939	-55.7633
119	1	0.204452	98.7357	-55.5589
120	1.09	0.217267	98.7829	-55.3221
121	1.1	0.230118	98.8359	-55.0689
122	1.1	0.243007	98.8949	-54.8016
123	1.2	0.253347	98.9591	-54.4976
124	1.22	0.266311	99.03	-54.1727
125	1.26	0.279319	99.108	-53.8208
126	1.3	0.292375	99.1935	-53.4407
127	1.6	0.305481	99.2868	-52.9519
128	1.71	0.318639	99.3884	-52.407
129	1.78	0.331854	99.4985	-51.8163
130	1.79	0.345126	99.6176	-51.1986
131	2	0.358459	99.7461	-50.4816
132	2.3	0.369171	99.8824	-49.6325
133	2.3	0.382622	100.029	-48.7525
134	2.88	0.396142	100.186	-47.6116
135	2.9	0.409735	100.354	-46.4234
136	3	0.423405	100.533	-45.1532
137	3.19	0.437153	100.724	-43.7587
138	3.24	0.450985	100.927	-42.2975
139	4	0.464904	101.143	-40.4379
140	4.56	0.476105	101.37	-38.2668
141	5.2	0.490189	101.61	-35.7178
142	5.4	0.504372	101.865	-32.9942
143	5.7	0.518658	102.134	-30.0379
144	5.8	0.533048	102.418	-26.9462
145	7.1	0.547551	102.718	-23.0586
146	7.6	0.56217	103.034	-18.7861
147	8.96	0.576911	103.367	-13.617
148	9	0.588793	103.713	-8.31783
149	9.1	0.603765	104.078	-2.82358
150	9.4	0.618872	104.461	2.99383
151	9.47	0.634124	104.863	8.99898
152	10	0.649522	105.285	15.4942
153	10	0.665079	105.727	22.145
154	10	0.680797	106.191	28.953
155	10	0.696684	106.676	35.9198
156	10.7	0.709522	107.179	43.5117
157	11	0.725736	107.706	51.4948
158	11	0.742143	108.257	59.6584
159	11	0.758753	108.833	68.0046
160	11	0.775574	109.434	76.5359
161	11.1	0.792618	110.062	85.334
162	12	0.809896	110.718	95.0528
163	12	0.827417	111.403	104.982
164	13	0.841621	112.111	115.923
165	13.4	0.859618	112.85	127.442
166	13.5	0.877897	113.621	139.293
167	13.6	0.896473	114.425	151.485
168	14	0.915365	115.262	164.3
169	14.8	0.93459	116.136	178.132
170	15	0.954165	117.046	192.445
171	15	0.974114	117.995	207.057
172	15.8	0.994457	118.984	222.769
173	16	1.01104	120.006	238.946

174	17	1.03215	121.072	256.492
175	20	1.05375	122.182	277.567
176	24.9	1.07584	123.34	304.355
177	25	1.09847	124.546	331.817
178	26	1.12168	125.804	360.981
179	26	1.1455	127.117	390.764
180	32	1.17	128.485	428.204
181	32	1.19012	129.902	466.288
182	35	1.21596	131.38	508.846
183	35	1.24264	132.925	552.339
184	38	1.27024	134.538	600.608
185	39	1.29884	136.225	651.262
186	40	1.32854	137.99	704.404
187	42.4	1.35946	139.838	762.045
188	42.5	1.39175	141.775	821.194
189	42.7	1.41865	143.788	881.771
190	43	1.4538	145.901	944.284
191	55.9	1.49085	148.124	1027.62
192	60.9	1.53007	150.465	1120.8
193	64	1.57179	152.936	1221.4
194	105	1.61644	155.548	1391.12
195	130	1.66456	158.319	1607.52
196	130	1.71688	161.267	1830.71
197	139	1.76241	164.373	2075.69
198	140	1.82501	167.704	2331.19
199	159	1.8957	171.297	2632.6
200	160	1.97737	175.207	2948.98
201	180	2.07485	179.512	3322.46
202	280	2.19728	184.34	3937.7
203	330	2.36561	189.936	4718.35
204	360	2.65209	196.97	5673.1

Data Set Standard Deviation = 47.7785
Numerator = 3.21841e+007
Denominator = 9.12768e+007
W Statistic = 0.352598 = 3.21841e+007 / 9.12768e+007

5% Critical value of 0.976 exceeds 0.352598
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.352598
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: cis-1,2-Dichloroethene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 204

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.59027	-2.65209	7.03356	6.86961
2	-2.59027	-2.36561	12.6297	12.9972
3	-2.59027	-2.19728	17.4578	18.6887
4	-2.59027	-2.07485	21.7627	24.0632
5	-2.59027	-1.97737	25.6727	29.1851
6	-2.59027	-1.8957	29.2664	34.0954
7	-2.59027	-1.82501	32.597	38.8227
8	-2.59027	-1.76241	35.7031	43.3878
9	-2.59027	-1.71688	38.6508	47.835
10	-2.59027	-1.66456	41.4216	52.1466
11	-1.56065	-1.61644	44.0345	54.6693
12	-0.693147	-1.57179	46.505	55.7588
13	-0.34249	-1.53007	48.8461	56.2828
14	-0.18633	-1.49085	51.0687	56.5606
15	-0.127833	-1.4538	53.1823	56.7465
16	0	-1.41865	55.1948	56.7465
17	0	-1.39175	57.1318	56.7465
18	0	-1.35946	58.9799	56.7465
19	0	-1.32854	60.745	56.7465
20	0	-1.29884	62.4319	56.7465
21	0	-1.27024	64.0454	56.7465
22	0	-1.24264	65.5896	56.7465
23	0	-1.21596	67.0682	56.7465
24	0	-1.19012	68.4845	56.7465
25	0	-1.17	69.8534	56.7465
26	0	-1.1455	71.1656	56.7465
27	0	-1.12168	72.4238	56.7465
28	0	-1.09847	73.6304	56.7465
29	0	-1.07584	74.7878	56.7465
30	0	-1.05375	75.8982	56.7465
31	0	-1.03215	76.9636	56.7465
32	0	-1.01104	77.9858	56.7465
33	0	-0.994457	78.9747	56.7465
34	0	-0.974114	79.9236	56.7465
35	0	-0.954165	80.834	56.7465
36	0	-0.93459	81.7075	56.7465
37	0	-0.915365	82.5454	56.7465
38	0	-0.896473	83.349	56.7465
39	0	-0.877897	84.1197	56.7465
40	0	-0.859618	84.8587	56.7465
41	0	-0.841621	85.567	56.7465
42	0	-0.827417	86.2516	56.7465
43	0	-0.809896	86.9076	56.7465
44	0	-0.792618	87.5358	56.7465
45	0	-0.775574	88.1373	56.7465
46	0	-0.758753	88.713	56.7465
47	0	-0.742143	89.2638	56.7465
48	0	-0.725736	89.7905	56.7465
49	0	-0.709522	90.2939	56.7465

50	0	-0.696684	90.7793	56.7465
51	0	-0.680797	91.2428	56.7465
52	0	-0.665079	91.6851	56.7465
53	0	-0.649522	92.107	56.7465
54	0	-0.634124	92.5091	56.7465
55	0	-0.618872	92.8921	56.7465
56	0	-0.603765	93.2566	56.7465
57	0	-0.588793	93.6033	56.7465
58	0	-0.576911	93.9361	56.7465
59	0	-0.5621794.2522	56.7465	
60	0	-0.547551	94.552	56.7465
61	0	-0.533048	94.8361	56.7465
62	0	-0.518658	95.1051	56.7465
63	0	-0.504372	95.3595	56.7465
64	0	-0.490189	95.5998	56.7465
65	0	-0.476105	95.8265	56.7465
66	0	-0.464904	96.0426	56.7465
67	0	-0.450985	96.246	56.7465
68	0	-0.437153	96.4371	56.7465
69	0	-0.423405	96.6164	56.7465
70	0	-0.409735	96.7843	56.7465
71	0	-0.396142	96.9412	56.7465
72	0	-0.382622	97.0876	56.7465
73	0	-0.369171	97.2239	56.7465
74	0	-0.358459	97.3524	56.7465
75	0	-0.345126	97.4715	56.7465
76	0	-0.331854	97.5816	56.7465
77	0	-0.318639	97.6831	56.7465
78	0	-0.305481	97.7765	56.7465
79	0	-0.292375	97.8619	56.7465
80	0	-0.279319	97.94	56.7465
81	0	-0.266311	98.0109	56.7465
82	0	-0.253347	98.0751	56.7465
83	0	-0.243007	98.1341	56.7465
84	0	-0.230118	98.1871	56.7465
85	0	-0.217267	98.2343	56.7465
86	0	-0.204452	98.2761	56.7465
87	0	-0.191671	98.3128	56.7465
88	0	-0.1789298.3448	56.7465	
89	0	-0.166199	98.3724	56.7465
90	0	-0.153505	98.396	56.7465
91	0	-0.143367	98.4166	56.7465
92	0	-0.130716	98.4337	56.7465
93	0	-0.118085	98.4476	56.7465
94	0	-0.105474	98.4587	56.7465
95	0	-0.0928787	98.4673	56.7465
96	0	-0.0802981	98.4738	56.7465
97	0	-0.0677301	98.4784	56.7465
98	0	-0.0551734	98.4814	56.7465
99	0	-0.0451348	98.4835	56.7465
100	0	-0.0325917	98.4845	56.7465
101	0	-0.0200544	98.4849	56.7465
102	0	-0.00751925	98.485	56.7465
103	0	0.00751925	98.485	56.7465
104	0	0.0200544	98.4854	56.7465
105	0	0.0325917	98.4865	56.7465
106	0	0.0451348	98.4885	56.7465
107	0	0.0551734	98.4916	56.7465
108	0	0.0677301	98.4962	56.7465
109	0	0.0802981	98.5026	56.7465
110	0	0.0928787	98.5112	56.7465
111	0	0.105474	98.5224	56.7465

112	0	0.118085	98.5363	56.7465	
113	0	0.130716	98.5534	56.7465	
114	0	0.143367	98.574	56.7465	
115	0	0.153505	98.5975	56.7465	
116	0	0.166199	98.6251	56.7465	
117	0	0.17892	98.6572	56.7465	
118	0	0.191671	98.6939	56.7465	
119	0	0.204452	98.7357	56.7465	
120	0.0861777	0.217267	98.7829	56.7652	
121	0.0953102	0.230118	98.8359	56.7871	
122	0.0953102	0.243007	98.8949	56.8103	
123	0.182322	0.253347	98.9591	56.8565	
124	0.198851	0.266311	99.03	56.9094	
125	0.231112	0.279319	99.108	56.974	
126	0.262364	0.292375	99.1935	57.0507	
127	0.470004	0.305481	99.2868	57.1943	
128	0.536493	0.318639	99.3884	57.3652	
129	0.576613	0.331854	99.4985	57.5566	
130	0.582216	0.345126	99.6176	57.7575	
131	0.693147	0.358459	99.7461	58.006	
132	0.832909	0.369171	99.8824	58.3135	
133	0.832909	0.382622	100.029	58.6322	
134	1.05779	0.396142	100.186	59.0512	
135	1.06471	0.409735	100.354	59.4874	
136	1.09861	0.423405	100.533	59.9526	
137	1.16002	0.437153	100.724	60.4597	
138	1.17557	0.450985	100.927	60.9899	
139	1.38629	0.464904	101.143	61.6344	
140	1.51732	0.476105	101.37	62.3568	
141	1.64866	0.490189	101.61	63.1649	
142	1.6864	0.504372	101.865	64.0155	
143	1.74047	0.518658	102.134	64.9182	
144	1.75786	0.533048	102.418	65.8552	
145	1.96009	0.547551	102.718	66.9285	
146	2.02815	0.56217	103.034	68.0686	
147	2.19277	0.576911	103.367	69.3337	
148	2.19722	0.588793	103.713	70.6274	
149	2.20827	0.603765	104.078	71.9607	
150	2.24071	0.618872	104.461	73.3474	
151	2.24813	0.634124	104.863	74.773	
152	2.30259	0.649522	105.285	76.2685	
153	2.30259	0.665079	105.727	77.7999	
154	2.30259	0.680797	106.191	79.3675	
155	2.30259	0.696684	106.676	80.9717	
156	2.37024	0.709522	107.179	82.6535	
157	2.3979	0.725736	107.706	84.3937	
158	2.3979	0.742143	108.257	86.1733	
159	2.3979	0.758753	108.833	87.9927	
160	2.3979	0.775574	109.434	89.8524	
161	2.40695	0.792618	110.062	91.7602	
162	2.48491	0.809896	110.718	93.7727	
163	2.48491	0.827417	111.403	95.8288	
164	2.56495	0.841621	112.111	97.9875	
165	2.59525	0.859618	112.85	100.218	
166	2.60269	0.877897	113.621	102.503	
167	2.61007	0.896473	114.425	104.843	
168	2.63906	0.915365	115.262	107.259	
169	2.69463	0.93459	116.136	109.777	
170	2.70805	0.954165	117.046	112.361	
171	2.70805	0.974114	117.995	114.999	
172	2.76001	0.994457	118.984	117.744	
173	2.77259	1.01104	120.006	120.547	

174	2.83321	1.03215	121.072	123.471
175	2.99573	1.05375	122.182	126.628
176	3.21487	1.07584	123.34	130.087
177	3.21888	1.09847	124.546	133.623
178	3.2581	1.12168	125.804	137.277
179	3.2581	1.1455	127.117	141.009
180	3.46574	1.17	128.485	145.064
181	3.46574	1.19012	129.902	149.189
182	3.55535	1.21596	131.38	153.512
183	3.55535	1.24264	132.925	157.93
184	3.63759	1.27024	134.538	162.551
185	3.66356	1.29884	136.225	167.309
186	3.68888	1.32854	137.99	172.21
187	3.74715	1.35946	139.838	177.304
188	3.7495	1.39175	141.775	182.522
189	3.7542	1.41865	143.788	187.848
190	3.7612	1.4538	145.901	193.316
191	4.02356	1.49085	148.124	199.315
192	4.10923	1.53007	150.465	205.602
193	4.15888	1.57179	152.936	212.139
194	4.65396	1.61644	155.548	219.662
195	4.86753	1.66456	158.319	227.764
196	4.86753	1.71688	161.267	236.121
197	4.93447	1.76241	164.373	244.818
198	4.94164	1.82501	167.704	253.836
199	5.0689	1.8957	171.297	263.445
200	5.07517	1.97737	175.207	273.481
201	5.19296	2.07485	179.512	284.255
202	5.63479	2.19728	184.34	296.637
203	5.79909	2.36561	189.936	310.355
204	5.8861	2.65209	196.97	325.966

Data Set Standard Deviation = 1.77666
Numerator = 106254
Denominator = 126213
W Statistic = 0.841862 = 106254 / 126213

5% Critical value of 0.976 exceeds 0.841862
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.841862
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: cis-1,2-Dichloroethene

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	56.5
	9/23/1999	ND<0	56.5
	3/15/2000	ND<0	56.5
	9/24/2003	ND<0	56.5
	3/11/2004	ND<0	56.5
	10/12/2004	ND<0	56.5
	4/1/2005	ND<0	56.5
	10/25/2005	ND<0	56.5
	4/29/2006	ND<0	56.5
	11/18/2006	ND<0	56.5
	5/23/2007	ND<0	56.5
	11/28/2007	ND<0	56.5
	6/5/2008	ND<0	56.5
	11/20/2008	ND<0	56.5
	6/11/2009	ND<-2.59027	56.5
	6/30/2010	ND<-2.59027	56.5

Rank Sum = 904
Rank Mean = 56.5

Background Rank Sum = 904
Background Rank Mean = 56.5

Compliance Wells

Well ID	Date	Result	Rank
MW-6	7/20/1995	ND<0	56.5
	8/24/1995	ND<0	56.5
	9/28/1995	ND<0	56.5
	10/26/1995	ND<0	56.5
	11/19/1996	ND<0	56.5
	12/19/1996	ND<0	56.5
	3/24/1997	ND<0	56.5
	9/24/1997	ND<0	56.5
	4/7/1998	ND<0	56.5
	9/23/1998	ND<0	56.5
	3/16/1999	ND<0	56.5
	9/23/1999	ND<0	56.5
	3/15/2000	ND<0	56.5
	9/24/2003	ND<0	56.5
	3/11/2004	ND<0	56.5
	10/12/2004	ND<0	56.5
	4/1/2005	ND<0	56.5
	10/25/2005	ND<0	56.5
	4/29/2006	ND<0	56.5
	11/18/2006	ND<0	56.5
	5/23/2007	ND<0	56.5
	11/28/2007	ND<0	56.5

	6/5/2008	ND<0	56.5	
	11/20/2008	ND<0	56.5	
	6/11/2009	ND<-2.59027		56.5
	6/30/2010	ND<-2.59027		56.5

Rank Sum = 1469
Rank Mean = 56.5

MW-7	7/20/1995	ND<0	56.5	
	8/24/1995	ND<0	56.5	
	9/28/1995	ND<0	56.5	
	10/26/1995	ND<0	56.5	
	11/19/1996	ND<0	56.5	
	12/19/1996	ND<0	56.5	
	3/24/1997	ND<0	56.5	
	9/24/1997	ND<0	56.5	
	4/7/1998	ND<0	56.5	
	9/23/1998	ND<0	56.5	
	3/16/1999	ND<0	56.5	
	9/23/1999	ND<0	56.5	
	3/15/2000	ND<0	56.5	
	9/24/2003	ND<0	56.5	
	3/11/2004	ND<0	56.5	
	10/12/2004	ND<0	56.5	
	4/1/2005	-1.56065 J	113	
	10/25/2005	ND<0	56.5	
	4/29/2006	ND<0	56.5	
	11/18/2006	ND<0	56.5	
	5/23/2007	ND<0	56.5	
	11/28/2007	ND<0	56.5	
	6/5/2008	ND<0	56.5	
	11/20/2008	ND<0	56.5	
	6/11/2009	ND<-2.59027		56.5
	6/30/2010	ND<-2.59027		56.5

Rank Sum = 1525.5
Rank Mean = 58.6731

MW-8	7/20/1995	0.0953102 J		121
	8/24/1995	2.99573		175
	9/28/1995	2.83321		174
	10/26/1995	0.693147		131
	11/19/1996	ND<0	56.5	
	12/19/1996	4.86753		195
	3/24/1997	5.07517		200
	9/24/1997	5.63479		202
	4/7/1998	5.19296	201	
	9/23/1998	5.8861	204	
	3/16/1999	5.0689	199	
	9/23/1999	4.93447		197
	3/15/2000	5.79909		203
	9/24/2003	3.55535		182
	3/11/2004	4.86753		196
	10/12/2004	4.94164		198
	4/1/2005	4.02356	191	
	10/25/2005	4.65396		194
	4/29/2006	3.7495	188	
	11/18/2006	3.74715		187
	5/23/2007	3.21888		177
	11/28/2007	4.10923		192
	6/5/2008	ND<0	56.5	
	11/20/2008	3.55535		183
	6/11/2009	3.66356		185
	6/30/2010	3.7612	190	

Rank Sum = 4578
Rank Mean = 176.077

MW-10	7/20/1995	1.38629		139
	8/24/1995	2.70805		170
	9/28/1995	3.46574		180
	10/26/1995	3.2581	178	
	11/19/1996	ND<0	56.5	
	12/19/1996	3.68888		186
	3/24/1997	3.2581	179	
	9/24/1997	3.63759		184
	4/7/1998	2.02815	146	
	9/23/1998	3.46574		181
	3/16/1999	3.7542	189	
	9/23/1999	3.21487		176
	3/15/2000	2.3979	157	
	9/24/2003	2.3979	158	
	3/11/2004	1.96009		145
	10/12/2004	ND<0	56.5	
	4/1/2005	ND<0	56.5	
	10/25/2005	2.59525		165
	4/29/2006	2.76001		172
	11/18/2006	2.19277		147
	5/23/2007	2.20827		149
	11/28/2007	2.61007		167
	6/5/2008	2.60269	166	
	11/20/2008	ND<0	56.5	
	6/11/2009	2.19722		148
	6/30/2010	1.75786		144

Rank Sum = 3852
Rank Mean = 148.154

MW-11R	7/20/1995	1.6864	142	
	8/24/1995	2.3979	159	
	9/28/1995	2.30259		152
	10/26/1995	2.70805		171
	11/19/1996	ND<0	56.5	
	12/19/1996	2.77259		173
	3/24/1997	2.48491		162
	9/24/1997	ND<0	56.5	
	4/7/1998	1.64866	141	
	9/23/1998	2.56495		164
	3/16/1999	2.40695		161
	9/23/1999	ND<0	56.5	
	3/15/2000	2.48491		163
	9/24/2003	2.30259		153
	3/11/2004	2.3979	160	
	10/12/2004	ND<0	56.5	
	4/1/2005	2.24813	151	
	10/25/2005	1.51732		140
	4/29/2006	1.05779		134
	11/18/2006	0.536493 J		128
	5/23/2007	1.74047		143
	11/28/2007	1.17557		138
	6/5/2008	ND<0	56.5	
	11/20/2008	ND<0	56.5	
	6/11/2009	0.262364		126
	6/30/2010	0.470004		127

Rank Sum = 3327
Rank Mean = 127.962

MW-12AR	3/16/1999	ND<0	56.5

	9/23/1999	ND<0	56.5
	3/15/2000	2.63906	168
	9/24/2003	2.30259	154
	3/11/2004	2.30259	155
	10/12/2004	2.24071	150
	4/1/2005	ND<0	56.5
	10/25/2005	1.06471	135
	4/29/2006	1.16002	137
	11/18/2006	0.0861777 J	120
	5/23/2007	ND<0	56.5
	11/28/2007	0.198851 J	124
	6/5/2008	ND<0	56.5
	11/20/2008	-0.18633 J	116
	6/11/2009	ND<-2.59027	56.5
	6/30/2010	ND<-2.59027	56.5

Rank Sum = 1654.5
Rank Mean = 103.406

MW-9	7/20/1995	0.182322 J	123
	8/24/1995	0.0953102 J	122
	9/28/1995	0 J	118
	10/26/1995	0 J	119
	11/19/1996	ND<0	56.5
	12/19/1996	ND<0	56.5
	3/24/1997	ND<0	56.5
	9/24/1997	ND<0	56.5
	4/7/1998	ND<0	56.5
	9/23/1998	ND<0	56.5
	3/16/1999	ND<0	56.5
	9/23/1999	ND<0	56.5
	3/15/2000	ND<0	56.5
	9/24/2003	ND<0	56.5
	3/11/2004	4.15888	193
	10/12/2004	ND<0	56.5
	4/1/2005	0.576613 J	129
	10/25/2005	0.231112 J	125
	4/29/2006	-0.127833 J	117
	11/18/2006	-0.34249 J	115
	5/23/2007	1.09861	136
	11/28/2007	ND<0 J	56.5
	6/5/2008	-0.693147 J	114
	11/20/2008	0.582216 J	130
	6/11/2009	0.832909	132
	6/30/2010	0.832909	133

Rank Sum = 2484
Rank Mean = 95.5385

MW-12BR	3/16/1999	2.69463	169
	9/23/1999	ND<0	56.5
	3/15/2000	ND<0	56.5
	9/24/2003	ND<0	56.5
	3/11/2004	ND<0	56.5
	10/12/2004	ND<0	56.5
	4/1/2005	2.37024	156
	10/25/2005	ND<0	56.5
	4/29/2006	ND<0	56.5
	11/18/2006	ND<0	56.5
	5/23/2007	ND<0	56.5
	11/28/2007	ND<0	56.5
	6/5/2008	ND<0	56.5
	11/20/2008	ND<0	56.5
	6/11/2009	ND<-2.59027	56.5

	6/30/2010	ND<-2.59027	56.5

Rank Sum = 1116
Rank Mean = 69.75

Calculation Results:

Kruskal-Wallis H Statistic = 105.896
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 126.894
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
105.896 > 15.5073 indicating a significant group difference at 5% significance level
126.894 > 15.5073 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 56.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-6	56.5	0	43.6368	
MW-7	58.6731	2.17308	43.6368	
MW-8	176.077	119.577	43.6368	
MW-10	148.154	91.6538	43.6368	
MW-11R	127.962	71.4615	43.6368	
MW-12AR		103.406	46.9063	48.5546
MW-9	95.5385	39.0385	43.6368	
MW-12BR		69.75	13.25	48.5546

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 56.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-6	56.5	0	47.1218	
MW-7	58.6731	2.17308	47.1218	
MW-8	176.077	119.577	47.1218	
MW-10	148.154	91.6538	47.1218	
MW-11R	127.962	71.4615	47.1218	
MW-12AR		103.406	46.9063	52.4323
MW-9	95.5385	39.0385	47.1218	
MW-12BR		69.75	13.25	52.4323

Mann-Kendall Trend Analysis

Parameter: cis-1,2-Dichloroethene

Location: MW-8

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
2.99573	0.0953102 J	2.90042	1	0
2.83321	0.0953102 J	2.7379	2	0
0.693147	0.0953102 J	0.597837	3	0
ND<0	0.0953102 J	-0.0953102	3	1
4.86753	0.0953102 J	4.77222	4	1
5.07517	0.0953102 J	4.97986	5	1
5.63479	0.0953102 J	5.53948	6	1
5.19296	0.0953102 J	5.09765	7	1
5.8861	0.0953102 J	5.79079	8	1
5.0689	0.0953102 J	4.97359	9	1
4.93447	0.0953102 J	4.83916	10	1
5.79909	0.0953102 J	5.70378	11	1
3.55535	0.0953102 J	3.46004	12	1
4.86753	0.0953102 J	4.77222	13	1
4.94164	0.0953102 J	4.84633	14	1
4.02356	0.0953102 J	3.92825	15	1
4.65396	0.0953102 J	4.55865	16	1
3.7495	0.0953102 J	3.65419	17	1
3.74715	0.0953102 J	3.65184	18	1
3.21888	0.0953102 J	3.12357	19	1
4.10923	0.0953102 J	4.01392	20	1
ND<0	0.0953102 J	-0.0953102	20	2
3.55535	0.0953102 J	3.46004	21	2
3.66356	0.0953102 J	3.56825	22	2
3.7612	0.0953102 J	3.66589	23	2
2.83321	2.99573	-0.162519	23	3
0.693147	2.99573	-2.302592	23	4
ND<0	2.99573	-2.995723	23	5
4.86753	2.99573	1.8718	24	5
5.07517	2.99573	2.07944	25	5
5.63479	2.99573	2.63906	26	5
5.19296	2.99573	2.19722	27	5
5.8861	2.99573	2.89037	28	5
5.0689	2.99573	2.07317	29	5
4.93447	2.99573	1.93874	30	5
5.79909	2.99573	2.80336	31	5
3.55535	2.99573	0.559616	32	5
4.86753	2.99573	1.8718	33	5
4.94164	2.99573	1.94591	34	5
4.02356	2.99573	1.02783	35	5
4.65396	2.99573	1.65823	36	5
3.7495	2.99573	0.753772	37	5
3.74715	2.99573	0.751416	38	5
3.21888	2.99573	0.223144	39	5
4.10923	2.99573	1.1135	40	5
ND<0	2.99573	-2.995734	0	6
3.55535	2.99573	0.559616	41	6

3.66356	2.99573	0.667829	42	6	
3.7612	2.99573	0.765468	43	6	
0.693147	2.83321	-2.140074	3	7	
ND<0	2.83321	-2.833214	3	8	
4.86753	2.83321	2.03432	44	8	
5.07517	2.83321	2.24196	45	8	
5.63479	2.83321	2.80158	46	8	
5.19296	2.83321	2.35974	47	8	
5.8861	2.83321	3.05289	48	8	
5.0689	2.83321	2.23569	49	8	
4.93447	2.83321	2.10126	50	8	
5.79909	2.83321	2.96588	51	8	
3.55535	2.83321	0.722135	52	8	
4.86753	2.83321	2.03432	53	8	
4.94164	2.83321	2.10843	54	8	
4.02356	2.83321	1.19035	55	8	
4.65396	2.83321	1.82075	56	8	
3.7495	2.83321	0.916291	57	8	
3.74715	2.83321	0.913935	58	8	
3.21888	2.83321	0.385662	59	8	
4.10923	2.83321	1.27602	60	8	
ND<0	2.83321	-2.833216	0	9	
3.55535	2.83321	0.722135	61	9	
3.66356	2.83321	0.830348	62	9	
3.7612	2.83321	0.927987	63	9	
ND<0	0.693147	-0.693147	63	10	
4.86753	0.693147	4.17439	64	10	
5.07517	0.693147	4.38203	65	10	
5.63479	0.693147	4.94164	66	10	
5.19296	0.693147	4.49981	67	10	
5.8861	0.693147	5.19296	68	10	
5.0689	0.693147	4.37576	69	10	
4.93447	0.693147	4.24133	70	10	
5.79909	0.693147	5.10595	71	10	
3.55535	0.693147	2.8622	72	10	
4.86753	0.693147	4.17439	73	10	
4.94164	0.693147	4.2485	74	10	
4.02356	0.693147	3.33042	75	10	
4.65396	0.693147	3.96081	76	10	
3.7495	0.693147	3.05636	77	10	
3.74715	0.693147	3.054	78	10	
3.21888	0.693147	2.52573	79	10	
4.10923	0.693147	3.41609	80	10	
ND<0	0.693147	-0.693147	80	11	
3.55535	0.693147	2.8622	81	11	
3.66356	0.693147	2.97041	82	11	
3.7612	0.693147	3.06805	83	11	
4.86753	ND<0	4.86753	84	11	
5.07517	ND<0	5.07517	85	11	
5.63479	ND<0	5.63479	86	11	
5.19296	ND<0	5.19296	87	11	
5.8861	ND<0	5.8861	88	11	
5.0689	ND<0	5.0689	89	11	
4.93447	ND<0	4.93447	90	11	
5.79909	ND<0	5.79909	91	11	
3.55535	ND<0	3.55535	92	11	
4.86753	ND<0	4.86753	93	11	
4.94164	ND<0	4.94164	94	11	
4.02356	ND<0	4.02356	95	11	

4.65396		ND<0	4.65396	96	11
3.7495	ND<0	3.7495	97	11	
3.74715		ND<0	3.74715	98	11
3.21888		ND<0	3.21888	99	11
4.10923		ND<0	4.10923	100	11
ND<0	ND<0	0	100	11	
3.55535		ND<0	3.55535	101	11
3.66356		ND<0	3.66356	102	11
3.7612	ND<0	3.7612	103	11	

5.07517		4.86753	0.207639	104	11
5.63479		4.86753	0.767255	105	11
5.19296		4.86753	0.325422	106	11
5.8861	4.86753	1.01857	107	11	
5.0689	4.86753	0.20137	108	11	
4.93447		4.86753	0.0669395	109	11
5.79909		4.86753	0.931558	110	11
3.55535		4.86753	-1.31219	110	12
4.86753		4.86753	0	110	12
4.94164		4.86753	0.074108	111	12
4.02356		4.86753	-0.84397	111	13
4.65396		4.86753	-0.213574	111	14
3.7495	4.86753	-1.11803	111	15	
3.74715		4.86753	-1.12039	111	16
3.21888		4.86753	-1.64866	111	17
4.10923		4.86753	-0.758301	111	18
ND<0	4.86753	-4.86753	111	19	
3.55535		4.86753	-1.31219	111	20
3.66356		4.86753	-1.20397	111	21
3.7612	4.86753	-1.10633	111	22	

5.63479		5.07517	0.559616	112	22
5.19296		5.07517	0.117783	113	22
5.8861	5.07517	0.81093	114	22	
5.0689	5.07517	-0.00626961	114	23	
4.93447		5.07517	-0.1407	114	24
5.79909		5.07517	0.723919	115	24
3.55535		5.07517	-1.51983	115	25
4.86753		5.07517	-0.207639	115	26
4.94164		5.07517	-0.133531	115	27
4.02356		5.07517	-1.05161	115	28
4.65396		5.07517	-0.421213	115	29
3.7495	5.07517	-1.32567	115	30	
3.74715		5.07517	-1.32803	115	31
3.21888		5.07517	-1.8563	115	32
4.10923		5.07517	-0.965941	115	33
ND<0	5.07517	-5.07517	115	34	
3.55535		5.07517	-1.51983	115	35
3.66356		5.07517	-1.41161	115	36
3.7612	5.07517	-1.31397	115	37	

5.19296		5.63479	-0.441833	115	38
5.8861	5.63479	0.251314	116	38	
5.0689	5.63479	-0.565885	116	39	
4.93447		5.63479	-0.700316	116	40
5.79909		5.63479	0.164303	117	40
3.55535		5.63479	-2.07944	117	41
4.86753		5.63479	-0.767255	117	42
4.94164		5.63479	-0.693147	117	43
4.02356		5.63479	-1.61123	117	44
4.65396		5.63479	-0.980829	117	45
3.7495	5.63479	-1.88529	117	46	

3.74715	5.63479	-1.88764	117	47	
3.21888	5.63479	-2.41591	117	48	
4.10923	5.63479	-1.52556	117	49	
ND<0	5.63479	-5.63479	117	50	
3.55535	5.63479	-2.07944	117	51	
3.66356	5.63479	-1.97123	117	52	
3.7612	5.63479	-1.87359	117	53	
5.8861	5.19296	0.693147	118	53	
5.0689	5.19296	-0.124053	118	54	
4.93447	5.19296	-0.258483	118	55	
5.79909	5.19296	0.606136	119	55	
3.55535	5.19296	-1.63761	119	56	
4.86753	5.19296	-0.325422	119	57	
4.94164	5.19296	-0.251314	119	58	
4.02356	5.19296	-1.16939	119	59	
4.65396	5.19296	-0.538997	119	60	
3.7495	5.19296	-1.44345	119	61	
3.74715	5.19296	-1.44581	119	62	
3.21888	5.19296	-1.97408	119	63	
4.10923	5.19296	-1.08372	119	64	
ND<0	5.19296	-5.19296	119	65	
3.55535	5.19296	-1.63761	119	66	
3.66356	5.19296	-1.5294	119	67	
3.7612	5.19296	-1.43176	119	68	
5.0689	5.8861	-0.8172	119	69	
4.93447	5.8861	-0.95163	119	70	
5.79909	5.8861	-0.0870114	119	71	
3.55535	5.8861	-2.33076	119	72	
4.86753	5.8861	-1.01857	119	73	
4.94164	5.8861	-0.944462	119	74	
4.02356	5.8861	-1.86254	119	75	
4.65396	5.8861	-1.23214	119	76	
3.7495	5.8861	-2.1366	119	77	
3.74715	5.8861	-2.13896	119	78	
3.21888	5.8861	-2.66723	119	79	
4.10923	5.8861	-1.77687	119	80	
ND<0	5.8861	-5.8861	119	81	
3.55535	5.8861	-2.33076	119	82	
3.66356	5.8861	-2.22254	119	83	
3.7612	5.8861	-2.1249	119	84	
4.93447	5.0689	-0.13443	119	85	
5.79909	5.0689	0.730188	120	85	
3.55535	5.0689	-1.51356	120	86	
4.86753	5.0689	-0.20137	120	87	
4.94164	5.0689	-0.127262	120	88	
4.02356	5.0689	-1.04534	120	89	
4.65396	5.0689	-0.414944	120	90	
3.7495	5.0689	-1.3194	120	91	
3.74715	5.0689	-1.32176	120	92	
3.21888	5.0689	-1.85003	120	93	
4.10923	5.0689	-0.959671	120	94	
ND<0	5.0689	-5.0689	120	95	
3.55535	5.0689	-1.51356	120	96	
3.66356	5.0689	-1.40534	120	97	
3.7612	5.0689	-1.3077	120	98	
5.79909	4.93447	0.864619	121	98	
3.55535	4.93447	-1.37913	121	99	
4.86753	4.93447	-0.0669395	121	100	

4.94164	4.93447	0.00716849	122	100	
4.02356	4.93447	-0.91091122	101		
4.65396	4.93447	-0.280514	122	102	
3.7495	4.93447	-1.18497122	103		
3.74715	4.93447	-1.18733122	104		
3.21888	4.93447	-1.7156 122	105		
4.10923	4.93447	-0.825241	122	106	
ND<0	4.93447	-4.93447122	107		
3.55535	4.93447	-1.37913122	108		
3.66356	4.93447	-1.27091122	109		
3.7612	4.93447	-1.17327122	110		
3.55535	5.79909	-2.24374122	111		
4.86753	5.79909	-0.931558	122	112	
4.94164	5.79909	-0.85745122	113		
4.02356	5.79909	-1.77553122	114		
4.65396	5.79909	-1.14513122	115		
3.7495	5.79909	-2.04959122	116		
3.74715	5.79909	-2.05194122	117		
3.21888	5.79909	-2.58022122	118		
4.10923	5.79909	-1.68986122	119		
ND<0	5.79909	-5.79909122	120		
3.55535	5.79909	-2.24374122	121		
3.66356	5.79909	-2.13553122	122		
3.7612	5.79909	-2.03789122	123		
4.86753	3.55535	1.31219 123	123		
4.94164	3.55535	1.38629 124	123		
4.02356	3.55535	0.468216	125	123	
4.65396	3.55535	1.09861 126	123		
3.7495	3.55535	0.194156	127	123	
3.74715	3.55535	0.1918 128	123		
3.21888	3.55535	-0.336472	128	124	
4.10923	3.55535	0.553885	129	124	
ND<0	3.55535	-3.55535129	125		
3.55535	3.55535	0 129	125		
3.66356	3.55535	0.108214	130	125	
3.7612	3.55535	0.205852	131	125	
4.94164	4.86753	0.074108	132	125	
4.02356	4.86753	-0.84397132	126		
4.65396	4.86753	-0.213574	132	127	
3.7495	4.86753	-1.11803132	128		
3.74715	4.86753	-1.12039132	129		
3.21888	4.86753	-1.64866132	130		
4.10923	4.86753	-0.758301	132	131	
ND<0	4.86753	-4.86753132	132		
3.55535	4.86753	-1.31219132	133		
3.66356	4.86753	-1.20397132	134		
3.7612	4.86753	-1.10633132	135		
4.02356	4.94164	-0.918078	132	136	
4.65396	4.94164	-0.287682	132	137	
3.7495	4.94164	-1.19214132	138		
3.74715	4.94164	-1.19449132	139		
3.21888	4.94164	-1.72277132	140		
4.10923	4.94164	-0.832409	132	141	
ND<0	4.94164	-4.94164132	142		
3.55535	4.94164	-1.38629132	143		
3.66356	4.94164	-1.27808132	144		
3.7612	4.94164	-1.18044132	145		

4.65396		4.02356		0.630396	133	145
3.7495	4.02356		-0.27406	133	146	
3.74715		4.02356		-0.276416	133	147
3.21888		4.02356		-0.804689	133	148
4.10923		4.02356		0.0856688	134	148
ND<0	4.02356		-4.02356	134	149	
3.55535		4.02356		-0.468216	134	150
3.66356		4.02356		-0.360003	134	151
3.7612	4.02356		-0.262364	134	152	
3.7495	4.65396		-0.904456	134	153	
3.74715		4.65396		-0.906812	134	154
3.21888		4.65396		-1.43508	134	155
4.10923		4.65396		-0.544727	134	156
ND<0	4.65396		-4.65396	134	157	
3.55535		4.65396		-1.09861	134	158
3.66356		4.65396		-0.990399	134	159
3.7612	4.65396		-0.89276	134	160	
3.74715		3.7495	-0.00235571	134	161	
3.21888		3.7495	-0.530628	134	162	
4.10923		3.7495	0.359729	135	162	
ND<0	3.7495	-3.7495	135	163		
3.55535		3.7495	-0.194156	135	164	
3.66356		3.7495	-0.0859424	135	165	
3.7612	3.7495	0.011696	136	165		
3.21888		3.74715		-0.528273	136	166
4.10923		3.74715		0.362085	137	166
ND<0	3.74715		-3.74715	137	167	
3.55535		3.74715		-0.1918	137	168
3.66356		3.74715		-0.0835867	137	169
3.7612	3.74715		0.0140518	138	169	
4.10923		3.21888		0.890357	139	169
ND<0	3.21888		-3.21888	139	170	
3.55535		3.21888		0.336472	140	170
3.66356		3.21888		0.444686	141	170
3.7612	3.21888		0.542324	142	170	
ND<0	4.10923		-4.10923	142	171	
3.55535		4.10923		-0.553885	142	172
3.66356		4.10923		-0.445672	142	173
3.7612	4.10923		-0.348033	142	174	
3.55535		ND<0	3.55535	143	174	
3.66356		ND<0	3.66356	144	174	
3.7612	ND<0	3.7612	145	174		
3.66356		3.55535		0.108214	146	174
3.7612	3.55535		0.205852	147	174	
3.7612	3.66356		0.0976385	148	174	

S Statistic = 148 - 174 = -26

Tied Group	Value	Members
1	0	2
2	4.86753	2
3	3.55535	2

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 54
B = 0
C = 0
D = 0
E = 6
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 2055.33
Z-Score = -0.551441
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.551441| <= 1.97737 indicating no evidence of a trend

Mann-Kendall Trend Analysis

Parameter: cis-1,2-Dichloroethene

Location: MW-10

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
2.70805	1.38629	1.32176	1	0
3.46574	1.38629	2.07944	2	0
3.2581	1.38629	1.8718	3	0
ND<0	1.38629	-1.38629	3	1
3.68888	1.38629	2.30259	4	1
3.2581	1.38629	1.8718	5	1
3.63759	1.38629	2.25129	6	1
2.02815	1.38629	0.641854	7	1
3.46574	1.38629	2.07944	8	1
3.7542	1.38629	2.3679	9	1
3.21487	1.38629	1.82857	10	1
2.3979	1.38629	1.0116	11	1
2.3979	1.38629	1.0116	12	1
1.96009	1.38629	0.5738	13	1
ND<0	1.38629	-1.38629	13	2
ND<0	1.38629	-1.38629	13	3
2.59525	1.38629	1.20896	14	3
2.76001	1.38629	1.37372	15	3
2.19277	1.38629	0.806476	16	3
2.20827	1.38629	0.82198	17	3
2.61007	1.38629	1.22378	18	3
2.60269	1.38629	1.2164	19	3
ND<0	1.38629	-1.38629	19	4
2.19722	1.38629	0.81093	20	4
1.75786	1.38629	0.371564	21	4
3.46574	2.70805	0.757686	22	4
3.2581	2.70805	0.550046	23	4
ND<0	2.70805	-2.70805	23	5
3.68888	2.70805	0.980829	24	5
3.2581	2.70805	0.550046	25	5
3.63759	2.70805	0.929536	26	5
2.02815	2.70805	-0.679902	26	6
3.46574	2.70805	0.757686	27	6
3.7542	2.70805	1.04615	28	6
3.21487	2.70805	0.506818	29	6
2.3979	2.70805	-0.310155	29	7
2.3979	2.70805	-0.310155	29	8
1.96009	2.70805	-0.747955	29	9
ND<0	2.70805	-2.70805	29	10
ND<0	2.70805	-2.70805	29	11
2.59525	2.70805	-0.112795	29	12
2.76001	2.70805	0.0519597	30	12
2.19277	2.70805	-0.515283	30	13
2.20827	2.70805	-0.499776	30	14
2.61007	2.70805	-0.0979804	30	15
2.60269	2.70805	-0.105361	30	16
ND<0	2.70805	-2.70805	30	17

2.19722		2.70805		-0.510826	30	18
1.75786		2.70805		-0.950192	30	19
3.2581	3.46574		-0.207639	30	20	
ND<0	3.46574		-3.4657430	21		
3.68888		3.46574		0.223144	31	21
3.2581	3.46574		-0.207639	31	22	
3.63759		3.46574		0.17185	32	22
2.02815		3.46574		-1.4375932	23	
3.46574		3.46574		0	32	23
3.7542	3.46574		0.288463	33	23	
3.21487		3.46574		-0.250868	33	24
2.3979	3.46574		-1.0678433	25		
2.3979	3.46574		-1.0678433	26		
1.96009		3.46574		-1.5056433	27	
ND<0	3.46574		-3.4657433	28		
ND<0	3.46574		-3.4657433	29		
2.59525		3.46574		-0.870481	33	30
2.76001		3.46574		-0.705726	33	31
2.19277		3.46574		-1.2729733	32	
2.20827		3.46574		-1.2574633	33	
2.61007		3.46574		-0.855666	33	34
2.60269		3.46574		-0.863046	33	35
ND<0	3.46574		-3.4657433	36		
2.19722		3.46574		-1.2685133	37	
1.75786		3.46574		-1.7078833	38	
ND<0	3.2581	-3.2581	33	39		
3.68888		3.2581	0.430783	34	39	
3.2581	3.2581	0	34	39		
3.63759		3.2581	0.37949	35	39	
2.02815		3.2581	-1.2299535	40		
3.46574		3.2581	0.207639	36	40	
3.7542	3.2581	0.496102	37	40		
3.21487		3.2581	-0.0432287	37	41	
2.3979	3.2581	-0.860201	37	42		
2.3979	3.2581	-0.860201	37	43		
1.96009		3.2581	-1.298	37	44	
ND<0	3.2581	-3.2581	37	45		
ND<0	3.2581	-3.2581	37	46		
2.59525		3.2581	-0.662842	37	47	
2.76001		3.2581	-0.498087	37	48	
2.19277		3.2581	-1.0653337	49		
2.20827		3.2581	-1.0498237	50		
2.61007		3.2581	-0.648027	37	51	
2.60269		3.2581	-0.655407	37	52	
ND<0	3.2581	-3.2581	37	53		
2.19722		3.2581	-1.0608737	54		
1.75786		3.2581	-1.5002437	55		
3.68888		ND<0	3.68888	38	55	
3.2581	ND<0	3.2581	39	55		
3.63759		ND<0	3.63759	40	55	
2.02815		ND<0	2.02815	41	55	
3.46574		ND<0	3.46574	42	55	
3.7542	ND<0	3.7542	43	55		
3.21487		ND<0	3.21487	44	55	
2.3979	ND<0	2.3979	45	55		
2.3979	ND<0	2.3979	46	55		
1.96009		ND<0	1.96009	47	55	
ND<0	ND<0	0	47	55		
ND<0	ND<0	0	47	55		

2.59525		ND<0	2.59525	48	55		
2.76001		ND<0	2.76001	49	55		
2.19277		ND<0	2.19277	50	55		
2.20827		ND<0	2.20827	51	55		
2.61007		ND<0	2.61007	52	55		
2.60269		ND<0	2.60269	53	55		
ND<0	ND<0	0	53	55			
2.19722		ND<0	2.19722	54	55		
1.75786		ND<0	1.75786	55	55		
3.2581	3.68888		-0.430783	55	56		
3.63759		3.68888		-0.0512933	55	57	
2.02815		3.68888		-1.6607355	58		
3.46574		3.68888		-0.223144	55	59	
3.7542	3.68888		0.0653195	56	59		
3.21487		3.68888		-0.474012	56	60	
2.3979	3.68888		-1.2909856	61			
2.3979	3.68888		-1.2909856	62			
1.96009		3.68888		-1.7287856	63		
ND<0	3.68888		-3.6888856	64			
ND<0	3.68888		-3.6888856	65			
2.59525		3.68888		-1.0936256	66		
2.76001		3.68888		-0.9288756	67		
2.19277		3.68888		-1.4961156	68		
2.20827		3.68888		-1.4806156	69		
2.61007		3.68888		-1.0788156	70		
2.60269		3.68888		-1.0861956	71		
ND<0	3.68888		-3.6888856	72			
2.19722		3.68888		-1.4916556	73		
1.75786		3.68888		-1.9310256	74		
3.63759		3.2581	0.37949	57	74		
2.02815		3.2581	-1.2299557		75		
3.46574		3.2581	0.207639		58	75	
3.7542	3.2581	0.496102		59	75		
3.21487		3.2581	-0.0432287		59	76	
2.3979	3.2581	-0.860201		59	77		
2.3979	3.2581	-0.860201		59	78		
1.96009		3.2581	-1.298	59	79		
ND<0	3.2581	-3.2581	59	80			
ND<0	3.2581	-3.2581	59	81			
2.59525		3.2581	-0.662842		59	82	
2.76001		3.2581	-0.498087		59	83	
2.19277		3.2581	-1.0653359		84		
2.20827		3.2581	-1.0498259		85		
2.61007		3.2581	-0.648027		59	86	
2.60269		3.2581	-0.655407		59	87	
ND<0	3.2581	-3.2581	59	88			
2.19722		3.2581	-1.0608759		89		
1.75786		3.2581	-1.5002459		90		
2.02815		3.63759		-1.6094459	91		
3.46574		3.63759		-0.1718559	92		
3.7542	3.63759		0.116613	60	92		
3.21487		3.63759		-0.422718	60	93	
2.3979	3.63759		-1.2396960	94			
2.3979	3.63759		-1.2396960	95			
1.96009		3.63759		-1.6774960	96		
ND<0	3.63759		-3.6375960	97			
ND<0	3.63759		-3.6375960	98			
2.59525		3.63759		-1.0423360	99		
2.76001		3.63759		-0.877576	60	100	

2.19277		3.63759		-1.4448260	101	
2.20827		3.63759		-1.4293160	102	
2.61007		3.63759		-1.0275260	103	
2.60269		3.63759		-1.0349 60	104	
ND<0	3.63759		-3.6375960	105		
2.19722		3.63759		-1.4403660	106	
1.75786		3.63759		-1.8797360	107	
3.46574		2.02815		1.43759 61	107	
3.7542	2.02815		1.72605 62	107		
3.21487		2.02815		1.18672 63	107	
2.3979	2.02815		0.369747	64	107	
2.3979	2.02815		0.369747	65	107	
1.96009		2.02815		-0.0680535	65	108
ND<0	2.02815		-2.0281565	109		
ND<0	2.02815		-2.0281565	110		
2.59525		2.02815		0.567106	66	110
2.76001		2.02815		0.731862	67	110
2.19277		2.02815		0.164622	68	110
2.20827		2.02815		0.180126	69	110
2.61007		2.02815		0.581922	70	110
2.60269		2.02815		0.574541	71	110
ND<0	2.02815		-2.0281571	111		
2.19722		2.02815		0.169076	72	111
1.75786		2.02815		-0.2702972	112	
3.7542	3.46574		0.288463	73	112	
3.21487		3.46574		-0.250868	73	113
2.3979	3.46574		-1.0678473	114		
2.3979	3.46574		-1.0678473	115		
1.96009		3.46574		-1.5056473	116	
ND<0	3.46574		-3.4657473	117		
ND<0	3.46574		-3.4657473	118		
2.59525		3.46574		-0.870481	73	119
2.76001		3.46574		-0.705726	73	120
2.19277		3.46574		-1.2729773	121	
2.20827		3.46574		-1.2574673	122	
2.61007		3.46574		-0.855666	73	123
2.60269		3.46574		-0.863046	73	124
ND<0	3.46574		-3.4657473	125		
2.19722		3.46574		-1.2685173	126	
1.75786		3.46574		-1.7078873	127	
3.21487		3.7542	-0.539331	73	128	
2.3979	3.7542	-1.3563	73	129		
2.3979	3.7542	-1.3563	73	130		
1.96009		3.7542	-1.7941	73	131	
ND<0	3.7542	-3.7542	73	132		
ND<0	3.7542	-3.7542	73	133		
2.59525		3.7542	-1.1589473	134		
2.76001		3.7542	-0.994189	73	135	
2.19277		3.7542	-1.5614373	136		
2.20827		3.7542	-1.5459273	137		
2.61007		3.7542	-1.1441373	138		
2.60269		3.7542	-1.1515173	139		
ND<0	3.7542	-3.7542	73	140		
2.19722		3.7542	-1.5569773	141		
1.75786		3.7542	-1.9963473	142		
2.3979	3.21487		-0.816973	73	143	
2.3979	3.21487		-0.816973	73	144	
1.96009		3.21487		-1.2547773	145	

ND<0	3.21487		-3.2148773	146		
ND<0	3.21487		-3.2148773	147		
2.59525		3.21487	-0.619613	73	148	
2.76001		3.21487	-0.454858	73	149	
2.19277		3.21487	-1.0221 73	150		
2.20827		3.21487	-1.0065973	151		
2.61007		3.21487	-0.604798	73	152	
2.60269		3.21487	-0.612178	73	153	
ND<0	3.21487		-3.2148773	154		
2.19722		3.21487	-1.0176473	155		
1.75786		3.21487	-1.4570173	156		
2.3979	2.3979	0	73	156		
1.96009		2.3979	-0.4378 73	157		
ND<0	2.3979	-2.3979	73	158		
ND<0	2.3979	-2.3979	73	159		
2.59525		2.3979	0.197359	74	159	
2.76001		2.3979	0.362115	75	159	
2.19277		2.3979	-0.205125	75	160	
2.20827		2.3979	-0.189621	75	161	
2.61007		2.3979	0.212175	76	161	
2.60269		2.3979	0.204794	77	161	
ND<0	2.3979	-2.3979	77	162		
2.19722		2.3979	-0.200671	77	163	
1.75786		2.3979	-0.640037	77	164	
1.96009		2.3979	-0.4378 77	165		
ND<0	2.3979	-2.3979	77	166		
ND<0	2.3979	-2.3979	77	167		
2.59525		2.3979	0.197359	78	167	
2.76001		2.3979	0.362115	79	167	
2.19277		2.3979	-0.205125	79	168	
2.20827		2.3979	-0.189621	79	169	
2.61007		2.3979	0.212175	80	169	
2.60269		2.3979	0.204794	81	169	
ND<0	2.3979	-2.3979	81	170		
2.19722		2.3979	-0.200671	81	171	
1.75786		2.3979	-0.640037	81	172	
ND<0	1.96009		-1.9600981	173		
ND<0	1.96009		-1.9600981	174		
2.59525		1.96009	0.63516 82	174		
2.76001		1.96009	0.799915	83	174	
2.19277		1.96009	0.232675	84	174	
2.20827		1.96009	0.24818 85	174		
2.61007		1.96009	0.649975	86	174	
2.60269		1.96009	0.642595	87	174	
ND<0	1.96009		-1.9600987	175		
2.19722		1.96009	0.23713 88	175		
1.75786		1.96009	-0.202237	88	176	
ND<0	ND<0	0	88	176		
2.59525		ND<0	2.59525 89	176		
2.76001		ND<0	2.76001 90	176		
2.19277		ND<0	2.19277 91	176		
2.20827		ND<0	2.20827 92	176		
2.61007		ND<0	2.61007 93	176		
2.60269		ND<0	2.60269 94	176		
ND<0	ND<0	0	94	176		
2.19722		ND<0	2.19722 95	176		
1.75786		ND<0	1.75786 96	176		

2.59525		ND<0	2.59525	97	176
2.76001		ND<0	2.76001	98	176
2.19277		ND<0	2.19277	99	176
2.20827		ND<0	2.20827	100	176
2.61007		ND<0	2.61007	101	176
2.60269		ND<0	2.60269	102	176
ND<0	ND<0	0	102	176	
2.19722		ND<0	2.19722	103	176
1.75786		ND<0	1.75786	104	176

2.76001	2.59525	0.164755	105	176
2.19277	2.59525	-0.402484	105	177
2.20827	2.59525	-0.38698	105	178
2.61007	2.59525	0.0148151	106	178
2.60269	2.59525	0.00743498	107	178
ND<0	2.59525	-2.59525	107	179
2.19722	2.59525	-0.39803	107	180
1.75786	2.59525	-0.837397	107	181
2.19277	2.76001	-0.56724	107	182
2.20827	2.76001	-0.551736	107	183
2.61007	2.76001	-0.14994	107	184
2.60269	2.76001	-0.15732	107	185
ND<0	2.76001	-2.76001	107	186
2.19722	2.76001	-0.562785	107	187
1.75786	2.76001	-1.00215	107	188
2.20827	2.19277	0.0155042	108	188
2.61007	2.19277	0.4173	109	188
2.60269	2.19277	0.409919	110	188
ND<0	2.19277	-2.19277	110	189
2.19722	2.19277	0.00445435	111	189
1.75786	2.19277	-0.434912	111	190
2.61007	2.20827	0.401795	112	190
2.60269	2.20827	0.394415	113	190
ND<0	2.20827	-2.20827	113	191
2.19722	2.20827	-0.0110498	113	192
1.75786	2.20827	-0.450416	113	193
2.60269	2.61007	-0.00738011	113	194
ND<0	2.61007	-2.61007	113	195
2.19722	2.61007	-0.412845	113	196
1.75786	2.61007	-0.852212	113	197
ND<0	2.60269	-2.60269	113	198
2.19722	2.60269	-0.405465	113	199
1.75786	2.60269	-0.844832	113	200
2.19722	ND<0	2.19722	114	200
1.75786	ND<0	1.75786	115	200
1.75786	2.19722	-0.439367	115	201

S Statistic = 115 - 201 = -86

Tied Group Value Members

1	3.46574	2
2	3.2581	2
3	0	4

4 2.3979 2

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 210
B = 0
C = 24
D = 0
E = 18
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 2046.67
Z-Score = -1.87886
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-1.87886| <= 1.97737 indicating no evidence of a trend

Mann-Kendall Trend Analysis

Parameter: cis-1,2-Dichloroethene

Location: MW-11R

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
2.3979	1.6864	0.711496	1	0
2.30259	1.6864	0.616186	2	0
2.70805	1.6864	1.02165	3	0
ND<0	1.6864	-1.6864	3	1
2.77259	1.6864	1.08619	4	1
2.48491	1.6864	0.798508	5	1
ND<0	1.6864	-1.6864	5	2
1.64866	1.6864	-0.0377403	5	3
2.56495	1.6864	0.87855	6	3
2.40695	1.6864	0.720546	7	3
ND<0	1.6864	-1.6864	7	4
2.48491	1.6864	0.798508	8	4
2.30259	1.6864	0.616186	9	4
2.3979	1.6864	0.711496	10	4
ND<0	1.6864	-1.6864	10	5
2.24813	1.6864	0.56173	11	5
1.51732	1.6864	-0.169076	11	6
1.05779	1.6864	-0.628609	11	7
0.536493 J	1.6864	-1.1499	11	8
1.74047	1.6864	0.0540672	12	8
1.17557	1.6864	-0.510826	12	9
ND<0	1.6864	-1.6864	12	10
ND<0	1.6864	-1.6864	12	11
0.262364	1.6864	-1.4240	12	12
0.470004	1.6864	-1.2164	12	13
2.30259	2.3979	-0.0953102	12	14
2.70805	2.3979	0.310155	13	14
ND<0	2.3979	-2.3979	13	15
2.77259	2.3979	0.374693	14	15
2.48491	2.3979	0.0870114	15	15
ND<0	2.3979	-2.3979	15	16
1.64866	2.3979	-0.749237	15	17
2.56495	2.3979	0.167054	16	17
2.40695	2.3979	0.00904984	17	17
ND<0	2.3979	-2.3979	17	18
2.48491	2.3979	0.0870114	18	18
2.30259	2.3979	-0.0953102	18	19
2.3979	2.3979	0	18	19
ND<0	2.3979	-2.3979	18	20
2.24813	2.3979	-0.149766	18	21
1.51732	2.3979	-0.880573	18	22
1.05779	2.3979	-1.3401	18	23
0.536493 J	2.3979	-1.8614	18	24
1.74047	2.3979	-0.657429	18	25
1.17557	2.3979	-1.2223	18	26
ND<0	2.3979	-2.3979	18	27
ND<0	2.3979	-2.3979	18	28

0.262364		2.3979	-2.1355318	29	
0.470004		2.3979	-1.9278918	30	
2.70805		2.30259	0.405465	19	30
ND<0	2.30259		-2.3025919	31	
2.77259		2.30259	0.470004	20	31
2.48491		2.30259	0.182322	21	31
ND<0	2.30259		-2.3025921	32	
1.64866		2.30259	-0.653926	21	33
2.56495		2.30259	0.262364	22	33
2.40695		2.30259	0.10436	23	33
ND<0	2.30259		-2.3025923	34	
2.48491		2.30259	0.182322	24	34
2.30259		2.30259	0	24	34
2.3979	2.30259		0.0953102	25	34
ND<0	2.30259		-2.3025925	35	
2.24813		2.30259	-0.0544562	25	36
1.51732		2.30259	-0.785262	25	37
1.05779		2.30259	-1.2447925	38	
0.536493 J		2.30259	-1.7660925	39	
1.74047		2.30259	-0.562119	25	40
1.17557		2.30259	-1.1270125	41	
ND<0	2.30259		-2.3025925	42	
ND<0	2.30259		-2.3025925	43	
0.262364		2.30259	-2.0402225	44	
0.470004		2.30259	-1.8325825	45	
ND<0	2.70805		-2.7080525	46	
2.77259		2.70805	0.0645385	26	46
2.48491		2.70805	-0.223144	26	47
ND<0	2.70805		-2.7080526	48	
1.64866		2.70805	-1.0593926	49	
2.56495		2.70805	-0.143101	26	50
2.40695		2.70805	-0.301105	26	51
ND<0	2.70805		-2.7080526	52	
2.48491		2.70805	-0.223144	26	53
2.30259		2.70805	-0.405465	26	54
2.3979	2.70805		-0.310155	26	55
ND<0	2.70805		-2.7080526	56	
2.24813		2.70805	-0.459921	26	57
1.51732		2.70805	-1.1907326	58	
1.05779		2.70805	-1.6502626	59	
0.536493 J		2.70805	-2.1715626	60	
1.74047		2.70805	-0.967584	26	61
1.17557		2.70805	-1.5324826	62	
ND<0	2.70805		-2.7080526	63	
ND<0	2.70805		-2.7080526	64	
0.262364		2.70805	-2.4456926	65	
0.470004		2.70805	-2.2380526	66	
2.77259		ND<0	2.77259	27	66
2.48491		ND<0	2.48491	28	66
ND<0	ND<0	0	28	66	
1.64866		ND<0	1.64866	29	66
2.56495		ND<0	2.56495	30	66
2.40695		ND<0	2.40695	31	66
ND<0	ND<0	0	31	66	
2.48491		ND<0	2.48491	32	66
2.30259		ND<0	2.30259	33	66
2.3979	ND<0	2.3979	34	66	
ND<0	ND<0	0	34	66	
2.24813		ND<0	2.24813	35	66

1.51732		ND<0	1.51732	36	66		
1.05779		ND<0	1.05779	37	66		
0.536493 J		ND<0	0.536493		38	66	
1.74047		ND<0	1.74047	39	66		
1.17557		ND<0	1.17557	40	66		
ND<0	ND<0	0	40	66			
ND<0	ND<0	0	40	66			
0.262364		ND<0	0.262364		41	66	
0.470004		ND<0	0.470004		42	66	
2.48491		2.77259		-0.287682		42	67
ND<0	2.77259		-2.7725942		68		
1.64866		2.77259		-1.1239342		69	
2.56495		2.77259		-0.207639		42	70
2.40695		2.77259		-0.365644		42	71
ND<0	2.77259		-2.7725942		72		
2.48491		2.77259		-0.287682		42	73
2.30259		2.77259		-0.470004		42	74
2.3979	2.77259		-0.374693		42	75	
ND<0	2.77259		-2.7725942		76		
2.24813		2.77259		-0.524464 2		77	
1.51732		2.77259		-1.255274 2		78	
1.05779		2.77259		-1.7148 42		79	
0.536493 J		2.77259		-2.2361 42		80	
1.74047		2.77259		-1.032124 2		81	
1.17557		2.77259		-1.597024 2		82	
ND<0	2.77259		-2.7725942		83		
ND<0	2.77259		-2.7725942		84		
0.262364		2.77259		-2.510224 2		85	
0.470004		2.77259		-2.302594 2		86	
ND<0	2.48491		-2.4849142		87		
1.64866		2.48491		-0.836248		42	88
2.56495		2.48491		0.0800427		43	88
2.40695		2.48491		-0.0779615		43	89
ND<0	2.48491		-2.4849143		90		
2.48491		2.48491		0	43	90	
2.30259		2.48491		-0.182322		43	91
2.3979	2.48491		-0.0870114		43	92	
ND<0	2.48491		-2.4849143		93		
2.24813		2.48491		-0.236778		43	94
1.51732		2.48491		-0.967584		43	95
1.05779		2.48491		-1.427143		96	
0.536493 J		2.48491		-1.948143		97	
1.74047		2.48491		-0.744443		98	
1.17557		2.48491		-1.309343		99	
ND<0	2.48491		-2.4849143		100		
ND<0	2.48491		-2.4849143		101		
0.262364		2.48491		-2.222543		102	
0.470004		2.48491		-2.0149 43		103	
1.64866		ND<0	1.64866	44	103		
2.56495		ND<0	2.56495	45	103		
2.40695		ND<0	2.40695	46	103		
ND<0	ND<0	0	46	103			
2.48491		ND<0	2.48491	47	103		
2.30259		ND<0	2.30259	48	103		
2.3979	ND<0	2.3979	49	103			
ND<0	ND<0	0	49	103			
2.24813		ND<0	2.24813	50	103		
1.51732		ND<0	1.51732	51	103		
1.05779		ND<0	1.05779	52	103		

0.536493 J		ND<0	0.536493		53	103
1.74047		ND<0	1.74047	54	103	
1.17557		ND<0	1.17557	55	103	
ND<0	ND<0	0	55	103		
ND<0	ND<0	0	55	103		
0.262364		ND<0	0.262364		56	103
0.470004		ND<0	0.470004		57	103
2.56495		1.64866		0.916291	58	103
2.40695		1.64866		0.758286	59	103
ND<0	1.64866		-1.6486	59	104	
2.48491		1.64866		0.836248	60	104
2.30259		1.64866		0.653926	61	104
2.3979	1.64866		0.749237		62	104
ND<0	1.64866		-1.6486	62	105	
2.24813		1.64866		0.59947	63	105
1.51732		1.64866		-0.131336	63	106
1.05779		1.64866		-0.590868	63	107
0.536493 J		1.64866		-1.1121	63	108
1.74047		1.64866		0.0918075	64	108
1.17557		1.64866		-0.473085	64	109
ND<0	1.64866		-1.6486	64	110	
ND<0	1.64866		-1.6486	64	111	
0.262364		1.64866		-1.3862	64	112
0.470004		1.64866		-1.1786	64	113
2.40695		2.56495		-0.158004	64	114
ND<0	2.56495		-2.5649	64	115	
2.48491		2.56495		-0.0800427	64	116
2.30259		2.56495		-0.262364	64	117
2.3979	2.56495		-0.167054		64	118
ND<0	2.56495		-2.5649	64	119	
2.24813		2.56495		-0.316	64	120
1.51732		2.56495		-1.047	64	121
1.05779		2.56495		-1.507	64	122
0.536493 J		2.56495		-2.028	64	123
1.74047		2.56495		-0.824483	64	124
1.17557		2.56495		-1.389	64	125
ND<0	2.56495		-2.5649	64	126	
ND<0	2.56495		-2.5649	64	127	
0.262364		2.56495		-2.302	64	128
0.470004		2.56495		-2.094	64	129
ND<0	2.40695		-2.4069	64	130	
2.48491		2.40695		0.0779615	65	130
2.30259		2.40695		-0.104	65	131
2.3979	2.40695		-0.00904984		65	132
ND<0	2.40695		-2.4069	65	133	
2.24813		2.40695		-0.158816	65	134
1.51732		2.40695		-0.889622	65	135
1.05779		2.40695		-1.349	65	136
0.536493 J		2.40695		-1.870	65	137
1.74047		2.40695		-0.666479	65	138
1.17557		2.40695		-1.231	65	139
ND<0	2.40695		-2.4069	65	140	
ND<0	2.40695		-2.4069	65	141	
0.262364		2.40695		-2.144	65	142
0.470004		2.40695		-1.936	65	143
2.48491		ND<0	2.48491	66	143	
2.30259		ND<0	2.30259	67	143	
2.3979	ND<0	2.3979	68	143		

ND<0	ND<0	0	68	143		
2.24813		ND<0	2.24813	69	143	
1.51732		ND<0	1.51732	70	143	
1.05779		ND<0	1.05779	71	143	
0.536493 J		ND<0	0.536493		72	143
1.74047		ND<0	1.74047	73	143	
1.17557		ND<0	1.17557	74	143	
ND<0	ND<0	0	74	143		
ND<0	ND<0	0	74	143		
0.262364		ND<0	0.262364		75	143
0.470004		ND<0	0.470004		76	143
2.30259		2.48491		-0.182322	76	144
2.3979	2.48491		-0.087011	4	76	145
ND<0	2.48491		-2.484917	6	146	
2.24813		2.48491		-0.236778	76	147
1.51732		2.48491		-0.967584	76	148
1.05779		2.48491		-1.427127	6	149
0.536493 J		2.48491		-1.948417	6	150
1.74047		2.48491		-0.744447	6	151
1.17557		2.48491		-1.309337	6	152
ND<0	2.48491		-2.484917	6	153	
ND<0	2.48491		-2.484917	6	154	
0.262364		2.48491		-2.222547	6	155
0.470004		2.48491		-2.0149	76	156
2.3979	2.30259		0.095310	2	77	156
ND<0	2.30259		-2.302597	7	157	
2.24813		2.30259		-0.054456	2	77	158
1.51732		2.30259		-0.78526	2	77	159
1.05779		2.30259		-1.244797	7	160
0.536493 J		2.30259		-1.766097	7	161
1.74047		2.30259		-0.56211	9	77	162
1.17557		2.30259		-1.127017	7	163
ND<0	2.30259		-2.302597	7	164	
ND<0	2.30259		-2.302597	7	165	
0.262364		2.30259		-2.040277	7	166
0.470004		2.30259		-1.832587	7	167
ND<0	2.3979	-2.3979	77	168		
2.24813		2.3979	-0.149766		77	169
1.51732		2.3979	-0.880573		77	170
1.05779		2.3979	-1.3401	77	171	
0.536493 J		2.3979	-1.8614	77	172	
1.74047		2.3979	-0.657429		77	173
1.17557		2.3979	-1.222327	7	174	
ND<0	2.3979	-2.3979	77	175		
ND<0	2.3979	-2.3979	77	176		
0.262364		2.3979	-2.135537	7	177	
0.470004		2.3979	-1.927897	7	178	
2.24813		ND<0	2.24813	78	178	
1.51732		ND<0	1.51732	79	178	
1.05779		ND<0	1.05779	80	178	
0.536493 J		ND<0	0.536493		81	178
1.74047		ND<0	1.74047	82	178	
1.17557		ND<0	1.17557	83	178	
ND<0	ND<0	0	83	178		
ND<0	ND<0	0	83	178		
0.262364		ND<0	0.262364		84	178
0.470004		ND<0	0.470004		85	178

1.51732	2.24813	-0.730806	85	179
1.05779	2.24813	-1.1903485	180	
0.536493 J	2.24813	-1.7116485	181	
1.74047	2.24813	-0.507663	85	182
1.17557	2.24813	-1.0725685	183	
ND<0	2.24813	-2.2481385	184	
ND<0	2.24813	-2.2481385	185	
0.262364	2.24813	-1.9857685	186	
0.470004	2.24813	-1.7781385	187	
1.05779	1.51732	-0.459532	85	188
0.536493 J	1.51732	-0.980829	85	189
1.74047	1.51732	0.223144	86	189
1.17557	1.51732	-0.341749	86	190
ND<0	1.51732	-1.5173286	191	
ND<0	1.51732	-1.5173286	192	
0.262364	1.51732	-1.2549686	193	
0.470004	1.51732	-1.0473286	194	
0.536493 J	1.05779	-0.521297	86	195
1.74047	1.05779	0.682676	87	195
1.17557	1.05779	0.117783	88	195
ND<0	1.05779	-1.0577988	196	
ND<0	1.05779	-1.0577988	197	
0.262364	1.05779	-0.795426	88	198
0.470004	1.05779	-0.587787	88	199
1.74047	0.536493 J	1.20397	89	199
1.17557	0.536493 J	0.63908	90	199
ND<0	0.536493 J	-0.536493	90	200
ND<0	0.536493 J	-0.536493	90	201
0.262364	0.536493 J	-0.274129	90	202
0.470004	0.536493 J	-0.0664897	90	203
1.17557	1.74047	-0.564893	90	204
ND<0	1.74047	-1.7404790	205	
ND<0	1.74047	-1.7404790	206	
0.262364	1.74047	-1.4781	90	207
0.470004	1.74047	-1.2704690	208	
ND<0	1.17557	-1.1755790	209	
ND<0	1.17557	-1.1755790	210	
0.262364	1.17557	-0.913209	90	211
0.470004	1.17557	-0.7055790	212	
ND<0	ND<0	0	90	212
0.262364	ND<0	0.262364	91	212
0.470004	ND<0	0.470004	92	212
0.262364	ND<0	0.262364	93	212
0.470004	ND<0	0.470004	94	212
0.470004	0.262364	0.207639	95	212

S Statistic = 95 - 212 = -117

Tied Group	Value	Members
1	2.3979	2
2	2.30259	2
3	0	6

4 2.48491 2

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 564
B = 0
C = 120
D = 0
E = 36
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 2027
Z-Score = -2.57651
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.57651| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: Cobalt

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 167
Percent Non-Detects: 78.7736%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	14 (82.3529%)	3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/15/2000	ND<20	ND<20
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	ND<20	ND<20
			6/5/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	0.11 J	0.11 J
			11/16/2009	0.08 J	0.08 J
			6/30/2010	0.1 J H	0.1 J H

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-6	27	24 (88.8889%)	7/20/1995	ND<20	ND<20
			8/24/1995	ND<20	ND<20
			9/28/1995	ND<20	ND<20
			10/26/1995	ND<20	ND<20
			11/19/1996	ND<20	ND<20
			12/19/1996	ND<20	ND<20
			3/24/1997	ND<20	ND<20
			9/24/1997	ND<20	ND<20
			4/7/1998	ND<20	ND<20
			9/23/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/15/2000	ND<20	ND<20
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	ND<20	ND<20
			6/5/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20

			6/11/2009	0.13 J	0.13 J	
			11/16/2009	0.13 J	0.13 J	
			6/30/2010	0.13 J H	0.13 J H	
MW-9	27	21 (77.7778%)	7/20/1995	ND<20	ND<20	
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	1.25 J	1.25 J	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	1.02 J	1.02 J	
			11/20/2008	3 J	3 J	
			6/11/2009	1	1	
			11/16/2009	0.93	0.93	
			6/30/2010	0.73 H	0.73 H	
MW-12BR	17	12 (70.5882%)	3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	1.46 J	1.46 J	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	1.48 J	1.48 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	1.1	1.1	
			11/16/2009	1	1	
			6/30/2010	1.1	1.1	
MW-12AR	17	12 (70.5882%)	3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	0.69 J	0.69 J	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	

		6/5/2008	1.48 J	1.48 J	
		11/20/2008	ND<20	ND<20	
		6/11/2009	0.69	0.69	
		11/16/2009	0.8	0.8	
		6/30/2010	0.65	0.65	
MW-11R	27	22 (81.4815%)	7/20/1995	ND<20	ND<20
		8/24/1995	ND<20	ND<20	
		9/28/1995	ND<20	ND<20	
		10/26/1995	ND<20	ND<20	
		11/19/1996	ND<20	ND<20	
		12/19/1996	ND<20	ND<20	
		3/24/1997	ND<20	ND<20	
		9/24/1997	ND<20	ND<20	
		4/7/1998	ND<20	ND<20	
		9/23/1998	ND<20	ND<20	
		3/16/1999	ND<20	ND<20	
		9/23/1999	ND<20	ND<20	
		3/15/2000	ND<20	ND<20	
		9/24/2003	ND<20	ND<20	
		3/11/2004	ND<20	ND<20	
		10/12/2004	ND<20	ND<20	
		4/1/2005	ND<20	ND<20	
		10/25/2005	ND<20	ND<20	
		4/29/2006	ND<20	ND<20	
		11/18/2006	2.13 J	2.13 J	
		5/23/2007	1.02 J	1.02 J	
		11/28/2007	ND<20	ND<20	
		6/5/2008	ND<20	ND<20	
		11/20/2008	ND<20	ND<20	
		6/11/2009	0.25	0.25	
		11/16/2009	0.15 J	0.15 J	
		6/30/2010	0.58 H	0.58 H	
MW-10	27	18 (66.6667%)	7/20/1995	ND<20	ND<20
		8/24/1995	ND<20	ND<20	
		9/28/1995	ND<20	ND<20	
		10/26/1995	ND<20	ND<20	
		11/19/1996	ND<20	ND<20	
		12/19/1996	ND<20	ND<20	
		3/24/1997	ND<20	ND<20	
		9/24/1997	ND<20	ND<20	
		4/7/1998	ND<20	ND<20	
		9/23/1998	ND<20	ND<20	
		3/16/1999	5	5	
		9/23/1999	25	25	
		3/15/2000	ND<20	ND<20	
		9/24/2003	ND<20	ND<20	
		3/11/2004	ND<20	ND<20	
		10/12/2004	ND<20	ND<20	
		4/1/2005	ND<20	ND<20	
		10/25/2005	ND<20	ND<20	
		4/29/2006	ND<20	ND<20	
		11/18/2006	1.45 J	1.45 J	
		5/23/2007	ND<20	ND<20	
		11/28/2007	3 J	3 J	
		6/5/2008	2.72 J	2.72 J	
		11/20/2008	6 J	6 J	
		6/11/2009	2	2	
		11/16/2009	2.8	2.8	
		6/30/2010	2.7 H	2.7 H	

MW-8	26	22 (84.6154%)	7/20/1995		ND<20	ND<20
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	1 J	1 J	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	0.6 J	0.6 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.4	0.4	
			6/30/2010	0.51 H	0.51 H	
MW-7	27	22 (81.4815%)	7/20/1995		ND<20	ND<20
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	0.58 J	0.58 J	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	0.98 J	0.98 J	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.48	0.48	
			11/16/2009	0.41	0.41	
			6/30/2010	0.37 H	0.37 H	

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.08	-2.65209	7.03356	-0.212167
2	0.1	-2.365	11.2629	7 -0.448728
3	0.11	-2.197	28.1457	8 -0.69043
4	0.13	-2.096	93.2185	49 -0.963031
5	0.13	-1.995	39.2583	65 -1.22243
6	0.13	-1.911	03.2948	85 -1.47087
7	0.15	-1.852	18.3291	91 -1.74869
8	0.25	-1.786	61.36	111 -2.19535
9	0.37	-1.727	93.3909	68 -2.83468
10	0.4	-1.684	94.4193	58 -3.50866
11	0.41	-1.635	24.4460	98 -4.1791
12	0.48	-1.589	27.4713	56 -4.94195
13	0.51	-1.546	43.49	527 -5.73063
14	0.58	-1.514	1	51.8195 -6.60881
15	0.58	-1.475	79.5399	75 -7.46477
16	0.6	-1.439	53.5606	98 -8.32849
17	0.65	-1.411	83.58	063 -9.24618
18	0.69	-1.378	66.5996	37 -10.1975
19	0.69	-1.346	94.61	778 -11.1268
20	0.73	-1.322	51.63	527 -12.0923
21	0.8	-1.293	03.6519	89 -13.1267
22	0.93	-1.264	64.6679	82 -14.3028
23	0.98	-1.242	64.6834	24 -15.5206
24	1	-1.215	96.69	821 -16.7366
25	1	-1.190	12.7123	73 -17.9267
26	1	-1.165	05.7259	47 -19.0917
27	1.02	-1.145	5	73.9069 -20.2601
28	1.02	-1.121	68.75	165 -21.4043
29	1.1	-1.098	47.7637	16 -22.6126
30	1.1	-1.080	32.7753	87 -23.8009
31	1.25	-1.058	12.7865	84 -25.1236
32	1.45	-1.036	43.7973	26 -26.6264
33	1.46	-1.019	43.8077	18 -28.1148
34	1.48	-0.998575		81.7689 -29.5927
35	1.48	-0.978	15.8272	57 -31.0403
36	2	-0.958125		83.6437 -32.9566
37	2.13	-0.942375		84.5318 -34.9638
38	2.7	-0.923014		85.3837 -37.456
39	2.72	-0.903992		86.201 -39.9148
40	2.8	-0.889006		86.9913 -42.404
41	3	-0.870	55.8749	91 -45.0157
42	3	-0.852385		88.4757 -47.5729
43	5	-0.838054		89.178 -51.7631
44	6	-0.820379		89.8511 -56.6854
45	10	-0.802956		90.4958 -64.715
46	10	-0.789191		91.1186 -72.6069
47	10	-0.772193		91.7149 -80.3288
48	10	-0.755415		92.2856 -87.883
49	10	-0.738846		92.8314 -95.2714

50	10	-0.725736	93.3581	-102.529
51	10	-0.709522	93.8616	-109.624
52	10	-0.693493	94.3425	-116.559
53	10	-0.680797	94.806	-123.367
54	10	-0.665079	95.2483	-130.018
55	10	-0.649522	95.6702	-136.513
56	10	-0.637192	96.0762	-142.885
57	10	-0.621911	96.463	-149.104
58	10	-0.606775	96.8312	-155.172
59	10	-0.594766	97.1849	-161.119
60	10	-0.579873	97.5212	-166.918
61	10	-0.565108	97.8405	-172.569
62	10	-0.550465	98.1435	-178.074
63	10	-0.538836	98.4339	-183.462
64	10	-0.524401	98.7088	-188.706
65	10	-0.510074	98.969	-193.807
66	10	-0.498687	99.2177	-198.794
67	10	-0.484544	99.4525	-203.639
68	10	-0.470498	99.6739	-208.344
69	10	-0.459327	99.8848	-212.937
70	10	-0.445443	100.083	-217.392
71	10	-0.431644	100.27	-221.708
72	10	-0.417928	100.444	-225.888
73	10	-0.40701	100.61	-229.958
74	10	-0.393433	100.765	-233.892
75	10	-0.379927	100.909	-237.691
76	10	-0.369171	101.045	-241.383
77	10	-0.355788	101.172	-244.941
78	10	-0.342466	101.289	-248.366
79	10	-0.331854	101.399	-251.684
80	10	-0.318639	101.501	-254.87
81	10	-0.305481	101.594	-257.925
82	10	-0.294992	101.681	-260.875
83	10	-0.281926	101.761	-263.694
84	10	-0.268908	101.833	-266.384
85	10	-0.255936	101.898	-268.943
86	10	-0.24559	101.959	-271.399
87	10	-0.232693	102.013	-273.726
88	10	-0.219834	102.061	-275.924
89	10	-0.209575	102.105	-278.02
90	10	-0.196779	102.144	-279.988
91	10	-0.184017	102.178	-281.828
92	10	-0.173829	102.208	-283.566
93	10	-0.161119	102.234	-285.177
94	10	-0.148434	102.256	-286.662
95	10	-0.135774	102.274	-288.019
96	10	-0.125661	102.29	-289.276
97	10	-0.113039	102.303	-290.406
98	10	-0.100433	102.313	-291.411
99	10	-0.0903606	102.321	-292.314
100	10	-0.0777834	102.327	-293.092
101	10	-0.0652187	102.332	-293.744
102	10	-0.0551734	102.335	-294.296
103	10	-0.0426257	102.336	-294.722
104	10	-0.0300838	102.337	-295.023
105	10	-0.0200544	102.338	-295.224
106	10	-0.00751925	102.338	-295.299
107	10	0.00751925	102.338	-295.224
108	10	0.0200544	102.338	-295.023
109	10	0.0300838	102.339	-294.722
110	10	0.0426257	102.341	-294.296
111	10	0.0551734	102.344	-293.744

112	10	0.0652187	102.348	-293.092
113	10	0.0777834	102.354	-292.314
114	10	0.0903606	102.362	-291.411
115	10	0.100433	102.373	-290.406
116	10	0.113039	102.385	-289.276
117	10	0.125661	102.401	-288.019
118	10	0.135774	102.42	-286.662
119	10	0.148434	102.442	-285.177
120	10	0.161119	102.468	-283.566
121	10	0.173829	102.498	-281.828
122	10	0.184017	102.532	-279.988
123	10	0.196779	102.57	-278.02
124	10	0.209575	102.614	-275.924
125	10	0.219834	102.663	-273.726
126	10	0.232693	102.717	-271.399
127	10	0.24559	102.777	-268.943
128	10	0.255936	102.843	-266.384
129	10	0.268908	102.915	-263.694
130	10	0.281926	102.994	-260.875
131	10	0.294992	103.081	-257.925
132	10	0.305481	103.175	-254.87
133	10	0.318639	103.276	-251.684
134	10	0.331854	103.386	-248.366
135	10	0.342466	103.504	-244.941
136	10	0.355788	103.63	-241.383
137	10	0.369171	103.767	-237.691
138	10	0.379927	103.911	-233.892
139	10	0.393433	104.066	-229.958
140	10	0.40701	104.231	-225.888
141	10	0.417928	104.406	-221.708
142	10	0.431644	104.592	-217.392
143	10	0.445443	104.791	-212.937
144	10	0.459327	105.002	-208.344
145	10	0.470498	105.223	-203.639
146	10	0.484544	105.458	-198.794
147	10	0.498687	105.707	-193.807
148	10	0.510074	105.967	-188.706
149	10	0.524401	106.242	-183.462
150	10	0.538836	106.532	-178.074
151	10	0.550465	106.835	-172.569
152	10	0.565108	107.154	-166.918
153	10	0.579873	107.491	-161.119
154	10	0.594766	107.844	-155.172
155	10	0.606775	108.213	-149.104
156	10	0.621911	108.599	-142.885
157	10	0.637192	109.005	-136.513
158	10	0.649522	109.427	-130.018
159	10	0.665079	109.87	-123.367
160	10	0.680797	110.333	-116.559
161	10	0.693493	110.814	-109.624
162	10	0.709522	111.317	-102.529
163	10	0.725736	111.844	-95.2714
164	10	0.738846	112.39	-87.883
165	10	0.755415	112.961	-80.3288
166	10	0.772193	113.557	-72.6069
167	10	0.789191	114.18	-64.715
168	10	0.802956	114.824	-56.6854
169	10	0.820379	115.498	-48.4816
170	10	0.838054	116.2	-40.1011
171	10	0.852385	116.926	-31.5772
172	10	0.87055	117.684	-22.8717
173	10	0.889006	118.475	-13.9817

174	10	0.903992		119.292	-4.94173
175	10	0.923014		120.144	4.28841
176	10	0.942375		121.032	13.7122
177	10	0.958125		121.95	23.2934
178	10	0.97815	122.907	33.0749	
179	10	0.998575		123.904	43.0607
180	10	1.01943	124.943	53.2549	
181	10	1.03643	126.017	63.6193	
182	10	1.05812	127.137	74.2005	
183	10	1.08032	128.304	85.0037	
184	10	1.09847	129.511	95.9884	
185	10	1.12168	130.769	107.205	
186	10	1.1455	132.081	118.66	
187	10	1.16505	133.438	130.311	
188	10	1.19012	134.855	142.212	
189	10	1.21596	136.333	154.371	
190	10	1.24264	137.877	166.798	
191	10	1.26464	139.477	179.444	
192	10	1.29303	141.149	192.375	
193	10	1.32251	142.898	205.6	
194	10	1.34694	144.712	219.069	
195	10	1.37866	146.613	232.856	
196	10	1.41183	148.606	246.974	
197	10	1.43953	150.678	261.369	
198	10	1.47579	152.856	276.127	
199	10	1.5141	155.149	291.268	
200	10	1.54643	157.54	306.733	
201	10	1.58927	160.066	322.625	
202	10	1.63524	162.74	338.978	
203	10	1.68494	165.579	355.827	
204	10	1.72793	168.564	373.106	
205	10	1.78661	171.756	390.972	
206	10	1.85218	175.187	409.494	
207	10	1.91103	178.839	428.604	
208	10	1.99539	182.821	448.558	
209	10	2.09693	187.218	469.528	
210	10	2.19728	192.046	491.501	
211	10	2.36561	197.642	515.157	
212	25	2.65209	204.676	581.459	

Data Set Standard Deviation = 3.78753
Numerator = 338094
Denominator = 619529
W Statistic = 0.545728 = 338094 / 619529

5% Critical value of 0.976 exceeds 0.545728
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.545728
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)	
1	-2.52573	-2.65209	7.03356	6.69845	
2	-2.30259	-2.36561	12.6297	12.1455	
3	-2.20727	-2.19728	17.4578	16.9955	
4	-2.04022	-2.09693	21.8549	21.2737	
5	-2.04022	-1.99539	25.8365	25.3447	
6	-2.04022	-1.91103	29.4885	29.2437	
7	-1.89712	-1.85218	32.9191	32.7575	
8	-1.38629	-1.78661	36.111	35.2342	
9	-0.994252	-1.72793	39.0968	36.9522	
10	-0.916291	-1.68494	41.9358	38.4961	
11	-0.891598	-1.63524	44.6098	39.9541	
12	-0.733969	-1.58927	47.1356	41.1206	
13	-0.673345	-1.54643	49.527	42.1619	
14	-0.544727	-1.5141	51.8195	42.9866	
15	-0.544727	-1.47579	53.9975	43.7905	
16	-0.510826	-1.43953	56.0698	44.5259	
17	-0.430783	-1.41183	58.063	45.1341	
18	-0.371064	-1.37866	59.9637	45.6456	
19	-0.371064	-1.34694	61.778	46.1454	
20	-0.314711	-1.32251	63.527	46.5617	
21	-0.223144	-1.29303	65.1989	46.8502	
22	-0.0725707	-1.26464	66.7982	46.942	
23	-0.0202027	-1.24264	68.3424	46.9671	
24	0	-1.21596	69.821	46.9671	
25	0	-1.19012	71.2373	46.9671	
26	0	-1.16505	72.5947	46.9671	
27	0.0198026	-1.1455	73.9069	46.9444	
28	0.0198026	-1.12168	75.165	46.9222	
29	0.0953102	-1.09847	76.3716	46.8175	
30	0.0953102	-1.08032	77.5387	46.7145	
31	0.223144	-1.05812	78.6584	46.4784	
32	0.371564	-1.03643	79.7326	46.0933	
33	0.378436	-1.01943	80.7718	45.7075	
34	0.392042	-0.998575	81.7689	45.316	
35	0.392042	-0.97815	82.7257	44.9325	
36	0.693147	-0.958125	83.6437	44.2684	
37	0.756122	-0.942375	84.5318	43.5559	
38	0.993252	-0.923014	85.3837	42.6391	
39	1.00063	-0.903992	86.201	41.7345	
40	1.02962	-0.889006	86.9913	40.8192	
41	1.09861	-0.870558	87.7491	39.8628	
42	1.09861	-0.852385	88.4757	38.9263	
43	1.60944	-0.838054	89.178	37.5776	
44	1.79176	-0.820379	89.8511	36.1076	
45	2.30259	-0.802956	90.4958	34.2588	
46	2.30259	-0.789191	91.1186	32.4416	
47	2.30259	-0.772193	91.7149	30.6635	
48	2.30259	-0.755415	92.2856	28.9241	
49	2.30259	-0.738846	92.8314	27.2229	

50	2.30259	-0.725736	93.3581	25.5518
51	2.30259	-0.709522	93.8616	23.9181
52	2.30259	-0.693493	94.3425	22.3212
53	2.30259	-0.680797	94.806	20.7536
54	2.30259	-0.665079	95.2483	19.2222
55	2.30259	-0.649522	95.6702	17.7267
56	2.30259	-0.637192	96.0762	16.2595
57	2.30259	-0.621911	96.463	14.8275
58	2.30259	-0.606775	96.8312	13.4303
59	2.30259	-0.594766	97.1849	12.0608
60	2.30259	-0.579873	97.5212	10.7256
61	2.30259	-0.565108	97.8405	9.42441
62	2.30259	-0.550465	98.1435	8.15691
63	2.30259	-0.538836	98.4339	6.9162
64	2.30259	-0.524401	98.7088	5.70872
65	2.30259	-0.510074	98.969	4.53423
66	2.30259	-0.498687	99.2177	3.38596
67	2.30259	-0.484544	99.4525	2.27026
68	2.30259	-0.470498	99.6739	1.1869
69	2.30259	-0.459327	99.8848	0.129259
70	2.30259	-0.445443	100.083	-0.896412
71	2.30259	-0.431644	100.27	-1.89031
72	2.30259	-0.417928	100.444	-2.85262
73	2.30259	-0.40701	100.61	-3.7898
74	2.30259	-0.393433	100.765	-4.69571
75	2.30259	-0.379927	100.909	-5.57052
76	2.30259	-0.369171	101.045	-6.42057
77	2.30259	-0.355788	101.172	-7.2398
78	2.30259	-0.342466	101.289	-8.02836
79	2.30259	-0.331854	101.399	-8.79248
80	2.30259	-0.318639	101.501	-9.52617
81	2.30259	-0.305481	101.594	-10.2296
82	2.30259	-0.294992	101.681	-10.9088
83	2.30259	-0.281926	101.761	-11.558
84	2.30259	-0.268908	101.833	-12.1772
85	2.30259	-0.255936	101.898	-12.7665
86	2.30259	-0.24559	101.959	-13.332
87	2.30259	-0.232693	102.013	-13.8678
88	2.30259	-0.219834	102.061	-14.3739
89	2.30259	-0.209575	102.105	-14.8565
90	2.30259	-0.196779	102.144	-15.3096
91	2.30259	-0.184017	102.178	-15.7333
92	2.30259	-0.173829	102.208	-16.1336
93	2.30259	-0.161119	102.234	-16.5046
94	2.30259	-0.148434	102.256	-16.8464
95	2.30259	-0.135774	102.274	-17.159
96	2.30259	-0.125661	102.29	-17.4483
97	2.30259	-0.113039	102.303	-17.7086
98	2.30259	-0.100433	102.313	-17.9399
99	2.30259	-0.0903606	102.321	-18.1479
100	2.30259	-0.0777834	102.327	-18.327
101	2.30259	-0.0652187	102.332	-18.4772
102	2.30259	-0.0551734	102.335	-18.6043
103	2.30259	-0.0426257	102.336	-18.7024
104	2.30259	-0.0300838	102.337	-18.7717
105	2.30259	-0.0200544	102.338	-18.8178
106	2.30259	-0.00751925	102.338	-18.8352
107	2.30259	0.00751925	102.338	-18.8178
108	2.30259	0.0200544	102.338	-18.7717
109	2.30259	0.0300838	102.339	-18.7024
110	2.30259	0.0426257	102.341	-18.6043
111	2.30259	0.0551734	102.344	-18.4772

112	2.30259	0.0652187	102.348	-18.327
113	2.30259	0.0777834	102.354	-18.1479
114	2.30259	0.0903606	102.362	-17.9399
115	2.30259	0.100433	102.373	-17.7086
116	2.30259	0.113039	102.385	-17.4483
117	2.30259	0.125661	102.401	-17.159
118	2.30259	0.135774	102.42	-16.8464
119	2.30259	0.148434	102.442	-16.5046
120	2.30259	0.161119	102.468	-16.1336
121	2.30259	0.173829	102.498	-15.7333
122	2.30259	0.184017	102.532	-15.3096
123	2.30259	0.196779	102.57	-14.8565
124	2.30259	0.209575	102.614	-14.3739
125	2.30259	0.219834	102.663	-13.8678
126	2.30259	0.232693	102.717	-13.332
127	2.30259	0.24559	102.777	-12.7665
128	2.30259	0.255936	102.843	-12.1772
129	2.30259	0.268908	102.915	-11.558
130	2.30259	0.281926	102.994	-10.9088
131	2.30259	0.294992	103.081	-10.2296
132	2.30259	0.305481	103.175	-9.52617
133	2.30259	0.318639	103.276	-8.79248
134	2.30259	0.331854	103.386	-8.02836
135	2.30259	0.342466	103.504	-7.2398
136	2.30259	0.355788	103.63	-6.42057
137	2.30259	0.369171	103.767	-5.57052
138	2.30259	0.379927	103.911	-4.69571
139	2.30259	0.393433	104.066	-3.7898
140	2.30259	0.40701	104.231	-2.85262
141	2.30259	0.417928	104.406	-1.89031
142	2.30259	0.431644	104.592	-0.896412
143	2.30259	0.445443	104.791	0.129259
144	2.30259	0.459327	105.002	1.1869
145	2.30259	0.470498	105.223	2.27026
146	2.30259	0.484544	105.458	3.38596
147	2.30259	0.498687	105.707	4.53423
148	2.30259	0.510074	105.967	5.70872
149	2.30259	0.524401	106.242	6.9162
150	2.30259	0.538836	106.532	8.15691
151	2.30259	0.550465	106.835	9.42441
152	2.30259	0.565108	107.154	10.7256
153	2.30259	0.579873	107.491	12.0608
154	2.30259	0.594766	107.844	13.4303
155	2.30259	0.606775	108.213	14.8275
156	2.30259	0.621911	108.599	16.2595
157	2.30259	0.637192	109.005	17.7267
158	2.30259	0.649522	109.427	19.2222
159	2.30259	0.665079	109.87	20.7536
160	2.30259	0.680797	110.333	22.3212
161	2.30259	0.693493	110.814	23.9181
162	2.30259	0.709522	111.317	25.5518
163	2.30259	0.725736	111.844	27.2229
164	2.30259	0.738846	112.39	28.9241
165	2.30259	0.755415	112.961	30.6635
166	2.30259	0.772193	113.557	32.4416
167	2.30259	0.789191	114.18	34.2588
168	2.30259	0.802956	114.824	36.1076
169	2.30259	0.820379	115.498	37.9966
170	2.30259	0.838054	116.2	39.9263
171	2.30259	0.852385	116.926	41.889
172	2.30259	0.87055	117.684	43.8935
173	2.30259	0.889006	118.475	45.9405

174	2.30259	0.903992		119.292	48.022
175	2.30259	0.923014		120.144	50.1474
176	2.30259	0.942375		121.032	52.3173
177	2.30259	0.958125		121.95	54.5234
178	2.30259	0.97815	122.907	56.7757	
179	2.30259	0.998575		123.904	59.075
180	2.30259	1.01943	124.943	61.4223	
181	2.30259	1.03643	126.017	63.8088	
182	2.30259	1.05812	127.137	66.2452	
183	2.30259	1.08032	128.304	68.7327	
184	2.30259	1.09847	129.511	71.2621	
185	2.30259	1.12168	130.769	73.8448	
186	2.30259	1.1455	132.081	76.4824	
187	2.30259	1.16505	133.438	79.1651	
188	2.30259	1.19012	134.855	81.9054	
189	2.30259	1.21596	136.333	84.7053	
190	2.30259	1.24264	137.877	87.5666	
191	2.30259	1.26464	139.477	90.4785	
192	2.30259	1.29303	141.149	93.4558	
193	2.30259	1.32251	142.898	96.501	
194	2.30259	1.34694	144.712	99.6024	
195	2.30259	1.37866	146.613	102.777	
196	2.30259	1.41183	148.606	106.028	
197	2.30259	1.43953	150.678	109.342	
198	2.30259	1.47579	152.856	112.741	
199	2.30259	1.5141	155.149	116.227	
200	2.30259	1.54643	157.54	119.788	
201	2.30259	1.58927	160.066	123.447	
202	2.30259	1.63524	162.74	127.212	
203	2.30259	1.68494	165.579	131.092	
204	2.30259	1.72793	168.564	135.071	
205	2.30259	1.78661	171.756	139.185	
206	2.30259	1.85218	175.187	143.449	
207	2.30259	1.91103	178.839	147.85	
208	2.30259	1.99539	182.821	152.444	
209	2.30259	2.09693	187.218	157.273	
210	2.30259	2.19728	192.046	162.332	
211	2.30259	2.36561	197.642	167.779	
212	3.21888	2.65209	204.676	176.316	

Data Set Standard Deviation = 1.15687
Numerator = 31087.3
Denominator = 57799
W Statistic = 0.537852 = 31087.3 / 57799

5% Critical value of 0.976 exceeds 0.537852
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.537852
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Cobalt

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<2.30259	84
	9/23/1999	ND<2.30259	84
	3/15/2000	ND<2.30259	84
	9/24/2003	ND<2.30259	84
	3/11/2004	ND<2.30259	84
	10/12/2004	ND<2.30259	84
	4/1/2005	ND<2.30259	84
	10/25/2005	ND<2.30259	84
	4/29/2006	ND<2.30259	84
	11/18/2006	ND<2.30259	84
	5/23/2007	ND<2.30259	84
	11/28/2007	ND<2.30259	84
	6/5/2008	ND<2.30259	84
	11/20/2008	ND<2.30259	84
	6/11/2009	-2.20727 J	170
	11/16/2009	-2.52573 J	168
	6/30/2010	-2.30259 J H	169

Rank Sum = 1683
Rank Mean = 99

Background Rank Sum = 1683
Background Rank Mean = 99

Compliance Wells

Well ID	Date	Result	Rank
MW-6	7/20/1995	ND<2.30259	84
	8/24/1995	ND<2.30259	84
	9/28/1995	ND<2.30259	84
	10/26/1995	ND<2.30259	84
	11/19/1996	ND<2.30259	84
	12/19/1996	ND<2.30259	84
	3/24/1997	ND<2.30259	84
	9/24/1997	ND<2.30259	84
	4/7/1998	ND<2.30259	84
	9/23/1998	ND<2.30259	84
	3/16/1999	ND<2.30259	84
	9/23/1999	ND<2.30259	84
	3/15/2000	ND<2.30259	84
	9/24/2003	ND<2.30259	84
	3/11/2004	ND<2.30259	84
	10/12/2004	ND<2.30259	84
	4/1/2005	ND<2.30259	84
	10/25/2005	ND<2.30259	84
	4/29/2006	ND<2.30259	84
	11/18/2006	ND<2.30259	84
	5/23/2007	ND<2.30259	84

	11/28/2007	ND<2.30259	84
	6/5/2008	ND<2.30259	84
	11/20/2008	ND<2.30259	84
	6/11/2009	-2.04022 J	171
	11/16/2009	-2.04022 J	172
	6/30/2010	-2.04022 J H	173

Rank Sum = 2532
Rank Mean = 93.7778

MW-9	7/20/1995	ND<2.30259	84
	8/24/1995	ND<2.30259	84
	9/28/1995	ND<2.30259	84
	10/26/1995	ND<2.30259	84
	11/19/1996	ND<2.30259	84
	12/19/1996	ND<2.30259	84
	3/24/1997	ND<2.30259	84
	9/24/1997	ND<2.30259	84
	4/7/1998	ND<2.30259	84
	9/23/1998	ND<2.30259	84
	3/16/1999	ND<2.30259	84
	9/23/1999	ND<2.30259	84
	3/15/2000	ND<2.30259	84
	9/24/2003	ND<2.30259	84
	3/11/2004	ND<2.30259	84
	10/12/2004	ND<2.30259	84
	4/1/2005	ND<2.30259	84
	10/25/2005	ND<2.30259	84
	4/29/2006	ND<2.30259	84
	11/18/2006	0.223144 J	198
	5/23/2007	ND<2.30259	84
	11/28/2007	ND<2.30259	84
	6/5/2008	0.0198026 J	194
	11/20/2008	1.09861 J	208
	6/11/2009	0	191
	11/16/2009	-0.0725707	189
	6/30/2010	-0.314711 H	187

Rank Sum = 2931
Rank Mean = 108.556

MW-12BR	3/16/1999	ND<2.30259	84
	9/23/1999	ND<2.30259	84
	3/15/2000	ND<2.30259	84
	9/24/2003	ND<2.30259	84
	3/11/2004	ND<2.30259	84
	10/12/2004	ND<2.30259	84
	4/1/2005	ND<2.30259	84
	10/25/2005	ND<2.30259	84
	4/29/2006	ND<2.30259	84
	11/18/2006	0.378436 J	200
	5/23/2007	ND<2.30259	84
	11/28/2007	ND<2.30259	84
	6/5/2008	0.392042 J	201
	11/20/2008	ND<2.30259	84
	6/11/2009	0.0953102	196
	11/16/2009	0	192
	6/30/2010	0.0953102	197

Rank Sum = 1994
Rank Mean = 117.294

MW-12AR	3/16/1999	ND<2.30259	84
	9/23/1999	ND<2.30259	84
	3/15/2000	ND<2.30259	84

	9/24/2003	ND<2.30259	84
	3/11/2004	ND<2.30259	84
	10/12/2004	ND<2.30259	84
	4/1/2005	ND<2.30259	84
	10/25/2005	ND<2.30259	84
	4/29/2006	ND<2.30259	84
	11/18/2006	-0.371064 J	185
	5/23/2007	ND<2.30259	84
	11/28/2007	ND<2.30259	84
	6/5/2008	0.392042 J	202
	11/20/2008	ND<2.30259	84
	6/11/2009	-0.371064	186
	11/16/2009	-0.223144	188
	6/30/2010	-0.430783	184

Rank Sum = 1953
Rank Mean = 114.882

MW-11R	7/20/1995	ND<2.30259	84
	8/24/1995	ND<2.30259	84
	9/28/1995	ND<2.30259	84
	10/26/1995	ND<2.30259	84
	11/19/1996	ND<2.30259	84
	12/19/1996	ND<2.30259	84
	3/24/1997	ND<2.30259	84
	9/24/1997	ND<2.30259	84
	4/7/1998	ND<2.30259	84
	9/23/1998	ND<2.30259	84
	3/16/1999	ND<2.30259	84
	9/23/1999	ND<2.30259	84
	3/15/2000	ND<2.30259	84
	9/24/2003	ND<2.30259	84
	3/11/2004	ND<2.30259	84
	10/12/2004	ND<2.30259	84
	4/1/2005	ND<2.30259	84
	10/25/2005	ND<2.30259	84
	4/29/2006	ND<2.30259	84
	11/18/2006	0.756122 J	204
	5/23/2007	0.0198026 J	195
	11/28/2007	ND<2.30259	84
	6/5/2008	ND<2.30259	84
	11/20/2008	ND<2.30259	84
	6/11/2009	-1.38629	175
	11/16/2009	-1.89712 J	174
	6/30/2010	-0.544727 H	181

Rank Sum = 2777
Rank Mean = 102.852

MW-10	7/20/1995	ND<2.30259	84
	8/24/1995	ND<2.30259	84
	9/28/1995	ND<2.30259	84
	10/26/1995	ND<2.30259	84
	11/19/1996	ND<2.30259	84
	12/19/1996	ND<2.30259	84
	3/24/1997	ND<2.30259	84
	9/24/1997	ND<2.30259	84
	4/7/1998	ND<2.30259	84
	9/23/1998	ND<2.30259	84
	3/16/1999	1.60944	210
	9/23/1999	3.21888	212
	3/15/2000	ND<2.30259	84
	9/24/2003	ND<2.30259	84
	3/11/2004	ND<2.30259	84

	10/12/2004	ND<2.30259	84
	4/1/2005	ND<2.30259	84
	10/25/2005	ND<2.30259	84
	4/29/2006	ND<2.30259	84
	11/18/2006	0.371564 J	199
	5/23/2007	ND<2.30259	84
	11/28/2007	1.09861 J	209
	6/5/2008	1.00063 J	206
	11/20/2008	1.79176 J	211
	6/11/2009	0.693147	203
	11/16/2009	1.02962	207
	6/30/2010	0.993252 H	205

Rank Sum = 3374
Rank Mean = 124.963

MW-8	7/20/1995	ND<2.30259	84
	8/24/1995	ND<2.30259	84
	9/28/1995	ND<2.30259	84
	10/26/1995	ND<2.30259	84
	11/19/1996	ND<2.30259	84
	12/19/1996	ND<2.30259	84
	3/24/1997	ND<2.30259	84
	9/24/1997	ND<2.30259	84
	4/7/1998	ND<2.30259	84
	9/23/1998	ND<2.30259	84
	3/16/1999	ND<2.30259	84
	9/23/1999	ND<2.30259	84
	3/15/2000	ND<2.30259	84
	9/24/2003	ND<2.30259	84
	3/11/2004	ND<2.30259	84
	10/12/2004	ND<2.30259	84
	4/1/2005	ND<2.30259	84
	10/25/2005	ND<2.30259	84
	4/29/2006	ND<2.30259	84
	11/18/2006	0 J	193
	5/23/2007	ND<2.30259	84
	11/28/2007	ND<2.30259	84
	6/5/2008	-0.510826 J	183
	11/20/2008	ND<2.30259	84
	6/11/2009	-0.916291	177
	6/30/2010	-0.673345 H	180

Rank Sum = 2581
Rank Mean = 99.2692

MW-7	7/20/1995	ND<2.30259	84
	8/24/1995	ND<2.30259	84
	9/28/1995	ND<2.30259	84
	10/26/1995	ND<2.30259	84
	11/19/1996	ND<2.30259	84
	12/19/1996	ND<2.30259	84
	3/24/1997	ND<2.30259	84
	9/24/1997	ND<2.30259	84
	4/7/1998	ND<2.30259	84
	9/23/1998	ND<2.30259	84
	3/16/1999	ND<2.30259	84
	9/23/1999	ND<2.30259	84
	3/15/2000	ND<2.30259	84
	9/24/2003	ND<2.30259	84
	3/11/2004	ND<2.30259	84
	10/12/2004	ND<2.30259	84
	4/1/2005	ND<2.30259	84
	10/25/2005	ND<2.30259	84

4/29/2006	ND<2.30259	84
11/18/2006	-0.544727 J	182
5/23/2007	ND<2.30259	84
11/28/2007	ND<2.30259	84
6/5/2008	-0.0202027 J	190
11/20/2008	ND<2.30259	84
6/11/2009	-0.733969	179
11/16/2009	-0.891598	178
6/30/2010	-0.994252 H	176

Rank Sum = 2753
Rank Mean = 101.963

Calculation Results:

Kruskal-Wallis H Statistic = 5.33987
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 10.4459
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
5.33987 < 15.5073 indicating no significant group difference at 5% significance level
10.4459 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ppb)

Parameter: Copper

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 164
Percent Non-Detects: 77.3585%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	12 (70.5882%)	3/16/1999	10 J	10 J
			9/23/1999	9 J	9 J
			3/15/2000	ND<20	ND<20
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	ND<20	ND<20
			6/5/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	0.5 J	0.5 J
			11/16/2009	0.3 J	0.3 J
			6/30/2010	0.35 J H	0.35 J H

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-6	27	23 (85.1852%)	7/20/1995	ND<20	ND<20
			8/24/1995	ND<20	ND<20
			9/28/1995	ND<20	ND<20
			10/26/1995	ND<20	ND<20
			11/19/1996	ND<20	ND<20
			12/19/1996	ND<20	ND<20
			3/24/1997	ND<20	ND<20
			9/24/1997	ND<20	ND<20
			4/7/1998	ND<20	ND<20
			9/23/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/15/2000	ND<20	ND<20
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	5.16 J	5.16 J
			6/5/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20

			6/11/2009	1.2	1.2	
			11/16/2009	1.3	1.3	
			6/30/2010	1.6 H	1.6 H	
MW-9	27	20 (74.0741%)	7/20/1995	ND<20	ND<20	
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	20	20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	0.01 J	0.01 J	
			11/18/2006	13.8	13.8	
			5/23/2007	5.59 J	5.59 J	
			11/28/2007	ND<20	ND<20	
			6/5/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.76 J	0.76 J	
			11/16/2009	0.33 J	0.33 J	
			6/30/2010	1 H	1 H	
MW-10	27	23 (85.1852%)	7/20/1995	ND<20	ND<20	
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	6.64 J	6.64 J	
			11/28/2007	ND<20	ND<20	
			6/5/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.39 J	0.39 J	
			11/16/2009	0.37 J	0.37 J	
			6/30/2010	0.93 J H	0.93 J H	
MW-12AR	17	14 (82.3529%)	3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	

		3/15/2000	ND<20	ND<20		
		9/24/2003	ND<20	ND<20		
		3/11/2004	ND<20	ND<20		
		10/12/2004	ND<20	ND<20		
		4/1/2005	ND<20	ND<20		
		10/25/2005	ND<20	ND<20		
		4/29/2006	ND<20	ND<20		
		11/18/2006	ND<20	ND<20		
		5/23/2007	ND<20	ND<20		
		11/28/2007	ND<20	ND<20		
		6/5/2008	ND<20	ND<20		
		11/20/2008	ND<20	ND<20		
		6/11/2009	0.37 J	0.37 J		
		11/16/2009	0.53 J	0.53 J		
		6/30/2010	2	2		
MW-12BR	17	13 (76.4706%)	3/16/1999		ND<20	ND<20
		9/23/1999	ND<20	ND<20		
		3/15/2000	ND<20	ND<20		
		9/24/2003	ND<20	ND<20		
		3/11/2004	ND<20	ND<20		
		10/12/2004	ND<20	ND<20		
		4/1/2005	ND<20	ND<20		
		10/25/2005	ND<20	ND<20		
		4/29/2006	ND<20	ND<20		
		11/18/2006	ND<20	ND<20		
		5/23/2007	ND<20	ND<20		
		11/28/2007	6 J	6 J		
		6/5/2008	ND<20	ND<20		
		11/20/2008	ND<20	ND<20		
		6/11/2009	1.6	1.6		
		11/16/2009	1.2	1.2		
		6/30/2010	3.4	3.4		
MW-11R	27	21 (77.7778%)	7/20/1995		ND<20	ND<20
		8/24/1995	ND<20	ND<20		
		9/28/1995	ND<20	ND<20		
		10/26/1995	ND<20	ND<20		
		11/19/1996	ND<20	ND<20		
		12/19/1996	ND<20	ND<20		
		3/24/1997	ND<20	ND<20		
		9/24/1997	ND<20	ND<20		
		4/7/1998	ND<20	ND<20		
		9/23/1998	ND<20	ND<20		
		3/16/1999	ND<20	ND<20		
		9/23/1999	32	32		
		3/15/2000	ND<20	ND<20		
		9/24/2003	ND<20	ND<20		
		3/11/2004	ND<20	ND<20		
		10/12/2004	ND<20	ND<20		
		4/1/2005	ND<20	ND<20		
		10/25/2005	ND<20	ND<20		
		4/29/2006	10 J	10 J		
		11/18/2006	ND<20	ND<20		
		5/23/2007	ND<20	ND<20		
		11/28/2007	8 J	8 J		
		6/5/2008	ND<20	ND<20		
		11/20/2008	ND<20	ND<20		
		6/11/2009	0.59 J	0.59 J		
		11/16/2009	0.73 J	0.73 J		
		6/30/2010	0.6 J H	0.6 J H		

MW-7	27	16 (59.2593%)	7/20/1995		ND<20	ND<20
			8/24/1995	ND<20	ND<20	
			9/28/1995	78.2	78.2	
			10/26/1995	26.1	26.1	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	50	50	
			9/23/1999	10 J	10 J	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	10.8	10.8	
			11/28/2007	7.06 J	7.06 J	
			6/5/2008	7.55 J	7.55 J	
			11/20/2008	6 J	6 J	
			6/11/2009	2.3	2.3	
			11/16/2009	1.4	1.4	
			6/30/2010	2.1 H	2.1 H	
MW-8	26	22 (84.6154%)	7/20/1995		ND<20	ND<20
			8/24/1995	ND<20	ND<20	
			9/28/1995	51.1	51.1	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	30	30	
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	0.31 J	0.31 J	
			6/30/2010	0.62 J H	0.62 J H	

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.01	-2.65209	7.03356	-0.0265209
2	0.3	-2.365	6.6297	-0.736205
3	0.31	-2.197	2.8174578	-1.41736
4	0.33	-2.096	9.3218549	-2.10935
5	0.35	-1.995	3.9258365	-2.80774
6	0.37	-1.911	0.3294885	-3.51482
7	0.37	-1.852	1.8329191	-4.20013
8	0.39	-1.786	6.136.111	-4.8969
9	0.5	-1.727	9.3390968	-5.76087
10	0.53	-1.684	9.4419358	-6.65389
11	0.59	-1.635	2.4446098	-7.61868
12	0.6	-1.589	2.7471356	-8.57224
13	0.62	-1.546	4.349.527	-9.53102
14	0.73	-1.514	1.8195	-10.6363
15	0.76	-1.475	7.9539975	-11.7579
16	0.93	-1.439	5.3560698	-13.0967
17	1	-1.411	8.358.063	-14.5085
18	1.2	-1.378	6.5996637	-16.1629
19	1.2	-1.346	9.461.778	-17.7792
20	1.3	-1.322	5.163.527	-19.4985
21	1.4	-1.293	0.3651989	-21.3087
22	1.6	-1.264	6.4667982	-23.3322
23	1.6	-1.242	6.8468424	-25.3204
24	2	-1.215	9.669.821	-27.7523
25	2.1	-1.190	1.2712373	-30.2516
26	2.3	-1.165	0.5725947	-32.9312
27	3.4	-1.145	73.9069	-36.8259
28	5.16	-1.121	6875.165	-42.6137
29	5.59	-1.098	4776.3716	-48.7542
30	6	-1.080	3277.5387	-55.2361
31	6	-1.058	1278.6584	-61.5848
32	6.64	-1.036	4379.7326	-68.4668
33	7.06	-1.019	4380.7718	-75.6639
34	7.55	-0.998575	81.7689	-83.2032
35	8	-0.978	1582.7257	-91.0284
36	9	-0.958125	83.6437	-99.6515
37	10	-0.942375	84.5318	-109.075
38	10	-0.923014	85.3837	-118.305
39	10	-0.903992	86.201	-127.345
40	10	-0.889006	86.9913	-136.235
41	10	-0.870	5587.7491	-144.941
42	10	-0.852385	88.4757	-153.465
43	10	-0.838054	89.178	-161.845
44	10	-0.820379	89.8511	-170.049
45	10	-0.802956	90.4958	-178.079
46	10	-0.789191	91.1186	-185.971
47	10	-0.772193	91.7149	-193.692
48	10	-0.755415	92.2856	-201.247
49	10	-0.738846	92.8314	-208.635

50	10	-0.725736	93.3581	-215.892
51	10	-0.709522	93.8616	-222.988
52	10	-0.693493	94.3425	-229.923
53	10	-0.680797	94.806	-236.731
54	10	-0.665079	95.2483	-243.381
55	10	-0.649522	95.6702	-249.877
56	10	-0.637192	96.0762	-256.248
57	10	-0.621911	96.463	-262.468
58	10	-0.606775	96.8312	-268.535
59	10	-0.594766	97.1849	-274.483
60	10	-0.579873	97.5212	-280.282
61	10	-0.565108	97.8405	-285.933
62	10	-0.550465	98.1435	-291.437
63	10	-0.538836	98.4339	-296.826
64	10	-0.524401	98.7088	-302.07
65	10	-0.510074	98.969	-307.171
66	10	-0.498687	99.2177	-312.157
67	10	-0.484544	99.4525	-317.003
68	10	-0.470498	99.6739	-321.708
69	10	-0.459327	99.8848	-326.301
70	10	-0.445443	100.083	-330.756
71	10	-0.431644	100.27	-335.072
72	10	-0.417928	100.444	-339.251
73	10	-0.40701	100.61	-343.321
74	10	-0.393433	100.765	-347.256
75	10	-0.379927	100.909	-351.055
76	10	-0.369171	101.045	-354.747
77	10	-0.355788	101.172	-358.305
78	10	-0.342466	101.289	-361.729
79	10	-0.331854	101.399	-365.048
80	10	-0.318639	101.501	-368.234
81	10	-0.305481	101.594	-371.289
82	10	-0.294992	101.681	-374.239
83	10	-0.281926	101.761	-377.058
84	10	-0.268908	101.833	-379.747
85	10	-0.255936	101.898	-382.307
86	10	-0.24559	101.959	-384.762
87	10	-0.232693	102.013	-387.089
88	10	-0.219834	102.061	-389.288
89	10	-0.209575	102.105	-391.383
90	10	-0.196779	102.144	-393.351
91	10	-0.184017	102.178	-395.191
92	10	-0.173829	102.208	-396.93
93	10	-0.161119	102.234	-398.541
94	10	-0.148434	102.256	-400.025
95	10	-0.135774	102.274	-401.383
96	10	-0.125661	102.29	-402.64
97	10	-0.113039	102.303	-403.77
98	10	-0.100433	102.313	-404.774
99	10	-0.0903606	102.321	-405.678
100	10	-0.0777834	102.327	-406.456
101	10	-0.0652187	102.332	-407.108
102	10	-0.0551734	102.335	-407.66
103	10	-0.0426257	102.336	-408.086
104	10	-0.0300838	102.337	-408.387
105	10	-0.0200544	102.338	-408.587
106	10	-0.00751925	102.338	-408.663
107	10	0.00751925	102.338	-408.587
108	10	0.0200544	102.338	-408.387
109	10	0.0300838	102.339	-408.086
110	10	0.0426257	102.341	-407.66
111	10	0.0551734	102.344	-407.108

112	10	0.0652187	102.348	-406.456
113	10	0.0777834	102.354	-405.678
114	10	0.0903606	102.362	-404.774
115	10	0.100433	102.373	-403.77
116	10	0.113039	102.385	-402.64
117	10	0.125661	102.401	-401.383
118	10	0.135774	102.42	-400.025
119	10	0.148434	102.442	-398.541
120	10	0.161119	102.468	-396.93
121	10	0.173829	102.498	-395.191
122	10	0.184017	102.532	-393.351
123	10	0.196779	102.57	-391.383
124	10	0.209575	102.614	-389.288
125	10	0.219834	102.663	-387.089
126	10	0.232693	102.717	-384.762
127	10	0.24559	102.777	-382.307
128	10	0.255936	102.843	-379.747
129	10	0.268908	102.915	-377.058
130	10	0.281926	102.994	-374.239
131	10	0.294992	103.081	-371.289
132	10	0.305481	103.175	-368.234
133	10	0.318639	103.276	-365.048
134	10	0.331854	103.386	-361.729
135	10	0.342466	103.504	-358.305
136	10	0.355788	103.63	-354.747
137	10	0.369171	103.767	-351.055
138	10	0.379927	103.911	-347.256
139	10	0.393433	104.066	-343.321
140	10	0.40701	104.231	-339.251
141	10	0.417928	104.406	-335.072
142	10	0.431644	104.592	-330.756
143	10	0.445443	104.791	-326.301
144	10	0.459327	105.002	-321.708
145	10	0.470498	105.223	-317.003
146	10	0.484544	105.458	-312.157
147	10	0.498687	105.707	-307.171
148	10	0.510074	105.967	-302.07
149	10	0.524401	106.242	-296.826
150	10	0.538836	106.532	-291.437
151	10	0.550465	106.835	-285.933
152	10	0.565108	107.154	-280.282
153	10	0.579873	107.491	-274.483
154	10	0.594766	107.844	-268.535
155	10	0.606775	108.213	-262.468
156	10	0.621911	108.599	-256.248
157	10	0.637192	109.005	-249.877
158	10	0.649522	109.427	-243.381
159	10	0.665079	109.87	-236.731
160	10	0.680797	110.333	-229.923
161	10	0.693493	110.814	-222.988
162	10	0.709522	111.317	-215.892
163	10	0.725736	111.844	-208.635
164	10	0.738846	112.39	-201.247
165	10	0.755415	112.961	-193.692
166	10	0.772193	113.557	-185.971
167	10	0.789191	114.18	-178.079
168	10	0.802956	114.824	-170.049
169	10	0.820379	115.498	-161.845
170	10	0.838054	116.2	-153.465
171	10	0.852385	116.926	-144.941
172	10	0.87055	117.684	-136.235
173	10	0.889006	118.475	-127.345

174	10	0.903992		119.292	-118.305
175	10	0.923014		120.144	-109.075
176	10	0.942375		121.032	-99.6515
177	10	0.958125		121.95	-90.0702
178	10	0.97815	122.907	-80.2887	
179	10	0.998575		123.904	-70.303
180	10	1.01943	124.943	-60.1087	
181	10	1.03643	126.017	-49.7444	
182	10	1.05812	127.137	-39.1632	
183	10	1.08032	128.304	-28.3599	
184	10	1.09847	129.511	-17.3753	
185	10	1.12168	130.769	-6.15848	
186	10	1.1455	132.081	5.29656	
187	10	1.16505	133.438	16.947	
188	10	1.19012	134.855	28.8482	
189	10	1.21596	136.333	41.0078	
190	10	1.24264	137.877	53.4343	
191	10	1.26464	139.477	66.0807	
192	10	1.29303	141.149	79.011	
193	10	1.32251	142.898	92.2361	
194	10	1.34694	144.712	105.705	
195	10	1.37866	146.613	119.492	
196	10	1.41183	148.606	133.61	
197	10	1.43953	150.678	148.006	
198	10	1.47579	152.856	162.764	
199	10	1.5141	155.149	177.905	
200	10	1.54643	157.54	193.369	
201	10	1.58927	160.066	209.262	
202	10	1.63524	162.74	225.614	
203	10	1.68494	165.579	242.463	
204	10.8	1.72793	168.564	261.125	
205	13.8	1.78661	171.756	285.78	
206	20	1.85218	175.187	322.824	
207	26.1	1.91103	178.839	372.702	
208	30	1.99539	182.821	432.564	
209	32	2.09693	187.218	499.665	
210	50	2.19728	192.046	609.53	
211	51.1	2.36561	197.642	730.412	
212	78.2	2.65209	204.676	937.806	

Data Set Standard Deviation = 7.38232
Numerator = 879479
Denominator = 2.35361e+006
W Statistic = 0.373673 = 879479 / 2.35361e+006

5% Critical value of 0.976 exceeds 0.373673
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.373673
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-4.60517	-2.65209	7.03356	12.2133
2	-1.20397	-2.36561	12.6297	15.0614
3	-1.17118	-2.19728	17.4578	17.6349
4	-1.10866	-2.09693	21.8549	19.9597
5	-1.04982	-1.99539	25.8365	22.0545
6	-0.994252	-1.91103	29.4885	23.9545
7	-0.994252	-1.85218	32.9191	25.796
8	-0.941609	-1.78661	36.111	27.4783
9	-0.693147	-1.72793	39.0968	28.676
10	-0.634878	-1.68494	41.9358	29.7458
11	-0.527633	-1.63524	44.6098	30.6086
12	-0.510826	-1.58927	47.1356	31.4204
13	-0.478036	-1.54643	49.527	32.1597
14	-0.314711	-1.5141	51.8195	32.6362
15	-0.274437	-1.47579	53.9975	33.0412
16	-0.0725707	-1.43953	56.0698	33.1457
17	0	-1.41183	58.063	33.1457
18	0.182322	-1.37866	59.9637	32.8943
19	0.182322	-1.34694	61.778	32.6487
20	0.262364	-1.32251	63.527	32.3017
21	0.336472	-1.29303	65.1989	31.8667
22	0.470004	-1.26464	66.7982	31.2723
23	0.470004	-1.24264	68.3424	30.6882
24	0.693147	-1.21596	69.821	29.8454
25	0.741937	-1.19012	71.2373	28.9624
26	0.832909	-1.16505	72.5947	27.992
27	1.22378	-1.1455	73.9069	26.5902
28	1.64094	-1.12168	75.165	24.7496
29	1.72098	-1.09847	76.3716	22.8591
30	1.79176	-1.08032	77.5387	20.9235
31	1.79176	-1.05812	78.6584	19.0276
32	1.89311	-1.03643	79.7326	17.0655
33	1.95445	-1.01943	80.7718	15.0731
34	2.02155	-0.998575	81.7689	13.0544
35	2.07944	-0.97815	82.7257	11.0204
36	2.19722	-0.958125	83.6437	8.91518
37	2.30259	-0.942375	84.5318	6.74528
38	2.30259	-0.923014	85.3837	4.61996
39	2.30259	-0.903992	86.201	2.53844
40	2.30259	-0.889006	86.9913	0.491426
41	2.30259	-0.870558	87.7491	-1.51309
42	2.30259	-0.852385	88.4757	-3.47578
43	2.30259	-0.838054	89.178	-5.40547
44	2.30259	-0.820379	89.8511	-7.29446
45	2.30259	-0.802956	90.4958	-9.14334
46	2.30259	-0.789191	91.1186	-10.9605
47	2.30259	-0.772193	91.7149	-12.7386
48	2.30259	-0.755415	92.2856	-14.478
49	2.30259	-0.738846	92.8314	-16.1792

50	2.30259	-0.725736	93.3581	-17.8503
51	2.30259	-0.709522	93.8616	-19.484
52	2.30259	-0.693493	94.3425	-21.0809
53	2.30259	-0.680797	94.806	-22.6484
54	2.30259	-0.665079	95.2483	-24.1798
55	2.30259	-0.649522	95.6702	-25.6754
56	2.30259	-0.637192	96.0762	-27.1426
57	2.30259	-0.621911	96.463	-28.5746
58	2.30259	-0.606775	96.8312	-29.9718
59	2.30259	-0.594766	97.1849	-31.3413
60	2.30259	-0.579873	97.5212	-32.6765
61	2.30259	-0.565108	97.8405	-33.9777
62	2.30259	-0.550465	98.1435	-35.2452
63	2.30259	-0.538836	98.4339	-36.4859
64	2.30259	-0.524401	98.7088	-37.6934
65	2.30259	-0.510074	98.969	-38.8679
66	2.30259	-0.498687	99.2177	-40.0161
67	2.30259	-0.484544	99.4525	-41.1318
68	2.30259	-0.470498	99.6739	-42.2152
69	2.30259	-0.459327	99.8848	-43.2728
70	2.30259	-0.445443	100.083	-44.2985
71	2.30259	-0.431644	100.27	-45.2924
72	2.30259	-0.417928	100.444	-46.2547
73	2.30259	-0.40701	100.61	-47.1919
74	2.30259	-0.393433	100.765	-48.0978
75	2.30259	-0.379927	100.909	-48.9726
76	2.30259	-0.369171	101.045	-49.8227
77	2.30259	-0.355788	101.172	-50.6419
78	2.30259	-0.342466	101.289	-51.4304
79	2.30259	-0.331854	101.399	-52.1946
80	2.30259	-0.318639	101.501	-52.9283
81	2.30259	-0.305481	101.594	-53.6317
82	2.30259	-0.294992	101.681	-54.3109
83	2.30259	-0.281926	101.761	-54.9601
84	2.30259	-0.268908	101.833	-55.5793
85	2.30259	-0.255936	101.898	-56.1686
86	2.30259	-0.24559	101.959	-56.7341
87	2.30259	-0.232693	102.013	-57.2699
88	2.30259	-0.219834	102.061	-57.776
89	2.30259	-0.209575	102.105	-58.2586
90	2.30259	-0.196779	102.144	-58.7117
91	2.30259	-0.184017	102.178	-59.1354
92	2.30259	-0.173829	102.208	-59.5357
93	2.30259	-0.161119	102.234	-59.9067
94	2.30259	-0.148434	102.256	-60.2484
95	2.30259	-0.135774	102.274	-60.5611
96	2.30259	-0.125661	102.29	-60.8504
97	2.30259	-0.113039	102.303	-61.1107
98	2.30259	-0.100433	102.313	-61.342
99	2.30259	-0.0903606	102.321	-61.55
100	2.30259	-0.0777834	102.327	-61.7291
101	2.30259	-0.0652187	102.332	-61.8793
102	2.30259	-0.0551734	102.335	-62.0063
103	2.30259	-0.0426257	102.336	-62.1045
104	2.30259	-0.0300838	102.337	-62.1738
105	2.30259	-0.0200544	102.338	-62.2199
106	2.30259	-0.00751925	102.338	-62.2373
107	2.30259	0.00751925	102.338	-62.2199
108	2.30259	0.0200544	102.338	-62.1738
109	2.30259	0.0300838	102.339	-62.1045
110	2.30259	0.0426257	102.341	-62.0063
111	2.30259	0.0551734	102.344	-61.8793

112	2.30259	0.0652187	102.348	-61.7291
113	2.30259	0.0777834	102.354	-61.55
114	2.30259	0.0903606	102.362	-61.342
115	2.30259	0.100433	102.373	-61.1107
116	2.30259	0.113039	102.385	-60.8504
117	2.30259	0.125661	102.401	-60.5611
118	2.30259	0.135774	102.42	-60.2484
119	2.30259	0.148434	102.442	-59.9067
120	2.30259	0.161119	102.468	-59.5357
121	2.30259	0.173829	102.498	-59.1354
122	2.30259	0.184017	102.532	-58.7117
123	2.30259	0.196779	102.57	-58.2586
124	2.30259	0.209575	102.614	-57.776
125	2.30259	0.219834	102.663	-57.2699
126	2.30259	0.232693	102.717	-56.7341
127	2.30259	0.24559	102.777	-56.1686
128	2.30259	0.255936	102.843	-55.5793
129	2.30259	0.268908	102.915	-54.9601
130	2.30259	0.281926	102.994	-54.3109
131	2.30259	0.294992	103.081	-53.6317
132	2.30259	0.305481	103.175	-52.9283
133	2.30259	0.318639	103.276	-52.1946
134	2.30259	0.331854	103.386	-51.4304
135	2.30259	0.342466	103.504	-50.6419
136	2.30259	0.355788	103.63	-49.8227
137	2.30259	0.369171	103.767	-48.9726
138	2.30259	0.379927	103.911	-48.0978
139	2.30259	0.393433	104.066	-47.1919
140	2.30259	0.40701	104.231	-46.2547
141	2.30259	0.417928	104.406	-45.2924
142	2.30259	0.431644	104.592	-44.2985
143	2.30259	0.445443	104.791	-43.2728
144	2.30259	0.459327	105.002	-42.2152
145	2.30259	0.470498	105.223	-41.1318
146	2.30259	0.484544	105.458	-40.0161
147	2.30259	0.498687	105.707	-38.8679
148	2.30259	0.510074	105.967	-37.6934
149	2.30259	0.524401	106.242	-36.4859
150	2.30259	0.538836	106.532	-35.2452
151	2.30259	0.550465	106.835	-33.9777
152	2.30259	0.565108	107.154	-32.6765
153	2.30259	0.579873	107.491	-31.3413
154	2.30259	0.594766	107.844	-29.9718
155	2.30259	0.606775	108.213	-28.5746
156	2.30259	0.621911	108.599	-27.1426
157	2.30259	0.637192	109.005	-25.6754
158	2.30259	0.649522	109.427	-24.1798
159	2.30259	0.665079	109.87	-22.6484
160	2.30259	0.680797	110.333	-21.0809
161	2.30259	0.693493	110.814	-19.484
162	2.30259	0.709522	111.317	-17.8503
163	2.30259	0.725736	111.844	-16.1792
164	2.30259	0.738846	112.39	-14.478
165	2.30259	0.755415	112.961	-12.7386
166	2.30259	0.772193	113.557	-10.9605
167	2.30259	0.789191	114.18	-9.14334
168	2.30259	0.802956	114.824	-7.29446
169	2.30259	0.820379	115.498	-5.40547
170	2.30259	0.838054	116.2	-3.47578
171	2.30259	0.852385	116.926	-1.51309
172	2.30259	0.87055	117.684	0.491426
173	2.30259	0.889006	118.475	2.53844

174	2.30259	0.903992		119.292	4.61996
175	2.30259	0.923014		120.144	6.74528
176	2.30259	0.942375		121.032	8.91518
177	2.30259	0.958125		121.95	11.1213
178	2.30259	0.97815	122.907	13.3736	
179	2.30259	0.998575		123.904	15.6729
180	2.30259	1.01943	124.943	18.0202	
181	2.30259	1.03643	126.017	20.4067	
182	2.30259	1.05812	127.137	22.8431	
183	2.30259	1.08032	128.304	25.3307	
184	2.30259	1.09847	129.511	27.86	
185	2.30259	1.12168	130.769	30.4427	
186	2.30259	1.1455	132.081	33.0804	
187	2.30259	1.16505	133.438	35.763	
188	2.30259	1.19012	134.855	38.5033	
189	2.30259	1.21596	136.333	41.3032	
190	2.30259	1.24264	137.877	44.1645	
191	2.30259	1.26464	139.477	47.0764	
192	2.30259	1.29303	141.149	50.0537	
193	2.30259	1.32251	142.898	53.0989	
194	2.30259	1.34694	144.712	56.2004	
195	2.30259	1.37866	146.613	59.3748	
196	2.30259	1.41183	148.606	62.6257	
197	2.30259	1.43953	150.678	65.9403	
198	2.30259	1.47579	152.856	69.3385	
199	2.30259	1.5141	155.149	72.8248	
200	2.30259	1.54643	157.54	76.3856	
201	2.30259	1.58927	160.066	80.045	
202	2.30259	1.63524	162.74	83.8103	
203	2.30259	1.68494	165.579	87.69	
204	2.37955	1.72793	168.564	91.8017	
205	2.62467	1.78661	171.756	96.491	
206	2.99573	1.85218	175.187	102.04	
207	3.26194	1.91103	178.839	108.273	
208	3.4012	1.99539	182.821	115.06	
209	3.46574	2.09693	187.218	122.327	
210	3.91202	2.19728	192.046	130.923	
211	3.93378	2.36561	197.642	140.229	
212	4.35927	2.65209	204.676	151.79	

Data Set Standard Deviation = 1.01994
Numerator = 23040.3
Denominator = 44925.9
W Statistic = 0.512851 = 23040.3 / 44925.9

5% Critical value of 0.976 exceeds 0.512851
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.512851
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Copper

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	2.30259 J	201
	9/23/1999	2.19722 J	200
	3/15/2000	ND<2.30259	82.5
	9/24/2003	ND<2.30259	82.5
	3/11/2004	ND<2.30259	82.5
	10/12/2004	ND<2.30259	82.5
	4/1/2005	ND<2.30259	82.5
	10/25/2005	ND<2.30259	82.5
	4/29/2006	ND<2.30259	82.5
	11/18/2006	ND<2.30259	82.5
	5/23/2007	ND<2.30259	82.5
	11/28/2007	ND<2.30259	82.5
	6/5/2008	ND<2.30259	82.5
	11/20/2008	ND<2.30259	82.5
	6/11/2009	-0.693147 J	173
	11/16/2009	-1.20397 J	166
	6/30/2010	-1.04982 J H	169

Rank Sum = 1899
Rank Mean = 111.706

Background Rank Sum = 1899
Background Rank Mean = 111.706

Compliance Wells

Well ID	Date	Result	Rank
MW-6	7/20/1995	ND<2.30259	82.5
	8/24/1995	ND<2.30259	82.5
	9/28/1995	ND<2.30259	82.5
	10/26/1995	ND<2.30259	82.5
	11/19/1996	ND<2.30259	82.5
	12/19/1996	ND<2.30259	82.5
	3/24/1997	ND<2.30259	82.5
	9/24/1997	ND<2.30259	82.5
	4/7/1998	ND<2.30259	82.5
	9/23/1998	ND<2.30259	82.5
	3/16/1999	ND<2.30259	82.5
	9/23/1999	ND<2.30259	82.5
	3/15/2000	ND<2.30259	82.5
	9/24/2003	ND<2.30259	82.5
	3/11/2004	ND<2.30259	82.5
	10/12/2004	ND<2.30259	82.5
	4/1/2005	ND<2.30259	82.5
	10/25/2005	ND<2.30259	82.5
	4/29/2006	ND<2.30259	82.5
	11/18/2006	ND<2.30259	82.5
	5/23/2007	ND<2.30259	82.5

	11/28/2007	1.64094 J	192
	6/5/2008	ND<2.30259	82.5
	11/20/2008	ND<2.30259	82.5
	6/11/2009	0.182322	182
	11/16/2009	0.262364	184
	6/30/2010	0.470004 H	186

Rank Sum = 2641.5
Rank Mean = 97.8333

MW-9	7/20/1995	ND<2.30259	82.5
	8/24/1995	ND<2.30259	82.5
	9/28/1995	ND<2.30259	82.5
	10/26/1995	ND<2.30259	82.5
	11/19/1996	ND<2.30259	82.5
	12/19/1996	ND<2.30259	82.5
	3/24/1997	ND<2.30259	82.5
	9/24/1997	ND<2.30259	82.5
	4/7/1998	ND<2.30259	82.5
	9/23/1998	ND<2.30259	82.5
	3/16/1999	2.99573	206
	9/23/1999	ND<2.30259	82.5
	3/15/2000	ND<2.30259	82.5
	9/24/2003	ND<2.30259	82.5
	3/11/2004	ND<2.30259	82.5
	10/12/2004	ND<2.30259	82.5
	4/1/2005	ND<2.30259	82.5
	10/25/2005	ND<2.30259	82.5
	4/29/2006	-4.60517 J	165
	11/18/2006	2.62467	205
	5/23/2007	1.72098 J	193
	11/28/2007	ND<2.30259	82.5
	6/5/2008	ND<2.30259	82.5
	11/20/2008	ND<2.30259	82.5
	6/11/2009	-0.274437 J	179
	11/16/2009	-1.10866 J	168
	6/30/2010	0 H	181

Rank Sum = 2947
Rank Mean = 109.148

MW-10	7/20/1995	ND<2.30259	82.5
	8/24/1995	ND<2.30259	82.5
	9/28/1995	ND<2.30259	82.5
	10/26/1995	ND<2.30259	82.5
	11/19/1996	ND<2.30259	82.5
	12/19/1996	ND<2.30259	82.5
	3/24/1997	ND<2.30259	82.5
	9/24/1997	ND<2.30259	82.5
	4/7/1998	ND<2.30259	82.5
	9/23/1998	ND<2.30259	82.5
	3/16/1999	ND<2.30259	82.5
	9/23/1999	ND<2.30259	82.5
	3/15/2000	ND<2.30259	82.5
	9/24/2003	ND<2.30259	82.5
	3/11/2004	ND<2.30259	82.5
	10/12/2004	ND<2.30259	82.5
	4/1/2005	ND<2.30259	82.5
	10/25/2005	ND<2.30259	82.5
	4/29/2006	ND<2.30259	82.5
	11/18/2006	ND<2.30259	82.5
	5/23/2007	1.89311 J	196
	11/28/2007	ND<2.30259	82.5
	6/5/2008	ND<2.30259	82.5

	11/20/2008	ND<2.30259	82.5
	6/11/2009	-0.941609 J	172
	11/16/2009	-0.994252 J	170
	6/30/2010	-0.0725707 J H	180

Rank Sum = 2615.5
Rank Mean = 96.8704

MW-12AR	3/16/1999	ND<2.30259	82.5
	9/23/1999	ND<2.30259	82.5
	3/15/2000	ND<2.30259	82.5
	9/24/2003	ND<2.30259	82.5
	3/11/2004	ND<2.30259	82.5
	10/12/2004	ND<2.30259	82.5
	4/1/2005	ND<2.30259	82.5
	10/25/2005	ND<2.30259	82.5
	4/29/2006	ND<2.30259	82.5
	11/18/2006	ND<2.30259	82.5
	5/23/2007	ND<2.30259	82.5
	11/28/2007	ND<2.30259	82.5
	6/5/2008	ND<2.30259	82.5
	11/20/2008	ND<2.30259	82.5
	6/11/2009	-0.994252 J	171
	11/16/2009	-0.634878 J	174
	6/30/2010	0.693147	188

Rank Sum = 1688
Rank Mean = 99.2941

MW-12BR	3/16/1999	ND<2.30259	82.5
	9/23/1999	ND<2.30259	82.5
	3/15/2000	ND<2.30259	82.5
	9/24/2003	ND<2.30259	82.5
	3/11/2004	ND<2.30259	82.5
	10/12/2004	ND<2.30259	82.5
	4/1/2005	ND<2.30259	82.5
	10/25/2005	ND<2.30259	82.5
	4/29/2006	ND<2.30259	82.5
	11/18/2006	ND<2.30259	82.5
	5/23/2007	ND<2.30259	82.5
	11/28/2007	1.79176 J	194
	6/5/2008	ND<2.30259	82.5
	11/20/2008	ND<2.30259	82.5
	6/11/2009	0.470004	187
	11/16/2009	0.182322	183
	6/30/2010	1.22378	191

Rank Sum = 1827.5
Rank Mean = 107.5

MW-11R	7/20/1995	ND<2.30259	82.5
	8/24/1995	ND<2.30259	82.5
	9/28/1995	ND<2.30259	82.5
	10/26/1995	ND<2.30259	82.5
	11/19/1996	ND<2.30259	82.5
	12/19/1996	ND<2.30259	82.5
	3/24/1997	ND<2.30259	82.5
	9/24/1997	ND<2.30259	82.5
	4/7/1998	ND<2.30259	82.5
	9/23/1998	ND<2.30259	82.5
	3/16/1999	ND<2.30259	82.5
	9/23/1999	3.46574	209
	3/15/2000	ND<2.30259	82.5
	9/24/2003	ND<2.30259	82.5
	3/11/2004	ND<2.30259	82.5

	10/12/2004	ND<2.30259	82.5
	4/1/2005	ND<2.30259	82.5
	10/25/2005	ND<2.30259	82.5
	4/29/2006	2.30259 J	202
	11/18/2006	ND<2.30259	82.5
	5/23/2007	ND<2.30259	82.5
	11/28/2007	2.07944 J	199
	6/5/2008	ND<2.30259	82.5
	11/20/2008	ND<2.30259	82.5
	6/11/2009	-0.527633 J	175
	11/16/2009	-0.314711 J	178
	6/30/2010	-0.510826 J H	176

Rank Sum = 2871.5
Rank Mean = 106.352

MW-7	7/20/1995	ND<2.30259	82.5
	8/24/1995	ND<2.30259	82.5
	9/28/1995	4.35927	212
	10/26/1995	3.26194	207
	11/19/1996	ND<2.30259	82.5
	12/19/1996	ND<2.30259	82.5
	3/24/1997	ND<2.30259	82.5
	9/24/1997	ND<2.30259	82.5
	4/7/1998	ND<2.30259	82.5
	9/23/1998	ND<2.30259	82.5
	3/16/1999	3.91202	210
	9/23/1999	2.30259 J	203
	3/15/2000	ND<2.30259	82.5
	9/24/2003	ND<2.30259	82.5
	3/11/2004	ND<2.30259	82.5
	10/12/2004	ND<2.30259	82.5
	4/1/2005	ND<2.30259	82.5
	10/25/2005	ND<2.30259	82.5
	4/29/2006	ND<2.30259	82.5
	11/18/2006	ND<2.30259	82.5
	5/23/2007	2.37955	204
	11/28/2007	1.95445 J	197
	6/5/2008	2.02155 J	198
	11/20/2008	1.79176 J	195
	6/11/2009	0.832909	190
	11/16/2009	0.336472	185
	6/30/2010	0.741937 H	189

Rank Sum = 3510
Rank Mean = 130

MW-8	7/20/1995	ND<2.30259	82.5
	8/24/1995	ND<2.30259	82.5
	9/28/1995	3.93378	211
	10/26/1995	ND<2.30259	82.5
	11/19/1996	ND<2.30259	82.5
	12/19/1996	ND<2.30259	82.5
	3/24/1997	ND<2.30259	82.5
	9/24/1997	ND<2.30259	82.5
	4/7/1998	ND<2.30259	82.5
	9/23/1998	ND<2.30259	82.5
	3/16/1999	3.4012	208
	9/23/1999	ND<2.30259	82.5
	3/15/2000	ND<2.30259	82.5
	9/24/2003	ND<2.30259	82.5
	3/11/2004	ND<2.30259	82.5
	10/12/2004	ND<2.30259	82.5
	4/1/2005	ND<2.30259	82.5

10/25/2005	ND<2.30259	82.5
4/29/2006	ND<2.30259	82.5
11/18/2006	ND<2.30259	82.5
5/23/2007	ND<2.30259	82.5
11/28/2007	ND<2.30259	82.5
6/5/2008	ND<2.30259	82.5
11/20/2008	ND<2.30259	82.5
6/11/2009	-1.17118 J	167
6/30/2010	-0.478036 J H	177

Rank Sum = 2578
Rank Mean = 99.1538

Calculation Results:

Kruskal-Wallis H Statistic = 5.95162
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 11.0817
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
5.95162 < 15.5073 indicating no significant group difference at 5% significance level
11.0817 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ppb)

Parameter: Iron

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 260
Total Non-Detect: 235
Percent Non-Detects: 90.3846%
Total Background Measurements: 22
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	22	22 (100%)	3/16/1999	ND<10	ND<10
			9/23/1999	ND<10	ND<10
			3/15/2000	ND<10	ND<10
			9/24/2003	ND<10	ND<10
			3/11/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/25/2005	ND<10	ND<10
			10/25/2005	ND<10	ND<10
			4/29/2006	ND<10	ND<10
			4/29/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			5/23/2007	ND<10	ND<10
			5/23/2007	ND<10	ND<10
			11/28/2007	ND<10	ND<10
			11/28/2007	ND<10	ND<10
			6/5/2008	ND<10	ND<10
			6/5/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12BR	23	22 (95.6522%)	3/16/1999	ND<10	ND<10
			9/23/1999	ND<10	ND<10
			3/15/2000	ND<10	ND<10
			9/24/2003	ND<10	ND<10
			3/11/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/25/2005	ND<10	ND<10
			10/25/2005	ND<10	ND<10
			4/29/2006	ND<10	ND<10
			4/29/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			5/23/2007	ND<10	ND<10
			5/23/2007	ND<10	ND<10
			11/28/2007	ND<10	ND<10
			11/28/2007	ND<10	ND<10
			6/5/2008	ND<10	ND<10

			6/5/2008	ND<10	ND<10		
			11/20/2008		ND<10	ND<10	
			11/20/2008		ND<10	ND<10	
			6/30/2010		52	52	
MW-12AR		23	22 (95.6522%)		3/16/1999		ND<10 ND<10
			9/23/1999		ND<10	ND<10	
			3/15/2000		ND<10	ND<10	
			9/24/2003		ND<10	ND<10	
			3/11/2004		ND<10	ND<10	
			10/12/2004		ND<10	ND<10	
			4/1/2005	ND<10	ND<10		
			4/1/2005	ND<10	ND<10		
			10/25/2005		ND<10	ND<10	
			10/25/2005		ND<10	ND<10	
			4/29/2006		ND<10	ND<10	
			4/29/2006		ND<10	ND<10	
			11/18/2006		ND<10	ND<10	
			11/18/2006		ND<10	ND<10	
			5/23/2007		ND<10	ND<10	
			5/23/2007		ND<10	ND<10	
			11/28/2007		ND<10	ND<10	
			11/28/2007		ND<10	ND<10	
			6/5/2008	ND<10	ND<10		
			6/5/2008	ND<10	ND<10		
			11/20/2008		ND<10	ND<10	
			11/20/2008		ND<10	ND<10	
			6/30/2010		100	100	
MW-9	32	28 (87.5%)		7/20/1995		5340	5340
			8/24/1995		4430	4430	
			9/28/1995		3080	3080	
			10/26/1995		5310	5310	
			11/19/1996		ND<10	ND<10	
			12/19/1996		ND<10	ND<10	
			3/24/1997		ND<10	ND<10	
			9/24/1997		ND<10	ND<10	
			4/7/1998	ND<10	ND<10		
			9/23/1998		ND<10	ND<10	
			3/16/1999		ND<10	ND<10	
			9/23/1999		ND<10	ND<10	
			3/15/2000		ND<10	ND<10	
			9/24/2003		ND<10	ND<10	
			3/11/2004		ND<10	ND<10	
			10/12/2004		ND<10	ND<10	
			4/1/2005	ND<10	ND<10		
			4/1/2005	ND<10	ND<10		
			10/25/2005		ND<10	ND<10	
			10/25/2005		ND<10	ND<10	
			4/29/2006		ND<10	ND<10	
			4/29/2006		ND<10	ND<10	
			11/18/2006		ND<10	ND<10	
			11/18/2006		ND<10	ND<10	
			5/23/2007		ND<10	ND<10	
			5/23/2007		ND<10	ND<10	
			11/28/2007		ND<10	ND<10	
			11/28/2007		ND<10	ND<10	
			6/5/2008	ND<10	ND<10		
			6/5/2008	ND<10	ND<10		
			11/20/2008		ND<10	ND<10	
			11/20/2008		ND<10	ND<10	

MW-11R	32	28 (87.5%)	7/20/1995		6860	6860
			8/24/1995		5440	5440
			9/28/1995		5950	5950
			10/26/1995		28200	28200
			11/19/1996		ND<10	ND<10
			12/19/1996		ND<10	ND<10
			3/24/1997		ND<10	ND<10
			9/24/1997		ND<10	ND<10
			4/7/1998	ND<10	ND<10	
			9/23/1998		ND<10	ND<10
			3/16/1999		ND<10	ND<10
			9/23/1999		ND<10	ND<10
			3/15/2000		ND<10	ND<10
			9/24/2003		ND<10	ND<10
			3/11/2004		ND<10	ND<10
			10/12/2004		ND<10	ND<10
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005		ND<10	ND<10
			10/25/2005		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			5/23/2007		ND<10	ND<10
			5/23/2007		ND<10	ND<10
			11/28/2007		ND<10	ND<10
			11/28/2007		ND<10	ND<10
			6/5/2008	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008		ND<10	ND<10
			11/20/2008		ND<10	ND<10
MW-7	32	28 (87.5%)	7/20/1995		3700	3700
			8/24/1995		6880	6880
			9/28/1995		39600	39600
			10/26/1995		17500	17500
			11/19/1996		ND<10	ND<10
			12/19/1996		ND<10	ND<10
			3/24/1997		ND<10	ND<10
			9/24/1997		ND<10	ND<10
			4/7/1998	ND<10	ND<10	
			9/23/1998		ND<10	ND<10
			3/16/1999		ND<10	ND<10
			9/23/1999		ND<10	ND<10
			3/15/2000		ND<10	ND<10
			9/24/2003		ND<10	ND<10
			3/11/2004		ND<10	ND<10
			10/12/2004		ND<10	ND<10
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005		ND<10	ND<10
			10/25/2005		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			5/23/2007		ND<10	ND<10
			5/23/2007		ND<10	ND<10
			11/28/2007		ND<10	ND<10
			11/28/2007		ND<10	ND<10
			6/5/2008	ND<10	ND<10	

			6/5/2008	ND<10	ND<10	
			11/20/2008		ND<10	ND<10
			11/20/2008		ND<10	ND<10
MW-10	32	29 (90.625%)	7/20/1995		2630	2630
			8/24/1995		6600	6600
			9/28/1995		6120	6120
			10/26/1995		ND<10	ND<10
			11/19/1996		ND<10	ND<10
			12/19/1996		ND<10	ND<10
			3/24/1997		ND<10	ND<10
			9/24/1997		ND<10	ND<10
			4/7/1998	ND<10	ND<10	
			9/23/1998		ND<10	ND<10
			3/16/1999		ND<10	ND<10
			9/23/1999		ND<10	ND<10
			3/15/2000		ND<10	ND<10
			9/24/2003		ND<10	ND<10
			3/11/2004		ND<10	ND<10
			10/12/2004		ND<10	ND<10
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005		ND<10	ND<10
			10/25/2005		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			5/23/2007		ND<10	ND<10
			5/23/2007		ND<10	ND<10
			11/28/2007		ND<10	ND<10
			11/28/2007		ND<10	ND<10
			6/5/2008	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008		ND<10	ND<10
			11/20/2008		ND<10	ND<10
MW-8	32	28 (87.5%)	7/20/1995		1910	1910
			8/24/1995		2680	2680
			9/28/1995		41700	41700
			10/26/1995		7410	7410
			11/19/1996		ND<10	ND<10
			12/19/1996		ND<10	ND<10
			3/24/1997		ND<10	ND<10
			9/24/1997		ND<10	ND<10
			4/7/1998	ND<10	ND<10	
			9/23/1998		ND<10	ND<10
			3/16/1999		ND<10	ND<10
			9/23/1999		ND<10	ND<10
			3/15/2000		ND<10	ND<10
			9/24/2003		ND<10	ND<10
			3/11/2004		ND<10	ND<10
			10/12/2004		ND<10	ND<10
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005		ND<10	ND<10
			10/25/2005		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			5/23/2007		ND<10	ND<10

			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
MW-6	32	28 (87.5%)	7/20/1995	3500	3500	
			8/24/1995	4220	4220	
			9/28/1995	381	381	
			10/26/1995	7110	7110	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	ND<10	ND<10	
			9/23/1999	ND<10	ND<10	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008	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: Iron

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 260

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	5	-2.747777	55021	-13.7388
2	5	-2.457271	3.5884	-26.0252
3	5	-2.290361	8.8342	-37.477
4	5	-2.170092	3.5435	-48.3275
5	5	-2.074852	7.8485	-58.7017
6	5	-2.014093	1.905	-68.7722
7	5	-1.943143	5.6808	-78.4878
8	5	-1.880793	9.2182	-87.8918
9	5	-1.825014	2.5488	-97.0168
10	5	-1.774384	5.6972	-105.889
11	5	-1.727934	8.683	-114.528
12	5	-1.6954	51.5574	-123.005
13	5	-1.654635	4.2951	-131.278
14	5	-1.616445	6.908	-139.361
15	5	-1.580475	9.4059	-147.263
16	5	-1.546436	1.7973	-154.995
17	5	-1.5141	64.0898	-162.566
18	5	-1.490856	6.3125	-170.02
19	5	-1.461066	8.4472	-177.325
20	5	-1.4325	70.4992	-184.488
21	5	-1.405077	2.4735	-191.513
22	5	-1.378667	4.3742	-198.406
23	5	-1.353177	6.2053	-205.172
24	5	-1.334627	7.9865	-211.845
25	5	-1.310587	9.7041	-218.398
26	5	-1.287278	1.3612	-224.835
27	5	-1.264648	2.9605	-231.158
28	5	-1.242648	4.5046	-237.371
29	5	-1.221238	5.996	-243.477
30	5	-1.205538	7.4493	-249.505
31	5	-1.185048	8.8537	-255.43
32	5	-1.165059	0.211	-261.255
33	5	-1.1455	91.5232	-266.983
34	5	-1.126399	2.7919	-272.615
35	5	-1.107689	4.0189	-278.153
36	5	-1.0939	95.2155	-283.623
37	5	-1.075849	6.3729	-289.002
38	5	-1.058129	7.4925	-294.292
39	5	-1.040739	8.5757	-299.496
40	5	-1.023659	9.6235	-304.614
41	5	-1.00687	100.637	-309.649
42	5	-0.994457	101.626	-314.621
43	5	-0.97815	102.583	-319.512
44	5	-0.9621	103.509	-324.322
45	5	-0.946291	104.404	-329.054
46	5	-0.930718	105.27	-333.707
47	5	-0.915365	106.108	-338.284
48	5	-0.903992	106.925	-342.804
49	5	-0.889006	107.716	-347.249

50	5	-0.874218	108.48	-351.62
51	5	-0.859618	109.219	-355.918
52	5	-0.845198	109.933	-360.144
53	5	-0.830953	110.624	-364.299
54	5	-0.820379	111.297	-368.401
55	5	-0.806422	111.947	-372.433
56	5	-0.792618	112.575	-376.396
57	5	-0.778966	113.182	-380.291
58	5	-0.765456	113.768	-384.118
59	5	-0.752084	114.334	-387.879
60	5	-0.742143	114.885	-391.589
61	5	-0.729003	115.416	-395.234
62	5	-0.715986	115.929	-398.814
63	5	-0.703089	116.423	-402.33
64	5	-0.690309	116.899	-405.781
65	5	-0.677639	117.359	-409.17
66	5	-0.668209	117.805	-412.511
67	5	-0.655726	118.235	-415.789
68	5	-0.643345	118.649	-419.006
69	5	-0.631062	119.047	-422.161
70	5	-0.618872	119.43	-425.256
71	5	-0.606775	119.798	-428.289
72	5	-0.597761	120.156	-431.278
73	5	-0.585815	120.499	-434.207
74	5	-0.573953	120.828	-437.077
75	5	-0.56217	121.144	-439.888
76	5	-0.550465	121.447	-442.64
77	5	-0.538836	121.738	-445.334
78	5	-0.530162	122.019	-447.985
79	5	-0.518658	122.288	-450.579
80	5	-0.507221	122.545	-453.115
81	5	-0.49585	122.791	-455.594
82	5	-0.484544	123.026	-458.017
83	5	-0.473299	123.25	-460.383
84	5	-0.464904	123.466	-462.708
85	5	-0.453763	123.672	-464.976
86	5	-0.442676	123.868	-467.19
87	5	-0.431644	124.054	-469.348
88	5	-0.420664	124.231	-471.451
89	5	-0.412463	124.401	-473.514
90	5	-0.401571	124.562	-475.522
91	5	-0.390726	124.715	-477.475
92	5	-0.379927	124.859	-479.375
93	5	-0.369171	124.996	-481.221
94	5	-0.358459	125.124	-483.013
95	5	-0.350451	125.247	-484.765
96	5	-0.33981	125.363	-486.464
97	5	-0.329206	125.471	-488.11
98	5	-0.318639	125.572	-489.703
99	5	-0.308108	125.667	-491.244
100	5	-0.297612	125.756	-492.732
101	5	-0.28976	125.84	-494.181
102	5	-0.279319	125.918	-495.577
103	5	-0.268908	125.99	-496.922
104	5	-0.258527	126.057	-498.215
105	5	-0.248174	126.119	-499.456
106	5	-0.237847	126.175	-500.645
107	5	-0.230118	126.228	-501.795
108	5	-0.219834	126.277	-502.895
109	5	-0.209575	126.32	-503.942
110	5	-0.199336	126.36	-504.939
111	5	-0.189118	126.396	-505.885

112	5	-0.17892	126.428	-506.779
113	5	-0.171285	126.457	-507.636
114	5	-0.161119	126.483	-508.441
115	5	-0.150969	126.506	-509.196
116	5	-0.140835	126.526	-509.9
117	5	-0.130716	126.543	-510.554
118	5	-0.12061	126.557	-511.157
119	5	-0.113039	126.57	-511.722
120	5	-0.102953	126.581	-512.237
121	5	-0.0928787	126.59	-512.701
122	5	-0.0828129	126.596	-513.115
123	5	-0.0727562	126.602	-513.479
124	5	-0.0627062	126.606	-513.793
125	5	-0.0551734	126.609	-514.069
126	5	-0.0451348	126.611	-514.294
127	5	-0.0350997	126.612	-514.47
128	5	-0.0250691	126.613	-514.595
129	5	-0.0150408	126.613	-514.67
130	5	-0.00501359	126.613	-514.695
131	5	0.00501359	126.613	-514.67
132	5	0.0150408	126.613	-514.595
133	5	0.0250691	126.614	-514.47
134	5	0.0350997	126.615	-514.294
135	5	0.0451348	126.617	-514.069
136	5	0.0551734	126.62	-513.793
137	5	0.0627062	126.624	-513.479
138	5	0.0727562	126.629	-513.115
139	5	0.0828129	126.636	-512.701
140	5	0.0928787	126.645	-512.237
141	5	0.102953	126.655	-511.722
142	5	0.113039	126.668	-511.157
143	5	0.12061	126.683	-510.554
144	5	0.130716	126.7	-509.9
145	5	0.140835	126.72	-509.196
146	5	0.150969	126.742	-508.441
147	5	0.161119	126.768	-507.636
148	5	0.171285	126.798	-506.779
149	5	0.17892	126.83	-505.885
150	5	0.189118	126.865	-504.939
151	5	0.199336	126.905	-503.942
152	5	0.209575	126.949	-502.895
153	5	0.219834	126.997	-501.795
154	5	0.230118	127.05	-500.645
155	5	0.237847	127.107	-499.456
156	5	0.248174	127.168	-498.215
157	5	0.258527	127.235	-496.922
158	5	0.268908	127.308	-495.577
159	5	0.279319	127.386	-494.181
160	5	0.28976	127.47	-492.732
161	5	0.297612	127.558	-491.244
162	5	0.308108	127.653	-489.703
163	5	0.318639	127.755	-488.11
164	5	0.329206	127.863	-486.464
165	5	0.33981	127.979	-484.765
166	5	0.350451	128.101	-483.013
167	5	0.358459	128.23	-481.221
168	5	0.369171	128.366	-479.375
169	5	0.379927	128.51	-477.475
170	5	0.390726	128.663	-475.522
171	5	0.401571	128.824	-473.514
172	5	0.412463	128.994	-471.451
173	5	0.420664	129.171	-469.348

174	5	0.431644	129.358	-467.19
175	5	0.442676	129.554	-464.976
176	5	0.453763	129.76	-462.708
177	5	0.464904	129.976	-460.383
178	5	0.473299	130.2	-458.017
179	5	0.484544	130.435	-455.594
180	5	0.49585	130.68	-453.115
181	5	0.507221	130.938	-450.579
182	5	0.518658	131.207	-447.985
183	5	0.530162	131.488	-445.334
184	5	0.538836	131.778	-442.64
185	5	0.550465	132.081	-439.888
186	5	0.56217	132.397	-437.077
187	5	0.573953	132.727	-434.207
188	5	0.585815	133.07	-431.278
189	5	0.597761	133.427	-428.289
190	5	0.606775	133.795	-425.256
191	5	0.618872	134.178	-422.161
192	5	0.631062	134.577	-419.006
193	5	0.643345	134.99	-415.789
194	5	0.655726	135.42	-412.511
195	5	0.668209	135.867	-409.17
196	5	0.677639	136.326	-405.781
197	5	0.690309	136.803	-402.33
198	5	0.703089	137.297	-398.814
199	5	0.715986	137.81	-395.234
200	5	0.729003	138.341	-391.589
201	5	0.742143	138.892	-387.879
202	5	0.752084	139.457	-384.118
203	5	0.765456	140.043	-380.291
204	5	0.778966	140.65	-376.396
205	5	0.792618	141.278	-372.433
206	5	0.806422	141.929	-368.401
207	5	0.820379	142.602	-364.299
208	5	0.830953	143.292	-360.144
209	5	0.845198	144.007	-355.918
210	5	0.859618	144.746	-351.62
211	5	0.874218	145.51	-347.249
212	5	0.889006	146.3	-342.804
213	5	0.903992	147.117	-338.284
214	5	0.915365	147.955	-333.707
215	5	0.930718	148.821	-329.054
216	5	0.946291	149.717	-324.322
217	5	0.9621	150.643	-319.512
218	5	0.97815	151.599	-314.621
219	5	0.994457	152.588	-309.649
220	5	1.00687	153.602	-304.614
221	5	1.02365	154.65	-299.496
222	5	1.04073	155.733	-294.292
223	5	1.05812	156.853	-289.002
224	5	1.07584	158.01	-283.623
225	5	1.0939	159.207	-278.153
226	5	1.10768	160.434	-272.615
227	5	1.12639	161.702	-266.983
228	5	1.1455	163.015	-261.255
229	5	1.16505	164.372	-255.43
230	5	1.18504	165.776	-249.505
231	5	1.20553	167.23	-243.477
232	5	1.22123	168.721	-237.371
233	5	1.24264	170.265	-231.158
234	5	1.26464	171.864	-224.835
235	5	1.28727	173.521	-218.398

236	52	1.31058	175.239	-150.248
237	100	1.33462	177.02	-16.7857
238	381	1.35317	178.851	498.773
239	1910	1.37866	180.752	3132.01
240	2630	1.40507	182.726	6827.35
241	2680	1.4325	184.778	10666.5
242	3080	1.46106	186.913	15166.5
243	3500	1.49085	189.136	20384.5
244	3700	1.5141	191.428	25986.7
245	4220	1.54643	193.82	32512.6
246	4430	1.58047	196.318	39514.1
247	5310	1.61644	198.93	48097.4
248	5340	1.65463	201.668	56933.1
249	5440	1.6954	204.543	66156
250	5950	1.72793	207.528	76437.2
251	6120	1.77438	210.677	87296.4
252	6600	1.82501	214.007	99341.5
253	6860	1.88079	217.545	112244
254	6880	1.94314	221.321	125612
255	7110	2.01409	225.377	139933
256	7410	2.07485	229.682	155307
257	17500	2.17009	234.391	193284
258	28200	2.29036	239.637	257872
259	39600	2.45727	245.675	355180
260	41700	2.74777	253.226	469762

Data Set Standard Deviation = 4268.64
Numerator = 2.20676e+011
Denominator = 1.19505e+012
W Statistic = 0.184659 = 2.20676e+011 / 1.19505e+012

5% Critical value of 0.976 exceeds 0.184659
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.184659
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Iron

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 260

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1.60944	-2.747777.55021	-4.42236	
2	1.60944	-2.4572713.5884	-8.37719	
3	1.60944	-2.2903618.8342	-12.0634	
4	1.60944	-2.1700923.5435	-15.556	
5	1.60944	-2.0748527.8485	-18.8953	
6	1.60944	-2.0140931.905	-22.1369	
7	1.60944	-1.9431435.6808	-25.2643	
8	1.60944	-1.8807939.2182	-28.2913	
9	1.60944	-1.8250142.5488	-31.2285	
10	1.60944	-1.7743845.6972	-34.0843	
11	1.60944	-1.7279348.683	-36.8653	
12	1.60944	-1.6954 51.5574	-39.5939	
13	1.60944	-1.6546354.2951	-42.2569	
14	1.60944	-1.6164456.908	-44.8585	
15	1.60944	-1.5804759.4059	-47.4021	
16	1.60944	-1.5464361.7973	-49.891	
17	1.60944	-1.5141 64.0898	-52.3279	
18	1.60944	-1.4908566.3125	-54.7273	
19	1.60944	-1.4610668.4472	-57.0788	
20	1.60944	-1.4325 70.4992	-59.3843	
21	1.60944	-1.4050772.4735	-61.6457	
22	1.60944	-1.3786674.3742	-63.8646	
23	1.60944	-1.3531776.2053	-66.0424	
24	1.60944	-1.3346277.9865	-68.1904	
25	1.60944	-1.3105879.7041	-70.2997	
26	1.60944	-1.2872781.3612	-72.3715	
27	1.60944	-1.2646482.9605	-74.4068	
28	1.60944	-1.2426484.5046	-76.4068	
29	1.60944	-1.2212385.996	-78.3723	
30	1.60944	-1.2055387.4493	-80.3125	
31	1.60944	-1.1850488.8537	-82.2198	
32	1.60944	-1.1650590.211	-84.0948	
33	1.60944	-1.1455 91.5232	-85.9385	
34	1.60944	-1.1263992.7919	-87.7513	
35	1.60944	-1.1076894.0189	-89.5341	
36	1.60944	-1.0939 95.2155	-91.2946	
37	1.60944	-1.0758496.3729	-93.0261	
38	1.60944	-1.0581297.4925	-94.7291	
39	1.60944	-1.0407398.5757	-96.4041	
40	1.60944	-1.0236599.6235	-98.0516	
41	1.60944	-1.00687100.637	-99.6721	
42	1.60944	-0.994457	101.626	-101.273
43	1.60944	-0.97815102.583	-102.847	
44	1.60944	-0.9621 103.509	-104.395	
45	1.60944	-0.946291	104.404	-105.918
46	1.60944	-0.930718	105.27	-107.416
47	1.60944	-0.915365	106.108	-108.889
48	1.60944	-0.903992	106.925	-110.344
49	1.60944	-0.889006	107.716	-111.775

50	1.60944	-0.874218	108.48	-113.182
51	1.60944	-0.859618	109.219	-114.566
52	1.60944	-0.845198	109.933	-115.926
53	1.60944	-0.830953	110.624	-117.263
54	1.60944	-0.820379	111.297	-118.584
55	1.60944	-0.806422	111.947	-119.882
56	1.60944	-0.792618	112.575	-121.157
57	1.60944	-0.778966	113.182	-122.411
58	1.60944	-0.765456	113.768	-123.643
59	1.60944	-0.752084	114.334	-124.853
60	1.60944	-0.742143	114.885	-126.048
61	1.60944	-0.729003	115.416	-127.221
62	1.60944	-0.715986	115.929	-128.373
63	1.60944	-0.703089	116.423	-129.505
64	1.60944	-0.690309	116.899	-130.616
65	1.60944	-0.677639	117.359	-131.707
66	1.60944	-0.668209	117.805	-132.782
67	1.60944	-0.655726	118.235	-133.837
68	1.60944	-0.643345	118.649	-134.873
69	1.60944	-0.631062	119.047	-135.888
70	1.60944	-0.618872	119.43	-136.884
71	1.60944	-0.606775	119.798	-137.861
72	1.60944	-0.597761	120.156	-138.823
73	1.60944	-0.585815	120.499	-139.766
74	1.60944	-0.573953	120.828	-140.69
75	1.60944	-0.56217	121.144	-141.594
76	1.60944	-0.550465	121.447	-142.48
77	1.60944	-0.538836	121.738	-143.348
78	1.60944	-0.530162	122.019	-144.201
79	1.60944	-0.518658	122.288	-145.036
80	1.60944	-0.507221	122.545	-145.852
81	1.60944	-0.49585	122.791	-146.65
82	1.60944	-0.484544	123.026	-147.43
83	1.60944	-0.473299	123.25	-148.192
84	1.60944	-0.464904	123.466	-148.94
85	1.60944	-0.453763	123.672	-149.67
86	1.60944	-0.442676	123.868	-150.383
87	1.60944	-0.431644	124.054	-151.077
88	1.60944	-0.420664	124.231	-151.754
89	1.60944	-0.412463	124.401	-152.418
90	1.60944	-0.401571	124.562	-153.064
91	1.60944	-0.390726	124.715	-153.693
92	1.60944	-0.379927	124.859	-154.305
93	1.60944	-0.369171	124.996	-154.899
94	1.60944	-0.358459	125.124	-155.476
95	1.60944	-0.350451	125.247	-156.04
96	1.60944	-0.33981	125.363	-156.587
97	1.60944	-0.329206	125.471	-157.117
98	1.60944	-0.318639	125.572	-157.629
99	1.60944	-0.308108	125.667	-158.125
100	1.60944	-0.297612	125.756	-158.604
101	1.60944	-0.28976	125.84	-159.071
102	1.60944	-0.279319	125.918	-159.52
103	1.60944	-0.268908	125.99	-159.953
104	1.60944	-0.258527	126.057	-160.369
105	1.60944	-0.248174	126.119	-160.769
106	1.60944	-0.237847	126.175	-161.151
107	1.60944	-0.230118	126.228	-161.522
108	1.60944	-0.219834	126.277	-161.876
109	1.60944	-0.209575	126.32	-162.213
110	1.60944	-0.199336	126.36	-162.534
111	1.60944	-0.189118	126.396	-162.838

112	1.60944	-0.17892	126.428	-163.126
113	1.60944	-0.171285	126.457	-163.402
114	1.60944	-0.161119	126.483	-163.661
115	1.60944	-0.150969	126.506	-163.904
116	1.60944	-0.140835	126.526	-164.131
117	1.60944	-0.130716	126.543	-164.341
118	1.60944	-0.12061	126.557	-164.535
119	1.60944	-0.113039	126.57	-164.717
120	1.60944	-0.102953	126.581	-164.883
121	1.60944	-0.0928787	126.59	-165.032
122	1.60944	-0.0828129	126.596	-165.165
123	1.60944	-0.0727562	126.602	-165.283
124	1.60944	-0.0627062	126.606	-165.383
125	1.60944	-0.0551734	126.609	-165.472
126	1.60944	-0.0451348	126.611	-165.545
127	1.60944	-0.0350997	126.612	-165.601
128	1.60944	-0.0250691	126.613	-165.642
129	1.60944	-0.0150408	126.613	-165.666
130	1.60944	-0.00501359	126.613	-165.674
131	1.60944	0.00501359	126.613	-165.666
132	1.60944	0.0150408	126.613	-165.642
133	1.60944	0.0250691	126.614	-165.601
134	1.60944	0.0350997	126.615	-165.545
135	1.60944	0.0451348	126.617	-165.472
136	1.60944	0.0551734	126.62	-165.383
137	1.60944	0.0627062	126.624	-165.283
138	1.60944	0.0727562	126.629	-165.165
139	1.60944	0.0828129	126.636	-165.032
140	1.60944	0.0928787	126.645	-164.883
141	1.60944	0.102953	126.655	-164.717
142	1.60944	0.113039	126.668	-164.535
143	1.60944	0.12061	126.683	-164.341
144	1.60944	0.130716	126.7	-164.131
145	1.60944	0.140835	126.72	-163.904
146	1.60944	0.150969	126.742	-163.661
147	1.60944	0.161119	126.768	-163.402
148	1.60944	0.171285	126.798	-163.126
149	1.60944	0.17892	126.83	-162.838
150	1.60944	0.189118	126.865	-162.534
151	1.60944	0.199336	126.905	-162.213
152	1.60944	0.209575	126.949	-161.876
153	1.60944	0.219834	126.997	-161.522
154	1.60944	0.230118	127.05	-161.151
155	1.60944	0.237847	127.107	-160.769
156	1.60944	0.248174	127.168	-160.369
157	1.60944	0.258527	127.235	-159.953
158	1.60944	0.268908	127.308	-159.52
159	1.60944	0.279319	127.386	-159.071
160	1.60944	0.28976	127.47	-158.604
161	1.60944	0.297612	127.558	-158.125
162	1.60944	0.308108	127.653	-157.629
163	1.60944	0.318639	127.755	-157.117
164	1.60944	0.329206	127.863	-156.587
165	1.60944	0.33981	127.979	-156.04
166	1.60944	0.350451	128.101	-155.476
167	1.60944	0.358459	128.23	-154.899
168	1.60944	0.369171	128.366	-154.305
169	1.60944	0.379927	128.51	-153.693
170	1.60944	0.390726	128.663	-153.064
171	1.60944	0.401571	128.824	-152.418
172	1.60944	0.412463	128.994	-151.754
173	1.60944	0.420664	129.171	-151.077

174	1.60944	0.431644		129.358	-150.383
175	1.60944	0.442676		129.554	-149.67
176	1.60944	0.453763		129.76	-148.94
177	1.60944	0.464904		129.976	-148.192
178	1.60944	0.473299		130.2	-147.43
179	1.60944	0.484544		130.435	-146.65
180	1.60944	0.49585	130.68	-145.852	
181	1.60944	0.507221		130.938	-145.036
182	1.60944	0.518658		131.207	-144.201
183	1.60944	0.530162		131.488	-143.348
184	1.60944	0.538836		131.778	-142.48
185	1.60944	0.550465		132.081	-141.594
186	1.60944	0.56217	132.397	-140.69	
187	1.60944	0.573953		132.727	-139.766
188	1.60944	0.585815		133.07	-138.823
189	1.60944	0.597761		133.427	-137.861
190	1.60944	0.606775		133.795	-136.884
191	1.60944	0.618872		134.178	-135.888
192	1.60944	0.631062		134.577	-134.873
193	1.60944	0.643345		134.99	-133.837
194	1.60944	0.655726		135.42	-132.782
195	1.60944	0.668209		135.867	-131.707
196	1.60944	0.677639		136.326	-130.616
197	1.60944	0.690309		136.803	-129.505
198	1.60944	0.703089		137.297	-128.373
199	1.60944	0.715986		137.81	-127.221
200	1.60944	0.729003		138.341	-126.048
201	1.60944	0.742143		138.892	-124.853
202	1.60944	0.752084		139.457	-123.643
203	1.60944	0.765456		140.043	-122.411
204	1.60944	0.778966		140.65	-121.157
205	1.60944	0.792618		141.278	-119.882
206	1.60944	0.806422		141.929	-118.584
207	1.60944	0.820379		142.602	-117.263
208	1.60944	0.830953		143.292	-115.926
209	1.60944	0.845198		144.007	-114.566
210	1.60944	0.859618		144.746	-113.182
211	1.60944	0.874218		145.51	-111.775
212	1.60944	0.889006		146.3	-110.344
213	1.60944	0.903992		147.117	-108.889
214	1.60944	0.915365		147.955	-107.416
215	1.60944	0.930718		148.821	-105.918
216	1.60944	0.946291		149.717	-104.395
217	1.60944	0.9621	150.643	-102.847	
218	1.60944	0.97815	151.599	-101.273	
219	1.60944	0.994457		152.588	-99.6721
220	1.60944	1.00687	153.602	-98.0516	
221	1.60944	1.02365	154.65	-96.4041	
222	1.60944	1.04073	155.733	-94.7291	
223	1.60944	1.05812	156.853	-93.0261	
224	1.60944	1.07584	158.01	-91.2946	
225	1.60944	1.0939	159.207	-89.5341	
226	1.60944	1.10768	160.434	-87.7513	
227	1.60944	1.12639	161.702	-85.9385	
228	1.60944	1.1455	163.015	-84.0948	
229	1.60944	1.16505	164.372	-82.2198	
230	1.60944	1.18504	165.776	-80.3125	
231	1.60944	1.20553	167.23	-78.3723	
232	1.60944	1.22123	168.721	-76.4068	
233	1.60944	1.24264	170.265	-74.4068	
234	1.60944	1.26464	171.864	-72.3715	
235	1.60944	1.28727	173.521	-70.2997	

236	3.95124	1.31058	175.239	-65.1213
237	4.60517	1.33462	177.02	-58.9751
238	5.9428	1.35317	178.851	-50.9335
239	7.55486	1.37866	180.752	-40.5179
240	7.87474	1.40507	182.726	-29.4533
241	7.89357	1.4325	184.778	-18.1457
242	8.03268	1.46106	186.913	-6.40952
243	8.16052	1.49085	189.136	5.75661
244	8.21609	1.5141	191.428	18.1966
245	8.34759	1.54643	193.82	31.1056
246	8.39615	1.58047	196.318	44.3754
247	8.57735	1.61644	198.93	58.2402
248	8.58298	1.65463	201.668	72.4418
249	8.60153	1.6954	204.543	87.0248
250	8.69115	1.72793	207.528	102.043
251	8.71932	1.77438	210.677	117.514
252	8.79482	1.82501	214.007	133.564
253	8.83346	1.88079	217.545	150.178
254	8.83637	1.94314	221.321	167.349
255	8.86926	2.01409	225.377	185.212
256	8.91059	2.07485	229.682	203.7
257	9.76996	2.17009	234.391	224.902
258	10.2471	2.29036	239.637	248.371
259	10.5866	2.45727	245.675	274.386
260	10.6383	2.74777	253.226	303.617

Data Set Standard Deviation = 2.03348
Numerator = 92183.3
Denominator = 271199
W Statistic = 0.339911 = 92183.3 / 271199

5% Critical value of 0.976 exceeds 0.339911
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.339911
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Iron

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<1.60944	118
	9/23/1999	ND<1.60944	118
	3/15/2000	ND<1.60944	118
	9/24/2003	ND<1.60944	118
	3/11/2004	ND<1.60944	118
	10/12/2004	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118

Rank Sum = 2596
Rank Mean = 118

Background Rank Sum = 2596
Background Rank Mean = 118

Compliance Wells

Well ID	Date	Result	Rank
MW-12BR	3/16/1999	ND<1.60944	118
	9/23/1999	ND<1.60944	118
	3/15/2000	ND<1.60944	118
	9/24/2003	ND<1.60944	118
	3/11/2004	ND<1.60944	118
	10/12/2004	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	5/23/2007	ND<1.60944	118

	11/28/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118
	6/30/2010	3.95124	236

Rank Sum = 2832
Rank Mean = 123.13

MW-12AR	3/16/1999	ND<1.60944	118
	9/23/1999	ND<1.60944	118
	3/15/2000	ND<1.60944	118
	9/24/2003	ND<1.60944	118
	3/11/2004	ND<1.60944	118
	10/12/2004	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118
	6/30/2010	4.60517	237

Rank Sum = 2833
Rank Mean = 123.174

MW-9	7/20/1995	8.58298	248
	8/24/1995	8.39615	246
	9/28/1995	8.03268	242
	10/26/1995	8.57735	247
	11/19/1996	ND<1.60944	118
	12/19/1996	ND<1.60944	118
	3/24/1997	ND<1.60944	118
	9/24/1997	ND<1.60944	118
	4/7/1998	ND<1.60944	118
	9/23/1998	ND<1.60944	118
	3/16/1999	ND<1.60944	118
	9/23/1999	ND<1.60944	118
	3/15/2000	ND<1.60944	118
	9/24/2003	ND<1.60944	118
	3/11/2004	ND<1.60944	118
	10/12/2004	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	5/23/2007	ND<1.60944	118

	11/28/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118

Rank Sum = 4287
Rank Mean = 133.969

MW-11R	7/20/1995	8.83346	253
	8/24/1995	8.60153	249
	9/28/1995	8.69115	250
	10/26/1995	10.2471	258
	11/19/1996	ND<1.60944	118
	12/19/1996	ND<1.60944	118
	3/24/1997	ND<1.60944	118
	9/24/1997	ND<1.60944	118
	4/7/1998	ND<1.60944	118
	9/23/1998	ND<1.60944	118
	3/16/1999	ND<1.60944	118
	9/23/1999	ND<1.60944	118
	3/15/2000	ND<1.60944	118
	9/24/2003	ND<1.60944	118
	3/11/2004	ND<1.60944	118
	10/12/2004	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118

Rank Sum = 4314
Rank Mean = 134.813

MW-7	7/20/1995	8.21609	244
	8/24/1995	8.83637	254
	9/28/1995	10.5866	259
	10/26/1995	9.76996	257
	11/19/1996	ND<1.60944	118
	12/19/1996	ND<1.60944	118
	3/24/1997	ND<1.60944	118
	9/24/1997	ND<1.60944	118
	4/7/1998	ND<1.60944	118
	9/23/1998	ND<1.60944	118
	3/16/1999	ND<1.60944	118
	9/23/1999	ND<1.60944	118
	3/15/2000	ND<1.60944	118
	9/24/2003	ND<1.60944	118
	3/11/2004	ND<1.60944	118
	10/12/2004	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	4/1/2005	ND<1.60944	118

	10/25/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118

Rank Sum = 4318
Rank Mean = 134.938

MW-10	7/20/1995	7.87474	240
	8/24/1995	8.79482	252
	9/28/1995	8.71932	251
	10/26/1995	ND<1.60944	118
	11/19/1996	ND<1.60944	118
	12/19/1996	ND<1.60944	118
	3/24/1997	ND<1.60944	118
	9/24/1997	ND<1.60944	118
	4/7/1998	ND<1.60944	118
	9/23/1998	ND<1.60944	118
	3/16/1999	ND<1.60944	118
	9/23/1999	ND<1.60944	118
	3/15/2000	ND<1.60944	118
	9/24/2003	ND<1.60944	118
	3/11/2004	ND<1.60944	118
	10/12/2004	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118

Rank Sum = 4165
Rank Mean = 130.156

MW-8	7/20/1995	7.55486	239
	8/24/1995	7.89357	241
	9/28/1995	10.6383	260
	10/26/1995	8.91059	256
	11/19/1996	ND<1.60944	118
	12/19/1996	ND<1.60944	118
	3/24/1997	ND<1.60944	118
	9/24/1997	ND<1.60944	118
	4/7/1998	ND<1.60944	118
	9/23/1998	ND<1.60944	118

	3/16/1999	ND<1.60944	118
	9/23/1999	ND<1.60944	118
	3/15/2000	ND<1.60944	118
	9/24/2003	ND<1.60944	118
	3/11/2004	ND<1.60944	118
	10/12/2004	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118

Rank Sum = 4300
Rank Mean = 134.375

MW-6	7/20/1995	8.16052	243
	8/24/1995	8.34759	245
	9/28/1995	5.9428	238
	10/26/1995	8.86926	255
	11/19/1996	ND<1.60944	118
	12/19/1996	ND<1.60944	118
	3/24/1997	ND<1.60944	118
	9/24/1997	ND<1.60944	118
	4/7/1998	ND<1.60944	118
	9/23/1998	ND<1.60944	118
	3/16/1999	ND<1.60944	118
	9/23/1999	ND<1.60944	118
	3/15/2000	ND<1.60944	118
	9/24/2003	ND<1.60944	118
	3/11/2004	ND<1.60944	118
	10/12/2004	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	4/1/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	10/25/2005	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	4/29/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	11/18/2006	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	5/23/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	11/28/2007	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	6/5/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118
	11/20/2008	ND<1.60944	118

Rank Sum = 4285
Rank Mean = 133.906

Calculation Results:

Kruskal-Wallis H Statistic = 1.4831
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 5.66899
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
1.4831 < 15.5073 indicating no significant group difference at 5% significance level
5.66899 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ppb)

Parameter: Lead

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 154
Percent Non-Detects: 72.6415%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	14 (82.3529%)	3/16/1999	5	5
			9/23/1999	8	8
			3/15/2000	21	21
			9/24/2003	ND<1	ND<1
			3/11/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/25/2005	ND<1	ND<1
			4/29/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			5/23/2007	ND<1	ND<1
			11/28/2007	ND<1	ND<1
			6/5/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1
			6/11/2009	ND<0.08	ND<0.08
			11/16/2009	ND<0.08	ND<0.08
			6/30/2010	ND<0.08	ND<0.08

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-6	27	20 (74.0741%)	7/20/1995	8.1	8.1
			8/24/1995	5.9	5.9
			9/28/1995	3.4	3.4
			10/26/1995	ND<1	ND<1
			11/19/1996	ND<1	ND<1
			12/19/1996	10.3	10.3
			3/24/1997	ND<1	ND<1
			9/24/1997	12	12
			4/7/1998	13	13
			9/23/1998	ND<1	ND<1
			3/16/1999	ND<1	ND<1
			9/23/1999	ND<1	ND<1
			3/15/2000	ND<1	ND<1
			9/24/2003	ND<1	ND<1
			3/11/2004	ND<1	ND<1
			10/12/2004	ND<1	ND<1
			4/1/2005	ND<1	ND<1
			10/25/2005	ND<1	ND<1
			4/29/2006	ND<1	ND<1
			11/18/2006	ND<1	ND<1
			5/23/2007	ND<1	ND<1
			11/28/2007	ND<1	ND<1
			6/5/2008	ND<1	ND<1
			11/20/2008	ND<1	ND<1

			6/11/2009	ND<0.08		ND<0.08
			11/16/2009	0.08 J	0.08 J	
			6/30/2010	ND<0.08		ND<0.08
MW-11R	27	20 (74.0741%)	7/20/1995	3.8	3.8	
			8/24/1995	6	6	
			9/28/1995	3.7	3.7	
			10/26/1995	11.9	11.9	
			11/19/1996	ND<1	ND<1	
			12/19/1996	ND<1	ND<1	
			3/24/1997	ND<1	ND<1	
			9/24/1997	ND<1	ND<1	
			4/7/1998	ND<1	ND<1	
			9/23/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	9	9	
			3/15/2000	ND<1	ND<1	
			9/24/2003	ND<1	ND<1	
			3/11/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/25/2005	ND<1	ND<1	
			4/29/2006	1.22	1.22	
			11/18/2006	ND<1	ND<1	
			5/23/2007	ND<1	ND<1	
			11/28/2007	ND<1	ND<1	
			6/5/2008	ND<1	ND<1	
			11/20/2008	0.63 J	0.63 J	
			6/11/2009	ND<0.08		ND<0.08
			11/16/2009	ND<0.08		ND<0.08
			6/30/2010	ND<0.08		ND<0.08
MW-9	27	22 (81.4815%)	7/20/1995	4	4	
			8/24/1995	3	3	
			9/28/1995	3.5	3.5	
			10/26/1995	ND<1	ND<1	
			11/19/1996	ND<1	ND<1	
			12/19/1996	ND<1	ND<1	
			3/24/1997	ND<1	ND<1	
			9/24/1997	22	22	
			4/7/1998	ND<1	ND<1	
			9/23/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	ND<1	ND<1	
			3/15/2000	ND<1	ND<1	
			9/24/2003	ND<1	ND<1	
			3/11/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/25/2005	ND<1	ND<1	
			4/29/2006	0.66 J	0.66 J	
			11/18/2006	ND<1	ND<1	
			5/23/2007	ND<1	ND<1	
			11/28/2007	ND<1	ND<1	
			6/5/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	ND<0.08		ND<0.08
			11/16/2009	ND<0.08		ND<0.08
			6/30/2010	ND<0.08		ND<0.08
MW-12AR	17	9 (52.9412%)	3/16/1999	ND<1	ND<1	
			9/23/1999	6	6	

			3/15/2000	11	11	
			9/24/2003	ND<1	ND<1	
			3/11/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/25/2005	ND<1	ND<1	
			4/29/2006	0.68 J	0.68 J	
			11/18/2006	ND<1	ND<1	
			5/23/2007	0.81 J	0.81 J	
			11/28/2007	ND<1	ND<1	
			6/5/2008	ND<1	ND<1	
			11/20/2008	0.73 J	0.73 J	
			6/11/2009	0.34	0.34	
			11/16/2009	0.44	0.44	
			6/30/2010	0.45	0.45	
MW-10	27	24 (88.8889%)	7/20/1995	ND<1	ND<1	
			8/24/1995	4.8	4.8	
			9/28/1995	ND<1	ND<1	
			10/26/1995	ND<1	ND<1	
			11/19/1996	ND<1	ND<1	
			12/19/1996	ND<1	ND<1	
			3/24/1997	ND<1	ND<1	
			9/24/1997	ND<1	ND<1	
			4/7/1998	ND<1	ND<1	
			9/23/1998	ND<1	ND<1	
			3/16/1999	ND<1	ND<1	
			9/23/1999	5	5	
			3/15/2000	ND<1	ND<1	
			9/24/2003	ND<1	ND<1	
			3/11/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/25/2005	ND<1	ND<1	
			4/29/2006	ND<1	ND<1	
			11/18/2006	ND<1	ND<1	
			5/23/2007	ND<1	ND<1	
			11/28/2007	ND<1	ND<1	
			6/5/2008	ND<1	ND<1	
			11/20/2008	ND<1	ND<1	
			6/11/2009	0.14 J	0.14 J	
			11/16/2009	ND<0.08		ND<0.08
			6/30/2010	ND<0.08		ND<0.08
MW-8	26	19 (73.0769%)	7/20/1995	3	3	
			8/24/1995	8.9	8.9	
			9/28/1995	19.6	19.6	
			10/26/1995	ND<1	ND<1	
			11/19/1996	ND<1	ND<1	
			12/19/1996	13.3	13.3	
			3/24/1997	ND<1	ND<1	
			9/24/1997	ND<1	ND<1	
			4/7/1998	ND<1	ND<1	
			9/23/1998	13	13	
			3/16/1999	ND<1	ND<1	
			9/23/1999	73	73	
			3/15/2000	ND<1	ND<1	
			9/24/2003	ND<1	ND<1	
			3/11/2004	ND<1	ND<1	
			10/12/2004	ND<1	ND<1	
			4/1/2005	ND<1	ND<1	
			10/25/2005	ND<1	ND<1	

			4/29/2006	ND<1	ND<1		
			11/18/2006	ND<1	ND<1		
			5/23/2007	ND<1	ND<1		
			11/28/2007	ND<1	ND<1		
			6/5/2008	ND<1	ND<1		
			11/20/2008	0.65 J	0.65 J		
			6/11/2009	ND<0.08		ND<0.08	
			6/30/2010	ND<0.08		ND<0.08	
MW-12BR		17	10 (58.8235%)	3/16/1999		ND<1	ND<1
			9/23/1999	6	6		
			3/15/2000	ND<1	ND<1		
			9/24/2003	ND<1	ND<1		
			3/11/2004	ND<1	ND<1		
			10/12/2004	ND<1	ND<1		
			4/1/2005	ND<1	ND<1		
			10/25/2005	0.62 J	0.62 J		
			4/29/2006	0.5 J	0.5 J		
			11/18/2006	ND<1	ND<1		
			5/23/2007	ND<1	ND<1		
			11/28/2007	ND<1	ND<1		
			6/5/2008	ND<1	ND<1		
			11/20/2008	2.72	2.72		
			6/11/2009	0.17 J	0.17 J		
			11/16/2009	0.26 J	0.26 J		
			6/30/2010	0.27 J	0.27 J		
MW-7	27	16 (59.2593%)	7/20/1995		ND<1	ND<1	
			8/24/1995	12.8	12.8		
			9/28/1995	40.6	40.6		
			10/26/1995	14.1	14.1		
			11/19/1996	ND<1	ND<1		
			12/19/1996	21.5	21.5		
			3/24/1997	ND<1	ND<1		
			9/24/1997	ND<1	ND<1		
			4/7/1998	ND<1	ND<1		
			9/23/1998	ND<1	ND<1		
			3/16/1999	9	9		
			9/23/1999	5	5		
			3/15/2000	ND<1	ND<1		
			9/24/2003	ND<1	ND<1		
			3/11/2004	ND<1	ND<1		
			10/12/2004	ND<1	ND<1		
			4/1/2005	ND<1	ND<1		
			10/25/2005	ND<1	ND<1		
			4/29/2006	ND<1	ND<1		
			11/18/2006	ND<1	ND<1		
			5/23/2007	ND<1	ND<1		
			11/28/2007	ND<1	ND<1		
			6/5/2008	0.52 J	0.52 J		
			11/20/2008	0.73 J	0.73 J		
			6/11/2009	0.17 J	0.17 J		
			11/16/2009	0.16 J	0.16 J		
			6/30/2010	0.16 J H	0.16 J H		

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.04	-2.65209	7.03356	-0.106083
2	0.04	-2.365	11.2629	-0.200708
3	0.04	-2.197	28.1457	-0.288599
4	0.04	-2.096	43.2185	-0.372477
5	0.04	-1.995	39.2583	-0.452292
6	0.04	-1.911	32.9488	-0.528734
7	0.04	-1.852	18.3291	-0.602821
8	0.04	-1.786	13.6111	-0.674285
9	0.04	-1.727	93.3906	-0.743402
10	0.04	-1.684	94.1935	-0.8108
11	0.04	-1.635	24.4609	-0.876209
12	0.04	-1.589	27.1356	-0.93978
13	0.04	-1.546	43.9527	-1.00164
14	0.04	-1.514	1.8195	-1.0622
15	0.04	-1.475	79.9975	-1.12123
16	0.08	-1.439	53.0698	-1.2364
17	0.14	-1.411	83.058	-1.43405
18	0.16	-1.378	65.9637	-1.65464
19	0.16	-1.346	46.778	-1.87015
20	0.17	-1.322	51.527	-2.09497
21	0.17	-1.293	65.1989	-2.31479
22	0.26	-1.264	66.7982	-2.6436
23	0.27	-1.242	68.3424	-2.97911
24	0.34	-1.215	96.821	-3.39254
25	0.44	-1.190	127.2373	-3.91619
26	0.45	-1.165	057.5947	-4.44046
27	0.5	-1.145	73.9069	-5.01321
28	0.5	-1.121	6875.165	-5.57405
29	0.5	-1.098	4776.3716	-6.12328
30	0.5	-1.080	3277.5387	-6.66345
31	0.5	-1.058	1278.6584	-7.19251
32	0.5	-1.036	4379.7326	-7.71072
33	0.5	-1.019	4380.7718	-8.22044
34	0.5	-0.998575	81.7689	-8.71972
35	0.5	-0.978	1582.7257	-9.2088
36	0.5	-0.958125	83.6437	-9.68786
37	0.5	-0.942375	84.5318	-10.159
38	0.5	-0.923014	85.3837	-10.6206
39	0.5	-0.903992	86.201	-11.0726
40	0.5	-0.889006	86.9913	-11.5171
41	0.5	-0.870	5587.7491	-11.9523
42	0.5	-0.852385	88.4757	-12.3785
43	0.5	-0.838054	89.178	-12.7976
44	0.5	-0.820379	89.8511	-13.2077
45	0.5	-0.802956	90.4958	-13.6092
46	0.5	-0.789191	91.1186	-14.0038
47	0.5	-0.772193	91.7149	-14.3899
48	0.5	-0.755415	92.2856	-14.7676
49	0.5	-0.738846	92.8314	-15.137

50	0.5	-0.725736	93.3581	-15.4999
51	0.5	-0.709522	93.8616	-15.8547
52	0.5	-0.693493	94.3425	-16.2014
53	0.5	-0.680797	94.806	-16.5418
54	0.5	-0.665079	95.2483	-16.8744
55	0.5	-0.649522	95.6702	-17.1991
56	0.5	-0.637192	96.0762	-17.5177
57	0.5	-0.621911	96.463	-17.8287
58	0.5	-0.606775	96.8312	-18.1321
59	0.5	-0.594766	97.1849	-18.4294
60	0.5	-0.579873	97.5212	-18.7194
61	0.5	-0.565108	97.8405	-19.0019
62	0.5	-0.550465	98.1435	-19.2772
63	0.5	-0.538836	98.4339	-19.5466
64	0.5	-0.524401	98.7088	-19.8088
65	0.5	-0.510074	98.969	-20.0638
66	0.5	-0.498687	99.2177	-20.3132
67	0.5	-0.484544	99.4525	-20.5554
68	0.5	-0.470498	99.6739	-20.7907
69	0.5	-0.459327	99.8848	-21.0203
70	0.5	-0.445443	100.083	-21.2431
71	0.5	-0.431644	100.27	-21.4589
72	0.5	-0.417928	100.444	-21.6679
73	0.5	-0.40701	100.61	-21.8714
74	0.5	-0.393433	100.765	-22.0681
75	0.5	-0.379927	100.909	-22.258
76	0.5	-0.369171	101.045	-22.4426
77	0.5	-0.355788	101.172	-22.6205
78	0.5	-0.342466	101.289	-22.7917
79	0.5	-0.331854	101.399	-22.9577
80	0.5	-0.318639	101.501	-23.117
81	0.5	-0.305481	101.594	-23.2697
82	0.5	-0.294992	101.681	-23.4172
83	0.5	-0.281926	101.761	-23.5582
84	0.5	-0.268908	101.833	-23.6926
85	0.5	-0.255936	101.898	-23.8206
86	0.5	-0.24559	101.959	-23.9434
87	0.5	-0.232693	102.013	-24.0598
88	0.5	-0.219834	102.061	-24.1697
89	0.5	-0.209575	102.105	-24.2745
90	0.5	-0.196779	102.144	-24.3729
91	0.5	-0.184017	102.178	-24.4649
92	0.5	-0.173829	102.208	-24.5518
93	0.5	-0.161119	102.234	-24.6323
94	0.5	-0.148434	102.256	-24.7066
95	0.5	-0.135774	102.274	-24.7744
96	0.5	-0.125661	102.29	-24.8373
97	0.5	-0.113039	102.303	-24.8938
98	0.5	-0.100433	102.313	-24.944
99	0.5	-0.0903606	102.321	-24.9892
100	0.5	-0.0777834	102.327	-25.0281
101	0.5	-0.0652187	102.332	-25.0607
102	0.5	-0.0551734	102.335	-25.0883
103	0.5	-0.0426257	102.336	-25.1096
104	0.5	-0.0300838	102.337	-25.1246
105	0.5	-0.0200544	102.338	-25.1347
106	0.5	-0.00751925	102.338	-25.1384
107	0.5	0.00751925	102.338	-25.1347
108	0.5	0.0200544	102.338	-25.1246
109	0.5	0.0300838	102.339	-25.1096
110	0.5	0.0426257	102.341	-25.0883
111	0.5	0.0551734	102.344	-25.0607

112	0.5	0.0652187	102.348	-25.0281
113	0.5	0.0777834	102.354	-24.9892
114	0.5	0.0903606	102.362	-24.944
115	0.5	0.100433	102.373	-24.8938
116	0.5	0.113039	102.385	-24.8373
117	0.5	0.125661	102.401	-24.7744
118	0.5	0.135774	102.42	-24.7066
119	0.5	0.148434	102.442	-24.6323
120	0.5	0.161119	102.468	-24.5518
121	0.5	0.173829	102.498	-24.4649
122	0.5	0.184017	102.532	-24.3729
123	0.5	0.196779	102.57	-24.2745
124	0.5	0.209575	102.614	-24.1697
125	0.5	0.219834	102.663	-24.0598
126	0.5	0.232693	102.717	-23.9434
127	0.5	0.24559	102.777	-23.8206
128	0.5	0.255936	102.843	-23.6926
129	0.5	0.268908	102.915	-23.5582
130	0.5	0.281926	102.994	-23.4172
131	0.5	0.294992	103.081	-23.2697
132	0.5	0.305481	103.175	-23.117
133	0.5	0.318639	103.276	-22.9577
134	0.5	0.331854	103.386	-22.7917
135	0.5	0.342466	103.504	-22.6205
136	0.5	0.355788	103.63	-22.4426
137	0.5	0.369171	103.767	-22.258
138	0.5	0.379927	103.911	-22.0681
139	0.5	0.393433	104.066	-21.8714
140	0.5	0.40701	104.231	-21.6679
141	0.5	0.417928	104.406	-21.4589
142	0.5	0.431644	104.592	-21.2431
143	0.5	0.445443	104.791	-21.0203
144	0.5	0.459327	105.002	-20.7907
145	0.5	0.470498	105.223	-20.5554
146	0.5	0.484544	105.458	-20.3132
147	0.5	0.498687	105.707	-20.0638
148	0.5	0.510074	105.967	-19.8088
149	0.5	0.524401	106.242	-19.5466
150	0.5	0.538836	106.532	-19.2772
151	0.5	0.550465	106.835	-19.0019
152	0.5	0.565108	107.154	-18.7194
153	0.5	0.579873	107.491	-18.4294
154	0.5	0.594766	107.844	-18.1321
155	0.5	0.606775	108.213	-17.8287
156	0.5	0.621911	108.599	-17.5177
157	0.5	0.637192	109.005	-17.1991
158	0.5	0.649522	109.427	-16.8744
159	0.5	0.665079	109.87	-16.5418
160	0.5	0.680797	110.333	-16.2014
161	0.5	0.693493	110.814	-15.8547
162	0.5	0.709522	111.317	-15.4999
163	0.5	0.725736	111.844	-15.137
164	0.5	0.738846	112.39	-14.7676
165	0.5	0.755415	112.961	-14.3899
166	0.5	0.772193	113.557	-14.0038
167	0.52	0.789191	114.18	-13.5934
168	0.62	0.802956	114.824	-13.0956
169	0.63	0.820379	115.498	-12.5788
170	0.65	0.838054	116.2	-12.034
171	0.66	0.852385	116.926	-11.4715
172	0.68	0.87055	117.684	-10.8795
173	0.73	0.889006	118.475	-10.2305

174	0.73	0.903992		119.292	-9.57059
175	0.81	0.923014		120.144	-8.82295
176	1.22	0.942375		121.032	-7.67325
177	2.72	0.958125		121.95	-5.06715
178	3	0.97815	122.907	-2.1327	
179	3	0.998575		123.904	0.863026
180	3.4	1.01943	124.943	4.32908	
181	3.5	1.03643	126.017	7.9566	
182	3.7	1.05812	127.137	11.8716	
183	3.8	1.08032	128.304	15.9769	
184	4	1.09847	129.511	20.3707	
185	4.8	1.12168	130.769	25.7548	
186	5	1.1455	132.081	31.4823	
187	5	1.16505	133.438	37.3075	
188	5	1.19012	134.855	43.2581	
189	5.9	1.21596	136.333	50.4323	
190	6	1.24264	137.877	57.8882	
191	6	1.26464	139.477	65.476	
192	6	1.29303	141.149	73.2342	
193	8	1.32251	142.898	83.8143	
194	8.1	1.34694	144.712	94.7245	
195	8.9	1.37866	146.613	106.995	
196	9	1.41183	148.606	119.701	
197	9	1.43953	150.678	132.657	
198	10.3	1.47579	152.856	147.857	
199	11	1.5141	155.149	164.513	
200	11.9	1.54643	157.54	182.915	
201	12	1.58927	160.066	201.986	
202	12.8	1.63524	162.74	222.917	
203	13	1.68494	165.579	244.822	
204	13	1.72793	168.564	267.285	
205	13.3	1.78661	171.756	291.047	
206	14.1	1.85218	175.187	317.162	
207	19.6	1.91103	178.839	354.618	
208	21	1.99539	182.821	396.522	
209	21.5	2.09693	187.218	441.606	
210	22	2.19728	192.046	489.946	
211	40.6	2.36561	197.642	585.99	
212	73	2.65209	204.676	779.592	

Data Set Standard Deviation = 6.77675
Numerator = 607764
Denominator = 1.98331e+006
W Statistic = 0.306439 = 607764 / 1.98331e+006

5% Critical value of 0.976 exceeds 0.306439
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.306439
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.21888	-2.65209	7.03356	8.53674
2	-3.21888	-2.36561	12.6297	16.1514
3	-3.21888	-2.19728	17.4578	23.2241
4	-3.21888	-2.09693	21.8549	29.9739
5	-3.21888	-1.99539	25.8365	36.3968
6	-3.21888	-1.91103	29.4885	42.5482
7	-3.21888	-1.85218	32.9191	48.5101
8	-3.21888	-1.78661	36.111	54.261
9	-3.21888	-1.72793	39.0968	59.823
10	-3.21888	-1.68494	41.9358	65.2466
11	-3.21888	-1.63524	44.6098	70.5102
12	-3.21888	-1.58927	47.1356	75.6259
13	-3.21888	-1.54643	49.527	80.6037
14	-3.21888	-1.5141	51.8195	85.4774
15	-3.21888	-1.47579	53.9975	90.2278
16	-2.52573	-1.43953	56.0698	93.8636
17	-1.96611	-1.41183	58.063	96.6394
18	-1.83258	-1.37866	59.9637	99.1659
19	-1.83258	-1.34694	61.778	101.634
20	-1.77196	-1.32251	63.527	103.978
21	-1.77196	-1.29303	65.1989	106.269
22	-1.34707	-1.26464	66.7982	107.973
23	-1.30933	-1.24264	68.3424	109.6
24	-1.07881	-1.21596	69.821	110.911
25	-0.820981	-1.19012	71.2373	111.888
26	-0.798508	-1.16505	72.5947	112.819
27	-0.693147	-1.1455	73.9069	113.613
28	-0.693147	-1.12168	75.165	114.39
29	-0.693147	-1.09847	76.3716	115.152
30	-0.693147	-1.08032	77.5387	115.9
31	-0.693147	-1.05812	78.6584	116.634
32	-0.693147	-1.03643	79.7326	117.352
33	-0.693147	-1.01943	80.7718	118.059
34	-0.693147	-0.998575	81.7689	118.751
35	-0.693147	-0.97815	82.7257	119.429
36	-0.693147	-0.958125	83.6437	120.093
37	-0.693147	-0.942375	84.5318	120.746
38	-0.693147	-0.923014	85.3837	121.386
39	-0.693147	-0.903992	86.201	122.013
40	-0.693147	-0.889006	86.9913	122.629
41	-0.693147	-0.87055	87.7491	123.232
42	-0.693147	-0.852385	88.4757	123.823
43	-0.693147	-0.838054	89.178	124.404
44	-0.693147	-0.820379	89.8511	124.973
45	-0.693147	-0.802956	90.4958	125.529
46	-0.693147	-0.789191	91.1186	126.076
47	-0.693147	-0.772193	91.7149	126.612
48	-0.693147	-0.755415	92.2856	127.135
49	-0.693147	-0.738846	92.8314	127.647

50	-0.693147	-0.725736	93.3581	128.15
51	-0.693147	-0.709522	93.8616	128.642
52	-0.693147	-0.693493	94.3425	129.123
53	-0.693147	-0.680797	94.806	129.595
54	-0.693147	-0.665079	95.2483	130.056
55	-0.693147	-0.649522	95.6702	130.506
56	-0.693147	-0.637192	96.0762	130.948
57	-0.693147	-0.621911	96.463	131.379
58	-0.693147	-0.606775	96.8312	131.799
59	-0.693147	-0.594766	97.1849	132.212
60	-0.693147	-0.579873	97.5212	132.613
61	-0.693147	-0.565108	97.8405	133.005
62	-0.693147	-0.550465	98.1435	133.387
63	-0.693147	-0.538836	98.4339	133.76
64	-0.693147	-0.524401	98.7088	134.124
65	-0.693147	-0.510074	98.969	134.477
66	-0.693147	-0.498687	99.2177	134.823
67	-0.693147	-0.484544	99.4525	135.159
68	-0.693147	-0.470498	99.6739	135.485
69	-0.693147	-0.459327	99.8848	135.803
70	-0.693147	-0.445443	100.083	136.112
71	-0.693147	-0.431644	100.27	136.411
72	-0.693147	-0.417928	100.444	136.701
73	-0.693147	-0.40701100.61	136.983	
74	-0.693147	-0.393433	100.765	137.256
75	-0.693147	-0.379927	100.909	137.519
76	-0.693147	-0.369171	101.045	137.775
77	-0.693147	-0.355788	101.172	138.022
78	-0.693147	-0.342466	101.289	138.259
79	-0.693147	-0.331854	101.399	138.489
80	-0.693147	-0.318639	101.501	138.71
81	-0.693147	-0.305481	101.594	138.922
82	-0.693147	-0.294992	101.681	139.126
83	-0.693147	-0.281926	101.761	139.322
84	-0.693147	-0.268908	101.833	139.508
85	-0.693147	-0.255936	101.898	139.685
86	-0.693147	-0.24559101.959	139.856	
87	-0.693147	-0.232693	102.013	140.017
88	-0.693147	-0.219834	102.061	140.169
89	-0.693147	-0.209575	102.105	140.314
90	-0.693147	-0.196779	102.144	140.451
91	-0.693147	-0.184017	102.178	140.578
92	-0.693147	-0.173829	102.208	140.699
93	-0.693147	-0.161119	102.234	140.811
94	-0.693147	-0.148434	102.256	140.913
95	-0.693147	-0.135774	102.274	141.008
96	-0.693147	-0.125661	102.29	141.095
97	-0.693147	-0.113039	102.303	141.173
98	-0.693147	-0.100433	102.313	141.243
99	-0.693147	-0.0903606	102.321	141.305
100	-0.693147	-0.0777834	102.327	141.359
101	-0.693147	-0.0652187	102.332	141.404
102	-0.693147	-0.0551734	102.335	141.443
103	-0.693147	-0.0426257	102.336	141.472
104	-0.693147	-0.0300838	102.337	141.493
105	-0.693147	-0.0200544	102.338	141.507
106	-0.693147	-0.00751925	102.338	141.512
107	-0.693147	0.00751925	102.338	141.507
108	-0.693147	0.0200544	102.338	141.493
109	-0.693147	0.0300838	102.339	141.472
110	-0.693147	0.0426257	102.341	141.443
111	-0.693147	0.0551734	102.344	141.404

112	-0.693147	0.0652187	102.348	141.359
113	-0.693147	0.0777834	102.354	141.305
114	-0.693147	0.0903606	102.362	141.243
115	-0.693147	0.100433	102.373	141.173
116	-0.693147	0.113039	102.385	141.095
117	-0.693147	0.125661	102.401	141.008
118	-0.693147	0.135774	102.42	140.913
119	-0.693147	0.148434	102.442	140.811
120	-0.693147	0.161119	102.468	140.699
121	-0.693147	0.173829	102.498	140.578
122	-0.693147	0.184017	102.532	140.451
123	-0.693147	0.196779	102.57	140.314
124	-0.693147	0.209575	102.614	140.169
125	-0.693147	0.219834	102.663	140.017
126	-0.693147	0.232693	102.717	139.856
127	-0.693147	0.24559	102.777	139.685
128	-0.693147	0.255936	102.843	139.508
129	-0.693147	0.268908	102.915	139.322
130	-0.693147	0.281926	102.994	139.126
131	-0.693147	0.294992	103.081	138.922
132	-0.693147	0.305481	103.175	138.71
133	-0.693147	0.318639	103.276	138.489
134	-0.693147	0.331854	103.386	138.259
135	-0.693147	0.342466	103.504	138.022
136	-0.693147	0.355788	103.63	137.775
137	-0.693147	0.369171	103.767	137.519
138	-0.693147	0.379927	103.911	137.256
139	-0.693147	0.393433	104.066	136.983
140	-0.693147	0.40701	104.231	136.701
141	-0.693147	0.417928	104.406	136.411
142	-0.693147	0.431644	104.592	136.112
143	-0.693147	0.445443	104.791	135.803
144	-0.693147	0.459327	105.002	135.485
145	-0.693147	0.470498	105.223	135.159
146	-0.693147	0.484544	105.458	134.823
147	-0.693147	0.498687	105.707	134.477
148	-0.693147	0.510074	105.967	134.124
149	-0.693147	0.524401	106.242	133.76
150	-0.693147	0.538836	106.532	133.387
151	-0.693147	0.550465	106.835	133.005
152	-0.693147	0.565108	107.154	132.613
153	-0.693147	0.579873	107.491	132.212
154	-0.693147	0.594766	107.844	131.799
155	-0.693147	0.606775	108.213	131.379
156	-0.693147	0.621911	108.599	130.948
157	-0.693147	0.637192	109.005	130.506
158	-0.693147	0.649522	109.427	130.056
159	-0.693147	0.665079	109.87	129.595
160	-0.693147	0.680797	110.333	129.123
161	-0.693147	0.693493	110.814	128.642
162	-0.693147	0.709522	111.317	128.15
163	-0.693147	0.725736	111.844	127.647
164	-0.693147	0.738846	112.39	127.135
165	-0.693147	0.755415	112.961	126.612
166	-0.693147	0.772193	113.557	126.076
167	-0.653926	0.789191	114.18	125.56
168	-0.478036	0.802956	114.824	125.176
169	-0.462035	0.820379	115.498	124.797
170	-0.430783	0.838054	116.2	124.436
171	-0.415515	0.852385	116.926	124.082
172	-0.385662	0.87055	117.684	123.746
173	-0.314711	0.889006	118.475	123.467

174	-0.314711		0.903992	119.292	123.182
175	-0.210721		0.923014	120.144	122.988
176	0.198851		0.942375	121.032	123.175
177	1.00063	0.958125	121.95	124.134	
178	1.09861	0.97815	122.907	125.208	
179	1.09861	0.998575	123.904	126.305	
180	1.22378	1.01943	124.943	127.553	
181	1.25276	1.03643	126.017	128.851	
182	1.30833	1.05812	127.137	130.236	
183	1.335	1.08032	128.304	131.678	
184	1.38629	1.09847	129.511	133.201	
185	1.56862	1.12168	130.769	134.96	
186	1.60944	1.1455	132.081	136.804	
187	1.60944	1.16505	133.438	138.679	
188	1.60944	1.19012	134.855	140.594	
189	1.77495	1.21596	136.333	142.753	
190	1.79176	1.24264	137.877	144.979	
191	1.79176	1.26464	139.477	147.245	
192	1.79176	1.29303	141.149	149.562	
193	2.07944	1.32251	142.898	152.312	
194	2.09186	1.34694	144.712	155.13	
195	2.18605	1.37866	146.613	158.143	
196	2.19722	1.41183	148.606	161.246	
197	2.19722	1.43953	150.678	164.408	
198	2.33214	1.47579	152.856	167.85	
199	2.3979	1.5141	155.149	171.481	
200	2.47654	1.54643	157.54	175.311	
201	2.48491	1.58927	160.066	179.26	
202	2.54945	1.63524	162.74	183.429	
203	2.56495	1.68494	165.579	187.751	
204	2.56495	1.72793	168.564	192.183	
205	2.58776	1.78661	171.756	196.806	
206	2.64617	1.85218	175.187	201.707	
207	2.97553	1.91103	178.839	207.394	
208	3.04452	1.99539	182.821	213.469	
209	3.06805	2.09693	187.218	219.902	
210	3.09104	2.19728	192.046	226.694	
211	3.70377	2.36561	197.642	235.456	
212	4.29046	2.65209	204.676	246.834	

Data Set Standard Deviation = 1.37734
Numerator = 60927.2
Denominator = 81927.9
W Statistic = 0.743668 = 60927.2 / 81927.9

5% Critical value of 0.976 exceeds 0.743668
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.743668
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Lead

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	1.60944	186
	9/23/1999	2.07944	193
	3/15/2000	3.04452	208
	9/24/2003	ND<-0.693147	77.5
	3/11/2004	ND<-0.693147	77.5
	10/12/2004	ND<-0.693147	77.5
	4/1/2005	ND<-0.693147	77.5
	10/25/2005	ND<-0.693147	77.5
	4/29/2006	ND<-0.693147	77.5
	11/18/2006	ND<-0.693147	77.5
	5/23/2007	ND<-0.693147	77.5
	11/28/2007	ND<-0.693147	77.5
	6/5/2008	ND<-0.693147	77.5
	11/20/2008	ND<-0.693147	77.5
	6/11/2009	ND<-3.21888	77.5
	11/16/2009	ND<-3.21888	77.5
	6/30/2010	ND<-3.21888	77.5

Rank Sum = 1672
Rank Mean = 98.3529

Background Rank Sum = 1672
Background Rank Mean = 98.3529

Compliance Wells

Well ID	Date	Result	Rank
MW-6	7/20/1995	2.09186	194
	8/24/1995	1.77495	189
	9/28/1995	1.22378	180
	10/26/1995	ND<-0.693147	77.5
	11/19/1996	ND<-0.693147	77.5
	12/19/1996	2.33214	198
	3/24/1997	ND<-0.693147	77.5
	9/24/1997	2.48491	201
	4/7/1998	2.56495	203
	9/23/1998	ND<-0.693147	77.5
	3/16/1999	ND<-0.693147	77.5
	9/23/1999	ND<-0.693147	77.5
	3/15/2000	ND<-0.693147	77.5
	9/24/2003	ND<-0.693147	77.5
	3/11/2004	ND<-0.693147	77.5
	10/12/2004	ND<-0.693147	77.5
	4/1/2005	ND<-0.693147	77.5
	10/25/2005	ND<-0.693147	77.5
	4/29/2006	ND<-0.693147	77.5
	11/18/2006	ND<-0.693147	77.5
	5/23/2007	ND<-0.693147	77.5

	11/28/2007	ND<-0.693147	77.5
	6/5/2008	ND<-0.693147	77.5
	11/20/2008	ND<-0.693147	77.5
	6/11/2009	ND<-3.21888	77.5
	11/16/2009	-2.52573 J	155
	6/30/2010	ND<-3.21888	77.5

Rank Sum = 2870
Rank Mean = 106.296

MW-11R	7/20/1995	1.335	183
	8/24/1995	1.79176	190
	9/28/1995	1.30833	182
	10/26/1995	2.47654	200
	11/19/1996	ND<-0.693147	77.5
	12/19/1996	ND<-0.693147	77.5
	3/24/1997	ND<-0.693147	77.5
	9/24/1997	ND<-0.693147	77.5
	4/7/1998	ND<-0.693147	77.5
	9/23/1998	ND<-0.693147	77.5
	3/16/1999	ND<-0.693147	77.5
	9/23/1999	2.19722	196
	3/15/2000	ND<-0.693147	77.5
	9/24/2003	ND<-0.693147	77.5
	3/11/2004	ND<-0.693147	77.5
	10/12/2004	ND<-0.693147	77.5
	4/1/2005	ND<-0.693147	77.5
	10/25/2005	ND<-0.693147	77.5
	4/29/2006	0.198851	176
	11/18/2006	ND<-0.693147	77.5
	5/23/2007	ND<-0.693147	77.5
	11/28/2007	ND<-0.693147	77.5
	6/5/2008	ND<-0.693147	77.5
	11/20/2008	-0.462035 J	169
	6/11/2009	ND<-3.21888	77.5
	11/16/2009	ND<-3.21888	77.5
	6/30/2010	ND<-3.21888	77.5

Rank Sum = 2846
Rank Mean = 105.407

MW-9	7/20/1995	1.38629	184
	8/24/1995	1.09861	178
	9/28/1995	1.25276	181
	10/26/1995	ND<-0.693147	77.5
	11/19/1996	ND<-0.693147	77.5
	12/19/1996	ND<-0.693147	77.5
	3/24/1997	ND<-0.693147	77.5
	9/24/1997	3.09104	210
	4/7/1998	ND<-0.693147	77.5
	9/23/1998	ND<-0.693147	77.5
	3/16/1999	ND<-0.693147	77.5
	9/23/1999	ND<-0.693147	77.5
	3/15/2000	ND<-0.693147	77.5
	9/24/2003	ND<-0.693147	77.5
	3/11/2004	ND<-0.693147	77.5
	10/12/2004	ND<-0.693147	77.5
	4/1/2005	ND<-0.693147	77.5
	10/25/2005	ND<-0.693147	77.5
	4/29/2006	-0.415515 J	171
	11/18/2006	ND<-0.693147	77.5
	5/23/2007	ND<-0.693147	77.5
	11/28/2007	ND<-0.693147	77.5
	6/5/2008	ND<-0.693147	77.5

	11/20/2008	ND<-0.693147	77.5
	6/11/2009	ND<-3.21888	77.5
	11/16/2009	ND<-3.21888	77.5
	6/30/2010	ND<-3.21888	77.5

Rank Sum = 2629
Rank Mean = 97.3704

MW-12AR	3/16/1999	ND<-0.693147	77.5
	9/23/1999	1.79176	191
	3/15/2000	2.3979	199
	9/24/2003	ND<-0.693147	77.5
	3/11/2004	ND<-0.693147	77.5
	10/12/2004	ND<-0.693147	77.5
	4/1/2005	ND<-0.693147	77.5
	10/25/2005	ND<-0.693147	77.5
	4/29/2006	-0.385662 J	172
	11/18/2006	ND<-0.693147	77.5
	5/23/2007	-0.210721 J	175
	11/28/2007	ND<-0.693147	77.5
	6/5/2008	ND<-0.693147	77.5
	11/20/2008	-0.314711 J	173
	6/11/2009	-1.07881	163
	11/16/2009	-0.820981	164
	6/30/2010	-0.798508	165

Rank Sum = 2099.5
Rank Mean = 123.5

MW-10	7/20/1995	ND<-0.693147	77.5
	8/24/1995	1.56862	185
	9/28/1995	ND<-0.693147	77.5
	10/26/1995	ND<-0.693147	77.5
	11/19/1996	ND<-0.693147	77.5
	12/19/1996	ND<-0.693147	77.5
	3/24/1997	ND<-0.693147	77.5
	9/24/1997	ND<-0.693147	77.5
	4/7/1998	ND<-0.693147	77.5
	9/23/1998	ND<-0.693147	77.5
	3/16/1999	ND<-0.693147	77.5
	9/23/1999	1.60944	187
	3/15/2000	ND<-0.693147	77.5
	9/24/2003	ND<-0.693147	77.5
	3/11/2004	ND<-0.693147	77.5
	10/12/2004	ND<-0.693147	77.5
	4/1/2005	ND<-0.693147	77.5
	10/25/2005	ND<-0.693147	77.5
	4/29/2006	ND<-0.693147	77.5
	11/18/2006	ND<-0.693147	77.5
	5/23/2007	ND<-0.693147	77.5
	11/28/2007	ND<-0.693147	77.5
	6/5/2008	ND<-0.693147	77.5
	11/20/2008	ND<-0.693147	77.5
	6/11/2009	-1.96611 J	156
	11/16/2009	ND<-3.21888	77.5
	6/30/2010	ND<-3.21888	77.5

Rank Sum = 2388
Rank Mean = 88.4444

MW-8	7/20/1995	1.09861	179
	8/24/1995	2.18605	195
	9/28/1995	2.97553	207
	10/26/1995	ND<-0.693147	77.5
	11/19/1996	ND<-0.693147	77.5

	12/19/1996	2.58776	205
	3/24/1997	ND<-0.693147	77.5
	9/24/1997	ND<-0.693147	77.5
	4/7/1998	ND<-0.693147	77.5
	9/23/1998	2.56495	204
	3/16/1999	ND<-0.693147	77.5
	9/23/1999	4.29046	212
	3/15/2000	ND<-0.693147	77.5
	9/24/2003	ND<-0.693147	77.5
	3/11/2004	ND<-0.693147	77.5
	10/12/2004	ND<-0.693147	77.5
	4/1/2005	ND<-0.693147	77.5
	10/25/2005	ND<-0.693147	77.5
	4/29/2006	ND<-0.693147	77.5
	11/18/2006	ND<-0.693147	77.5
	5/23/2007	ND<-0.693147	77.5
	11/28/2007	ND<-0.693147	77.5
	6/5/2008	ND<-0.693147	77.5
	11/20/2008	-0.430783 J	170
	6/11/2009	ND<-3.21888	77.5
	6/30/2010	ND<-3.21888	77.5

Rank Sum = 2844.5
Rank Mean = 109.404

MW-12BR	3/16/1999	ND<-0.693147	77.5
	9/23/1999	1.79176	192
	3/15/2000	ND<-0.693147	77.5
	9/24/2003	ND<-0.693147	77.5
	3/11/2004	ND<-0.693147	77.5
	10/12/2004	ND<-0.693147	77.5
	4/1/2005	ND<-0.693147	77.5
	10/25/2005	-0.478036 J	168
	4/29/2006	-0.693147 J	166
	11/18/2006	ND<-0.693147	77.5
	5/23/2007	ND<-0.693147	77.5
	11/28/2007	ND<-0.693147	77.5
	6/5/2008	ND<-0.693147	77.5
	11/20/2008	1.00063	177
	6/11/2009	-1.77196 J	159
	11/16/2009	-1.34707 J	161
	6/30/2010	-1.30933 J	162

Rank Sum = 1960
Rank Mean = 115.294

MW-7	7/20/1995	ND<-0.693147	77.5
	8/24/1995	2.54945	202
	9/28/1995	3.70377	211
	10/26/1995	2.64617	206
	11/19/1996	ND<-0.693147	77.5
	12/19/1996	3.06805	209
	3/24/1997	ND<-0.693147	77.5
	9/24/1997	ND<-0.693147	77.5
	4/7/1998	ND<-0.693147	77.5
	9/23/1998	ND<-0.693147	77.5
	3/16/1999	2.19722	197
	9/23/1999	1.60944	188
	3/15/2000	ND<-0.693147	77.5
	9/24/2003	ND<-0.693147	77.5
	3/11/2004	ND<-0.693147	77.5
	10/12/2004	ND<-0.693147	77.5
	4/1/2005	ND<-0.693147	77.5
	10/25/2005	ND<-0.693147	77.5

4/29/2006	ND<-0.693147		77.5
11/18/2006	ND<-0.693147		77.5
5/23/2007	ND<-0.693147		77.5
11/28/2007	ND<-0.693147		77.5
6/5/2008	-0.653926	J	167
11/20/2008	-0.314711	J	174
6/11/2009	-1.77196	J	160
11/16/2009	-1.83258	J	157
6/30/2010	-1.83258	J H	158

Rank Sum = 3269
Rank Mean = 121.074

Calculation Results:

Kruskal-Wallis H Statistic = 6.48316
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 10.5128
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
6.48316 < 15.5073 indicating no significant group difference at 5% significance level
10.5128 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ppb)

Parameter: Manganese

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 260
Total Non-Detect: 252
Percent Non-Detects: 96.9231%
Total Background Measurements: 22
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	22	22 (100%)	3/16/1999	ND<10	ND<10
			9/23/1999	ND<10	ND<10
			3/15/2000	ND<10	ND<10
			9/24/2003	ND<10	ND<10
			3/11/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/25/2005	ND<10	ND<10
			10/25/2005	ND<10	ND<10
			4/29/2006	ND<10	ND<10
			4/29/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			5/23/2007	ND<10	ND<10
			5/23/2007	ND<10	ND<10
			11/28/2007	ND<10	ND<10
			11/28/2007	ND<10	ND<10
			6/5/2008	ND<10	ND<10
			6/5/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10
			11/20/2008	ND<10	ND<10

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12BR	23	22 (95.6522%)	3/16/1999	ND<10	ND<10
			9/23/1999	ND<10	ND<10
			3/15/2000	ND<10	ND<10
			9/24/2003	ND<10	ND<10
			3/11/2004	ND<10	ND<10
			10/12/2004	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			4/1/2005	ND<10	ND<10
			10/25/2005	ND<10	ND<10
			10/25/2005	ND<10	ND<10
			4/29/2006	ND<10	ND<10
			4/29/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			11/18/2006	ND<10	ND<10
			5/23/2007	ND<10	ND<10
			5/23/2007	ND<10	ND<10
			11/28/2007	ND<10	ND<10
			11/28/2007	ND<10	ND<10
			6/5/2008	ND<10	ND<10

			6/5/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			6/30/2010	14	14	
MW-12AR		23	22 (95.6522%)	3/16/1999	ND<10	ND<10
			9/23/1999	ND<10	ND<10	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			6/30/2010	30	30	
MW-9	32	31 (96.875%)	7/20/1995	ND<10	ND<10	
			8/24/1995	ND<10	ND<10	
			9/28/1995	21.4	21.4	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	ND<10	ND<10	
			9/23/1999	ND<10	ND<10	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	

MW-10	32	31 (96.875%)	7/20/1995		ND<10	ND<10
			8/24/1995	ND<10	ND<10	
			9/28/1995	26.1	26.1	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	ND<10	ND<10	
			9/23/1999	ND<10	ND<10	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
MW-7	32	30 (93.75%)	7/20/1995		73.7	73.7
			8/24/1995	ND<10	ND<10	
			9/28/1995	97.6	97.6	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	ND<10	ND<10	
			9/23/1999	ND<10	ND<10	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	

			6/5/2008	ND<10	ND<10	
			11/20/2008		ND<10	ND<10
			11/20/2008		ND<10	ND<10
MW-11R	32	30 (93.75%)	7/20/1995		64	64
			8/24/1995		ND<10	ND<10
			9/28/1995		23	23
			10/26/1995		ND<10	ND<10
			11/19/1996		ND<10	ND<10
			12/19/1996		ND<10	ND<10
			3/24/1997		ND<10	ND<10
			9/24/1997		ND<10	ND<10
			4/7/1998	ND<10	ND<10	
			9/23/1998		ND<10	ND<10
			3/16/1999		ND<10	ND<10
			9/23/1999		ND<10	ND<10
			3/15/2000		ND<10	ND<10
			9/24/2003		ND<10	ND<10
			3/11/2004		ND<10	ND<10
			10/12/2004		ND<10	ND<10
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005		ND<10	ND<10
			10/25/2005		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			5/23/2007		ND<10	ND<10
			5/23/2007		ND<10	ND<10
			11/28/2007		ND<10	ND<10
			11/28/2007		ND<10	ND<10
			6/5/2008	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008		ND<10	ND<10
			11/20/2008		ND<10	ND<10
MW-8	32	32 (100%)	7/20/1995		ND<10	ND<10
			8/24/1995		ND<10	ND<10
			9/28/1995		ND<10	ND<10
			10/26/1995		ND<10	ND<10
			11/19/1996		ND<10	ND<10
			12/19/1996		ND<10	ND<10
			3/24/1997		ND<10	ND<10
			9/24/1997		ND<10	ND<10
			4/7/1998	ND<10	ND<10	
			9/23/1998		ND<10	ND<10
			3/16/1999		ND<10	ND<10
			9/23/1999		ND<10	ND<10
			3/15/2000		ND<10	ND<10
			9/24/2003		ND<10	ND<10
			3/11/2004		ND<10	ND<10
			10/12/2004		ND<10	ND<10
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005		ND<10	ND<10
			10/25/2005		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			4/29/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			11/18/2006		ND<10	ND<10
			5/23/2007		ND<10	ND<10

			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
			11/20/2008	ND<10	ND<10	
MW-6	32	32 (100%)	7/20/1995	ND<10	ND<10	
			8/24/1995	ND<10	ND<10	
			9/28/1995	ND<10	ND<10	
			10/26/1995	ND<10	ND<10	
			11/19/1996	ND<10	ND<10	
			12/19/1996	ND<10	ND<10	
			3/24/1997	ND<10	ND<10	
			9/24/1997	ND<10	ND<10	
			4/7/1998	ND<10	ND<10	
			9/23/1998	ND<10	ND<10	
			3/16/1999	ND<10	ND<10	
			9/23/1999	ND<10	ND<10	
			3/15/2000	ND<10	ND<10	
			9/24/2003	ND<10	ND<10	
			3/11/2004	ND<10	ND<10	
			10/12/2004	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			4/1/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			10/25/2005	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			4/29/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			11/18/2006	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			5/23/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			11/28/2007	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			6/5/2008	ND<10	ND<10	
			11/20/2008	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: Manganese

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 260

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	5	-2.747777	55021	-13.7388
2	5	-2.457271	3.5884	-26.0252
3	5	-2.290361	8.8342	-37.477
4	5	-2.170092	3.5435	-48.3275
5	5	-2.074852	7.8485	-58.7017
6	5	-2.014093	1.905	-68.7722
7	5	-1.943143	5.6808	-78.4878
8	5	-1.880793	9.2182	-87.8918
9	5	-1.825014	2.5488	-97.0168
10	5	-1.774384	5.6972	-105.889
11	5	-1.727934	8.683	-114.528
12	5	-1.6954	51.5574	-123.005
13	5	-1.654635	4.2951	-131.278
14	5	-1.616445	6.908	-139.361
15	5	-1.580475	9.4059	-147.263
16	5	-1.546436	1.7973	-154.995
17	5	-1.5141	64.0898	-162.566
18	5	-1.490856	6.3125	-170.02
19	5	-1.461066	8.4472	-177.325
20	5	-1.4325	70.4992	-184.488
21	5	-1.405077	2.4735	-191.513
22	5	-1.378667	4.3742	-198.406
23	5	-1.353177	6.2053	-205.172
24	5	-1.334627	7.9865	-211.845
25	5	-1.310587	9.7041	-218.398
26	5	-1.287278	1.3612	-224.835
27	5	-1.264648	2.9605	-231.158
28	5	-1.242648	4.5046	-237.371
29	5	-1.221238	5.996	-243.477
30	5	-1.205538	7.4493	-249.505
31	5	-1.185048	8.8537	-255.43
32	5	-1.165059	0.211	-261.255
33	5	-1.1455	91.5232	-266.983
34	5	-1.126399	2.7919	-272.615
35	5	-1.107689	4.0189	-278.153
36	5	-1.0939	95.2155	-283.623
37	5	-1.075849	6.3729	-289.002
38	5	-1.058129	7.4925	-294.292
39	5	-1.040739	8.5757	-299.496
40	5	-1.023659	9.6235	-304.614
41	5	-1.00687	100.637	-309.649
42	5	-0.994457	101.626	-314.621
43	5	-0.97815	102.583	-319.512
44	5	-0.9621	103.509	-324.322
45	5	-0.946291	104.404	-329.054
46	5	-0.930718	105.27	-333.707
47	5	-0.915365	106.108	-338.284
48	5	-0.903992	106.925	-342.804
49	5	-0.889006	107.716	-347.249

50	5	-0.874218	108.48	-351.62
51	5	-0.859618	109.219	-355.918
52	5	-0.845198	109.933	-360.144
53	5	-0.830953	110.624	-364.299
54	5	-0.820379	111.297	-368.401
55	5	-0.806422	111.947	-372.433
56	5	-0.792618	112.575	-376.396
57	5	-0.778966	113.182	-380.291
58	5	-0.765456	113.768	-384.118
59	5	-0.752084	114.334	-387.879
60	5	-0.742143	114.885	-391.589
61	5	-0.729003	115.416	-395.234
62	5	-0.715986	115.929	-398.814
63	5	-0.703089	116.423	-402.33
64	5	-0.690309	116.899	-405.781
65	5	-0.677639	117.359	-409.17
66	5	-0.668209	117.805	-412.511
67	5	-0.655726	118.235	-415.789
68	5	-0.643345	118.649	-419.006
69	5	-0.631062	119.047	-422.161
70	5	-0.618872	119.43	-425.256
71	5	-0.606775	119.798	-428.289
72	5	-0.597761	120.156	-431.278
73	5	-0.585815	120.499	-434.207
74	5	-0.573953	120.828	-437.077
75	5	-0.56217	121.144	-439.888
76	5	-0.550465	121.447	-442.64
77	5	-0.538836	121.738	-445.334
78	5	-0.530162	122.019	-447.985
79	5	-0.518658	122.288	-450.579
80	5	-0.507221	122.545	-453.115
81	5	-0.49585	122.791	-455.594
82	5	-0.484544	123.026	-458.017
83	5	-0.473299	123.25	-460.383
84	5	-0.464904	123.466	-462.708
85	5	-0.453763	123.672	-464.976
86	5	-0.442676	123.868	-467.19
87	5	-0.431644	124.054	-469.348
88	5	-0.420664	124.231	-471.451
89	5	-0.412463	124.401	-473.514
90	5	-0.401571	124.562	-475.522
91	5	-0.390726	124.715	-477.475
92	5	-0.379927	124.859	-479.375
93	5	-0.369171	124.996	-481.221
94	5	-0.358459	125.124	-483.013
95	5	-0.350451	125.247	-484.765
96	5	-0.33981	125.363	-486.464
97	5	-0.329206	125.471	-488.11
98	5	-0.318639	125.572	-489.703
99	5	-0.308108	125.667	-491.244
100	5	-0.297612	125.756	-492.732
101	5	-0.28976	125.84	-494.181
102	5	-0.279319	125.918	-495.577
103	5	-0.268908	125.99	-496.922
104	5	-0.258527	126.057	-498.215
105	5	-0.248174	126.119	-499.456
106	5	-0.237847	126.175	-500.645
107	5	-0.230118	126.228	-501.795
108	5	-0.219834	126.277	-502.895
109	5	-0.209575	126.32	-503.942
110	5	-0.199336	126.36	-504.939
111	5	-0.189118	126.396	-505.885

112	5	-0.17892	126.428	-506.779
113	5	-0.171285	126.457	-507.636
114	5	-0.161119	126.483	-508.441
115	5	-0.150969	126.506	-509.196
116	5	-0.140835	126.526	-509.9
117	5	-0.130716	126.543	-510.554
118	5	-0.12061	126.557	-511.157
119	5	-0.113039	126.57	-511.722
120	5	-0.102953	126.581	-512.237
121	5	-0.0928787	126.59	-512.701
122	5	-0.0828129	126.596	-513.115
123	5	-0.0727562	126.602	-513.479
124	5	-0.0627062	126.606	-513.793
125	5	-0.0551734	126.609	-514.069
126	5	-0.0451348	126.611	-514.294
127	5	-0.0350997	126.612	-514.47
128	5	-0.0250691	126.613	-514.595
129	5	-0.0150408	126.613	-514.67
130	5	-0.00501359	126.613	-514.695
131	5	0.00501359	126.613	-514.67
132	5	0.0150408	126.613	-514.595
133	5	0.0250691	126.614	-514.47
134	5	0.0350997	126.615	-514.294
135	5	0.0451348	126.617	-514.069
136	5	0.0551734	126.62	-513.793
137	5	0.0627062	126.624	-513.479
138	5	0.0727562	126.629	-513.115
139	5	0.0828129	126.636	-512.701
140	5	0.0928787	126.645	-512.237
141	5	0.102953	126.655	-511.722
142	5	0.113039	126.668	-511.157
143	5	0.12061	126.683	-510.554
144	5	0.130716	126.7	-509.9
145	5	0.140835	126.72	-509.196
146	5	0.150969	126.742	-508.441
147	5	0.161119	126.768	-507.636
148	5	0.171285	126.798	-506.779
149	5	0.17892	126.83	-505.885
150	5	0.189118	126.865	-504.939
151	5	0.199336	126.905	-503.942
152	5	0.209575	126.949	-502.895
153	5	0.219834	126.997	-501.795
154	5	0.230118	127.05	-500.645
155	5	0.237847	127.107	-499.456
156	5	0.248174	127.168	-498.215
157	5	0.258527	127.235	-496.922
158	5	0.268908	127.308	-495.577
159	5	0.279319	127.386	-494.181
160	5	0.28976	127.47	-492.732
161	5	0.297612	127.558	-491.244
162	5	0.308108	127.653	-489.703
163	5	0.318639	127.755	-488.11
164	5	0.329206	127.863	-486.464
165	5	0.33981	127.979	-484.765
166	5	0.350451	128.101	-483.013
167	5	0.358459	128.23	-481.221
168	5	0.369171	128.366	-479.375
169	5	0.379927	128.51	-477.475
170	5	0.390726	128.663	-475.522
171	5	0.401571	128.824	-473.514
172	5	0.412463	128.994	-471.451
173	5	0.420664	129.171	-469.348

174	5	0.431644	129.358	-467.19
175	5	0.442676	129.554	-464.976
176	5	0.453763	129.76	-462.708
177	5	0.464904	129.976	-460.383
178	5	0.473299	130.2	-458.017
179	5	0.484544	130.435	-455.594
180	5	0.49585	130.68	-453.115
181	5	0.507221	130.938	-450.579
182	5	0.518658	131.207	-447.985
183	5	0.530162	131.488	-445.334
184	5	0.538836	131.778	-442.64
185	5	0.550465	132.081	-439.888
186	5	0.56217	132.397	-437.077
187	5	0.573953	132.727	-434.207
188	5	0.585815	133.07	-431.278
189	5	0.597761	133.427	-428.289
190	5	0.606775	133.795	-425.256
191	5	0.618872	134.178	-422.161
192	5	0.631062	134.577	-419.006
193	5	0.643345	134.99	-415.789
194	5	0.655726	135.42	-412.511
195	5	0.668209	135.867	-409.17
196	5	0.677639	136.326	-405.781
197	5	0.690309	136.803	-402.33
198	5	0.703089	137.297	-398.814
199	5	0.715986	137.81	-395.234
200	5	0.729003	138.341	-391.589
201	5	0.742143	138.892	-387.879
202	5	0.752084	139.457	-384.118
203	5	0.765456	140.043	-380.291
204	5	0.778966	140.65	-376.396
205	5	0.792618	141.278	-372.433
206	5	0.806422	141.929	-368.401
207	5	0.820379	142.602	-364.299
208	5	0.830953	143.292	-360.144
209	5	0.845198	144.007	-355.918
210	5	0.859618	144.746	-351.62
211	5	0.874218	145.51	-347.249
212	5	0.889006	146.3	-342.804
213	5	0.903992	147.117	-338.284
214	5	0.915365	147.955	-333.707
215	5	0.930718	148.821	-329.054
216	5	0.946291	149.717	-324.322
217	5	0.9621	150.643	-319.512
218	5	0.97815	151.599	-314.621
219	5	0.994457	152.588	-309.649
220	5	1.00687	153.602	-304.614
221	5	1.02365	154.65	-299.496
222	5	1.04073	155.733	-294.292
223	5	1.05812	156.853	-289.002
224	5	1.07584	158.01	-283.623
225	5	1.0939	159.207	-278.153
226	5	1.10768	160.434	-272.615
227	5	1.12639	161.702	-266.983
228	5	1.1455	163.015	-261.255
229	5	1.16505	164.372	-255.43
230	5	1.18504	165.776	-249.505
231	5	1.20553	167.23	-243.477
232	5	1.22123	168.721	-237.371
233	5	1.24264	170.265	-231.158
234	5	1.26464	171.864	-224.835
235	5	1.28727	173.521	-218.398

236	5	1.31058	175.239	-211.845
237	5	1.33462	177.02	-205.172
238	5	1.35317	178.851	-198.406
239	5	1.37866	180.752	-191.513
240	5	1.40507	182.726	-184.488
241	5	1.4325	184.778	-177.325
242	5	1.46106	186.913	-170.02
243	5	1.49085	189.136	-162.566
244	5	1.5141	191.428	-154.995
245	5	1.54643	193.82	-147.263
246	5	1.58047	196.318	-139.361
247	5	1.61644	198.93	-131.278
248	5	1.65463	201.668	-123.005
249	5	1.6954	204.543	-114.528
250	5	1.72793	207.528	-105.889
251	5	1.77438	210.677	-97.0168
252	5	1.82501	214.007	-87.8918
253	14	1.88079	217.545	-61.5607
254	21.4	1.94314	221.321	-19.9776
255	23	2.01409	225.377	26.3465
256	26.1	2.07485	229.682	80.5001
257	30	2.17009	234.391	145.603
258	64	2.29036	239.637	292.186
259	73.7	2.45727	245.675	473.287
260	97.6	2.74777	253.226	741.469

Data Set Standard Deviation = 8.37132
Numerator = 549776
Denominator = 4.59617e+006
W Statistic = 0.119616 = 549776 / 4.59617e+006

5% Critical value of 0.976 exceeds 0.119616
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.119616
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Manganese

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 260

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1.60944	-2.747777	55021	-4.42236
2	1.60944	-2.457271	3.5884	-8.37719
3	1.60944	-2.290361	8.8342	-12.0634
4	1.60944	-2.170092	3.5435	-15.556
5	1.60944	-2.074852	7.8485	-18.8953
6	1.60944	-2.014093	1.905	-22.1369
7	1.60944	-1.943143	5.6808	-25.2643
8	1.60944	-1.880793	9.2182	-28.2913
9	1.60944	-1.825014	2.5488	-31.2285
10	1.60944	-1.774384	5.6972	-34.0843
11	1.60944	-1.727934	8.683	-36.8653
12	1.60944	-1.6954	51.5574	-39.5939
13	1.60944	-1.654635	4.2951	-42.2569
14	1.60944	-1.616445	6.908	-44.8585
15	1.60944	-1.580475	9.4059	-47.4021
16	1.60944	-1.546436	1.7973	-49.891
17	1.60944	-1.5141	64.0898	-52.3279
18	1.60944	-1.490856	6.3125	-54.7273
19	1.60944	-1.461066	8.4472	-57.0788
20	1.60944	-1.4325	70.4992	-59.3843
21	1.60944	-1.405077	2.4735	-61.6457
22	1.60944	-1.378667	4.3742	-63.8646
23	1.60944	-1.353177	6.2053	-66.0424
24	1.60944	-1.334627	7.9865	-68.1904
25	1.60944	-1.310587	9.7041	-70.2997
26	1.60944	-1.287278	1.3612	-72.3715
27	1.60944	-1.264648	2.9605	-74.4068
28	1.60944	-1.242648	4.5046	-76.4068
29	1.60944	-1.221238	5.996	-78.3723
30	1.60944	-1.205538	7.4493	-80.3125
31	1.60944	-1.185048	8.8537	-82.2198
32	1.60944	-1.165059	0.211	-84.0948
33	1.60944	-1.1455	91.5232	-85.9385
34	1.60944	-1.126399	2.7919	-87.7513
35	1.60944	-1.107689	4.0189	-89.5341
36	1.60944	-1.0939	95.2155	-91.2946
37	1.60944	-1.075849	6.3729	-93.0261
38	1.60944	-1.058129	7.4925	-94.7291
39	1.60944	-1.040739	8.5757	-96.4041
40	1.60944	-1.023659	9.6235	-98.0516
41	1.60944	-1.00687	100.637	-99.6721
42	1.60944	-0.994457	101.626	-101.273
43	1.60944	-0.97815	102.583	-102.847
44	1.60944	-0.9621	103.509	-104.395
45	1.60944	-0.946291	104.404	-105.918
46	1.60944	-0.930718	105.27	-107.416
47	1.60944	-0.915365	106.108	-108.889
48	1.60944	-0.903992	106.925	-110.344
49	1.60944	-0.889006	107.716	-111.775

50	1.60944	-0.874218	108.48	-113.182
51	1.60944	-0.859618	109.219	-114.566
52	1.60944	-0.845198	109.933	-115.926
53	1.60944	-0.830953	110.624	-117.263
54	1.60944	-0.820379	111.297	-118.584
55	1.60944	-0.806422	111.947	-119.882
56	1.60944	-0.792618	112.575	-121.157
57	1.60944	-0.778966	113.182	-122.411
58	1.60944	-0.765456	113.768	-123.643
59	1.60944	-0.752084	114.334	-124.853
60	1.60944	-0.742143	114.885	-126.048
61	1.60944	-0.729003	115.416	-127.221
62	1.60944	-0.715986	115.929	-128.373
63	1.60944	-0.703089	116.423	-129.505
64	1.60944	-0.690309	116.899	-130.616
65	1.60944	-0.677639	117.359	-131.707
66	1.60944	-0.668209	117.805	-132.782
67	1.60944	-0.655726	118.235	-133.837
68	1.60944	-0.643345	118.649	-134.873
69	1.60944	-0.631062	119.047	-135.888
70	1.60944	-0.618872	119.43	-136.884
71	1.60944	-0.606775	119.798	-137.861
72	1.60944	-0.597761	120.156	-138.823
73	1.60944	-0.585815	120.499	-139.766
74	1.60944	-0.573953	120.828	-140.69
75	1.60944	-0.56217	121.144	-141.594
76	1.60944	-0.550465	121.447	-142.48
77	1.60944	-0.538836	121.738	-143.348
78	1.60944	-0.530162	122.019	-144.201
79	1.60944	-0.518658	122.288	-145.036
80	1.60944	-0.507221	122.545	-145.852
81	1.60944	-0.49585	122.791	-146.65
82	1.60944	-0.484544	123.026	-147.43
83	1.60944	-0.473299	123.25	-148.192
84	1.60944	-0.464904	123.466	-148.94
85	1.60944	-0.453763	123.672	-149.67
86	1.60944	-0.442676	123.868	-150.383
87	1.60944	-0.431644	124.054	-151.077
88	1.60944	-0.420664	124.231	-151.754
89	1.60944	-0.412463	124.401	-152.418
90	1.60944	-0.401571	124.562	-153.064
91	1.60944	-0.390726	124.715	-153.693
92	1.60944	-0.379927	124.859	-154.305
93	1.60944	-0.369171	124.996	-154.899
94	1.60944	-0.358459	125.124	-155.476
95	1.60944	-0.350451	125.247	-156.04
96	1.60944	-0.33981	125.363	-156.587
97	1.60944	-0.329206	125.471	-157.117
98	1.60944	-0.318639	125.572	-157.629
99	1.60944	-0.308108	125.667	-158.125
100	1.60944	-0.297612	125.756	-158.604
101	1.60944	-0.28976	125.84	-159.071
102	1.60944	-0.279319	125.918	-159.52
103	1.60944	-0.268908	125.99	-159.953
104	1.60944	-0.258527	126.057	-160.369
105	1.60944	-0.248174	126.119	-160.769
106	1.60944	-0.237847	126.175	-161.151
107	1.60944	-0.230118	126.228	-161.522
108	1.60944	-0.219834	126.277	-161.876
109	1.60944	-0.209575	126.32	-162.213
110	1.60944	-0.199336	126.36	-162.534
111	1.60944	-0.189118	126.396	-162.838

112	1.60944	-0.17892	126.428	-163.126
113	1.60944	-0.171285	126.457	-163.402
114	1.60944	-0.161119	126.483	-163.661
115	1.60944	-0.150969	126.506	-163.904
116	1.60944	-0.140835	126.526	-164.131
117	1.60944	-0.130716	126.543	-164.341
118	1.60944	-0.12061	126.557	-164.535
119	1.60944	-0.113039	126.57	-164.717
120	1.60944	-0.102953	126.581	-164.883
121	1.60944	-0.0928787	126.59	-165.032
122	1.60944	-0.0828129	126.596	-165.165
123	1.60944	-0.0727562	126.602	-165.283
124	1.60944	-0.0627062	126.606	-165.383
125	1.60944	-0.0551734	126.609	-165.472
126	1.60944	-0.0451348	126.611	-165.545
127	1.60944	-0.0350997	126.612	-165.601
128	1.60944	-0.0250691	126.613	-165.642
129	1.60944	-0.0150408	126.613	-165.666
130	1.60944	-0.00501359	126.613	-165.674
131	1.60944	0.00501359	126.613	-165.666
132	1.60944	0.0150408	126.613	-165.642
133	1.60944	0.0250691	126.614	-165.601
134	1.60944	0.0350997	126.615	-165.545
135	1.60944	0.0451348	126.617	-165.472
136	1.60944	0.0551734	126.62	-165.383
137	1.60944	0.0627062	126.624	-165.283
138	1.60944	0.0727562	126.629	-165.165
139	1.60944	0.0828129	126.636	-165.032
140	1.60944	0.0928787	126.645	-164.883
141	1.60944	0.102953	126.655	-164.717
142	1.60944	0.113039	126.668	-164.535
143	1.60944	0.12061	126.683	-164.341
144	1.60944	0.130716	126.7	-164.131
145	1.60944	0.140835	126.72	-163.904
146	1.60944	0.150969	126.742	-163.661
147	1.60944	0.161119	126.768	-163.402
148	1.60944	0.171285	126.798	-163.126
149	1.60944	0.17892	126.83	-162.838
150	1.60944	0.189118	126.865	-162.534
151	1.60944	0.199336	126.905	-162.213
152	1.60944	0.209575	126.949	-161.876
153	1.60944	0.219834	126.997	-161.522
154	1.60944	0.230118	127.05	-161.151
155	1.60944	0.237847	127.107	-160.769
156	1.60944	0.248174	127.168	-160.369
157	1.60944	0.258527	127.235	-159.953
158	1.60944	0.268908	127.308	-159.52
159	1.60944	0.279319	127.386	-159.071
160	1.60944	0.28976	127.47	-158.604
161	1.60944	0.297612	127.558	-158.125
162	1.60944	0.308108	127.653	-157.629
163	1.60944	0.318639	127.755	-157.117
164	1.60944	0.329206	127.863	-156.587
165	1.60944	0.33981	127.979	-156.04
166	1.60944	0.350451	128.101	-155.476
167	1.60944	0.358459	128.23	-154.899
168	1.60944	0.369171	128.366	-154.305
169	1.60944	0.379927	128.51	-153.693
170	1.60944	0.390726	128.663	-153.064
171	1.60944	0.401571	128.824	-152.418
172	1.60944	0.412463	128.994	-151.754
173	1.60944	0.420664	129.171	-151.077

174	1.60944	0.431644		129.358	-150.383
175	1.60944	0.442676		129.554	-149.67
176	1.60944	0.453763		129.76	-148.94
177	1.60944	0.464904		129.976	-148.192
178	1.60944	0.473299		130.2	-147.43
179	1.60944	0.484544		130.435	-146.65
180	1.60944	0.49585	130.68	-145.852	
181	1.60944	0.507221		130.938	-145.036
182	1.60944	0.518658		131.207	-144.201
183	1.60944	0.530162		131.488	-143.348
184	1.60944	0.538836		131.778	-142.48
185	1.60944	0.550465		132.081	-141.594
186	1.60944	0.56217	132.397	-140.69	
187	1.60944	0.573953		132.727	-139.766
188	1.60944	0.585815		133.07	-138.823
189	1.60944	0.597761		133.427	-137.861
190	1.60944	0.606775		133.795	-136.884
191	1.60944	0.618872		134.178	-135.888
192	1.60944	0.631062		134.577	-134.873
193	1.60944	0.643345		134.99	-133.837
194	1.60944	0.655726		135.42	-132.782
195	1.60944	0.668209		135.867	-131.707
196	1.60944	0.677639		136.326	-130.616
197	1.60944	0.690309		136.803	-129.505
198	1.60944	0.703089		137.297	-128.373
199	1.60944	0.715986		137.81	-127.221
200	1.60944	0.729003		138.341	-126.048
201	1.60944	0.742143		138.892	-124.853
202	1.60944	0.752084		139.457	-123.643
203	1.60944	0.765456		140.043	-122.411
204	1.60944	0.778966		140.65	-121.157
205	1.60944	0.792618		141.278	-119.882
206	1.60944	0.806422		141.929	-118.584
207	1.60944	0.820379		142.602	-117.263
208	1.60944	0.830953		143.292	-115.926
209	1.60944	0.845198		144.007	-114.566
210	1.60944	0.859618		144.746	-113.182
211	1.60944	0.874218		145.51	-111.775
212	1.60944	0.889006		146.3	-110.344
213	1.60944	0.903992		147.117	-108.889
214	1.60944	0.915365		147.955	-107.416
215	1.60944	0.930718		148.821	-105.918
216	1.60944	0.946291		149.717	-104.395
217	1.60944	0.9621	150.643	-102.847	
218	1.60944	0.97815	151.599	-101.273	
219	1.60944	0.994457		152.588	-99.6721
220	1.60944	1.00687	153.602	-98.0516	
221	1.60944	1.02365	154.65	-96.4041	
222	1.60944	1.04073	155.733	-94.7291	
223	1.60944	1.05812	156.853	-93.0261	
224	1.60944	1.07584	158.01	-91.2946	
225	1.60944	1.0939	159.207	-89.5341	
226	1.60944	1.10768	160.434	-87.7513	
227	1.60944	1.12639	161.702	-85.9385	
228	1.60944	1.1455	163.015	-84.0948	
229	1.60944	1.16505	164.372	-82.2198	
230	1.60944	1.18504	165.776	-80.3125	
231	1.60944	1.20553	167.23	-78.3723	
232	1.60944	1.22123	168.721	-76.4068	
233	1.60944	1.24264	170.265	-74.4068	
234	1.60944	1.26464	171.864	-72.3715	
235	1.60944	1.28727	173.521	-70.2997	

236	1.60944	1.31058	175.239	-68.1904
237	1.60944	1.33462	177.02	-66.0424
238	1.60944	1.35317	178.851	-63.8646
239	1.60944	1.37866	180.752	-61.6457
240	1.60944	1.40507	182.726	-59.3843
241	1.60944	1.4325	184.778	-57.0788
242	1.60944	1.46106	186.913	-54.7273
243	1.60944	1.49085	189.136	-52.3279
244	1.60944	1.5141	191.428	-49.891
245	1.60944	1.54643	193.82	-47.4021
246	1.60944	1.58047	196.318	-44.8585
247	1.60944	1.61644	198.93	-42.2569
248	1.60944	1.65463	201.668	-39.5939
249	1.60944	1.6954	204.543	-36.8653
250	1.60944	1.72793	207.528	-34.0843
251	1.60944	1.77438	210.677	-31.2285
252	1.60944	1.82501	214.007	-28.2913
253	2.63906	1.88079	217.545	-23.3278
254	3.06339	1.94314	221.321	-17.3752
255	3.13549	2.01409	225.377	-11.06
256	3.26194	2.07485	229.682	-4.29198
257	3.4012	2.17009	234.391	3.08893
258	4.15888	2.29036	239.637	12.6143
259	4.3	2.45727	245.675	23.1806
260	4.58088	2.74777	253.226	35.7677

Data Set Standard Deviation = 0.35732
Numerator = 1279.33
Denominator = 8373.79
W Statistic = 0.152778 = 1279.33 / 8373.79

5% Critical value of 0.976 exceeds 0.152778
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.152778
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Manganese

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

Total Percent Non-Detects = 96.9231%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 22
Maximum Background Concentration = 1.60944
Confidence Level = 73.3%
False Positive Rate = 26.7%

Location	Date	Samples	Mean	Significant
MW-12BR	6/30/2010	1	2.63906	TRUE
MW-12AR	6/30/2010	1	3.4012	TRUE
MW-9	11/20/2008	2	1.60944	FALSE
MW-10	11/20/2008	2	1.60944	FALSE
MW-7	11/20/2008	2	1.60944	FALSE
MW-11R	11/20/2008	2	1.60944	FALSE
MW-8	11/20/2008	2	1.60944	FALSE
MW-6	11/20/2008	2	1.60944	FALSE

Mann-Kendall Trend Analysis

Parameter: Manganese

Location: MW-12BR

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives		Negatives
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
ND<1.60944		ND<1.60944	0	0	0
2.63906		ND<1.60944	1.02962	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
ND<1.60944		ND<1.60944	0	1	0
2.63906		ND<1.60944	1.02962	2	0
ND<1.60944		ND<1.60944	0	2	0
ND<1.60944		ND<1.60944	0	2	0
ND<1.60944		ND<1.60944	0	2	0

ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
2.63906	ND<1.60944	1.02962	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
2.63906	ND<1.60944	1.02962	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
2.63906	ND<1.60944	1.02962	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0

ND<1.60944	ND<1.60944	0	5	0	
ND<1.60944	ND<1.60944	0	5	0	
ND<1.60944	ND<1.60944	0	5	0	
ND<1.60944	ND<1.60944	0	5	0	
ND<1.60944	ND<1.60944	0	5	0	
ND<1.60944	ND<1.60944	0	5	0	
ND<1.60944	ND<1.60944	0	5	0	
ND<1.60944	ND<1.60944	0	5	0	
ND<1.60944	ND<1.60944	0	5	0	
ND<1.60944	ND<1.60944	0	5	0	
ND<1.60944	ND<1.60944	0	5	0	
2.63906	ND<1.60944	1.02962	6	0	
ND<1.60944	ND<1.60944	Same Date		6	0
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
ND<1.60944	ND<1.60944	0	6	0	
2.63906	ND<1.60944	1.02962	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
ND<1.60944	ND<1.60944	0	7	0	
2.63906	ND<1.60944	1.02962	8	0	
ND<1.60944	ND<1.60944	Same Date		8	0
ND<1.60944	ND<1.60944	0	8	0	
ND<1.60944	ND<1.60944	0	8	0	
ND<1.60944	ND<1.60944	0	8	0	
ND<1.60944	ND<1.60944	0	8	0	
ND<1.60944	ND<1.60944	0	8	0	
ND<1.60944	ND<1.60944	0	8	0	
ND<1.60944	ND<1.60944	0	8	0	
ND<1.60944	ND<1.60944	0	8	0	
ND<1.60944	ND<1.60944	0	8	0	
ND<1.60944	ND<1.60944	0	8	0	
ND<1.60944	ND<1.60944	0	8	0	
ND<1.60944	ND<1.60944	0	8	0	
2.63906	ND<1.60944	1.02962	9	0	
ND<1.60944	ND<1.60944	0	9	0	

ND<1.60944	ND<1.60944	0	9	0	
ND<1.60944	ND<1.60944	0	9	0	
ND<1.60944	ND<1.60944	0	9	0	
ND<1.60944	ND<1.60944	0	9	0	
ND<1.60944	ND<1.60944	0	9	0	
ND<1.60944	ND<1.60944	0	9	0	
ND<1.60944	ND<1.60944	0	9	0	
ND<1.60944	ND<1.60944	0	9	0	
ND<1.60944	ND<1.60944	0	9	0	
ND<1.60944	ND<1.60944	0	9	0	
ND<1.60944	ND<1.60944	0	9	0	
2.63906	ND<1.60944	1.02962	10	0	
ND<1.60944	ND<1.60944	Same Date		10	0
ND<1.60944	ND<1.60944	0	10	0	
ND<1.60944	ND<1.60944	0	10	0	
ND<1.60944	ND<1.60944	0	10	0	
ND<1.60944	ND<1.60944	0	10	0	
ND<1.60944	ND<1.60944	0	10	0	
ND<1.60944	ND<1.60944	0	10	0	
ND<1.60944	ND<1.60944	0	10	0	
ND<1.60944	ND<1.60944	0	10	0	
ND<1.60944	ND<1.60944	0	10	0	
ND<1.60944	ND<1.60944	0	10	0	
2.63906	ND<1.60944	1.02962	11	0	
ND<1.60944	ND<1.60944	0	11	0	
ND<1.60944	ND<1.60944	0	11	0	
ND<1.60944	ND<1.60944	0	11	0	
ND<1.60944	ND<1.60944	0	11	0	
ND<1.60944	ND<1.60944	0	11	0	
ND<1.60944	ND<1.60944	0	11	0	
ND<1.60944	ND<1.60944	0	11	0	
ND<1.60944	ND<1.60944	0	11	0	
ND<1.60944	ND<1.60944	0	11	0	
ND<1.60944	ND<1.60944	0	11	0	
2.63906	ND<1.60944	1.02962	12	0	
ND<1.60944	ND<1.60944	Same Date		12	0
ND<1.60944	ND<1.60944	0	12	0	
ND<1.60944	ND<1.60944	0	12	0	
ND<1.60944	ND<1.60944	0	12	0	
ND<1.60944	ND<1.60944	0	12	0	
ND<1.60944	ND<1.60944	0	12	0	
ND<1.60944	ND<1.60944	0	12	0	
ND<1.60944	ND<1.60944	0	12	0	
ND<1.60944	ND<1.60944	0	12	0	
2.63906	ND<1.60944	1.02962	13	0	
ND<1.60944	ND<1.60944	0	13	0	
ND<1.60944	ND<1.60944	0	13	0	
ND<1.60944	ND<1.60944	0	13	0	
ND<1.60944	ND<1.60944	0	13	0	
ND<1.60944	ND<1.60944	0	13	0	
ND<1.60944	ND<1.60944	0	13	0	
ND<1.60944	ND<1.60944	0	13	0	
ND<1.60944	ND<1.60944	0	13	0	
2.63906	ND<1.60944	1.02962	14	0	
ND<1.60944	ND<1.60944	Same Date		14	0
ND<1.60944	ND<1.60944	0	14	0	
ND<1.60944	ND<1.60944	0	14	0	

ND<1.60944	ND<1.60944	0	14	0	
ND<1.60944	ND<1.60944	0	14	0	
ND<1.60944	ND<1.60944	0	14	0	
ND<1.60944	ND<1.60944	0	14	0	
2.63906	ND<1.60944	1.02962	15	0	
ND<1.60944	ND<1.60944	0	15	0	
ND<1.60944	ND<1.60944	0	15	0	
ND<1.60944	ND<1.60944	0	15	0	
ND<1.60944	ND<1.60944	0	15	0	
ND<1.60944	ND<1.60944	0	15	0	
ND<1.60944	ND<1.60944	0	15	0	
2.63906	ND<1.60944	1.02962	16	0	
ND<1.60944	ND<1.60944	Same Date		16	0
ND<1.60944	ND<1.60944	0	16	0	
ND<1.60944	ND<1.60944	0	16	0	
ND<1.60944	ND<1.60944	0	16	0	
ND<1.60944	ND<1.60944	0	16	0	
2.63906	ND<1.60944	1.02962	17	0	
ND<1.60944	ND<1.60944	0	17	0	
ND<1.60944	ND<1.60944	0	17	0	
ND<1.60944	ND<1.60944	0	17	0	
ND<1.60944	ND<1.60944	0	17	0	
2.63906	ND<1.60944	1.02962	18	0	
ND<1.60944	ND<1.60944	Same Date		18	0
ND<1.60944	ND<1.60944	0	18	0	
ND<1.60944	ND<1.60944	0	18	0	
2.63906	ND<1.60944	1.02962	19	0	
ND<1.60944	ND<1.60944	0	19	0	
ND<1.60944	ND<1.60944	0	19	0	
2.63906	ND<1.60944	1.02962	20	0	
ND<1.60944	ND<1.60944	Same Date		20	0
2.63906	ND<1.60944	1.02962	21	0	
2.63906	ND<1.60944	1.02962	22	0	

S Statistic = 22 - 0 = 22

Tied Group	Value	Members
1	1.60944	22

Time Period		Observations
3/16/1999		1
9/23/1999		1
3/15/2000		1
9/24/2003		1
3/11/2004		1
10/12/2004		1
4/1/2005	2	
10/25/2005		2
4/29/2006		2
11/18/2006		2
5/23/2007		2
11/28/2007		2

6/5/2008 2
11/20/2008 2
6/30/2010 1
There are 8 time periods with multiple data

A = 22638
B = 144
C = 9240
D = 0
E = 462
F = 16
a = 25806
b = 95634
c = 1012
Group Variance = 175.304
Z-Score = 1.58607
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|1.58607| <= 1.97737 indicating no evidence of a trend

Mann-Kendall Trend Analysis

Parameter: Manganese

Location: MW-12AR

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
ND<1.60944	ND<1.60944	0	0	0
3.4012	ND<1.60944	1.79176	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
ND<1.60944	ND<1.60944	0	1	0
3.4012	ND<1.60944	1.79176	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0

ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
ND<1.60944	ND<1.60944	0	2	0
3.4012	ND<1.60944	1.79176	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
ND<1.60944	ND<1.60944	0	3	0
3.4012	ND<1.60944	1.79176	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
ND<1.60944	ND<1.60944	0	4	0
3.4012	ND<1.60944	1.79176	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0

ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
ND<1.60944	ND<1.60944	0	5	0
3.4012	ND<1.60944	1.79176	6	0

ND<1.60944	ND<1.60944	Same Date	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
ND<1.60944	ND<1.60944	0	6	0
3.4012	ND<1.60944	1.79176	7	0

ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
ND<1.60944	ND<1.60944	0	7	0
3.4012	ND<1.60944	1.79176	8	0

ND<1.60944	ND<1.60944	Same Date	8	0
ND<1.60944	ND<1.60944	0	8	0
ND<1.60944	ND<1.60944	0	8	0
ND<1.60944	ND<1.60944	0	8	0
ND<1.60944	ND<1.60944	0	8	0
ND<1.60944	ND<1.60944	0	8	0
ND<1.60944	ND<1.60944	0	8	0
ND<1.60944	ND<1.60944	0	8	0
ND<1.60944	ND<1.60944	0	8	0
ND<1.60944	ND<1.60944	0	8	0
ND<1.60944	ND<1.60944	0	8	0
ND<1.60944	ND<1.60944	0	8	0
ND<1.60944	ND<1.60944	0	8	0
3.4012	ND<1.60944	1.79176	9	0

ND<1.60944	ND<1.60944	0	9	0

ND<1.60944	ND<1.60944	0	9	0
ND<1.60944	ND<1.60944	0	9	0
ND<1.60944	ND<1.60944	0	9	0
ND<1.60944	ND<1.60944	0	9	0
ND<1.60944	ND<1.60944	0	9	0
ND<1.60944	ND<1.60944	0	9	0
ND<1.60944	ND<1.60944	0	9	0
ND<1.60944	ND<1.60944	0	9	0
ND<1.60944	ND<1.60944	0	9	0
ND<1.60944	ND<1.60944	0	9	0
ND<1.60944	ND<1.60944	0	9	0
3.4012	ND<1.60944	1.79176	10	0

ND<1.60944	ND<1.60944	Same Date	10	0
ND<1.60944	ND<1.60944	0	10	0
ND<1.60944	ND<1.60944	0	10	0
ND<1.60944	ND<1.60944	0	10	0
ND<1.60944	ND<1.60944	0	10	0
ND<1.60944	ND<1.60944	0	10	0
ND<1.60944	ND<1.60944	0	10	0
ND<1.60944	ND<1.60944	0	10	0
ND<1.60944	ND<1.60944	0	10	0
ND<1.60944	ND<1.60944	0	10	0
ND<1.60944	ND<1.60944	0	10	0
3.4012	ND<1.60944	1.79176	11	0

ND<1.60944	ND<1.60944	0	11	0
ND<1.60944	ND<1.60944	0	11	0
ND<1.60944	ND<1.60944	0	11	0
ND<1.60944	ND<1.60944	0	11	0
ND<1.60944	ND<1.60944	0	11	0
ND<1.60944	ND<1.60944	0	11	0
ND<1.60944	ND<1.60944	0	11	0
ND<1.60944	ND<1.60944	0	11	0
ND<1.60944	ND<1.60944	0	11	0
ND<1.60944	ND<1.60944	0	11	0
ND<1.60944	ND<1.60944	0	11	0
3.4012	ND<1.60944	1.79176	12	0

ND<1.60944	ND<1.60944	Same Date	12	0
ND<1.60944	ND<1.60944	0	12	0
ND<1.60944	ND<1.60944	0	12	0
ND<1.60944	ND<1.60944	0	12	0
ND<1.60944	ND<1.60944	0	12	0
ND<1.60944	ND<1.60944	0	12	0
ND<1.60944	ND<1.60944	0	12	0
ND<1.60944	ND<1.60944	0	12	0
ND<1.60944	ND<1.60944	0	12	0
ND<1.60944	ND<1.60944	0	12	0
ND<1.60944	ND<1.60944	0	12	0
3.4012	ND<1.60944	1.79176	13	0

ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
ND<1.60944	ND<1.60944	0	13	0
3.4012	ND<1.60944	1.79176	14	0

ND<1.60944	ND<1.60944	Same Date	14	0
ND<1.60944	ND<1.60944	0	14	0
ND<1.60944	ND<1.60944	0	14	0

ND<1.60944	ND<1.60944	0	14	0
ND<1.60944	ND<1.60944	0	14	0
ND<1.60944	ND<1.60944	0	14	0
ND<1.60944	ND<1.60944	0	14	0
3.4012	ND<1.60944	1.79176	15	0
ND<1.60944	ND<1.60944	0	15	0
ND<1.60944	ND<1.60944	0	15	0
ND<1.60944	ND<1.60944	0	15	0
ND<1.60944	ND<1.60944	0	15	0
ND<1.60944	ND<1.60944	0	15	0
ND<1.60944	ND<1.60944	0	15	0
3.4012	ND<1.60944	1.79176	16	0
ND<1.60944	ND<1.60944	Same Date	16	0
ND<1.60944	ND<1.60944	0	16	0
ND<1.60944	ND<1.60944	0	16	0
ND<1.60944	ND<1.60944	0	16	0
ND<1.60944	ND<1.60944	0	16	0
3.4012	ND<1.60944	1.79176	17	0
ND<1.60944	ND<1.60944	0	17	0
ND<1.60944	ND<1.60944	0	17	0
ND<1.60944	ND<1.60944	0	17	0
ND<1.60944	ND<1.60944	0	17	0
3.4012	ND<1.60944	1.79176	18	0
ND<1.60944	ND<1.60944	Same Date	18	0
ND<1.60944	ND<1.60944	0	18	0
ND<1.60944	ND<1.60944	0	18	0
3.4012	ND<1.60944	1.79176	19	0
ND<1.60944	ND<1.60944	0	19	0
ND<1.60944	ND<1.60944	0	19	0
3.4012	ND<1.60944	1.79176	20	0
ND<1.60944	ND<1.60944	Same Date	20	0
3.4012	ND<1.60944	1.79176	21	0
3.4012	ND<1.60944	1.79176	22	0

S Statistic = 22 - 0 = 22

Tied Group	Value	Members
1	1.60944	22

Time Period	Observations
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	2
10/25/2005	2
4/29/2006	2
11/18/2006	2
5/23/2007	2
11/28/2007	2

6/5/2008 2
11/20/2008 2
6/30/2010 1
There are 8 time periods with multiple data

A = 22638
B = 144
C = 9240
D = 0
E = 462
F = 16
a = 25806
b = 95634
c = 1012
Group Variance = 175.304
Z-Score = 1.58607
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|1.58607| <= 1.97737 indicating no evidence of a trend

Concentrations (ppb)

Parameter: Nickel

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 165
Percent Non-Detects: 77.8302%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	12 (70.5882%)	3/16/1999	6 J	6 J
			9/23/1999	ND<50	ND<50
			3/15/2000	ND<50	ND<50
			9/24/2003	ND<50	ND<50
			3/11/2004	ND<50	ND<50
			10/12/2004	ND<50	ND<50
			4/1/2005	ND<50	ND<50
			10/25/2005	ND<50	ND<50
			4/29/2006	ND<50	ND<50
			11/18/2006	1.27 J	1.27 J
			5/23/2007	ND<50	ND<50
			11/28/2007	ND<50	ND<50
			6/5/2008	1.04 J	1.04 J
			11/20/2008	ND<50	ND<50
			6/11/2009	0.36 J	0.36 J
			11/16/2009	0.42 J	0.42 J
			6/30/2010	ND<0.4	ND<0.4

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-11R	27	21 (77.7778%)	7/20/1995	ND<50	ND<50
			8/24/1995	ND<50	ND<50
			9/28/1995	ND<50	ND<50
			10/26/1995	ND<50	ND<50
			11/19/1996	ND<50	ND<50
			12/19/1996	ND<50	ND<50
			3/24/1997	ND<50	ND<50
			9/24/1997	10 J	10 J
			4/7/1998	ND<50	ND<50
			9/23/1998	ND<50	ND<50
			3/16/1999	ND<50	ND<50
			9/23/1999	6 J	6 J
			3/15/2000	ND<50	ND<50
			9/24/2003	ND<50	ND<50
			3/11/2004	ND<50	ND<50
			10/12/2004	ND<50	ND<50
			4/1/2005	ND<50	ND<50
			10/25/2005	ND<50	ND<50
			4/29/2006	ND<50	ND<50
			11/18/2006	1.41 J	1.41 J
			5/23/2007	ND<50	ND<50
			11/28/2007	ND<50	ND<50
			6/5/2008	ND<50	ND<50
			11/20/2008	ND<50	ND<50

			6/11/2009		0.63	0.63
			11/16/2009		0.58	0.58
			6/30/2010		0.62 J H	0.62 J H
MW-10	27	22 (81.4815%)	7/20/1995		ND<50	ND<50
			8/24/1995		ND<50	ND<50
			9/28/1995		ND<50	ND<50
			10/26/1995		ND<50	ND<50
			11/19/1996		ND<50	ND<50
			12/19/1996		ND<50	ND<50
			3/24/1997		ND<50	ND<50
			9/24/1997		ND<50	ND<50
			4/7/1998	180	180	
			9/23/1998		ND<50	ND<50
			3/16/1999		5 J	5 J
			9/23/1999		38 J	38 J
			3/15/2000		ND<50	ND<50
			9/24/2003		ND<50	ND<50
			3/11/2004		ND<50	ND<50
			10/12/2004		ND<50	ND<50
			4/1/2005	ND<50	ND<50	
			10/25/2005		ND<50	ND<50
			4/29/2006		ND<50	ND<50
			11/18/2006		ND<50	ND<50
			5/23/2007		ND<50	ND<50
			11/28/2007		ND<50	ND<50
			6/5/2008	1.31 J	1.31 J	
			11/20/2008		ND<50	ND<50
			6/11/2009		0.59 J	0.59 J
			11/16/2009		ND<0.2	ND<0.2
			6/30/2010		ND<0.4	ND<0.4
MW-8	26	22 (84.6154%)	7/20/1995		ND<50	ND<50
			8/24/1995		ND<50	ND<50
			9/28/1995		ND<50	ND<50
			10/26/1995		ND<50	ND<50
			11/19/1996		ND<50	ND<50
			12/19/1996		ND<50	ND<50
			3/24/1997		ND<50	ND<50
			9/24/1997		ND<50	ND<50
			4/7/1998	60	60	
			9/23/1998		ND<50	ND<50
			3/16/1999		ND<50	ND<50
			9/23/1999		ND<50	ND<50
			3/15/2000		ND<50	ND<50
			9/24/2003		ND<50	ND<50
			3/11/2004		ND<50	ND<50
			10/12/2004		ND<50	ND<50
			4/1/2005	ND<50	ND<50	
			10/25/2005		ND<50	ND<50
			4/29/2006		ND<50	ND<50
			11/18/2006		ND<50	ND<50
			5/23/2007		ND<50	ND<50
			11/28/2007		ND<50	ND<50
			6/5/2008	1.03 J	1.03 J	
			11/20/2008		ND<50	ND<50
			6/11/2009		0.54 J	0.54 J
			6/30/2010		0.68 J H	0.68 J H
MW-7	27	19 (70.3704%)	7/20/1995		ND<50	ND<50
			8/24/1995		ND<50	ND<50
			9/28/1995		ND<50	ND<50

			10/26/1995	ND<50	ND<50	
			11/19/1996	ND<50	ND<50	
			12/19/1996	ND<50	ND<50	
			3/24/1997	ND<50	ND<50	
			9/24/1997	ND<50	ND<50	
			4/7/1998	63	63	
			9/23/1998	ND<50	ND<50	
			3/16/1999	6	6	
			9/23/1999	ND<50	ND<50	
			3/15/2000	ND<50	ND<50	
			9/24/2003	ND<50	ND<50	
			3/11/2004	ND<50	ND<50	
			10/12/2004	ND<50	ND<50	
			4/1/2005	ND<50	ND<50	
			10/25/2005	ND<50	ND<50	
			4/29/2006	ND<50	ND<50	
			11/18/2006	1.74 J	1.74 J	
			5/23/2007	ND<50	ND<50	
			11/28/2007	ND<50	ND<50	
			6/5/2008	1.89 J	1.89 J	
			11/20/2008	16 J	16 J	
			6/11/2009	0.71	0.71	
			11/16/2009	1.5	1.5	
			6/30/2010	0.5 J H	0.5 J H	
MW-6	27	23 (85.1852%)	7/20/1995	ND<50	ND<50	
			8/24/1995	ND<50	ND<50	
			9/28/1995	ND<50	ND<50	
			10/26/1995	ND<50	ND<50	
			11/19/1996	ND<50	ND<50	
			12/19/1996	ND<50	ND<50	
			3/24/1997	ND<50	ND<50	
			9/24/1997	ND<50	ND<50	
			4/7/1998	ND<50	ND<50	
			9/23/1998	ND<50	ND<50	
			3/16/1999	ND<50	ND<50	
			9/23/1999	10 J	10 J	
			3/15/2000	ND<50	ND<50	
			9/24/2003	ND<50	ND<50	
			3/11/2004	ND<50	ND<50	
			10/12/2004	ND<50	ND<50	
			4/1/2005	ND<50	ND<50	
			10/25/2005	ND<50	ND<50	
			4/29/2006	ND<50	ND<50	
			11/18/2006	4.96 J	4.96 J	
			5/23/2007	ND<50	ND<50	
			11/28/2007	ND<50	ND<50	
			6/5/2008	ND<50	ND<50	
			11/20/2008	ND<50	ND<50	
			6/11/2009	0.35 J	0.35 J	
			11/16/2009	0.32 J	0.32 J	
			6/30/2010	ND<0.4	ND<0.4	
MW-12AR	17	13 (76.4706%)	3/16/1999	ND<50	ND<50	
			9/23/1999	ND<50	ND<50	
			3/15/2000	ND<50	ND<50	
			9/24/2003	ND<50	ND<50	
			3/11/2004	ND<50	ND<50	
			10/12/2004	ND<50	ND<50	
			4/1/2005	ND<50	ND<50	
			10/25/2005	ND<50	ND<50	
			4/29/2006	ND<50	ND<50	

			11/18/2006	ND<50	ND<50	
			5/23/2007	ND<50	ND<50	
			11/28/2007	ND<50	ND<50	
			6/5/2008	1.25 J	1.25 J	
			11/20/2008	ND<50	ND<50	
			6/11/2009	1.1	1.1	
			11/16/2009	1	1	
			6/30/2010	0.97 J	0.97 J	
MW-12BR		17	11 (64.7059%)	3/16/1999	ND<50	ND<50
			9/23/1999	ND<50	ND<50	
			3/15/2000	ND<50	ND<50	
			9/24/2003	ND<50	ND<50	
			3/11/2004	ND<50	ND<50	
			10/12/2004	ND<50	ND<50	
			4/1/2005	ND<50	ND<50	
			10/25/2005	ND<50	ND<50	
			4/29/2006	ND<50	ND<50	
			11/18/2006	2.29 J	2.29 J	
			5/23/2007	ND<50	ND<50	
			11/28/2007	4 J	4 J	
			6/5/2008	3.1 J	3.1 J	
			11/20/2008	ND<50	ND<50	
			6/11/2009	2.2	2.2	
			11/16/2009	1.8	1.8	
			6/30/2010	2.1	2.1	
MW-9	27	22 (81.4815%)	7/20/1995	ND<50	ND<50	
			8/24/1995	ND<50	ND<50	
			9/28/1995	ND<50	ND<50	
			10/26/1995	ND<50	ND<50	
			11/19/1996	ND<50	ND<50	
			12/19/1996	ND<50	ND<50	
			3/24/1997	ND<50	ND<50	
			9/24/1997	ND<50	ND<50	
			4/7/1998	72	72	
			9/23/1998	ND<50	ND<50	
			3/16/1999	ND<50	ND<50	
			9/23/1999	ND<50	ND<50	
			3/15/2000	ND<50	ND<50	
			9/24/2003	ND<50	ND<50	
			3/11/2004	ND<50	ND<50	
			10/12/2004	ND<50	ND<50	
			4/1/2005	ND<50	ND<50	
			10/25/2005	ND<50	ND<50	
			4/29/2006	ND<50	ND<50	
			11/18/2006	ND<50	ND<50	
			5/23/2007	ND<50	ND<50	
			11/28/2007	ND<50	ND<50	
			6/5/2008	1.03 J	1.03 J	
			11/20/2008	ND<50	ND<50	
			6/11/2009	0.87	0.87	
			11/16/2009	0.69 J	0.69 J	
			6/30/2010	0.53 J H	0.53 J H	

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.1	-2.65209	7.03356	-0.265209
2	0.2	-2.365	11.2629	-0.738331
3	0.2	-2.197	28.1457	-1.17779
4	0.2	-2.096	32.1854	-1.59717
5	0.32	-1.995	39.2583	-2.2357
6	0.35	-1.911	03.2948	-2.90456
7	0.36	-1.852	18.3291	-3.57135
8	0.42	-1.786	13.6111	-4.32172
9	0.5	-1.727	93.3096	-5.18569
10	0.53	-1.684	94.1935	-6.07871
11	0.54	-1.635	24.4609	-6.96173
12	0.58	-1.589	27.1356	-7.88351
13	0.59	-1.546	43.527	-8.7959
14	0.62	-1.514	1.8195	-9.73465
15	0.63	-1.475	79.9975	-10.6644
16	0.68	-1.439	53.0698	-11.6433
17	0.69	-1.411	83.063	-12.6174
18	0.71	-1.378	65.9637	-13.5963
19	0.87	-1.346	94.778	-14.7681
20	0.97	-1.322	51.527	-16.051
21	1	-1.293	03.1989	-17.344
22	1.03	-1.264	64.7982	-18.6466
23	1.03	-1.242	64.3424	-19.9265
24	1.04	-1.215	96.821	-21.1911
25	1.1	-1.190	12.2373	-22.5002
26	1.25	-1.165	05.5947	-23.9565
27	1.27	-1.145	5.9069	-25.4113
28	1.31	-1.121	68.165	-26.8807
29	1.41	-1.098	47.3716	-28.4296
30	1.5	-1.080	32.5387	-30.05
31	1.74	-1.058	12.6584	-31.8912
32	1.8	-1.036	43.7326	-33.7568
33	1.89	-1.019	43.7718	-35.6835
34	2.1	-0.998575	81.7689	-37.7805
35	2.2	-0.978	15.7257	-39.9324
36	2.29	-0.958125	83.6437	-42.1265
37	3.1	-0.942375	84.5318	-45.0479
38	4	-0.923014	85.3837	-48.7399
39	4.96	-0.903992	86.201	-53.2237
40	5	-0.889006	86.9913	-57.6688
41	6	-0.870	55.7491	-62.8921
42	6	-0.852385	88.4757	-68.0064
43	6	-0.838054	89.178	-73.0347
44	10	-0.820379	89.8511	-81.2385
45	10	-0.802956	90.4958	-89.2681
46	16	-0.789191	91.1186	-101.895
47	25	-0.772193	91.7149	-121.2
48	25	-0.755415	92.2856	-140.085
49	25	-0.738846	92.8314	-158.556

50	25	-0.725736	93.3581	-176.7
51	25	-0.709522	93.8616	-194.438
52	25	-0.693493	94.3425	-211.775
53	25	-0.680797	94.806	-228.795
54	25	-0.665079	95.2483	-245.422
55	25	-0.649522	95.6702	-261.66
56	25	-0.637192	96.0762	-277.59
57	25	-0.621911	96.463	-293.138
58	25	-0.606775	96.8312	-308.307
59	25	-0.594766	97.1849	-323.176
60	25	-0.579873	97.5212	-337.673
61	25	-0.565108	97.8405	-351.801
62	25	-0.550465	98.1435	-365.562
63	25	-0.538836	98.4339	-379.033
64	25	-0.524401	98.7088	-392.143
65	25	-0.510074	98.969	-404.895
66	25	-0.498687	99.2177	-417.362
67	25	-0.484544	99.4525	-429.476
68	25	-0.470498	99.6739	-441.238
69	25	-0.459327	99.8848	-452.722
70	25	-0.445443	100.083	-463.858
71	25	-0.431644	100.27	-474.649
72	25	-0.417928	100.444	-485.097
73	25	-0.40701	100.61	-495.272
74	25	-0.393433	100.765	-505.108
75	25	-0.379927	100.909	-514.606
76	25	-0.369171	101.045	-523.835
77	25	-0.355788	101.172	-532.73
78	25	-0.342466	101.289	-541.292
79	25	-0.331854	101.399	-549.588
80	25	-0.318639	101.501	-557.554
81	25	-0.305481	101.594	-565.191
82	25	-0.294992	101.681	-572.566
83	25	-0.281926	101.761	-579.614
84	25	-0.268908	101.833	-586.337
85	25	-0.255936	101.898	-592.735
86	25	-0.24559	101.959	-598.875
87	25	-0.232693	102.013	-604.692
88	25	-0.219834	102.061	-610.188
89	25	-0.209575	102.105	-615.428
90	25	-0.196779	102.144	-620.347
91	25	-0.184017	102.178	-624.947
92	25	-0.173829	102.208	-629.293
93	25	-0.161119	102.234	-633.321
94	25	-0.148434	102.256	-637.032
95	25	-0.135774	102.274	-640.426
96	25	-0.125661	102.29	-643.568
97	25	-0.113039	102.303	-646.394
98	25	-0.100433	102.313	-648.905
99	25	-0.0903606	102.321	-651.164
100	25	-0.0777834	102.327	-653.108
101	25	-0.0652187	102.332	-654.739
102	25	-0.0551734	102.335	-656.118
103	25	-0.0426257	102.336	-657.184
104	25	-0.0300838	102.337	-657.936
105	25	-0.0200544	102.338	-658.437
106	25	-0.00751925	102.338	-658.625
107	25	0.00751925	102.338	-658.437
108	25	0.0200544	102.338	-657.936
109	25	0.0300838	102.339	-657.184
110	25	0.0426257	102.341	-656.118
111	25	0.0551734	102.344	-654.739

112	25	0.0652187	102.348	-653.108
113	25	0.0777834	102.354	-651.164
114	25	0.0903606	102.362	-648.905
115	25	0.100433	102.373	-646.394
116	25	0.113039	102.385	-643.568
117	25	0.125661	102.401	-640.426
118	25	0.135774	102.42	-637.032
119	25	0.148434	102.442	-633.321
120	25	0.161119	102.468	-629.293
121	25	0.173829	102.498	-624.947
122	25	0.184017	102.532	-620.347
123	25	0.196779	102.57	-615.428
124	25	0.209575	102.614	-610.188
125	25	0.219834	102.663	-604.692
126	25	0.232693	102.717	-598.875
127	25	0.24559	102.777	-592.735
128	25	0.255936	102.843	-586.337
129	25	0.268908	102.915	-579.614
130	25	0.281926	102.994	-572.566
131	25	0.294992	103.081	-565.191
132	25	0.305481	103.175	-557.554
133	25	0.318639	103.276	-549.588
134	25	0.331854	103.386	-541.292
135	25	0.342466	103.504	-532.73
136	25	0.355788	103.63	-523.835
137	25	0.369171	103.767	-514.606
138	25	0.379927	103.911	-505.108
139	25	0.393433	104.066	-495.272
140	25	0.40701	104.231	-485.097
141	25	0.417928	104.406	-474.649
142	25	0.431644	104.592	-463.858
143	25	0.445443	104.791	-452.722
144	25	0.459327	105.002	-441.238
145	25	0.470498	105.223	-429.476
146	25	0.484544	105.458	-417.362
147	25	0.498687	105.707	-404.895
148	25	0.510074	105.967	-392.143
149	25	0.524401	106.242	-379.033
150	25	0.538836	106.532	-365.562
151	25	0.550465	106.835	-351.801
152	25	0.565108	107.154	-337.673
153	25	0.579873	107.491	-323.176
154	25	0.594766	107.844	-308.307
155	25	0.606775	108.213	-293.138
156	25	0.621911	108.599	-277.59
157	25	0.637192	109.005	-261.66
158	25	0.649522	109.427	-245.422
159	25	0.665079	109.87	-228.795
160	25	0.680797	110.333	-211.775
161	25	0.693493	110.814	-194.438
162	25	0.709522	111.317	-176.7
163	25	0.725736	111.844	-158.556
164	25	0.738846	112.39	-140.085
165	25	0.755415	112.961	-121.2
166	25	0.772193	113.557	-101.895
167	25	0.789191	114.18	-82.1653
168	25	0.802956	114.824	-62.0914
169	25	0.820379	115.498	-41.5819
170	25	0.838054	116.2	-20.6306
171	25	0.852385	116.926	0.679031
172	25	0.87055	117.684	22.4428
173	25	0.889006	118.475	44.6679

174	25	0.903992		119.292	67.2677
175	25	0.923014		120.144	90.3431
176	25	0.942375		121.032	113.902
177	25	0.958125		121.95	137.856
178	25	0.97815	122.907	162.309	
179	25	0.998575		123.904	187.274
180	25	1.01943	124.943	212.759	
181	25	1.03643	126.017	238.67	
182	25	1.05812	127.137	265.123	
183	25	1.08032	128.304	292.131	
184	25	1.09847	129.511	319.593	
185	25	1.12168	130.769	347.635	
186	25	1.1455	132.081	376.273	
187	25	1.16505	133.438	405.399	
188	25	1.19012	134.855	435.152	
189	25	1.21596	136.333	465.551	
190	25	1.24264	137.877	496.617	
191	25	1.26464	139.477	528.233	
192	25	1.29303	141.149	560.559	
193	25	1.32251	142.898	593.621	
194	25	1.34694	144.712	627.295	
195	25	1.37866	146.613	661.761	
196	25	1.41183	148.606	697.057	
197	25	1.43953	150.678	733.045	
198	25	1.47579	152.856	769.94	
199	25	1.5141	155.149	807.793	
200	25	1.54643	157.54	846.453	
201	25	1.58927	160.066	886.185	
202	25	1.63524	162.74	927.066	
203	25	1.68494	165.579	969.19	
204	25	1.72793	168.564	1012.39	
205	25	1.78661	171.756	1057.05	
206	25	1.85218	175.187	1103.36	
207	25	1.91103	178.839	1151.13	
208	38	1.99539	182.821	1226.96	
209	60	2.09693	187.218	1352.77	
210	63	2.19728	192.046	1491.2	
211	72	2.36561	197.642	1661.53	
212	180	2.65209	204.676	2138.9	

Data Set Standard Deviation = 15.4781
Numerator = 4.57491e+006
Denominator = 1.03463e+007
W Statistic = 0.442179 = 4.57491e+006 / 1.03463e+007

5% Critical value of 0.976 exceeds 0.442179
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.442179
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)	
1	-2.30259	-2.65209	7.03356	6.10665	
2	-1.60944	-2.36561	12.6297	9.91396	
3	-1.60944	-2.19728	17.4578	13.4504	
4	-1.60944	-2.09693	21.8549	16.8252	
5	-1.13943	-1.99539	25.8365	19.0989	
6	-1.04982	-1.91103	29.4885	21.1051	
7	-1.02165	-1.85218	32.9191	22.9974	
8	-0.867501	-1.78661	36.111	24.5473	
9	-0.693147	-1.72793	39.0968	25.745	
10	-0.634878	-1.68494	41.9358	26.8147	
11	-0.616186	-1.63524	44.6098	27.8223	
12	-0.544727	-1.58927	47.1356	28.688	
13	-0.527633	-1.54643	49.527	29.504	
14	-0.478036	-1.5141	51.8195	30.2278	
15	-0.462035	-1.47579	53.9975	30.9096	
16	-0.385662	-1.43953	56.0698	31.4648	
17	-0.371064	-1.41183	58.063	31.9887	
18	-0.34249	-1.37866	59.9637	32.4609	
19	-0.139262	-1.34694	61.778	32.6485	
20	-0.0304592	-1.32251	63.527	32.6887	
21	0	-1.29303	65.1989	32.6887	
22	0.0295588	-1.26464	66.7982	32.6514	
23	0.0295588	-1.24264	68.3424	32.6146	
24	0.0392207	-1.21596	69.821	32.5669	
25	0.0953102	-1.19012	71.2373	32.4535	
26	0.223144	-1.16505	72.5947	32.1935	
27	0.239017	-1.1455	73.9069	31.9197	
28	0.270027	-1.12168	75.165	31.6169	
29	0.34359	-1.09847	76.3716	31.2394	
30	0.405465	-1.08032	77.5387	30.8014	
31	0.553885	-1.05812	78.6584	30.2153	
32	0.587787	-1.03643	79.7326	29.6061	
33	0.636577	-1.01943	80.7718	28.9572	
34	0.741937	-0.998575	81.7689	28.2163	
35	0.788457	-0.97815	82.7257	27.4451	
36	0.828552	-0.958125	83.6437	26.6512	
37	1.1314	-0.942375	84.5318	25.585	
38	1.38629	-0.923014	85.3837	24.3054	
39	1.60141	-0.903992	86.201	22.8578	
40	1.60944	-0.889006	86.9913	21.427	
41	1.79176	-0.87055	87.7491	19.8672	
42	1.79176	-0.852385	88.4757	18.3399	
43	1.79176	-0.838054	89.178	16.8383	
44	2.30259	-0.820379	89.8511	14.9493	
45	2.30259	-0.802956	90.4958	13.1004	
46	2.77259	-0.789191	91.1186	10.9123	
47	3.21888	-0.772193	91.7149	8.42673	
48	3.21888	-0.755415	92.2856	5.99515	
49	3.21888	-0.738846	92.8314	3.61689	

50	3.21888	-0.725736	93.3581	1.28084
51	3.21888	-0.709522	93.8616	-1.00303
52	3.21888	-0.693493	94.3425	-3.23529
53	3.21888	-0.680797	94.806	-5.42669
54	3.21888	-0.665079	95.2483	-7.5675
55	3.21888	-0.649522	95.6702	-9.65823
56	3.21888	-0.637192	96.0762	-11.7093
57	3.21888	-0.621911	96.463	-13.7111
58	3.21888	-0.606775	96.8312	-15.6643
59	3.21888	-0.594766	97.1849	-17.5787
60	3.21888	-0.579873	97.5212	-19.4453
61	3.21888	-0.565108	97.8405	-21.2643
62	3.21888	-0.550465	98.1435	-23.0362
63	3.21888	-0.538836	98.4339	-24.7706
64	3.21888	-0.524401	98.7088	-26.4586
65	3.21888	-0.510074	98.969	-28.1005
66	3.21888	-0.498687	99.2177	-29.7057
67	3.21888	-0.484544	99.4525	-31.2654
68	3.21888	-0.470498	99.6739	-32.7798
69	3.21888	-0.459327	99.8848	-34.2584
70	3.21888	-0.445443	100.083	-35.6922
71	3.21888	-0.431644	100.27	-37.0816
72	3.21888	-0.417928	100.444	-38.4268
73	3.21888	-0.40701	100.61	-39.737
74	3.21888	-0.393433	100.765	-41.0034
75	3.21888	-0.379927	100.909	-42.2263
76	3.21888	-0.369171	101.045	-43.4146
77	3.21888	-0.355788	101.172	-44.5599
78	3.21888	-0.342466	101.289	-45.6622
79	3.21888	-0.331854	101.399	-46.7304
80	3.21888	-0.318639	101.501	-47.7561
81	3.21888	-0.305481	101.594	-48.7394
82	3.21888	-0.294992	101.681	-49.6889
83	3.21888	-0.281926	101.761	-50.5964
84	3.21888	-0.268908	101.833	-51.462
85	3.21888	-0.255936	101.898	-52.2858
86	3.21888	-0.24559	101.959	-53.0763
87	3.21888	-0.232693	102.013	-53.8253
88	3.21888	-0.219834	102.061	-54.533
89	3.21888	-0.209575	102.105	-55.2076
90	3.21888	-0.196779	102.144	-55.841
91	3.21888	-0.184017	102.178	-56.4333
92	3.21888	-0.173829	102.208	-56.9928
93	3.21888	-0.161119	102.234	-57.5115
94	3.21888	-0.148434	102.256	-57.9892
95	3.21888	-0.135774	102.274	-58.4263
96	3.21888	-0.125661	102.29	-58.8308
97	3.21888	-0.113039	102.303	-59.1946
98	3.21888	-0.100433	102.313	-59.5179
99	3.21888	-0.0903606	102.321	-59.8088
100	3.21888	-0.0777834	102.327	-60.0591
101	3.21888	-0.0652187	102.332	-60.2691
102	3.21888	-0.0551734	102.335	-60.4467
103	3.21888	-0.0426257	102.336	-60.5839
104	3.21888	-0.0300838	102.337	-60.6807
105	3.21888	-0.0200544	102.338	-60.7453
106	3.21888	-0.00751925	102.338	-60.7695
107	3.21888	0.00751925	102.338	-60.7453
108	3.21888	0.0200544	102.338	-60.6807
109	3.21888	0.0300838	102.339	-60.5839
110	3.21888	0.0426257	102.341	-60.4467
111	3.21888	0.0551734	102.344	-60.2691

112	3.21888	0.0652187	102.348	-60.0591
113	3.21888	0.0777834	102.354	-59.8088
114	3.21888	0.0903606	102.362	-59.5179
115	3.21888	0.100433	102.373	-59.1946
116	3.21888	0.113039	102.385	-58.8308
117	3.21888	0.125661	102.401	-58.4263
118	3.21888	0.135774	102.42	-57.9892
119	3.21888	0.148434	102.442	-57.5115
120	3.21888	0.161119	102.468	-56.9928
121	3.21888	0.173829	102.498	-56.4333
122	3.21888	0.184017	102.532	-55.841
123	3.21888	0.196779	102.57	-55.2076
124	3.21888	0.209575	102.614	-54.533
125	3.21888	0.219834	102.663	-53.8253
126	3.21888	0.232693	102.717	-53.0763
127	3.21888	0.24559	102.777	-52.2858
128	3.21888	0.255936	102.843	-51.462
129	3.21888	0.268908	102.915	-50.5964
130	3.21888	0.281926	102.994	-49.6889
131	3.21888	0.294992	103.081	-48.7394
132	3.21888	0.305481	103.175	-47.7561
133	3.21888	0.318639	103.276	-46.7304
134	3.21888	0.331854	103.386	-45.6622
135	3.21888	0.342466	103.504	-44.5599
136	3.21888	0.355788	103.63	-43.4146
137	3.21888	0.369171	103.767	-42.2263
138	3.21888	0.379927	103.911	-41.0034
139	3.21888	0.393433	104.066	-39.737
140	3.21888	0.40701	104.231	-38.4268
141	3.21888	0.417928	104.406	-37.0816
142	3.21888	0.431644	104.592	-35.6922
143	3.21888	0.445443	104.791	-34.2584
144	3.21888	0.459327	105.002	-32.7798
145	3.21888	0.470498	105.223	-31.2654
146	3.21888	0.484544	105.458	-29.7057
147	3.21888	0.498687	105.707	-28.1005
148	3.21888	0.510074	105.967	-26.4586
149	3.21888	0.524401	106.242	-24.7706
150	3.21888	0.538836	106.532	-23.0362
151	3.21888	0.550465	106.835	-21.2643
152	3.21888	0.565108	107.154	-19.4453
153	3.21888	0.579873	107.491	-17.5787
154	3.21888	0.594766	107.844	-15.6643
155	3.21888	0.606775	108.213	-13.7111
156	3.21888	0.621911	108.599	-11.7093
157	3.21888	0.637192	109.005	-9.65823
158	3.21888	0.649522	109.427	-7.5675
159	3.21888	0.665079	109.87	-5.42669
160	3.21888	0.680797	110.333	-3.23529
161	3.21888	0.693493	110.814	-1.00303
162	3.21888	0.709522	111.317	1.28084
163	3.21888	0.725736	111.844	3.61689
164	3.21888	0.738846	112.39	5.99515
165	3.21888	0.755415	112.961	8.42673
166	3.21888	0.772193	113.557	10.9123
167	3.21888	0.789191	114.18	13.4526
168	3.21888	0.802956	114.824	16.0373
169	3.21888	0.820379	115.498	18.6779
170	3.21888	0.838054	116.2	21.3755
171	3.21888	0.852385	116.926	24.1193
172	3.21888	0.87055	117.684	26.9215
173	3.21888	0.889006	118.475	29.7831

174	3.21888	0.903992		119.292	32.6929
175	3.21888	0.923014		120.144	35.664
176	3.21888	0.942375		121.032	38.6974
177	3.21888	0.958125		121.95	41.7814
178	3.21888	0.97815	122.907	44.93	
179	3.21888	0.998575		123.904	48.1443
180	3.21888	1.01943	124.943	51.4257	
181	3.21888	1.03643	126.017	54.7618	
182	3.21888	1.05812	127.137	58.1678	
183	3.21888	1.08032	128.304	61.6452	
184	3.21888	1.09847	129.511	65.181	
185	3.21888	1.12168	130.769	68.7916	
186	3.21888	1.1455	132.081	72.4788	
187	3.21888	1.16505	133.438	76.229	
188	3.21888	1.19012	134.855	80.0598	
189	3.21888	1.21596	136.333	83.9738	
190	3.21888	1.24264	137.877	87.9738	
191	3.21888	1.26464	139.477	92.0445	
192	3.21888	1.29303	141.149	96.2066	
193	3.21888	1.32251	142.898	100.464	
194	3.21888	1.34694	144.712	104.799	
195	3.21888	1.37866	146.613	109.237	
196	3.21888	1.41183	148.606	113.781	
197	3.21888	1.43953	150.678	118.415	
198	3.21888	1.47579	152.856	123.165	
199	3.21888	1.5141	155.149	128.039	
200	3.21888	1.54643	157.54	133.017	
201	3.21888	1.58927	160.066	138.133	
202	3.21888	1.63524	162.74	143.396	
203	3.21888	1.68494	165.579	148.82	
204	3.21888	1.72793	168.564	154.382	
205	3.21888	1.78661	171.756	160.133	
206	3.21888	1.85218	175.187	166.095	
207	3.21888	1.91103	178.839	172.246	
208	3.63759	1.99539	182.821	179.504	
209	4.09434	2.09693	187.218	188.09	
210	4.14313	2.19728	192.046	197.194	
211	4.27667	2.36561	197.642	207.311	
212	5.19296	2.65209	204.676	221.083	

Data Set Standard Deviation = 1.3881
Numerator = 48877.6
Denominator = 83213.1
W Statistic = 0.587378 = 48877.6 / 83213.1

5% Critical value of 0.976 exceeds 0.587378
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.587378
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Nickel

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	1.79176 J	202
	9/23/1999	ND<3.21888	83
	3/15/2000	ND<3.21888	83
	9/24/2003	ND<3.21888	83
	3/11/2004	ND<3.21888	83
	10/12/2004	ND<3.21888	83
	4/1/2005	ND<3.21888	83
	10/25/2005	ND<3.21888	83
	4/29/2006	ND<3.21888	83
	11/18/2006	0.239017 J	188
	5/23/2007	ND<3.21888	83
	11/28/2007	ND<3.21888	83
	6/5/2008	0.0392207 J	185
	11/20/2008	ND<3.21888	83
	6/11/2009	-1.02165 J	168
	11/16/2009	-0.867501 J	169
	6/30/2010	ND<-1.60944	83

Rank Sum = 1908
Rank Mean = 112.235

Background Rank Sum = 1908
Background Rank Mean = 112.235

Compliance Wells

Well ID	Date	Result	Rank
MW-11R	7/20/1995	ND<3.21888	83
	8/24/1995	ND<3.21888	83
	9/28/1995	ND<3.21888	83
	10/26/1995	ND<3.21888	83
	11/19/1996	ND<3.21888	83
	12/19/1996	ND<3.21888	83
	3/24/1997	ND<3.21888	83
	9/24/1997	2.30259 J	205
	4/7/1998	ND<3.21888	83
	9/23/1998	ND<3.21888	83
	3/16/1999	ND<3.21888	83
	9/23/1999	1.79176 J	203
	3/15/2000	ND<3.21888	83
	9/24/2003	ND<3.21888	83
	3/11/2004	ND<3.21888	83
	10/12/2004	ND<3.21888	83
	4/1/2005	ND<3.21888	83
	10/25/2005	ND<3.21888	83
	4/29/2006	ND<3.21888	83
	11/18/2006	0.34359 J	190
	5/23/2007	ND<3.21888	83

	11/28/2007	ND<3.21888	83
	6/5/2008	ND<3.21888	83
	11/20/2008	ND<3.21888	83
	6/11/2009	-0.462035	176
	11/16/2009	-0.544727	173
	6/30/2010	-0.478036 J H	175

Rank Sum = 2865
Rank Mean = 106.111

MW-10	7/20/1995	ND<3.21888	83
	8/24/1995	ND<3.21888	83
	9/28/1995	ND<3.21888	83
	10/26/1995	ND<3.21888	83
	11/19/1996	ND<3.21888	83
	12/19/1996	ND<3.21888	83
	3/24/1997	ND<3.21888	83
	9/24/1997	ND<3.21888	83
	4/7/1998	5.19296	212
	9/23/1998	ND<3.21888	83
	3/16/1999	1.60944 J	201
	9/23/1999	3.63759 J	208
	3/15/2000	ND<3.21888	83
	9/24/2003	ND<3.21888	83
	3/11/2004	ND<3.21888	83
	10/12/2004	ND<3.21888	83
	4/1/2005	ND<3.21888	83
	10/25/2005	ND<3.21888	83
	4/29/2006	ND<3.21888	83
	11/18/2006	ND<3.21888	83
	5/23/2007	ND<3.21888	83
	11/28/2007	ND<3.21888	83
	6/5/2008	0.270027 J	189
	11/20/2008	ND<3.21888	83
	6/11/2009	-0.527633 J	174
	11/16/2009	ND<-2.30259	83
	6/30/2010	ND<-1.60944	83

Rank Sum = 2810
Rank Mean = 104.074

MW-8	7/20/1995	ND<3.21888	83
	8/24/1995	ND<3.21888	83
	9/28/1995	ND<3.21888	83
	10/26/1995	ND<3.21888	83
	11/19/1996	ND<3.21888	83
	12/19/1996	ND<3.21888	83
	3/24/1997	ND<3.21888	83
	9/24/1997	ND<3.21888	83
	4/7/1998	4.09434	209
	9/23/1998	ND<3.21888	83
	3/16/1999	ND<3.21888	83
	9/23/1999	ND<3.21888	83
	3/15/2000	ND<3.21888	83
	9/24/2003	ND<3.21888	83
	3/11/2004	ND<3.21888	83
	10/12/2004	ND<3.21888	83
	4/1/2005	ND<3.21888	83
	10/25/2005	ND<3.21888	83
	4/29/2006	ND<3.21888	83
	11/18/2006	ND<3.21888	83
	5/23/2007	ND<3.21888	83
	11/28/2007	ND<3.21888	83
	6/5/2008	0.0295588 J	183

	11/20/2008	ND<3.21888	83
	6/11/2009	-0.616186 J	172
	6/30/2010	-0.385662 J H	177

Rank Sum = 2567
Rank Mean = 98.7308

MW-7	7/20/1995	ND<3.21888	83
	8/24/1995	ND<3.21888	83
	9/28/1995	ND<3.21888	83
	10/26/1995	ND<3.21888	83
	11/19/1996	ND<3.21888	83
	12/19/1996	ND<3.21888	83
	3/24/1997	ND<3.21888	83
	9/24/1997	ND<3.21888	83
	4/7/1998	4.14313	210
	9/23/1998	ND<3.21888	83
	3/16/1999	1.79176	204
	9/23/1999	ND<3.21888	83
	3/15/2000	ND<3.21888	83
	9/24/2003	ND<3.21888	83
	3/11/2004	ND<3.21888	83
	10/12/2004	ND<3.21888	83
	4/1/2005	ND<3.21888	83
	10/25/2005	ND<3.21888	83
	4/29/2006	ND<3.21888	83
	11/18/2006	0.553885 J	192
	5/23/2007	ND<3.21888	83
	11/28/2007	ND<3.21888	83
	6/5/2008	0.636577 J	194
	11/20/2008	2.77259 J	207
	6/11/2009	-0.34249	179
	11/16/2009	0.405465	191
	6/30/2010	-0.693147 J H	170

Rank Sum = 3124
Rank Mean = 115.704

MW-6	7/20/1995	ND<3.21888	83
	8/24/1995	ND<3.21888	83
	9/28/1995	ND<3.21888	83
	10/26/1995	ND<3.21888	83
	11/19/1996	ND<3.21888	83
	12/19/1996	ND<3.21888	83
	3/24/1997	ND<3.21888	83
	9/24/1997	ND<3.21888	83
	4/7/1998	ND<3.21888	83
	9/23/1998	ND<3.21888	83
	3/16/1999	ND<3.21888	83
	9/23/1999	2.30259 J	206
	3/15/2000	ND<3.21888	83
	9/24/2003	ND<3.21888	83
	3/11/2004	ND<3.21888	83
	10/12/2004	ND<3.21888	83
	4/1/2005	ND<3.21888	83
	10/25/2005	ND<3.21888	83
	4/29/2006	ND<3.21888	83
	11/18/2006	1.60141 J	200
	5/23/2007	ND<3.21888	83
	11/28/2007	ND<3.21888	83
	6/5/2008	ND<3.21888	83
	11/20/2008	ND<3.21888	83
	6/11/2009	-1.04982 J	167
	11/16/2009	-1.13943 J	166

	6/30/2010	ND<-1.60944	83

Rank Sum = 2648
Rank Mean = 98.0741

MW-12AR	3/16/1999	ND<3.21888	83
	9/23/1999	ND<3.21888	83
	3/15/2000	ND<3.21888	83
	9/24/2003	ND<3.21888	83
	3/11/2004	ND<3.21888	83
	10/12/2004	ND<3.21888	83
	4/1/2005	ND<3.21888	83
	10/25/2005	ND<3.21888	83
	4/29/2006	ND<3.21888	83
	11/18/2006	ND<3.21888	83
	5/23/2007	ND<3.21888	83
	11/28/2007	ND<3.21888	83
	6/5/2008	0.223144 J	187
	11/20/2008	ND<3.21888	83
	6/11/2009	0.0953102	186
	11/16/2009	0	182
	6/30/2010	-0.0304592 J	181

Rank Sum = 1815
Rank Mean = 106.765

MW-12BR	3/16/1999	ND<3.21888	83
	9/23/1999	ND<3.21888	83
	3/15/2000	ND<3.21888	83
	9/24/2003	ND<3.21888	83
	3/11/2004	ND<3.21888	83
	10/12/2004	ND<3.21888	83
	4/1/2005	ND<3.21888	83
	10/25/2005	ND<3.21888	83
	4/29/2006	ND<3.21888	83
	11/18/2006	0.828552 J	197
	5/23/2007	ND<3.21888	83
	11/28/2007	1.38629 J	199
	6/5/2008	1.1314 J	198
	11/20/2008	ND<3.21888	83
	6/11/2009	0.788457	196
	11/16/2009	0.587787	193
	6/30/2010	0.741937	195

Rank Sum = 2091
Rank Mean = 123

MW-9	7/20/1995	ND<3.21888	83
	8/24/1995	ND<3.21888	83
	9/28/1995	ND<3.21888	83
	10/26/1995	ND<3.21888	83
	11/19/1996	ND<3.21888	83
	12/19/1996	ND<3.21888	83
	3/24/1997	ND<3.21888	83
	9/24/1997	ND<3.21888	83
	4/7/1998	4.27667	211
	9/23/1998	ND<3.21888	83
	3/16/1999	ND<3.21888	83
	9/23/1999	ND<3.21888	83
	3/15/2000	ND<3.21888	83
	9/24/2003	ND<3.21888	83
	3/11/2004	ND<3.21888	83
	10/12/2004	ND<3.21888	83
	4/1/2005	ND<3.21888	83
	10/25/2005	ND<3.21888	83

4/29/2006	ND<3.21888	83
11/18/2006	ND<3.21888	83
5/23/2007	ND<3.21888	83
11/28/2007	ND<3.21888	83
6/5/2008	0.0295588 J	184
11/20/2008	ND<3.21888	83
6/11/2009	-0.139262	180
11/16/2009	-0.371064 J	178
6/30/2010	-0.634878 J H	171

Rank Sum = 2750
Rank Mean = 101.852

Calculation Results:

Kruskal-Wallis H Statistic = 3.11144
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 5.88678
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
3.11144 < 15.5073 indicating no significant group difference at 5% significance level
5.88678 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ppb)

Parameter: Nitrate

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 162
Total Non-Detect: 127
Percent Non-Detects: 78.3951%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	12 (70.5882%)	3/16/1999	ND<30	ND<30
			9/23/1999	ND<30	ND<30
			3/15/2000	ND<30	ND<30
			9/24/2003	ND<30	ND<30
			3/11/2004	ND<30	ND<30
			10/12/2004	ND<30	ND<30
			4/1/2005	ND<40	ND<40
			10/25/2005	ND<40	ND<40
			4/29/2006	68	68
			11/18/2006	94	94
			5/23/2007	14 J	14 J
			11/28/2007	ND<30	ND<30
			6/5/2008	ND<30	ND<30
			11/20/2008	ND<30	ND<30
			6/11/2009	420 J	420 J
			11/16/2009	ND<360	ND<360
			6/30/2010	61 J	61 J

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-8	17	14 (82.3529%)	9/23/1998	ND<30	ND<30
			3/16/1999	ND<30	ND<30
			9/23/1999	ND<30	ND<30
			3/15/2000	ND<30	ND<30
			9/24/2003	ND<30	ND<30
			3/11/2004	ND<30	ND<30
			10/12/2004	ND<30	ND<30
			4/1/2005	ND<40	ND<40
			10/25/2005	ND<40	ND<40
			4/29/2006	ND<40	ND<40
			11/18/2006	17 J	17 J
			5/23/2007	35	35
			11/28/2007	ND<30	ND<30
			6/5/2008	ND<30	ND<30
			11/20/2008	ND<30	ND<30
			6/11/2009	ND<100	ND<100
			6/30/2010	60 J	60 J
MW-9	18	15 (83.3333%)	9/23/1998	ND<30	ND<30
			3/16/1999	ND<30	ND<30
			9/23/1999	ND<30	ND<30
			3/15/2000	ND<30	ND<30
			9/24/2003	ND<30	ND<30
			3/11/2004	ND<30	ND<30

		10/12/2004	ND<30	ND<30		
		4/1/2005	ND<40	ND<40		
		10/25/2005	ND<40	ND<40		
		4/29/2006	10 J	10 J		
		11/18/2006	15 J	15 J		
		5/23/2007	29 J	29 J		
		11/28/2007	ND<30	ND<30		
		6/5/2008	ND<30	ND<30		
		11/20/2008	ND<30	ND<30		
		6/11/2009	ND<100		ND<100	
		11/16/2009	ND<360		ND<360	
		6/30/2010	ND<36	ND<36		
MW-12BR	18	14 (77.7778%)	3/16/1999		ND<30	ND<30
		9/23/1999	ND<30	ND<30		
		3/15/2000	ND<30	ND<30		
		9/24/2003	ND<30	ND<30		
		3/11/2004	ND<30	ND<30		
		10/12/2004	ND<30	ND<30		
		4/1/2005	ND<40	ND<40		
		10/25/2005	ND<40	ND<40		
		4/29/2006	33 J	33 J		
		11/18/2006	22 J	22 J		
		5/23/2007	20 J	20 J		
		11/28/2007	ND<30	ND<30		
		6/5/2008	ND<30	ND<30		
		11/20/2008	ND<30	ND<30		
		6/11/2009	150 J M	150 J M		
		11/16/2009	ND<360		ND<360	
		11/16/2009	ND<360		ND<360	
		6/30/2010	ND<36	ND<36		
MW-12AR	17	12 (70.5882%)	3/16/1999		ND<30	ND<30
		9/23/1999	ND<30	ND<30		
		3/15/2000	ND<30	ND<30		
		9/24/2003	ND<30	ND<30		
		3/11/2004	ND<30	ND<30		
		10/12/2004	ND<30	ND<30		
		4/1/2005	ND<40	ND<40		
		10/25/2005	ND<40	ND<40		
		4/29/2006	160	160		
		11/18/2006	276	276		
		5/23/2007	217	217		
		11/28/2007	ND<30	ND<30		
		6/5/2008	ND<30	ND<30		
		11/20/2008	ND<30	ND<30		
		6/11/2009	240 J M	240 J M		
		11/12/2009	640000 J		640000 J	
		6/30/2010	ND<36	ND<36		
MW-11R19	14 (73.6842%)	9/23/1998		ND<30	ND<30	
		3/16/1999	ND<30	ND<30		
		9/23/1999	ND<30	ND<30		
		3/15/2000	ND<30	ND<30		
		9/24/2003	ND<30	ND<30		
		3/11/2004	ND<30	ND<30		
		10/12/2004	ND<30	ND<30		
		4/1/2005	ND<40	ND<40		
		10/25/2005	ND<40	ND<40		
		4/29/2006	18 J	18 J		
		11/18/2006	60	60		
		5/23/2007	33	33		

			11/28/2007	ND<30	ND<30	
			6/5/2008	ND<30	ND<30	
			11/20/2008	ND<30	ND<30	
			6/11/2009	270 J M	270 J M	
			11/16/2009	ND<360		ND<360
			11/16/2009	ND<360		ND<360
			6/30/2010	55 J	55 J	
MW-10	19	17 (89.4737%)	9/23/1998		ND<30	ND<30
			3/16/1999	ND<30	ND<30	
			9/23/1999	ND<30	ND<30	
			3/15/2000	ND<30	ND<30	
			9/24/2003	ND<30	ND<30	
			3/11/2004	ND<30	ND<30	
			10/12/2004	ND<30	ND<30	
			4/1/2005	ND<40	ND<40	
			10/25/2005	ND<40	ND<40	
			4/29/2006	38 J	38 J	
			11/18/2006	ND<30	ND<30	
			5/23/2007	38	38	
			11/28/2007	ND<30	ND<30	
			6/5/2008	ND<30	ND<30	
			11/20/2008	ND<30	ND<30	
			6/11/2009	ND<100		ND<100
			11/16/2009	ND<360		ND<360
			11/16/2009	ND<360		ND<360
			6/30/2010	ND<36	ND<36	
MW-7	19	15 (78.9474%)	9/23/1998		ND<30	ND<30
			3/16/1999	ND<30	ND<30	
			9/23/1999	ND<30	ND<30	
			3/15/2000	ND<30	ND<30	
			9/24/2003	ND<30	ND<30	
			3/11/2004	ND<30	ND<30	
			10/12/2004	ND<30	ND<30	
			4/1/2005	ND<40	ND<40	
			10/25/2005	ND<40	ND<40	
			4/29/2006	22 J	22 J	
			11/18/2006	58	58	
			5/23/2007	74	74	
			11/28/2007	ND<30	ND<30	
			6/5/2008	ND<30	ND<30	
			11/20/2008	ND<30	ND<30	
			6/11/2009	180 J M	180 J M	
			11/16/2009	ND<360		ND<360
			11/16/2009	ND<360		ND<360
			6/30/2010	ND<36	ND<36	
MW-6	18	14 (77.7778%)	9/23/1998		ND<30	ND<30
			3/16/1999	ND<30	ND<30	
			9/23/1999	ND<30	ND<30	
			3/15/2000	ND<30	ND<30	
			9/24/2003	ND<30	ND<30	
			3/11/2004	ND<30	ND<30	
			10/12/2004	ND<30	ND<30	
			4/1/2005	ND<40	ND<40	
			10/25/2005	ND<40	ND<40	
			4/29/2006	55	55	
			11/18/2006	21 J	21 J	
			5/23/2007	36	36	
			11/28/2007	ND<30	ND<30	
			6/5/2008	ND<30	ND<30	

11/20/2008	ND<30	ND<30	
6/11/2009	200 J M	200 J M	
11/16/2009	ND<360		ND<360
6/30/2010	ND<36	ND<36	

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 = 162

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	10	-2.512136	31081	-25.1213
2	14	-2.257131	1.4054	-56.7211
3	15	-2.096931	5.8026	-88.1751
4	15	-1.977371	9.7126	-117.836
5	15	-1.880792	3.2499	-146.047
6	15	-1.799122	6.4867	-173.034
7	15	-1.727932	9.4725	-198.953
8	15	-1.654633	2.2103	-223.773
9	15	-1.598193	4.7645	-247.745
10	15	-1.546433	7.1559	-270.942
11	15	-1.498523	9.4015	-293.42
12	15	-1.4538	41.515	-315.227
13	15	-1.411834	3.5083	-336.404
14	15	-1.3722	45.3913	-356.987
15	15	-1.328544	7.1563	-376.915
16	15	-1.293034	8.8282	-396.311
17	15	-1.259085	0.4135	-415.197
18	15	-1.226535	1.9179	-433.595
19	15	-1.195225	3.3464	-451.523
20	15	-1.165055	4.7038	-468.999
21	15	-1.1359	55.994	-486.038
22	15	-1.107685	7.221	-502.653
23	15	-1.075845	8.3784	-518.79
24	15	-1.049395	9.4796	-534.531
25	15	-1.023656	0.5275	-549.886
26	15	-0.998575	61.5246	-564.864
27	15	-0.974114	62.4735	-579.476
28	15	-0.950222	63.3764	-593.73
29	15	-0.926859	64.2355	-607.632
30	15	-0.900227	65.0459	-621.136
31	15	-0.877897	65.8166	-634.304
32	15	-0.855996	66.5494	-647.144
33	15	-0.834498	67.2457	-659.662
34	15	-0.813379	67.9073	-671.862
35	15	-0.792618	68.5356	-683.752
36	15	-0.772193	69.1319	-695.335
37	15	-0.752084	69.6975	-706.616
38	15	-0.729003	70.2289	-717.551
39	15	-0.709522	70.7323	-728.194
40	15	-0.690309	71.2089	-738.548
41	15	-0.671346	71.6596	-748.618
42	15	-0.652622	72.0855	-758.408
43	15	-0.634124	72.4876	-767.92
44	15	-0.615839	72.8669	-777.157
45	15	-0.594766	73.2206	-786.079
46	15	-0.576911	73.5534	-794.732
47	15	-0.559237	73.8662	-803.121
48	15	-0.541736	74.1597	-811.247
49	15	-0.524401	74.4347	-819.113

50	15	-0.507221	74.6919	-826.721
51	15	-0.490189	74.9322	-834.074
52	15	-0.470498	75.1536	-841.132
53	15	-0.453763	75.3595	-847.938
54	15	-0.437153	75.5506	-854.495
55	15	-0.420664	75.7275	-860.805
56	15	-0.4042975.891	-866.87	
57	15	-0.388022	76.0416	-872.69
58	15	-0.371856	76.1798	-878.268
59	15	-0.355788	76.3064	-883.605
60	15	-0.337155	76.4201	-888.662
61	15	-0.321278	76.5233	-893.481
62	15	-0.305481	76.6166	-898.063
63	15	-0.2897676.7006	-902.41	
64	15	-0.2741176.7757	-906.521	
65	15	-0.258527	76.8426	-910.399
66	15	-0.243007	76.9016	-914.044
67	15	-0.224974	76.9522	-917.419
68	15	-0.209575	76.9962	-920.563
69	15	-0.194225	77.0339	-923.476
70	15	-0.1789277.0659	-926.16	
71	15	-0.163659	77.0927	-928.615
72	15	-0.148434	77.1147	-930.841
73	15	-0.133244	77.1325	-932.84
74	15	-0.118085	77.1464	-934.611
75	15	-0.100433	77.1565	-936.118
76	15	-0.0853288	77.1638	-937.398
77	15	-0.0702426	77.1687	-938.451
78	15	-0.0551734	77.1718	-939.279
79	15	-0.0401167	77.1734	-939.881
80	15	-0.0250691	77.174	-940.257
81	15	-0.0100272	77.1741	-940.407
82	15	0.0100272	77.1742	-940.257
83	15	0.0250691	77.1748	-939.881
84	15	0.0401167	77.1764	-939.279
85	15	0.0551734	77.1795	-938.451
86	15	0.0702426	77.1844	-937.398
87	15	0.0853288	77.1917	-936.118
88	15	0.100433	77.2018	-934.611
89	15	0.118085	77.2157	-932.84
90	15	0.133244	77.2335	-930.841
91	15	0.148434	77.2555	-928.615
92	17	0.163659	77.2823	-925.833
93	18	0.17892 77.3143	-922.612	
94	18	0.194225	77.352	-919.116
95	18	0.209575	77.3959	-915.344
96	18	0.224974	77.4466	-911.294
97	18	0.243007	77.5056	-906.92
98	18	0.258527	77.5724	-902.266
99	18	0.27411 77.6476	-897.332	
100	20	0.28976 77.7315	-891.537	
101	20	0.305481	77.8249	-885.428
102	20	0.321278	77.9281	-879.002
103	20	0.337155	78.0418	-872.259
104	20	0.355788	78.1683	-865.143
105	20	0.371856	78.3066	-857.706
106	20	0.388022	78.4572	-849.946
107	20	0.40429 78.6206	-841.86	
108	20	0.420664	78.7976	-833.447
109	20	0.437153	78.9887	-824.703
110	20	0.453763	79.1946	-815.628
111	20	0.470498	79.416	-806.218

112	20	0.490189		79.6562	-796.414
113	20	0.507221		79.9135	-786.27
114	20	0.524401		80.1885	-775.782
115	20	0.541736		80.482	-764.947
116	20	0.559237		80.7947	-753.763
117	20	0.576911		81.1276	-742.224
118	20	0.594766		81.4813	-730.329
119	20	0.615839		81.8606	-718.012
120	21	0.634124		82.2627	-704.696
121	22	0.652622		82.6886	-690.338
122	22	0.671346		83.1393	-675.568
123	29	0.690309		83.6158	-655.549
124	33	0.709522		84.1192	-632.135
125	33	0.729003		84.6507	-608.078
126	35	0.752084		85.2163	-581.755
127	36	0.772193		85.8126	-553.956
128	38	0.792618		86.4408	-523.837
129	38	0.813379		87.1024	-492.928
130	50	0.834498		87.7988	-451.203
131	50	0.855996		88.5316	-408.404
132	50	0.877897		89.3023	-364.509
133	55	0.900227		90.1127	-314.996
134	55	0.926859		90.9717	-264.019
135	58	0.950222		91.8747	-208.906
136	60	0.974114		92.8236	-150.459
137	60	0.998575		93.8207	-90.5449
138	61	1.02365	94.8686	-28.1021	
139	68	1.04939	95.9698	43.2562	
140	74	1.07584	97.1272	122.868	
141	94	1.10768	98.3542	226.99	
142	150	1.1359	99.6444	397.374	
143	160	1.16505	101.002	583.782	
144	180	1.19522	102.43	798.922	
145	180	1.22653	103.935	1019.7	
146	180	1.25908	105.52	1246.33	
147	180	1.29303	107.192	1479.08	
148	180	1.32854	108.957	1718.22	
149	180	1.3722	110.84	1965.21	
150	180	1.41183	112.833	2219.34	
151	180	1.4538	114.947	2481.03	
152	180	1.49852	117.192	2750.76	
153	180	1.54643	119.584	3029.12	
154	180	1.59819	122.138	3316.79	
155	180	1.65463	124.876	3614.62	
156	200	1.72793	127.861	3960.21	
157	217	1.79912	131.098	4350.62	
158	240	1.88079	134.636	4802.01	
159	270	1.97737	138.546	5335.9	
160	276	2.09693	142.943	5914.65	
161	420	2.25713	148.037	6862.64	
162	640000	2.51213	154.348	1.61463e+006	

Data Set Standard Deviation = 50279.8
Numerator = 2.60702e+012
Denominator = 6.28223e+013
W Statistic = 0.0414984 = 2.60702e+012 / 6.28223e+013

5% Critical value of 0.976 exceeds 0.0414984
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0414984

Evidence of non-normality at 99% level of significance

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 = 162

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	2.30259	-2.51213	6.31081	-5.7844
2	2.63906	-2.257	13.11.4054	-11.7411
3	2.70805	-2.096	9315.8026	-17.4197
4	2.70805	-1.977	3719.7126	-22.7745
5	2.70805	-1.880	7923.2499	-27.8678
6	2.70805	-1.799	1226.4867	-32.7399
7	2.70805	-1.727	9329.4725	-37.4192
8	2.70805	-1.654	6332.2103	-41.9
9	2.70805	-1.598	1934.7645	-46.228
10	2.70805	-1.546	4337.1559	-50.4158
11	2.70805	-1.498	5239.4015	-54.4739
12	2.70805	-1.453	8 41.515	-58.4108
13	2.70805	-1.411	8343.5083	-62.2341
14	2.70805	-1.372	2 45.3913	-65.9501
15	2.70805	-1.328	5447.1563	-69.5479
16	2.70805	-1.293	0348.8282	-73.0495
17	2.70805	-1.259	0850.4135	-76.4592
18	2.70805	-1.226	5351.9179	-79.7807
19	2.70805	-1.195	2253.3464	-83.0174
20	2.70805	-1.165	0554.7038	-86.1724
21	2.70805	-1.135	9 55.994	-89.2484
22	2.70805	-1.107	6857.221	-92.2481
23	2.70805	-1.075	8458.3784	-95.1615
24	2.70805	-1.049	3959.4796	-98.0033
25	2.70805	-1.023	6560.5275	-100.775
26	2.70805	-0.998575	61.5246	-103.48
27	2.70805	-0.974114	62.4735	-106.118
28	2.70805	-0.950222	63.3764	-108.691
29	2.70805	-0.926859	64.2355	-111.201
30	2.70805	-0.900227	65.0459	-113.639
31	2.70805	-0.877897	65.8166	-116.016
32	2.70805	-0.855996	66.5494	-118.334
33	2.70805	-0.834498	67.2457	-120.594
34	2.70805	-0.813379	67.9073	-122.797
35	2.70805	-0.792618	68.5356	-124.943
36	2.70805	-0.772193	69.1319	-127.034
37	2.70805	-0.752084	69.6975	-129.071
38	2.70805	-0.729003	70.2289	-131.045
39	2.70805	-0.709522	70.7323	-132.967
40	2.70805	-0.690309	71.2089	-134.836
41	2.70805	-0.671346	71.6596	-136.654
42	2.70805	-0.652622	72.0855	-138.421
43	2.70805	-0.634124	72.4876	-140.139
44	2.70805	-0.615839	72.8669	-141.806
45	2.70805	-0.594766	73.2206	-143.417
46	2.70805	-0.576911	73.5534	-144.979
47	2.70805	-0.559237	73.8662	-146.494
48	2.70805	-0.541736	74.1597	-147.961
49	2.70805	-0.524401	74.4347	-149.381

50	2.70805	-0.507221	74.6919	-150.754
51	2.70805	-0.490189	74.9322	-152.082
52	2.70805	-0.470498	75.1536	-153.356
53	2.70805	-0.453763	75.3595	-154.585
54	2.70805	-0.437153	75.5506	-155.769
55	2.70805	-0.420664	75.7275	-156.908
56	2.70805	-0.404297	5.891	-158.003
57	2.70805	-0.388022	76.0416	-159.053
58	2.70805	-0.371856	76.1798	-160.06
59	2.70805	-0.355788	76.3064	-161.024
60	2.70805	-0.337155	76.4201	-161.937
61	2.70805	-0.321278	76.5233	-162.807
62	2.70805	-0.305481	76.6166	-163.634
63	2.70805	-0.289767	6.7006	-164.419
64	2.70805	-0.274117	6.7757	-165.161
65	2.70805	-0.258527	76.8426	-165.861
66	2.70805	-0.243007	76.9016	-166.519
67	2.70805	-0.224974	76.9522	-167.129
68	2.70805	-0.209575	76.9962	-167.696
69	2.70805	-0.194225	77.0339	-168.222
70	2.70805	-0.178927	7.0659	-168.707
71	2.70805	-0.163659	77.0927	-169.15
72	2.70805	-0.148434	77.1147	-169.552
73	2.70805	-0.133244	77.1325	-169.913
74	2.70805	-0.118085	77.1464	-170.232
75	2.70805	-0.100433	77.1565	-170.504
76	2.70805	-0.0853288	77.1638	-170.736
77	2.70805	-0.0702426	77.1687	-170.926
78	2.70805	-0.0551734	77.1718	-171.075
79	2.70805	-0.0401167	77.1734	-171.184
80	2.70805	-0.0250691	77.174	-171.252
81	2.70805	-0.0100272	77.1741	-171.279
82	2.70805	0.0100272	77.1742	-171.252
83	2.70805	0.0250691	77.1748	-171.184
84	2.70805	0.0401167	77.1764	-171.075
85	2.70805	0.0551734	77.1795	-170.926
86	2.70805	0.0702426	77.1844	-170.736
87	2.70805	0.0853288	77.1917	-170.504
88	2.70805	0.100433	77.2018	-170.232
89	2.70805	0.118085	77.2157	-169.913
90	2.70805	0.133244	77.2335	-169.552
91	2.70805	0.148434	77.2555	-169.15
92	2.83321	0.163659	77.2823	-168.686
93	2.89037	0.17892	77.3143	-168.169
94	2.89037	0.194225	77.352	-167.608
95	2.89037	0.209575	77.3959	-167.002
96	2.89037	0.224974	77.4466	-166.352
97	2.89037	0.243007	77.5056	-165.649
98	2.89037	0.258527	77.5724	-164.902
99	2.89037	0.27411	77.6476	-164.11
100	2.99573	0.28976	77.7315	-163.242
101	2.99573	0.305481	77.8249	-162.327
102	2.99573	0.321278	77.9281	-161.364
103	2.99573	0.337155	78.0418	-160.354
104	2.99573	0.355788	78.1683	-159.288
105	2.99573	0.371856	78.3066	-158.174
106	2.99573	0.388022	78.4572	-157.012
107	2.99573	0.40429	78.6206	-155.801
108	2.99573	0.420664	78.7976	-154.54
109	2.99573	0.437153	78.9887	-153.231
110	2.99573	0.453763	79.1946	-151.872
111	2.99573	0.470498	79.416	-150.462

112	2.99573	0.490189		79.6562	-148.994
113	2.99573	0.507221		79.9135	-147.474
114	2.99573	0.524401		80.1885	-145.903
115	2.99573	0.541736		80.482	-144.28
116	2.99573	0.559237		80.7947	-142.605
117	2.99573	0.576911		81.1276	-140.877
118	2.99573	0.594766		81.4813	-139.095
119	2.99573	0.615839		81.8606	-137.25
120	3.04452	0.634124		82.2627	-135.319
121	3.09104	0.652622		82.6886	-133.302
122	3.09104	0.671346		83.1393	-131.227
123	3.3673	0.690309		83.6158	-128.902
124	3.49651	0.709522		84.1192	-126.422
125	3.49651	0.729003		84.6507	-123.873
126	3.55535	0.752084		85.2163	-121.199
127	3.58352	0.772193		85.8126	-118.432
128	3.63759	0.792618		86.4408	-115.548
129	3.63759	0.813379		87.1024	-112.59
130	3.91202	0.834498		87.7988	-109.325
131	3.91202	0.855996		88.5316	-105.976
132	3.91202	0.877897		89.3023	-102.542
133	4.00733	0.900227		90.1127	-98.9345
134	4.00733	0.926859		90.9717	-95.2203
135	4.06044	0.950222		91.8747	-91.362
136	4.09434	0.974114		92.8236	-87.3736
137	4.09434	0.998575		93.8207	-83.2851
138	4.11087	1.02365	94.8686	-79.077	
139	4.21951	1.04939	95.9698	-74.6491	
140	4.30407	1.07584	97.1272	-70.0186	
141	4.54329	1.10768	98.3542	-64.9861	
142	5.01064	1.1359	99.6444	-59.2945	
143	5.07517	1.16505	101.002	-53.3817	
144	5.19296	1.19522	102.43	-47.175	
145	5.19296	1.22653	103.935	-40.8057	
146	5.19296	1.25908	105.52	-34.2673	
147	5.19296	1.29303	107.192	-27.5526	
148	5.19296	1.32854	108.957	-20.6536	
149	5.19296	1.3722	110.84	-13.5278	
150	5.19296	1.41183	112.833	-6.19621	
151	5.19296	1.4538	114.947	1.35333	
152	5.19296	1.49852	117.192	9.13506	
153	5.19296	1.54643	119.584	17.1656	
154	5.19296	1.59819	122.138	25.4649	
155	5.19296	1.65463	124.876	34.0573	
156	5.29832	1.72793	127.861	43.2125	
157	5.3799	1.79912	131.098	52.8915	
158	5.48064	1.88079	134.636	63.1995	
159	5.59842	1.97737	138.546	74.2696	
160	5.6204	2.09693	142.943	86.0552	
161	6.04025	2.25713	148.037	99.6888	
162	13.3692	2.51213	154.348	133.274	

Data Set Standard Deviation = 1.18516
Numerator = 17762
Denominator = 34904.4
W Statistic = 0.508875 = 17762 / 34904.4

5% Critical value of 0.976 exceeds 0.508875
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.508875

Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Nitrate

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<2.70805	64
	9/23/1999	ND<2.70805	64
	3/15/2000	ND<2.70805	64
	9/24/2003	ND<2.70805	64
	3/11/2004	ND<2.70805	64
	10/12/2004	ND<2.70805	64
	4/1/2005	ND<2.99573	64
	10/25/2005	ND<2.99573	64
	4/29/2006	4.21951	150
	11/18/2006	4.54329	152
	5/23/2007	2.63906 J	129
	11/28/2007	ND<2.70805	64
	6/5/2008	ND<2.70805	64
	11/20/2008	ND<2.70805	64
	6/11/2009	6.04025 J	161
	11/16/2009	ND<5.19296	64
	6/30/2010	4.11087 J	149

Rank Sum = 1509
Rank Mean = 88.7647

Background Rank Sum = 1509
Background Rank Mean = 88.7647

Compliance Wells

Well ID	Date	Result	Rank
MW-8	9/23/1998	ND<2.70805	64
	3/16/1999	ND<2.70805	64
	9/23/1999	ND<2.70805	64
	3/15/2000	ND<2.70805	64
	9/24/2003	ND<2.70805	64
	3/11/2004	ND<2.70805	64
	10/12/2004	ND<2.70805	64
	4/1/2005	ND<2.99573	64
	10/25/2005	ND<2.99573	64
	4/29/2006	ND<2.99573	64
	11/18/2006	2.83321 J	131
	5/23/2007	3.55535	140
	11/28/2007	ND<2.70805	64
	6/5/2008	ND<2.70805	64
	11/20/2008	ND<2.70805	64
	6/11/2009	ND<3.91202	64
	6/30/2010	4.09434 J	147

Rank Sum = 1314
Rank Mean = 77.2941

MW-9	9/23/1998	ND<2.70805	64
	3/16/1999	ND<2.70805	64
	9/23/1999	ND<2.70805	64
	3/15/2000	ND<2.70805	64
	9/24/2003	ND<2.70805	64
	3/11/2004	ND<2.70805	64
	10/12/2004	ND<2.70805	64
	4/1/2005	ND<2.99573	64
	10/25/2005	ND<2.99573	64
	4/29/2006	2.30259 J	128
	11/18/2006	2.70805 J	130
	5/23/2007	3.3673 J	137
	11/28/2007	ND<2.70805	64
	6/5/2008	ND<2.70805	64
	11/20/2008	ND<2.70805	64
	6/11/2009	ND<3.91202	64
	11/16/2009	ND<5.19296	64
	6/30/2010	ND<2.89037	64

Rank Sum = 1355
Rank Mean = 75.2778

MW-12BR	3/16/1999	ND<2.70805	64
	9/23/1999	ND<2.70805	64
	3/15/2000	ND<2.70805	64
	9/24/2003	ND<2.70805	64
	3/11/2004	ND<2.70805	64
	10/12/2004	ND<2.70805	64
	4/1/2005	ND<2.99573	64
	10/25/2005	ND<2.99573	64
	4/29/2006	3.49651 J	138
	11/18/2006	3.09104 J	135
	5/23/2007	2.99573 J	133
	11/28/2007	ND<2.70805	64
	6/5/2008	ND<2.70805	64
	11/20/2008	ND<2.70805	64
	6/11/2009	5.01064 J M	153
	11/16/2009	ND<5.19296	64
	11/16/2009	ND<5.19296	64
	6/30/2010	ND<2.89037	64

Rank Sum = 1455
Rank Mean = 80.8333

MW-12AR	3/16/1999	ND<2.70805	64
	9/23/1999	ND<2.70805	64
	3/15/2000	ND<2.70805	64
	9/24/2003	ND<2.70805	64
	3/11/2004	ND<2.70805	64
	10/12/2004	ND<2.70805	64
	4/1/2005	ND<2.99573	64
	10/25/2005	ND<2.99573	64
	4/29/2006	5.07517	154
	11/18/2006	5.6204	160
	5/23/2007	5.3799	157
	11/28/2007	ND<2.70805	64
	6/5/2008	ND<2.70805	64
	11/20/2008	ND<2.70805	64
	6/11/2009	5.48064 J M	158
	11/12/2009	13.3692 J	162
	6/30/2010	ND<2.89037	64

Rank Sum = 1559
Rank Mean = 91.7059

MW-11R	9/23/1998	ND<2.70805	64
	3/16/1999	ND<2.70805	64
	9/23/1999	ND<2.70805	64
	3/15/2000	ND<2.70805	64
	9/24/2003	ND<2.70805	64
	3/11/2004	ND<2.70805	64
	10/12/2004	ND<2.70805	64
	4/1/2005	ND<2.99573	64
	10/25/2005	ND<2.99573	64
	4/29/2006	2.89037 J	132
	11/18/2006	4.09434	148
	5/23/2007	3.49651	139
	11/28/2007	ND<2.70805	64
	6/5/2008	ND<2.70805	64
	11/20/2008	ND<2.70805	64
	6/11/2009	5.59842 J M	159
	11/16/2009	ND<5.19296	64
	11/16/2009	ND<5.19296	64
	6/30/2010	4.00733 J	144

Rank Sum = 1618
Rank Mean = 85.1579

MW-10	9/23/1998	ND<2.70805	64
	3/16/1999	ND<2.70805	64
	9/23/1999	ND<2.70805	64
	3/15/2000	ND<2.70805	64
	9/24/2003	ND<2.70805	64
	3/11/2004	ND<2.70805	64
	10/12/2004	ND<2.70805	64
	4/1/2005	ND<2.99573	64
	10/25/2005	ND<2.99573	64
	4/29/2006	3.63759 J	142
	11/18/2006	ND<2.70805	64
	5/23/2007	3.63759	143
	11/28/2007	ND<2.70805	64
	6/5/2008	ND<2.70805	64
	11/20/2008	ND<2.70805	64
	6/11/2009	ND<3.91202	64
	11/16/2009	ND<5.19296	64
	11/16/2009	ND<5.19296	64
	6/30/2010	ND<2.89037	64

Rank Sum = 1373
Rank Mean = 72.2632

MW-7	9/23/1998	ND<2.70805	64
	3/16/1999	ND<2.70805	64
	9/23/1999	ND<2.70805	64
	3/15/2000	ND<2.70805	64
	9/24/2003	ND<2.70805	64
	3/11/2004	ND<2.70805	64
	10/12/2004	ND<2.70805	64
	4/1/2005	ND<2.99573	64
	10/25/2005	ND<2.99573	64
	4/29/2006	3.09104 J	136
	11/18/2006	4.06044	146
	5/23/2007	4.30407	151
	11/28/2007	ND<2.70805	64
	6/5/2008	ND<2.70805	64
	11/20/2008	ND<2.70805	64
	6/11/2009	5.19296 J M	155
	11/16/2009	ND<5.19296	64
	11/16/2009	ND<5.19296	64

	6/30/2010	ND<2.89037	64

Rank Sum = 1548
Rank Mean = 81.4737

MW-6	9/23/1998	ND<2.70805	64
	3/16/1999	ND<2.70805	64
	9/23/1999	ND<2.70805	64
	3/15/2000	ND<2.70805	64
	9/24/2003	ND<2.70805	64
	3/11/2004	ND<2.70805	64
	10/12/2004	ND<2.70805	64
	4/1/2005	ND<2.99573	64
	10/25/2005	ND<2.99573	64
	4/29/2006	4.00733	145
	11/18/2006	3.04452 J	134
	5/23/2007	3.58352	141
	11/28/2007	ND<2.70805	64
	6/5/2008	ND<2.70805	64
	11/20/2008	ND<2.70805	64
	6/11/2009	5.29832 J M	156
	11/16/2009	ND<5.19296	64
	6/30/2010	ND<2.89037	64

Rank Sum = 1472
Rank Mean = 81.7778

Calculation Results:

Kruskal-Wallis H Statistic = 2.52225
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 4.86722
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
2.52225 < 15.5073 indicating no significant group difference at 5% significance level
4.86722 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ppb)

Parameter: Selenium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 187
Percent Non-Detects: 88.2075%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.21	ND<0.21
			11/16/2009	ND<0.21	ND<0.21
			6/30/2010	ND<0.21	ND<0.21

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-8	26	22 (84.6154%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	52	52
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	1.63 J	1.63 J
			10/25/2005	1.52 J	1.52 J
			4/29/2006	1.04 J	1.04 J
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2

			6/11/2009	ND<0.21	ND<0.21	
			6/30/2010	ND<0.21	ND<0.21	
MW-9	27	22 (81.4815%)	7/20/1995	ND<2	ND<2	
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	27	27	
			9/24/1997	ND<2	ND<2	
			4/7/1998	68	68	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	1.54 J	1.54 J	
			10/25/2005	1.83 J	1.83 J	
			4/29/2006	1.32 J	1.32 J	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.21	ND<0.21	
			11/16/2009	ND<0.21	ND<0.21	
			6/30/2010	ND<0.21	ND<0.21	
MW-12BR	17	16 (94.1176%)	3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	1.89 J	1.89 J	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.21	ND<0.21	
			11/16/2009	ND<0.21	ND<0.21	
			6/30/2010	ND<0.21	ND<0.21	
MW-12AR	17	15 (88.2353%)	3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	1.54 J	1.54 J	
			4/29/2006	1.83 J	1.83 J	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	

			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.21		ND<0.21
			11/16/2009	ND<0.21		ND<0.21
			6/30/2010	ND<0.21		ND<0.21
MW-10	27	21 (77.7778%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	160	160	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	1.04 J	1.04 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	2.06	2.06	
			11/20/2008	ND<2	ND<2	
			6/11/2009	0.25 J	0.25 J	
			11/16/2009	0.25 J	0.25 J	
			6/30/2010	0.28 J H	0.28 J H	
MW-7	27	23 (85.1852%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	58	58	
			9/23/1998	ND<2	ND<2	
			3/16/1999	90	90	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	1.34 J	1.34 J	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	0.27 J	0.27 J	
			11/16/2009	ND<0.21		ND<0.21
			6/30/2010	ND<0.21		ND<0.21
MW-6	27	27 (100%)	7/20/1995		ND<2	ND<2

		8/24/1995	ND<2	ND<2	
		9/28/1995	ND<2	ND<2	
		10/26/1995	ND<2	ND<2	
		11/19/1996	ND<2	ND<2	
		12/19/1996	ND<2	ND<2	
		3/24/1997	ND<2	ND<2	
		9/24/1997	ND<2	ND<2	
		4/7/1998	ND<2	ND<2	
		9/23/1998	ND<2	ND<2	
		3/16/1999	ND<2	ND<2	
		9/23/1999	ND<2	ND<2	
		3/15/2000	ND<2	ND<2	
		9/24/2003	ND<2	ND<2	
		3/11/2004	ND<2	ND<2	
		10/12/2004	ND<2	ND<2	
		4/1/2005	ND<2	ND<2	
		10/25/2005	ND<2	ND<2	
		4/29/2006	ND<2	ND<2	
		11/18/2006	ND<2	ND<2	
		5/23/2007	ND<2	ND<2	
		11/28/2007	ND<2	ND<2	
		6/5/2008	ND<2	ND<2	
		11/20/2008	ND<2	ND<2	
		6/11/2009	ND<0.21		ND<0.21
		11/16/2009	ND<0.21		ND<0.21
		6/30/2010	ND<0.21		ND<0.21
MW-11R27	24 (88.8889%)	7/20/1995		ND<2	ND<2
		8/24/1995	ND<2	ND<2	
		9/28/1995	ND<2	ND<2	
		10/26/1995	ND<2	ND<2	
		11/19/1996	ND<2	ND<2	
		12/19/1996	ND<2	ND<2	
		3/24/1997	ND<2	ND<2	
		9/24/1997	ND<2	ND<2	
		4/7/1998	20	20	
		9/23/1998	ND<2	ND<2	
		3/16/1999	ND<2	ND<2	
		9/23/1999	ND<2	ND<2	
		3/15/2000	ND<2	ND<2	
		9/24/2003	ND<2	ND<2	
		3/11/2004	ND<2	ND<2	
		10/12/2004	ND<2	ND<2	
		4/1/2005	ND<2	ND<2	
		10/25/2005	ND<2	ND<2	
		4/29/2006	1.39 J	1.39 J	
		11/18/2006	1.12 J	1.12 J	
		5/23/2007	ND<2	ND<2	
		11/28/2007	ND<2	ND<2	
		6/5/2008	ND<2	ND<2	
		11/20/2008	ND<2	ND<2	
		6/11/2009	ND<0.21		ND<0.21
		11/16/2009	ND<0.21		ND<0.21
		6/30/2010	ND<0.21		ND<0.21

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.105	-2.65209	7.03356	-0.278469
2	0.105	-2.365	11.2629	7 -0.526859
3	0.105	-2.197	28.1745	78 -0.757573
4	0.105	-2.096	93.2185	49 -0.977751
5	0.105	-1.995	39.2583	65 -1.18727
6	0.105	-1.911	03.2948	85 -1.38793
7	0.105	-1.852	18.3291	91 -1.5824
8	0.105	-1.786	13.6111	1 -1.77
9	0.105	-1.727	93.3909	68 -1.95143
10	0.105	-1.684	94.1935	8 -2.12835
11	0.105	-1.635	24.4609	8 -2.30005
12	0.105	-1.589	27.1356	-2.46692
13	0.105	-1.546	43.527	-2.6293
14	0.105	-1.514	1 51.8195	-2.78828
15	0.105	-1.475	79.9975	-2.94324
16	0.105	-1.439	53.0698	-3.09439
17	0.105	-1.411	83.063	-3.24263
18	0.105	-1.378	65.9637	-3.38739
19	0.105	-1.346	94.778	-3.52882
20	0.105	-1.322	51.63	-3.66768
21	0.105	-1.293	03.1989	-3.80345
22	0.105	-1.264	64.7982	-3.93624
23	0.25	-1.242	64.3424	-4.2469
24	0.25	-1.215	96.821	-4.55089
25	0.27	-1.190	12.2373	-4.87222
26	0.28	-1.165	05.5947	-5.19843
27	1	-1.145	1 73.9069	-6.34394
28	1	-1.121	68.165	-7.46561
29	1	-1.098	47.3716	-8.56408
30	1	-1.080	32.5387	-9.6444
31	1	-1.058	12.6584	-10.7025
32	1	-1.036	43.7326	-11.739
33	1	-1.019	43.7718	-12.7584
34	1	-0.998575	81.7689	-13.757
35	1	-0.978	15.7257	-14.7351
36	1	-0.958125	83.6437	-15.6932
37	1	-0.942375	84.5318	-16.6356
38	1	-0.923014	85.3837	-17.5586
39	1	-0.903992	86.201	-18.4626
40	1	-0.889006	86.9913	-19.3516
41	1	-0.870	55.7491	-20.2222
42	1	-0.852385	88.4757	-21.0746
43	1	-0.838054	89.178	-21.9126
44	1	-0.820379	89.8511	-22.733
45	1	-0.802956	90.4958	-23.536
46	1	-0.789191	91.1186	-24.3251
47	1	-0.772193	91.7149	-25.0973
48	1	-0.755415	92.2856	-25.8527
49	1	-0.738846	92.8314	-26.5916

50	1	-0.725736	93.3581	-27.3173
51	1	-0.709522	93.8616	-28.0269
52	1	-0.693493	94.3425	-28.7203
53	1	-0.680797	94.806	-29.4011
54	1	-0.665079	95.2483	-30.0662
55	1	-0.649522	95.6702	-30.7157
56	1	-0.637192	96.0762	-31.3529
57	1	-0.621911	96.463	-31.9748
58	1	-0.606775	96.8312	-32.5816
59	1	-0.594766	97.1849	-33.1764
60	1	-0.579873	97.5212	-33.7563
61	1	-0.565108	97.8405	-34.3214
62	1	-0.550465	98.1435	-34.8718
63	1	-0.538836	98.4339	-35.4107
64	1	-0.524401	98.7088	-35.9351
65	1	-0.510074	98.969	-36.4451
66	1	-0.498687	99.2177	-36.9438
67	1	-0.484544	99.4525	-37.4284
68	1	-0.470498	99.6739	-37.8989
69	1	-0.459327	99.8848	-38.3582
70	1	-0.445443	100.083	-38.8036
71	1	-0.431644	100.27	-39.2353
72	1	-0.417928	100.444	-39.6532
73	1	-0.40701	100.61	-40.0602
74	1	-0.393433	100.765	-40.4537
75	1	-0.379927	100.909	-40.8336
76	1	-0.369171	101.045	-41.2028
77	1	-0.355788	101.172	-41.5585
78	1	-0.342466	101.289	-41.901
79	1	-0.331854	101.399	-42.2329
80	1	-0.318639	101.501	-42.5515
81	1	-0.305481	101.594	-42.857
82	1	-0.294992	101.681	-43.152
83	1	-0.281926	101.761	-43.4339
84	1	-0.268908	101.833	-43.7028
85	1	-0.255936	101.898	-43.9587
86	1	-0.24559	101.959	-44.2043
87	1	-0.232693	102.013	-44.437
88	1	-0.219834	102.061	-44.6569
89	1	-0.209575	102.105	-44.8664
90	1	-0.196779	102.144	-45.0632
91	1	-0.184017	102.178	-45.2472
92	1	-0.173829	102.208	-45.4211
93	1	-0.161119	102.234	-45.5822
94	1	-0.148434	102.256	-45.7306
95	1	-0.135774	102.274	-45.8664
96	1	-0.125661	102.29	-45.9921
97	1	-0.113039	102.303	-46.1051
98	1	-0.100433	102.313	-46.2055
99	1	-0.0903606	102.321	-46.2959
100	1	-0.0777834	102.327	-46.3737
101	1	-0.0652187	102.332	-46.4389
102	1	-0.0551734	102.335	-46.4941
103	1	-0.0426257	102.336	-46.5367
104	1	-0.0300838	102.337	-46.5668
105	1	-0.0200544	102.338	-46.5868
106	1	-0.00751925	102.338	-46.5943
107	1	0.00751925	102.338	-46.5868
108	1	0.0200544	102.338	-46.5668
109	1	0.0300838	102.339	-46.5367
110	1	0.0426257	102.341	-46.4941
111	1	0.0551734	102.344	-46.4389

112	1	0.0652187	102.348	-46.3737
113	1	0.0777834	102.354	-46.2959
114	1	0.0903606	102.362	-46.2055
115	1	0.100433	102.373	-46.1051
116	1	0.113039	102.385	-45.9921
117	1	0.125661	102.401	-45.8664
118	1	0.135774	102.42	-45.7306
119	1	0.148434	102.442	-45.5822
120	1	0.161119	102.468	-45.4211
121	1	0.173829	102.498	-45.2472
122	1	0.184017	102.532	-45.0632
123	1	0.196779	102.57	-44.8664
124	1	0.209575	102.614	-44.6569
125	1	0.219834	102.663	-44.437
126	1	0.232693	102.717	-44.2043
127	1	0.24559	102.777	-43.9587
128	1	0.255936	102.843	-43.7028
129	1	0.268908	102.915	-43.4339
130	1	0.281926	102.994	-43.152
131	1	0.294992	103.081	-42.857
132	1	0.305481	103.175	-42.5515
133	1	0.318639	103.276	-42.2329
134	1	0.331854	103.386	-41.901
135	1	0.342466	103.504	-41.5585
136	1	0.355788	103.63	-41.2028
137	1	0.369171	103.767	-40.8336
138	1	0.379927	103.911	-40.4537
139	1	0.393433	104.066	-40.0602
140	1	0.40701	104.231	-39.6532
141	1	0.417928	104.406	-39.2353
142	1	0.431644	104.592	-38.8036
143	1	0.445443	104.791	-38.3582
144	1	0.459327	105.002	-37.8989
145	1	0.470498	105.223	-37.4284
146	1	0.484544	105.458	-36.9438
147	1	0.498687	105.707	-36.4451
148	1	0.510074	105.967	-35.9351
149	1	0.524401	106.242	-35.4107
150	1	0.538836	106.532	-34.8718
151	1	0.550465	106.835	-34.3214
152	1	0.565108	107.154	-33.7563
153	1	0.579873	107.491	-33.1764
154	1	0.594766	107.844	-32.5816
155	1	0.606775	108.213	-31.9748
156	1	0.621911	108.599	-31.3529
157	1	0.637192	109.005	-30.7157
158	1	0.649522	109.427	-30.0662
159	1	0.665079	109.87	-29.4011
160	1	0.680797	110.333	-28.7203
161	1	0.693493	110.814	-28.0269
162	1	0.709522	111.317	-27.3173
163	1	0.725736	111.844	-26.5916
164	1	0.738846	112.39	-25.8527
165	1	0.755415	112.961	-25.0973
166	1	0.772193	113.557	-24.3251
167	1	0.789191	114.18	-23.536
168	1	0.802956	114.824	-22.733
169	1	0.820379	115.498	-21.9126
170	1	0.838054	116.2	-21.0746
171	1	0.852385	116.926	-20.2222
172	1	0.87055	117.684	-19.3516
173	1	0.889006	118.475	-18.4626

174	1	0.903992	119.292	-17.5586
175	1	0.923014	120.144	-16.6356
176	1	0.942375	121.032	-15.6932
177	1	0.958125	121.95	-14.7351
178	1	0.97815	122.907	-13.757
179	1	0.998575	123.904	-12.7584
180	1	1.01943	124.943	-11.739
181	1	1.03643	126.017	-10.7025
182	1	1.05812	127.137	-9.6444
183	1	1.08032	128.304	-8.56408
184	1	1.09847	129.511	-7.46561
185	1	1.12168	130.769	-6.34394
186	1	1.1455	132.081	-5.19843
187	1	1.16505	133.438	-4.03339
188	1	1.19012	134.855	-2.84327
189	1	1.21596	136.333	-1.62731
190	1	1.24264	137.877	-0.384664
191	1	1.26464	139.477	0.879977
192	1.04	1.29303	141.149	2.22473
193	1.04	1.32251	142.898	3.60014
194	1.12	1.34694	144.712	5.10871
195	1.32	1.37866	146.613	6.92854
196	1.34	1.41183	148.606	8.82039
197	1.39	1.43953	150.678	10.8213
198	1.52	1.47579	152.856	13.0645
199	1.54	1.5141	155.149	15.3963
200	1.54	1.54643	157.54	17.7778
201	1.63	1.58927	160.066	20.3683
202	1.83	1.63524	162.74	23.3608
203	1.83	1.68494	165.579	26.4442
204	1.89	1.72793	168.564	29.71
205	2.06	1.78661	171.756	33.3904
206	20	1.85218	175.187	70.4339
207	27	1.91103	178.839	122.032
208	52	1.99539	182.821	225.792
209	58	2.09693	187.218	347.414
210	68	2.19728	192.046	496.83
211	90	2.36561	197.642	709.735
212	160	2.65209	204.676	1134.07

Data Set Standard Deviation = 14.3809
Numerator = 1.28611e+006
Denominator = 8.93145e+006
W Statistic = 0.143998 = 1.28611e+006 / 8.93145e+006

5% Critical value of 0.976 exceeds 0.143998
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.143998
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.25379	-2.65209	7.03356	5.97726
2	-2.25379	-2.3656	11.2629	7 11.3089
3	-2.25379	-2.1972	16.4578	16.2611
4	-2.25379	-2.0969	21.8549	20.9871
5	-2.25379	-1.9953	25.8365	25.4844
6	-2.25379	-1.9110	29.4885	29.7914
7	-2.25379	-1.8521	32.9191	33.9659
8	-2.25379	-1.7866	36.111	37.9925
9	-2.25379	-1.7279	39.0968	41.8869
10	-2.25379	-1.6849	41.9358	45.6844
11	-2.25379	-1.6352	44.6098	49.3699
12	-2.25379	-1.5892	47.1356	52.9518
13	-2.25379	-1.5464	49.527	56.4371
14	-2.25379	-1.5141	51.8195	59.8496
15	-2.25379	-1.4757	53.9975	63.1757
16	-2.25379	-1.4395	56.0698	66.4202
17	-2.25379	-1.4118	58.063	69.6021
18	-2.25379	-1.3786	59.9637	72.7093
19	-2.25379	-1.3469	61.778	75.7451
20	-2.25379	-1.3225	63.527	78.7257
21	-2.25379	-1.2930	65.1989	81.64
22	-2.25379	-1.2646	66.7982	84.4902
23	-1.38629	-1.2426	68.3424	86.2129
24	-1.38629	-1.2159	69.821	87.8985
25	-1.30933	-1.1901	71.2373	89.4568
26	-1.27297	-1.1650	72.5947	90.9399
27	0	-1.1455	73.9069	90.9399
28	0	-1.1216	75.165	90.9399
29	0	-1.0984	76.3716	90.9399
30	0	-1.0803	77.5387	90.9399
31	0	-1.0581	78.6584	90.9399
32	0	-1.0364	79.7326	90.9399
33	0	-1.0194	80.7718	90.9399
34	0	-0.998575	81.7689	90.9399
35	0	-0.9781	82.7257	90.9399
36	0	-0.958125	83.6437	90.9399
37	0	-0.942375	84.5318	90.9399
38	0	-0.923014	85.3837	90.9399
39	0	-0.903992	86.201	90.9399
40	0	-0.889006	86.9913	90.9399
41	0	-0.8705	87.7491	90.9399
42	0	-0.852385	88.4757	90.9399
43	0	-0.838054	89.178	90.9399
44	0	-0.820379	89.8511	90.9399
45	0	-0.802956	90.4958	90.9399
46	0	-0.789191	91.1186	90.9399
47	0	-0.772193	91.7149	90.9399
48	0	-0.755415	92.2856	90.9399
49	0	-0.738846	92.8314	90.9399

50	0	-0.725736	93.3581	90.9399
51	0	-0.709522	93.8616	90.9399
52	0	-0.693493	94.3425	90.9399
53	0	-0.680797	94.806	90.9399
54	0	-0.665079	95.2483	90.9399
55	0	-0.649522	95.6702	90.9399
56	0	-0.637192	96.0762	90.9399
57	0	-0.621911	96.463	90.9399
58	0	-0.606775	96.8312	90.9399
59	0	-0.594766	97.1849	90.9399
60	0	-0.579873	97.5212	90.9399
61	0	-0.565108	97.8405	90.9399
62	0	-0.550465	98.1435	90.9399
63	0	-0.538836	98.4339	90.9399
64	0	-0.524401	98.7088	90.9399
65	0	-0.510074	98.969	90.9399
66	0	-0.498687	99.2177	90.9399
67	0	-0.484544	99.4525	90.9399
68	0	-0.470498	99.6739	90.9399
69	0	-0.459327	99.8848	90.9399
70	0	-0.445443	100.083	90.9399
71	0	-0.431644	100.27	90.9399
72	0	-0.417928	100.444	90.9399
73	0	-0.40701	100.61	90.9399
74	0	-0.393433	100.765	90.9399
75	0	-0.379927	100.909	90.9399
76	0	-0.369171	101.045	90.9399
77	0	-0.355788	101.172	90.9399
78	0	-0.342466	101.289	90.9399
79	0	-0.331854	101.399	90.9399
80	0	-0.318639	101.501	90.9399
81	0	-0.305481	101.594	90.9399
82	0	-0.294992	101.681	90.9399
83	0	-0.281926	101.761	90.9399
84	0	-0.268908	101.833	90.9399
85	0	-0.255936	101.898	90.9399
86	0	-0.24559	101.959	90.9399
87	0	-0.232693	102.013	90.9399
88	0	-0.219834	102.061	90.9399
89	0	-0.209575	102.105	90.9399
90	0	-0.196779	102.144	90.9399
91	0	-0.184017	102.178	90.9399
92	0	-0.173829	102.208	90.9399
93	0	-0.161119	102.234	90.9399
94	0	-0.148434	102.256	90.9399
95	0	-0.135774	102.274	90.9399
96	0	-0.125661	102.29	90.9399
97	0	-0.113039	102.303	90.9399
98	0	-0.100433	102.313	90.9399
99	0	-0.0903606	102.321	90.9399
100	0	-0.0777834	102.327	90.9399
101	0	-0.0652187	102.332	90.9399
102	0	-0.0551734	102.335	90.9399
103	0	-0.0426257	102.336	90.9399
104	0	-0.0300838	102.337	90.9399
105	0	-0.0200544	102.338	90.9399
106	0	-0.00751925	102.338	90.9399
107	0	0.00751925	102.338	90.9399
108	0	0.0200544	102.338	90.9399
109	0	0.0300838	102.339	90.9399
110	0	0.0426257	102.341	90.9399
111	0	0.0551734	102.344	90.9399

112	0	0.0652187	102.348	90.9399
113	0	0.0777834	102.354	90.9399
114	0	0.0903606	102.362	90.9399
115	0	0.100433	102.373	90.9399
116	0	0.113039	102.385	90.9399
117	0	0.125661	102.401	90.9399
118	0	0.135774	102.42	90.9399
119	0	0.148434	102.442	90.9399
120	0	0.161119	102.468	90.9399
121	0	0.173829	102.498	90.9399
122	0	0.184017	102.532	90.9399
123	0	0.196779	102.57	90.9399
124	0	0.209575	102.614	90.9399
125	0	0.219834	102.663	90.9399
126	0	0.232693	102.717	90.9399
127	0	0.24559	102.777	90.9399
128	0	0.255936	102.843	90.9399
129	0	0.268908	102.915	90.9399
130	0	0.281926	102.994	90.9399
131	0	0.294992	103.081	90.9399
132	0	0.305481	103.175	90.9399
133	0	0.318639	103.276	90.9399
134	0	0.331854	103.386	90.9399
135	0	0.342466	103.504	90.9399
136	0	0.355788	103.63	90.9399
137	0	0.369171	103.767	90.9399
138	0	0.379927	103.911	90.9399
139	0	0.393433	104.066	90.9399
140	0	0.40701	104.231	90.9399
141	0	0.417928	104.406	90.9399
142	0	0.431644	104.592	90.9399
143	0	0.445443	104.791	90.9399
144	0	0.459327	105.002	90.9399
145	0	0.470498	105.223	90.9399
146	0	0.484544	105.458	90.9399
147	0	0.498687	105.707	90.9399
148	0	0.510074	105.967	90.9399
149	0	0.524401	106.242	90.9399
150	0	0.538836	106.532	90.9399
151	0	0.550465	106.835	90.9399
152	0	0.565108	107.154	90.9399
153	0	0.579873	107.491	90.9399
154	0	0.594766	107.844	90.9399
155	0	0.606775	108.213	90.9399
156	0	0.621911	108.599	90.9399
157	0	0.637192	109.005	90.9399
158	0	0.649522	109.427	90.9399
159	0	0.665079	109.87	90.9399
160	0	0.680797	110.333	90.9399
161	0	0.693493	110.814	90.9399
162	0	0.709522	111.317	90.9399
163	0	0.725736	111.844	90.9399
164	0	0.738846	112.39	90.9399
165	0	0.755415	112.961	90.9399
166	0	0.772193	113.557	90.9399
167	0	0.789191	114.18	90.9399
168	0	0.802956	114.824	90.9399
169	0	0.820379	115.498	90.9399
170	0	0.838054	116.2	90.9399
171	0	0.852385	116.926	90.9399
172	0	0.87055	117.684	90.9399
173	0	0.889006	118.475	90.9399

174	0		0.903992	119.292	90.9399
175	0		0.923014	120.144	90.9399
176	0		0.942375	121.032	90.9399
177	0		0.958125	121.95	90.9399
178	0		0.97815	122.907	90.9399
179	0		0.998575	123.904	90.9399
180	0		1.01943	124.943	90.9399
181	0		1.03643	126.017	90.9399
182	0		1.05812	127.137	90.9399
183	0		1.08032	128.304	90.9399
184	0		1.09847	129.511	90.9399
185	0		1.12168	130.769	90.9399
186	0		1.1455	132.081	90.9399
187	0		1.16505	133.438	90.9399
188	0		1.19012	134.855	90.9399
189	0		1.21596	136.333	90.9399
190	0		1.24264	137.877	90.9399
191	0		1.26464	139.477	90.9399
192	0.0392207		1.29303	141.149	90.9906
193	0.0392207		1.32251	142.898	91.0425
194	0.113329		1.34694	144.712	91.1951
195	0.277632		1.37866	146.613	91.5779
196	0.29267	1.41183	148.606	91.9911	
197	0.329304		1.43953	150.678	92.4651
198	0.41871	1.47579	152.856	93.083	
199	0.431782		1.5141	155.149	93.7368
200	0.431782		1.54643	157.54	94.4045
201	0.48858	1.58927	160.066	95.181	
202	0.604316		1.63524	162.74	96.1692
203	0.604316		1.68494	165.579	97.1874
204	0.636577		1.72793	168.564	98.2874
205	0.722706		1.78661	171.756	99.5786
206	2.99573	1.85218	175.187	105.127	
207	3.29584	1.91103	178.839	111.426	
208	3.95124	1.99539	182.821	119.31	
209	4.06044	2.09693	187.218	127.824	
210	4.21951	2.19728	192.046	137.096	
211	4.49981	2.36561	197.642	147.741	
212	5.07517	2.65209	204.676	161.2	

Data Set Standard Deviation = 1.05589
Numerator = 25985.6
Denominator = 48149
W Statistic = 0.539691 = 25985.6 / 48149

5% Critical value of 0.976 exceeds 0.539691
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.539691
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Selenium

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	94
	9/23/1999	ND<0	94
	3/15/2000	ND<0	94
	9/24/2003	ND<0	94
	3/11/2004	ND<0	94
	10/12/2004	ND<0	94
	4/1/2005	ND<0	94
	10/25/2005	ND<0	94
	4/29/2006	ND<0	94
	11/18/2006	ND<0	94
	5/23/2007	ND<0	94
	11/28/2007	ND<0	94
	6/5/2008	ND<0	94
	11/20/2008	ND<0	94
	6/11/2009	ND<-2.25379	94
	11/16/2009	ND<-2.25379	94
	6/30/2010	ND<-2.25379	94

Rank Sum = 1598
Rank Mean = 94

Background Rank Sum = 1598
Background Rank Mean = 94

Compliance Wells

Well ID	Date	Result	Rank
MW-8	7/20/1995	ND<0	94
	8/24/1995	ND<0	94
	9/28/1995	ND<0	94
	10/26/1995	ND<0	94
	11/19/1996	ND<0	94
	12/19/1996	ND<0	94
	3/24/1997	ND<0	94
	9/24/1997	ND<0	94
	4/7/1998	3.95124	208
	9/23/1998	ND<0	94
	3/16/1999	ND<0	94
	9/23/1999	ND<0	94
	3/15/2000	ND<0	94
	9/24/2003	ND<0	94
	3/11/2004	ND<0	94
	10/12/2004	ND<0	94
	4/1/2005	0.48858 J	201
	10/25/2005	0.41871 J	198
	4/29/2006	0.0392207 J	192
	11/18/2006	ND<0	94
	5/23/2007	ND<0	94

	11/28/2007	ND<0	94	
	6/5/2008	ND<0	94	
	11/20/2008	ND<0	94	
	6/11/2009	ND<-2.25379		94
	6/30/2010	ND<-2.25379		94

Rank Sum = 2867
Rank Mean = 110.269

MW-9	7/20/1995	ND<0	94	
	8/24/1995	ND<0	94	
	9/28/1995	ND<0	94	
	10/26/1995	ND<0	94	
	11/19/1996	ND<0	94	
	12/19/1996	ND<0	94	
	3/24/1997	3.29584		207
	9/24/1997	ND<0	94	
	4/7/1998	4.21951	210	
	9/23/1998	ND<0	94	
	3/16/1999	ND<0	94	
	9/23/1999	ND<0	94	
	3/15/2000	ND<0	94	
	9/24/2003	ND<0	94	
	3/11/2004	ND<0	94	
	10/12/2004	ND<0	94	
	4/1/2005	0.431782 J	199	
	10/25/2005	0.604316 J		202
	4/29/2006	0.277632 J		195
	11/18/2006	ND<0	94	
	5/23/2007	ND<0	94	
	11/28/2007	ND<0	94	
	6/5/2008	ND<0	94	
	11/20/2008	ND<0	94	
	6/11/2009	ND<-2.25379		94
	11/16/2009	ND<-2.25379		94
	6/30/2010	ND<-2.25379		94

Rank Sum = 3081
Rank Mean = 114.111

MW-12BR	3/16/1999	ND<0	94	
	9/23/1999	ND<0	94	
	3/15/2000	ND<0	94	
	9/24/2003	ND<0	94	
	3/11/2004	ND<0	94	
	10/12/2004	ND<0	94	
	4/1/2005	0.636577 J	204	
	10/25/2005	ND<0	94	
	4/29/2006	ND<0	94	
	11/18/2006	ND<0	94	
	5/23/2007	ND<0	94	
	11/28/2007	ND<0	94	
	6/5/2008	ND<0	94	
	11/20/2008	ND<0	94	
	6/11/2009	ND<-2.25379		94
	11/16/2009	ND<-2.25379		94
	6/30/2010	ND<-2.25379		94

Rank Sum = 1708
Rank Mean = 100.471

MW-12AR	3/16/1999	ND<0	94	
	9/23/1999	ND<0	94	
	3/15/2000	ND<0	94	
	9/24/2003	ND<0	94	

	3/11/2004	ND<0	94	
	10/12/2004	ND<0	94	
	4/1/2005	ND<0	94	
	10/25/2005	0.431782	J	200
	4/29/2006	0.604316	J	203
	11/18/2006	ND<0	94	
	5/23/2007	ND<0	94	
	11/28/2007	ND<0	94	
	6/5/2008	ND<0	94	
	11/20/2008	ND<0	94	
	6/11/2009	ND<-2.25379		94
	11/16/2009	ND<-2.25379		94
	6/30/2010	ND<-2.25379		94

Rank Sum = 1813
Rank Mean = 106.647

MW-10	7/20/1995	ND<0	94	
	8/24/1995	ND<0	94	
	9/28/1995	ND<0	94	
	10/26/1995	ND<0	94	
	11/19/1996	ND<0	94	
	12/19/1996	ND<0	94	
	3/24/1997	ND<0	94	
	9/24/1997	ND<0	94	
	4/7/1998	5.07517		212
	9/23/1998	ND<0	94	
	3/16/1999	ND<0	94	
	9/23/1999	ND<0	94	
	3/15/2000	ND<0	94	
	9/24/2003	ND<0	94	
	3/11/2004	ND<0	94	
	10/12/2004	ND<0	94	
	4/1/2005	ND<0	94	
	10/25/2005	ND<0	94	
	4/29/2006	ND<0	94	
	11/18/2006	0.0392207	J	193
	5/23/2007	ND<0	94	
	11/28/2007	ND<0	94	
	6/5/2008	0.722706		205
	11/20/2008	ND<0	94	
	6/11/2009	-1.38629	J	188
	11/16/2009	-1.38629	J	189
	6/30/2010	-1.27297	J H	191

Rank Sum = 3152
Rank Mean = 116.741

MW-7	7/20/1995	ND<0	94	
	8/24/1995	ND<0	94	
	9/28/1995	ND<0	94	
	10/26/1995	ND<0	94	
	11/19/1996	ND<0	94	
	12/19/1996	ND<0	94	
	3/24/1997	ND<0	94	
	9/24/1997	ND<0	94	
	4/7/1998	4.06044		209
	9/23/1998	ND<0	94	
	3/16/1999	4.49981		211
	9/23/1999	ND<0	94	
	3/15/2000	ND<0	94	
	9/24/2003	ND<0	94	
	3/11/2004	ND<0	94	
	10/12/2004	ND<0	94	

	4/1/2005	ND<0	94	
	10/25/2005	ND<0	94	
	4/29/2006	0.29267	J	196
	11/18/2006	ND<0	94	
	5/23/2007	ND<0	94	
	11/28/2007	ND<0	94	
	6/5/2008	ND<0	94	
	11/20/2008	ND<0	94	
	6/11/2009	-1.30933	J	190
	11/16/2009	ND<-2.25379		94
	6/30/2010	ND<-2.25379		94

Rank Sum = 2968
Rank Mean = 109.926

MW-6	7/20/1995	ND<0	94	
	8/24/1995	ND<0	94	
	9/28/1995	ND<0	94	
	10/26/1995	ND<0	94	
	11/19/1996	ND<0	94	
	12/19/1996	ND<0	94	
	3/24/1997	ND<0	94	
	9/24/1997	ND<0	94	
	4/7/1998	ND<0	94	
	9/23/1998	ND<0	94	
	3/16/1999	ND<0	94	
	9/23/1999	ND<0	94	
	3/15/2000	ND<0	94	
	9/24/2003	ND<0	94	
	3/11/2004	ND<0	94	
	10/12/2004	ND<0	94	
	4/1/2005	ND<0	94	
	10/25/2005	ND<0	94	
	4/29/2006	ND<0	94	
	11/18/2006	ND<0	94	
	5/23/2007	ND<0	94	
	11/28/2007	ND<0	94	
	6/5/2008	ND<0	94	
	11/20/2008	ND<0	94	
	6/11/2009	ND<-2.25379		94
	11/16/2009	ND<-2.25379		94
	6/30/2010	ND<-2.25379		94

Rank Sum = 2538
Rank Mean = 94

MW-11R	7/20/1995	ND<0	94	
	8/24/1995	ND<0	94	
	9/28/1995	ND<0	94	
	10/26/1995	ND<0	94	
	11/19/1996	ND<0	94	
	12/19/1996	ND<0	94	
	3/24/1997	ND<0	94	
	9/24/1997	ND<0	94	
	4/7/1998	2.99573		206
	9/23/1998	ND<0	94	
	3/16/1999	ND<0	94	
	9/23/1999	ND<0	94	
	3/15/2000	ND<0	94	
	9/24/2003	ND<0	94	
	3/11/2004	ND<0	94	
	10/12/2004	ND<0	94	
	4/1/2005	ND<0	94	
	10/25/2005	ND<0	94	

4/29/2006	0.329304	J	197
11/18/2006	0.113329	J	194
5/23/2007	ND<0	94	
11/28/2007	ND<0	94	
6/5/2008	ND<0	94	
11/20/2008	ND<0	94	
6/11/2009	ND<-2.25379	94	
11/16/2009	ND<-2.25379	94	
6/30/2010	ND<-2.25379	94	

Rank Sum = 2853
Rank Mean = 105.667

Calculation Results:

Kruskal-Wallis H Statistic = 3.34681
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 10.6689
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
3.34681 < 15.5073 indicating no significant group difference at 5% significance level
10.6689 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ppb)

Parameter: Tetrachloroethene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 148
Percent Non-Detects: 69.8113%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.15	ND<0.15
			11/16/2009	ND<0.15	ND<0.15
			6/30/2010	ND<0.15	ND<0.15

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-6	27	27 (100%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2

			6/11/2009	ND<0.15		ND<0.15
			11/16/2009	ND<0.15		ND<0.15
			6/30/2010	ND<0.15		ND<0.15
MW-7	27	23 (85.1852%)	7/20/1995		0.86 J	0.86 J
			8/24/1995	0.67 J	0.67 J	
			9/28/1995	0.8 J	0.8 J	
			10/26/1995	0.9 J	0.9 J	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.15		ND<0.15
			11/16/2009	ND<0.15		ND<0.15
			6/30/2010	ND<0.15		ND<0.15
MW-8	26	6 (23.0769%)	7/20/1995		3.2	3.2
			8/24/1995	99	99	
			9/28/1995	88	88	
			10/26/1995	8	8	
			11/19/1996	ND<2	ND<2	
			12/19/1996	59	59	
			3/24/1997	49	49	
			9/24/1997	34	34	
			4/7/1998	ND<2	ND<2	
			9/23/1998	31	31	
			3/16/1999	30.4	30.4	
			9/23/1999	32.2	32.2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	6	6	
			10/12/2004	ND<2	ND<2	
			4/1/2005	5.34	5.34	
			10/25/2005	2.18	2.18	
			4/29/2006	2.4	2.4	
			11/18/2006	2.69	2.69	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.54 J	0.54 J	
			6/5/2008	0.84 J	0.84 J	
			11/20/2008	0.65 J	0.65 J	
			6/11/2009	0.8 J	0.8 J	
			6/30/2010	0.24 J	0.24 J	
MW-10	27	17 (62.963%)	7/20/1995		0.71 J	0.71 J
			8/24/1995	1.6	1.6	
			9/28/1995	ND<2	ND<2	

		10/26/1995	2	2		
		11/19/1996	ND<2	ND<2		
		12/19/1996	ND<2	ND<2		
		3/24/1997	ND<2	ND<2		
		9/24/1997	ND<2	ND<2		
		4/7/1998	ND<2	ND<2		
		9/23/1998	ND<2	ND<2		
		3/16/1999	ND<2	ND<2		
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	0.75 J	0.75 J		
		10/25/2005	0.71 J	0.71 J		
		4/29/2006	0.96 J	0.96 J		
		11/18/2006	0.55 J	0.55 J		
		5/23/2007	ND<2	ND<2		
		11/28/2007	0.31 J	0.31 J		
		6/5/2008	0.36 J	0.36 J		
		11/20/2008	ND<2	ND<2		
		6/11/2009	ND<0.15		ND<0.15	
		11/16/2009	0.29 J	0.29 J		
		6/30/2010	ND<0.15		ND<0.15	
MW-11R	27	14 (51.8519%)	7/20/1995	2.1	2.1	
		8/24/1995	4.4	4.4		
		9/28/1995	2	2		
		10/26/1995	4	4		
		11/19/1996	ND<2	ND<2		
		12/19/1996	ND<2	ND<2		
		3/24/1997	ND<2	ND<2		
		9/24/1997	ND<2	ND<2		
		4/7/1998	ND<2	ND<2		
		9/23/1998	ND<2	ND<2		
		3/16/1999	2.7	2.7		
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	2.64	2.64		
		10/25/2005	0.46 J	0.46 J		
		4/29/2006	ND<2	ND<2		
		11/18/2006	0.49 J	0.49 J		
		5/23/2007	ND<2	ND<2		
		11/28/2007	0.38 J	0.38 J		
		6/5/2008	ND<2	ND<2		
		11/20/2008	0.4 J	0.4 J		
		6/11/2009	2.3	2.3		
		11/16/2009	0.3 J	0.3 J		
		6/30/2010	1.2	1.2		
MW-12AR	17	14 (82.3529%)	3/16/1999	ND<2	ND<2	
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	ND<2	ND<2		
		10/25/2005	0.32 J	0.32 J		
		4/29/2006	0.35 J	0.35 J		

			11/18/2006	ND<2	ND<2		
			5/23/2007	ND<2	ND<2		
			11/28/2007	ND<2	ND<2		
			6/5/2008	0.3 J	0.3 J		
			11/20/2008	ND<2	ND<2		
			6/11/2009	ND<0.15		ND<0.15	
			11/16/2009	ND<0.15		ND<0.15	
			6/30/2010	ND<0.15		ND<0.15	
MW-12BR		17	16 (94.1176%)	3/16/1999		ND<2	ND<2
			9/23/1999	ND<2	ND<2		
			3/15/2000	ND<2	ND<2		
			9/24/2003	ND<2	ND<2		
			3/11/2004	ND<2	ND<2		
			10/12/2004	ND<2	ND<2		
			4/1/2005	0.42 J	0.42 J		
			10/25/2005	ND<2	ND<2		
			4/29/2006	ND<2	ND<2		
			11/18/2006	ND<2	ND<2		
			5/23/2007	ND<2	ND<2		
			11/28/2007	ND<2	ND<2		
			6/5/2008	ND<2	ND<2		
			11/20/2008	ND<2	ND<2		
			6/11/2009	ND<0.15		ND<0.15	
			11/16/2009	ND<0.15		ND<0.15	
			6/30/2010	ND<0.15		ND<0.15	
MW-9	27	14 (51.8519%)	7/20/1995		0.43 J	0.43 J	
			8/24/1995	0.51 J	0.51 J		
			9/28/1995	0.8 J	0.8 J		
			10/26/1995	0.9 J	0.9 J		
			11/19/1996	ND<2	ND<2		
			12/19/1996	ND<2	ND<2		
			3/24/1997	ND<2	ND<2		
			9/24/1997	ND<2	ND<2		
			4/7/1998	ND<2	ND<2		
			9/23/1998	ND<2	ND<2		
			3/16/1999	ND<2	ND<2		
			9/23/1999	ND<2	ND<2		
			3/15/2000	ND<2	ND<2		
			9/24/2003	ND<2	ND<2		
			3/11/2004	ND<2	ND<2		
			10/12/2004	ND<2	ND<2		
			4/1/2005	0.32 J	0.32 J		
			10/25/2005	ND<2	ND<2		
			4/29/2006	0.29 J	0.29 J		
			11/18/2006	0.21 J	0.21 J		
			5/23/2007	ND<2	ND<2		
			11/28/2007	0.28 J	0.28 J		
			6/5/2008	0.41 J	0.41 J		
			11/20/2008	0.41 J	0.41 J		
			6/11/2009	0.39 J	0.39 J		
			11/16/2009	0.58 J	0.58 J		
			6/30/2010	0.68 J	0.68 J		

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Tetrachloroethene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.075	-2.65209	7.03356	-0.198906
2	0.075	-2.365	11.2629	7 -0.376328
3	0.075	-2.197	28.4578	-0.541124
4	0.075	-2.096	32.8549	-0.698394
5	0.075	-1.995	39.8365	-0.848048
6	0.075	-1.911	03.4885	-0.991376
7	0.075	-1.852	18.9191	-1.13029
8	0.075	-1.786	61.111	-1.26428
9	0.075	-1.727	93.0968	-1.39388
10	0.075	-1.684	94.9358	-1.52025
11	0.075	-1.635	24.6098	-1.64289
12	0.075	-1.589	27.1356	-1.76209
13	0.075	-1.546	43.527	-1.87807
14	0.075	-1.514	1.8195	-1.99163
15	0.075	-1.475	79.9975	-2.10231
16	0.075	-1.439	53.0698	-2.21028
17	0.075	-1.411	83.063	-2.31616
18	0.21	-1.378	65.9637	-2.60568
19	0.24	-1.346	94.778	-2.92895
20	0.28	-1.322	51.527	-3.29925
21	0.29	-1.293	03.1989	-3.67423
22	0.29	-1.264	64.7982	-4.04097
23	0.3	-1.242	64.3424	-4.41377
24	0.3	-1.215	96.821	-4.77856
25	0.31	-1.190	12.2373	-5.14749
26	0.32	-1.165	05.5947	-5.52031
27	0.32	-1.145	5 73.9069	-5.88687
28	0.35	-1.121	68.75.165	-6.27946
29	0.36	-1.098	47.3716	-6.67491
30	0.38	-1.080	32.5387	-7.08543
31	0.39	-1.058	12.6584	-7.49809
32	0.4	-1.036	43.7326	-7.91267
33	0.41	-1.019	43.7718	-8.33063
34	0.41	-0.998575	81.7689	-8.74005
35	0.42	-0.978	15.7257	-9.15087
36	0.43	-0.958125	83.6437	-9.56287
37	0.46	-0.942375	84.5318	-9.99636
38	0.49	-0.923014	85.3837	-10.4486
39	0.51	-0.903992	86.201	-10.9097
40	0.54	-0.889006	86.9913	-11.3897
41	0.55	-0.870	5587.7491	-11.8685
42	0.58	-0.852385	88.4757	-12.3629
43	0.65	-0.838054	89.178	-12.9077
44	0.67	-0.820379	89.8511	-13.4573
45	0.68	-0.802956	90.4958	-14.0033
46	0.71	-0.789191	91.1186	-14.5636
47	0.71	-0.772193	91.7149	-15.1119
48	0.75	-0.755415	92.2856	-15.6785
49	0.8	-0.738846	92.8314	-16.2695

50	0.8	-0.725736	93.3581	-16.8501
51	0.8	-0.709522	93.8616	-17.4177
52	0.84	-0.693493	94.3425	-18.0003
53	0.86	-0.680797	94.806	-18.5858
54	0.9	-0.665079	95.2483	-19.1843
55	0.9	-0.649522	95.6702	-19.7689
56	0.96	-0.637192	96.0762	-20.3806
57	1	-0.621911	96.463	-21.0025
58	1	-0.606775	96.8312	-21.6093
59	1	-0.594766	97.1849	-22.2041
60	1	-0.579873	97.5212	-22.7839
61	1	-0.565108	97.8405	-23.349
62	1	-0.550465	98.1435	-23.8995
63	1	-0.538836	98.4339	-24.4383
64	1	-0.524401	98.7088	-24.9627
65	1	-0.510074	98.969	-25.4728
66	1	-0.498687	99.2177	-25.9715
67	1	-0.484544	99.4525	-26.4561
68	1	-0.470498	99.6739	-26.9266
69	1	-0.459327	99.8848	-27.3859
70	1	-0.445443	100.083	-27.8313
71	1	-0.431644	100.27	-28.263
72	1	-0.417928	100.444	-28.6809
73	1	-0.40701	100.61	-29.0879
74	1	-0.393433	100.765	-29.4813
75	1	-0.379927	100.909	-29.8613
76	1	-0.369171	101.045	-30.2304
77	1	-0.355788	101.172	-30.5862
78	1	-0.342466	101.289	-30.9287
79	1	-0.331854	101.399	-31.2605
80	1	-0.318639	101.501	-31.5792
81	1	-0.305481	101.594	-31.8847
82	1	-0.294992	101.681	-32.1797
83	1	-0.281926	101.761	-32.4616
84	1	-0.268908	101.833	-32.7305
85	1	-0.255936	101.898	-32.9864
86	1	-0.24559	101.959	-33.232
87	1	-0.232693	102.013	-33.4647
88	1	-0.219834	102.061	-33.6845
89	1	-0.209575	102.105	-33.8941
90	1	-0.196779	102.144	-34.0909
91	1	-0.184017	102.178	-34.2749
92	1	-0.173829	102.208	-34.4487
93	1	-0.161119	102.234	-34.6099
94	1	-0.148434	102.256	-34.7583
95	1	-0.135774	102.274	-34.8941
96	1	-0.125661	102.29	-35.0197
97	1	-0.113039	102.303	-35.1328
98	1	-0.100433	102.313	-35.2332
99	1	-0.0903606	102.321	-35.3236
100	1	-0.0777834	102.327	-35.4013
101	1	-0.0652187	102.332	-35.4666
102	1	-0.0551734	102.335	-35.5217
103	1	-0.0426257	102.336	-35.5644
104	1	-0.0300838	102.337	-35.5944
105	1	-0.0200544	102.338	-35.6145
106	1	-0.00751925	102.338	-35.622
107	1	0.00751925	102.338	-35.6145
108	1	0.0200544	102.338	-35.5944
109	1	0.0300838	102.339	-35.5644
110	1	0.0426257	102.341	-35.5217
111	1	0.0551734	102.344	-35.4666

112	1	0.0652187	102.348	-35.4013
113	1	0.0777834	102.354	-35.3236
114	1	0.0903606	102.362	-35.2332
115	1	0.100433	102.373	-35.1328
116	1	0.113039	102.385	-35.0197
117	1	0.125661	102.401	-34.8941
118	1	0.135774	102.42	-34.7583
119	1	0.148434	102.442	-34.6099
120	1	0.161119	102.468	-34.4487
121	1	0.173829	102.498	-34.2749
122	1	0.184017	102.532	-34.0909
123	1	0.196779	102.57	-33.8941
124	1	0.209575	102.614	-33.6845
125	1	0.219834	102.663	-33.4647
126	1	0.232693	102.717	-33.232
127	1	0.24559	102.777	-32.9864
128	1	0.255936	102.843	-32.7305
129	1	0.268908	102.915	-32.4616
130	1	0.281926	102.994	-32.1797
131	1	0.294992	103.081	-31.8847
132	1	0.305481	103.175	-31.5792
133	1	0.318639	103.276	-31.2605
134	1	0.331854	103.386	-30.9287
135	1	0.342466	103.504	-30.5862
136	1	0.355788	103.63	-30.2304
137	1	0.369171	103.767	-29.8613
138	1	0.379927	103.911	-29.4813
139	1	0.393433	104.066	-29.0879
140	1	0.40701	104.231	-28.6809
141	1	0.417928	104.406	-28.263
142	1	0.431644	104.592	-27.8313
143	1	0.445443	104.791	-27.3859
144	1	0.459327	105.002	-26.9266
145	1	0.470498	105.223	-26.4561
146	1	0.484544	105.458	-25.9715
147	1	0.498687	105.707	-25.4728
148	1	0.510074	105.967	-24.9627
149	1	0.524401	106.242	-24.4383
150	1	0.538836	106.532	-23.8995
151	1	0.550465	106.835	-23.349
152	1	0.565108	107.154	-22.7839
153	1	0.579873	107.491	-22.2041
154	1	0.594766	107.844	-21.6093
155	1	0.606775	108.213	-21.0025
156	1	0.621911	108.599	-20.3806
157	1	0.637192	109.005	-19.7434
158	1	0.649522	109.427	-19.0939
159	1	0.665079	109.87	-18.4288
160	1	0.680797	110.333	-17.748
161	1	0.693493	110.814	-17.0545
162	1	0.709522	111.317	-16.345
163	1	0.725736	111.844	-15.6193
164	1	0.738846	112.39	-14.8804
165	1	0.755415	112.961	-14.125
166	1	0.772193	113.557	-13.3528
167	1	0.789191	114.18	-12.5636
168	1	0.802956	114.824	-11.7607
169	1	0.820379	115.498	-10.9403
170	1	0.838054	116.2	-10.1022
171	1	0.852385	116.926	-9.24985
172	1	0.87055	117.684	-8.3793
173	1	0.889006	118.475	-7.4903

174	1	0.903992	119.292	-6.5863
175	1	0.923014	120.144	-5.66329
176	1	0.942375	121.032	-4.72091
177	1	0.958125	121.95	-3.76279
178	1	0.97815	122.907	-2.78464
179	1	0.998575	123.904	-1.78606
180	1	1.01943	124.943	-0.766635
181	1	1.03643	126.017	0.269798
182	1	1.05812	127.137	1.32792
183	1	1.08032	128.304	2.40824
184	1	1.09847	129.511	3.50671
185	1	1.12168	130.769	4.62839
186	1	1.1455	132.081	5.77389
187	1	1.16505	133.438	6.93894
188	1.2	1.19012	134.855	8.36708
189	1.6	1.21596	136.333	10.3126
190	2	1.24264	137.877	12.7979
191	2	1.26464	139.477	15.3272
192	2.1	1.29303	141.149	18.0426
193	2.18	1.32251	142.898	20.9256
194	2.3	1.34694	144.712	24.0236
195	2.4	1.37866	146.613	27.3324
196	2.64	1.41183	148.606	31.0596
197	2.69	1.43953	150.678	34.9319
198	2.7	1.47579	152.856	38.9166
199	3.2	1.5141	155.149	43.7617
200	4	1.54643	157.54	49.9474
201	4.4	1.58927	160.066	56.9402
202	5.34	1.63524	162.74	65.6724
203	6	1.68494	165.579	75.782
204	8	1.72793	168.564	89.6054
205	30.4	1.78661	171.756	143.918
206	31	1.85218	175.187	201.336
207	32.2	1.91103	178.839	262.871
208	34	1.99539	182.821	330.715
209	49	2.09693	187.218	433.464
210	59	2.19728	192.046	563.104
211	88	2.36561	197.642	771.278
212	99	2.65209	204.676	1033.83

Data Set Standard Deviation = 11.1013
Numerator = 1.06881e+006
Denominator = 5.32224e+006
W Statistic = 0.20082 = 1.06881e+006 / 5.32224e+006

5% Critical value of 0.976 exceeds 0.20082
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.20082
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Tetrachloroethene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)	
1	-2.59027	-2.65209	7.03356	6.86961	
2	-2.59027	-2.36561	12.6297	12.9972	
3	-2.59027	-2.19728	17.4578	18.6887	
4	-2.59027	-2.09693	21.8549	24.1204	
5	-2.59027	-1.99539	25.8365	29.289	
6	-2.59027	-1.91103	29.4885	34.239	
7	-2.59027	-1.85218	32.9191	39.0367	
8	-2.59027	-1.78661	36.111	43.6645	
9	-2.59027	-1.72793	39.0968	48.1403	
10	-2.59027	-1.68494	41.9358	52.5047	
11	-2.59027	-1.63524	44.6098	56.7404	
12	-2.59027	-1.58927	47.1356	60.857	
13	-2.59027	-1.54643	49.527	64.8627	
14	-2.59027	-1.5141	51.8195	68.7846	
15	-2.59027	-1.47579	53.9975	72.6073	
16	-2.59027	-1.43953	56.0698	76.3361	
17	-2.59027	-1.41183	58.063	79.9931	
18	-1.56065	-1.37866	59.9637	82.1447	
19	-1.42712	-1.34694	61.778	84.067	
20	-1.27297	-1.32251	63.527	85.7505	
21	-1.23787	-1.29303	65.1989	87.3511	
22	-1.23787	-1.26464	66.7982	88.9166	
23	-1.20397	-1.24264	68.3424	90.4127	
24	-1.20397	-1.21596	69.821	91.8766	
25	-1.17118	-1.19012	71.2373	93.2705	
26	-1.13943	-1.16505	72.5947	94.598	
27	-1.13943	-1.1455	73.9069	95.9032	
28	-1.04982	-1.12168	75.165	97.0808	
29	-1.02165	-1.09847	76.3716	98.203	
30	-0.967584	-1.08032	77.5387	99.2483	
31	-0.941609	-1.05812	78.6584	100.245	
32	-0.916291	-1.03643	79.7326	101.194	
33	-0.891598	-1.01943	80.7718	102.103	
34	-0.891598	-0.998575	81.7689	102.994	
35	-0.867501	-0.97815	82.7257	103.842	
36	-0.84397	-0.958125	83.6437	104.651	
37	-0.776529	-0.942375	84.5318	105.383	
38	-0.71335	-0.923014	85.3837	106.041	
39	-0.673345	-0.903992	86.201	106.65	
40	-0.616186	-0.889006	86.9913	107.197	
41	-0.597837	-0.87055	87.7491	107.718	
42	-0.544727	-0.852385	88.4757	108.182	
43	-0.430783	-0.838054	89.178	108.543	
44	-0.400478	-0.820379	89.8511	108.872	
45	-0.385662	-0.802956	90.4958	109.181	
46	-0.34249	-0.789191	91.1186	109.452	
47	-0.34249	-0.772193	91.7149	109.716	
48	-0.287682	-0.755415	92.2856	109.934	
49	-0.223144	-0.738846	92.8314	110.098	

50	-0.223144	-0.725736	93.3581	110.26
51	-0.223144	-0.709522	93.8616	110.419
52	-0.174353	-0.693493	94.3425	110.54
53	-0.150823	-0.680797	94.806	110.642
54	-0.105361	-0.665079	95.2483	110.712
55	-0.105361	-0.649522	95.6702	110.781
56	-0.040822	-0.637192	96.0762	110.807
57	0	-0.621911	96.463	110.807
58	0	-0.606775	96.8312	110.807
59	0	-0.594766	97.1849	110.807
60	0	-0.579873	97.5212	110.807
61	0	-0.565108	97.8405	110.807
62	0	-0.550465	98.1435	110.807
63	0	-0.538836	98.4339	110.807
64	0	-0.524401	98.7088	110.807
65	0	-0.510074	98.969	110.807
66	0	-0.498687	99.2177	110.807
67	0	-0.484544	99.4525	110.807
68	0	-0.470498	99.6739	110.807
69	0	-0.459327	99.8848	110.807
70	0	-0.445443	100.083	110.807
71	0	-0.431644	100.27	110.807
72	0	-0.417928	100.444	110.807
73	0	-0.40701	100.61	110.807
74	0	-0.393433	100.765	110.807
75	0	-0.379927	100.909	110.807
76	0	-0.369171	101.045	110.807
77	0	-0.355788	101.172	110.807
78	0	-0.342466	101.289	110.807
79	0	-0.331854	101.399	110.807
80	0	-0.318639	101.501	110.807
81	0	-0.305481	101.594	110.807
82	0	-0.294992	101.681	110.807
83	0	-0.281926	101.761	110.807
84	0	-0.268908	101.833	110.807
85	0	-0.255936	101.898	110.807
86	0	-0.24559	101.959	110.807
87	0	-0.232693	102.013	110.807
88	0	-0.219834	102.061	110.807
89	0	-0.209575	102.105	110.807
90	0	-0.196779	102.144	110.807
91	0	-0.184017	102.178	110.807
92	0	-0.173829	102.208	110.807
93	0	-0.161119	102.234	110.807
94	0	-0.148434	102.256	110.807
95	0	-0.135774	102.274	110.807
96	0	-0.125661	102.29	110.807
97	0	-0.113039	102.303	110.807
98	0	-0.100433	102.313	110.807
99	0	-0.0903606	102.321	110.807
100	0	-0.0777834	102.327	110.807
101	0	-0.0652187	102.332	110.807
102	0	-0.0551734	102.335	110.807
103	0	-0.0426257	102.336	110.807
104	0	-0.0300838	102.337	110.807
105	0	-0.0200544	102.338	110.807
106	0	-0.00751925	102.338	110.807
107	0	0.00751925	102.338	110.807
108	0	0.0200544	102.338	110.807
109	0	0.0300838	102.339	110.807
110	0	0.0426257	102.341	110.807
111	0	0.0551734	102.344	110.807

112	0	0.0652187	102.348	110.807
113	0	0.0777834	102.354	110.807
114	0	0.0903606	102.362	110.807
115	0	0.100433	102.373	110.807
116	0	0.113039	102.385	110.807
117	0	0.125661	102.401	110.807
118	0	0.135774	102.42	110.807
119	0	0.148434	102.442	110.807
120	0	0.161119	102.468	110.807
121	0	0.173829	102.498	110.807
122	0	0.184017	102.532	110.807
123	0	0.196779	102.57	110.807
124	0	0.209575	102.614	110.807
125	0	0.219834	102.663	110.807
126	0	0.232693	102.717	110.807
127	0	0.24559	102.777	110.807
128	0	0.255936	102.843	110.807
129	0	0.268908	102.915	110.807
130	0	0.281926	102.994	110.807
131	0	0.294992	103.081	110.807
132	0	0.305481	103.175	110.807
133	0	0.318639	103.276	110.807
134	0	0.331854	103.386	110.807
135	0	0.342466	103.504	110.807
136	0	0.355788	103.63	110.807
137	0	0.369171	103.767	110.807
138	0	0.379927	103.911	110.807
139	0	0.393433	104.066	110.807
140	0	0.40701	104.231	110.807
141	0	0.417928	104.406	110.807
142	0	0.431644	104.592	110.807
143	0	0.445443	104.791	110.807
144	0	0.459327	105.002	110.807
145	0	0.470498	105.223	110.807
146	0	0.484544	105.458	110.807
147	0	0.498687	105.707	110.807
148	0	0.510074	105.967	110.807
149	0	0.524401	106.242	110.807
150	0	0.538836	106.532	110.807
151	0	0.550465	106.835	110.807
152	0	0.565108	107.154	110.807
153	0	0.579873	107.491	110.807
154	0	0.594766	107.844	110.807
155	0	0.606775	108.213	110.807
156	0	0.621911	108.599	110.807
157	0	0.637192	109.005	110.807
158	0	0.649522	109.427	110.807
159	0	0.665079	109.87	110.807
160	0	0.680797	110.333	110.807
161	0	0.693493	110.814	110.807
162	0	0.709522	111.317	110.807
163	0	0.725736	111.844	110.807
164	0	0.738846	112.39	110.807
165	0	0.755415	112.961	110.807
166	0	0.772193	113.557	110.807
167	0	0.789191	114.18	110.807
168	0	0.802956	114.824	110.807
169	0	0.820379	115.498	110.807
170	0	0.838054	116.2	110.807
171	0	0.852385	116.926	110.807
172	0	0.87055	117.684	110.807
173	0	0.889006	118.475	110.807

174	0	0.903992		119.292	110.807
175	0	0.923014		120.144	110.807
176	0	0.942375		121.032	110.807
177	0	0.958125		121.95	110.807
178	0	0.97815	122.907	110.807	
179	0	0.998575		123.904	110.807
180	0	1.01943	124.943	110.807	
181	0	1.03643	126.017	110.807	
182	0	1.05812	127.137	110.807	
183	0	1.08032	128.304	110.807	
184	0	1.09847	129.511	110.807	
185	0	1.12168	130.769	110.807	
186	0	1.1455	132.081	110.807	
187	0	1.16505	133.438	110.807	
188	0.182322		1.19012	134.855	111.024
189	0.470004		1.21596	136.333	111.595
190	0.693147		1.24264	137.877	112.457
191	0.693147		1.26464	139.477	113.333
192	0.741937		1.29303	141.149	114.293
193	0.779325		1.32251	142.898	115.323
194	0.832909		1.34694	144.712	116.445
195	0.875469		1.37866	146.613	117.652
196	0.970779		1.41183	148.606	119.023
197	0.989541		1.43953	150.678	120.447
198	0.993252		1.47579	152.856	121.913
199	1.16315	1.5141	155.149	123.674	
200	1.38629	1.54643	157.54	125.818	
201	1.4816	1.58927	160.066	128.173	
202	1.67523	1.63524	162.74	130.912	
203	1.79176	1.68494	165.579	133.931	
204	2.07944	1.72793	168.564	137.524	
205	3.41444	1.78661	171.756	143.624	
206	3.43399	1.85218	175.187	149.985	
207	3.47197	1.91103	178.839	156.62	
208	3.52636	1.99539	182.821	163.656	
209	3.89182	2.09693	187.218	171.817	
210	4.07754	2.19728	192.046	180.777	
211	4.47734	2.36561	197.642	191.368	
212	4.59512	2.65209	204.676	203.555	

Data Set Standard Deviation = 1.15682
Numerator = 41434.6
Denominator = 57793.4
W Statistic = 0.716944 = 41434.6 / 57793.4

5% Critical value of 0.976 exceeds 0.716944
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.716944
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Tetrachloroethene

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	74.5
	9/23/1999	ND<0	74.5
	3/15/2000	ND<0	74.5
	9/24/2003	ND<0	74.5
	3/11/2004	ND<0	74.5
	10/12/2004	ND<0	74.5
	4/1/2005	ND<0	74.5
	10/25/2005	ND<0	74.5
	4/29/2006	ND<0	74.5
	11/18/2006	ND<0	74.5
	5/23/2007	ND<0	74.5
	11/28/2007	ND<0	74.5
	6/5/2008	ND<0	74.5
	11/20/2008	ND<0	74.5
	6/11/2009	ND<-2.59027	74.5
	11/16/2009	ND<-2.59027	74.5
	6/30/2010	ND<-2.59027	74.5

Rank Sum = 1266.5
Rank Mean = 74.5

Background Rank Sum = 1266.5
Background Rank Mean = 74.5

Compliance Wells

Well ID	Date	Result	Rank
MW-6	7/20/1995	ND<0	74.5
	8/24/1995	ND<0	74.5
	9/28/1995	ND<0	74.5
	10/26/1995	ND<0	74.5
	11/19/1996	ND<0	74.5
	12/19/1996	ND<0	74.5
	3/24/1997	ND<0	74.5
	9/24/1997	ND<0	74.5
	4/7/1998	ND<0	74.5
	9/23/1998	ND<0	74.5
	3/16/1999	ND<0	74.5
	9/23/1999	ND<0	74.5
	3/15/2000	ND<0	74.5
	9/24/2003	ND<0	74.5
	3/11/2004	ND<0	74.5
	10/12/2004	ND<0	74.5
	4/1/2005	ND<0	74.5
	10/25/2005	ND<0	74.5
	4/29/2006	ND<0	74.5
	11/18/2006	ND<0	74.5
	5/23/2007	ND<0	74.5

	11/28/2007	ND<0	74.5	
	6/5/2008	ND<0	74.5	
	11/20/2008	ND<0	74.5	
	6/11/2009	ND<-2.59027		74.5
	11/16/2009	ND<-2.59027		74.5
	6/30/2010	ND<-2.59027		74.5

Rank Sum = 2011.5
Rank Mean = 74.5

MW-7	7/20/1995	-0.150823 J		184
	8/24/1995	-0.400478 J		175
	9/28/1995	-0.223144 J		180
	10/26/1995	-0.105361 J		185
	11/19/1996	ND<0	74.5	
	12/19/1996	ND<0	74.5	
	3/24/1997	ND<0	74.5	
	9/24/1997	ND<0	74.5	
	4/7/1998	ND<0	74.5	
	9/23/1998	ND<0	74.5	
	3/16/1999	ND<0	74.5	
	9/23/1999	ND<0	74.5	
	3/15/2000	ND<0	74.5	
	9/24/2003	ND<0	74.5	
	3/11/2004	ND<0	74.5	
	10/12/2004	ND<0	74.5	
	4/1/2005	ND<0	74.5	
	10/25/2005	ND<0	74.5	
	4/29/2006	ND<0	74.5	
	11/18/2006	ND<0	74.5	
	5/23/2007	ND<0	74.5	
	11/28/2007	ND<0	74.5	
	6/5/2008	ND<0	74.5	
	11/20/2008	ND<0	74.5	
	6/11/2009	ND<-2.59027		74.5
	11/16/2009	ND<-2.59027		74.5
	6/30/2010	ND<-2.59027		74.5

Rank Sum = 2437.5
Rank Mean = 90.2778

MW-8	7/20/1995	1.16315		199
	8/24/1995	4.59512		212
	9/28/1995	4.47734		211
	10/26/1995	2.07944		204
	11/19/1996	ND<0	74.5	
	12/19/1996	4.07754		210
	3/24/1997	3.89182		209
	9/24/1997	3.52636		208
	4/7/1998	ND<0	74.5	
	9/23/1998	3.43399		206
	3/16/1999	3.41444		205
	9/23/1999	3.47197		207
	3/15/2000	ND<0	74.5	
	9/24/2003	ND<0	74.5	
	3/11/2004	1.79176		203
	10/12/2004	ND<0	74.5	
	4/1/2005	1.67523	202	
	10/25/2005	0.779325		193
	4/29/2006	0.875469		195
	11/18/2006	0.989541		197
	5/23/2007	ND<0	74.5	
	11/28/2007	-0.616186 J		171
	6/5/2008	-0.174353 J	183	

	11/20/2008	-0.430783	J	174
	6/11/2009	-0.223144	J	181
	6/30/2010	-1.42712	J	150

Rank Sum = 4367
Rank Mean = 167.962

MW-10	7/20/1995	-0.34249	J	177
	8/24/1995	0.470004		189
	9/28/1995	ND<0	74.5	
	10/26/1995	0.693147		190
	11/19/1996	ND<0	74.5	
	12/19/1996	ND<0	74.5	
	3/24/1997	ND<0	74.5	
	9/24/1997	ND<0	74.5	
	4/7/1998	ND<0	74.5	
	9/23/1998	ND<0	74.5	
	3/16/1999	ND<0	74.5	
	9/23/1999	ND<0	74.5	
	3/15/2000	ND<0	74.5	
	9/24/2003	ND<0	74.5	
	3/11/2004	ND<0	74.5	
	10/12/2004	ND<0	74.5	
	4/1/2005	-0.287682	J	179
	10/25/2005	-0.34249	J	178
	4/29/2006	-0.040822	J	187
	11/18/2006	-0.597837	J	172
	5/23/2007	ND<0	74.5	
	11/28/2007	-1.17118	J	156
	6/5/2008	-1.02165	J	160
	11/20/2008	ND<0	74.5	
	6/11/2009	ND<-2.59027		74.5
	11/16/2009	-1.23787	J	152
	6/30/2010	ND<-2.59027		74.5

Rank Sum = 3006.5
Rank Mean = 111.352

MW-11R	7/20/1995	0.741937		192
	8/24/1995	1.4816	201	
	9/28/1995	0.693147		191
	10/26/1995	1.38629		200
	11/19/1996	ND<0	74.5	
	12/19/1996	ND<0	74.5	
	3/24/1997	ND<0	74.5	
	9/24/1997	ND<0	74.5	
	4/7/1998	ND<0	74.5	
	9/23/1998	ND<0	74.5	
	3/16/1999	0.993252		198
	9/23/1999	ND<0	74.5	
	3/15/2000	ND<0	74.5	
	9/24/2003	ND<0	74.5	
	3/11/2004	ND<0	74.5	
	10/12/2004	ND<0	74.5	
	4/1/2005	0.970779		196
	10/25/2005	-0.776529	J	168
	4/29/2006	ND<0	74.5	
	11/18/2006	-0.71335	J	169
	5/23/2007	ND<0	74.5	
	11/28/2007	-0.967584	J	161
	6/5/2008	ND<0	74.5	
	11/20/2008	-0.916291	J	163
	6/11/2009	0.832909		194
	11/16/2009	-1.20397	J	154

	6/30/2010	0.182322	188

Rank Sum = 3418
Rank Mean = 126.593

MW-12AR	3/16/1999	ND<0	74.5
	9/23/1999	ND<0	74.5
	3/15/2000	ND<0	74.5
	9/24/2003	ND<0	74.5
	3/11/2004	ND<0	74.5
	10/12/2004	ND<0	74.5
	4/1/2005	ND<0	74.5
	10/25/2005	-1.13943 J	157
	4/29/2006	-1.04982 J	159
	11/18/2006	ND<0	74.5
	5/23/2007	ND<0	74.5
	11/28/2007	ND<0	74.5
	6/5/2008	-1.20397 J	155
	11/20/2008	ND<0	74.5
	6/11/2009	ND<-2.59027	74.5
	11/16/2009	ND<-2.59027	74.5
	6/30/2010	ND<-2.59027	74.5

Rank Sum = 1514
Rank Mean = 89.0588

MW-12BR	3/16/1999	ND<0	74.5
	9/23/1999	ND<0	74.5
	3/15/2000	ND<0	74.5
	9/24/2003	ND<0	74.5
	3/11/2004	ND<0	74.5
	10/12/2004	ND<0	74.5
	4/1/2005	-0.867501 J	166
	10/25/2005	ND<0	74.5
	4/29/2006	ND<0	74.5
	11/18/2006	ND<0	74.5
	5/23/2007	ND<0	74.5
	11/28/2007	ND<0	74.5
	6/5/2008	ND<0	74.5
	11/20/2008	ND<0	74.5
	6/11/2009	ND<-2.59027	74.5
	11/16/2009	ND<-2.59027	74.5
	6/30/2010	ND<-2.59027	74.5

Rank Sum = 1358
Rank Mean = 79.8824

MW-9	7/20/1995	-0.84397 J	167
	8/24/1995	-0.673345 J	170
	9/28/1995	-0.223144 J	182
	10/26/1995	-0.105361 J	186
	11/19/1996	ND<0	74.5
	12/19/1996	ND<0	74.5
	3/24/1997	ND<0	74.5
	9/24/1997	ND<0	74.5
	4/7/1998	ND<0	74.5
	9/23/1998	ND<0	74.5
	3/16/1999	ND<0	74.5
	9/23/1999	ND<0	74.5
	3/15/2000	ND<0	74.5
	9/24/2003	ND<0	74.5
	3/11/2004	ND<0	74.5
	10/12/2004	ND<0	74.5
	4/1/2005	-1.13943 J	158
	10/25/2005	ND<0	74.5

4/29/2006	-1.23787	J	153
11/18/2006	-1.56065	J	149
5/23/2007	ND<0	74.5	
11/28/2007	-1.27297	J	151
6/5/2008	-0.891598	J	164
11/20/2008	-0.891598	J	165
6/11/2009	-0.941609	J	162
11/16/2009	-0.544727	J	173
6/30/2010	-0.385662	J	176

Rank Sum = 3199
Rank Mean = 118.481

Calculation Results:

Kruskal-Wallis H Statistic = 48.6326
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 73.711
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
48.6326 > 15.5073 indicating a significant group difference at 5% significance level
73.711 > 15.5073 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 74.5

Well	Mean Rank	Dif from Bkg	Critical Value
MW-6	74.5	0	44.1836
MW-7	90.2778	15.7778	44.1836
MW-8	167.962	93.4615	44.5106
MW-10	111.352	36.8519	44.1836
MW-11R	126.593	52.0926	44.1836
MW-12AR	89.0588	14.5588	48.9476
MW-12BR	79.8824	5.38235	48.9476
MW-9	118.481	43.9815	44.1836

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 74.5

Well	Mean Rank	Dif from Bkg	Critical Value
MW-6	74.5	0	47.7122
MW-7	90.2778	15.7778	47.7122
MW-8	167.962	93.4615	48.0654
MW-10	111.352	36.8519	47.7122
MW-11R	126.593	52.0926	47.7122
MW-12AR	89.0588	14.5588	52.8567
MW-12BR	79.8824	5.38235	52.8567
MW-9	118.481	43.9815	47.7122

Mann-Kendall Trend Analysis

Parameter: Tetrachloroethene

Location: MW-8

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
4.59512	1.16315	3.43197	1	0
4.47734	1.16315	3.31419	2	0
2.07944	1.16315	0.916291	3	0
ND<0	1.16315	-1.163153	1	
4.07754	1.16315	2.91439	4	1
3.89182	1.16315	2.72867	5	1
3.52636	1.16315	2.36321	6	1
ND<0	1.16315	-1.163156	2	
3.43399	1.16315	2.27084	7	2
3.41444	1.16315	2.25129	8	2
3.47197	1.16315	2.30882	9	2
ND<0	1.16315	-1.163159	3	
ND<0	1.16315	-1.163159	4	
1.79176	1.16315	0.628609	10	4
ND<0	1.16315	-1.1631510	5	
1.67523	1.16315	0.512075	11	5
0.779325	1.16315	-0.383826	11	6
0.875469	1.16315	-0.287682	11	7
0.989541	1.16315	-0.173611	11	8
ND<0	1.16315	-1.163151	11	9
-0.616186 J	1.16315	-1.779341	11	10
-0.174353 J	1.16315	-1.3375	11	11
-0.430783 J	1.16315	-1.593931	11	12
-0.223144 J	1.16315	-1.386291	11	13
-1.42712 J	1.16315	-2.590271	11	14
4.47734	4.59512	-0.117783	11	15
2.07944	4.59512	-2.515681	11	16
ND<0	4.59512	-4.595121	11	17
4.07754	4.59512	-0.517582	11	18
3.89182	4.59512	-0.7033	11	19
3.52636	4.59512	-1.068761	11	20
ND<0	4.59512	-4.595121	11	21
3.43399	4.59512	-1.161131	11	22
3.41444	4.59512	-1.180681	11	23
3.47197	4.59512	-1.123151	11	24
ND<0	4.59512	-4.595121	11	25
ND<0	4.59512	-4.595121	11	26
1.79176	4.59512	-2.803361	11	27
ND<0	4.59512	-4.595121	11	28
1.67523	4.59512	-2.919891	11	29
0.779325	4.59512	-3.815791	11	30
0.875469	4.59512	-3.719651	11	31
0.989541	4.59512	-3.605581	11	32
ND<0	4.59512	-4.595121	11	33
-0.616186 J	4.59512	-5.211311	11	34
-0.174353 J	4.59512	-4.769471	11	35
-0.430783 J	4.59512	-5.0259	11	36

-0.223144 J	4.59512	-4.818261	1	37		
-1.42712 J	4.59512	-6.022241	1	38		
2.07944	4.47734	-2.3979	11	39		
ND<0	4.47734	-4.477341	1	40		
4.07754	4.47734	-0.399799	11	41		
3.89182	4.47734	-0.585517	11	42		
3.52636	4.47734	-0.950976	11	43		
ND<0	4.47734	-4.477341	1	44		
3.43399	4.47734	-1.043351	1	45		
3.41444	4.47734	-1.062891	1	46		
3.47197	4.47734	-1.005371	1	47		
ND<0	4.47734	-4.477341	1	48		
ND<0	4.47734	-4.477341	1	49		
1.79176	4.47734	-2.685581	1	50		
ND<0	4.47734	-4.477341	1	51		
1.67523	4.47734	-2.802111	1	52		
0.779325	4.47734	-3.698011	1	53		
0.875469	4.47734	-3.601871	1	54		
0.989541	4.47734	-3.4878	11	55		
ND<0	4.47734	-4.477341	1	56		
-0.616186 J	4.47734	-5.093521	1	57		
-0.174353 J	4.47734	-4.651691	1	58		
-0.430783 J	4.47734	-4.908121	1	59		
-0.223144 J	4.47734	-4.700481	1	60		
-1.42712 J	4.47734	-5.904451	1	61		
ND<0	2.07944	-2.079441	1	62		
4.07754	2.07944	1.9981	12	62		
3.89182	2.07944	1.81238	13	62		
3.52636	2.07944	1.44692	14	62		
ND<0	2.07944	-2.079441	4	63		
3.43399	2.07944	1.35455	15	63		
3.41444	2.07944	1.335	16	63		
3.47197	2.07944	1.39252	17	63		
ND<0	2.07944	-2.079441	7	64		
ND<0	2.07944	-2.079441	7	65		
1.79176	2.07944	-0.287682		17	66	
ND<0	2.07944	-2.079441	7	67		
1.67523	2.07944	-0.404216		17	68	
0.779325	2.07944	-1.300121	7	69		
0.875469	2.07944	-1.203971	7	70		
0.989541	2.07944	-1.0899	17	71		
ND<0	2.07944	-2.079441	7	72		
-0.616186 J	2.07944	-2.695631	7	73		
-0.174353 J	2.07944	-2.253791	7	74		
-0.430783 J	2.07944	-2.510221	7	75		
-0.223144 J	2.07944	-2.302591	7	76		
-1.42712 J	2.07944	-3.506561	7	77		
4.07754	ND<0	4.07754	18	77		
3.89182	ND<0	3.89182	19	77		
3.52636	ND<0	3.52636	20	77		
ND<0	ND<0	0	20	77		
3.43399	ND<0	3.43399	21	77		
3.41444	ND<0	3.41444	22	77		
3.47197	ND<0	3.47197	23	77		
ND<0	ND<0	0	23	77		
ND<0	ND<0	0	23	77		
1.79176	ND<0	1.79176	24	77		
ND<0	ND<0	0	24	77		
1.67523	ND<0	1.67523	25	77		

0.779325	ND<0	0.779325	26	77	
0.875469	ND<0	0.875469	27	77	
0.989541	ND<0	0.989541	28	77	
ND<0	ND<0	0	28	77	
-0.616186 J	ND<0	-0.616186	28	78	
-0.174353 J	ND<0	-0.174353	28	79	
-0.430783 J	ND<0	-0.430783	28	80	
-0.223144 J	ND<0	-0.223144	28	81	
-1.42712 J	ND<0	-1.4271	28	82	
3.89182	4.07754	-0.185717	28	83	
3.52636	4.07754	-0.551177	28	84	
ND<0	4.07754	-4.0775	28	85	
3.43399	4.07754	-0.6435	28	86	
3.41444	4.07754	-0.663095	28	87	
3.47197	4.07754	-0.605571	28	88	
ND<0	4.07754	-4.0775	28	89	
ND<0	4.07754	-4.0775	28	90	
1.79176	4.07754	-2.2857	28	91	
ND<0	4.07754	-4.0775	28	92	
1.67523	4.07754	-2.4023	28	93	
0.779325	4.07754	-3.2982	28	94	
0.875469	4.07754	-3.2020	28	95	
0.989541	4.07754	-3.088	28	96	
ND<0	4.07754	-4.0775	28	97	
-0.616186 J	4.07754	-4.6937	28	98	
-0.174353 J	4.07754	-4.2518	28	99	
-0.430783 J	4.07754	-4.5083	28	100	
-0.223144 J	4.07754	-4.3006	28	101	
-1.42712 J	4.07754	-5.5046	28	102	
3.52636	3.89182	-0.3654	28	103	
ND<0	3.89182	-3.8918	28	104	
3.43399	3.89182	-0.457833	28	105	
3.41444	3.89182	-0.477378	28	106	
3.47197	3.89182	-0.419854	28	107	
ND<0	3.89182	-3.8918	28	108	
ND<0	3.89182	-3.8918	28	109	
1.79176	3.89182	-2.1000	28	110	
ND<0	3.89182	-3.8918	28	111	
1.67523	3.89182	-2.2165	28	112	
0.779325	3.89182	-3.1125	28	113	
0.875469	3.89182	-3.0163	28	114	
0.989541	3.89182	-2.9022	28	115	
ND<0	3.89182	-3.8918	28	116	
-0.616186 J	3.89182	-4.5080	28	117	
-0.174353 J	3.89182	-4.0661	28	118	
-0.430783 J	3.89182	-4.3226	28	119	
-0.223144 J	3.89182	-4.1149	28	120	
-1.42712 J	3.89182	-5.3189	28	121	
ND<0	3.52636	-3.5263	28	122	
3.43399	3.52636	-0.092373	3	28	123
3.41444	3.52636	-0.111918		28	124
3.47197	3.52636	-0.054394	1	28	125
ND<0	3.52636	-3.5263	28	126	
ND<0	3.52636	-3.5263	28	127	
1.79176	3.52636	-1.7346	28	128	
ND<0	3.52636	-3.5263	28	129	
1.67523	3.52636	-1.8511	28	130	
0.779325	3.52636	-2.7470	28	131	
0.875469	3.52636	-2.6508	28	132	

0.989541 3.52636 -2.5368228 133
ND<0 3.52636 -3.5263628 134
-0.616186 J 3.52636 -4.1425528 135
-0.174353 J 3.52636 -3.7007128 136
-0.430783 J 3.52636 -3.9571428 137
-0.223144 J 3.52636 -3.7495 28 138
-1.42712 J 3.52636 -4.9534828 139

3.43399 ND<0 3.43399 29 139
3.41444 ND<0 3.41444 30 139
3.47197 ND<0 3.47197 31 139
ND<0 ND<0 0 31 139
ND<0 ND<0 0 31 139
1.79176 ND<0 1.79176 32 139
ND<0 ND<0 0 32 139
1.67523 ND<0 1.67523 33 139
0.779325 ND<0 0.779325 34 139
0.875469 ND<0 0.875469 35 139
0.989541 ND<0 0.989541 36 139
ND<0 ND<0 0 36 139
-0.616186 J ND<0 -0.616186 36 140
-0.174353 J ND<0 -0.174353 36 141
-0.430783 J ND<0 -0.430783 36 142
-0.223144 J ND<0 -0.223144 36 143
-1.42712 J ND<0 -1.4271236 144

3.41444 3.43399 -0.0195446 36 145
3.47197 3.43399 0.0379792 37 145
ND<0 3.43399 -3.4339937 146
ND<0 3.43399 -3.4339937 147
1.79176 3.43399 -1.6422337 148
ND<0 3.43399 -3.4339937 149
1.67523 3.43399 -1.7587637 150
0.779325 3.43399 -2.6546637 151
0.875469 3.43399 -2.5585237 152
0.989541 3.43399 -2.4444537 153
ND<0 3.43399 -3.4339937 154
-0.616186 J 3.43399 -4.0501737 155
-0.174353 J 3.43399 -3.6083437 156
-0.430783 J 3.43399 -3.8647737 157
-0.223144 J 3.43399 -3.6571337 158
-1.42712 J 3.43399 -4.8611 37 159

3.47197 3.41444 0.0575238 38 159
ND<0 3.41444 -3.4144438 160
ND<0 3.41444 -3.4144438 161
1.79176 3.41444 -1.6226838 162
ND<0 3.41444 -3.4144438 163
1.67523 3.41444 -1.7392238 164
0.779325 3.41444 -2.6351238 165
0.875469 3.41444 -2.5389738 166
0.989541 3.41444 -2.4249 38 167
ND<0 3.41444 -3.4144438 168
-0.616186 J 3.41444 -4.0306338 169
-0.174353 J 3.41444 -3.5888 38 170
-0.430783 J 3.41444 -3.8452338 171
-0.223144 J 3.41444 -3.6375938 172
-1.42712 J 3.41444 -4.8415638 173

ND<0 3.47197 -3.4719738 174
ND<0 3.47197 -3.4719738 175
1.79176 3.47197 -1.6802138 176

ND<0	3.47197	-3.4719	738	177		
1.67523	3.47197	-1.7967	438	178		
0.779325	3.47197	-2.6926	438	179		
0.875469	3.47197	-2.5965	38	180		
0.989541	3.47197	-2.4824	338	181		
ND<0	3.47197	-3.4719	738	182		
-0.616186 J	3.47197	-4.0881	538	183		
-0.174353 J	3.47197	-3.6463	238	184		
-0.430783 J	3.47197	-3.9027	538	185		
-0.223144 J	3.47197	-3.6951	138	186		
-1.42712 J	3.47197	-4.8990	838	187		
ND<0	ND<0	0	38	187		
1.79176	ND<0	1.79176	39	187		
ND<0	ND<0	0	39	187		
1.67523	ND<0	1.67523	40	187		
0.779325	ND<0	0.779325		41	187	
0.875469	ND<0	0.875469		42	187	
0.989541	ND<0	0.989541		43	187	
ND<0	ND<0	0	43	187		
-0.616186 J	ND<0	-0.616186		43	188	
-0.174353 J	ND<0	-0.174353		43	189	
-0.430783 J	ND<0	-0.430783		43	190	
-0.223144 J	ND<0	-0.223144		43	191	
-1.42712 J	ND<0	-1.4271	243	192		
1.79176	ND<0	1.79176	44	192		
ND<0	ND<0	0	44	192		
1.67523	ND<0	1.67523	45	192		
0.779325	ND<0	0.779325		46	192	
0.875469	ND<0	0.875469		47	192	
0.989541	ND<0	0.989541		48	192	
ND<0	ND<0	0	48	192		
-0.616186 J	ND<0	-0.616186		48	193	
-0.174353 J	ND<0	-0.174353		48	194	
-0.430783 J	ND<0	-0.430783		48	195	
-0.223144 J	ND<0	-0.223144		48	196	
-1.42712 J	ND<0	-1.4271	248	197		
ND<0	1.79176	-1.7917	648	198		
1.67523	1.79176	-0.116	534	48	199	
0.779325	1.79176	-1.0124	348	200		
0.875469	1.79176	-0.916	291	48	201	
0.989541	1.79176	-0.802	218	48	202	
ND<0	1.79176	-1.7917	648	203		
-0.616186 J	1.79176	-2.4079	548	204		
-0.174353 J	1.79176	-1.9661	148	205		
-0.430783 J	1.79176	-2.2225	448	206		
-0.223144 J	1.79176	-2.0149	48	207		
-1.42712 J	1.79176	-3.2188	848	208		
1.67523	ND<0	1.67523	49	208		
0.779325	ND<0	0.779325		50	208	
0.875469	ND<0	0.875469		51	208	
0.989541	ND<0	0.989541		52	208	
ND<0	ND<0	0	52	208		
-0.616186 J	ND<0	-0.616186		52	209	
-0.174353 J	ND<0	-0.174353		52	210	
-0.430783 J	ND<0	-0.430783		52	211	
-0.223144 J	ND<0	-0.223144		52	212	
-1.42712 J	ND<0	-1.4271	252	213		

0.779325	1.67523	-0.895901	52	214
0.875469	1.67523	-0.799757	52	215
0.989541	1.67523	-0.685684	52	216
ND<0	1.67523	-1.6752352	217	
-0.616186 J	1.67523	-2.2914152	218	
-0.174353 J	1.67523	-1.8495852	219	
-0.430783 J	1.67523	-2.1060152	220	
-0.223144 J	1.67523	-1.8983752	221	
-1.42712 J	1.67523	-3.1023452	222	
0.875469	0.779325	0.0961439	53	222
0.989541	0.779325	0.210216	54	222
ND<0	0.779325	-0.779325	54	223
-0.616186 J	0.779325	-1.3955154	224	
-0.174353 J	0.779325	-0.953678	54	225
-0.430783 J	0.779325	-1.2101154	226	
-0.223144 J	0.779325	-1.0024754	227	
-1.42712 J	0.779325	-2.2064454	228	
0.989541	0.875469	0.114072	55	228
ND<0	0.875469	-0.875469	55	229
-0.616186 J	0.875469	-1.4916555	230	
-0.174353 J	0.875469	-1.0498255	231	
-0.430783 J	0.875469	-1.3062555	232	
-0.223144 J	0.875469	-1.0986155	233	
-1.42712 J	0.875469	-2.3025955	234	
ND<0	0.989541	-0.989541	55	235
-0.616186 J	0.989541	-1.6057355	236	
-0.174353 J	0.989541	-1.1638955	237	
-0.430783 J	0.989541	-1.4203255	238	
-0.223144 J	0.989541	-1.2126855	239	
-1.42712 J	0.989541	-2.4166655	240	
-0.616186 J	ND<0	-0.616186	55	241
-0.174353 J	ND<0	-0.174353	55	242
-0.430783 J	ND<0	-0.430783	55	243
-0.223144 J	ND<0	-0.223144	55	244
-1.42712 J	ND<0	-1.4271255	245	
-0.174353 J	-0.616186 J	0.441833	56	245
-0.430783 J	-0.616186 J	0.185403	57	245
-0.223144 J	-0.616186 J	0.393043	58	245
-1.42712 J	-0.616186 J	-0.8109358	246	
-0.430783 J	-0.174353 J	-0.2564358	247	
-0.223144 J	-0.174353 J	-0.0487902	58	248
-1.42712 J	-0.174353 J	-1.2527658	249	
-0.223144 J	-0.430783 J	0.207639	59	249
-1.42712 J	-0.430783 J	-0.996333	59	250
-1.42712 J	-0.223144 J	-1.2039759	251	

S Statistic = 59 - 251 = -192

Tied Group	Value	Members
1	0	6

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 510
B = 0
C = 120
D = 0
E = 30
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 2030
Z-Score = -4.23921
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-4.23921| > 1.97737 indicating a trend

Mann-Kendall Trend Analysis

Parameter: Tetrachloroethene

Location: MW-11R

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives	
1.4816	0.741937	0.739667	1	0	
0.693147	0.741937	-0.0487902	1	1	
1.38629	0.741937	0.644357	2	1	
ND<0	0.741937	-0.741937	2	2	
ND<0	0.741937	-0.741937	2	3	
ND<0	0.741937	-0.741937	2	4	
ND<0	0.741937	-0.741937	2	5	
ND<0	0.741937	-0.741937	2	6	
ND<0	0.741937	-0.741937	2	7	
0.993252	0.741937	0.251314	3	7	
ND<0	0.741937	-0.741937	3	8	
ND<0	0.741937	-0.741937	3	9	
ND<0	0.741937	-0.741937	3	10	
ND<0	0.741937	-0.741937	3	11	
ND<0	0.741937	-0.741937	3	12	
0.970779	0.741937	0.228842	4	12	
-0.776529 J	0.741937	-1.518474	13		
ND<0	0.741937	-0.741937	4	14	
-0.71335 J	0.741937	-1.455294	15		
ND<0	0.741937	-0.741937	4	16	
-0.967584 J	0.741937	-1.709524	17		
ND<0	0.741937	-0.741937	4	18	
-0.916291 J	0.741937	-1.658234	19		
0.832909	0.741937	0.0909718	5	19	
-1.20397 J	0.741937	-1.945915	20		
0.182322	0.741937	-0.559616	5	21	
0.693147	1.4816	-0.788457	5	22	
1.38629	1.4816	-0.0953102	5	23	
ND<0	1.4816	-1.4816	5	24	
ND<0	1.4816	-1.4816	5	25	
ND<0	1.4816	-1.4816	5	26	
ND<0	1.4816	-1.4816	5	27	
ND<0	1.4816	-1.4816	5	28	
ND<0	1.4816	-1.4816	5	29	
0.993252	1.4816	-0.488353	5	30	
ND<0	1.4816	-1.4816	5	31	
ND<0	1.4816	-1.4816	5	32	
ND<0	1.4816	-1.4816	5	33	
ND<0	1.4816	-1.4816	5	34	
ND<0	1.4816	-1.4816	5	35	
0.970779	1.4816	-0.510826	5	36	
-0.776529 J	1.4816	-2.258135	37		
ND<0	1.4816	-1.4816	5	38	
-0.71335 J	1.4816	-2.194955	39		
ND<0	1.4816	-1.4816	5	40	
-0.967584 J	1.4816	-2.449195	41		
ND<0	1.4816	-1.4816	5	42	

-0.916291 J	1.4816	-2.3979	5	43	
0.832909	1.4816	-0.648695	5	44	
-1.20397 J	1.4816	-2.685585	45		
0.182322	1.4816	-1.299285	46		

1.38629	0.693147	0.693147	6	46
ND<0	0.693147	-0.693147	6	47
ND<0	0.693147	-0.693147	6	48
ND<0	0.693147	-0.693147	6	49
ND<0	0.693147	-0.693147	6	50
ND<0	0.693147	-0.693147	6	51
ND<0	0.693147	-0.693147	6	52
0.993252	0.693147	0.300105	7	52
ND<0	0.693147	-0.693147	7	53
ND<0	0.693147	-0.693147	7	54
ND<0	0.693147	-0.693147	7	55
ND<0	0.693147	-0.693147	7	56
ND<0	0.693147	-0.693147	7	57
0.970779	0.693147	0.277632	8	57
-0.776529 J	0.693147	-1.469688	58	
ND<0	0.693147	-0.693147	8	59
-0.71335 J	0.693147	-1.4065	8	60
ND<0	0.693147	-0.693147	8	61
-0.967584 J	0.693147	-1.660738	62	
ND<0	0.693147	-0.693147	8	63
-0.916291 J	0.693147	-1.609448	64	
0.832909	0.693147	0.139762	9	64
-1.20397 J	0.693147	-1.897129	65	
0.182322	0.693147	-0.510826	9	66

ND<0	1.38629	-1.386299	67
ND<0	1.38629	-1.386299	68
ND<0	1.38629	-1.386299	69
ND<0	1.38629	-1.386299	70
ND<0	1.38629	-1.386299	71
ND<0	1.38629	-1.386299	72
0.993252	1.38629	-0.393043	9	73
ND<0	1.38629	-1.386299	74
ND<0	1.38629	-1.386299	75
ND<0	1.38629	-1.386299	76
ND<0	1.38629	-1.386299	77
ND<0	1.38629	-1.386299	78
0.970779	1.38629	-0.415515	9	79
-0.776529 J	1.38629	-2.162829	80
ND<0	1.38629	-1.386299	81
-0.71335 J	1.38629	-2.099649	82
ND<0	1.38629	-1.386299	83
-0.967584 J	1.38629	-2.353889	84
ND<0	1.38629	-1.386299	85
-0.916291 J	1.38629	-2.302599	86
0.832909	1.38629	-0.553385	9	87
-1.20397 J	1.38629	-2.590279	88
0.182322	1.38629	-1.203979	89

ND<0	ND<0	0	9	89
ND<0	ND<0	0	9	89
ND<0	ND<0	0	9	89
ND<0	ND<0	0	9	89
ND<0	ND<0	0	9	89
0.993252	ND<0	0.993252	10	89
ND<0	ND<0	0	10	89
ND<0	ND<0	0	10	89

ND<0	ND<0	0	10	89		
ND<0	ND<0	0	10	89		
ND<0	ND<0	0	10	89		
0.970779		ND<0	0.970779		11	89
-0.776529 J		ND<0	-0.776529		11	90
ND<0	ND<0	0	11	90		
-0.71335 J		ND<0	-0.713351	1	91	
ND<0	ND<0	0	11	91		
-0.967584 J		ND<0	-0.967584		11	92
ND<0	ND<0	0	11	92		
-0.916291 J		ND<0	-0.916291		11	93
0.832909		ND<0	0.832909		12	93
-1.20397 J		ND<0	-1.203971	2	94	
0.182322		ND<0	0.182322		13	94
ND<0	ND<0	0	13	94		
ND<0	ND<0	0	13	94		
ND<0	ND<0	0	13	94		
ND<0	ND<0	0	13	94		
0.993252		ND<0	0.993252		14	94
ND<0	ND<0	0	14	94		
ND<0	ND<0	0	14	94		
ND<0	ND<0	0	14	94		
ND<0	ND<0	0	14	94		
ND<0	ND<0	0	14	94		
0.970779		ND<0	0.970779		15	94
-0.776529 J		ND<0	-0.776529		15	95
ND<0	ND<0	0	15	95		
-0.71335 J		ND<0	-0.713351	5	96	
ND<0	ND<0	0	15	96		
-0.967584 J		ND<0	-0.967584		15	97
ND<0	ND<0	0	15	97		
-0.916291 J		ND<0	-0.916291		15	98
0.832909		ND<0	0.832909		16	98
-1.20397 J		ND<0	-1.203971	6	99	
0.182322		ND<0	0.182322		17	99
ND<0	ND<0	0	17	99		
ND<0	ND<0	0	17	99		
ND<0	ND<0	0	17	99		
0.993252		ND<0	0.993252		18	99
ND<0	ND<0	0	18	99		
ND<0	ND<0	0	18	99		
ND<0	ND<0	0	18	99		
ND<0	ND<0	0	18	99		
ND<0	ND<0	0	18	99		
0.970779		ND<0	0.970779		19	99
-0.776529 J		ND<0	-0.776529		19	100
ND<0	ND<0	0	19	100		
-0.71335 J		ND<0	-0.713351	9	101	
ND<0	ND<0	0	19	101		
-0.967584 J		ND<0	-0.967584		19	102
ND<0	ND<0	0	19	102		
-0.916291 J		ND<0	-0.916291		19	103
0.832909		ND<0	0.832909		20	103
-1.20397 J		ND<0	-1.203972	0	104	
0.182322		ND<0	0.182322		21	104
ND<0	ND<0	0	21	104		
ND<0	ND<0	0	21	104		
0.993252		ND<0	0.993252		22	104
ND<0	ND<0	0	22	104		

ND<0	ND<0	0	22	104		
ND<0	ND<0	0	22	104		
ND<0	ND<0	0	22	104		
ND<0	ND<0	0	22	104		
0.970779		ND<0	0.970779		23	104
-0.776529 J		ND<0	-0.776529		23	105
ND<0	ND<0	0	23	105		
-0.71335 J		ND<0	-0.713352	3	106	
ND<0	ND<0	0	23	106		
-0.967584 J		ND<0	-0.967584		23	107
ND<0	ND<0	0	23	107		
-0.916291 J		ND<0	-0.916291		23	108
0.832909		ND<0	0.832909		24	108
-1.20397 J		ND<0	-1.203972	4	109	
0.182322		ND<0	0.182322		25	109
ND<0	ND<0	0	25	109		
0.993252		ND<0	0.993252		26	109
ND<0	ND<0	0	26	109		
ND<0	ND<0	0	26	109		
ND<0	ND<0	0	26	109		
ND<0	ND<0	0	26	109		
ND<0	ND<0	0	26	109		
0.970779		ND<0	0.970779		27	109
-0.776529 J		ND<0	-0.776529		27	110
ND<0	ND<0	0	27	110		
-0.71335 J		ND<0	-0.713352	7	111	
ND<0	ND<0	0	27	111		
-0.967584 J		ND<0	-0.967584		27	112
ND<0	ND<0	0	27	112		
-0.916291 J		ND<0	-0.916291		27	113
0.832909		ND<0	0.832909		28	113
-1.20397 J		ND<0	-1.203972	8	114	
0.182322		ND<0	0.182322		29	114
0.993252		ND<0	0.993252		30	114
ND<0	ND<0	0	30	114		
ND<0	ND<0	0	30	114		
ND<0	ND<0	0	30	114		
ND<0	ND<0	0	30	114		
ND<0	ND<0	0	30	114		
0.970779		ND<0	0.970779		31	114
-0.776529 J		ND<0	-0.776529		31	115
ND<0	ND<0	0	31	115		
-0.71335 J		ND<0	-0.713353	1	116	
ND<0	ND<0	0	31	116		
-0.967584 J		ND<0	-0.967584		31	117
ND<0	ND<0	0	31	117		
-0.916291 J		ND<0	-0.916291		31	118
0.832909		ND<0	0.832909		32	118
-1.20397 J		ND<0	-1.203973	2	119	
0.182322		ND<0	0.182322		33	119
ND<0	0.993252		-0.993252		33	120
ND<0	0.993252		-0.993252		33	121
ND<0	0.993252		-0.993252		33	122
ND<0	0.993252		-0.993252		33	123
ND<0	0.993252		-0.993252		33	124
0.970779		0.993252		-0.022472	9	33	125
-0.776529 J		0.993252		-1.769783	3	126
ND<0	0.993252		-0.993252		33	127
-0.71335 J		0.993252		-1.7066	33	128

ND<0	0.993252	-0.993252	33	129		
-0.967584 J	0.993252	-1.9608433	130			
ND<0	0.993252	-0.993252	33	131		
-0.916291 J	0.993252	-1.9095433	132			
0.832909	0.993252	-0.160343	33	133		
-1.20397 J	0.993252	-2.1972233	134			
0.182322	0.993252	-0.8109333	135			

ND<0	ND<0	0	33	135		
ND<0	ND<0	0	33	135		
ND<0	ND<0	0	33	135		
ND<0	ND<0	0	33	135		
0.970779	ND<0	0.970779	34	135		
-0.776529 J	ND<0	-0.776529	34	136		
ND<0	ND<0	0	34	136		
-0.71335 J	ND<0	-0.7133534	137			
ND<0	ND<0	0	34	137		
-0.967584 J	ND<0	-0.967584	34	138		
ND<0	ND<0	0	34	138		
-0.916291 J	ND<0	-0.916291	34	139		
0.832909	ND<0	0.832909	35	139		
-1.20397 J	ND<0	-1.2039735	140			
0.182322	ND<0	0.182322	36	140		

ND<0	ND<0	0	36	140		
ND<0	ND<0	0	36	140		
ND<0	ND<0	0	36	140		
0.970779	ND<0	0.970779	37	140		
-0.776529 J	ND<0	-0.776529	37	141		
ND<0	ND<0	0	37	141		
-0.71335 J	ND<0	-0.7133537	142			
ND<0	ND<0	0	37	142		
-0.967584 J	ND<0	-0.967584	37	143		
ND<0	ND<0	0	37	143		
-0.916291 J	ND<0	-0.916291	37	144		
0.832909	ND<0	0.832909	38	144		
-1.20397 J	ND<0	-1.2039738	145			
0.182322	ND<0	0.182322	39	145		

ND<0	ND<0	0	39	145		
ND<0	ND<0	0	39	145		
0.970779	ND<0	0.970779	40	145		
-0.776529 J	ND<0	-0.776529	40	146		
ND<0	ND<0	0	40	146		
-0.71335 J	ND<0	-0.7133540	147			
ND<0	ND<0	0	40	147		
-0.967584 J	ND<0	-0.967584	40	148		
ND<0	ND<0	0	40	148		
-0.916291 J	ND<0	-0.916291	40	149		
0.832909	ND<0	0.832909	41	149		
-1.20397 J	ND<0	-1.2039741	150			
0.182322	ND<0	0.182322	42	150		

ND<0	ND<0	0	42	150		
0.970779	ND<0	0.970779	43	150		
-0.776529 J	ND<0	-0.776529	43	151		
ND<0	ND<0	0	43	151		
-0.71335 J	ND<0	-0.7133543	152			
ND<0	ND<0	0	43	152		
-0.967584 J	ND<0	-0.967584	43	153		
ND<0	ND<0	0	43	153		
-0.916291 J	ND<0	-0.916291	43	154		

0.832909	ND<0	0.832909	44	154	
-1.20397 J	ND<0	-1.2039744	155		
0.182322	ND<0	0.182322	45	155	
0.970779	ND<0	0.970779	46	155	
-0.776529 J	ND<0	-0.776529	46	156	
ND<0	ND<0	0	46	156	
-0.71335 J	ND<0	-0.7133546	157		
ND<0	ND<0	0	46	157	
-0.967584 J	ND<0	-0.967584	46	158	
ND<0	ND<0	0	46	158	
-0.916291 J	ND<0	-0.916291	46	159	
0.832909	ND<0	0.832909	47	159	
-1.20397 J	ND<0	-1.2039747	160		
0.182322	ND<0	0.182322	48	160	
-0.776529 J	0.970779	-1.7473148	161		
ND<0	0.970779	-0.970779	48	162	
-0.71335 J	0.970779	-1.6841348	163		
ND<0	0.970779	-0.970779	48	164	
-0.967584 J	0.970779	-1.9383648	165		
ND<0	0.970779	-0.970779	48	166	
-0.916291 J	0.970779	-1.8870748	167		
0.832909	0.970779	-0.1378748	168		
-1.20397 J	0.970779	-2.1747548	169		
0.182322	0.970779	-0.788457	48	170	
ND<0	-0.776529 J	0.776529	49	170	
-0.71335 J	-0.776529 J	0.0631789	50	170	
ND<0	-0.776529 J	0.776529	51	170	
-0.967584 J	-0.776529 J	-0.191055	51	171	
ND<0	-0.776529 J	0.776529	52	171	
-0.916291 J	-0.776529 J	-0.139762	52	172	
0.832909	-0.776529 J	1.60944	53	172	
-1.20397 J	-0.776529 J	-0.427444	53	173	
0.182322	-0.776529 J	0.95885	54	173	
-0.71335 J	ND<0	-0.7133554	174		
ND<0	ND<0	0	54	174	
-0.967584 J	ND<0	-0.967584	54	175	
ND<0	ND<0	0	54	175	
-0.916291 J	ND<0	-0.916291	54	176	
0.832909	ND<0	0.832909	55	176	
-1.20397 J	ND<0	-1.2039755	177		
0.182322	ND<0	0.182322	56	177	
ND<0	-0.71335 J	0.71335	57	177	
-0.967584 J	-0.71335 J	-0.254234	57	178	
ND<0	-0.71335 J	0.71335	58	178	
-0.916291 J	-0.71335 J	-0.202941	58	179	
0.832909	-0.71335 J	1.54626	59	179	
-1.20397 J	-0.71335 J	-0.490623	59	180	
0.182322	-0.71335 J	0.895671	60	180	
-0.967584 J	ND<0	-0.967584	60	181	
ND<0	ND<0	0	60	181	
-0.916291 J	ND<0	-0.916291	60	182	
0.832909	ND<0	0.832909	61	182	
-1.20397 J	ND<0	-1.2039761	183		
0.182322	ND<0	0.182322	62	183	

ND<0	-0.967584 J	0.967584	63	183	
-0.916291 J	-0.967584 J	0.0512933	64	183	
0.832909	-0.967584 J	1.80049	65	183	
-1.20397 J	-0.967584 J	-0.236389	65	184	
0.182322	-0.967584 J	1.14991	66	184	
-0.916291 J	ND<0	-0.916291	66	185	
0.832909	ND<0	0.832909	67	185	
-1.20397 J	ND<0	-1.2039767	186		
0.182322	ND<0	0.182322	68	186	
0.832909	-0.916291 J	1.7492	69	186	
-1.20397 J	-0.916291 J	-0.287682	69	187	
0.182322	-0.916291 J	1.09861	70	187	
-1.20397 J	0.832909	-2.0368870	188		
0.182322	0.832909	-0.650588	70	189	
0.182322	-1.20397 J	1.38629	71	189	

S Statistic = 71 - 189 = -118

Tied Group	Value	Members
1	0	14

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 6006
B = 0
C = 2184
D = 0

E = 182
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 1967.33
Z-Score = -2.63783
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.63783| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: Tin

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 207
Percent Non-Detects: 97.6415%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	16 (94.1176%)	3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/15/2000	ND<20	ND<20
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	5.1 J	5.1 J
			6/5/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	ND<0.4	ND<0.4
			11/16/2009	ND<0.4	ND<0.4
			6/30/2010	ND<0.4	ND<0.4

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-6	27	27 (100%)	7/20/1995	ND<20	ND<20
			8/24/1995	ND<20	ND<20
			9/28/1995	ND<20	ND<20
			10/26/1995	ND<20	ND<20
			11/19/1996	ND<20	ND<20
			12/19/1996	ND<20	ND<20
			3/24/1997	ND<20	ND<20
			9/24/1997	ND<20	ND<20
			4/7/1998	ND<20	ND<20
			9/23/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/15/2000	ND<20	ND<20
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	ND<20	ND<20
			6/5/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20

			6/11/2009	ND<0.4	ND<0.4	
			11/16/2009	ND<0.4	ND<0.4	
			6/30/2010	ND<0.4	ND<0.4	
MW-12BR		17	17 (100%)	3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	ND<0.4	ND<0.4	
			11/16/2009	ND<0.4	ND<0.4	
			6/30/2010	ND<0.4	ND<0.4	
MW-7	27	26 (96.2963%)	7/20/1995	ND<20	ND<20	
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	ND<20	ND<20	
			11/20/2008	35	35	
			6/11/2009	ND<0.4	ND<0.4	
			11/16/2009	ND<0.4	ND<0.4	
			6/30/2010	ND<0.4	ND<0.4	
MW-9	27	24 (88.8889%)	7/20/1995	ND<20	ND<20	
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	

			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	ND<20	ND<20	
			11/20/2008	14 J	14 J	
			6/11/2009	0.45 J	0.45 J	
			11/16/2009	ND<0.4	ND<0.4	
			6/30/2010	0.57 J H	0.57 J H	
MW-8	26	26 (100%)	7/20/1995	ND<20	ND<20	
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	ND<0.4	ND<0.4	
			6/30/2010	ND<0.4	ND<0.4	
MW-10	27	27 (100%)	7/20/1995	ND<20	ND<20	
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	

		11/18/2006	ND<20	ND<20		
		5/23/2007	ND<20	ND<20		
		11/28/2007	ND<20	ND<20		
		6/5/2008	ND<20	ND<20		
		11/20/2008	ND<20	ND<20		
		6/11/2009	ND<0.4	ND<0.4		
		11/16/2009	ND<0.4	ND<0.4		
		6/30/2010	ND<0.4	ND<0.4		
MW-11R	27 (100%)	7/20/1995	ND<20	ND<20		
		8/24/1995	ND<20	ND<20		
		9/28/1995	ND<20	ND<20		
		10/26/1995	ND<20	ND<20		
		11/19/1996	ND<20	ND<20		
		12/19/1996	ND<20	ND<20		
		3/24/1997	ND<20	ND<20		
		9/24/1997	ND<20	ND<20		
		4/7/1998	ND<20	ND<20		
		9/23/1998	ND<20	ND<20		
		3/16/1999	ND<20	ND<20		
		9/23/1999	ND<20	ND<20		
		3/15/2000	ND<20	ND<20		
		9/24/2003	ND<20	ND<20		
		3/11/2004	ND<20	ND<20		
		10/12/2004	ND<20	ND<20		
		4/1/2005	ND<20	ND<20		
		10/25/2005	ND<20	ND<20		
		4/29/2006	ND<20	ND<20		
		11/18/2006	ND<20	ND<20		
		5/23/2007	ND<20	ND<20		
		11/28/2007	ND<20	ND<20		
		6/5/2008	ND<20	ND<20		
		11/20/2008	ND<20	ND<20		
		6/11/2009	ND<0.4	ND<0.4		
		11/16/2009	ND<0.4	ND<0.4		
		6/30/2010	ND<0.4	ND<0.4		
MW-12AR	17	17 (100%)	3/16/1999	ND<20	ND<20	
		9/23/1999	ND<20	ND<20		
		3/15/2000	ND<20	ND<20		
		9/24/2003	ND<20	ND<20		
		3/11/2004	ND<20	ND<20		
		10/12/2004	ND<20	ND<20		
		4/1/2005	ND<20	ND<20		
		10/25/2005	ND<20	ND<20		
		4/29/2006	ND<20	ND<20		
		11/18/2006	ND<20	ND<20		
		5/23/2007	ND<20	ND<20		
		11/28/2007	ND<20	ND<20		
		6/5/2008	ND<20	ND<20		
		11/20/2008	ND<20	ND<20		
		6/11/2009	ND<0.4	ND<0.4		
		11/16/2009	ND<0.4	ND<0.4		
		6/30/2010	ND<0.4	ND<0.4		

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Tin

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.2	-2.65	2097.03356	-0.530417
2	0.2	-2.36	56112.6297	-1.00354
3	0.2	-2.19	72817.4578	-1.443
4	0.2	-2.09	69321.8549	-1.86238
5	0.2	-1.99	53925.8365	-2.26146
6	0.2	-1.91	10329.4885	-2.64367
7	0.2	-1.85	21832.9191	-3.0141
8	0.2	-1.78	66136.111	-3.37143
9	0.2	-1.72	79339.0968	-3.71701
10	0.2	-1.68	49441.9358	-4.054
11	0.2	-1.63	52444.6098	-4.38105
12	0.2	-1.58	92747.1356	-4.6989
13	0.2	-1.54	64349.527	-5.00819
14	0.2	-1.51	41 51.8195	-5.31101
15	0.2	-1.47	57953.9975	-5.60617
16	0.2	-1.43	95356.0698	-5.89407
17	0.2	-1.41	18358.063	-6.17644
18	0.2	-1.37	86659.9637	-6.45217
19	0.2	-1.34	69461.778	-6.72156
20	0.2	-1.32	25163.527	-6.98606
21	0.2	-1.29	30365.1989	-7.24467
22	0.2	-1.26	46466.7982	-7.49759
23	0.2	-1.24	26468.3424	-7.74612
24	0.2	-1.21	59669.821	-7.98931
25	0.45	-1.19	01271.2373	-8.52487
26	0.57	-1.16	50572.5947	-9.18894
27	5.1	-1.14	55 73.9069	-15.031
28	10	-1.12	16875.165	-26.2478
29	10	-1.09	84776.3716	-37.2325
30	10	-1.08	03277.5387	-48.0357
31	10	-1.05	81278.6584	-58.6169
32	10	-1.03	64379.7326	-68.9812
33	10	-1.01	94380.7718	-79.1755
34	10	-0.998575	81.7689	-89.1613
35	10	-0.97	81582.7257	-98.9428
36	10	-0.958125	83.6437	-108.524
37	10	-0.942375	84.5318	-117.948
38	10	-0.923014	85.3837	-127.178
39	10	-0.903992	86.201	-136.218
40	10	-0.889006	86.9913	-145.108
41	10	-0.87	05587.7491	-153.813
42	10	-0.852385	88.4757	-162.337
43	10	-0.838054	89.178	-170.718
44	10	-0.820379	89.8511	-178.922
45	10	-0.802956	90.4958	-186.951
46	10	-0.789191	91.1186	-194.843
47	10	-0.772193	91.7149	-202.565
48	10	-0.755415	92.2856	-210.119
49	10	-0.738846	92.8314	-217.508

50	10	-0.725736	93.3581	-224.765
51	10	-0.709522	93.8616	-231.86
52	10	-0.693493	94.3425	-238.795
53	10	-0.680797	94.806	-245.603
54	10	-0.665079	95.2483	-252.254
55	10	-0.649522	95.6702	-258.749
56	10	-0.637192	96.0762	-265.121
57	10	-0.621911	96.463	-271.34
58	10	-0.606775	96.8312	-277.408
59	10	-0.594766	97.1849	-283.356
60	10	-0.579873	97.5212	-289.154
61	10	-0.565108	97.8405	-294.805
62	10	-0.550465	98.1435	-300.31
63	10	-0.538836	98.4339	-305.698
64	10	-0.524401	98.7088	-310.942
65	10	-0.510074	98.969	-316.043
66	10	-0.498687	99.2177	-321.03
67	10	-0.484544	99.4525	-325.875
68	10	-0.470498	99.6739	-330.58
69	10	-0.459327	99.8848	-335.174
70	10	-0.445443	100.083	-339.628
71	10	-0.431644	100.27	-343.945
72	10	-0.417928	100.444	-348.124
73	10	-0.40701	100.61	-352.194
74	10	-0.393433	100.765	-356.128
75	10	-0.379927	100.909	-359.928
76	10	-0.369171	101.045	-363.619
77	10	-0.355788	101.172	-367.177
78	10	-0.342466	101.289	-370.602
79	10	-0.331854	101.399	-373.92
80	10	-0.318639	101.501	-377.107
81	10	-0.305481	101.594	-380.161
82	10	-0.294992	101.681	-383.111
83	10	-0.281926	101.761	-385.931
84	10	-0.268908	101.833	-388.62
85	10	-0.255936	101.898	-391.179
86	10	-0.24559	101.959	-393.635
87	10	-0.232693	102.013	-395.962
88	10	-0.219834	102.061	-398.16
89	10	-0.209575	102.105	-400.256
90	10	-0.196779	102.144	-402.224
91	10	-0.184017	102.178	-404.064
92	10	-0.173829	102.208	-405.802
93	10	-0.161119	102.234	-407.413
94	10	-0.148434	102.256	-408.898
95	10	-0.135774	102.274	-410.256
96	10	-0.125661	102.29	-411.512
97	10	-0.113039	102.303	-412.643
98	10	-0.100433	102.313	-413.647
99	10	-0.0903606	102.321	-414.551
100	10	-0.0777834	102.327	-415.328
101	10	-0.0652187	102.332	-415.981
102	10	-0.0551734	102.335	-416.532
103	10	-0.0426257	102.336	-416.959
104	10	-0.0300838	102.337	-417.259
105	10	-0.0200544	102.338	-417.46
106	10	-0.00751925	102.338	-417.535
107	10	0.00751925	102.338	-417.46
108	10	0.0200544	102.338	-417.259
109	10	0.0300838	102.339	-416.959
110	10	0.0426257	102.341	-416.532
111	10	0.0551734	102.344	-415.981

112	10	0.0652187	102.348	-415.328
113	10	0.0777834	102.354	-414.551
114	10	0.0903606	102.362	-413.647
115	10	0.100433	102.373	-412.643
116	10	0.113039	102.385	-411.512
117	10	0.125661	102.401	-410.256
118	10	0.135774	102.42	-408.898
119	10	0.148434	102.442	-407.413
120	10	0.161119	102.468	-405.802
121	10	0.173829	102.498	-404.064
122	10	0.184017	102.532	-402.224
123	10	0.196779	102.57	-400.256
124	10	0.209575	102.614	-398.16
125	10	0.219834	102.663	-395.962
126	10	0.232693	102.717	-393.635
127	10	0.24559	102.777	-391.179
128	10	0.255936	102.843	-388.62
129	10	0.268908	102.915	-385.931
130	10	0.281926	102.994	-383.111
131	10	0.294992	103.081	-380.161
132	10	0.305481	103.175	-377.107
133	10	0.318639	103.276	-373.92
134	10	0.331854	103.386	-370.602
135	10	0.342466	103.504	-367.177
136	10	0.355788	103.63	-363.619
137	10	0.369171	103.767	-359.928
138	10	0.379927	103.911	-356.128
139	10	0.393433	104.066	-352.194
140	10	0.40701	104.231	-348.124
141	10	0.417928	104.406	-343.945
142	10	0.431644	104.592	-339.628
143	10	0.445443	104.791	-335.174
144	10	0.459327	105.002	-330.58
145	10	0.470498	105.223	-325.875
146	10	0.484544	105.458	-321.03
147	10	0.498687	105.707	-316.043
148	10	0.510074	105.967	-310.942
149	10	0.524401	106.242	-305.698
150	10	0.538836	106.532	-300.31
151	10	0.550465	106.835	-294.805
152	10	0.565108	107.154	-289.154
153	10	0.579873	107.491	-283.356
154	10	0.594766	107.844	-277.408
155	10	0.606775	108.213	-271.34
156	10	0.621911	108.599	-265.121
157	10	0.637192	109.005	-258.749
158	10	0.649522	109.427	-252.254
159	10	0.665079	109.87	-245.603
160	10	0.680797	110.333	-238.795
161	10	0.693493	110.814	-231.86
162	10	0.709522	111.317	-224.765
163	10	0.725736	111.844	-217.508
164	10	0.738846	112.39	-210.119
165	10	0.755415	112.961	-202.565
166	10	0.772193	113.557	-194.843
167	10	0.789191	114.18	-186.951
168	10	0.802956	114.824	-178.922
169	10	0.820379	115.498	-170.718
170	10	0.838054	116.2	-162.337
171	10	0.852385	116.926	-153.813
172	10	0.87055	117.684	-145.108
173	10	0.889006	118.475	-136.218

174	10	0.903992		119.292	-127.178
175	10	0.923014		120.144	-117.948
176	10	0.942375		121.032	-108.524
177	10	0.958125		121.95	-98.9428
178	10	0.97815	122.907	-89.1613	
179	10	0.998575		123.904	-79.1755
180	10	1.01943	124.943	-68.9812	
181	10	1.03643	126.017	-58.6169	
182	10	1.05812	127.137	-48.0357	
183	10	1.08032	128.304	-37.2325	
184	10	1.09847	129.511	-26.2478	
185	10	1.12168	130.769	-15.031	
186	10	1.1455	132.081	-3.57597	
187	10	1.16505	133.438	8.07449	
188	10	1.19012	134.855	19.9757	
189	10	1.21596	136.333	32.1353	
190	10	1.24264	137.877	44.5617	
191	10	1.26464	139.477	57.2081	
192	10	1.29303	141.149	70.1385	
193	10	1.32251	142.898	83.3635	
194	10	1.34694	144.712	96.8329	
195	10	1.37866	146.613	110.619	
196	10	1.41183	148.606	124.738	
197	10	1.43953	150.678	139.133	
198	10	1.47579	152.856	153.891	
199	10	1.5141	155.149	169.032	
200	10	1.54643	157.54	184.496	
201	10	1.58927	160.066	200.389	
202	10	1.63524	162.74	216.741	
203	10	1.68494	165.579	233.591	
204	10	1.72793	168.564	250.87	
205	10	1.78661	171.756	268.736	
206	10	1.85218	175.187	287.258	
207	10	1.91103	178.839	306.368	
208	10	1.99539	182.821	326.322	
209	10	2.09693	187.218	347.292	
210	10	2.19728	192.046	369.264	
211	14	2.36561	197.642	402.383	
212	35	2.65209	204.676	495.206	

Data Set Standard Deviation = 3.70755
Numerator = 245229
Denominator = 593640
W Statistic = 0.413094 = 245229 / 593640

5% Critical value of 0.976 exceeds 0.413094
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.413094
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Tin

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.60944	-2.65209	7.03356	4.26837
2	-1.60944	-2.36561	12.6297	8.07568
3	-1.60944	-2.19728	17.4578	11.6121
4	-1.60944	-2.09693	21.8549	14.987
5	-1.60944	-1.99539	25.8365	18.1984
6	-1.60944	-1.91103	29.4885	21.2741
7	-1.60944	-1.85218	32.9191	24.2551
8	-1.60944	-1.78661	36.111	27.1305
9	-1.60944	-1.72793	39.0968	29.9115
10	-1.60944	-1.68494	41.9358	32.6233
11	-1.60944	-1.63524	44.6098	35.2551
12	-1.60944	-1.58927	47.1356	37.8129
13	-1.60944	-1.54643	49.527	40.3018
14	-1.60944	-1.5141	51.8195	42.7387
15	-1.60944	-1.47579	53.9975	45.1139
16	-1.60944	-1.43953	56.0698	47.4307
17	-1.60944	-1.41183	58.063	49.703
18	-1.60944	-1.37866	59.9637	51.9218
19	-1.60944	-1.34694	61.778	54.0897
20	-1.60944	-1.32251	63.527	56.2181
21	-1.60944	-1.29303	65.1989	58.2992
22	-1.60944	-1.26464	66.7982	60.3346
23	-1.60944	-1.24264	68.3424	62.3345
24	-1.60944	-1.21596	69.821	64.2915
25	-0.798508	-1.19012	71.2373	65.2418
26	-0.562119	-1.16505	72.5947	65.8967
27	1.62924	-1.1455	73.9069	64.0304
28	2.30259	-1.12168	75.165	61.4477
29	2.30259	-1.09847	76.3716	58.9184
30	2.30259	-1.08032	77.5387	56.4308
31	2.30259	-1.05812	78.6584	53.9944
32	2.30259	-1.03643	79.7326	51.6079
33	2.30259	-1.01943	80.7718	49.2606
34	2.30259	-0.998575	81.7689	46.9613
35	2.30259	-0.97815	82.7257	44.709
36	2.30259	-0.958125	83.6437	42.5029
37	2.30259	-0.942375	84.5318	40.333
38	2.30259	-0.923014	85.3837	38.2077
39	2.30259	-0.903992	86.201	36.1261
40	2.30259	-0.889006	86.9913	34.0791
41	2.30259	-0.87055	87.7491	32.0746
42	2.30259	-0.852385	88.4757	30.1119
43	2.30259	-0.838054	89.178	28.1822
44	2.30259	-0.820379	89.8511	26.2932
45	2.30259	-0.802956	90.4958	24.4444
46	2.30259	-0.789191	91.1186	22.6272
47	2.30259	-0.772193	91.7149	20.8491
48	2.30259	-0.755415	92.2856	19.1097
49	2.30259	-0.738846	92.8314	17.4085

50	2.30259	-0.725736	93.3581	15.7374
51	2.30259	-0.709522	93.8616	14.1037
52	2.30259	-0.693493	94.3425	12.5069
53	2.30259	-0.680797	94.806	10.9393
54	2.30259	-0.665079	95.2483	9.40786
55	2.30259	-0.649522	95.6702	7.91228
56	2.30259	-0.637192	96.0762	6.44509
57	2.30259	-0.621911	96.463	5.01309
58	2.30259	-0.606775	96.8312	3.61593
59	2.30259	-0.594766	97.1849	2.24643
60	2.30259	-0.579873	97.5212	0.911226
61	2.30259	-0.565108	97.8405	-0.389982
62	2.30259	-0.550465	98.1435	-1.65747
63	2.30259	-0.538836	98.4339	-2.89819
64	2.30259	-0.524401	98.7088	-4.10567
65	2.30259	-0.510074	98.969	-5.28016
66	2.30259	-0.498687	99.2177	-6.42843
67	2.30259	-0.484544	99.4525	-7.54413
68	2.30259	-0.470498	99.6739	-8.62749
69	2.30259	-0.459327	99.8848	-9.68513
70	2.30259	-0.445443	100.083	-10.7108
71	2.30259	-0.431644	100.27	-11.7047
72	2.30259	-0.417928	100.444	-12.667
73	2.30259	-0.40701	100.61	-13.6042
74	2.30259	-0.393433	100.765	-14.5101
75	2.30259	-0.379927	100.909	-15.3849
76	2.30259	-0.369171	101.045	-16.235
77	2.30259	-0.355788	101.172	-17.0542
78	2.30259	-0.342466	101.289	-17.8427
79	2.30259	-0.331854	101.399	-18.6069
80	2.30259	-0.318639	101.501	-19.3406
81	2.30259	-0.305481	101.594	-20.044
82	2.30259	-0.294992	101.681	-20.7232
83	2.30259	-0.281926	101.761	-21.3724
84	2.30259	-0.268908	101.833	-21.9915
85	2.30259	-0.255936	101.898	-22.5809
86	2.30259	-0.24559	101.959	-23.1464
87	2.30259	-0.232693	102.013	-23.6821
88	2.30259	-0.219834	102.061	-24.1883
89	2.30259	-0.209575	102.105	-24.6709
90	2.30259	-0.196779	102.144	-25.124
91	2.30259	-0.184017	102.178	-25.5477
92	2.30259	-0.173829	102.208	-25.948
93	2.30259	-0.161119	102.234	-26.319
94	2.30259	-0.148434	102.256	-26.6607
95	2.30259	-0.135774	102.274	-26.9734
96	2.30259	-0.125661	102.29	-27.2627
97	2.30259	-0.113039	102.303	-27.523
98	2.30259	-0.100433	102.313	-27.7543
99	2.30259	-0.0903606	102.321	-27.9623
100	2.30259	-0.0777834	102.327	-28.1414
101	2.30259	-0.0652187	102.332	-28.2916
102	2.30259	-0.0551734	102.335	-28.4186
103	2.30259	-0.0426257	102.336	-28.5168
104	2.30259	-0.0300838	102.337	-28.5861
105	2.30259	-0.0200544	102.338	-28.6322
106	2.30259	-0.00751925	102.338	-28.6495
107	2.30259	0.00751925	102.338	-28.6322
108	2.30259	0.0200544	102.338	-28.5861
109	2.30259	0.0300838	102.339	-28.5168
110	2.30259	0.0426257	102.341	-28.4186
111	2.30259	0.0551734	102.344	-28.2916

112	2.30259	0.0652187	102.348	-28.1414
113	2.30259	0.0777834	102.354	-27.9623
114	2.30259	0.0903606	102.362	-27.7543
115	2.30259	0.100433	102.373	-27.523
116	2.30259	0.113039	102.385	-27.2627
117	2.30259	0.125661	102.401	-26.9734
118	2.30259	0.135774	102.42	-26.6607
119	2.30259	0.148434	102.442	-26.319
120	2.30259	0.161119	102.468	-25.948
121	2.30259	0.173829	102.498	-25.5477
122	2.30259	0.184017	102.532	-25.124
123	2.30259	0.196779	102.57	-24.6709
124	2.30259	0.209575	102.614	-24.1883
125	2.30259	0.219834	102.663	-23.6821
126	2.30259	0.232693	102.717	-23.1464
127	2.30259	0.24559	102.777	-22.5809
128	2.30259	0.255936	102.843	-21.9915
129	2.30259	0.268908	102.915	-21.3724
130	2.30259	0.281926	102.994	-20.7232
131	2.30259	0.294992	103.081	-20.044
132	2.30259	0.305481	103.175	-19.3406
133	2.30259	0.318639	103.276	-18.6069
134	2.30259	0.331854	103.386	-17.8427
135	2.30259	0.342466	103.504	-17.0542
136	2.30259	0.355788	103.63	-16.235
137	2.30259	0.369171	103.767	-15.3849
138	2.30259	0.379927	103.911	-14.5101
139	2.30259	0.393433	104.066	-13.6042
140	2.30259	0.40701	104.231	-12.667
141	2.30259	0.417928	104.406	-11.7047
142	2.30259	0.431644	104.592	-10.7108
143	2.30259	0.445443	104.791	-9.68513
144	2.30259	0.459327	105.002	-8.62749
145	2.30259	0.470498	105.223	-7.54413
146	2.30259	0.484544	105.458	-6.42843
147	2.30259	0.498687	105.707	-5.28016
148	2.30259	0.510074	105.967	-4.10567
149	2.30259	0.524401	106.242	-2.89819
150	2.30259	0.538836	106.532	-1.65747
151	2.30259	0.550465	106.835	-0.389982
152	2.30259	0.565108	107.154	0.911226
153	2.30259	0.579873	107.491	2.24643
154	2.30259	0.594766	107.844	3.61593
155	2.30259	0.606775	108.213	5.01309
156	2.30259	0.621911	108.599	6.44509
157	2.30259	0.637192	109.005	7.91228
158	2.30259	0.649522	109.427	9.40786
159	2.30259	0.665079	109.87	10.9393
160	2.30259	0.680797	110.333	12.5069
161	2.30259	0.693493	110.814	14.1037
162	2.30259	0.709522	111.317	15.7374
163	2.30259	0.725736	111.844	17.4085
164	2.30259	0.738846	112.39	19.1097
165	2.30259	0.755415	112.961	20.8491
166	2.30259	0.772193	113.557	22.6272
167	2.30259	0.789191	114.18	24.4444
168	2.30259	0.802956	114.824	26.2932
169	2.30259	0.820379	115.498	28.1822
170	2.30259	0.838054	116.2	30.1119
171	2.30259	0.852385	116.926	32.0746
172	2.30259	0.87055	117.684	34.0791
173	2.30259	0.889006	118.475	36.1261

174	2.30259	0.903992		119.292	38.2077
175	2.30259	0.923014		120.144	40.333
176	2.30259	0.942375		121.032	42.5029
177	2.30259	0.958125		121.95	44.709
178	2.30259	0.97815	122.907	46.9613	
179	2.30259	0.998575		123.904	49.2606
180	2.30259	1.01943	124.943	51.6079	
181	2.30259	1.03643	126.017	53.9944	
182	2.30259	1.05812	127.137	56.4308	
183	2.30259	1.08032	128.304	58.9184	
184	2.30259	1.09847	129.511	61.4477	
185	2.30259	1.12168	130.769	64.0304	
186	2.30259	1.1455	132.081	66.6681	
187	2.30259	1.16505	133.438	69.3507	
188	2.30259	1.19012	134.855	72.091	
189	2.30259	1.21596	136.333	74.8909	
190	2.30259	1.24264	137.877	77.7522	
191	2.30259	1.26464	139.477	80.6641	
192	2.30259	1.29303	141.149	83.6414	
193	2.30259	1.32251	142.898	86.6866	
194	2.30259	1.34694	144.712	89.7881	
195	2.30259	1.37866	146.613	92.9625	
196	2.30259	1.41183	148.606	96.2134	
197	2.30259	1.43953	150.678	99.528	
198	2.30259	1.47579	152.856	102.926	
199	2.30259	1.5141	155.149	106.413	
200	2.30259	1.54643	157.54	109.973	
201	2.30259	1.58927	160.066	113.633	
202	2.30259	1.63524	162.74	117.398	
203	2.30259	1.68494	165.579	121.278	
204	2.30259	1.72793	168.564	125.256	
205	2.30259	1.78661	171.756	129.37	
206	2.30259	1.85218	175.187	133.635	
207	2.30259	1.91103	178.839	138.035	
208	2.30259	1.99539	182.821	142.63	
209	2.30259	2.09693	187.218	147.458	
210	2.30259	2.19728	192.046	152.518	
211	2.63906	2.36561	197.642	158.761	
212	3.55535	2.65209	204.676	168.19	

Data Set Standard Deviation = 1.27141
Numerator = 28287.8
Denominator = 69810.7
W Statistic = 0.405207 = 28287.8 / 69810.7

5% Critical value of 0.976 exceeds 0.405207
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.405207
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Tin

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

Total Percent Non-Detects = 97.6415%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 17
Maximum Background Concentration = 2.30259
Confidence Level = 68%
False Positive Rate = 32%

Location	Date	Samples	Mean	Significant
MW-6	6/30/2010	1	-1.60944	FALSE
MW-12BR	6/30/2010	1	-1.60944	FALSE
MW-7	6/30/2010	1	-1.60944	FALSE
MW-9	6/30/2010	1	-0.562119	FALSE
MW-8	6/30/2010	1	-1.60944	FALSE
MW-10	6/30/2010	1	-1.60944	FALSE
MW-11R	6/30/2010	1	-1.60944	FALSE
MW-12AR	6/30/2010	1	-1.60944	FALSE

Concentrations (ppb)

Parameter: Toluene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 185
Percent Non-Detects: 87.2642%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	16 (94.1176%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	1.15 J	1.15 J
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.33	ND<0.33
			11/16/2009	ND<0.33	ND<0.33
			6/30/2010	ND<0.33	ND<0.33

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-10	27	26 (96.2963%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	0.35 J	0.35 J
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2

			6/11/2009	ND<0.33		ND<0.33
			11/16/2009	ND<0.33		ND<0.33
			6/30/2010	ND<0.33		ND<0.33
MW-9	27	22 (81.4815%)	7/20/1995	0.26 J	0.26 J	
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	0.46 J	0.46 J	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.2 J	0.2 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	0.33 J	0.33 J	
			6/11/2009	0.35 J	0.35 J	
			11/16/2009	ND<0.33		ND<0.33
			6/30/2010	ND<0.33		ND<0.33
MW-12BR	17	16 (94.1176%)	3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	0.24 J	0.24 J	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.33		ND<0.33
			11/16/2009	ND<0.33		ND<0.33
			6/30/2010	ND<0.33		ND<0.33
MW-11R	27	25 (92.5926%)	7/20/1995	ND<2	ND<2	
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	

			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	3.16	3.16	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.55 J	0.55 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.33		ND<0.33
			11/16/2009	ND<0.33		ND<0.33
			6/30/2010	ND<0.33		ND<0.33
MW-8	26	16 (61.5385%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	5	5	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	0.22 J	0.22 J	
			10/25/2005	0.55 J	0.55 J	
			4/29/2006	0.58 J	0.58 J	
			11/18/2006	0.49 J	0.49 J	
			5/23/2007	1.2 J	1.2 J	
			11/28/2007	0.85 J	0.85 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	1.34 J	1.34 J	
			6/11/2009	1	1	
			6/30/2010	0.39 J	0.39 J	
MW-7	27	22 (81.4815%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	0.26 J	0.26 J	
			4/29/2006	0.39 J	0.39 J	

			11/18/2006	0.51 J	0.51 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.27 J	0.27 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	0.29 J	0.29 J	
			6/11/2009	ND<0.33		ND<0.33
			11/16/2009	ND<0.33		ND<0.33
			6/30/2010	ND<0.33		ND<0.33
MW-6	27	26 (96.2963%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	0.43 J	0.43 J	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.33		ND<0.33
			11/16/2009	ND<0.33		ND<0.33
			6/30/2010	ND<0.33		ND<0.33
MW-12AR	17	16 (94.1176%)	3/16/1999		ND<2	ND<2
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	0.37 J	0.37 J	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.33		ND<0.33
			11/16/2009	ND<0.33		ND<0.33
			6/30/2010	ND<0.33		ND<0.33

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.165	-2.65209	7.03356	-0.437594
2	0.165	-2.365	11.2629	7 -0.827921
3	0.165	-2.197	28.1457	8 -1.19047
4	0.165	-2.096	32.8549	-1.53647
5	0.165	-1.995	39.2583	65 -1.86571
6	0.165	-1.911	03.2948	85 -2.18103
7	0.165	-1.852	18.3291	91 -2.48664
8	0.165	-1.786	13.6.111	-2.78143
9	0.165	-1.727	93.3909	68 -3.06653
10	0.165	-1.684	94.1.9358	-3.34455
11	0.165	-1.635	24.4.6098	-3.61436
12	0.165	-1.589	27.4.1356	-3.87659
13	0.165	-1.546	43.49.527	-4.13175
14	0.165	-1.514	1 51.8195	-4.38158
15	0.165	-1.475	79.53.9975	-4.62509
16	0.165	-1.439	53.56.0698	-4.86261
17	0.165	-1.411	83.58.063	-5.09556
18	0.165	-1.378	66.59.9637	-5.32304
19	0.165	-1.346	94.61.778	-5.54529
20	0.165	-1.322	51.63.527	-5.7635
21	0.165	-1.293	03.65.1989	-5.97685
22	0.165	-1.264	64.66.7982	-6.18551
23	0.165	-1.242	64.68.3424	-6.39055
24	0.2	-1.215	96.69.821	-6.63374
25	0.22	-1.190	12.71.2373	-6.89557
26	0.24	-1.165	05.72.5947	-7.17518
27	0.26	-1.145	5 73.9069	-7.47301
28	0.26	-1.121	68.75.165	-7.76465
29	0.27	-1.098	47.76.3716	-8.06123
30	0.29	-1.080	32.77.5387	-8.37453
31	0.33	-1.058	12.78.6584	-8.72371
32	0.35	-1.036	43.79.7326	-9.08646
33	0.35	-1.019	43.80.7718	-9.44326
34	0.37	-0.998575	81.7689	-9.81273
35	0.39	-0.978	158.7257	-10.1942
36	0.39	-0.958125	83.6437	-10.5679
37	0.43	-0.942375	84.5318	-10.9731
38	0.46	-0.923014	85.3837	-11.3977
39	0.49	-0.903992	86.201	-11.8406
40	0.51	-0.889006	86.9913	-12.294
41	0.55	-0.870	5587.7491	-12.7728
42	0.55	-0.852385	88.4757	-13.2417
43	0.58	-0.838054	89.178	-13.7277
44	0.85	-0.820379	89.8511	-14.425
45	1	-0.802956	90.4958	-15.228
46	1	-0.789191	91.1186	-16.0172
47	1	-0.772193	91.7149	-16.7894
48	1	-0.755415	92.2856	-17.5448
49	1	-0.738846	92.8314	-18.2836

50	1	-0.725736	93.3581	-19.0094
51	1	-0.709522	93.8616	-19.7189
52	1	-0.693493	94.3425	-20.4124
53	1	-0.680797	94.806	-21.0932
54	1	-0.665079	95.2483	-21.7583
55	1	-0.649522	95.6702	-22.4078
56	1	-0.637192	96.0762	-23.045
57	1	-0.621911	96.463	-23.6669
58	1	-0.606775	96.8312	-24.2737
59	1	-0.594766	97.1849	-24.8684
60	1	-0.579873	97.5212	-25.4483
61	1	-0.565108	97.8405	-26.0134
62	1	-0.550465	98.1435	-26.5639
63	1	-0.538836	98.4339	-27.1027
64	1	-0.524401	98.7088	-27.6271
65	1	-0.510074	98.969	-28.1372
66	1	-0.498687	99.2177	-28.6359
67	1	-0.484544	99.4525	-29.1204
68	1	-0.470498	99.6739	-29.5909
69	1	-0.459327	99.8848	-30.0503
70	1	-0.445443	100.083	-30.4957
71	1	-0.431644	100.27	-30.9273
72	1	-0.417928	100.444	-31.3453
73	1	-0.40701	100.61	-31.7523
74	1	-0.393433	100.765	-32.1457
75	1	-0.379927	100.909	-32.5256
76	1	-0.369171	101.045	-32.8948
77	1	-0.355788	101.172	-33.2506
78	1	-0.342466	101.289	-33.5931
79	1	-0.331854	101.399	-33.9249
80	1	-0.318639	101.501	-34.2436
81	1	-0.305481	101.594	-34.549
82	1	-0.294992	101.681	-34.844
83	1	-0.281926	101.761	-35.126
84	1	-0.268908	101.833	-35.3949
85	1	-0.255936	101.898	-35.6508
86	1	-0.24559	101.959	-35.8964
87	1	-0.232693	102.013	-36.1291
88	1	-0.219834	102.061	-36.3489
89	1	-0.209575	102.105	-36.5585
90	1	-0.196779	102.144	-36.7553
91	1	-0.184017	102.178	-36.9393
92	1	-0.173829	102.208	-37.1131
93	1	-0.161119	102.234	-37.2742
94	1	-0.148434	102.256	-37.4227
95	1	-0.135774	102.274	-37.5584
96	1	-0.125661	102.29	-37.6841
97	1	-0.113039	102.303	-37.7971
98	1	-0.100433	102.313	-37.8976
99	1	-0.0903606	102.321	-37.9879
100	1	-0.0777834	102.327	-38.0657
101	1	-0.0652187	102.332	-38.1309
102	1	-0.0551734	102.335	-38.1861
103	1	-0.0426257	102.336	-38.2287
104	1	-0.0300838	102.337	-38.2588
105	1	-0.0200544	102.338	-38.2789
106	1	-0.00751925	102.338	-38.2864
107	1	0.00751925	102.338	-38.2789
108	1	0.0200544	102.338	-38.2588
109	1	0.0300838	102.339	-38.2287
110	1	0.0426257	102.341	-38.1861
111	1	0.0551734	102.344	-38.1309

112	1	0.0652187	102.348	-38.0657
113	1	0.0777834	102.354	-37.9879
114	1	0.0903606	102.362	-37.8976
115	1	0.100433	102.373	-37.7971
116	1	0.113039	102.385	-37.6841
117	1	0.125661	102.401	-37.5584
118	1	0.135774	102.42	-37.4227
119	1	0.148434	102.442	-37.2742
120	1	0.161119	102.468	-37.1131
121	1	0.173829	102.498	-36.9393
122	1	0.184017	102.532	-36.7553
123	1	0.196779	102.57	-36.5585
124	1	0.209575	102.614	-36.3489
125	1	0.219834	102.663	-36.1291
126	1	0.232693	102.717	-35.8964
127	1	0.24559	102.777	-35.6508
128	1	0.255936	102.843	-35.3949
129	1	0.268908	102.915	-35.126
130	1	0.281926	102.994	-34.844
131	1	0.294992	103.081	-34.549
132	1	0.305481	103.175	-34.2436
133	1	0.318639	103.276	-33.9249
134	1	0.331854	103.386	-33.5931
135	1	0.342466	103.504	-33.2506
136	1	0.355788	103.63	-32.8948
137	1	0.369171	103.767	-32.5256
138	1	0.379927	103.911	-32.1457
139	1	0.393433	104.066	-31.7523
140	1	0.40701	104.231	-31.3453
141	1	0.417928	104.406	-30.9273
142	1	0.431644	104.592	-30.4957
143	1	0.445443	104.791	-30.0503
144	1	0.459327	105.002	-29.5909
145	1	0.470498	105.223	-29.1204
146	1	0.484544	105.458	-28.6359
147	1	0.498687	105.707	-28.1372
148	1	0.510074	105.967	-27.6271
149	1	0.524401	106.242	-27.1027
150	1	0.538836	106.532	-26.5639
151	1	0.550465	106.835	-26.0134
152	1	0.565108	107.154	-25.4483
153	1	0.579873	107.491	-24.8684
154	1	0.594766	107.844	-24.2737
155	1	0.606775	108.213	-23.6669
156	1	0.621911	108.599	-23.045
157	1	0.637192	109.005	-22.4078
158	1	0.649522	109.427	-21.7583
159	1	0.665079	109.87	-21.0932
160	1	0.680797	110.333	-20.4124
161	1	0.693493	110.814	-19.7189
162	1	0.709522	111.317	-19.0094
163	1	0.725736	111.844	-18.2836
164	1	0.738846	112.39	-17.5448
165	1	0.755415	112.961	-16.7894
166	1	0.772193	113.557	-16.0172
167	1	0.789191	114.18	-15.228
168	1	0.802956	114.824	-14.425
169	1	0.820379	115.498	-13.6047
170	1	0.838054	116.2	-12.7666
171	1	0.852385	116.926	-11.9142
172	1	0.87055	117.684	-11.0437
173	1	0.889006	118.475	-10.1547

174	1	0.903992	119.292	-9.25068
175	1	0.923014	120.144	-8.32766
176	1	0.942375	121.032	-7.38529
177	1	0.958125	121.95	-6.42716
178	1	0.97815	122.907	-5.44901
179	1	0.998575	123.904	-4.45044
180	1	1.01943	124.943	-3.43101
181	1	1.03643	126.017	-2.39458
182	1	1.05812	127.137	-1.33645
183	1	1.08032	128.304	-0.256134
184	1	1.09847	129.511	0.842335
185	1	1.12168	130.769	1.96401
186	1	1.1455	132.081	3.10952
187	1	1.16505	133.438	4.27456
188	1	1.19012	134.855	5.46468
189	1	1.21596	136.333	6.68064
190	1	1.24264	137.877	7.92329
191	1	1.26464	139.477	9.18793
192	1	1.29303	141.149	10.481
193	1	1.32251	142.898	11.8035
194	1	1.34694	144.712	13.1504
195	1	1.37866	146.613	14.5291
196	1	1.41183	148.606	15.9409
197	1	1.43953	150.678	17.3804
198	1	1.47579	152.856	18.8562
199	1	1.5141	155.149	20.3703
200	1	1.54643	157.54	21.9168
201	1	1.58927	160.066	23.506
202	1	1.63524	162.74	25.1413
203	1	1.68494	165.579	26.8262
204	1	1.72793	168.564	28.5541
205	1	1.78661	171.756	30.3407
206	1	1.85218	175.187	32.1929
207	1	1.91103	178.839	34.1039
208	1.15	1.99539	182.821	36.3986
209	1.2	2.09693	187.218	38.915
210	1.34	2.19728	192.046	41.8593
211	3.16	2.36561	197.642	49.3347
212	5	2.65209	204.676	62.5951

Data Set Standard Deviation = 0.446376
Numerator = 3918.15
Denominator = 8604.97
W Statistic = 0.455335 = 3918.15 / 8604.97

5% Critical value of 0.976 exceeds 0.455335
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.455335
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.80181	-2.65209	7.03356	4.77856
2	-1.80181	-2.36561	12.6297	9.04094
3	-1.80181	-2.19728	17.4578	13
4	-1.80181	-2.09693	21.8549	16.7783
5	-1.80181	-1.99539	25.8365	20.3736
6	-1.80181	-1.91103	29.4885	23.8169
7	-1.80181	-1.85218	32.9191	27.1542
8	-1.80181	-1.78661	36.111	30.3733
9	-1.80181	-1.72793	39.0968	33.4867
10	-1.80181	-1.68494	41.9358	36.5227
11	-1.80181	-1.63524	44.6098	39.4691
12	-1.80181	-1.58927	47.1356	42.3326
13	-1.80181	-1.54643	49.527	45.119
14	-1.80181	-1.5141	51.8195	47.8471
15	-1.80181	-1.47579	53.9975	50.5062
16	-1.80181	-1.43953	56.0698	53.1
17	-1.80181	-1.41183	58.063	55.6438
18	-1.80181	-1.37866	59.9637	58.1279
19	-1.80181	-1.34694	61.778	60.5548
20	-1.80181	-1.32251	63.527	62.9377
21	-1.80181	-1.29303	65.1989	65.2675
22	-1.80181	-1.26464	66.7982	67.5462
23	-1.80181	-1.24264	68.3424	69.7852
24	-1.60944	-1.21596	69.821	71.7422
25	-1.51413	-1.19012	71.2373	73.5442
26	-1.42712	-1.16505	72.5947	75.2069
27	-1.34707	-1.1455	73.9069	76.7499
28	-1.34707	-1.12168	75.165	78.2609
29	-1.30933	-1.09847	76.3716	79.6992
30	-1.23787	-1.08032	77.5387	81.0365
31	-1.10866	-1.05812	78.6584	82.2096
32	-1.04982	-1.03643	79.7326	83.2977
33	-1.04982	-1.01943	80.7718	84.3679
34	-0.994252	-0.998575	81.7689	85.3607
35	-0.941609	-0.97815	82.7257	86.2817
36	-0.941609	-0.958125	83.6437	87.1839
37	-0.84397	-0.942375	84.5318	87.9793
38	-0.776529	-0.923014	85.3837	88.696
39	-0.71335	-0.903992	86.201	89.3409
40	-0.673345	-0.889006	86.9913	89.9395
41	-0.597837	-0.87055	87.7491	90.4599
42	-0.597837	-0.852385	88.4757	90.9695
43	-0.544727	-0.838054	89.178	91.426
44	-0.162519	-0.820379	89.8511	91.5593
45	0	-0.802956	90.4958	91.5593
46	0	-0.789191	91.1186	91.5593
47	0	-0.772193	91.7149	91.5593
48	0	-0.755415	92.2856	91.5593
49	0	-0.738846	92.8314	91.5593

50	0	-0.725736	93.3581	91.5593
51	0	-0.709522	93.8616	91.5593
52	0	-0.693493	94.3425	91.5593
53	0	-0.680797	94.806	91.5593
54	0	-0.665079	95.2483	91.5593
55	0	-0.649522	95.6702	91.5593
56	0	-0.637192	96.0762	91.5593
57	0	-0.621911	96.463	91.5593
58	0	-0.606775	96.8312	91.5593
59	0	-0.594766	97.1849	91.5593
60	0	-0.579873	97.5212	91.5593
61	0	-0.565108	97.8405	91.5593
62	0	-0.550465	98.1435	91.5593
63	0	-0.538836	98.4339	91.5593
64	0	-0.524401	98.7088	91.5593
65	0	-0.510074	98.969	91.5593
66	0	-0.498687	99.2177	91.5593
67	0	-0.484544	99.4525	91.5593
68	0	-0.470498	99.6739	91.5593
69	0	-0.459327	99.8848	91.5593
70	0	-0.445443	100.083	91.5593
71	0	-0.431644	100.27	91.5593
72	0	-0.417928	100.444	91.5593
73	0	-0.40701	100.61	91.5593
74	0	-0.393433	100.765	91.5593
75	0	-0.379927	100.909	91.5593
76	0	-0.369171	101.045	91.5593
77	0	-0.355788	101.172	91.5593
78	0	-0.342466	101.289	91.5593
79	0	-0.331854	101.399	91.5593
80	0	-0.318639	101.501	91.5593
81	0	-0.305481	101.594	91.5593
82	0	-0.294992	101.681	91.5593
83	0	-0.281926	101.761	91.5593
84	0	-0.268908	101.833	91.5593
85	0	-0.255936	101.898	91.5593
86	0	-0.24559	101.959	91.5593
87	0	-0.232693	102.013	91.5593
88	0	-0.219834	102.061	91.5593
89	0	-0.209575	102.105	91.5593
90	0	-0.196779	102.144	91.5593
91	0	-0.184017	102.178	91.5593
92	0	-0.173829	102.208	91.5593
93	0	-0.161119	102.234	91.5593
94	0	-0.148434	102.256	91.5593
95	0	-0.135774	102.274	91.5593
96	0	-0.125661	102.29	91.5593
97	0	-0.113039	102.303	91.5593
98	0	-0.100433	102.313	91.5593
99	0	-0.0903606	102.321	91.5593
100	0	-0.0777834	102.327	91.5593
101	0	-0.0652187	102.332	91.5593
102	0	-0.0551734	102.335	91.5593
103	0	-0.0426257	102.336	91.5593
104	0	-0.0300838	102.337	91.5593
105	0	-0.0200544	102.338	91.5593
106	0	-0.00751925	102.338	91.5593
107	0	0.00751925	102.338	91.5593
108	0	0.0200544	102.338	91.5593
109	0	0.0300838	102.339	91.5593
110	0	0.0426257	102.341	91.5593
111	0	0.0551734	102.344	91.5593

112	0	0.0652187	102.348	91.5593
113	0	0.0777834	102.354	91.5593
114	0	0.0903606	102.362	91.5593
115	0	0.100433	102.373	91.5593
116	0	0.113039	102.385	91.5593
117	0	0.125661	102.401	91.5593
118	0	0.135774	102.42	91.5593
119	0	0.148434	102.442	91.5593
120	0	0.161119	102.468	91.5593
121	0	0.173829	102.498	91.5593
122	0	0.184017	102.532	91.5593
123	0	0.196779	102.57	91.5593
124	0	0.209575	102.614	91.5593
125	0	0.219834	102.663	91.5593
126	0	0.232693	102.717	91.5593
127	0	0.24559	102.777	91.5593
128	0	0.255936	102.843	91.5593
129	0	0.268908	102.915	91.5593
130	0	0.281926	102.994	91.5593
131	0	0.294992	103.081	91.5593
132	0	0.305481	103.175	91.5593
133	0	0.318639	103.276	91.5593
134	0	0.331854	103.386	91.5593
135	0	0.342466	103.504	91.5593
136	0	0.355788	103.63	91.5593
137	0	0.369171	103.767	91.5593
138	0	0.379927	103.911	91.5593
139	0	0.393433	104.066	91.5593
140	0	0.40701	104.231	91.5593
141	0	0.417928	104.406	91.5593
142	0	0.431644	104.592	91.5593
143	0	0.445443	104.791	91.5593
144	0	0.459327	105.002	91.5593
145	0	0.470498	105.223	91.5593
146	0	0.484544	105.458	91.5593
147	0	0.498687	105.707	91.5593
148	0	0.510074	105.967	91.5593
149	0	0.524401	106.242	91.5593
150	0	0.538836	106.532	91.5593
151	0	0.550465	106.835	91.5593
152	0	0.565108	107.154	91.5593
153	0	0.579873	107.491	91.5593
154	0	0.594766	107.844	91.5593
155	0	0.606775	108.213	91.5593
156	0	0.621911	108.599	91.5593
157	0	0.637192	109.005	91.5593
158	0	0.649522	109.427	91.5593
159	0	0.665079	109.87	91.5593
160	0	0.680797	110.333	91.5593
161	0	0.693493	110.814	91.5593
162	0	0.709522	111.317	91.5593
163	0	0.725736	111.844	91.5593
164	0	0.738846	112.39	91.5593
165	0	0.755415	112.961	91.5593
166	0	0.772193	113.557	91.5593
167	0	0.789191	114.18	91.5593
168	0	0.802956	114.824	91.5593
169	0	0.820379	115.498	91.5593
170	0	0.838054	116.2	91.5593
171	0	0.852385	116.926	91.5593
172	0	0.87055	117.684	91.5593
173	0	0.889006	118.475	91.5593

174	0	0.903992		119.292	91.5593
175	0	0.923014		120.144	91.5593
176	0	0.942375		121.032	91.5593
177	0	0.958125		121.95	91.5593
178	0	0.97815	122.907	91.5593	
179	0	0.998575		123.904	91.5593
180	0	1.01943	124.943	91.5593	
181	0	1.03643	126.017	91.5593	
182	0	1.05812	127.137	91.5593	
183	0	1.08032	128.304	91.5593	
184	0	1.09847	129.511	91.5593	
185	0	1.12168	130.769	91.5593	
186	0	1.1455	132.081	91.5593	
187	0	1.16505	133.438	91.5593	
188	0	1.19012	134.855	91.5593	
189	0	1.21596	136.333	91.5593	
190	0	1.24264	137.877	91.5593	
191	0	1.26464	139.477	91.5593	
192	0	1.29303	141.149	91.5593	
193	0	1.32251	142.898	91.5593	
194	0	1.34694	144.712	91.5593	
195	0	1.37866	146.613	91.5593	
196	0	1.41183	148.606	91.5593	
197	0	1.43953	150.678	91.5593	
198	0	1.47579	152.856	91.5593	
199	0	1.5141	155.149	91.5593	
200	0	1.54643	157.54	91.5593	
201	0	1.58927	160.066	91.5593	
202	0	1.63524	162.74	91.5593	
203	0	1.68494	165.579	91.5593	
204	0	1.72793	168.564	91.5593	
205	0	1.78661	171.756	91.5593	
206	0	1.85218	175.187	91.5593	
207	0	1.91103	178.839	91.5593	
208	0.139762		1.99539	182.821	91.8382
209	0.182322		2.09693	187.218	92.2205
210	0.29267	2.19728	192.046	92.8636	
211	1.15057	2.36561	197.642	95.5854	
212	1.60944	2.65209	204.676	99.8538	

Data Set Standard Deviation = 0.637269
Numerator = 9970.78
Denominator = 17538.5
W Statistic = 0.568507 = 9970.78 / 17538.5

5% Critical value of 0.976 exceeds 0.568507
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.568507
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Toluene

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	93
	9/23/1999	ND<0	93
	3/15/2000	ND<0	93
	9/24/2003	ND<0	93
	3/11/2004	ND<0	93
	10/12/2004	ND<0	93
	4/1/2005	ND<0	93
	10/25/2005	ND<0	93
	4/29/2006	0.139762 J	208
	11/18/2006	ND<0	93
	5/23/2007	ND<0	93
	11/28/2007	ND<0	93
	6/5/2008	ND<0	93
	11/20/2008	ND<0	93
	6/11/2009	ND<-1.80181	93
	11/16/2009	ND<-1.80181	93
	6/30/2010	ND<-1.80181	93

Rank Sum = 1696
Rank Mean = 99.7647

Background Rank Sum = 1696
Background Rank Mean = 99.7647

Compliance Wells

Well ID	Date	Result	Rank
MW-10	7/20/1995	ND<0	93
	8/24/1995	ND<0	93
	9/28/1995	ND<0	93
	10/26/1995	ND<0	93
	11/19/1996	ND<0	93
	12/19/1996	ND<0	93
	3/24/1997	ND<0	93
	9/24/1997	ND<0	93
	4/7/1998	ND<0	93
	9/23/1998	ND<0	93
	3/16/1999	ND<0	93
	9/23/1999	ND<0	93
	3/15/2000	ND<0	93
	9/24/2003	ND<0	93
	3/11/2004	ND<0	93
	10/12/2004	ND<0	93
	4/1/2005	ND<0	93
	10/25/2005	ND<0	93
	4/29/2006	-1.04982 J	194
	11/18/2006	ND<0	93
	5/23/2007	ND<0	93

	11/28/2007	ND<0	93	
	6/5/2008	ND<0	93	
	11/20/2008	ND<0	93	
	6/11/2009	ND<-1.80181	93	
	11/16/2009	ND<-1.80181	93	
	6/30/2010	ND<-1.80181	93	

Rank Sum = 2612
Rank Mean = 96.7407

MW-9	7/20/1995	-1.34707	J	189
	8/24/1995	ND<0	93	
	9/28/1995	ND<0	93	
	10/26/1995	ND<0	93	
	11/19/1996	ND<0	93	
	12/19/1996	ND<0	93	
	3/24/1997	ND<0	93	
	9/24/1997	ND<0	93	
	4/7/1998	ND<0	93	
	9/23/1998	ND<0	93	
	3/16/1999	ND<0	93	
	9/23/1999	ND<0	93	
	3/15/2000	ND<0	93	
	9/24/2003	ND<0	93	
	3/11/2004	ND<0	93	
	10/12/2004	ND<0	93	
	4/1/2005	ND<0	93	
	10/25/2005	ND<0	93	
	4/29/2006	-0.776529	J	200
	11/18/2006	ND<0	93	
	5/23/2007	ND<0	93	
	11/28/2007	-1.60944	J	186
	6/5/2008	ND<0	93	
	11/20/2008	-1.10866	J	193
	6/11/2009	-1.04982	J	195
	11/16/2009	ND<-1.80181	93	
	6/30/2010	ND<-1.80181	93	

Rank Sum = 3009
Rank Mean = 111.444

MW-12BR	3/16/1999	ND<0	93	
	9/23/1999	ND<0	93	
	3/15/2000	ND<0	93	
	9/24/2003	ND<0	93	
	3/11/2004	ND<0	93	
	10/12/2004	ND<0	93	
	4/1/2005	ND<0	93	
	10/25/2005	ND<0	93	
	4/29/2006	-1.42712	J	188
	11/18/2006	ND<0	93	
	5/23/2007	ND<0	93	
	11/28/2007	ND<0	93	
	6/5/2008	ND<0	93	
	11/20/2008	ND<0	93	
	6/11/2009	ND<-1.80181	93	
	11/16/2009	ND<-1.80181	93	
	6/30/2010	ND<-1.80181	93	

Rank Sum = 1676
Rank Mean = 98.5882

MW-11R	7/20/1995	ND<0	93
	8/24/1995	ND<0	93
	9/28/1995	ND<0	93

	10/26/1995	ND<0	93	
	11/19/1996	ND<0	93	
	12/19/1996	ND<0	93	
	3/24/1997	ND<0	93	
	9/24/1997	ND<0	93	
	4/7/1998	ND<0	93	
	9/23/1998	ND<0	93	
	3/16/1999	ND<0	93	
	9/23/1999	ND<0	93	
	3/15/2000	ND<0	93	
	9/24/2003	ND<0	93	
	3/11/2004	ND<0	93	
	10/12/2004	ND<0	93	
	4/1/2005	ND<0	93	
	10/25/2005	ND<0	93	
	4/29/2006	1.15057		211
	11/18/2006	ND<0	93	
	5/23/2007	ND<0	93	
	11/28/2007	-0.597837 J		203
	6/5/2008	ND<0	93	
	11/20/2008	ND<0	93	
	6/11/2009	ND<-1.80181		93
	11/16/2009	ND<-1.80181		93
	6/30/2010	ND<-1.80181		93

Rank Sum = 2739
Rank Mean = 101.444

MW-8	7/20/1995	ND<0	93	
	8/24/1995	ND<0	93	
	9/28/1995	1.60944		212
	10/26/1995	ND<0	93	
	11/19/1996	ND<0	93	
	12/19/1996	ND<0	93	
	3/24/1997	ND<0	93	
	9/24/1997	ND<0	93	
	4/7/1998	ND<0	93	
	9/23/1998	ND<0	93	
	3/16/1999	ND<0	93	
	9/23/1999	ND<0	93	
	3/15/2000	ND<0	93	
	9/24/2003	ND<0	93	
	3/11/2004	ND<0	93	
	10/12/2004	ND<0	93	
	4/1/2005	-1.51413 J	187	
	10/25/2005	-0.597837 J		204
	4/29/2006	-0.544727 J		205
	11/18/2006	-0.71335 J		201
	5/23/2007	0.182322 J		209
	11/28/2007	-0.162519 J		206
	6/5/2008	ND<0	93	
	11/20/2008	0.29267 J		210
	6/11/2009	0	207	
	6/30/2010	-0.941609 J		197

Rank Sum = 3526
Rank Mean = 135.615

MW-7	7/20/1995	ND<0	93	
	8/24/1995	ND<0	93	
	9/28/1995	ND<0	93	
	10/26/1995	ND<0	93	
	11/19/1996	ND<0	93	
	12/19/1996	ND<0	93	

	3/24/1997	ND<0	93	
	9/24/1997	ND<0	93	
	4/7/1998	ND<0	93	
	9/23/1998	ND<0	93	
	3/16/1999	ND<0	93	
	9/23/1999	ND<0	93	
	3/15/2000	ND<0	93	
	9/24/2003	ND<0	93	
	3/11/2004	ND<0	93	
	10/12/2004	ND<0	93	
	4/1/2005	ND<0	93	
	10/25/2005	-1.34707	J	190
	4/29/2006	-0.941609	J	198
	11/18/2006	-0.673345	J	202
	5/23/2007	ND<0	93	
	11/28/2007	-1.30933	J	191
	6/5/2008	ND<0	93	
	11/20/2008	-1.23787	J	192
	6/11/2009	ND<-1.80181	93	
	11/16/2009	ND<-1.80181	93	
	6/30/2010	ND<-1.80181	93	

Rank Sum = 3019
Rank Mean = 111.815

MW-6	7/20/1995	ND<0	93	
	8/24/1995	ND<0	93	
	9/28/1995	ND<0	93	
	10/26/1995	ND<0	93	
	11/19/1996	ND<0	93	
	12/19/1996	ND<0	93	
	3/24/1997	ND<0	93	
	9/24/1997	ND<0	93	
	4/7/1998	ND<0	93	
	9/23/1998	ND<0	93	
	3/16/1999	ND<0	93	
	9/23/1999	ND<0	93	
	3/15/2000	ND<0	93	
	9/24/2003	ND<0	93	
	3/11/2004	ND<0	93	
	10/12/2004	ND<0	93	
	4/1/2005	ND<0	93	
	10/25/2005	ND<0	93	
	4/29/2006	-0.84397	J	199
	11/18/2006	ND<0	93	
	5/23/2007	ND<0	93	
	11/28/2007	ND<0	93	
	6/5/2008	ND<0	93	
	11/20/2008	ND<0	93	
	6/11/2009	ND<-1.80181	93	
	11/16/2009	ND<-1.80181	93	
	6/30/2010	ND<-1.80181	93	

Rank Sum = 2617
Rank Mean = 96.9259

MW-12AR	3/16/1999	ND<0	93	
	9/23/1999	ND<0	93	
	3/15/2000	ND<0	93	
	9/24/2003	ND<0	93	
	3/11/2004	ND<0	93	
	10/12/2004	ND<0	93	
	4/1/2005	ND<0	93	
	10/25/2005	ND<0	93	

4/29/2006	-0.994252 J	196	
11/18/2006	ND<0	93	
5/23/2007	ND<0	93	
11/28/2007	ND<0	93	
6/5/2008	ND<0	93	
11/20/2008	ND<0	93	
6/11/2009	ND<-1.80181	93	
11/16/2009	ND<-1.80181	93	
6/30/2010	ND<-1.80181	93	

Rank Sum = 1684
Rank Mean = 99.0588

Calculation Results:

Kruskal-Wallis H Statistic = 8.49755
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 25.3291
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
8.49755 < 15.5073 indicating no significant group difference at 5% significance level
25.3291 > 15.5073 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 99.7647

Well	Mean Rank	Dif from Bkg	Critical Value
MW-10	96.7407	-3.02397	44.1836
MW-9	111.444	11.6797	44.1836
MW-12BR	98.5882	-1.17647	48.9476
MW-11R	101.444	1.67974	44.1836
MW-8	135.615	35.8507	44.5106
MW-7	111.815	12.0501	44.1836
MW-6	96.9259	-2.83878	44.1836
MW-12AR	99.0588	-0.705882	48.9476

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 99.7647

Well	Mean Rank	Dif from Bkg	Critical Value
MW-10	96.7407	-3.02397	47.7122
MW-9	111.444	11.6797	47.7122
MW-12BR	98.5882	-1.17647	52.8567
MW-11R	101.444	1.67974	47.7122
MW-8	135.615	35.8507	48.0654
MW-7	111.815	12.0501	47.7122
MW-6	96.9259	-2.83878	47.7122
MW-12AR	99.0588	-0.705882	52.8567

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Toluene

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

Total Percent Non-Detects = 87.2642%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 17
Maximum Background Concentration = 0.139762
Confidence Level = 68%
False Positive Rate = 32%

Location	Date	Samples	Mean	Significant
MW-10	6/30/2010	1	-1.80181	FALSE
MW-9	6/30/2010	1	-1.80181	FALSE
MW-12BR	6/30/2010	1	-1.80181	FALSE
MW-11R	6/30/2010	1	-1.80181	FALSE
MW-8	6/30/2010	1	-0.941609	FALSE
MW-7	6/30/2010	1	-1.80181	FALSE
MW-6	6/30/2010	1	-1.80181	FALSE
MW-12AR	6/30/2010	1	-1.80181	FALSE

Concentrations (ppb)

Parameter: trans-1,2-Dichloroethene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 189
Percent Non-Detects: 89.1509%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.2	ND<0.2
			11/16/2009	ND<0.2	ND<0.2
			6/30/2010	ND<0.2	ND<0.2

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-9	27	27 (100%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2

		6/11/2009	ND<0.2	ND<0.2		
		11/16/2009	ND<0.2	ND<0.2		
		6/30/2010	ND<0.2	ND<0.2		
MW-12BR	17	16 (94.1176%)	3/16/1999		ND<2	ND<2
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	0.22 J	0.22 J		
		10/25/2005	ND<2	ND<2		
		4/29/2006	ND<2	ND<2		
		11/18/2006	ND<2	ND<2		
		5/23/2007	ND<2	ND<2		
		11/28/2007	ND<2	ND<2		
		6/5/2008	ND<2	ND<2		
		11/20/2008	ND<2	ND<2		
		6/11/2009	ND<0.2	ND<0.2		
		11/16/2009	ND<0.2	ND<0.2		
		6/30/2010	ND<0.2	ND<0.2		
MW-12AR	17	17 (100%)	3/16/1999		ND<2	ND<2
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	ND<2	ND<2		
		10/25/2005	ND<2	ND<2		
		4/29/2006	ND<2	ND<2		
		11/18/2006	ND<2	ND<2		
		5/23/2007	ND<2	ND<2		
		11/28/2007	ND<2	ND<2		
		6/5/2008	ND<2	ND<2		
		11/20/2008	ND<2	ND<2		
		6/11/2009	ND<0.2	ND<0.2		
		11/16/2009	ND<0.2	ND<0.2		
		6/30/2010	ND<0.2	ND<0.2		
MW-11R	27	26 (96.2963%)	7/20/1995	ND<2	ND<2	
		8/24/1995	ND<2	ND<2		
		9/28/1995	ND<2	ND<2		
		10/26/1995	0.4 J	0.4 J		
		11/19/1996	ND<2	ND<2		
		12/19/1996	ND<2	ND<2		
		3/24/1997	ND<2	ND<2		
		9/24/1997	ND<2	ND<2		
		4/7/1998	ND<2	ND<2		
		9/23/1998	ND<2	ND<2		
		3/16/1999	ND<2	ND<2		
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	ND<2	ND<2		
		10/25/2005	ND<2	ND<2		
		4/29/2006	ND<2	ND<2		
		11/18/2006	ND<2	ND<2		
		5/23/2007	ND<2	ND<2		
		11/28/2007	ND<2	ND<2		

			6/5/2008	ND<2	ND<2	
			11/20/2008		ND<2	ND<2
			6/11/2009		ND<0.2	ND<0.2
			11/16/2009		ND<0.2	ND<0.2
			6/30/2010		ND<0.2	ND<0.2
MW-8	26	15 (57.6923%)	7/20/1995		ND<2	ND<2
			8/24/1995		4.8	4.8
			9/28/1995		4	4
			10/26/1995		0.4 J	0.4 J
			11/19/1996		ND<2	ND<2
			12/19/1996		ND<2	ND<2
			3/24/1997		5	5
			9/24/1997		ND<2	ND<2
			4/7/1998	ND<2	ND<2	
			9/23/1998		ND<2	ND<2
			3/16/1999		ND<2	ND<2
			9/23/1999		ND<2	ND<2
			3/15/2000		ND<2	ND<2
			9/24/2003		ND<2	ND<2
			3/11/2004		ND<2	ND<2
			10/12/2004		ND<2	ND<2
			4/1/2005	0.28 J	0.28 J	
			10/25/2005		0.52 J	0.52 J
			4/29/2006		0.28 J	0.28 J
			11/18/2006		3.65	3.65
			5/23/2007		ND<2	ND<2
			11/28/2007		0.55 J	0.55 J
			6/5/2008	ND<2	ND<2	
			11/20/2008		0.25 J	0.25 J
			6/11/2009		ND<0.2	ND<0.2
			6/30/2010		0.24 J	0.24 J
MW-7	27	27 (100%)	7/20/1995		ND<2	ND<2
			8/24/1995		ND<2	ND<2
			9/28/1995		ND<2	ND<2
			10/26/1995		ND<2	ND<2
			11/19/1996		ND<2	ND<2
			12/19/1996		ND<2	ND<2
			3/24/1997		ND<2	ND<2
			9/24/1997		ND<2	ND<2
			4/7/1998	ND<2	ND<2	
			9/23/1998		ND<2	ND<2
			3/16/1999		ND<2	ND<2
			9/23/1999		ND<2	ND<2
			3/15/2000		ND<2	ND<2
			9/24/2003		ND<2	ND<2
			3/11/2004		ND<2	ND<2
			10/12/2004		ND<2	ND<2
			4/1/2005	ND<2	ND<2	
			10/25/2005		ND<2	ND<2
			4/29/2006		ND<2	ND<2
			11/18/2006		ND<2	ND<2
			5/23/2007		ND<2	ND<2
			11/28/2007		ND<2	ND<2
			6/5/2008	ND<2	ND<2	
			11/20/2008		ND<2	ND<2
			6/11/2009		ND<0.2	ND<0.2
			11/16/2009		ND<0.2	ND<0.2
			6/30/2010		ND<0.2	ND<0.2
MW-6	27	27 (100%)	7/20/1995		ND<2	ND<2

			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.2	ND<0.2	
			11/16/2009	ND<0.2	ND<0.2	
			6/30/2010	ND<0.2	ND<0.2	
MW-10	27	17 (62.963%)	7/20/1995	ND<2	ND<2	
			8/24/1995	0.34 J	0.34 J	
			9/28/1995	0.7 J	0.7 J	
			10/26/1995	0.6 J	0.6 J	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	0.24 J	0.24 J	
			10/25/2005	0.24 J	0.24 J	
			4/29/2006	0.29 J	0.29 J	
			11/18/2006	0.59 J	0.59 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.28 J	0.28 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	0.21 J	0.21 J	
			6/11/2009	ND<0.2	ND<0.2	
			11/16/2009	0.27 J	0.27 J	
			6/30/2010	ND<0.2	ND<0.2	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: trans-1,2-Dichloroethene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.1	-2.65209	7.03356	-0.265209
2	0.1	-2.365	6.2297	-0.50177
3	0.1	-2.197	8.4578	-0.721499
4	0.1	-2.096	9.8549	-0.931192
5	0.1	-1.995	3.8365	-1.13073
6	0.1	-1.911	0.4885	-1.32183
7	0.1	-1.852	3.9191	-1.50705
8	0.1	-1.786	6.111	-1.68571
9	0.1	-1.727	9.0968	-1.85851
10	0.1	-1.684	4.9358	-2.027
11	0.1	-1.635	4.6098	-2.19052
12	0.1	-1.589	7.1356	-2.34945
13	0.1	-1.546	4.527	-2.50409
14	0.1	-1.514	1.8195	-2.6555
15	0.1	-1.475	3.9975	-2.80308
16	0.1	-1.439	5.0698	-2.94704
17	0.1	-1.411	8.063	-3.08822
18	0.1	-1.378	6.9637	-3.22609
19	0.1	-1.346	1.778	-3.36078
20	0.1	-1.322	5.527	-3.49303
21	0.1	-1.293	5.1989	-3.62233
22	0.1	-1.264	6.7982	-3.7488
23	0.1	-1.242	6.3424	-3.87306
24	0.1	-1.215	9.821	-3.99466
25	0.21	-1.190	1.2373	-4.24458
26	0.22	-1.165	2.5947	-4.50089
27	0.24	-1.145	3.9069	-4.77581
28	0.24	-1.121	6.875.165	-5.04502
29	0.24	-1.098	4.3716	-5.30865
30	0.25	-1.080	7.5387	-5.57873
31	0.27	-1.058	8.6584	-5.86442
32	0.28	-1.036	9.7326	-6.15462
33	0.28	-1.019	0.7718	-6.44006
34	0.28	-0.998575	81.7689	-6.71966
35	0.29	-0.978	2.7257	-7.00333
36	0.34	-0.958125	83.6437	-7.32909
37	0.4	-0.942375	84.5318	-7.70604
38	0.4	-0.923014	85.3837	-8.07525
39	0.52	-0.903992	86.201	-8.54532
40	0.55	-0.889006	86.9913	-9.03428
41	0.59	-0.870	5.7491	-9.5479
42	0.6	-0.852385	88.4757	-10.0593
43	0.7	-0.838054	89.178	-10.646
44	1	-0.820379	89.8511	-11.4663
45	1	-0.802956	90.4958	-12.2693
46	1	-0.789191	91.1186	-13.0585
47	1	-0.772193	91.7149	-13.8307
48	1	-0.755415	92.2856	-14.5861
49	1	-0.738846	92.8314	-15.3249

50	1	-0.725736	93.3581	-16.0507
51	1	-0.709522	93.8616	-16.7602
52	1	-0.693493	94.3425	-17.4537
53	1	-0.680797	94.806	-18.1345
54	1	-0.665079	95.2483	-18.7996
55	1	-0.649522	95.6702	-19.4491
56	1	-0.637192	96.0762	-20.0863
57	1	-0.621911	96.463	-20.7082
58	1	-0.606775	96.8312	-21.315
59	1	-0.594766	97.1849	-21.9097
60	1	-0.579873	97.5212	-22.4896
61	1	-0.565108	97.8405	-23.0547
62	1	-0.550465	98.1435	-23.6052
63	1	-0.538836	98.4339	-24.144
64	1	-0.524401	98.7088	-24.6684
65	1	-0.510074	98.969	-25.1785
66	1	-0.498687	99.2177	-25.6772
67	1	-0.484544	99.4525	-26.1617
68	1	-0.470498	99.6739	-26.6322
69	1	-0.459327	99.8848	-27.0916
70	1	-0.445443	100.083	-27.537
71	1	-0.431644	100.27	-27.9686
72	1	-0.417928	100.444	-28.3866
73	1	-0.40701	100.61	-28.7936
74	1	-0.393433	100.765	-29.187
75	1	-0.379927	100.909	-29.5669
76	1	-0.369171	101.045	-29.9361
77	1	-0.355788	101.172	-30.2919
78	1	-0.342466	101.289	-30.6344
79	1	-0.331854	101.399	-30.9662
80	1	-0.318639	101.501	-31.2849
81	1	-0.305481	101.594	-31.5903
82	1	-0.294992	101.681	-31.8853
83	1	-0.281926	101.761	-32.1673
84	1	-0.268908	101.833	-32.4362
85	1	-0.255936	101.898	-32.6921
86	1	-0.24559	101.959	-32.9377
87	1	-0.232693	102.013	-33.1704
88	1	-0.219834	102.061	-33.3902
89	1	-0.209575	102.105	-33.5998
90	1	-0.196779	102.144	-33.7966
91	1	-0.184017	102.178	-33.9806
92	1	-0.173829	102.208	-34.1544
93	1	-0.161119	102.234	-34.3155
94	1	-0.148434	102.256	-34.464
95	1	-0.135774	102.274	-34.5997
96	1	-0.125661	102.29	-34.7254
97	1	-0.113039	102.303	-34.8384
98	1	-0.100433	102.313	-34.9389
99	1	-0.0903606	102.321	-35.0292
100	1	-0.0777834	102.327	-35.107
101	1	-0.0652187	102.332	-35.1722
102	1	-0.0551734	102.335	-35.2274
103	1	-0.0426257	102.336	-35.27
104	1	-0.0300838	102.337	-35.3001
105	1	-0.0200544	102.338	-35.3202
106	1	-0.00751925	102.338	-35.3277
107	1	0.00751925	102.338	-35.3202
108	1	0.0200544	102.338	-35.3001
109	1	0.0300838	102.339	-35.27
110	1	0.0426257	102.341	-35.2274
111	1	0.0551734	102.344	-35.1722

112	1	0.0652187	102.348	-35.107
113	1	0.0777834	102.354	-35.0292
114	1	0.0903606	102.362	-34.9389
115	1	0.100433	102.373	-34.8384
116	1	0.113039	102.385	-34.7254
117	1	0.125661	102.401	-34.5997
118	1	0.135774	102.42	-34.464
119	1	0.148434	102.442	-34.3155
120	1	0.161119	102.468	-34.1544
121	1	0.173829	102.498	-33.9806
122	1	0.184017	102.532	-33.7966
123	1	0.196779	102.57	-33.5998
124	1	0.209575	102.614	-33.3902
125	1	0.219834	102.663	-33.1704
126	1	0.232693	102.717	-32.9377
127	1	0.24559	102.777	-32.6921
128	1	0.255936	102.843	-32.4362
129	1	0.268908	102.915	-32.1673
130	1	0.281926	102.994	-31.8853
131	1	0.294992	103.081	-31.5903
132	1	0.305481	103.175	-31.2849
133	1	0.318639	103.276	-30.9662
134	1	0.331854	103.386	-30.6344
135	1	0.342466	103.504	-30.2919
136	1	0.355788	103.63	-29.9361
137	1	0.369171	103.767	-29.5669
138	1	0.379927	103.911	-29.187
139	1	0.393433	104.066	-28.7936
140	1	0.40701	104.231	-28.3866
141	1	0.417928	104.406	-27.9686
142	1	0.431644	104.592	-27.537
143	1	0.445443	104.791	-27.0916
144	1	0.459327	105.002	-26.6322
145	1	0.470498	105.223	-26.1617
146	1	0.484544	105.458	-25.6772
147	1	0.498687	105.707	-25.1785
148	1	0.510074	105.967	-24.6684
149	1	0.524401	106.242	-24.144
150	1	0.538836	106.532	-23.6052
151	1	0.550465	106.835	-23.0547
152	1	0.565108	107.154	-22.4896
153	1	0.579873	107.491	-21.9097
154	1	0.594766	107.844	-21.315
155	1	0.606775	108.213	-20.7082
156	1	0.621911	108.599	-20.0863
157	1	0.637192	109.005	-19.4491
158	1	0.649522	109.427	-18.7996
159	1	0.665079	109.87	-18.1345
160	1	0.680797	110.333	-17.4537
161	1	0.693493	110.814	-16.7602
162	1	0.709522	111.317	-16.0507
163	1	0.725736	111.844	-15.3249
164	1	0.738846	112.39	-14.5861
165	1	0.755415	112.961	-13.8307
166	1	0.772193	113.557	-13.0585
167	1	0.789191	114.18	-12.2693
168	1	0.802956	114.824	-11.4663
169	1	0.820379	115.498	-10.646
170	1	0.838054	116.2	-9.80791
171	1	0.852385	116.926	-8.95553
172	1	0.87055	117.684	-8.08498
173	1	0.889006	118.475	-7.19597

174	1	0.903992	119.292	-6.29198
175	1	0.923014	120.144	-5.36897
176	1	0.942375	121.032	-4.42659
177	1	0.958125	121.95	-3.46847
178	1	0.97815	122.907	-2.49032
179	1	0.998575	123.904	-1.49174
180	1	1.01943	124.943	-0.472313
181	1	1.03643	126.017	0.56412
182	1	1.05812	127.137	1.62224
183	1	1.08032	128.304	2.70256
184	1	1.09847	129.511	3.80103
185	1	1.12168	130.769	4.92271
186	1	1.1455	132.081	6.06821
187	1	1.16505	133.438	7.23326
188	1	1.19012	134.855	8.42338
189	1	1.21596	136.333	9.63934
190	1	1.24264	137.877	10.882
191	1	1.26464	139.477	12.1466
192	1	1.29303	141.149	13.4397
193	1	1.32251	142.898	14.7622
194	1	1.34694	144.712	16.1091
195	1	1.37866	146.613	17.4878
196	1	1.41183	148.606	18.8996
197	1	1.43953	150.678	20.3391
198	1	1.47579	152.856	21.8149
199	1	1.5141	155.149	23.329
200	1	1.54643	157.54	24.8754
201	1	1.58927	160.066	26.4647
202	1	1.63524	162.74	28.1
203	1	1.68494	165.579	29.7849
204	1	1.72793	168.564	31.5128
205	1	1.78661	171.756	33.2994
206	1	1.85218	175.187	35.1516
207	1	1.91103	178.839	37.0626
208	1	1.99539	182.821	39.058
209	3.65	2.09693	187.218	46.7118
210	4	2.19728	192.046	55.501
211	4.8	2.36561	197.642	66.8559
212	5	2.65209	204.676	80.1164

Data Set Standard Deviation = 0.584535
Numerator = 6418.63
Denominator = 14756.1
W Statistic = 0.434983 = 6418.63 / 14756.1

5% Critical value of 0.976 exceeds 0.434983
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.434983
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: trans-1,2-Dichloroethene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.30259	-2.65209	7.03356	6.10665
2	-2.30259	-2.36561	12.6297	11.5537
3	-2.30259	-2.19728	17.4578	16.6131
4	-2.30259	-2.09693	21.8549	21.4415
5	-2.30259	-1.99539	25.8365	26.036
6	-2.30259	-1.91103	29.4885	30.4364
7	-2.30259	-1.85218	32.9191	34.7012
8	-2.30259	-1.78661	36.111	38.815
9	-2.30259	-1.72793	39.0968	42.7937
10	-2.30259	-1.68494	41.9358	46.6734
11	-2.30259	-1.63524	44.6098	50.4387
12	-2.30259	-1.58927	47.1356	54.0981
13	-2.30259	-1.54643	49.527	57.6589
14	-2.30259	-1.5141	51.8195	61.1452
15	-2.30259	-1.47579	53.9975	64.5434
16	-2.30259	-1.43953	56.0698	67.858
17	-2.30259	-1.41183	58.063	71.1089
18	-2.30259	-1.37866	59.9637	74.2834
19	-2.30259	-1.34694	61.778	77.3848
20	-2.30259	-1.32251	63.527	80.43
21	-2.30259	-1.29303	65.1989	83.4073
22	-2.30259	-1.26464	66.7982	86.3192
23	-2.30259	-1.24264	68.3424	89.1805
24	-2.30259	-1.21596	69.821	91.9804
25	-1.56065	-1.19012	71.2373	93.8377
26	-1.51413	-1.16505	72.5947	95.6018
27	-1.42712	-1.1455	73.9069	97.2365
28	-1.42712	-1.12168	75.165	98.8373
29	-1.42712	-1.09847	76.3716	100.405
30	-1.38629	-1.08032	77.5387	101.903
31	-1.30933	-1.05812	78.6584	103.288
32	-1.27297	-1.03643	79.7326	104.607
33	-1.27297	-1.01943	80.7718	105.905
34	-1.27297	-0.998575	81.7689	107.176
35	-1.23787	-0.97815	82.7257	108.387
36	-1.07881	-0.958125	83.6437	109.421
37	-0.916291	-0.942375	84.5318	110.284
38	-0.916291	-0.923014	85.3837	111.13
39	-0.653926	-0.903992	86.201	111.721
40	-0.597837	-0.889006	86.9913	112.253
41	-0.527633	-0.870558	87.7491	112.712
42	-0.510826	-0.852385	88.4757	113.147
43	-0.356675	-0.838054	89.178	113.446
44	0	-0.820379	89.8511	113.446
45	0	-0.802956	90.4958	113.446
46	0	-0.789191	91.1186	113.446
47	0	-0.772193	91.7149	113.446
48	0	-0.755415	92.2856	113.446
49	0	-0.738846	92.8314	113.446

50	0	-0.725736	93.3581	113.446
51	0	-0.709522	93.8616	113.446
52	0	-0.693493	94.3425	113.446
53	0	-0.680797	94.806	113.446
54	0	-0.665079	95.2483	113.446
55	0	-0.649522	95.6702	113.446
56	0	-0.637192	96.0762	113.446
57	0	-0.621911	96.463	113.446
58	0	-0.606775	96.8312	113.446
59	0	-0.594766	97.1849	113.446
60	0	-0.579873	97.5212	113.446
61	0	-0.565108	97.8405	113.446
62	0	-0.550465	98.1435	113.446
63	0	-0.538836	98.4339	113.446
64	0	-0.524401	98.7088	113.446
65	0	-0.510074	98.969	113.446
66	0	-0.498687	99.2177	113.446
67	0	-0.484544	99.4525	113.446
68	0	-0.470498	99.6739	113.446
69	0	-0.459327	99.8848	113.446
70	0	-0.445443	100.083	113.446
71	0	-0.431644	100.27	113.446
72	0	-0.417928	100.444	113.446
73	0	-0.40701	100.61	113.446
74	0	-0.393433	100.765	113.446
75	0	-0.379927	100.909	113.446
76	0	-0.369171	101.045	113.446
77	0	-0.355788	101.172	113.446
78	0	-0.342466	101.289	113.446
79	0	-0.331854	101.399	113.446
80	0	-0.318639	101.501	113.446
81	0	-0.305481	101.594	113.446
82	0	-0.294992	101.681	113.446
83	0	-0.281926	101.761	113.446
84	0	-0.268908	101.833	113.446
85	0	-0.255936	101.898	113.446
86	0	-0.24559	101.959	113.446
87	0	-0.232693	102.013	113.446
88	0	-0.219834	102.061	113.446
89	0	-0.209575	102.105	113.446
90	0	-0.196779	102.144	113.446
91	0	-0.184017	102.178	113.446
92	0	-0.173829	102.208	113.446
93	0	-0.161119	102.234	113.446
94	0	-0.148434	102.256	113.446
95	0	-0.135774	102.274	113.446
96	0	-0.125661	102.29	113.446
97	0	-0.113039	102.303	113.446
98	0	-0.100433	102.313	113.446
99	0	-0.0903606	102.321	113.446
100	0	-0.0777834	102.327	113.446
101	0	-0.0652187	102.332	113.446
102	0	-0.0551734	102.335	113.446
103	0	-0.0426257	102.336	113.446
104	0	-0.0300838	102.337	113.446
105	0	-0.0200544	102.338	113.446
106	0	-0.00751925	102.338	113.446
107	0	0.00751925	102.338	113.446
108	0	0.0200544	102.338	113.446
109	0	0.0300838	102.339	113.446
110	0	0.0426257	102.341	113.446
111	0	0.0551734	102.344	113.446

112	0	0.0652187	102.348	113.446
113	0	0.0777834	102.354	113.446
114	0	0.0903606	102.362	113.446
115	0	0.100433	102.373	113.446
116	0	0.113039	102.385	113.446
117	0	0.125661	102.401	113.446
118	0	0.135774	102.42	113.446
119	0	0.148434	102.442	113.446
120	0	0.161119	102.468	113.446
121	0	0.173829	102.498	113.446
122	0	0.184017	102.532	113.446
123	0	0.196779	102.57	113.446
124	0	0.209575	102.614	113.446
125	0	0.219834	102.663	113.446
126	0	0.232693	102.717	113.446
127	0	0.24559	102.777	113.446
128	0	0.255936	102.843	113.446
129	0	0.268908	102.915	113.446
130	0	0.281926	102.994	113.446
131	0	0.294992	103.081	113.446
132	0	0.305481	103.175	113.446
133	0	0.318639	103.276	113.446
134	0	0.331854	103.386	113.446
135	0	0.342466	103.504	113.446
136	0	0.355788	103.63	113.446
137	0	0.369171	103.767	113.446
138	0	0.379927	103.911	113.446
139	0	0.393433	104.066	113.446
140	0	0.40701	104.231	113.446
141	0	0.417928	104.406	113.446
142	0	0.431644	104.592	113.446
143	0	0.445443	104.791	113.446
144	0	0.459327	105.002	113.446
145	0	0.470498	105.223	113.446
146	0	0.484544	105.458	113.446
147	0	0.498687	105.707	113.446
148	0	0.510074	105.967	113.446
149	0	0.524401	106.242	113.446
150	0	0.538836	106.532	113.446
151	0	0.550465	106.835	113.446
152	0	0.565108	107.154	113.446
153	0	0.579873	107.491	113.446
154	0	0.594766	107.844	113.446
155	0	0.606775	108.213	113.446
156	0	0.621911	108.599	113.446
157	0	0.637192	109.005	113.446
158	0	0.649522	109.427	113.446
159	0	0.665079	109.87	113.446
160	0	0.680797	110.333	113.446
161	0	0.693493	110.814	113.446
162	0	0.709522	111.317	113.446
163	0	0.725736	111.844	113.446
164	0	0.738846	112.39	113.446
165	0	0.755415	112.961	113.446
166	0	0.772193	113.557	113.446
167	0	0.789191	114.18	113.446
168	0	0.802956	114.824	113.446
169	0	0.820379	115.498	113.446
170	0	0.838054	116.2	113.446
171	0	0.852385	116.926	113.446
172	0	0.87055	117.684	113.446
173	0	0.889006	118.475	113.446

174	0	0.903992	119.292	113.446
175	0	0.923014	120.144	113.446
176	0	0.942375	121.032	113.446
177	0	0.958125	121.95	113.446
178	0	0.97815	122.907	113.446
179	0	0.998575	123.904	113.446
180	0	1.01943	124.943	113.446
181	0	1.03643	126.017	113.446
182	0	1.05812	127.137	113.446
183	0	1.08032	128.304	113.446
184	0	1.09847	129.511	113.446
185	0	1.12168	130.769	113.446
186	0	1.1455	132.081	113.446
187	0	1.16505	133.438	113.446
188	0	1.19012	134.855	113.446
189	0	1.21596	136.333	113.446
190	0	1.24264	137.877	113.446
191	0	1.26464	139.477	113.446
192	0	1.29303	141.149	113.446
193	0	1.32251	142.898	113.446
194	0	1.34694	144.712	113.446
195	0	1.37866	146.613	113.446
196	0	1.41183	148.606	113.446
197	0	1.43953	150.678	113.446
198	0	1.47579	152.856	113.446
199	0	1.5141	155.149	113.446
200	0	1.54643	157.54	113.446
201	0	1.58927	160.066	113.446
202	0	1.63524	162.74	113.446
203	0	1.68494	165.579	113.446
204	0	1.72793	168.564	113.446
205	0	1.78661	171.756	113.446
206	0	1.85218	175.187	113.446
207	0	1.91103	178.839	113.446
208	0	1.99539	182.821	113.446
209	1.29473	2.09693	187.218	116.161
210	1.38629	2.19728	192.046	119.207
211	1.56862	2.36561	197.642	122.918
212	1.60944	2.65209	204.676	127.186

Data Set Standard Deviation = 0.808421
Numerator = 16176.4
Denominator = 28224.3
W Statistic = 0.573136 = 16176.4 / 28224.3

5% Critical value of 0.976 exceeds 0.573136
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.573136
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: trans-1,2-Dichloroethene

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	95
	9/23/1999	ND<0	95
	3/15/2000	ND<0	95
	9/24/2003	ND<0	95
	3/11/2004	ND<0	95
	10/12/2004	ND<0	95
	4/1/2005	ND<0	95
	10/25/2005	ND<0	95
	4/29/2006	ND<0	95
	11/18/2006	ND<0	95
	5/23/2007	ND<0	95
	11/28/2007	ND<0	95
	6/5/2008	ND<0	95
	11/20/2008	ND<0	95
	6/11/2009	ND<-2.30259	95
	11/16/2009	ND<-2.30259	95
	6/30/2010	ND<-2.30259	95

Rank Sum = 1615
Rank Mean = 95

Background Rank Sum = 1615
Background Rank Mean = 95

Compliance Wells

Well ID	Date	Result	Rank
MW-9	7/20/1995	ND<0	95
	8/24/1995	ND<0	95
	9/28/1995	ND<0	95
	10/26/1995	ND<0	95
	11/19/1996	ND<0	95
	12/19/1996	ND<0	95
	3/24/1997	ND<0	95
	9/24/1997	ND<0	95
	4/7/1998	ND<0	95
	9/23/1998	ND<0	95
	3/16/1999	ND<0	95
	9/23/1999	ND<0	95
	3/15/2000	ND<0	95
	9/24/2003	ND<0	95
	3/11/2004	ND<0	95
	10/12/2004	ND<0	95
	4/1/2005	ND<0	95
	10/25/2005	ND<0	95
	4/29/2006	ND<0	95
	11/18/2006	ND<0	95
	5/23/2007	ND<0	95

	11/28/2007	ND<0	95
	6/5/2008	ND<0	95
	11/20/2008	ND<0	95
	6/11/2009	ND<-2.30259	95
	11/16/2009	ND<-2.30259	95
	6/30/2010	ND<-2.30259	95

Rank Sum = 2565
Rank Mean = 95

MW-12BR	3/16/1999	ND<0	95
	9/23/1999	ND<0	95
	3/15/2000	ND<0	95
	9/24/2003	ND<0	95
	3/11/2004	ND<0	95
	10/12/2004	ND<0	95
	4/1/2005	-1.51413 J	191
	10/25/2005	ND<0	95
	4/29/2006	ND<0	95
	11/18/2006	ND<0	95
	5/23/2007	ND<0	95
	11/28/2007	ND<0	95
	6/5/2008	ND<0	95
	11/20/2008	ND<0	95
	6/11/2009	ND<-2.30259	95
	11/16/2009	ND<-2.30259	95
	6/30/2010	ND<-2.30259	95

Rank Sum = 1711
Rank Mean = 100.647

MW-12AR	3/16/1999	ND<0	95
	9/23/1999	ND<0	95
	3/15/2000	ND<0	95
	9/24/2003	ND<0	95
	3/11/2004	ND<0	95
	10/12/2004	ND<0	95
	4/1/2005	ND<0	95
	10/25/2005	ND<0	95
	4/29/2006	ND<0	95
	11/18/2006	ND<0	95
	5/23/2007	ND<0	95
	11/28/2007	ND<0	95
	6/5/2008	ND<0	95
	11/20/2008	ND<0	95
	6/11/2009	ND<-2.30259	95
	11/16/2009	ND<-2.30259	95
	6/30/2010	ND<-2.30259	95

Rank Sum = 1615
Rank Mean = 95

MW-11R	7/20/1995	ND<0	95
	8/24/1995	ND<0	95
	9/28/1995	ND<0	95
	10/26/1995	-0.916291 J	202
	11/19/1996	ND<0	95
	12/19/1996	ND<0	95
	3/24/1997	ND<0	95
	9/24/1997	ND<0	95
	4/7/1998	ND<0	95
	9/23/1998	ND<0	95
	3/16/1999	ND<0	95
	9/23/1999	ND<0	95
	3/15/2000	ND<0	95

	9/24/2003	ND<0	95	
	3/11/2004	ND<0	95	
	10/12/2004	ND<0	95	
	4/1/2005	ND<0	95	
	10/25/2005	ND<0	95	
	4/29/2006	ND<0	95	
	11/18/2006	ND<0	95	
	5/23/2007	ND<0	95	
	11/28/2007	ND<0	95	
	6/5/2008	ND<0	95	
	11/20/2008	ND<0	95	
	6/11/2009	ND<-2.30259		95
	11/16/2009	ND<-2.30259		95
	6/30/2010	ND<-2.30259		95

Rank Sum = 2672
Rank Mean = 98.963

MW-8	7/20/1995	ND<0	95	
	8/24/1995	1.56862		211
	9/28/1995	1.38629		210
	10/26/1995	-0.916291 J		203
	11/19/1996	ND<0	95	
	12/19/1996	ND<0	95	
	3/24/1997	1.60944		212
	9/24/1997	ND<0	95	
	4/7/1998	ND<0	95	
	9/23/1998	ND<0	95	
	3/16/1999	ND<0	95	
	9/23/1999	ND<0	95	
	3/15/2000	ND<0	95	
	9/24/2003	ND<0	95	
	3/11/2004	ND<0	95	
	10/12/2004	ND<0	95	
	4/1/2005	-1.27297 J	197	
	10/25/2005	-0.653926 J		204
	4/29/2006	-1.27297 J		198
	11/18/2006	1.29473		209
	5/23/2007	ND<0	95	
	11/28/2007	-0.597837 J		205
	6/5/2008	ND<0	95	
	11/20/2008	-1.38629 J		195
	6/11/2009	ND<-2.30259		95
	6/30/2010	-1.42712 J		192

Rank Sum = 3661
Rank Mean = 140.808

MW-7	7/20/1995	ND<0	95
	8/24/1995	ND<0	95
	9/28/1995	ND<0	95
	10/26/1995	ND<0	95
	11/19/1996	ND<0	95
	12/19/1996	ND<0	95
	3/24/1997	ND<0	95
	9/24/1997	ND<0	95
	4/7/1998	ND<0	95
	9/23/1998	ND<0	95
	3/16/1999	ND<0	95
	9/23/1999	ND<0	95
	3/15/2000	ND<0	95
	9/24/2003	ND<0	95
	3/11/2004	ND<0	95
	10/12/2004	ND<0	95

	4/1/2005	ND<0	95	
	10/25/2005	ND<0	95	
	4/29/2006	ND<0	95	
	11/18/2006	ND<0	95	
	5/23/2007	ND<0	95	
	11/28/2007	ND<0	95	
	6/5/2008	ND<0	95	
	11/20/2008	ND<0	95	
	6/11/2009	ND<-2.30259		95
	11/16/2009	ND<-2.30259		95
	6/30/2010	ND<-2.30259		95

Rank Sum = 2565
Rank Mean = 95

MW-6	7/20/1995	ND<0	95	
	8/24/1995	ND<0	95	
	9/28/1995	ND<0	95	
	10/26/1995	ND<0	95	
	11/19/1996	ND<0	95	
	12/19/1996	ND<0	95	
	3/24/1997	ND<0	95	
	9/24/1997	ND<0	95	
	4/7/1998	ND<0	95	
	9/23/1998	ND<0	95	
	3/16/1999	ND<0	95	
	9/23/1999	ND<0	95	
	3/15/2000	ND<0	95	
	9/24/2003	ND<0	95	
	3/11/2004	ND<0	95	
	10/12/2004	ND<0	95	
	4/1/2005	ND<0	95	
	10/25/2005	ND<0	95	
	4/29/2006	ND<0	95	
	11/18/2006	ND<0	95	
	5/23/2007	ND<0	95	
	11/28/2007	ND<0	95	
	6/5/2008	ND<0	95	
	11/20/2008	ND<0	95	
	6/11/2009	ND<-2.30259		95
	11/16/2009	ND<-2.30259		95
	6/30/2010	ND<-2.30259		95

Rank Sum = 2565
Rank Mean = 95

MW-10	7/20/1995	ND<0	95	
	8/24/1995	-1.07881 J		201
	9/28/1995	-0.356675 J		208
	10/26/1995	-0.510826 J		207
	11/19/1996	ND<0	95	
	12/19/1996	ND<0	95	
	3/24/1997	ND<0	95	
	9/24/1997	ND<0	95	
	4/7/1998	ND<0	95	
	9/23/1998	ND<0	95	
	3/16/1999	ND<0	95	
	9/23/1999	ND<0	95	
	3/15/2000	ND<0	95	
	9/24/2003	ND<0	95	
	3/11/2004	ND<0	95	
	10/12/2004	ND<0	95	
	4/1/2005	-1.42712 J	193	
	10/25/2005	-1.42712 J		194

4/29/2006	-1.23787 J	200	
11/18/2006	-0.527633 J	206	
5/23/2007	ND<0	95	
11/28/2007	-1.27297 J	199	
6/5/2008	ND<0	95	
11/20/2008	-1.56065 J	190	
6/11/2009	ND<-2.30259	95	
11/16/2009	-1.30933 J	196	
6/30/2010	ND<-2.30259	95	

Rank Sum = 3609
Rank Mean = 133.667

Calculation Results:

Kruskal-Wallis H Statistic = 18.0319
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 61.8714
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
18.0319 > 15.5073 indicating a significant group difference at 5% significance level
61.8714 > 15.5073 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 95

Well	Mean Rank	Dif from Bkg	Critical Value
MW-9	95	0	44.1836
MW-12BR	100.647	5.64706	48.9476
MW-12AR	95	0	48.9476
MW-11R	98.963	3.96296	44.1836
MW-8	140.808	45.8077	44.5106
MW-7	95	0	44.1836
MW-6	95	0	44.1836
MW-10	133.667	38.6667	44.1836

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 95

Well	Mean Rank	Dif from Bkg	Critical Value
MW-9	95	0	47.7122
MW-12BR	100.647	5.64706	52.8567
MW-12AR	95	0	52.8567
MW-11R	98.963	3.96296	47.7122
MW-8	140.808	45.8077	48.0654
MW-7	95	0	47.7122
MW-6	95	0	47.7122
MW-10	133.667	38.6667	47.7122

Mann-Kendall Trend Analysis

Parameter: trans-1,2-Dichloroethene

Location: MW-8

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

95% Confidence Level

Xj	Xk	Xj - Xk		Positives	Negatives	
1.56862		ND<0	1.56862	1	0	
1.38629		ND<0	1.38629	2	0	
-0.916291 J		ND<0	-0.916291		2	1
ND<0	ND<0	0	2	1		
ND<0	ND<0	0	2	1		
1.60944		ND<0	1.60944	3	1	
ND<0	ND<0	0	3	1		
ND<0	ND<0	0	3	1		
ND<0	ND<0	0	3	1		
ND<0	ND<0	0	3	1		
ND<0	ND<0	0	3	1		
ND<0	ND<0	0	3	1		
ND<0	ND<0	0	3	1		
ND<0	ND<0	0	3	1		
ND<0	ND<0	0	3	1		
-1.27297 J		ND<0	-1.272973		2	
-0.653926 J		ND<0	-0.653926		3	3
-1.27297 J		ND<0	-1.272973		4	
1.29473		ND<0	1.29473	4	4	
ND<0	ND<0	0	4	4		
-0.597837 J		ND<0	-0.597837		4	5
ND<0	ND<0	0	4	5		
-1.38629 J		ND<0	-1.386294		6	
ND<-2.30259		ND<0	-2.302594		7	
-1.42712 J		ND<0	-1.427124		8	
1.38629		1.56862		-0.182322	4	9
-0.916291 J		1.56862		-2.484914	10	
ND<0	1.56862		-1.568624		11	
ND<0	1.56862		-1.568624		12	
1.60944		1.56862		0.040822	5	12
ND<0	1.56862		-1.568625		13	
ND<0	1.56862		-1.568625		14	
ND<0	1.56862		-1.568625		15	
ND<0	1.56862		-1.568625		16	
ND<0	1.56862		-1.568625		17	
ND<0	1.56862		-1.568625		18	
ND<0	1.56862		-1.568625		19	
ND<0	1.56862		-1.568625		20	
ND<0	1.56862		-1.568625		21	
-1.27297 J		1.56862		-2.841585	22	
-0.653926 J		1.56862		-2.222545	23	
-1.27297 J		1.56862		-2.841585	24	
1.29473		1.56862		-0.273889	5	25
ND<0	1.56862		-1.568625		26	
-0.597837 J		1.56862		-2.166455	27	
ND<0	1.56862		-1.568625		28	
-1.38629 J		1.56862		-2.954915	29	

ND<-2.30259	1.56862	-3.8712	5	30		
-1.42712 J	1.56862	-2.995735	31			
-0.916291 J	1.38629	-2.302595	32			
ND<0	1.38629	-1.386295	33			
ND<0	1.38629	-1.386295	34			
1.60944	1.38629	0.223144	6	34		
ND<0	1.38629	-1.386296	35			
ND<0	1.38629	-1.386296	36			
ND<0	1.38629	-1.386296	37			
ND<0	1.38629	-1.386296	38			
ND<0	1.38629	-1.386296	39			
ND<0	1.38629	-1.386296	40			
ND<0	1.38629	-1.386296	41			
ND<0	1.38629	-1.386296	42			
ND<0	1.38629	-1.386296	43			
-1.27297 J	1.38629	-2.659266	44			
-0.653926 J	1.38629	-2.040226	45			
-1.27297 J	1.38629	-2.659266	46			
1.29473	1.38629	-0.0915672	6	47		
ND<0	1.38629	-1.386296	48			
-0.597837 J	1.38629	-1.984136	49			
ND<0	1.38629	-1.386296	50			
-1.38629 J	1.38629	-2.772596	51			
ND<-2.30259	1.38629	-3.688886	52			
-1.42712 J	1.38629	-2.813416	53			
ND<0	-0.916291 J	0.916291	7	53		
ND<0	-0.916291 J	0.916291	8	53		
1.60944	-0.916291 J	2.52573	9	53		
ND<0	-0.916291 J	0.916291	10	53		
ND<0	-0.916291 J	0.916291	11	53		
ND<0	-0.916291 J	0.916291	12	53		
ND<0	-0.916291 J	0.916291	13	53		
ND<0	-0.916291 J	0.916291	14	53		
ND<0	-0.916291 J	0.916291	15	53		
ND<0	-0.916291 J	0.916291	16	53		
ND<0	-0.916291 J	0.916291	17	53		
ND<0	-0.916291 J	0.916291	18	53		
-1.27297 J	-0.916291 J	-0.356675	18	54		
-0.653926 J	-0.916291 J	0.262364	19	54		
-1.27297 J	-0.916291 J	-0.356675	19	55		
1.29473	-0.916291 J	2.21102	20	55		
ND<0	-0.916291 J	0.916291	21	55		
-0.597837 J	-0.916291 J	0.318454	22	55		
ND<0	-0.916291 J	0.916291	23	55		
-1.38629 J	-0.916291 J	-0.470004	23	56		
ND<-2.30259	-0.916291 J	-1.3862923	57			
-1.42712 J	-0.916291 J	-0.510826	23	58		
ND<0	ND<0	0	23	58		
1.60944	ND<0	1.60944	24	58		
ND<0	ND<0	0	24	58		
ND<0	ND<0	0	24	58		
ND<0	ND<0	0	24	58		
ND<0	ND<0	0	24	58		
ND<0	ND<0	0	24	58		
ND<0	ND<0	0	24	58		
ND<0	ND<0	0	24	58		
ND<0	ND<0	0	24	58		
ND<0	ND<0	0	24	58		
-1.27297 J	ND<0	-1.2729724	59			

-0.653926 J ND<0 -0.653926 24 60
-1.27297 J ND<0 -1.2729724 61
1.29473 ND<0 1.29473 25 61
ND<0 ND<0 0 25 61
-0.597837 J ND<0 -0.597837 25 62
ND<0 ND<0 0 25 62
-1.38629 J ND<0 -1.3862925 63
ND<-2.30259 ND<0 -2.3025925 64
-1.42712 J ND<0 -1.4271225 65

1.60944 ND<0 1.60944 26 65
ND<0 ND<0 0 26 65
ND<0 ND<0 0 26 65
ND<0 ND<0 0 26 65
ND<0 ND<0 0 26 65
ND<0 ND<0 0 26 65
ND<0 ND<0 0 26 65
ND<0 ND<0 0 26 65
ND<0 ND<0 0 26 65
ND<0 ND<0 0 26 65
-1.27297 J ND<0 -1.2729726 66
-0.653926 J ND<0 -0.653926 26 67
-1.27297 J ND<0 -1.2729726 68
1.29473 ND<0 1.29473 27 68
ND<0 ND<0 0 27 68
-0.597837 J ND<0 -0.597837 27 69
ND<0 ND<0 0 27 69
-1.38629 J ND<0 -1.3862927 70
ND<-2.30259 ND<0 -2.3025927 71
-1.42712 J ND<0 -1.4271227 72

ND<0 1.60944 -1.6094427 73
ND<0 1.60944 -1.6094427 74
ND<0 1.60944 -1.6094427 75
ND<0 1.60944 -1.6094427 76
ND<0 1.60944 -1.6094427 77
ND<0 1.60944 -1.6094427 78
ND<0 1.60944 -1.6094427 79
ND<0 1.60944 -1.6094427 80
ND<0 1.60944 -1.6094427 81
-1.27297 J 1.60944 -2.8824 27 82
-0.653926 J 1.60944 -2.2633627 83
-1.27297 J 1.60944 -2.8824 27 84
1.29473 1.60944 -0.314711 27 85
ND<0 1.60944 -1.6094427 86
-0.597837 J 1.60944 -2.2072727 87
ND<0 1.60944 -1.6094427 88
-1.38629 J 1.60944 -2.9957327 89
ND<-2.30259 1.60944 -3.9120227 90
-1.42712 J 1.60944 -3.0365527 91

ND<0 ND<0 0 27 91
ND<0 ND<0 0 27 91
ND<0 ND<0 0 27 91
ND<0 ND<0 0 27 91
ND<0 ND<0 0 27 91
ND<0 ND<0 0 27 91
ND<0 ND<0 0 27 91
ND<0 ND<0 0 27 91
-1.27297 J ND<0 -1.2729727 92
-0.653926 J ND<0 -0.653926 27 93
-1.27297 J ND<0 -1.2729727 94

1.29473		ND<0	1.29473	28	94	
ND<0	ND<0	0	28	94		
-0.597837 J		ND<0	-0.597837		28	95
ND<0	ND<0	0	28	95		
-1.38629 J		ND<0	-1.38629	28	96	
ND<-2.30259		ND<0	-2.30259	28	97	
-1.42712 J		ND<0	-1.42712	28	98	
ND<0	ND<0	0	28	98		
ND<0	ND<0	0	28	98		
ND<0	ND<0	0	28	98		
ND<0	ND<0	0	28	98		
ND<0	ND<0	0	28	98		
ND<0	ND<0	0	28	98		
ND<0	ND<0	0	28	98		
-1.27297 J		ND<0	-1.27297	28	99	
-0.653926 J		ND<0	-0.653926		28	100
-1.27297 J		ND<0	-1.27297	28	101	
1.29473		ND<0	1.29473	29	101	
ND<0	ND<0	0	29	101		
-0.597837 J		ND<0	-0.597837		29	102
ND<0	ND<0	0	29	102		
-1.38629 J		ND<0	-1.38629	29	103	
ND<-2.30259		ND<0	-2.30259	29	104	
-1.42712 J		ND<0	-1.42712	29	105	
ND<0	ND<0	0	29	105		
ND<0	ND<0	0	29	105		
ND<0	ND<0	0	29	105		
ND<0	ND<0	0	29	105		
ND<0	ND<0	0	29	105		
ND<0	ND<0	0	29	105		
-1.27297 J		ND<0	-1.27297	29	106	
-0.653926 J		ND<0	-0.653926		29	107
-1.27297 J		ND<0	-1.27297	29	108	
1.29473		ND<0	1.29473	30	108	
ND<0	ND<0	0	30	108		
-0.597837 J		ND<0	-0.597837		30	109
ND<0	ND<0	0	30	109		
-1.38629 J		ND<0	-1.38629	30	110	
ND<-2.30259		ND<0	-2.30259	30	111	
-1.42712 J		ND<0	-1.42712	30	112	
ND<0	ND<0	0	30	112		
ND<0	ND<0	0	30	112		
ND<0	ND<0	0	30	112		
ND<0	ND<0	0	30	112		
ND<0	ND<0	0	30	112		
-1.27297 J		ND<0	-1.27297	30	113	
-0.653926 J		ND<0	-0.653926		30	114
-1.27297 J		ND<0	-1.27297	30	115	
1.29473		ND<0	1.29473	31	115	
ND<0	ND<0	0	31	115		
-0.597837 J		ND<0	-0.597837		31	116
ND<0	ND<0	0	31	116		
-1.38629 J		ND<0	-1.38629	31	117	
ND<-2.30259		ND<0	-2.30259	31	118	
-1.42712 J		ND<0	-1.42712	31	119	
ND<0	ND<0	0	31	119		
ND<0	ND<0	0	31	119		
ND<0	ND<0	0	31	119		

ND<0	ND<0	0	31	119		
-1.27297 J		ND<0	-1.272973	1	120	
-0.653926 J		ND<0	-0.653926		31	121
-1.27297 J		ND<0	-1.272973	1	122	
1.29473		ND<0	1.29473	32	122	
ND<0	ND<0	0	32	122		
-0.597837 J		ND<0	-0.597837		32	123
ND<0	ND<0	0	32	123		
-1.38629 J		ND<0	-1.386293	2	124	
ND<-2.30259		ND<0	-2.302593	2	125	
-1.42712 J		ND<0	-1.427123	2	126	
ND<0	ND<0	0	32	126		
ND<0	ND<0	0	32	126		
ND<0	ND<0	0	32	126		
-1.27297 J		ND<0	-1.272973	2	127	
-0.653926 J		ND<0	-0.653926		32	128
-1.27297 J		ND<0	-1.272973	2	129	
1.29473		ND<0	1.29473	33	129	
ND<0	ND<0	0	33	129		
-0.597837 J		ND<0	-0.597837		33	130
ND<0	ND<0	0	33	130		
-1.38629 J		ND<0	-1.386293	3	131	
ND<-2.30259		ND<0	-2.302593	3	132	
-1.42712 J		ND<0	-1.427123	3	133	
ND<0	ND<0	0	33	133		
ND<0	ND<0	0	33	133		
-1.27297 J		ND<0	-1.272973	3	134	
-0.653926 J		ND<0	-0.653926		33	135
-1.27297 J		ND<0	-1.272973	3	136	
1.29473		ND<0	1.29473	34	136	
ND<0	ND<0	0	34	136		
-0.597837 J		ND<0	-0.597837		34	137
ND<0	ND<0	0	34	137		
-1.38629 J		ND<0	-1.386293	4	138	
ND<-2.30259		ND<0	-2.302593	4	139	
-1.42712 J		ND<0	-1.427123	4	140	
ND<0	ND<0	0	34	140		
-1.27297 J		ND<0	-1.272973	4	141	
-0.653926 J		ND<0	-0.653926		34	142
-1.27297 J		ND<0	-1.272973	4	143	
1.29473		ND<0	1.29473	35	143	
ND<0	ND<0	0	35	143		
-0.597837 J		ND<0	-0.597837		35	144
ND<0	ND<0	0	35	144		
-1.38629 J		ND<0	-1.386293	5	145	
ND<-2.30259		ND<0	-2.302593	5	146	
-1.42712 J		ND<0	-1.427123	5	147	
-1.27297 J		ND<0	-1.272973	5	148	
-0.653926 J		ND<0	-0.653926		35	149
-1.27297 J		ND<0	-1.272973	5	150	
1.29473		ND<0	1.29473	36	150	
ND<0	ND<0	0	36	150		
-0.597837 J		ND<0	-0.597837		36	151
ND<0	ND<0	0	36	151		
-1.38629 J		ND<0	-1.386293	6	152	
ND<-2.30259		ND<0	-2.302593	6	153	
-1.42712 J		ND<0	-1.427123	6	154	

-0.653926 J	-1.27297 J	0.619039	37	154
-1.27297 J	-1.27297 J	0	37	154
1.29473	-1.27297 J	2.56769	38	154
ND<0	-1.27297 J	1.27297	39	154
-0.597837 J	-1.27297 J	0.675129	40	154
ND<0	-1.27297 J	1.27297	41	154
-1.38629 J	-1.27297 J	-0.113329	41	155
ND<-2.30259	-1.27297 J	-1.0296241	156	
-1.42712 J	-1.27297 J	-0.154151	41	157
-1.27297 J	-0.653926 J	-0.619039	41	158
1.29473	-0.653926 J	1.94865	42	158
ND<0	-0.653926 J	0.653926	43	158
-0.597837 J	-0.653926 J	0.0560895	44	158
ND<0	-0.653926 J	0.653926	45	158
-1.38629 J	-0.653926 J	-0.732368	45	159
ND<-2.30259	-0.653926 J	-1.6486645	160	
-1.42712 J	-0.653926 J	-0.7731945	161	
1.29473	-1.27297 J	2.56769	46	161
ND<0	-1.27297 J	1.27297	47	161
-0.597837 J	-1.27297 J	0.675129	48	161
ND<0	-1.27297 J	1.27297	49	161
-1.38629 J	-1.27297 J	-0.113329	49	162
ND<-2.30259	-1.27297 J	-1.0296249	163	
-1.42712 J	-1.27297 J	-0.154151	49	164
ND<0	1.29473	-1.2947349	165	
-0.597837 J	1.29473	-1.8925649	166	
ND<0	1.29473	-1.2947349	167	
-1.38629 J	1.29473	-2.6810249	168	
ND<-2.30259	1.29473	-3.5973149	169	
-1.42712 J	1.29473	-2.7218449	170	
-0.597837 J	ND<0	-0.597837	49	171
ND<0	ND<0	0	49	171
-1.38629 J	ND<0	-1.3862949	172	
ND<-2.30259	ND<0	-2.3025949	173	
-1.42712 J	ND<0	-1.4271249	174	
ND<0	-0.597837 J	0.597837	50	174
-1.38629 J	-0.597837 J	-0.788457	50	175
ND<-2.30259	-0.597837 J	-1.7047550	176	
-1.42712 J	-0.597837 J	-0.829279	50	177
-1.38629 J	ND<0	-1.3862950	178	
ND<-2.30259	ND<0	-2.3025950	179	
-1.42712 J	ND<0	-1.4271250	180	
ND<-2.30259	-1.38629 J	-0.916291	50	181
-1.42712 J	-1.38629 J	-0.040822	50	182
-1.42712 J	ND<-2.30259	0.875469	51	182

S Statistic = 51 - 182 = -131

Tied Group Value Members

1	0	14
2	-1.272972	

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 6024
B = 0
C = 2184
D = 0
E = 184
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1723.67
Z-Score = -3.13124
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.13124| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: Trichloroethene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 130
Percent Non-Detects: 61.3208%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.13	ND<0.13
			11/16/2009	ND<0.13	ND<0.13
			6/30/2010	ND<0.13	ND<0.13

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-7	27	23 (85.1852%)	7/20/1995	1.1	1.1
			8/24/1995	0.8 J	0.8 J
			9/28/1995	0.9 J	0.9 J
			10/26/1995	1 J	1 J
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2

			6/11/2009	ND<0.13	ND<0.13	
			11/16/2009	ND<0.13	ND<0.13	
			6/30/2010	ND<0.13	ND<0.13	
MW-9	27	13 (48.1481%)	7/20/1995	0.33 J	0.33 J	
			8/24/1995	0.5 J	0.5 J	
			9/28/1995	0.8 J	0.8 J	
			10/26/1995	1 J	1 J	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	0.7 J	0.7 J	
			10/25/2005	0.53 J	0.53 J	
			4/29/2006	0.45 J	0.45 J	
			11/18/2006	0.43 J	0.43 J	
			5/23/2007	0.6 J	0.6 J	
			11/28/2007	0.74 J	0.74 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	0.6 J	0.6 J	
			6/11/2009	0.67 J	0.67 J	
			11/16/2009	0.73 J	0.73 J	
			6/30/2010	0.68 J	0.68 J	
MW-12BR	17	14 (82.3529%)	3/16/1999	6.1	6.1	
			9/23/1999	4.5	4.5	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	2.14	2.14	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.13	ND<0.13	
			11/16/2009	ND<0.13	ND<0.13	
			6/30/2010	ND<0.13	ND<0.13	
MW-12AR	17	10 (58.8235%)	3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	5.2	5.2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	0.64 J	0.64 J	
			4/29/2006	0.55 J	0.55 J	
			11/18/2006	0.35 J	0.35 J	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.45 J	0.45 J	

		6/5/2008	ND<2	ND<2	
		11/20/2008	0.23 J	0.23 J	
		6/11/2009	ND<0.13		ND<0.13
		11/16/2009	0.13 J	0.13 J	
		6/30/2010	ND<0.13		ND<0.13
MW-11R	27	9 (33.3333%)	7/20/1995	3.5	3.5
		8/24/1995	8.8	8.8	
		9/28/1995	6	6	
		10/26/1995	8	8	
		11/19/1996	ND<2	ND<2	
		12/19/1996	9	9	
		3/24/1997	7	7	
		9/24/1997	ND<2	ND<2	
		4/7/1998	ND<2	ND<2	
		9/23/1998	ND<2	ND<2	
		3/16/1999	5.1	5.1	
		9/23/1999	2.3	2.3	
		3/15/2000	ND<2	ND<2	
		9/24/2003	ND<2	ND<2	
		3/11/2004	ND<2	ND<2	
		10/12/2004	ND<2	ND<2	
		4/1/2005	3.01	3.01	
		10/25/2005	1.28 J	1.28 J	
		4/29/2006	0.59 J	0.59 J	
		11/18/2006	0.96 J	0.96 J	
		5/23/2007	2	2	
		11/28/2007	1.01 J	1.01 J	
		6/5/2008	ND<2	ND<2	
		11/20/2008	0.29 J	0.29 J	
		6/11/2009	1.5	1.5	
		11/16/2009	0.22 J	0.22 J	
		6/30/2010	1.4	1.4	
MW-10	27	13 (48.1481%)	7/20/1995	0.58 J	0.58 J
		8/24/1995	2.2	2.2	
		9/28/1995	3	3	
		10/26/1995	3	3	
		11/19/1996	ND<2	ND<2	
		12/19/1996	ND<2	ND<2	
		3/24/1997	ND<2	ND<2	
		9/24/1997	ND<2	ND<2	
		4/7/1998	ND<2	ND<2	
		9/23/1998	ND<2	ND<2	
		3/16/1999	3.2	3.2	
		9/23/1999	ND<2	ND<2	
		3/15/2000	ND<2	ND<2	
		9/24/2003	ND<2	ND<2	
		3/11/2004	ND<2	ND<2	
		10/12/2004	ND<2	ND<2	
		4/1/2005	0.88 J	0.88 J	
		10/25/2005	1.15 J	1.15 J	
		4/29/2006	1.27 J	1.27 J	
		11/18/2006	0.89 J	0.89 J	
		5/23/2007	ND<2	ND<2	
		11/28/2007	1 J	1 J	
		6/5/2008	ND<2	ND<2	
		11/20/2008	0.91 J	0.91 J	
		6/11/2009	0.59 J	0.59 J	
		11/16/2009	0.94 J	0.94 J	
		6/30/2010	0.52 J	0.52 J	

MW-8	26	4 (15.3846%)	7/20/1995		19	19
			8/24/1995	300	300	
			9/28/1995	190	190	
			10/26/1995	15	15	
			11/19/1996	ND<2	ND<2	
			12/19/1996	280	280	
			3/24/1997	260	260	
			9/24/1997	150	150	
			4/7/1998	120	120	
			9/23/1998	150	150	
			3/16/1999	120	120	
			9/23/1999	77.4	77.4	
			3/15/2000	160	160	
			9/24/2003	ND<2	ND<2	
			3/11/2004	8.9	8.9	
			10/12/2004	ND<2	ND<2	
			4/1/2005	2.29	2.29	
			10/25/2005	6.66	6.66	
			4/29/2006	2.22	2.22	
			11/18/2006	3.54	3.54	
			5/23/2007	1.6	1.6	
			11/28/2007	4.18	4.18	
			6/5/2008	ND<2 J	ND<2 J	
			11/20/2008	1.3 J	1.3 J	
			6/11/2009	1.3	1.3	
			6/30/2010	0.87 J	0.87 J	
MW-6	27	27 (100%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.13		ND<0.13
			11/16/2009	ND<0.13		ND<0.13
			6/30/2010	ND<0.13		ND<0.13

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Trichloroethene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.065	-2.65209	7.03356	-0.172386
2	0.065	-2.365	11.2629 7	-0.326151
3	0.065	-2.197	28.1745 8	-0.468974
4	0.065	-2.096	32.8549 1	-0.605275
5	0.065	-1.995	39.8365 2	-0.734975
6	0.065	-1.911	32.9488 5	-0.859192
7	0.065	-1.852	18.3291 9	-0.979584
8	0.065	-1.786	13.6111 1	-1.09571
9	0.065	-1.727	93.3909 6	-1.20803
10	0.065	-1.684	94.1935 8	-1.31755
11	0.065	-1.635	24.4609 8	-1.42384
12	0.065	-1.589	27.1356 7	-1.52714
13	0.065	-1.546	43.527 9	-1.62766
14	0.065	-1.514	1.8195 1	-1.72608
15	0.13	-1.475	79.9975 3	-1.91793
16	0.22	-1.439	56.0698 5	-2.23463
17	0.23	-1.411	83.063 8	-2.55935
18	0.29	-1.378	65.9637 6	-2.95916
19	0.33	-1.346	94.778 6	-3.40365
20	0.35	-1.322	51.527 6	-3.86653
21	0.43	-1.293	03.1989 6	-4.42253
22	0.45	-1.264	66.7982 6	-4.99162
23	0.45	-1.242	68.3424 6	-5.55081
24	0.5	-1.215	96.821 9	-6.15879
25	0.52	-1.190	12.2373 7	-6.77765
26	0.53	-1.165	05.5947 7	-7.39512
27	0.55	-1.145	5 73.9069	-8.02515
28	0.58	-1.121	68.165 7	-8.67572
29	0.59	-1.098	47.3716 7	-9.32382
30	0.59	-1.080	32.5387 7	-9.96121
31	0.6	-1.058	12.6584 7	-10.5961
32	0.6	-1.036	43.7326 7	-11.2179
33	0.64	-1.019	43.7718 8	-11.8704
34	0.67	-0.998575	81.7689	-12.5394
35	0.68	-0.978	15.7257 8	-13.2046
36	0.7	-0.958125	83.6437	-13.8753
37	0.73	-0.942375	84.5318	-14.5632
38	0.74	-0.923014	85.3837	-15.2462
39	0.8	-0.903992	86.201	-15.9694
40	0.8	-0.889006	86.9913	-16.6806
41	0.87	-0.870	55.7491 7	-17.438
42	0.88	-0.852385	88.4757	-18.1881
43	0.89	-0.838054	89.178	-18.934
44	0.9	-0.820379	89.8511	-19.6723
45	0.91	-0.802956	90.4958	-20.403
46	0.94	-0.789191	91.1186	-21.1448
47	0.96	-0.772193	91.7149	-21.8861
48	1	-0.755415	92.2856	-22.6416
49	1	-0.738846	92.8314	-23.3804

50	1	-0.725736	93.3581	-24.1061
51	1	-0.709522	93.8616	-24.8157
52	1	-0.693493	94.3425	-25.5091
53	1	-0.680797	94.806	-26.1899
54	1	-0.665079	95.2483	-26.855
55	1	-0.649522	95.6702	-27.5045
56	1	-0.637192	96.0762	-28.1417
57	1	-0.621911	96.463	-28.7637
58	1	-0.606775	96.8312	-29.3704
59	1	-0.594766	97.1849	-29.9652
60	1	-0.579873	97.5212	-30.5451
61	1	-0.565108	97.8405	-31.1102
62	1	-0.550465	98.1435	-31.6606
63	1	-0.538836	98.4339	-32.1995
64	1	-0.524401	98.7088	-32.7239
65	1	-0.510074	98.969	-33.234
66	1	-0.498687	99.2177	-33.7326
67	1	-0.484544	99.4525	-34.2172
68	1	-0.470498	99.6739	-34.6877
69	1	-0.459327	99.8848	-35.147
70	1	-0.445443	100.083	-35.5924
71	1	-0.431644	100.27	-36.0241
72	1	-0.417928	100.444	-36.442
73	1	-0.40701	100.61	-36.849
74	1	-0.393433	100.765	-37.2425
75	1	-0.379927	100.909	-37.6224
76	1	-0.369171	101.045	-37.9916
77	1	-0.355788	101.172	-38.3473
78	1	-0.342466	101.289	-38.6898
79	1	-0.331854	101.399	-39.0217
80	1	-0.318639	101.501	-39.3403
81	1	-0.305481	101.594	-39.6458
82	1	-0.294992	101.681	-39.9408
83	1	-0.281926	101.761	-40.2227
84	1	-0.268908	101.833	-40.4916
85	1	-0.255936	101.898	-40.7476
86	1	-0.24559	101.959	-40.9931
87	1	-0.232693	102.013	-41.2258
88	1	-0.219834	102.061	-41.4457
89	1	-0.209575	102.105	-41.6552
90	1	-0.196779	102.144	-41.852
91	1	-0.184017	102.178	-42.036
92	1	-0.173829	102.208	-42.2099
93	1	-0.161119	102.234	-42.371
94	1	-0.148434	102.256	-42.5194
95	1	-0.135774	102.274	-42.6552
96	1	-0.125661	102.29	-42.7809
97	1	-0.113039	102.303	-42.8939
98	1	-0.100433	102.313	-42.9943
99	1	-0.0903606	102.321	-43.0847
100	1	-0.0777834	102.327	-43.1625
101	1	-0.0652187	102.332	-43.2277
102	1	-0.0551734	102.335	-43.2829
103	1	-0.0426257	102.336	-43.3255
104	1	-0.0300838	102.337	-43.3556
105	1	-0.0200544	102.338	-43.3756
106	1	-0.00751925	102.338	-43.3831
107	1	0.00751925	102.338	-43.3756
108	1	0.0200544	102.338	-43.3556
109	1	0.0300838	102.339	-43.3255
110	1	0.0426257	102.341	-43.2829
111	1	0.0551734	102.344	-43.2277

112	1	0.0652187	102.348	-43.1625
113	1	0.0777834	102.354	-43.0847
114	1	0.0903606	102.362	-42.9943
115	1	0.100433	102.373	-42.8939
116	1	0.113039	102.385	-42.7809
117	1	0.125661	102.401	-42.6552
118	1	0.135774	102.42	-42.5194
119	1	0.148434	102.442	-42.371
120	1	0.161119	102.468	-42.2099
121	1	0.173829	102.498	-42.036
122	1	0.184017	102.532	-41.852
123	1	0.196779	102.57	-41.6552
124	1	0.209575	102.614	-41.4457
125	1	0.219834	102.663	-41.2258
126	1	0.232693	102.717	-40.9931
127	1	0.24559	102.777	-40.7476
128	1	0.255936	102.843	-40.4916
129	1	0.268908	102.915	-40.2227
130	1	0.281926	102.994	-39.9408
131	1	0.294992	103.081	-39.6458
132	1	0.305481	103.175	-39.3403
133	1	0.318639	103.276	-39.0217
134	1	0.331854	103.386	-38.6898
135	1	0.342466	103.504	-38.3473
136	1	0.355788	103.63	-37.9916
137	1	0.369171	103.767	-37.6224
138	1	0.379927	103.911	-37.2425
139	1	0.393433	104.066	-36.849
140	1	0.40701	104.231	-36.442
141	1	0.417928	104.406	-36.0241
142	1	0.431644	104.592	-35.5924
143	1	0.445443	104.791	-35.147
144	1	0.459327	105.002	-34.6877
145	1	0.470498	105.223	-34.2172
146	1	0.484544	105.458	-33.7326
147	1	0.498687	105.707	-33.234
148	1	0.510074	105.967	-32.7239
149	1	0.524401	106.242	-32.1995
150	1	0.538836	106.532	-31.6606
151	1	0.550465	106.835	-31.1102
152	1	0.565108	107.154	-30.5451
153	1	0.579873	107.491	-29.9652
154	1	0.594766	107.844	-29.3704
155	1	0.606775	108.213	-28.7637
156	1	0.621911	108.599	-28.1417
157	1	0.637192	109.005	-27.5045
158	1	0.649522	109.427	-26.855
159	1	0.665079	109.87	-26.1899
160	1	0.680797	110.333	-25.5091
161	1	0.693493	110.814	-24.8157
162	1	0.709522	111.317	-24.1061
163	1	0.725736	111.844	-23.3804
164	1	0.738846	112.39	-22.6416
165	1	0.755415	112.961	-21.8861
166	1	0.772193	113.557	-21.1139
167	1.01	0.789191	114.18	-20.3169
168	1.1	0.802956	114.824	-19.4336
169	1.15	0.820379	115.498	-18.4902
170	1.27	0.838054	116.2	-17.4258
171	1.28	0.852385	116.926	-16.3348
172	1.3	0.87055	117.684	-15.2031
173	1.3	0.889006	118.475	-14.0474

174	1.4	0.903992		119.292	-12.7818
175	1.5	0.923014		120.144	-11.3973
176	1.6	0.942375		121.032	-9.88946
177	2	0.958125		121.95	-7.97321
178	2.14	0.97815	122.907	-5.87997	
179	2.2	0.998575		123.904	-3.6831
180	2.22	1.01943	124.943	-1.41997	
181	2.29	1.03643	126.017	0.95346	
182	2.3	1.05812	127.137	3.38714	
183	3	1.08032	128.304	6.6281	
184	3	1.09847	129.511	9.92351	
185	3.01	1.12168	130.769	13.2998	
186	3.2	1.1455	132.081	16.9654	
187	3.5	1.16505	133.438	21.043	
188	3.54	1.19012	134.855	25.2561	
189	4.18	1.21596	136.333	30.3388	
190	4.5	1.24264	137.877	35.9307	
191	5.1	1.26464	139.477	42.3803	
192	5.2	1.29303	141.149	49.1041	
193	6	1.32251	142.898	57.0391	
194	6.1	1.34694	144.712	65.2555	
195	6.66	1.37866	146.613	74.4373	
196	7	1.41183	148.606	84.3201	
197	8	1.43953	150.678	95.8364	
198	8.8	1.47579	152.856	108.823	
199	8.9	1.5141	155.149	122.299	
200	9	1.54643	157.54	136.217	
201	15	1.58927	160.066	160.056	
202	19	1.63524	162.74	191.125	
203	77.4	1.68494	165.579	321.54	
204	120	1.72793	168.564	528.891	
205	120	1.78661	171.756	743.285	
206	150	1.85218	175.187	1021.11	
207	150	1.91103	178.839	1307.77	
208	160	1.99539	182.821	1627.03	
209	190	2.09693	187.218	2025.45	
210	260	2.19728	192.046	2596.74	
211	280	2.36561	197.642	3259.11	
212	300	2.65209	204.676	4054.74	

Data Set Standard Deviation = 41.1881
Numerator = 1.64409e+007
Denominator = 7.32643e+007
W Statistic = 0.224405 = 1.64409e+007 / 7.32643e+007

5% Critical value of 0.976 exceeds 0.224405
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.224405
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Trichloroethene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)	
1	-2.73337	-2.65209	7.03356	7.24913	
2	-2.73337	-2.36561	12.6297	13.7152	
3	-2.73337	-2.19728	17.4578	19.7212	
4	-2.73337	-2.09693	21.8549	25.4529	
5	-2.73337	-1.99539	25.8365	30.907	
6	-2.73337	-1.91103	29.4885	36.1306	
7	-2.73337	-1.85218	32.9191	41.1933	
8	-2.73337	-1.78661	36.111	46.0767	
9	-2.73337	-1.72793	39.0968	50.7998	
10	-2.73337	-1.68494	41.9358	55.4054	
11	-2.73337	-1.63524	44.6098	59.8751	
12	-2.73337	-1.58927	47.1356	64.2191	
13	-2.73337	-1.54643	49.527	68.4461	
14	-2.73337	-1.5141	51.8195	72.5847	
15	-2.04022	-1.47579	53.9975	75.5956	
16	-1.51413	-1.43953	56.0698	77.7753	
17	-1.46968	-1.41183	58.063	79.8502	
18	-1.23787	-1.37866	59.9637	81.5568	
19	-1.10866	-1.34694	61.778	83.0501	
20	-1.04982	-1.32251	63.527	84.4385	
21	-0.84397	-1.29303	65.1989	85.5298	
22	-0.798508	-1.26464	66.7982	86.5396	
23	-0.798508	-1.24264	68.3424	87.5319	
24	-0.693147	-1.21596	69.821	88.3747	
25	-0.653926	-1.19012	71.2373	89.153	
26	-0.634878	-1.16505	72.5947	89.8926	
27	-0.597837	-1.1455	73.9069	90.5774	
28	-0.544727	-1.12168	75.165	91.1885	
29	-0.527633	-1.09847	76.3716	91.768	
30	-0.527633	-1.08032	77.5387	92.3381	
31	-0.510826	-1.05812	78.6584	92.8786	
32	-0.510826	-1.03643	79.7326	93.408	
33	-0.446287	-1.01943	80.7718	93.863	
34	-0.400478	-0.998575		81.7689	94.2629
35	-0.385662	-0.97815	82.7257	94.6401	
36	-0.356675	-0.958125		83.6437	94.9819
37	-0.314711	-0.942375		84.5318	95.2784
38	-0.301105	-0.923014		85.3837	95.5563
39	-0.223144	-0.903992		86.201	95.7581
40	-0.223144	-0.889006		86.9913	95.9564
41	-0.139262	-0.87055	87.7491	96.0777	
42	-0.127833	-0.852385		88.4757	96.1866
43	-0.116534	-0.838054		89.178	96.2843
44	-0.105361	-0.820379		89.8511	96.3707
45	-0.0943107	-0.802956		90.4958	96.4465
46	-0.0618754	-0.789191		91.1186	96.4953
47	-0.040822	-0.772193		91.7149	96.5268
48	0	-0.755415	92.2856	96.5268	
49	0	-0.738846	92.8314	96.5268	

50	0	-0.725736	93.3581	96.5268
51	0	-0.709522	93.8616	96.5268
52	0	-0.693493	94.3425	96.5268
53	0	-0.680797	94.806	96.5268
54	0	-0.665079	95.2483	96.5268
55	0	-0.649522	95.6702	96.5268
56	0	-0.637192	96.0762	96.5268
57	0	-0.621911	96.463	96.5268
58	0	-0.606775	96.8312	96.5268
59	0	-0.594766	97.1849	96.5268
60	0	-0.579873	97.5212	96.5268
61	0	-0.565108	97.8405	96.5268
62	0	-0.550465	98.1435	96.5268
63	0	-0.538836	98.4339	96.5268
64	0	-0.524401	98.7088	96.5268
65	0	-0.510074	98.969	96.5268
66	0	-0.498687	99.2177	96.5268
67	0	-0.484544	99.4525	96.5268
68	0	-0.470498	99.6739	96.5268
69	0	-0.459327	99.8848	96.5268
70	0	-0.445443	100.083	96.5268
71	0	-0.431644	100.27	96.5268
72	0	-0.417928	100.444	96.5268
73	0	-0.40701	100.61	96.5268
74	0	-0.393433	100.765	96.5268
75	0	-0.379927	100.909	96.5268
76	0	-0.369171	101.045	96.5268
77	0	-0.355788	101.172	96.5268
78	0	-0.342466	101.289	96.5268
79	0	-0.331854	101.399	96.5268
80	0	-0.318639	101.501	96.5268
81	0	-0.305481	101.594	96.5268
82	0	-0.294992	101.681	96.5268
83	0	-0.281926	101.761	96.5268
84	0	-0.268908	101.833	96.5268
85	0	-0.255936	101.898	96.5268
86	0	-0.24559	101.959	96.5268
87	0	-0.232693	102.013	96.5268
88	0	-0.219834	102.061	96.5268
89	0	-0.209575	102.105	96.5268
90	0	-0.196779	102.144	96.5268
91	0	-0.184017	102.178	96.5268
92	0	-0.173829	102.208	96.5268
93	0	-0.161119	102.234	96.5268
94	0	-0.148434	102.256	96.5268
95	0	-0.135774	102.274	96.5268
96	0	-0.125661	102.29	96.5268
97	0	-0.113039	102.303	96.5268
98	0	-0.100433	102.313	96.5268
99	0	-0.0903606	102.321	96.5268
100	0	-0.0777834	102.327	96.5268
101	0	-0.0652187	102.332	96.5268
102	0	-0.0551734	102.335	96.5268
103	0	-0.0426257	102.336	96.5268
104	0	-0.0300838	102.337	96.5268
105	0	-0.0200544	102.338	96.5268
106	0	-0.00751925	102.338	96.5268
107	0	0.00751925	102.338	96.5268
108	0	0.0200544	102.338	96.5268
109	0	0.0300838	102.339	96.5268
110	0	0.0426257	102.341	96.5268
111	0	0.0551734	102.344	96.5268

112	0	0.0652187	102.348	96.5268	
113	0	0.0777834	102.354	96.5268	
114	0	0.0903606	102.362	96.5268	
115	0	0.100433	102.373	96.5268	
116	0	0.113039	102.385	96.5268	
117	0	0.125661	102.401	96.5268	
118	0	0.135774	102.42	96.5268	
119	0	0.148434	102.442	96.5268	
120	0	0.161119	102.468	96.5268	
121	0	0.173829	102.498	96.5268	
122	0	0.184017	102.532	96.5268	
123	0	0.196779	102.57	96.5268	
124	0	0.209575	102.614	96.5268	
125	0	0.219834	102.663	96.5268	
126	0	0.232693	102.717	96.5268	
127	0	0.24559	102.777	96.5268	
128	0	0.255936	102.843	96.5268	
129	0	0.268908	102.915	96.5268	
130	0	0.281926	102.994	96.5268	
131	0	0.294992	103.081	96.5268	
132	0	0.305481	103.175	96.5268	
133	0	0.318639	103.276	96.5268	
134	0	0.331854	103.386	96.5268	
135	0	0.342466	103.504	96.5268	
136	0	0.355788	103.63	96.5268	
137	0	0.369171	103.767	96.5268	
138	0	0.379927	103.911	96.5268	
139	0	0.393433	104.066	96.5268	
140	0	0.40701	104.231	96.5268	
141	0	0.417928	104.406	96.5268	
142	0	0.431644	104.592	96.5268	
143	0	0.445443	104.791	96.5268	
144	0	0.459327	105.002	96.5268	
145	0	0.470498	105.223	96.5268	
146	0	0.484544	105.458	96.5268	
147	0	0.498687	105.707	96.5268	
148	0	0.510074	105.967	96.5268	
149	0	0.524401	106.242	96.5268	
150	0	0.538836	106.532	96.5268	
151	0	0.550465	106.835	96.5268	
152	0	0.565108	107.154	96.5268	
153	0	0.579873	107.491	96.5268	
154	0	0.594766	107.844	96.5268	
155	0	0.606775	108.213	96.5268	
156	0	0.621911	108.599	96.5268	
157	0	0.637192	109.005	96.5268	
158	0	0.649522	109.427	96.5268	
159	0	0.665079	109.87	96.5268	
160	0	0.680797	110.333	96.5268	
161	0	0.693493	110.814	96.5268	
162	0	0.709522	111.317	96.5268	
163	0	0.725736	111.844	96.5268	
164	0	0.738846	112.39	96.5268	
165	0	0.755415	112.961	96.5268	
166	0	0.772193	113.557	96.5268	
167	0.00995033	0.789191	114.18	96.5347	
168	0.0953102	0.802956	114.824	96.6112	
169	0.139762	0.820379	115.498	96.7259	
170	0.239017	0.838054	116.2	96.9262	
171	0.24686	0.852385	116.926	97.1366	
172	0.262364	0.87055	117.684	97.365	
173	0.262364	0.889006	118.475	97.5982	

174	0.336472		0.903992		119.292	97.9024
175	0.405465		0.923014		120.144	98.2767
176	0.470004		0.942375		121.032	98.7196
177	0.693147		0.958125		121.95	99.3837
178	0.760806		0.97815	122.907	100.128	
179	0.788457		0.998575		123.904	100.915
180	0.797507		1.01943	124.943	101.728	
181	0.828552		1.03643	126.017	102.587	
182	0.832909		1.05812	127.137	103.468	
183	1.09861	1.08032	128.304	104.655		
184	1.09861	1.09847	129.511	105.862		
185	1.10194	1.12168	130.769	107.098		
186	1.16315	1.1455	132.081	108.43		
187	1.25276	1.16505	133.438	109.89		
188	1.26413	1.19012	134.855	111.394		
189	1.43031	1.21596	136.333	113.134		
190	1.50408	1.24264	137.877	115.003		
191	1.62924	1.26464	139.477	117.063		
192	1.64866	1.29303	141.149	119.195		
193	1.79176	1.32251	142.898	121.564		
194	1.80829	1.34694	144.712	124		
195	1.89612	1.37866	146.613	126.614		
196	1.94591	1.41183	148.606	129.361		
197	2.07944	1.43953	150.678	132.355		
198	2.17475	1.47579	152.856	135.564		
199	2.18605	1.5141	155.149	138.874		
200	2.19722	1.54643	157.54	142.272		
201	2.70805	1.58927	160.066	146.576		
202	2.94444	1.63524	162.74	151.391		
203	4.34899	1.68494	165.579	158.719		
204	4.78749	1.72793	168.564	166.991		
205	4.78749	1.78661	171.756	175.544		
206	5.01064	1.85218	175.187	184.825		
207	5.01064	1.91103	178.839	194.4		
208	5.07517	1.99539	182.821	204.527		
209	5.24702	2.09693	187.218	215.53		
210	5.56068	2.19728	192.046	227.748		
211	5.63479	2.36561	197.642	241.078		
212	5.70378	2.65209	204.676	256.205		

Data Set Standard Deviation = 1.46269
Numerator = 65641
Denominator = 92396.3
W Statistic = 0.71043 = 65641 / 92396.3

5% Critical value of 0.976 exceeds 0.71043
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.71043
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Trichloroethene

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	65.5
	9/23/1999	ND<0	65.5
	3/15/2000	ND<0	65.5
	9/24/2003	ND<0	65.5
	3/11/2004	ND<0	65.5
	10/12/2004	ND<0	65.5
	4/1/2005	ND<0	65.5
	10/25/2005	ND<0	65.5
	4/29/2006	ND<0	65.5
	11/18/2006	ND<0	65.5
	5/23/2007	ND<0	65.5
	11/28/2007	ND<0	65.5
	6/5/2008	ND<0	65.5
	11/20/2008	ND<0	65.5
	6/11/2009	ND<-2.73337	65.5
	11/16/2009	ND<-2.73337	65.5
	6/30/2010	ND<-2.73337	65.5

Rank Sum = 1113.5
Rank Mean = 65.5

Background Rank Sum = 1113.5
Background Rank Mean = 65.5

Compliance Wells

Well ID	Date	Result	Rank
MW-7	7/20/1995	0.0953102	168
	8/24/1995	-0.223144 J	155
	9/28/1995	-0.105361 J	160
	10/26/1995	0 J	164
	11/19/1996	ND<0	65.5
	12/19/1996	ND<0	65.5
	3/24/1997	ND<0	65.5
	9/24/1997	ND<0	65.5
	4/7/1998	ND<0	65.5
	9/23/1998	ND<0	65.5
	3/16/1999	ND<0	65.5
	9/23/1999	ND<0	65.5
	3/15/2000	ND<0	65.5
	9/24/2003	ND<0	65.5
	3/11/2004	ND<0	65.5
	10/12/2004	ND<0	65.5
	4/1/2005	ND<0	65.5
	10/25/2005	ND<0	65.5
	4/29/2006	ND<0	65.5
	11/18/2006	ND<0	65.5
	5/23/2007	ND<0	65.5

	11/28/2007	ND<0	65.5
	6/5/2008	ND<0	65.5
	11/20/2008	ND<0	65.5
	6/11/2009	ND<-2.73337	65.5
	11/16/2009	ND<-2.73337	65.5
	6/30/2010	ND<-2.73337	65.5

Rank Sum = 2153.5
Rank Mean = 79.7593

MW-9	7/20/1995	-1.10866 J	135
	8/24/1995	-0.693147 J	140
	9/28/1995	-0.223144 J	156
	10/26/1995	0 J	165
	11/19/1996	ND<0	65.5
	12/19/1996	ND<0	65.5
	3/24/1997	ND<0	65.5
	9/24/1997	ND<0	65.5
	4/7/1998	ND<0	65.5
	9/23/1998	ND<0	65.5
	3/16/1999	ND<0	65.5
	9/23/1999	ND<0	65.5
	3/15/2000	ND<0	65.5
	9/24/2003	ND<0	65.5
	3/11/2004	ND<0	65.5
	10/12/2004	ND<0	65.5
	4/1/2005	-0.356675 J	152
	10/25/2005	-0.634878 J	142
	4/29/2006	-0.798508 J	138
	11/18/2006	-0.84397 J	137
	5/23/2007	-0.510826 J	147
	11/28/2007	-0.301105 J	154
	6/5/2008	ND<0	65.5
	11/20/2008	-0.510826 J	148
	6/11/2009	-0.400478 J	150
	11/16/2009	-0.314711 J	153
	6/30/2010	-0.385662 J	151

Rank Sum = 2919.5
Rank Mean = 108.13

MW-12BR	3/16/1999	1.80829		194
	9/23/1999	1.50408	190	
	3/15/2000	ND<0	65.5	
	9/24/2003	ND<0	65.5	
	3/11/2004	ND<0	65.5	
	10/12/2004	ND<0	65.5	
	4/1/2005	0.760806	178	
	10/25/2005	ND<0	65.5	
	4/29/2006	ND<0	65.5	
	11/18/2006	ND<0	65.5	
	5/23/2007	ND<0	65.5	
	11/28/2007	ND<0	65.5	
	6/5/2008	ND<0	65.5	
	11/20/2008	ND<0	65.5	
	6/11/2009	ND<-2.73337	65.5	
	11/16/2009	ND<-2.73337	65.5	
	6/30/2010	ND<-2.73337	65.5	

Rank Sum = 1479
Rank Mean = 87

MW-12AR	3/16/1999	ND<0	65.5
	9/23/1999	ND<0	65.5
	3/15/2000	ND<0	65.5

	9/24/2003	1.64866		192
	3/11/2004	ND<0	65.5	
	10/12/2004	ND<0	65.5	
	4/1/2005	ND<0	65.5	
	10/25/2005	-0.446287	J	149
	4/29/2006	-0.597837	J	143
	11/18/2006	-1.04982	J	136
	5/23/2007	ND<0	65.5	
	11/28/2007	-0.798508	J	139
	6/5/2008	ND<0	65.5	
	11/20/2008	-1.46968	J	133
	6/11/2009	ND<-2.73337		65.5
	11/16/2009	-2.04022	J	131
	6/30/2010	ND<-2.73337		65.5

Rank Sum = 1678
Rank Mean = 98.7059

MW-11R	7/20/1995	1.25276		187
	8/24/1995	2.17475		198
	9/28/1995	1.79176		193
	10/26/1995	2.07944		197
	11/19/1996	ND<0	65.5	
	12/19/1996	2.19722		200
	3/24/1997	1.94591		196
	9/24/1997	ND<0	65.5	
	4/7/1998	ND<0	65.5	
	9/23/1998	ND<0	65.5	
	3/16/1999	1.62924		191
	9/23/1999	0.832909		182
	3/15/2000	ND<0	65.5	
	9/24/2003	ND<0	65.5	
	3/11/2004	ND<0	65.5	
	10/12/2004	ND<0	65.5	
	4/1/2005	1.10194	185	
	10/25/2005	0.24686	J	171
	4/29/2006	-0.527633	J	145
	11/18/2006	-0.040822	J	163
	5/23/2007	0.693147		177
	11/28/2007	0.00995033	J	167
	6/5/2008	ND<0	65.5	
	11/20/2008	-1.23787	J	134
	6/11/2009	0.405465		175
	11/16/2009	-1.51413	J	132
	6/30/2010	0.336472		174

Rank Sum = 3756.5
Rank Mean = 139.13

MW-10	7/20/1995	-0.544727	J	144
	8/24/1995	0.788457		179
	9/28/1995	1.09861		183
	10/26/1995	1.09861		184
	11/19/1996	ND<0	65.5	
	12/19/1996	ND<0	65.5	
	3/24/1997	ND<0	65.5	
	9/24/1997	ND<0	65.5	
	4/7/1998	ND<0	65.5	
	9/23/1998	ND<0	65.5	
	3/16/1999	1.16315		186
	9/23/1999	ND<0	65.5	
	3/15/2000	ND<0	65.5	
	9/24/2003	ND<0	65.5	
	3/11/2004	ND<0	65.5	

	10/12/2004	ND<0	65.5	
	4/1/2005	-0.127833 J	158	
	10/25/2005	0.139762 J		169
	4/29/2006	0.239017 J		170
	11/18/2006	-0.116534 J		159
	5/23/2007	ND<0	65.5	
	11/28/2007	0 J	166	
	6/5/2008	ND<0	65.5	
	11/20/2008	-0.0943107 J		161
	6/11/2009	-0.527633 J		146
	11/16/2009	-0.0618754 J		162
	6/30/2010	-0.653926 J		141

Rank Sum = 3159.5
Rank Mean = 117.019

MW-8	7/20/1995	2.94444		202
	8/24/1995	5.70378		212
	9/28/1995	5.24702		209
	10/26/1995	2.70805		201
	11/19/1996	ND<0	65.5	
	12/19/1996	5.63479		211
	3/24/1997	5.56068		210
	9/24/1997	5.01064		206
	4/7/1998	4.78749	204	
	9/23/1998	5.01064		207
	3/16/1999	4.78749		205
	9/23/1999	4.34899		203
	3/15/2000	5.07517		208
	9/24/2003	ND<0	65.5	
	3/11/2004	2.18605		199
	10/12/2004	ND<0	65.5	
	4/1/2005	0.828552	181	
	10/25/2005	1.89612		195
	4/29/2006	0.797507		180
	11/18/2006	1.26413		188
	5/23/2007	0.470004		176
	11/28/2007	1.43031		189
	6/5/2008	ND<0 J	65.5	
	11/20/2008	0.262364 J		172
	6/11/2009	0.262364		173
	6/30/2010	-0.139262 J		157

Rank Sum = 4550
Rank Mean = 175

MW-6	7/20/1995	ND<0	65.5
	8/24/1995	ND<0	65.5
	9/28/1995	ND<0	65.5
	10/26/1995	ND<0	65.5
	11/19/1996	ND<0	65.5
	12/19/1996	ND<0	65.5
	3/24/1997	ND<0	65.5
	9/24/1997	ND<0	65.5
	4/7/1998	ND<0	65.5
	9/23/1998	ND<0	65.5
	3/16/1999	ND<0	65.5
	9/23/1999	ND<0	65.5
	3/15/2000	ND<0	65.5
	9/24/2003	ND<0	65.5
	3/11/2004	ND<0	65.5
	10/12/2004	ND<0	65.5
	4/1/2005	ND<0	65.5
	10/25/2005	ND<0	65.5

4/29/2006	ND<0	65.5	
11/18/2006	ND<0	65.5	
5/23/2007	ND<0	65.5	
11/28/2007	ND<0	65.5	
6/5/2008	ND<0	65.5	
11/20/2008	ND<0	65.5	
6/11/2009	ND<-2.73337	65.5	
11/16/2009	ND<-2.73337	65.5	
6/30/2010	ND<-2.73337	65.5	

Rank Sum = 1768.5
Rank Mean = 65.5

Calculation Results:

Kruskal-Wallis H Statistic = 67.6513
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 87.9242
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
67.6513 > 15.5073 indicating a significant group difference at 5% significance level
87.9242 > 15.5073 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 65.5

Well	Mean Rank	Dif from Bkg	Critical Value
MW-7	79.7593	14.2593	44.1836
MW-9	108.13	42.6296	44.1836
MW-12BR	87	21.5	48.9476
MW-12AR	98.7059	33.2059	48.9476
MW-11R	139.13	73.6296	44.1836
MW-10	117.019	51.5185	44.1836
MW-8	175	109.5	44.5106
MW-6	65.5	0	44.1836

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 65.5

Well	Mean Rank	Dif from Bkg	Critical Value
MW-7	79.7593	14.2593	47.7122
MW-9	108.13	42.6296	47.7122
MW-12BR	87	21.5	52.8567
MW-12AR	98.7059	33.2059	52.8567
MW-11R	139.13	73.6296	47.7122
MW-10	117.019	51.5185	47.7122
MW-8	175	109.5	48.0654
MW-6	65.5	0	47.7122

Mann-Kendall Trend Analysis

Parameter: Trichloroethene

Location: MW-11R

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
2.17475	1.25276	0.921989	1	0
1.79176	1.25276	0.538997	2	0
2.07944	1.25276	0.826679	3	0
ND<0	1.25276	-1.252763	1	
2.19722	1.25276	0.944462	4	1
1.94591	1.25276	0.693147	5	1
ND<0	1.25276	-1.252765	2	
ND<0	1.25276	-1.252765	3	
ND<0	1.25276	-1.252765	4	
1.62924	1.25276	0.376478	6	4
0.832909	1.25276	-0.419854	6	5
ND<0	1.25276	-1.252766	6	
ND<0	1.25276	-1.252766	7	
ND<0	1.25276	-1.252766	8	
ND<0	1.25276	-1.252766	9	
1.10194	1.25276	-0.150823	6	10
0.24686 J	1.25276	-1.0059	6	11
-0.527633 J	1.25276	-1.7804	6	12
-0.040822 J	1.25276	-1.293586	13	
0.693147	1.25276	-0.559616	6	14
0.00995033 J	1.25276	-1.242816	15	
ND<0	1.25276	-1.252766	16	
-1.23787 J	1.25276	-2.490646	17	
0.405465	1.25276	-0.847298	6	18
-1.51413 J	1.25276	-2.766896	19	
0.336472	1.25276	-0.916291	6	20
1.79176	2.17475	-0.382992	6	21
2.07944	2.17475	-0.0953102	6	22
ND<0	2.17475	-2.174756	23	
2.19722	2.17475	0.0224729	7	23
1.94591	2.17475	-0.228842	7	24
ND<0	2.17475	-2.174757	25	
ND<0	2.17475	-2.174757	26	
ND<0	2.17475	-2.174757	27	
1.62924	2.17475	-0.545511	7	28
0.832909	2.17475	-1.341847	29	
ND<0	2.17475	-2.174757	30	
ND<0	2.17475	-2.174757	31	
ND<0	2.17475	-2.174757	32	
ND<0	2.17475	-2.174757	33	
1.10194	2.17475	-1.072817	34	
0.24686 J	2.17475	-1.927897	35	
-0.527633 J	2.17475	-2.702387	36	
-0.040822 J	2.17475	-2.215577	37	
0.693147	2.17475	-1.4816	7	38
0.00995033 J	2.17475	-2.1648	7	39
ND<0	2.17475	-2.174757	40	

-1.23787 J	2.17475	-3.412637	41	
0.405465	2.17475	-1.769297	42	
-1.51413 J	2.17475	-3.688887	43	
0.336472	2.17475	-1.838287	44	
2.07944	1.79176	0.287682	8	44
ND<0	1.79176	-1.791768	45	
2.19722	1.79176	0.405465	9	45
1.94591	1.79176	0.154151	10	45
ND<0	1.79176	-1.7917610	46	
ND<0	1.79176	-1.7917610	47	
ND<0	1.79176	-1.7917610	48	
1.62924	1.79176	-0.162519	10	49
0.832909	1.79176	-0.9588510	50	
ND<0	1.79176	-1.7917610	51	
ND<0	1.79176	-1.7917610	52	
ND<0	1.79176	-1.7917610	53	
ND<0	1.79176	-1.7917610	54	
1.10194	1.79176	-0.689819	10	55
0.24686 J	1.79176	-1.5449 10	56	
-0.527633 J	1.79176	-2.3193910	57	
-0.040822 J	1.79176	-1.8325810	58	
0.693147	1.79176	-1.0986110	59	
0.00995033 J	1.79176	-1.7818110	60	
ND<0	1.79176	-1.7917610	61	
-1.23787 J	1.79176	-3.0296310	62	
0.405465	1.79176	-1.3862910	63	
-1.51413 J	1.79176	-3.3058910	64	
0.336472	1.79176	-1.4552910	65	
ND<0	2.07944	-2.0794410	66	
2.19722	2.07944	0.117783	11	66
1.94591	2.07944	-0.133531	11	67
ND<0	2.07944	-2.0794411	68	
ND<0	2.07944	-2.0794411	69	
ND<0	2.07944	-2.0794411	70	
1.62924	2.07944	-0.450201	11	71
0.832909	2.07944	-1.2465311	72	
ND<0	2.07944	-2.0794411	73	
ND<0	2.07944	-2.0794411	74	
ND<0	2.07944	-2.0794411	75	
ND<0	2.07944	-2.0794411	76	
1.10194	2.07944	-0.977501	11	77
0.24686 J	2.07944	-1.8325811	78	
-0.527633 J	2.07944	-2.6070711	79	
-0.040822 J	2.07944	-2.1202611	80	
0.693147	2.07944	-1.3862911	81	
0.00995033 J	2.07944	-2.0694911	82	
ND<0	2.07944	-2.0794411	83	
-1.23787 J	2.07944	-3.3173211	84	
0.405465	2.07944	-1.6739811	85	
-1.51413 J	2.07944	-3.5935711	86	
0.336472	2.07944	-1.7429711	87	
2.19722	ND<0	2.19722 12	87	
1.94591	ND<0	1.94591 13	87	
ND<0	ND<0	0 13	87	
ND<0	ND<0	0 13	87	
ND<0	ND<0	0 13	87	
1.62924	ND<0	1.62924 14	87	
0.832909	ND<0	0.832909	15	87
ND<0	ND<0	0 15	87	

ND<0	ND<0	0	15	87			
ND<0	ND<0	0	15	87			
ND<0	ND<0	0	15	87			
1.10194		ND<0	1.10194	16	87		
0.24686 J		ND<0	0.24686	17	87		
-0.527633 J		ND<0	-0.527633		17	88	
-0.040822 J		ND<0	-0.040822		17	89	
0.693147		ND<0	0.693147		18	89	
0.00995033 J		ND<0	0.00995033		19	89	
ND<0	ND<0	0	19	89			
-1.23787 J		ND<0	-1.2378	19	90		
0.405465		ND<0	0.405465		20	90	
-1.51413 J		ND<0	-1.5141	20	91		
0.336472		ND<0	0.336472		21	91	
1.94591		2.19722		-0.2513	14	21	92
ND<0	2.19722		-2.1972	21	93		
ND<0	2.19722		-2.1972	21	94		
ND<0	2.19722		-2.1972	21	95		
1.62924		2.19722		-0.5679	84	21	96
0.832909		2.19722		-1.3643	21	97	
ND<0	2.19722		-2.1972	21	98		
ND<0	2.19722		-2.1972	21	99		
ND<0	2.19722		-2.1972	21	100		
ND<0	2.19722		-2.1972	21	101		
1.10194		2.19722		-1.0952	8 21	102	
0.24686 J		2.19722		-1.9503	6 21	103	
-0.527633 J		2.19722		-2.7248	6 21	104	
-0.040822 J		2.19722		-2.2380	5 21	105	
0.693147		2.19722		-1.5040	8 21	106	
0.00995033 J		2.19722		-2.1872	7 21	107	
ND<0	2.19722		-2.1972	21	108		
-1.23787 J		2.19722		-3.4351	21	109	
0.405465		2.19722		-1.7917	6 21	110	
-1.51413 J		2.19722		-3.7113	5 21	111	
0.336472		2.19722		-1.8607	5 21	112	
ND<0	1.94591		-1.9459	12 1	113		
ND<0	1.94591		-1.9459	12 1	114		
ND<0	1.94591		-1.9459	12 1	115		
1.62924		1.94591		-0.3166	7 21	116	
0.832909		1.94591		-1.113	21	117	
ND<0	1.94591		-1.9459	12 1	118		
ND<0	1.94591		-1.9459	12 1	119		
ND<0	1.94591		-1.9459	12 1	120		
ND<0	1.94591		-1.9459	12 1	121		
1.10194		1.94591		-0.8439	7 21	122	
0.24686 J		1.94591		-1.6990	5 21	123	
-0.527633 J		1.94591		-2.4735	4 21	124	
-0.040822 J		1.94591		-1.9867	3 21	125	
0.693147		1.94591		-1.2527	6 21	126	
0.00995033 J		1.94591		-1.9359	6 21	127	
ND<0	1.94591		-1.9459	12 1	128		
-1.23787 J		1.94591		-3.1837	8 21	129	
0.405465		1.94591		-1.5404	5 21	130	
-1.51413 J		1.94591		-3.4600	4 21	131	
0.336472		1.94591		-1.6094	4 21	132	
ND<0	ND<0	0	21	132			
ND<0	ND<0	0	21	132			
1.62924		ND<0	1.62924	22	132		
0.832909		ND<0	0.832909		23	132	

ND<0	ND<0	0	23	132			
ND<0	ND<0	0	23	132			
ND<0	ND<0	0	23	132			
ND<0	ND<0	0	23	132			
1.10194		ND<0	1.10194	24	132		
0.24686 J		ND<0	0.24686	25	132		
-0.527633 J		ND<0	-0.527633		25	133	
-0.040822 J		ND<0	-0.040822		25	134	
0.693147		ND<0	0.693147		26	134	
0.00995033 J		ND<0	0.00995033		27	134	
ND<0	ND<0	0	27	134			
-1.23787 J		ND<0	-1.2378727		135		
0.405465		ND<0	0.405465		28	135	
-1.51413 J		ND<0	-1.5141328		136		
0.336472		ND<0	0.336472		29	136	
ND<0	ND<0	0	29	136			
1.62924		ND<0	1.62924	30	136		
0.832909		ND<0	0.832909		31	136	
ND<0	ND<0	0	31	136			
ND<0	ND<0	0	31	136			
ND<0	ND<0	0	31	136			
ND<0	ND<0	0	31	136			
1.10194		ND<0	1.10194	32	136		
0.24686 J		ND<0	0.24686	33	136		
-0.527633 J		ND<0	-0.527633		33	137	
-0.040822 J		ND<0	-0.040822		33	138	
0.693147		ND<0	0.693147		34	138	
0.00995033 J		ND<0	0.00995033		35	138	
ND<0	ND<0	0	35	138			
-1.23787 J		ND<0	-1.2378735		139		
0.405465		ND<0	0.405465		36	139	
-1.51413 J		ND<0	-1.5141336		140		
0.336472		ND<0	0.336472		37	140	
1.62924		ND<0	1.62924	38	140		
0.832909		ND<0	0.832909		39	140	
ND<0	ND<0	0	39	140			
ND<0	ND<0	0	39	140			
ND<0	ND<0	0	39	140			
ND<0	ND<0	0	39	140			
1.10194		ND<0	1.10194	40	140		
0.24686 J		ND<0	0.24686	41	140		
-0.527633 J		ND<0	-0.527633		41	141	
-0.040822 J		ND<0	-0.040822		41	142	
0.693147		ND<0	0.693147		42	142	
0.00995033 J		ND<0	0.00995033		43	142	
ND<0	ND<0	0	43	142			
-1.23787 J		ND<0	-1.2378743		143		
0.405465		ND<0	0.405465		44	143	
-1.51413 J		ND<0	-1.5141344		144		
0.336472		ND<0	0.336472		45	144	
0.832909		1.62924	-0.796331		45	145	
ND<0	1.62924	-1.6292445		146			
ND<0	1.62924	-1.6292445		147			
ND<0	1.62924	-1.6292445		148			
ND<0	1.62924	-1.6292445		149			
1.10194		1.62924	-0.5273	45	150		
0.24686 J		1.62924	-1.3823845		151		
-0.527633 J		1.62924	-2.1568745		152		
-0.040822 J		1.62924	-1.6700645		153		

0.693147	1.62924	-0.936093	45	154
0.00995033 J	1.62924	-1.6192945	155	
ND<0	1.62924	-1.6292445	156	
-1.23787 J	1.62924	-2.8671145	157	
0.405465	1.62924	-1.2237845	158	
-1.51413 J	1.62924	-3.1433745	159	
0.336472	1.62924	-1.2927745	160	

ND<0	0.832909	-0.832909	45	161
ND<0	0.832909	-0.832909	45	162
ND<0	0.832909	-0.832909	45	163
ND<0	0.832909	-0.832909	45	164
1.10194	0.832909	0.269031	46	164
0.24686 J	0.832909	-0.586049	46	165
-0.527633 J	0.832909	-1.3605446	166	
-0.040822 J	0.832909	-0.873731	46	167
0.693147	0.832909	-0.139762	46	168
0.00995033 J	0.832909	-0.822959	46	169
ND<0	0.832909	-0.832909	46	170
-1.23787 J	0.832909	-2.0707846	171	
0.405465	0.832909	-0.427444	46	172
-1.51413 J	0.832909	-2.3470446	173	
0.336472	0.832909	-0.496437	46	174

ND<0	ND<0	0	46	174	
ND<0	ND<0	0	46	174	
ND<0	ND<0	0	46	174	
1.10194	ND<0	1.10194	47	174	
0.24686 J	ND<0	0.24686	48	174	
-0.527633 J	ND<0	-0.527633	48	175	
-0.040822 J	ND<0	-0.040822	48	176	
0.693147	ND<0	0.693147	49	176	
0.00995033 J	ND<0	0.00995033	50	176	
ND<0	ND<0	0	50	176	
-1.23787 J	ND<0	-1.2378750	177		
0.405465	ND<0	0.405465	51	177	
-1.51413 J	ND<0	-1.5141351	178		
0.336472	ND<0	0.336472	52	178	

ND<0	ND<0	0	52	178	
ND<0	ND<0	0	52	178	
1.10194	ND<0	1.10194	53	178	
0.24686 J	ND<0	0.24686	54	178	
-0.527633 J	ND<0	-0.527633	54	179	
-0.040822 J	ND<0	-0.040822	54	180	
0.693147	ND<0	0.693147	55	180	
0.00995033 J	ND<0	0.00995033	56	180	
ND<0	ND<0	0	56	180	
-1.23787 J	ND<0	-1.2378756	181		
0.405465	ND<0	0.405465	57	181	
-1.51413 J	ND<0	-1.5141357	182		
0.336472	ND<0	0.336472	58	182	

ND<0	ND<0	0	58	182	
1.10194	ND<0	1.10194	59	182	
0.24686 J	ND<0	0.24686	60	182	
-0.527633 J	ND<0	-0.527633	60	183	
-0.040822 J	ND<0	-0.040822	60	184	
0.693147	ND<0	0.693147	61	184	
0.00995033 J	ND<0	0.00995033	62	184	
ND<0	ND<0	0	62	184	
-1.23787 J	ND<0	-1.2378762	185		

0.405465	ND<0	0.405465	63	185	
-1.51413 J	ND<0	-1.5141363	186		
0.336472	ND<0	0.336472	64	186	
1.10194	ND<0	1.10194 65	186		
0.24686 J	ND<0	0.24686 66	186		
-0.527633 J	ND<0	-0.527633	66	187	
-0.040822 J	ND<0	-0.040822	66	188	
0.693147	ND<0	0.693147	67	188	
0.00995033 J	ND<0	0.00995033	68	188	
ND<0	ND<0	0	68	188	
-1.23787 J	ND<0	-1.2378768	189		
0.405465	ND<0	0.405465	69	189	
-1.51413 J	ND<0	-1.5141369	190		
0.336472	ND<0	0.336472	70	190	
0.24686 J	1.10194	-0.8550870	191		
-0.527633 J	1.10194	-1.6295770	192		
-0.040822 J	1.10194	-1.1427670	193		
0.693147	1.10194	-0.408793	70	194	
0.00995033 J	1.10194	-1.0919970	195		
ND<0	1.10194	-1.1019470	196		
-1.23787 J	1.10194	-2.3398170	197		
0.405465	1.10194	-0.696475	70	198	
-1.51413 J	1.10194	-2.6160770	199		
0.336472	1.10194	-0.765468	70	200	
-0.527633 J	0.24686 J	-0.774493	70	201	
-0.040822 J	0.24686 J	-0.287682	70	202	
0.693147	0.24686 J	0.446287	71	202	
0.00995033 J	0.24686 J	-0.2369171	203		
ND<0	0.24686 J	-0.2468671	204		
-1.23787 J	0.24686 J	-1.4847371	205		
0.405465	0.24686 J	0.158605	72	205	
-1.51413 J	0.24686 J	-1.7609972	206		
0.336472	0.24686 J	0.0896122	73	206	
-0.040822 J	-0.527633 J	0.486811	74	206	
0.693147	-0.527633 J	1.22078 75	206		
0.00995033 J	-0.527633 J	0.537583	76	206	
ND<0	-0.527633 J	0.527633	77	206	
-1.23787 J	-0.527633 J	-0.710242	77	207	
0.405465	-0.527633 J	0.933098	78	207	
-1.51413 J	-0.527633 J	-0.986495	78	208	
0.336472	-0.527633 J	0.864105	79	208	
0.693147	-0.040822 J	0.733969	80	208	
0.00995033 J	-0.040822 J	0.0507723	81	208	
ND<0	-0.040822 J	0.040822	82	208	
-1.23787 J	-0.040822 J	-1.1970582	209		
0.405465	-0.040822 J	0.446287	83	209	
-1.51413 J	-0.040822 J	-1.4733183	210		
0.336472	-0.040822 J	0.377294	84	210	
0.00995033 J	0.693147	-0.683197	84	211	
ND<0	0.693147	-0.693147	84	212	
-1.23787 J	0.693147	-1.9310284	213		
0.405465	0.693147	-0.287682	84	214	
-1.51413 J	0.693147	-2.2072784	215		
0.336472	0.693147	-0.356675	84	216	

ND<0	0.00995033 J	-0.00995033	84	217	
-1.23787 J	0.00995033 J	-1.2478284		218	
0.405465	0.00995033 J	0.395515		85	218
-1.51413 J	0.00995033 J	-1.5240885		219	
0.336472	0.00995033 J	0.326522		86	219
-1.23787 J	ND<0	-1.2378786	220		
0.405465	ND<0	0.405465	87	220	
-1.51413 J	ND<0	-1.5141387	221		
0.336472	ND<0	0.336472	88	221	
0.405465	-1.23787 J	1.64334	89	221	
-1.51413 J	-1.23787 J	-0.276253		89	222
0.336472	-1.23787 J	1.57435	90	222	
-1.51413 J	0.405465	-1.9195990		223	
0.336472	0.405465	-0.0689929		90	224
0.336472	-1.51413 J	1.8506	91	224	

S Statistic = 91 - 224 = -133

Tied Group	Value	Members
1	0	9

Time Period		Observations
7/20/1995		1
8/24/1995		1
9/28/1995		1
10/26/1995		1
11/19/1996		1
12/19/1996		1
3/24/1997		1
9/24/1997		1
4/7/1998	1	
9/23/1998		1
3/16/1999		1
9/23/1999		1
3/15/2000		1
9/24/2003		1
3/11/2004		1
10/12/2004		1
4/1/2005	1	
10/25/2005		1
4/29/2006		1
11/18/2006		1
5/23/2007		1
11/28/2007		1
6/5/2008	1	
11/20/2008		1
6/11/2009		1
11/16/2009		1
6/30/2010		1

There are 0 time periods with multiple data

A = 1656
B = 0
C = 504
D = 0

E = 72
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 2209
Z-Score = -2.80851
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.80851| > 1.97737 indicating a trend

Mann-Kendall Trend Analysis

Parameter: Trichloroethene

Location: MW-10

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
0.788457	-0.544727 J	1.33318	1	0
1.09861	-0.544727 J	1.64334	2	0
1.09861	-0.544727 J	1.64334	3	0
ND<0	-0.544727 J	0.544727	4	0
ND<0	-0.544727 J	0.544727	5	0
ND<0	-0.544727 J	0.544727	6	0
ND<0	-0.544727 J	0.544727	7	0
ND<0	-0.544727 J	0.544727	8	0
ND<0	-0.544727 J	0.544727	9	0
1.16315	-0.544727 J	1.70788	10	0
ND<0	-0.544727 J	0.544727	11	0
ND<0	-0.544727 J	0.544727	12	0
ND<0	-0.544727 J	0.544727	13	0
ND<0	-0.544727 J	0.544727	14	0
ND<0	-0.544727 J	0.544727	15	0
-0.127833 J	-0.544727 J	0.416894	16	0
0.139762 J	-0.544727 J	0.684489	17	0
0.239017 J	-0.544727 J	0.783744	18	0
-0.116534 J	-0.544727 J	0.428193	19	0
ND<0	-0.544727 J	0.544727	20	0
0 J	-0.544727 J	0.544727	21	0
ND<0	-0.544727 J	0.544727	22	0
-0.0943107 J	-0.544727 J	0.450416	23	0
-0.527633 J	-0.544727 J	0.0170944	24	0
-0.0618754 J	-0.544727 J	0.482852	25	0
-0.653926 J	-0.544727 J	-0.109199	25	1
1.09861	0.788457	0.310155	26	1
1.09861	0.788457	0.310155	27	1
ND<0	0.788457	-0.788457	27	2
ND<0	0.788457	-0.788457	27	3
ND<0	0.788457	-0.788457	27	4
ND<0	0.788457	-0.788457	27	5
ND<0	0.788457	-0.788457	27	6
ND<0	0.788457	-0.788457	27	7
1.16315	0.788457	0.374693	28	7
ND<0	0.788457	-0.788457	28	8
ND<0	0.788457	-0.788457	28	9
ND<0	0.788457	-0.788457	28	10
ND<0	0.788457	-0.788457	28	11
ND<0	0.788457	-0.788457	28	12
-0.127833 J	0.788457	-0.916291	28	13
0.139762 J	0.788457	-0.648695	28	14
0.239017 J	0.788457	-0.549442	28	15
-0.116534 J	0.788457	-0.904991	28	16
ND<0	0.788457	-0.788457	28	17
0 J	0.788457	-0.788457	28	18
ND<0	0.788457	-0.788457	28	19

-0.0943107 J	0.788457	-0.882768	28	20
-0.527633 J	0.788457	-1.3160928	21	
-0.0618754 J	0.788457	-0.850333	28	22
-0.653926 J	0.788457	-1.4423828	23	

1.09861	1.09861	0	28	23
ND<0	1.09861	-1.0986128	24	
ND<0	1.09861	-1.0986128	25	
ND<0	1.09861	-1.0986128	26	
ND<0	1.09861	-1.0986128	27	
ND<0	1.09861	-1.0986128	28	
ND<0	1.09861	-1.0986128	29	
1.16315	1.09861	0.0645385	29	29
ND<0	1.09861	-1.0986129	30	
ND<0	1.09861	-1.0986129	31	
ND<0	1.09861	-1.0986129	32	
ND<0	1.09861	-1.0986129	33	
ND<0	1.09861	-1.0986129	34	
-0.127833 J	1.09861	-1.2264529	35	
0.139762 J	1.09861	-0.9588529	36	
0.239017 J	1.09861	-0.859595	29	37
-0.116534 J	1.09861	-1.2151529	38	
ND<0	1.09861	-1.0986129	39	
0 J	1.09861	-1.0986129	40	
ND<0	1.09861	-1.0986129	41	
-0.0943107 J	1.09861	-1.1929229	42	
-0.527633 J	1.09861	-1.6262529	43	
-0.0618754 J	1.09861	-1.1604929	44	
-0.653926 J	1.09861	-1.7525429	45	

ND<0	1.09861	-1.0986129	46	
ND<0	1.09861	-1.0986129	47	
ND<0	1.09861	-1.0986129	48	
ND<0	1.09861	-1.0986129	49	
ND<0	1.09861	-1.0986129	50	
ND<0	1.09861	-1.0986129	51	
1.16315	1.09861	0.0645385	30	51
ND<0	1.09861	-1.0986130	52	
ND<0	1.09861	-1.0986130	53	
ND<0	1.09861	-1.0986130	54	
ND<0	1.09861	-1.0986130	55	
ND<0	1.09861	-1.0986130	56	
-0.127833 J	1.09861	-1.2264530	57	
0.139762 J	1.09861	-0.9588530	58	
0.239017 J	1.09861	-0.859595	30	59
-0.116534 J	1.09861	-1.2151530	60	
ND<0	1.09861	-1.0986130	61	
0 J	1.09861	-1.0986130	62	
ND<0	1.09861	-1.0986130	63	
-0.0943107 J	1.09861	-1.1929230	64	
-0.527633 J	1.09861	-1.6262530	65	
-0.0618754 J	1.09861	-1.1604930	66	
-0.653926 J	1.09861	-1.7525430	67	

ND<0	ND<0	0	30	67
ND<0	ND<0	0	30	67
ND<0	ND<0	0	30	67
ND<0	ND<0	0	30	67
ND<0	ND<0	0	30	67
1.16315	ND<0	1.16315	31	67
ND<0	ND<0	0	31	67
ND<0	ND<0	0	31	67

ND<0	ND<0	0	31	67		
ND<0	ND<0	0	31	67		
ND<0	ND<0	0	31	67		
-0.127833 J		ND<0	-0.127833		31	68
0.139762 J		ND<0	0.139762		32	68
0.239017 J		ND<0	0.239017		33	68
-0.116534 J		ND<0	-0.116534		33	69
ND<0	ND<0	0	33	69		
0 J	ND<0	0	33	69		
ND<0	ND<0	0	33	69		
-0.0943107 J		ND<0	-0.0943107		33	70
-0.527633 J		ND<0	-0.527633		33	71
-0.0618754 J		ND<0	-0.0618754		33	72
-0.653926 J		ND<0	-0.653926		33	73
ND<0	ND<0	0	33	73		
ND<0	ND<0	0	33	73		
ND<0	ND<0	0	33	73		
ND<0	ND<0	0	33	73		
1.16315		ND<0	1.16315	34	73	
ND<0	ND<0	0	34	73		
ND<0	ND<0	0	34	73		
ND<0	ND<0	0	34	73		
ND<0	ND<0	0	34	73		
ND<0	ND<0	0	34	73		
-0.127833 J		ND<0	-0.127833		34	74
0.139762 J		ND<0	0.139762		35	74
0.239017 J		ND<0	0.239017		36	74
-0.116534 J		ND<0	-0.116534		36	75
ND<0	ND<0	0	36	75		
0 J	ND<0	0	36	75		
ND<0	ND<0	0	36	75		
-0.0943107 J		ND<0	-0.0943107		36	76
-0.527633 J		ND<0	-0.527633		36	77
-0.0618754 J		ND<0	-0.0618754		36	78
-0.653926 J		ND<0	-0.653926		36	79
ND<0	ND<0	0	36	79		
ND<0	ND<0	0	36	79		
ND<0	ND<0	0	36	79		
1.16315		ND<0	1.16315	37	79	
ND<0	ND<0	0	37	79		
ND<0	ND<0	0	37	79		
ND<0	ND<0	0	37	79		
ND<0	ND<0	0	37	79		
ND<0	ND<0	0	37	79		
-0.127833 J		ND<0	-0.127833		37	80
0.139762 J		ND<0	0.139762		38	80
0.239017 J		ND<0	0.239017		39	80
-0.116534 J		ND<0	-0.116534		39	81
ND<0	ND<0	0	39	81		
0 J	ND<0	0	39	81		
ND<0	ND<0	0	39	81		
-0.0943107 J		ND<0	-0.0943107		39	82
-0.527633 J		ND<0	-0.527633		39	83
-0.0618754 J		ND<0	-0.0618754		39	84
-0.653926 J		ND<0	-0.653926		39	85
ND<0	ND<0	0	39	85		
ND<0	ND<0	0	39	85		
1.16315		ND<0	1.16315	40	85	
ND<0	ND<0	0	40	85		

ND<0	ND<0	0	40	85			
ND<0	ND<0	0	40	85			
ND<0	ND<0	0	40	85			
ND<0	ND<0	0	40	85			
-0.127833 J		ND<0	-0.127833		40	86	
0.139762 J		ND<0	0.139762		41	86	
0.239017 J		ND<0	0.239017		42	86	
-0.116534 J		ND<0	-0.116534		42	87	
ND<0	ND<0	0	42	87			
0 J	ND<0	0	42	87			
ND<0	ND<0	0	42	87			
-0.0943107 J		ND<0	-0.0943107		42	88	
-0.527633 J		ND<0	-0.527633		42	89	
-0.0618754 J		ND<0	-0.0618754		42	90	
-0.653926 J		ND<0	-0.653926		42	91	
ND<0	ND<0	0	42	91			
1.16315		ND<0	1.16315	43	91		
ND<0	ND<0	0	43	91			
ND<0	ND<0	0	43	91			
ND<0	ND<0	0	43	91			
ND<0	ND<0	0	43	91			
ND<0	ND<0	0	43	91			
-0.127833 J		ND<0	-0.127833		43	92	
0.139762 J		ND<0	0.139762		44	92	
0.239017 J		ND<0	0.239017		45	92	
-0.116534 J		ND<0	-0.116534		45	93	
ND<0	ND<0	0	45	93			
0 J	ND<0	0	45	93			
ND<0	ND<0	0	45	93			
-0.0943107 J		ND<0	-0.0943107		45	94	
-0.527633 J		ND<0	-0.527633		45	95	
-0.0618754 J		ND<0	-0.0618754		45	96	
-0.653926 J		ND<0	-0.653926		45	97	
1.16315		ND<0	1.16315	46	97		
ND<0	ND<0	0	46	97			
ND<0	ND<0	0	46	97			
ND<0	ND<0	0	46	97			
ND<0	ND<0	0	46	97			
ND<0	ND<0	0	46	97			
-0.127833 J		ND<0	-0.127833		46	98	
0.139762 J		ND<0	0.139762		47	98	
0.239017 J		ND<0	0.239017		48	98	
-0.116534 J		ND<0	-0.116534		48	99	
ND<0	ND<0	0	48	99			
0 J	ND<0	0	48	99			
ND<0	ND<0	0	48	99			
-0.0943107 J		ND<0	-0.0943107		48	100	
-0.527633 J		ND<0	-0.527633		48	101	
-0.0618754 J		ND<0	-0.0618754		48	102	
-0.653926 J		ND<0	-0.653926		48	103	
ND<0	1.16315		-1.1631548		104		
ND<0	1.16315		-1.1631548		105		
ND<0	1.16315		-1.1631548		106		
ND<0	1.16315		-1.1631548		107		
ND<0	1.16315		-1.1631548		108		
-0.127833 J		1.16315		-1.2909848		109	
0.139762 J		1.16315		-1.0233948		110	
0.239017 J		1.16315		-0.924134	48		111
-0.116534 J		1.16315		-1.2796848		112	

ND<0	1.16315	-1.1631548	113
0 J	1.16315	-1.1631548	114
ND<0	1.16315	-1.1631548	115
-0.0943107 J	1.16315	-1.2574648	116
-0.527633 J	1.16315	-1.6907848	117
-0.0618754 J	1.16315	-1.2250348	118
-0.653926 J	1.16315	-1.8170848	119

ND<0	ND<0	0	48	119	
ND<0	ND<0	0	48	119	
ND<0	ND<0	0	48	119	
ND<0	ND<0	0	48	119	
-0.127833 J	ND<0	-0.127833	48	120	
0.139762 J	ND<0	0.139762	49	120	
0.239017 J	ND<0	0.239017	50	120	
-0.116534 J	ND<0	-0.116534	50	121	
ND<0	ND<0	0	50	121	
0 J	ND<0	0	50	121	
ND<0	ND<0	0	50	121	
-0.0943107 J	ND<0	-0.0943107	50	122	
-0.527633 J	ND<0	-0.527633	50	123	
-0.0618754 J	ND<0	-0.0618754	50	124	
-0.653926 J	ND<0	-0.653926	50	125	

ND<0	ND<0	0	50	125	
ND<0	ND<0	0	50	125	
ND<0	ND<0	0	50	125	
-0.127833 J	ND<0	-0.127833	50	126	
0.139762 J	ND<0	0.139762	51	126	
0.239017 J	ND<0	0.239017	52	126	
-0.116534 J	ND<0	-0.116534	52	127	
ND<0	ND<0	0	52	127	
0 J	ND<0	0	52	127	
ND<0	ND<0	0	52	127	
-0.0943107 J	ND<0	-0.0943107	52	128	
-0.527633 J	ND<0	-0.527633	52	129	
-0.0618754 J	ND<0	-0.0618754	52	130	
-0.653926 J	ND<0	-0.653926	52	131	

ND<0	ND<0	0	52	131	
ND<0	ND<0	0	52	131	
-0.127833 J	ND<0	-0.127833	52	132	
0.139762 J	ND<0	0.139762	53	132	
0.239017 J	ND<0	0.239017	54	132	
-0.116534 J	ND<0	-0.116534	54	133	
ND<0	ND<0	0	54	133	
0 J	ND<0	0	54	133	
ND<0	ND<0	0	54	133	
-0.0943107 J	ND<0	-0.0943107	54	134	
-0.527633 J	ND<0	-0.527633	54	135	
-0.0618754 J	ND<0	-0.0618754	54	136	
-0.653926 J	ND<0	-0.653926	54	137	

ND<0	ND<0	0	54	137	
-0.127833 J	ND<0	-0.127833	54	138	
0.139762 J	ND<0	0.139762	55	138	
0.239017 J	ND<0	0.239017	56	138	
-0.116534 J	ND<0	-0.116534	56	139	
ND<0	ND<0	0	56	139	
0 J	ND<0	0	56	139	
ND<0	ND<0	0	56	139	
-0.0943107 J	ND<0	-0.0943107	56	140	

-0.527633 J	ND<0	-0.527633	56	141
-0.0618754 J	ND<0	-0.0618754	56	142
-0.653926 J	ND<0	-0.653926	56	143
-0.127833 J	ND<0	-0.127833	56	144
0.139762 J	ND<0	0.139762	57	144
0.239017 J	ND<0	0.239017	58	144
-0.116534 J	ND<0	-0.116534	58	145
ND<0	ND<0	0	58	145
0 J	ND<0	0	58	145
ND<0	ND<0	0	58	145
-0.0943107 J	ND<0	-0.0943107	58	146
-0.527633 J	ND<0	-0.527633	58	147
-0.0618754 J	ND<0	-0.0618754	58	148
-0.653926 J	ND<0	-0.653926	58	149
0.139762 J	-0.127833 J	0.267595	59	149
0.239017 J	-0.127833 J	0.36685	60	149
-0.116534 J	-0.127833 J	0.0112996	61	149
ND<0	-0.127833 J	0.127833	62	149
0 J	-0.127833 J	0.127833	63	149
ND<0	-0.127833 J	0.127833	64	149
-0.0943107 J	-0.127833 J	0.0335227	65	149
-0.527633 J	-0.127833 J	-0.399799	65	150
-0.0618754 J	-0.127833 J	0.065958	66	150
-0.653926 J	-0.127833 J	-0.526093	66	151
0.239017 J	0.139762 J	0.099255	67	151
-0.116534 J	0.139762 J	-0.256296	67	152
ND<0	0.139762 J	-0.139762	67	153
0 J	0.139762 J	-0.139762	67	154
ND<0	0.139762 J	-0.139762	67	155
-0.0943107 J	0.139762 J	-0.234073	67	156
-0.527633 J	0.139762 J	-0.667395	67	157
-0.0618754 J	0.139762 J	-0.201637	67	158
-0.653926 J	0.139762 J	-0.793688	67	159
-0.116534 J	0.239017 J	-0.355551	67	160
ND<0	0.239017 J	-0.239017	67	161
0 J	0.239017 J	-0.239017	67	162
ND<0	0.239017 J	-0.239017	67	163
-0.0943107 J	0.239017 J	-0.333328	67	164
-0.527633 J	0.239017 J	-0.7666567	165	
-0.0618754 J	0.239017 J	-0.300892	67	166
-0.653926 J	0.239017 J	-0.892943	67	167
ND<0	-0.116534 J	0.116534	68	167
0 J	-0.116534 J	0.116534	69	167
ND<0	-0.116534 J	0.116534	70	167
-0.0943107 J	-0.116534 J	0.0222231	71	167
-0.527633 J	-0.116534 J	-0.411099	71	168
-0.0618754 J	-0.116534 J	0.0546584	72	168
-0.653926 J	-0.116534 J	-0.537393	72	169
0 J	ND<0	0	72	169
ND<0	ND<0	0	72	169
-0.0943107 J	ND<0	-0.0943107	72	170
-0.527633 J	ND<0	-0.527633	72	171
-0.0618754 J	ND<0	-0.0618754	72	172
-0.653926 J	ND<0	-0.653926	72	173

ND<0	0 J	0	72	173
-0.0943107 J	0 J	-0.0943107	72	174
-0.527633 J	0 J	-0.527633	72	175
-0.0618754 J	0 J	-0.0618754	72	176
-0.653926 J	0 J	-0.653926	72	177
-0.0943107 J	ND<0	-0.0943107	72	178
-0.527633 J	ND<0	-0.527633	72	179
-0.0618754 J	ND<0	-0.0618754	72	180
-0.653926 J	ND<0	-0.653926	72	181
-0.527633 J	-0.0943107 J	-0.433322	72	182
-0.0618754 J	-0.0943107 J	0.0324353	73	182
-0.653926 J	-0.0943107 J	-0.559616	73	183
-0.0618754 J	-0.527633 J	0.465757	74	183
-0.653926 J	-0.527633 J	-0.126294	74	184
-0.653926 J	-0.0618754 J	-0.592051	74	185

S Statistic = 74 - 185 = -111

Tied Group	Value	Members
1	1.09861	2
2	0	14

Time Period		Observations
7/20/1995		1
8/24/1995		1
9/28/1995		1
10/26/1995		1
11/19/1996		1
12/19/1996		1
3/24/1997		1
9/24/1997		1
4/7/1998	1	
9/23/1998		1
3/16/1999		1
9/23/1999		1
3/15/2000		1
9/24/2003		1
3/11/2004		1
10/12/2004		1
4/1/2005	1	
10/25/2005		1
4/29/2006		1
11/18/2006		1
5/23/2007		1
11/28/2007		1
6/5/2008	1	
11/20/2008		1
6/11/2009		1
11/16/2009		1
6/30/2010		1

There are 0 time periods with multiple data

A = 6024
B = 0
C = 2184

D = 0
E = 184
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 1966.33
Z-Score = -2.48064
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.48064| > 1.97737 indicating a trend

Mann-Kendall Trend Analysis

Parameter: Trichloroethene

Location: MW-8

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives	
5.70378	2.94444	2.75934	1	0	
5.24702	2.94444	2.30259	2	0	
2.70805	2.94444	-0.236389	2	1	
ND<0	2.94444	-2.944442	2		
5.63479	2.94444	2.69035	3	2	
5.56068	2.94444	2.61624	4	2	
5.01064	2.94444	2.0662	5	2	
4.78749	2.94444	1.84305	6	2	
5.01064	2.94444	2.0662	7	2	
4.78749	2.94444	1.84305	8	2	
4.34899	2.94444	1.40455	9	2	
5.07517	2.94444	2.13073	10	2	
ND<0	2.94444	-2.94444	10	3	
2.18605	2.94444	-0.758388		10	4
ND<0	2.94444	-2.94444	10	5	
0.828552	2.94444	-2.11589	10	6	
1.89612	2.94444	-1.04832	10	7	
0.797507	2.94444	-2.14693	10	8	
1.26413	2.94444	-1.68031	10	9	
0.470004	2.94444	-2.47444	10	10	
1.43031	2.94444	-1.51413	10	11	
ND<0 J	2.94444	-2.94444	10	12	
0.262364 J	2.94444	-2.68207	10	13	
0.262364	2.94444	-2.68207	10	14	
-0.139262 J	2.94444	-3.0837	10	15	
5.24702	5.70378	-0.456758		10	16
2.70805	5.70378	-2.99573	10	17	
ND<0	5.70378	-5.70378	10	18	
5.63479	5.70378	-0.068992	9	10	19
5.56068	5.70378	-0.143101		10	20
5.01064	5.70378	-0.693147		10	21
4.78749	5.70378	-0.916291		10	22
5.01064	5.70378	-0.693147		10	23
4.78749	5.70378	-0.916291		10	24
4.34899	5.70378	-1.3548	10	25	
5.07517	5.70378	-0.628609		10	26
ND<0	5.70378	-5.70378	10	27	
2.18605	5.70378	-3.51773	10	28	
ND<0	5.70378	-5.70378	10	29	
0.828552	5.70378	-4.87523	10	30	
1.89612	5.70378	-3.80766	10	31	
0.797507	5.70378	-4.90628	10	32	
1.26413	5.70378	-4.43966	10	33	
0.470004	5.70378	-5.23378	10	34	
1.43031	5.70378	-4.27347	10	35	
ND<0 J	5.70378	-5.70378	10	36	
0.262364 J	5.70378	-5.44142	10	37	

0.262364	5.70378	-5.441421	0	38	
-0.139262 J	5.70378	-5.843041	0	39	
2.70805	5.24702	-2.538971	0	40	
ND<0	5.24702	-5.247021	0	41	
5.63479	5.24702	0.387766	11	41	
5.56068	5.24702	0.313658	12	41	
5.01064	5.24702	-0.236389	12	42	
4.78749	5.24702	-0.459532	12	43	
5.01064	5.24702	-0.236389	12	44	
4.78749	5.24702	-0.459532	12	45	
4.34899	5.24702	-0.898037	12	46	
5.07517	5.24702	-0.171851	2	47	
ND<0	5.24702	-5.247021	2	48	
2.18605	5.24702	-3.060971	2	49	
ND<0	5.24702	-5.247021	2	50	
0.828552	5.24702	-4.418471	2	51	
1.89612	5.24702	-3.3509	12	52	
0.797507	5.24702	-4.449521	2	53	
1.26413	5.24702	-3.9829	12	54	
0.470004	5.24702	-4.777021	2	55	
1.43031	5.24702	-3.816711	2	56	
ND<0 J	5.24702	-5.247021	2	57	
0.262364 J	5.24702	-4.984661	2	58	
0.262364	5.24702	-4.984661	2	59	
-0.139262 J	5.24702	-5.386291	2	60	
ND<0	2.70805	-2.708051	2	61	
5.63479	2.70805	2.92674	13	61	
5.56068	2.70805	2.85263	14	61	
5.01064	2.70805	2.30259	15	61	
4.78749	2.70805	2.07944	16	61	
5.01064	2.70805	2.30259	17	61	
4.78749	2.70805	2.07944	18	61	
4.34899	2.70805	1.64094	19	61	
5.07517	2.70805	2.36712	20	61	
ND<0	2.70805	-2.708052	0	62	
2.18605	2.70805	-0.521999	20	63	
ND<0	2.70805	-2.708052	0	64	
0.828552	2.70805	-1.8795	20	65	
1.89612	2.70805	-0.811931	20	66	
0.797507	2.70805	-1.910542	0	67	
1.26413	2.70805	-1.443922	0	68	
0.470004	2.70805	-2.238052	0	69	
1.43031	2.70805	-1.277742	0	70	
ND<0 J	2.70805	-2.708052	0	71	
0.262364 J	2.70805	-2.445692	0	72	
0.262364	2.70805	-2.445692	0	73	
-0.139262 J	2.70805	-2.847312	0	74	
5.63479	ND<0	5.63479	21	74	
5.56068	ND<0	5.56068	22	74	
5.01064	ND<0	5.01064	23	74	
4.78749	ND<0	4.78749	24	74	
5.01064	ND<0	5.01064	25	74	
4.78749	ND<0	4.78749	26	74	
4.34899	ND<0	4.34899	27	74	
5.07517	ND<0	5.07517	28	74	
ND<0	ND<0	0	28	74	
2.18605	ND<0	2.18605	29	74	
ND<0	ND<0	0	29	74	
0.828552	ND<0	0.828552	30	74	

1.89612	ND<0	1.89612	31	74
0.797507	ND<0	0.797507	32	74
1.26413	ND<0	1.26413	33	74
0.470004	ND<0	0.470004	34	74
1.43031	ND<0	1.43031	35	74
ND<0 J	ND<0	0	35	74
0.262364 J	ND<0	0.262364	36	74
0.262364	ND<0	0.262364	37	74
-0.139262 J	ND<0	-0.139262	37	75

5.56068	5.63479	-0.074108	37	76
5.01064	5.63479	-0.624154	37	77
4.78749	5.63479	-0.847298	37	78
5.01064	5.63479	-0.624154	37	79
4.78749	5.63479	-0.847298	37	80
4.34899	5.63479	-1.2858	37	81
5.07517	5.63479	-0.559616	37	82
ND<0	5.63479	-5.6347937	83	
2.18605	5.63479	-3.4487437	84	
ND<0	5.63479	-5.6347937	85	
0.828552	5.63479	-4.8062437	86	
1.89612	5.63479	-3.7386737	87	
0.797507	5.63479	-4.8372837	88	
1.26413	5.63479	-4.3706637	89	
0.470004	5.63479	-5.1647937	90	
1.43031	5.63479	-4.2044837	91	
ND<0 J	5.63479	-5.6347937	92	
0.262364 J	5.63479	-5.3724337	93	
0.262364	5.63479	-5.3724337	94	
-0.139262 J	5.63479	-5.7740537	95	

5.01064	5.56068	-0.550046	37	96
4.78749	5.56068	-0.7731937	97	
5.01064	5.56068	-0.550046	37	98
4.78749	5.56068	-0.7731937	99	
4.34899	5.56068	-1.2116937	100	
5.07517	5.56068	-0.485508	37	101
ND<0	5.56068	-5.5606837	102	
2.18605	5.56068	-3.3746337	103	
ND<0	5.56068	-5.5606837	104	
0.828552	5.56068	-4.7321337	105	
1.89612	5.56068	-3.6645637	106	
0.797507	5.56068	-4.7631737	107	
1.26413	5.56068	-4.2965537	108	
0.470004	5.56068	-5.0906837	109	
1.43031	5.56068	-4.1303737	110	
ND<0 J	5.56068	-5.5606837	111	
0.262364 J	5.56068	-5.2983237	112	
0.262364	5.56068	-5.2983237	113	
-0.139262 J	5.56068	-5.6999437	114	

4.78749	5.01064	-0.223144	37	115
5.01064	5.01064	0	37	115
4.78749	5.01064	-0.223144	37	116
4.34899	5.01064	-0.661649	37	117
5.07517	5.01064	0.0645385	38	117
ND<0	5.01064	-5.0106438	118	
2.18605	5.01064	-2.8245838	119	
ND<0	5.01064	-5.0106438	120	
0.828552	5.01064	-4.1820838	121	
1.89612	5.01064	-3.1145238	122	
0.797507	5.01064	-4.2131338	123	

1.26413	5.01064	-3.7465138	124	
0.470004	5.01064	-4.5406338	125	
1.43031	5.01064	-3.5803238	126	
ND<0 J 5.01064	-5.0106438	127		
0.262364 J	5.01064	-4.7482738	128	
0.262364	5.01064	-4.7482738	129	
-0.139262 J	5.01064	-5.1499 38	130	
5.01064	4.78749	0.223144	39	130
4.78749	4.78749	0 39	130	
4.34899	4.78749	-0.438505	39	131
5.07517	4.78749	0.287682	40	131
ND<0 4.78749	-4.7874940	132		
2.18605	4.78749	-2.6014440	133	
ND<0 4.78749	-4.7874940	134		
0.828552	4.78749	-3.9589440	135	
1.89612	4.78749	-2.8913740	136	
0.797507	4.78749	-3.9899840	137	
1.26413	4.78749	-3.5233740	138	
0.470004	4.78749	-4.3174940	139	
1.43031	4.78749	-3.3571840	140	
ND<0 J 4.78749	-4.7874940	141		
0.262364 J	4.78749	-4.5251340	142	
0.262364	4.78749	-4.5251340	143	
-0.139262 J	4.78749	-4.9267540	144	
4.78749	5.01064	-0.223144	40	145
4.34899	5.01064	-0.661649	40	146
5.07517	5.01064	0.0645385	41	146
ND<0 5.01064	-5.0106441	147		
2.18605	5.01064	-2.8245841	148	
ND<0 5.01064	-5.0106441	149		
0.828552	5.01064	-4.1820841	150	
1.89612	5.01064	-3.1145241	151	
0.797507	5.01064	-4.2131341	152	
1.26413	5.01064	-3.7465141	153	
0.470004	5.01064	-4.5406341	154	
1.43031	5.01064	-3.5803241	155	
ND<0 J 5.01064	-5.0106441	156		
0.262364 J	5.01064	-4.7482741	157	
0.262364	5.01064	-4.7482741	158	
-0.139262 J	5.01064	-5.1499 41	159	
4.34899	4.78749	-0.438505	41	160
5.07517	4.78749	0.287682	42	160
ND<0 4.78749	-4.7874942	161		
2.18605	4.78749	-2.6014442	162	
ND<0 4.78749	-4.7874942	163		
0.828552	4.78749	-3.9589442	164	
1.89612	4.78749	-2.8913742	165	
0.797507	4.78749	-3.9899842	166	
1.26413	4.78749	-3.5233742	167	
0.470004	4.78749	-4.3174942	168	
1.43031	4.78749	-3.3571842	169	
ND<0 J 4.78749	-4.7874942	170		
0.262364 J	4.78749	-4.5251342	171	
0.262364	4.78749	-4.5251342	172	
-0.139262 J	4.78749	-4.9267542	173	
5.07517	4.34899	0.726187	43	173
ND<0 4.34899	-4.3489943	174		
2.18605	4.34899	-2.1629443	175	

ND<0	4.34899	-4.3489943	176		
0.828552	4.34899	-3.5204343	177		
1.89612	4.34899	-2.4528743	178		
0.797507	4.34899	-3.5514843	179		
1.26413	4.34899	-3.0848643	180		
0.470004	4.34899	-3.8789843	181		
1.43031	4.34899	-2.9186843	182		
ND<0 J	4.34899	-4.3489943	183		
0.262364 J	4.34899	-4.0866243	184		
0.262364	4.34899	-4.0866243	185		
-0.139262 J	4.34899	-4.4882543	186		
ND<0	5.07517	-5.0751743	187		
2.18605	5.07517	-2.8891243	188		
ND<0	5.07517	-5.0751743	189		
0.828552	5.07517	-4.2466243	190		
1.89612	5.07517	-3.1790543	191		
0.797507	5.07517	-4.2776743	192		
1.26413	5.07517	-3.8110543	193		
0.470004	5.07517	-4.6051743	194		
1.43031	5.07517	-3.6448643	195		
ND<0 J	5.07517	-5.0751743	196		
0.262364 J	5.07517	-4.8128143	197		
0.262364	5.07517	-4.8128143	198		
-0.139262 J	5.07517	-5.2144443	199		
2.18605	ND<0	2.18605	44	199	
ND<0	ND<0	0	44	199	
0.828552	ND<0	0.828552	45	199	
1.89612	ND<0	1.89612	46	199	
0.797507	ND<0	0.797507	47	199	
1.26413	ND<0	1.26413	48	199	
0.470004	ND<0	0.470004	49	199	
1.43031	ND<0	1.43031	50	199	
ND<0 J	ND<0	0	50	199	
0.262364 J	ND<0	0.262364	51	199	
0.262364	ND<0	0.262364	52	199	
-0.139262 J	ND<0	-0.139262	52	200	
ND<0	2.18605	-2.1860552	201		
0.828552	2.18605	-1.3575	52	202	
1.89612	2.18605	-0.289932	52	203	
0.797507	2.18605	-1.3885452	204		
1.26413	2.18605	-0.921925	52	205	
0.470004	2.18605	-1.7160552	206		
1.43031	2.18605	-0.7557452	207		
ND<0 J	2.18605	-2.1860552	208		
0.262364 J	2.18605	-1.9236952	209		
0.262364	2.18605	-1.9236952	210		
-0.139262 J	2.18605	-2.3253152	211		
0.828552	ND<0	0.828552	53	211	
1.89612	ND<0	1.89612	54	211	
0.797507	ND<0	0.797507	55	211	
1.26413	ND<0	1.26413	56	211	
0.470004	ND<0	0.470004	57	211	
1.43031	ND<0	1.43031	58	211	
ND<0 J	ND<0	0	58	211	
0.262364 J	ND<0	0.262364	59	211	
0.262364	ND<0	0.262364	60	211	
-0.139262 J	ND<0	-0.139262	60	212	

1.89612	0.828552	1.06757	61	212
0.797507	0.828552	-0.0310446	61	213
1.26413	0.828552	0.435575	62	213
0.470004	0.828552	-0.358548	62	214
1.43031	0.828552	0.601759	63	214
ND<0 J	0.828552	-0.828552	63	215
0.262364 J	0.828552	-0.566188	63	216
0.262364	0.828552	-0.566188	63	217
-0.139262 J	0.828552	-0.967814	63	218
0.797507	1.89612	-1.0986163	219	
1.26413	1.89612	-0.631993	63	220
0.470004	1.89612	-1.4261263	221	
1.43031	1.89612	-0.465808	63	222
ND<0 J	1.89612	-1.8961263	223	
0.262364 J	1.89612	-1.6337663	224	
0.262364	1.89612	-1.6337663	225	
-0.139262 J	1.89612	-2.0353863	226	
1.26413	0.797507	0.46662	64	226
0.470004	0.797507	-0.327504	64	227
1.43031	0.797507	0.632804	65	227
ND<0 J	0.797507	-0.797507	65	228
0.262364 J	0.797507	-0.535143	65	229
0.262364	0.797507	-0.535143	65	230
-0.139262 J	0.797507	-0.936769	65	231
0.470004	1.26413	-0.794123	65	232
1.43031	1.26413	0.166185	66	232
ND<0 J	1.26413	-1.2641366	233	
0.262364 J	1.26413	-1.0017666	234	
0.262364	1.26413	-1.0017666	235	
-0.139262 J	1.26413	-1.4033966	236	
1.43031	0.470004	0.960308	67	236
ND<0 J	0.470004	-0.470004	67	237
0.262364 J	0.470004	-0.207639	67	238
0.262364	0.470004	-0.207639	67	239
-0.139262 J	0.470004	-0.609266	67	240
ND<0 J	1.43031	-1.4303167	241	
0.262364 J	1.43031	-1.1679567	242	
0.262364	1.43031	-1.1679567	243	
-0.139262 J	1.43031	-1.5695767	244	
0.262364 J	ND<0 J	0.262364	68	244
0.262364	ND<0 J	0.262364	69	244
-0.139262 J	ND<0 J	-0.139262	69	245
0.262364	0.262364 J	0	69	245
-0.139262 J	0.262364 J	-0.401626	69	246
-0.139262 J	0.262364	-0.401626	69	247

S Statistic = 69 - 247 = -178

Tied Group Value Members

1	0	4
2	5.01064	2
3	4.78749	2

4	0.262364	2

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 210
B = 0
C = 24
D = 0
E = 18
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 2046.67
Z-Score = -3.91246
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.91246| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: Trichlorofluoromethane

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 220
Total Non-Detect: 187
Percent Non-Detects: 85%
Total Background Measurements: 18
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	18	17 (94.4444%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.25	ND<0.25
			11/16/2009	ND<0.25	ND<0.25
			11/16/2009	3.4 J	3.4 J
			6/30/2010	ND<0.25	ND<0.25

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12AR	18	17 (94.4444%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.25	ND<0.25
			11/16/2009	12	12
			11/16/2009	ND<0.25	ND<0.25
			6/30/2010	ND<0.25	ND<0.25
MW-6	28	25 (89.2857%)	7/20/1995	0.41 J	0.41 J
			8/24/1995	ND<2	ND<2
			9/28/1995	0.4 J	0.4 J
			10/26/1995	ND<2	ND<2

			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.25		ND<0.25
			11/16/2009	ND<0.25		ND<0.25
			11/16/2009	7.6 J	7.6 J	
			6/30/2010	ND<0.25		ND<0.25
MW-7	28	22 (78.5714%)	7/20/1995		13	13
			8/24/1995	9.6	9.6	
			9/28/1995	11	11	
			10/26/1995	7	7	
			11/19/1996	ND<2	ND<2	
			12/19/1996	5	5	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.25		ND<0.25
			11/16/2009	ND<0.25		ND<0.25
			11/16/2009	56	56	
			6/30/2010	ND<0.25		ND<0.25
MW-8	26	25 (96.1538%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	5	5	
			9/24/1997	ND<2	ND<2	

		4/7/1998	ND<2	ND<2		
		9/23/1998		ND<2	ND<2	
		3/16/1999		ND<2	ND<2	
		9/23/1999		ND<2	ND<2	
		3/15/2000		ND<2	ND<2	
		9/24/2003		ND<2	ND<2	
		3/11/2004		ND<2	ND<2	
		10/12/2004		ND<2	ND<2	
		4/1/2005	ND<2	ND<2		
		10/25/2005		ND<2	ND<2	
		4/29/2006		ND<2	ND<2	
		11/18/2006		ND<2	ND<2	
		5/23/2007		ND<2	ND<2	
		11/28/2007		ND<2	ND<2	
		6/5/2008	ND<2	ND<2		
		11/20/2008		ND<2	ND<2	
		6/11/2009		ND<0.25		ND<0.25
		6/30/2010		ND<0.25		ND<0.25
MW-11R28	17 (60.7143%)	7/20/1995			ND<2	ND<2
		8/24/1995		14	14	
		9/28/1995		5	5	
		10/26/1995		6	6	
		11/19/1996		ND<2	ND<2	
		12/19/1996		25	25	
		3/24/1997		14	14	
		9/24/1997		6.2	6.2	
		4/7/1998	8.5	8.5		
		9/23/1998		ND<2	ND<2	
		3/16/1999		ND<2	ND<2	
		9/23/1999		ND<2	ND<2	
		3/15/2000		ND<2	ND<2	
		9/24/2003		ND<2	ND<2	
		3/11/2004		ND<2	ND<2	
		10/12/2004		ND<2	ND<2	
		4/1/2005	ND<2	ND<2		
		10/25/2005		0.28 J	0.28 J	
		4/29/2006		ND<2	ND<2	
		11/18/2006		ND<2	ND<2	
		5/23/2007		ND<2	ND<2	
		11/28/2007		ND<2	ND<2	
		6/5/2008	ND<2	ND<2		
		11/20/2008		0.2 J	0.2 J	
		6/11/2009		ND<0.25		ND<0.25
		11/16/2009		ND<0.25		ND<0.25
		11/16/2009		3.9 J	3.9 J	
		6/30/2010		0.54 J	0.54 J	
MW-12BR	18	17 (94.4444%)	3/16/1999		ND<2	ND<2
		9/23/1999		ND<2	ND<2	
		3/15/2000		ND<2	ND<2	
		9/24/2003		ND<2	ND<2	
		3/11/2004		ND<2	ND<2	
		10/12/2004		ND<2	ND<2	
		4/1/2005	ND<2	ND<2		
		10/25/2005		ND<2	ND<2	
		4/29/2006		ND<2	ND<2	
		11/18/2006		ND<2	ND<2	
		5/23/2007		ND<2	ND<2	
		11/28/2007		ND<2	ND<2	
		6/5/2008	ND<2	ND<2		
		11/20/2008		ND<2	ND<2	

			6/11/2009	ND<0.25		ND<0.25
			11/16/2009	20	20	
			11/16/2009	ND<0.25		ND<0.25
			6/30/2010	ND<0.25		ND<0.25
MW-9	28	20 (71.4286%)	7/20/1995		21	21
			8/24/1995	14	14	
			9/28/1995	15	15	
			10/26/1995	10	10	
			11/19/1996	ND<2	ND<2	
			12/19/1996	19	19	
			3/24/1997	8	8	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.25		ND<0.25
			11/16/2009	70	70	
			11/16/2009	ND<0.25		ND<0.25
			6/30/2010	0.31 J	0.31 J	
MW-10	28	27 (96.4286%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.25		ND<0.25
			11/16/2009	ND<0.25		ND<0.25
			11/16/2009	3.1 J	3.1 J	
			6/30/2010	ND<0.25		ND<0.25

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 = 220

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.125	-2.65209	7.03356	-0.331511
2	0.125	-2.3656	12.6297	-0.627213
3	0.125	-2.2262	17.5857	-0.905488
4	0.125	-2.0969	21.9828	-1.1676
5	0.125	-2.0140	26.0394	-1.41937
6	0.125	-1.9268	29.7521	-1.66022
7	0.125	-1.8662	33.2351	-1.89351
8	0.125	-1.7991	36.472	-2.1184
9	0.125	-1.7506	39.5369	-2.33723
10	0.125	-1.6954	42.4112	-2.54916
11	0.125	-1.6546	45.149	-2.75599
12	0.125	-1.6072	47.7323	-2.95689
13	0.125	-1.5717	50.2028	-3.15337
14	0.125	-1.5300	52.5439	-3.34462
15	0.125	-1.4985	54.7894	-3.53194
16	0.125	-1.4610	56.9241	-3.71457
17	0.125	-1.4325	58.9762	-3.89363
18	0.125	-1.3983	60.9316	-4.06843
19	0.125	-1.3722	62.8146	-4.23996
20	0.125	-1.3407	64.6122	-4.40755
21	0.125	-1.3105	66.3298	-4.57137
22	0.125	-1.2872	67.9869	-4.73228
23	0.125	-1.2590	69.5722	-4.88967
24	0.125	-1.2372	71.1029	-5.04432
25	0.2	-1.2107	72.5688	-5.28647
26	0.28	-1.1901	73.9852	-5.6197
27	0.31	-1.1650	75.3425	-5.98087
28	0.4	-1.1455	76.6547	-6.43907
29	0.41	-1.1216	77.9129	-6.89895
30	0.54	-1.1030	79.1296	-7.49461
31	1	-1.0803	80.2967	-8.57493
32	1	-1.0625	81.4257	-9.63745
33	1	-1.0407	82.5088	-10.6782
34	1	-1.0236	83.5566	-11.7018
35	1	-1.0027	84.5621	-12.7045
36	1	-0.986272	85.5348	-13.6908
37	1	-0.966088	86.4681	-14.6569
38	1	-0.950222	87.3711	-15.6071
39	1	-0.930718	88.2373	-16.5378
40	1	-0.915365	89.0752	-17.4532
41	1	-0.896473	89.8788	-18.3497
42	1	-0.877897	90.6496	-19.2276
43	1	-0.863249	91.3947	-20.0908
44	1	-0.845198	92.1091	-20.936
45	1	-0.830953	92.7996	-21.767
46	1	-0.813379	93.4612	-22.5804
47	1	-0.7995	94.1004	-23.3799
48	1	-0.782366	94.7125	-24.1622
49	1	-0.768821	95.3036	-24.931

50	1	-0.752084	95.8692	-25.6831
51	1	-0.738846	96.4151	-26.422
52	1	-0.722479	96.9371	-27.1445
53	1	-0.709522	97.4405	-27.854
54	1	-0.693493	97.9214	-28.5475
55	1	-0.680797	98.3849	-29.2283
56	1	-0.665079	98.8272	-29.8933
57	1	-0.652622	99.2531	-30.546
58	1	-0.637192	99.6592	-31.1832
59	1	-0.624956	100.05	-31.8081
60	1	-0.609791	100.422	-32.4179
61	1	-0.594766	100.775	-33.0127
62	1	-0.582841	101.115	-33.5955
63	1	-0.568052	101.438	-34.1636
64	1	-0.556308	101.747	-34.7199
65	1	-0.541736	102.041	-35.2616
66	1	-0.530162	102.322	-35.7918
67	1	-0.515791	102.588	-36.3076
68	1	-0.504372	102.842	-36.8119
69	1	-0.490189	103.082	-37.3021
70	1	-0.478914	103.312	-37.781
71	1	-0.464904	103.528	-38.2459
72	1	-0.453763	103.734	-38.6997
73	1	-0.439913	103.927	-39.1396
74	1	-0.428895	104.111	-39.5685
75	1	-0.415193	104.284	-39.9837
76	1	-0.40429	104.447	-40.388
77	1	-0.390726	104.6	-40.7787
78	1	-0.379927	104.744	-41.1586
79	1	-0.36649	104.878	-41.5251
80	1	-0.355788	105.005	-41.8809
81	1	-0.342466	105.122	-42.2234
82	1	-0.329206	105.231	-42.5526
83	1	-0.318639	105.332	-42.8712
84	1	-0.305481	105.426	-43.1767
85	1	-0.294992	105.513	-43.4717
86	1	-0.281926	105.592	-43.7536
87	1	-0.271509	105.666	-44.0251
88	1	-0.258527	105.733	-44.2837
89	1	-0.248174	105.794	-44.5318
90	1	-0.235269	105.85	-44.7671
91	1	-0.224974	105.9	-44.9921
92	1	-0.212137	105.945	-45.2042
93	1	-0.201894	105.986	-45.4061
94	1	-0.189118	106.022	-45.5952
95	1	-0.17892	106.054	-45.7742
96	1	-0.166199	106.081	-45.9404
97	1	-0.156042	106.106	-46.0964
98	1	-0.143367	106.126	-46.2398
99	1	-0.133244	106.144	-46.373
100	1	-0.12061	106.159	-46.4936
101	1	-0.107995	106.17	-46.6016
102	1	-0.0979139	106.18	-46.6995
103	1	-0.0853288	106.187	-46.7849
104	1	-0.0752698	106.193	-46.8601
105	1	-0.0627062	106.197	-46.9228
106	1	-0.0526632	106.199	-46.9755
107	1	-0.0401167	106.201	-47.0156
108	1	-0.0300838	106.202	-47.0457
109	1	-0.0175476	106.202	-47.0632
110	1	-0.00751925	106.202	-47.0708
111	1	0.00751925	106.202	-47.0632

112	1	0.0175476	106.203	-47.0457
113	1	0.0300838	106.204	-47.0156
114	1	0.0401167	106.205	-46.9755
115	1	0.0526632	106.208	-46.9228
116	1	0.0627062	106.212	-46.8601
117	1	0.0752698	106.218	-46.7849
118	1	0.0853288	106.225	-46.6995
119	1	0.0979139	106.234	-46.6016
120	1	0.107995	106.246	-46.4936
121	1	0.12061	106.261	-46.373
122	1	0.133244	106.278	-46.2398
123	1	0.143367	106.299	-46.0964
124	1	0.156042	106.323	-45.9404
125	1	0.166199	106.351	-45.7742
126	1	0.17892	106.383	-45.5952
127	1	0.189118	106.419	-45.4061
128	1	0.201894	106.459	-45.2042
129	1	0.212137	106.504	-44.9921
130	1	0.224974	106.555	-44.7671
131	1	0.235269	106.61	-44.5318
132	1	0.248174	106.672	-44.2837
133	1	0.258527	106.739	-44.0251
134	1	0.271509	106.813	-43.7536
135	1	0.281926	106.892	-43.4717
136	1	0.294992	106.979	-43.1767
137	1	0.305481	107.072	-42.8712
138	1	0.318639	107.174	-42.5526
139	1	0.329206	107.282	-42.2234
140	1	0.342466	107.4	-41.8809
141	1	0.355788	107.526	-41.5251
142	1	0.36649	107.661	-41.1586
143	1	0.379927	107.805	-40.7787
144	1	0.390726	107.958	-40.388
145	1	0.40429	108.121	-39.9837
146	1	0.415193	108.293	-39.5685
147	1	0.428895	108.477	-39.1396
148	1	0.439913	108.671	-38.6997
149	1	0.453763	108.877	-38.2459
150	1	0.464904	109.093	-37.781
151	1	0.478914	109.322	-37.3021
152	1	0.490189	109.563	-36.8119
153	1	0.504372	109.817	-36.3076
154	1	0.515791	110.083	-35.7918
155	1	0.530162	110.364	-35.2616
156	1	0.541736	110.657	-34.7199
157	1	0.556308	110.967	-34.1636
158	1	0.568052	111.29	-33.5955
159	1	0.582841	111.629	-33.0127
160	1	0.594766	111.983	-32.4179
161	1	0.609791	112.355	-31.8081
162	1	0.624956	112.746	-31.1832
163	1	0.637192	113.152	-30.546
164	1	0.652622	113.577	-29.8933
165	1	0.665079	114.02	-29.2283
166	1	0.680797	114.483	-28.5475
167	1	0.693493	114.964	-27.854
168	1	0.709522	115.468	-27.1445
169	1	0.722479	115.99	-26.422
170	1	0.738846	116.535	-25.6831
171	1	0.752084	117.101	-24.931
172	1	0.768821	117.692	-24.1622
173	1	0.782366	118.304	-23.3799

174	1	0.7995	118.943	-22.5804
175	1	0.813379	119.605	-21.767
176	1	0.830953	120.296	-20.936
177	1	0.845198	121.01	-20.0908
178	1	0.863249	121.755	-19.2276
179	1	0.877897	122.526	-18.3497
180	1	0.896473	123.329	-17.4532
181	1	0.915365	124.167	-16.5378
182	1	0.930718	125.034	-15.6071
183	1	0.950222	125.937	-14.6569
184	1	0.966088	126.87	-13.6908
185	1	0.986272	127.843	-12.7045
186	1	1.00271	128.848	-11.7018
187	1	1.02365	129.896	-10.6782
188	1	1.04073	130.979	-9.63745
189	1	1.06252	132.108	-8.57493
190	1	1.08032	133.275	-7.49461
191	1	1.10306	134.492	-6.39155
192	1	1.12168	135.75	-5.26987
193	1	1.1455	137.062	-4.12436
194	3.1	1.16505	138.419	-0.51272
195	3.4	1.19012	139.836	3.53369
196	3.9	1.21073	141.302	8.25553
197	5	1.23724	142.832	14.4417
198	5	1.25908	144.418	20.7371
199	5	1.28727	146.075	27.1735
200	6	1.31058	147.792	35.037
201	6.2	1.34075	149.59	43.3496
202	7	1.3722	151.473	52.9551
203	7.6	1.39838	153.428	63.5827
204	8	1.4325	155.481	75.0428
205	8.5	1.46106	157.615	87.4617
206	9.6	1.49852	159.861	101.847
207	10	1.53007	162.202	117.148
208	11	1.57179	164.672	134.438
209	12	1.60725	167.256	153.725
210	13	1.65463	169.993	175.235
211	14	1.6954	172.868	198.971
212	14	1.75069	175.933	223.48
213	14	1.79912	179.17	248.668
214	15	1.86629	182.653	276.662
215	19	1.92684	186.365	313.272
216	20	2.01409	190.422	353.554
217	21	2.09693	194.819	397.59
218	25	2.22621	199.775	453.245
219	56	2.36561	205.371	585.719
220	70	2.65209	212.405	771.365

Data Set Standard Deviation = 6.91352
Numerator = 595004
Denominator = 2.22335e+006
W Statistic = 0.267616 = 595004 / 2.22335e+006

5% Critical value of 0.976 exceeds 0.267616
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.267616
Evidence of non-normality at 99% level of significance

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 = 220

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.07944	-2.65209	7.03356	5.51486
2	-2.07944	-2.36561	12.6297	10.434
3	-2.07944	-2.22621	17.5857	15.0633
4	-2.07944	-2.09693	21.9828	19.4237
5	-2.07944	-2.01409	26.0394	23.6119
6	-2.07944	-1.92684	29.7521	27.6187
7	-2.07944	-1.86629	33.2351	31.4995
8	-2.07944	-1.79912	36.472	35.2407
9	-2.07944	-1.75069	39.5369	38.8811
10	-2.07944	-1.6954	42.4112	42.4066
11	-2.07944	-1.65463	45.149	45.8473
12	-2.07944	-1.60725	47.7323	49.1895
13	-2.07944	-1.57179	50.2028	52.4579
14	-2.07944	-1.53007	52.5439	55.6396
15	-2.07944	-1.49852	54.7894	58.7557
16	-2.07944	-1.46106	56.9241	61.7939
17	-2.07944	-1.4325	58.9762	64.7727
18	-2.07944	-1.39838	60.9316	67.6805
19	-2.07944	-1.3722	62.8146	70.5339
20	-2.07944	-1.34075	64.6122	73.322
21	-2.07944	-1.31058	66.3298	76.0472
22	-2.07944	-1.28727	67.9869	78.724
23	-2.07944	-1.25908	69.5722	81.3422
24	-2.07944	-1.23724	71.1029	83.915
25	-1.60944	-1.21073	72.5688	85.8636
26	-1.27297	-1.19012	73.9852	87.3786
27	-1.17118	-1.16505	75.3425	88.743
28	-0.916291	-1.1455	76.6547	89.7927
29	-0.891598	-1.12168	77.9129	90.7927
30	-0.616186	-1.10306	79.1296	91.4724
31	0	-1.08032	80.2967	91.4724
32	0	-1.06252	81.4257	91.4724
33	0	-1.04073	82.5088	91.4724
34	0	-1.02365	83.5566	91.4724
35	0	-1.00271	84.5621	91.4724
36	0	-0.986272	85.5348	91.4724
37	0	-0.966088	86.4681	91.4724
38	0	-0.950222	87.3711	91.4724
39	0	-0.930718	88.2373	91.4724
40	0	-0.915365	89.0752	91.4724
41	0	-0.896473	89.8788	91.4724
42	0	-0.877897	90.6496	91.4724
43	0	-0.863249	91.3947	91.4724
44	0	-0.845198	92.1091	91.4724
45	0	-0.830953	92.7996	91.4724
46	0	-0.813379	93.4612	91.4724
47	0	-0.7995	94.1004	91.4724
48	0	-0.782366	94.7125	91.4724
49	0	-0.768821	95.3036	91.4724

50	0	-0.752084	95.8692	91.4724
51	0	-0.738846	96.4151	91.4724
52	0	-0.722479	96.9371	91.4724
53	0	-0.709522	97.4405	91.4724
54	0	-0.693493	97.9214	91.4724
55	0	-0.680797	98.3849	91.4724
56	0	-0.665079	98.8272	91.4724
57	0	-0.652622	99.2531	91.4724
58	0	-0.637192	99.6592	91.4724
59	0	-0.624956	100.05	91.4724
60	0	-0.609791	100.422	91.4724
61	0	-0.594766	100.775	91.4724
62	0	-0.582841	101.115	91.4724
63	0	-0.568052	101.438	91.4724
64	0	-0.556308	101.747	91.4724
65	0	-0.541736	102.041	91.4724
66	0	-0.530162	102.322	91.4724
67	0	-0.515791	102.588	91.4724
68	0	-0.504372	102.842	91.4724
69	0	-0.490189	103.082	91.4724
70	0	-0.478914	103.312	91.4724
71	0	-0.464904	103.528	91.4724
72	0	-0.453763	103.734	91.4724
73	0	-0.439913	103.927	91.4724
74	0	-0.428895	104.111	91.4724
75	0	-0.415193	104.284	91.4724
76	0	-0.40429	104.447	91.4724
77	0	-0.390726	104.6	91.4724
78	0	-0.379927	104.744	91.4724
79	0	-0.36649	104.878	91.4724
80	0	-0.355788	105.005	91.4724
81	0	-0.342466	105.122	91.4724
82	0	-0.329206	105.231	91.4724
83	0	-0.318639	105.332	91.4724
84	0	-0.305481	105.426	91.4724
85	0	-0.294992	105.513	91.4724
86	0	-0.281926	105.592	91.4724
87	0	-0.271509	105.666	91.4724
88	0	-0.258527	105.733	91.4724
89	0	-0.248174	105.794	91.4724
90	0	-0.235269	105.85	91.4724
91	0	-0.224974	105.9	91.4724
92	0	-0.212137	105.945	91.4724
93	0	-0.201894	105.986	91.4724
94	0	-0.189118	106.022	91.4724
95	0	-0.17892	106.054	91.4724
96	0	-0.166199	106.081	91.4724
97	0	-0.156042	106.106	91.4724
98	0	-0.143367	106.126	91.4724
99	0	-0.133244	106.144	91.4724
100	0	-0.12061	106.159	91.4724
101	0	-0.107995	106.17	91.4724
102	0	-0.0979139	106.18	91.4724
103	0	-0.0853288	106.187	91.4724
104	0	-0.0752698	106.193	91.4724
105	0	-0.0627062	106.197	91.4724
106	0	-0.0526632	106.199	91.4724
107	0	-0.0401167	106.201	91.4724
108	0	-0.0300838	106.202	91.4724
109	0	-0.0175476	106.202	91.4724
110	0	-0.00751925	106.202	91.4724
111	0	0.00751925	106.202	91.4724

112	0	0.0175476	106.203	91.4724
113	0	0.0300838	106.204	91.4724
114	0	0.0401167	106.205	91.4724
115	0	0.0526632	106.208	91.4724
116	0	0.0627062	106.212	91.4724
117	0	0.0752698	106.218	91.4724
118	0	0.0853288	106.225	91.4724
119	0	0.0979139	106.234	91.4724
120	0	0.107995	106.246	91.4724
121	0	0.12061	106.261	91.4724
122	0	0.133244	106.278	91.4724
123	0	0.143367	106.299	91.4724
124	0	0.156042	106.323	91.4724
125	0	0.166199	106.351	91.4724
126	0	0.17892	106.383	91.4724
127	0	0.189118	106.419	91.4724
128	0	0.201894	106.459	91.4724
129	0	0.212137	106.504	91.4724
130	0	0.224974	106.555	91.4724
131	0	0.235269	106.61	91.4724
132	0	0.248174	106.672	91.4724
133	0	0.258527	106.739	91.4724
134	0	0.271509	106.813	91.4724
135	0	0.281926	106.892	91.4724
136	0	0.294992	106.979	91.4724
137	0	0.305481	107.072	91.4724
138	0	0.318639	107.174	91.4724
139	0	0.329206	107.282	91.4724
140	0	0.342466	107.4	91.4724
141	0	0.355788	107.526	91.4724
142	0	0.36649	107.661	91.4724
143	0	0.379927	107.805	91.4724
144	0	0.390726	107.958	91.4724
145	0	0.40429	108.121	91.4724
146	0	0.415193	108.293	91.4724
147	0	0.428895	108.477	91.4724
148	0	0.439913	108.671	91.4724
149	0	0.453763	108.877	91.4724
150	0	0.464904	109.093	91.4724
151	0	0.478914	109.322	91.4724
152	0	0.490189	109.563	91.4724
153	0	0.504372	109.817	91.4724
154	0	0.515791	110.083	91.4724
155	0	0.530162	110.364	91.4724
156	0	0.541736	110.657	91.4724
157	0	0.556308	110.967	91.4724
158	0	0.568052	111.29	91.4724
159	0	0.582841	111.629	91.4724
160	0	0.594766	111.983	91.4724
161	0	0.609791	112.355	91.4724
162	0	0.624956	112.746	91.4724
163	0	0.637192	113.152	91.4724
164	0	0.652622	113.577	91.4724
165	0	0.665079	114.02	91.4724
166	0	0.680797	114.483	91.4724
167	0	0.693493	114.964	91.4724
168	0	0.709522	115.468	91.4724
169	0	0.722479	115.99	91.4724
170	0	0.738846	116.535	91.4724
171	0	0.752084	117.101	91.4724
172	0	0.768821	117.692	91.4724
173	0	0.782366	118.304	91.4724

174	0	0.7995	118.943	91.4724	
175	0	0.813379		119.605	91.4724
176	0	0.830953		120.296	91.4724
177	0	0.845198		121.01	91.4724
178	0	0.863249		121.755	91.4724
179	0	0.877897		122.526	91.4724
180	0	0.896473		123.329	91.4724
181	0	0.915365		124.167	91.4724
182	0	0.930718		125.034	91.4724
183	0	0.950222		125.937	91.4724
184	0	0.966088		126.87	91.4724
185	0	0.986272		127.843	91.4724
186	0	1.00271	128.848	91.4724	
187	0	1.02365	129.896	91.4724	
188	0	1.04073	130.979	91.4724	
189	0	1.06252	132.108	91.4724	
190	0	1.08032	133.275	91.4724	
191	0	1.10306	134.492	91.4724	
192	0	1.12168	135.75	91.4724	
193	0	1.1455	137.062	91.4724	
194	1.1314	1.16505	138.419	92.7906	
195	1.22378	1.19012	139.836	94.247	
196	1.36098	1.21073	141.302	95.8948	
197	1.60944	1.23724	142.832	97.886	
198	1.60944	1.25908	144.418	99.9124	
199	1.60944	1.28727	146.075	101.984	
200	1.79176	1.31058	147.792	104.332	
201	1.82455	1.34075	149.59	106.779	
202	1.94591	1.3722	151.473	109.449	
203	2.02815	1.39838	153.428	112.285	
204	2.07944	1.4325	155.481	115.264	
205	2.14007	1.46106	157.615	118.391	
206	2.26176	1.49852	159.861	121.78	
207	2.30259	1.53007	162.202	125.303	
208	2.3979	1.57179	164.672	129.072	
209	2.48491	1.60725	167.256	133.066	
210	2.56495	1.65463	169.993	137.31	
211	2.63906	1.6954	172.868	141.784	
212	2.63906	1.75069	175.933	146.404	
213	2.63906	1.79912	179.17	151.152	
214	2.70805	1.86629	182.653	156.206	
215	2.94444	1.92684	186.365	161.88	
216	2.99573	2.01409	190.422	167.913	
217	3.04452	2.09693	194.819	174.298	
218	3.21888	2.22621	199.775	181.463	
219	4.02535	2.36561	205.371	190.986	
220	4.2485	2.65209	212.405	202.253	

Data Set Standard Deviation = 1.12174
Numerator = 40906.4
Denominator = 58531.6
W Statistic = 0.698877 = 40906.4 / 58531.6

5% Critical value of 0.976 exceeds 0.698877
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.698877
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Trichlorofluoromethane

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	94
	9/23/1999	ND<0	94
	3/15/2000	ND<0	94
	9/24/2003	ND<0	94
	3/11/2004	ND<0	94
	10/12/2004	ND<0	94
	4/1/2005	ND<0	94
	10/25/2005	ND<0	94
	4/29/2006	ND<0	94
	11/18/2006	ND<0	94
	5/23/2007	ND<0	94
	11/28/2007	ND<0	94
	6/5/2008	ND<0	94
	11/20/2008	ND<0	94
	6/11/2009	ND<-2.07944	94
	11/16/2009	ND<-2.07944	94
	11/16/2009	1.22378 J	195
	6/30/2010	ND<-2.07944	94

Rank Sum = 1793
Rank Mean = 99.6111

Background Rank Sum = 1793
Background Rank Mean = 99.6111

Compliance Wells

Well ID	Date	Result	Rank
MW-12AR	3/16/1999	ND<0	94
	9/23/1999	ND<0	94
	3/15/2000	ND<0	94
	9/24/2003	ND<0	94
	3/11/2004	ND<0	94
	10/12/2004	ND<0	94
	4/1/2005	ND<0	94
	10/25/2005	ND<0	94
	4/29/2006	ND<0	94
	11/18/2006	ND<0	94
	5/23/2007	ND<0	94
	11/28/2007	ND<0	94
	6/5/2008	ND<0	94
	11/20/2008	ND<0	94
	6/11/2009	ND<-2.07944	94
	11/16/2009	2.48491	209
	11/16/2009	ND<-2.07944	94
	6/30/2010	ND<-2.07944	94

Rank Sum = 1807
Rank Mean = 100.389

MW-6	7/20/1995	-0.891598	J	192
	8/24/1995	ND<0	94	
	9/28/1995	-0.916291	J	191
	10/26/1995	ND<0	94	
	11/19/1996	ND<0	94	
	12/19/1996	ND<0	94	
	3/24/1997	ND<0	94	
	9/24/1997	ND<0	94	
	4/7/1998	ND<0	94	
	9/23/1998	ND<0	94	
	3/16/1999	ND<0	94	
	9/23/1999	ND<0	94	
	3/15/2000	ND<0	94	
	9/24/2003	ND<0	94	
	3/11/2004	ND<0	94	
	10/12/2004	ND<0	94	
	4/1/2005	ND<0	94	
	10/25/2005	ND<0	94	
	4/29/2006	ND<0	94	
	11/18/2006	ND<0	94	
	5/23/2007	ND<0	94	
	11/28/2007	ND<0	94	
	6/5/2008	ND<0	94	
	11/20/2008	ND<0	94	
	6/11/2009	ND<-2.07944		94
	11/16/2009	ND<-2.07944		94
	11/16/2009	2.02815	J	203
	6/30/2010	ND<-2.07944		94

Rank Sum = 2936
Rank Mean = 104.857

MW-7	7/20/1995	2.56495		210
	8/24/1995	2.26176		206
	9/28/1995	2.3979	208	
	10/26/1995	1.94591		202
	11/19/1996	ND<0	94	
	12/19/1996	1.60944		197
	3/24/1997	ND<0	94	
	9/24/1997	ND<0	94	
	4/7/1998	ND<0	94	
	9/23/1998	ND<0	94	
	3/16/1999	ND<0	94	
	9/23/1999	ND<0	94	
	3/15/2000	ND<0	94	
	9/24/2003	ND<0	94	
	3/11/2004	ND<0	94	
	10/12/2004	ND<0	94	
	4/1/2005	ND<0	94	
	10/25/2005	ND<0	94	
	4/29/2006	ND<0	94	
	11/18/2006	ND<0	94	
	5/23/2007	ND<0	94	
	11/28/2007	ND<0	94	
	6/5/2008	ND<0	94	
	11/20/2008	ND<0	94	
	6/11/2009	ND<-2.07944		94
	11/16/2009	ND<-2.07944		94
	11/16/2009	4.02535		219
	6/30/2010	ND<-2.07944		94

Rank Sum = 3310
Rank Mean = 118.214

MW-8	7/20/1995	ND<0	94	
	8/24/1995	ND<0	94	
	9/28/1995	ND<0	94	
	10/26/1995	ND<0	94	
	11/19/1996	ND<0	94	
	12/19/1996	ND<0	94	
	3/24/1997	1.60944		198
	9/24/1997	ND<0	94	
	4/7/1998	ND<0	94	
	9/23/1998	ND<0	94	
	3/16/1999	ND<0	94	
	9/23/1999	ND<0	94	
	3/15/2000	ND<0	94	
	9/24/2003	ND<0	94	
	3/11/2004	ND<0	94	
	10/12/2004	ND<0	94	
	4/1/2005	ND<0	94	
	10/25/2005	ND<0	94	
	4/29/2006	ND<0	94	
	11/18/2006	ND<0	94	
	5/23/2007	ND<0	94	
	11/28/2007	ND<0	94	
	6/5/2008	ND<0	94	
	11/20/2008	ND<0	94	
	6/11/2009	ND<-2.07944		94
	6/30/2010	ND<-2.07944		94

Rank Sum = 2548
Rank Mean = 98

MW-11R	7/20/1995	ND<0	94	
	8/24/1995	2.63906		211
	9/28/1995	1.60944		199
	10/26/1995	1.79176		200
	11/19/1996	ND<0	94	
	12/19/1996	3.21888		218
	3/24/1997	2.63906		212
	9/24/1997	1.82455		201
	4/7/1998	2.14007	205	
	9/23/1998	ND<0	94	
	3/16/1999	ND<0	94	
	9/23/1999	ND<0	94	
	3/15/2000	ND<0	94	
	9/24/2003	ND<0	94	
	3/11/2004	ND<0	94	
	10/12/2004	ND<0	94	
	4/1/2005	ND<0	94	
	10/25/2005	-1.27297 J		189
	4/29/2006	ND<0	94	
	11/18/2006	ND<0	94	
	5/23/2007	ND<0	94	
	11/28/2007	ND<0	94	
	6/5/2008	ND<0	94	
	11/20/2008	-1.60944 J		188
	6/11/2009	ND<-2.07944		94
	11/16/2009	ND<-2.07944		94
	11/16/2009	1.36098 J		196
	6/30/2010	-0.616186 J		193

Rank Sum = 3810
Rank Mean = 136.071

MW-12BR	3/16/1999	ND<0	94

	9/23/1999	ND<0	94
	3/15/2000	ND<0	94
	9/24/2003	ND<0	94
	3/11/2004	ND<0	94
	10/12/2004	ND<0	94
	4/1/2005	ND<0	94
	10/25/2005	ND<0	94
	4/29/2006	ND<0	94
	11/18/2006	ND<0	94
	5/23/2007	ND<0	94
	11/28/2007	ND<0	94
	6/5/2008	ND<0	94
	11/20/2008	ND<0	94
	6/11/2009	ND<-2.07944	94
	11/16/2009	2.99573	216
	11/16/2009	ND<-2.07944	94
	6/30/2010	ND<-2.07944	94

Rank Sum = 1814
Rank Mean = 100.778

MW-9	7/20/1995	3.04452	217
	8/24/1995	2.63906	213
	9/28/1995	2.70805	214
	10/26/1995	2.30259	207
	11/19/1996	ND<0	94
	12/19/1996	2.94444	215
	3/24/1997	2.07944	204
	9/24/1997	ND<0	94
	4/7/1998	ND<0	94
	9/23/1998	ND<0	94
	3/16/1999	ND<0	94
	9/23/1999	ND<0	94
	3/15/2000	ND<0	94
	9/24/2003	ND<0	94
	3/11/2004	ND<0	94
	10/12/2004	ND<0	94
	4/1/2005	ND<0	94
	10/25/2005	ND<0	94
	4/29/2006	ND<0	94
	11/18/2006	ND<0	94
	5/23/2007	ND<0	94
	11/28/2007	ND<0	94
	6/5/2008	ND<0	94
	11/20/2008	ND<0	94
	6/11/2009	ND<-2.07944	94
	11/16/2009	4.2485	220
	11/16/2009	ND<-2.07944	94
	6/30/2010	-1.17118 J	190

Rank Sum = 3560
Rank Mean = 127.143

MW-10	7/20/1995	ND<0	94
	8/24/1995	ND<0	94
	9/28/1995	ND<0	94
	10/26/1995	ND<0	94
	11/19/1996	ND<0	94
	12/19/1996	ND<0	94
	3/24/1997	ND<0	94
	9/24/1997	ND<0	94
	4/7/1998	ND<0	94
	9/23/1998	ND<0	94
	3/16/1999	ND<0	94

9/23/1999	ND<0	94	
3/15/2000	ND<0	94	
9/24/2003	ND<0	94	
3/11/2004	ND<0	94	
10/12/2004	ND<0	94	
4/1/2005	ND<0	94	
10/25/2005	ND<0	94	
4/29/2006	ND<0	94	
11/18/2006	ND<0	94	
5/23/2007	ND<0	94	
11/28/2007	ND<0	94	
6/5/2008	ND<0	94	
11/20/2008	ND<0	94	
6/11/2009	ND<-2.07944	94	
11/16/2009	ND<-2.07944	94	
11/16/2009	1.1314 J	194	
6/30/2010	ND<-2.07944	94	

Rank Sum = 2732
Rank Mean = 97.5714

Calculation Results:

Kruskal-Wallis H Statistic = 10.623
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 27.5294
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
10.623 < 15.5073 indicating no significant group difference at 5% significance level
27.5294 > 15.5073 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 99.6111

Well	Mean Rank	Dif from Bkg	Critical Value
MW-12AR	100.389	0.777778	49.3593
MW-6	104.857	5.24603	44.7357
MW-7	118.214	18.6032	44.7357
MW-8	98	-1.61111	45.404
MW-11R	136.071	36.4603	44.7357
MW-12BR	100.778	1.16667	49.3593
MW-9	127.143	27.5317	44.7357
MW-10	97.5714	-2.03968	44.7357

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 99.6111

Well	Mean Rank	Dif from Bkg	Critical Value
MW-12AR	100.389	0.777778	53.3014
MW-6	104.857	5.24603	48.3085
MW-7	118.214	18.6032	48.3085
MW-8	98	-1.61111	49.0301
MW-11R	136.071	36.4603	48.3085
MW-12BR	100.778	1.16667	53.3014
MW-9	127.143	27.5317	48.3085
MW-10	97.5714	-2.03968	48.3085

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Trichlorofluoromethane

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

Total Percent Non-Detects = 85%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 18
Maximum Background Concentration = 1.22378
Confidence Level = 69.2%
False Positive Rate = 30.8%

Location	Date	Samples	Mean	Significant
MW-12AR	6/30/2010	1	-2.07944	FALSE
MW-6	6/30/2010	1	-2.07944	FALSE
MW-7	6/30/2010	1	-2.07944	FALSE
MW-8	6/30/2010	1	-2.07944	FALSE
MW-11R	6/30/2010	1	-0.616186	FALSE
MW-12BR	6/30/2010	1	-2.07944	FALSE
MW-9	6/30/2010	1	-1.17118	FALSE
MW-10	6/30/2010	1	-2.07944	FALSE

Concentrations (ppb)

Parameter: Vanadium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 161
Percent Non-Detects: 75.9434%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	15 (88.2353%)	3/16/1999	ND<20	ND<20
			9/23/1999	11 J	11 J
			3/15/2000	22	22
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	ND<20	ND<20
			6/5/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	ND<1.4	ND<1.4
			11/16/2009	ND<1.4	ND<1.4
			6/30/2010	ND<1.4	ND<1.4

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12BR	17	16 (94.1176%)	3/16/1999	ND<20	ND<20
			9/23/1999	22	22
			3/15/2000	ND<20	ND<20
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	ND<20	ND<20
			6/5/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	ND<1.4	ND<1.4
			11/16/2009	ND<1.4	ND<1.4
			6/30/2010	ND<1.4	ND<1.4
MW-12AR	17	14 (82.3529%)	3/16/1999	ND<20	ND<20
			9/23/1999	ND<20	ND<20
			3/15/2000	270	270
			9/24/2003	43	43
			3/11/2004	96	96
			10/12/2004	ND<20	ND<20

			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	ND<20	ND<20
			11/28/2007	ND<20	ND<20
			6/5/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	ND<1.4	ND<1.4
			11/16/2009	ND<1.4	ND<1.4
			6/30/2010	ND<1.4	ND<1.4
MW-11R	27	25 (92.5926%)	7/20/1995	ND<20	ND<20
			8/24/1995	ND<20	ND<20
			9/28/1995	ND<20	ND<20
			10/26/1995	ND<20	ND<20
			11/19/1996	ND<20	ND<20
			12/19/1996	ND<20	ND<20
			3/24/1997	ND<20	ND<20
			9/24/1997	ND<20	ND<20
			4/7/1998	ND<20	ND<20
			9/23/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20
			9/23/1999	9 J	9 J
			3/15/2000	ND<20	ND<20
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	5.32	5.32
			11/28/2007	ND<20	ND<20
			6/5/2008	ND<20	ND<20
			11/20/2008	ND<20	ND<20
			6/11/2009	ND<1.4	ND<1.4
			11/16/2009	ND<1.4	ND<1.4
			6/30/2010	ND<1.4	ND<1.4
MW-10	27	16 (59.2593%)	7/20/1995	ND<20	ND<20
			8/24/1995	ND<20	ND<20
			9/28/1995	ND<20	ND<20
			10/26/1995	ND<20	ND<20
			11/19/1996	ND<20	ND<20
			12/19/1996	52	52
			3/24/1997	ND<20	ND<20
			9/24/1997	50	50
			4/7/1998	73	73
			9/23/1998	ND<20	ND<20
			3/16/1999	ND<20	ND<20
			9/23/1999	6 J	6 J
			3/15/2000	41	41
			9/24/2003	ND<20	ND<20
			3/11/2004	ND<20	ND<20
			10/12/2004	ND<20	ND<20
			4/1/2005	ND<20	ND<20
			10/25/2005	ND<20	ND<20
			4/29/2006	ND<20	ND<20
			11/18/2006	ND<20	ND<20
			5/23/2007	3.77 J	3.77 J
			11/28/2007	9 J	9 J

			6/5/2008	ND<20	ND<20	
			11/20/2008	39	39	
			6/11/2009	1.9 J	1.9 J	
			11/16/2009	1.5 J	1.5 J	
			6/30/2010	1.5 J H	1.5 J H	
MW-8	26	14 (53.8462%)	7/20/1995		ND<20	ND<20
			8/24/1995	ND<20	ND<20	
			9/28/1995	245	245	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	164	164	
			3/24/1997	44	44	
			9/24/1997	ND<20	ND<20	
			4/7/1998	44	44	
			9/23/1998	110	110	
			3/16/1999	ND<20	ND<20	
			9/23/1999	6 J	6 J	
			3/15/2000	ND<20	ND<20	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	4.47 J	4.47 J	
			5/23/2007	12	12	
			11/28/2007	21.2	21.2	
			6/5/2008	2.94 J	2.94 J	
			11/20/2008	9 J	9 J	
			6/11/2009	1.4 J	1.4 J	
			6/30/2010	ND<1.4	ND<1.4	
MW-7	27	13 (48.1481%)	7/20/1995		4 J	4 J
			8/24/1995	ND<20	ND<20	
			9/28/1995	274	274	
			10/26/1995	122	122	
			11/19/1996	ND<20	ND<20	
			12/19/1996	178	178	
			3/24/1997	120	120	
			9/24/1997	76	76	
			4/7/1998	160	160	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	27	27	
			3/15/2000	62	62	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	8.33	8.33	
			11/28/2007	ND<20	ND<20	
			6/5/2008	2.5 J	2.5 J	
			11/20/2008	16 J	16 J	
			6/11/2009	4.3 J	4.3 J	
			11/16/2009	ND<1.4	ND<1.4	
			6/30/2010	4.7 J H	4.7 J H	
MW-6	27	26 (96.2963%)	7/20/1995		ND<20	ND<20

			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	ND<20	ND<20	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	64	64	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	ND<20	ND<20	
			11/28/2007	ND<20	ND<20	
			6/5/2008	ND<20	ND<20	
			11/20/2008	ND<20	ND<20	
			6/11/2009	ND<1.4	ND<1.4	
			11/16/2009	ND<1.4	ND<1.4	
			6/30/2010	ND<1.4	ND<1.4	
MW-9	27	22 (81.4815%)	7/20/1995	ND<20	ND<20	
			8/24/1995	ND<20	ND<20	
			9/28/1995	ND<20	ND<20	
			10/26/1995	ND<20	ND<20	
			11/19/1996	ND<20	ND<20	
			12/19/1996	ND<20	ND<20	
			3/24/1997	52	52	
			9/24/1997	ND<20	ND<20	
			4/7/1998	ND<20	ND<20	
			9/23/1998	ND<20	ND<20	
			3/16/1999	ND<20	ND<20	
			9/23/1999	ND<20	ND<20	
			3/15/2000	42	42	
			9/24/2003	ND<20	ND<20	
			3/11/2004	ND<20	ND<20	
			10/12/2004	ND<20	ND<20	
			4/1/2005	ND<20	ND<20	
			10/25/2005	ND<20	ND<20	
			4/29/2006	ND<20	ND<20	
			11/18/2006	ND<20	ND<20	
			5/23/2007	3.07 J	3.07 J	
			11/28/2007	7 J	7 J	
			6/5/2008	ND<20	ND<20	
			11/20/2008	25	25	
			6/11/2009	ND<1.4	ND<1.4	
			11/16/2009	ND<1.4	ND<1.4	
			6/30/2010	ND<1.4	ND<1.4	

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.7	-2.65209	7.03356	-1.85646
2	0.7	-2.36561	12.6297	-3.51239
3	0.7	-2.19728	17.4578	-5.05049
4	0.7	-2.09693	21.8549	-6.51834
5	0.7	-1.99539	25.8365	-7.91512
6	0.7	-1.91103	29.4885	-9.25284
7	0.7	-1.85218	32.9191	-10.5494
8	0.7	-1.78661	36.111	-11.8
9	0.7	-1.72793	39.0968	-13.0095
10	0.7	-1.68494	41.9358	-14.189
11	0.7	-1.63524	44.6098	-15.3337
12	0.7	-1.58927	47.1356	-16.4462
13	0.7	-1.54643	49.527	-17.5287
14	0.7	-1.5141	51.8195	-18.5885
15	0.7	-1.47579	53.9975	-19.6216
16	0.7	-1.43953	56.0698	-20.6293
17	0.7	-1.41183	58.063	-21.6175
18	0.7	-1.37866	59.9637	-22.5826
19	0.7	-1.34694	61.778	-23.5255
20	0.7	-1.32251	63.527	-24.4512
21	1.4	-1.29303	65.1989	-26.2615
22	1.5	-1.26464	66.7982	-28.1584
23	1.5	-1.24264	68.3424	-30.0224
24	1.9	-1.21596	69.821	-32.3327
25	2.5	-1.19012	71.2373	-35.308
26	2.94	-1.16505	72.5947	-38.7332
27	3.07	-1.1455	73.9069	-42.2499
28	3.77	-1.12168	75.165	-46.4787
29	4	-1.09847	76.3716	-50.8725
30	4.3	-1.08032	77.5387	-55.5179
31	4.47	-1.05812	78.6584	-60.2477
32	4.7	-1.03643	79.7326	-65.119
33	5.32	-1.01943	80.7718	-70.5423
34	6	-0.998575	81.7689	-76.5338
35	6	-0.97815	82.7257	-82.4027
36	7	-0.958125	83.6437	-89.1095
37	8.33	-0.942375	84.5318	-96.9595
38	9	-0.923014	85.3837	-105.267
39	9	-0.903992	86.201	-113.403
40	9	-0.889006	86.9913	-121.404
41	10	-0.87055	87.7491	-130.109
42	10	-0.852385	88.4757	-138.633
43	10	-0.838054	89.178	-147.014
44	10	-0.820379	89.8511	-155.217
45	10	-0.802956	90.4958	-163.247
46	10	-0.789191	91.1186	-171.139
47	10	-0.772193	91.7149	-178.861
48	10	-0.755415	92.2856	-186.415
49	10	-0.738846	92.8314	-193.803

50	10	-0.725736	93.3581	-201.061
51	10	-0.709522	93.8616	-208.156
52	10	-0.693493	94.3425	-215.091
53	10	-0.680797	94.806	-221.899
54	10	-0.665079	95.2483	-228.55
55	10	-0.649522	95.6702	-235.045
56	10	-0.637192	96.0762	-241.417
57	10	-0.621911	96.463	-247.636
58	10	-0.606775	96.8312	-253.704
59	10	-0.594766	97.1849	-259.651
60	10	-0.579873	97.5212	-265.45
61	10	-0.565108	97.8405	-271.101
62	10	-0.550465	98.1435	-276.606
63	10	-0.538836	98.4339	-281.994
64	10	-0.524401	98.7088	-287.238
65	10	-0.510074	98.969	-292.339
66	10	-0.498687	99.2177	-297.326
67	10	-0.484544	99.4525	-302.171
68	10	-0.470498	99.6739	-306.876
69	10	-0.459327	99.8848	-311.469
70	10	-0.445443	100.083	-315.924
71	10	-0.431644	100.27	-320.24
72	10	-0.417928	100.444	-324.42
73	10	-0.40701	100.61	-328.49
74	10	-0.393433	100.765	-332.424
75	10	-0.379927	100.909	-336.223
76	10	-0.369171	101.045	-339.915
77	10	-0.355788	101.172	-343.473
78	10	-0.342466	101.289	-346.897
79	10	-0.331854	101.399	-350.216
80	10	-0.318639	101.501	-353.402
81	10	-0.305481	101.594	-356.457
82	10	-0.294992	101.681	-359.407
83	10	-0.281926	101.761	-362.226
84	10	-0.268908	101.833	-364.915
85	10	-0.255936	101.898	-367.475
86	10	-0.24559	101.959	-369.931
87	10	-0.232693	102.013	-372.258
88	10	-0.219834	102.061	-374.456
89	10	-0.209575	102.105	-376.552
90	10	-0.196779	102.144	-378.52
91	10	-0.184017	102.178	-380.36
92	10	-0.173829	102.208	-382.098
93	10	-0.161119	102.234	-383.709
94	10	-0.148434	102.256	-385.194
95	10	-0.135774	102.274	-386.551
96	10	-0.125661	102.29	-387.808
97	10	-0.113039	102.303	-388.938
98	10	-0.100433	102.313	-389.943
99	10	-0.0903606	102.321	-390.846
100	10	-0.0777834	102.327	-391.624
101	10	-0.0652187	102.332	-392.276
102	10	-0.0551734	102.335	-392.828
103	10	-0.0426257	102.336	-393.254
104	10	-0.0300838	102.337	-393.555
105	10	-0.0200544	102.338	-393.756
106	10	-0.00751925	102.338	-393.831
107	10	0.00751925	102.338	-393.756
108	10	0.0200544	102.338	-393.555
109	10	0.0300838	102.339	-393.254
110	10	0.0426257	102.341	-392.828
111	10	0.0551734	102.344	-392.276

112	10	0.0652187	102.348	-391.624
113	10	0.0777834	102.354	-390.846
114	10	0.0903606	102.362	-389.943
115	10	0.100433	102.373	-388.938
116	10	0.113039	102.385	-387.808
117	10	0.125661	102.401	-386.551
118	10	0.135774	102.42	-385.194
119	10	0.148434	102.442	-383.709
120	10	0.161119	102.468	-382.098
121	10	0.173829	102.498	-380.36
122	10	0.184017	102.532	-378.52
123	10	0.196779	102.57	-376.552
124	10	0.209575	102.614	-374.456
125	10	0.219834	102.663	-372.258
126	10	0.232693	102.717	-369.931
127	10	0.24559	102.777	-367.475
128	10	0.255936	102.843	-364.915
129	10	0.268908	102.915	-362.226
130	10	0.281926	102.994	-359.407
131	10	0.294992	103.081	-356.457
132	10	0.305481	103.175	-353.402
133	10	0.318639	103.276	-350.216
134	10	0.331854	103.386	-346.897
135	10	0.342466	103.504	-343.473
136	10	0.355788	103.63	-339.915
137	10	0.369171	103.767	-336.223
138	10	0.379927	103.911	-332.424
139	10	0.393433	104.066	-328.49
140	10	0.40701	104.231	-324.42
141	10	0.417928	104.406	-320.24
142	10	0.431644	104.592	-315.924
143	10	0.445443	104.791	-311.469
144	10	0.459327	105.002	-306.876
145	10	0.470498	105.223	-302.171
146	10	0.484544	105.458	-297.326
147	10	0.498687	105.707	-292.339
148	10	0.510074	105.967	-287.238
149	10	0.524401	106.242	-281.994
150	10	0.538836	106.532	-276.606
151	10	0.550465	106.835	-271.101
152	10	0.565108	107.154	-265.45
153	10	0.579873	107.491	-259.651
154	10	0.594766	107.844	-253.704
155	10	0.606775	108.213	-247.636
156	10	0.621911	108.599	-241.417
157	10	0.637192	109.005	-235.045
158	10	0.649522	109.427	-228.55
159	10	0.665079	109.87	-221.899
160	10	0.680797	110.333	-215.091
161	10	0.693493	110.814	-208.156
162	10	0.709522	111.317	-201.061
163	10	0.725736	111.844	-193.803
164	10	0.738846	112.39	-186.415
165	10	0.755415	112.961	-178.861
166	10	0.772193	113.557	-171.139
167	10	0.789191	114.18	-163.247
168	10	0.802956	114.824	-155.217
169	10	0.820379	115.498	-147.014
170	10	0.838054	116.2	-138.633
171	10	0.852385	116.926	-130.109
172	10	0.87055	117.684	-121.404
173	10	0.889006	118.475	-112.514

174	10	0.903992		119.292	-103.474
175	10	0.923014		120.144	-94.2435
176	10	0.942375		121.032	-84.8198
177	10	0.958125		121.95	-75.2385
178	10	0.97815	122.907	-65.457	
179	10	0.998575		123.904	-55.4713
180	10	1.01943	124.943	-45.277	
181	10	1.03643	126.017	-34.9126	
182	11	1.05812	127.137	-23.2733	
183	12	1.08032	128.304	-10.3095	
184	16	1.09847	129.511	7.26605	
185	21.2	1.12168	130.769	31.0456	
186	22	1.1455	132.081	56.2467	
187	22	1.16505	133.438	81.8777	
188	25	1.19012	134.855	111.631	
189	27	1.21596	136.333	144.462	
190	39	1.24264	137.877	192.925	
191	41	1.26464	139.477	244.775	
192	42	1.29303	141.149	299.082	
193	43	1.32251	142.898	355.95	
194	44	1.34694	144.712	415.215	
195	44	1.37866	146.613	475.876	
196	50	1.41183	148.606	546.468	
197	52	1.43953	150.678	621.323	
198	52	1.47579	152.856	698.065	
199	62	1.5141	155.149	791.939	
200	64	1.54643	157.54	890.911	
201	73	1.58927	160.066	1006.93	
202	76	1.63524	162.74	1131.21	
203	96	1.68494	165.579	1292.96	
204	110	1.72793	168.564	1483.03	
205	120	1.78661	171.756	1697.43	
206	122	1.85218	175.187	1923.39	
207	160	1.91103	178.839	2229.16	
208	164	1.99539	182.821	2556.4	
209	178	2.09693	187.218	2929.65	
210	245	2.19728	192.046	3467.99	
211	270	2.36561	197.642	4106.7	
212	274	2.65209	204.676	4833.38	

Data Set Standard Deviation = 38.897
Numerator = 2.33615e+007
Denominator = 6.53401e+007
W Statistic = 0.357537 = 2.33615e+007 / 6.53401e+007

5% Critical value of 0.976 exceeds 0.357537
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.357537
Evidence of non-normality at 99% level of significance

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 = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-0.356675	-2.65209	7.03356	0.945933
2	-0.356675	-2.36561	12.6297	1.78969
3	-0.356675	-2.19728	17.4578	2.5734
4	-0.356675	-2.09693	21.8549	3.32133
5	-0.356675	-1.99539	25.8365	4.03303
6	-0.356675	-1.91103	29.4885	4.71465
7	-0.356675	-1.85218	32.9191	5.37528
8	-0.356675	-1.78661	36.111	6.01252
9	-0.356675	-1.72793	39.0968	6.62883
10	-0.356675	-1.68494	41.9358	7.2298
11	-0.356675	-1.63524	44.6098	7.81305
12	-0.356675	-1.58927	47.1356	8.3799
13	-0.356675	-1.54643	49.527	8.93147
14	-0.356675	-1.5141	51.8195	9.47152
15	-0.356675	-1.47579	53.9975	9.9979
16	-0.356675	-1.43953	56.0698	10.5113
17	-0.356675	-1.41183	58.063	11.0149
18	-0.356675	-1.37866	59.9637	11.5066
19	-0.356675	-1.34694	61.778	11.9871
20	-0.356675	-1.32251	63.527	12.4588
21	0.336472	-1.29303	65.1989	12.0237
22	0.405465	-1.26464	66.7982	11.5109
23	0.405465	-1.24264	68.3424	11.0071
24	0.641854	-1.21596	69.821	10.2266
25	0.916291	-1.19012	71.2373	9.13611
26	1.07841	-1.16505	72.5947	7.87971
27	1.12168	-1.1455	73.9069	6.59483
28	1.32708	-1.12168	75.165	5.10628
29	1.38629	-1.09847	76.3716	3.58347
30	1.45862	-1.08032	77.5387	2.0077
31	1.49739	-1.05812	78.6584	0.423283
32	1.54756	-1.03643	79.7326	-1.18066
33	1.67147	-1.01943	80.7718	-2.88461
34	1.79176	-0.998575	81.7689	-4.67381
35	1.79176	-0.97815	82.7257	-6.42642
36	1.94591	-0.958125	83.6437	-8.29085
37	2.11986	-0.942375	84.5318	-10.2886
38	2.19722	-0.923014	85.3837	-12.3166
39	2.19722	-0.903992	86.201	-14.3029
40	2.19722	-0.889006	86.9913	-16.2562
41	2.30259	-0.87055	87.7491	-18.2608
42	2.30259	-0.852385	88.4757	-20.2235
43	2.30259	-0.838054	89.178	-22.1531
44	2.30259	-0.820379	89.8511	-24.0421
45	2.30259	-0.802956	90.4958	-25.891
46	2.30259	-0.789191	91.1186	-27.7082
47	2.30259	-0.772193	91.7149	-29.4862
48	2.30259	-0.755415	92.2856	-31.2256
49	2.30259	-0.738846	92.8314	-32.9269

50	2.30259	-0.725736	93.3581	-34.598
51	2.30259	-0.709522	93.8616	-36.2317
52	2.30259	-0.693493	94.3425	-37.8285
53	2.30259	-0.680797	94.806	-39.3961
54	2.30259	-0.665079	95.2483	-40.9275
55	2.30259	-0.649522	95.6702	-42.4231
56	2.30259	-0.637192	96.0762	-43.8903
57	2.30259	-0.621911	96.463	-45.3223
58	2.30259	-0.606775	96.8312	-46.7194
59	2.30259	-0.594766	97.1849	-48.0889
60	2.30259	-0.579873	97.5212	-49.4241
61	2.30259	-0.565108	97.8405	-50.7254
62	2.30259	-0.550465	98.1435	-51.9929
63	2.30259	-0.538836	98.4339	-53.2336
64	2.30259	-0.524401	98.7088	-54.441
65	2.30259	-0.510074	98.969	-55.6155
66	2.30259	-0.498687	99.2177	-56.7638
67	2.30259	-0.484544	99.4525	-57.8795
68	2.30259	-0.470498	99.6739	-58.9629
69	2.30259	-0.459327	99.8848	-60.0205
70	2.30259	-0.445443	100.083	-61.0462
71	2.30259	-0.431644	100.27	-62.0401
72	2.30259	-0.417928	100.444	-63.0024
73	2.30259	-0.40701	100.61	-63.9396
74	2.30259	-0.393433	100.765	-64.8455
75	2.30259	-0.379927	100.909	-65.7203
76	2.30259	-0.369171	101.045	-66.5703
77	2.30259	-0.355788	101.172	-67.3896
78	2.30259	-0.342466	101.289	-68.1781
79	2.30259	-0.331854	101.399	-68.9422
80	2.30259	-0.318639	101.501	-69.6759
81	2.30259	-0.305481	101.594	-70.3793
82	2.30259	-0.294992	101.681	-71.0586
83	2.30259	-0.281926	101.761	-71.7077
84	2.30259	-0.268908	101.833	-72.3269
85	2.30259	-0.255936	101.898	-72.9162
86	2.30259	-0.24559	101.959	-73.4817
87	2.30259	-0.232693	102.013	-74.0175
88	2.30259	-0.219834	102.061	-74.5237
89	2.30259	-0.209575	102.105	-75.0063
90	2.30259	-0.196779	102.144	-75.4594
91	2.30259	-0.184017	102.178	-75.8831
92	2.30259	-0.173829	102.208	-76.2833
93	2.30259	-0.161119	102.234	-76.6543
94	2.30259	-0.148434	102.256	-76.9961
95	2.30259	-0.135774	102.274	-77.3088
96	2.30259	-0.125661	102.29	-77.5981
97	2.30259	-0.113039	102.303	-77.8584
98	2.30259	-0.100433	102.313	-78.0896
99	2.30259	-0.0903606	102.321	-78.2977
100	2.30259	-0.0777834	102.327	-78.4768
101	2.30259	-0.0652187	102.332	-78.627
102	2.30259	-0.0551734	102.335	-78.754
103	2.30259	-0.0426257	102.336	-78.8522
104	2.30259	-0.0300838	102.337	-78.9214
105	2.30259	-0.0200544	102.338	-78.9676
106	2.30259	-0.00751925	102.338	-78.9849
107	2.30259	0.00751925	102.338	-78.9676
108	2.30259	0.0200544	102.338	-78.9214
109	2.30259	0.0300838	102.339	-78.8522
110	2.30259	0.0426257	102.341	-78.754
111	2.30259	0.0551734	102.344	-78.627

112	2.30259	0.0652187	102.348	-78.4768
113	2.30259	0.0777834	102.354	-78.2977
114	2.30259	0.0903606	102.362	-78.0896
115	2.30259	0.100433	102.373	-77.8584
116	2.30259	0.113039	102.385	-77.5981
117	2.30259	0.125661	102.401	-77.3088
118	2.30259	0.135774	102.42	-76.9961
119	2.30259	0.148434	102.442	-76.6543
120	2.30259	0.161119	102.468	-76.2833
121	2.30259	0.173829	102.498	-75.8831
122	2.30259	0.184017	102.532	-75.4594
123	2.30259	0.196779	102.57	-75.0063
124	2.30259	0.209575	102.614	-74.5237
125	2.30259	0.219834	102.663	-74.0175
126	2.30259	0.232693	102.717	-73.4817
127	2.30259	0.24559	102.777	-72.9162
128	2.30259	0.255936	102.843	-72.3269
129	2.30259	0.268908	102.915	-71.7077
130	2.30259	0.281926	102.994	-71.0586
131	2.30259	0.294992	103.081	-70.3793
132	2.30259	0.305481	103.175	-69.6759
133	2.30259	0.318639	103.276	-68.9422
134	2.30259	0.331854	103.386	-68.1781
135	2.30259	0.342466	103.504	-67.3896
136	2.30259	0.355788	103.63	-66.5703
137	2.30259	0.369171	103.767	-65.7203
138	2.30259	0.379927	103.911	-64.8455
139	2.30259	0.393433	104.066	-63.9396
140	2.30259	0.40701	104.231	-63.0024
141	2.30259	0.417928	104.406	-62.0401
142	2.30259	0.431644	104.592	-61.0462
143	2.30259	0.445443	104.791	-60.0205
144	2.30259	0.459327	105.002	-58.9629
145	2.30259	0.470498	105.223	-57.8795
146	2.30259	0.484544	105.458	-56.7638
147	2.30259	0.498687	105.707	-55.6155
148	2.30259	0.510074	105.967	-54.441
149	2.30259	0.524401	106.242	-53.2336
150	2.30259	0.538836	106.532	-51.9929
151	2.30259	0.550465	106.835	-50.7254
152	2.30259	0.565108	107.154	-49.4241
153	2.30259	0.579873	107.491	-48.0889
154	2.30259	0.594766	107.844	-46.7194
155	2.30259	0.606775	108.213	-45.3223
156	2.30259	0.621911	108.599	-43.8903
157	2.30259	0.637192	109.005	-42.4231
158	2.30259	0.649522	109.427	-40.9275
159	2.30259	0.665079	109.87	-39.3961
160	2.30259	0.680797	110.333	-37.8285
161	2.30259	0.693493	110.814	-36.2317
162	2.30259	0.709522	111.317	-34.598
163	2.30259	0.725736	111.844	-32.9269
164	2.30259	0.738846	112.39	-31.2256
165	2.30259	0.755415	112.961	-29.4862
166	2.30259	0.772193	113.557	-27.7082
167	2.30259	0.789191	114.18	-25.891
168	2.30259	0.802956	114.824	-24.0421
169	2.30259	0.820379	115.498	-22.1531
170	2.30259	0.838054	116.2	-20.2235
171	2.30259	0.852385	116.926	-18.2608
172	2.30259	0.87055	117.684	-16.2562
173	2.30259	0.889006	118.475	-14.2092

174	2.30259	0.903992		119.292	-12.1277
175	2.30259	0.923014		120.144	-10.0024
176	2.30259	0.942375		121.032	-7.8325
177	2.30259	0.958125		121.95	-5.62633
178	2.30259	0.97815	122.907	-3.37406	
179	2.30259	0.998575		123.904	-1.07475
180	2.30259	1.01943	124.943	1.27257	
181	2.30259	1.03643	126.017	3.65904	
182	2.3979	1.05812	127.137	6.19631	
183	2.48491	1.08032	128.304	8.8808	
184	2.77259	1.09847	129.511	11.9264	
185	3.054	1.12168	130.769	15.352	
186	3.09104	1.1455	132.081	18.8928	
187	3.09104	1.16505	133.438	22.494	
188	3.21888	1.19012	134.855	26.3249	
189	3.29584	1.21596	136.333	30.3325	
190	3.66356	1.24264	137.877	34.885	
191	3.71357	1.26464	139.477	39.5813	
192	3.73767	1.29303	141.149	44.4142	
193	3.7612	1.32251	142.898	49.3884	
194	3.78419	1.34694	144.712	54.4855	
195	3.78419	1.37866	146.613	59.7026	
196	3.91202	1.41183	148.606	65.2257	
197	3.95124	1.43953	150.678	70.9137	
198	3.95124	1.47579	152.856	76.7449	
199	4.12713	1.5141	155.149	82.9938	
200	4.15888	1.54643	157.54	89.4252	
201	4.29046	1.58927	160.066	96.2439	
202	4.33073	1.63524	162.74	103.326	
203	4.56435	1.68494	165.579	111.016	
204	4.70048	1.72793	168.564	119.138	
205	4.78749	1.78661	171.756	127.692	
206	4.80402	1.85218	175.187	136.59	
207	5.07517	1.91103	178.839	146.289	
208	5.09987	1.99539	182.821	156.465	
209	5.18178	2.09693	187.218	167.331	
210	5.50126	2.19728	192.046	179.418	
211	5.59842	2.36561	197.642	192.662	
212	5.61313	2.65209	204.676	207.549	

Data Set Standard Deviation = 1.15579
Numerator = 43076.4
Denominator = 57691.2
W Statistic = 0.746673 = 43076.4 / 57691.2

5% Critical value of 0.976 exceeds 0.746673
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.746673
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Vanadium

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<2.30259	81
	9/23/1999	2.3979 J	182
	3/15/2000	3.09104	186
	9/24/2003	ND<2.30259	81
	3/11/2004	ND<2.30259	81
	10/12/2004	ND<2.30259	81
	4/1/2005	ND<2.30259	81
	10/25/2005	ND<2.30259	81
	4/29/2006	ND<2.30259	81
	11/18/2006	ND<2.30259	81
	5/23/2007	ND<2.30259	81
	11/28/2007	ND<2.30259	81
	6/5/2008	ND<2.30259	81
	11/20/2008	ND<2.30259	81
	6/11/2009	ND<-0.356675	81
	11/16/2009	ND<-0.356675	81
	6/30/2010	ND<-0.356675	81

Rank Sum = 1583
Rank Mean = 93.1176

Background Rank Sum = 1583
Background Rank Mean = 93.1176

Compliance Wells

Well ID	Date	Result	Rank
MW-12BR	3/16/1999	ND<2.30259	81
	9/23/1999	3.09104	187
	3/15/2000	ND<2.30259	81
	9/24/2003	ND<2.30259	81
	3/11/2004	ND<2.30259	81
	10/12/2004	ND<2.30259	81
	4/1/2005	ND<2.30259	81
	10/25/2005	ND<2.30259	81
	4/29/2006	ND<2.30259	81
	11/18/2006	ND<2.30259	81
	5/23/2007	ND<2.30259	81
	11/28/2007	ND<2.30259	81
	6/5/2008	ND<2.30259	81
	11/20/2008	ND<2.30259	81
	6/11/2009	ND<-0.356675	81
	11/16/2009	ND<-0.356675	81
	6/30/2010	ND<-0.356675	81

Rank Sum = 1483
Rank Mean = 87.2353

MW-12AR	3/16/1999	ND<2.30259	81
	9/23/1999	ND<2.30259	81
	3/15/2000	5.59842	211
	9/24/2003	3.7612	193
	3/11/2004	4.56435	203
	10/12/2004	ND<2.30259	81
	4/1/2005	ND<2.30259	81
	10/25/2005	ND<2.30259	81
	4/29/2006	ND<2.30259	81
	11/18/2006	ND<2.30259	81
	5/23/2007	ND<2.30259	81
	11/28/2007	ND<2.30259	81
	6/5/2008	ND<2.30259	81
	11/20/2008	ND<2.30259	81
	6/11/2009	ND<-0.356675	81
	11/16/2009	ND<-0.356675	81
	6/30/2010	ND<-0.356675	81

Rank Sum = 1741
Rank Mean = 102.412

MW-11R	7/20/1995	ND<2.30259	81
	8/24/1995	ND<2.30259	81
	9/28/1995	ND<2.30259	81
	10/26/1995	ND<2.30259	81
	11/19/1996	ND<2.30259	81
	12/19/1996	ND<2.30259	81
	3/24/1997	ND<2.30259	81
	9/24/1997	ND<2.30259	81
	4/7/1998	ND<2.30259	81
	9/23/1998	ND<2.30259	81
	3/16/1999	ND<2.30259	81
	9/23/1999	2.19722 J	179
	3/15/2000	ND<2.30259	81
	9/24/2003	ND<2.30259	81
	3/11/2004	ND<2.30259	81
	10/12/2004	ND<2.30259	81
	4/1/2005	ND<2.30259	81
	10/25/2005	ND<2.30259	81
	4/29/2006	ND<2.30259	81
	11/18/2006	ND<2.30259	81
	5/23/2007	1.67147	174
	11/28/2007	ND<2.30259	81
	6/5/2008	ND<2.30259	81
	11/20/2008	ND<2.30259	81
	6/11/2009	ND<-0.356675	81
	11/16/2009	ND<-0.356675	81
	6/30/2010	ND<-0.356675	81

Rank Sum = 2378
Rank Mean = 88.0741

MW-10	7/20/1995	ND<2.30259	81
	8/24/1995	ND<2.30259	81
	9/28/1995	ND<2.30259	81
	10/26/1995	ND<2.30259	81
	11/19/1996	ND<2.30259	81
	12/19/1996	3.95124	197
	3/24/1997	ND<2.30259	81
	9/24/1997	3.91202	196
	4/7/1998	4.29046	201
	9/23/1998	ND<2.30259	81
	3/16/1999	ND<2.30259	81
	9/23/1999	1.79176 J	175

	3/15/2000	3.71357	191
	9/24/2003	ND<2.30259	81
	3/11/2004	ND<2.30259	81
	10/12/2004	ND<2.30259	81
	4/1/2005	ND<2.30259	81
	10/25/2005	ND<2.30259	81
	4/29/2006	ND<2.30259	81
	11/18/2006	ND<2.30259	81
	5/23/2007	1.32708 J	169
	11/28/2007	2.19722 J	180
	6/5/2008	ND<2.30259	81
	11/20/2008	3.66356	190
	6/11/2009	0.641854 J	165
	11/16/2009	0.405465 J	163
	6/30/2010	0.405465 J H	164

Rank Sum = 3287
Rank Mean = 121.741

MW-8	7/20/1995	ND<2.30259	81
	8/24/1995	ND<2.30259	81
	9/28/1995	5.50126	210
	10/26/1995	ND<2.30259	81
	11/19/1996	ND<2.30259	81
	12/19/1996	5.09987	208
	3/24/1997	3.78419	194
	9/24/1997	ND<2.30259	81
	4/7/1998	3.78419	195
	9/23/1998	4.70048	204
	3/16/1999	ND<2.30259	81
	9/23/1999	1.79176 J	176
	3/15/2000	ND<2.30259	81
	9/24/2003	ND<2.30259	81
	3/11/2004	ND<2.30259	81
	10/12/2004	ND<2.30259	81
	4/1/2005	ND<2.30259	81
	10/25/2005	ND<2.30259	81
	4/29/2006	ND<2.30259	81
	11/18/2006	1.49739 J	172
	5/23/2007	2.48491	183
	11/28/2007	3.054	185
	6/5/2008	1.07841 J	167
	11/20/2008	2.19722 J	181
	6/11/2009	0.336472 J	162
	6/30/2010	ND<-0.356675	81

Rank Sum = 3371
Rank Mean = 129.654

MW-7	7/20/1995	1.38629 J	170
	8/24/1995	ND<2.30259	81
	9/28/1995	5.61313	212
	10/26/1995	4.80402	206
	11/19/1996	ND<2.30259	81
	12/19/1996	5.18178	209
	3/24/1997	4.78749	205
	9/24/1997	4.33073	202
	4/7/1998	5.07517	207
	9/23/1998	ND<2.30259	81
	3/16/1999	ND<2.30259	81
	9/23/1999	3.29584	189
	3/15/2000	4.12713	199
	9/24/2003	ND<2.30259	81
	3/11/2004	ND<2.30259	81

	10/12/2004	ND<2.30259	81
	4/1/2005	ND<2.30259	81
	10/25/2005	ND<2.30259	81
	4/29/2006	ND<2.30259	81
	11/18/2006	ND<2.30259	81
	5/23/2007	2.11986	178
	11/28/2007	ND<2.30259	81
	6/5/2008	0.916291 J	166
	11/20/2008	2.77259 J	184
	6/11/2009	1.45862 J	171
	11/16/2009	ND<-0.356675	81
	6/30/2010	1.54756 J H	173

Rank Sum = 3724
Rank Mean = 137.926

MW-6	7/20/1995	ND<2.30259	81
	8/24/1995	ND<2.30259	81
	9/28/1995	ND<2.30259	81
	10/26/1995	ND<2.30259	81
	11/19/1996	ND<2.30259	81
	12/19/1996	ND<2.30259	81
	3/24/1997	ND<2.30259	81
	9/24/1997	ND<2.30259	81
	4/7/1998	ND<2.30259	81
	9/23/1998	ND<2.30259	81
	3/16/1999	ND<2.30259	81
	9/23/1999	ND<2.30259	81
	3/15/2000	4.15888	200
	9/24/2003	ND<2.30259	81
	3/11/2004	ND<2.30259	81
	10/12/2004	ND<2.30259	81
	4/1/2005	ND<2.30259	81
	10/25/2005	ND<2.30259	81
	4/29/2006	ND<2.30259	81
	11/18/2006	ND<2.30259	81
	5/23/2007	ND<2.30259	81
	11/28/2007	ND<2.30259	81
	6/5/2008	ND<2.30259	81
	11/20/2008	ND<2.30259	81
	6/11/2009	ND<-0.356675	81
	11/16/2009	ND<-0.356675	81
	6/30/2010	ND<-0.356675	81

Rank Sum = 2306
Rank Mean = 85.4074

MW-9	7/20/1995	ND<2.30259	81
	8/24/1995	ND<2.30259	81
	9/28/1995	ND<2.30259	81
	10/26/1995	ND<2.30259	81
	11/19/1996	ND<2.30259	81
	12/19/1996	ND<2.30259	81
	3/24/1997	3.95124	198
	9/24/1997	ND<2.30259	81
	4/7/1998	ND<2.30259	81
	9/23/1998	ND<2.30259	81
	3/16/1999	ND<2.30259	81
	9/23/1999	ND<2.30259	81
	3/15/2000	3.73767	192
	9/24/2003	ND<2.30259	81
	3/11/2004	ND<2.30259	81
	10/12/2004	ND<2.30259	81
	4/1/2005	ND<2.30259	81

10/25/2005	ND<2.30259	81
4/29/2006	ND<2.30259	81
11/18/2006	ND<2.30259	81
5/23/2007	1.12168 J	168
11/28/2007	1.94591 J	177
6/5/2008	ND<2.30259	81
11/20/2008	3.21888	188
6/11/2009	ND<-0.356675	81
11/16/2009	ND<-0.356675	81
6/30/2010	ND<-0.356675	81

Rank Sum = 2705
Rank Mean = 100.185

Calculation Results:

Kruskal-Wallis H Statistic = 20.9324
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 37.2456
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
20.9324 > 15.5073 indicating a significant group difference at 5% significance level
37.2456 > 15.5073 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 93.1176

Well	Mean Rank	Dif from Bkg	Critical Value
MW-12BR	87.2353	-5.8823	48.9476
MW-12AR	102.412	9.29412	48.9476
MW-11R	88.0741	-5.04357	44.1836
MW-10	121.741	28.6231	44.1836
MW-8	129.654	36.5362	44.5106
MW-7	137.926	44.8083	44.1836
MW-6	85.4074	-7.71024	44.1836
MW-9	100.185	7.06754	44.1836

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 93.1176

Well	Mean Rank	Dif from Bkg	Critical Value
MW-12BR	87.2353	-5.8823	52.8567
MW-12AR	102.412	9.29412	52.8567
MW-11R	88.0741	-5.04357	47.7122
MW-10	121.741	28.6231	47.7122
MW-8	129.654	36.5362	48.0654
MW-7	137.926	44.8083	47.7122
MW-6	85.4074	-7.71024	47.7122
MW-9	100.185	7.06754	47.7122

Mann-Kendall Trend Analysis

Parameter: Vanadium

Location: MW-7

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives		Negatives	
ND<2.30259		1.38629 J	0.916291		1	0
5.61313		1.38629 J	4.22683	2	0	
4.80402		1.38629 J	3.41773	3	0	
ND<2.30259		1.38629 J	0.916291		4	0
5.18178		1.38629 J	3.79549	5	0	
4.78749		1.38629 J	3.4012	6	0	
4.33073		1.38629 J	2.94444	7	0	
5.07517		1.38629 J	3.68888	8	0	
ND<2.30259		1.38629 J	0.916291		9	0
ND<2.30259		1.38629 J	0.916291		10	0
3.29584		1.38629 J	1.90954	11	0	
4.12713		1.38629 J	2.74084	12	0	
ND<2.30259		1.38629 J	0.916291		13	0
ND<2.30259		1.38629 J	0.916291		14	0
ND<2.30259		1.38629 J	0.916291		15	0
ND<2.30259		1.38629 J	0.916291		16	0
ND<2.30259		1.38629 J	0.916291		17	0
ND<2.30259		1.38629 J	0.916291		18	0
ND<2.30259		1.38629 J	0.916291		19	0
2.11986		1.38629 J	0.733569		20	0
ND<2.30259		1.38629 J	0.916291		21	0
0.916291 J		1.38629 J	-0.470004		21	1
2.77259 J		1.38629 J	1.38629	22	1	
1.45862 J		1.38629 J	0.0723207		23	1
ND<-0.356675		1.38629 J	-1.74297	23	2	
1.54756 J H		1.38629 J	0.161268		24	2
5.61313		ND<2.30259	3.31054	25	2	
4.80402		ND<2.30259	2.50144	26	2	
ND<2.30259		ND<2.30259	0	26	2	
5.18178		ND<2.30259	2.8792	27	2	
4.78749		ND<2.30259	2.48491	28	2	
4.33073		ND<2.30259	2.02815	29	2	
5.07517		ND<2.30259	2.77259	30	2	
ND<2.30259		ND<2.30259	0	30	2	
ND<2.30259		ND<2.30259	0	30	2	
3.29584		ND<2.30259	0.993252		31	2
4.12713		ND<2.30259	1.82455	32	2	
ND<2.30259		ND<2.30259	0	32	2	
ND<2.30259		ND<2.30259	0	32	2	
ND<2.30259		ND<2.30259	0	32	2	
ND<2.30259		ND<2.30259	0	32	2	
ND<2.30259		ND<2.30259	0	32	2	
ND<2.30259		ND<2.30259	0	32	2	
ND<2.30259		ND<2.30259	0	32	2	
2.11986		ND<2.30259	-0.182722		32	3
ND<2.30259		ND<2.30259	0	32	3	
0.916291 J		ND<2.30259	-1.38629	32	4	

2.77259 J	ND<2.30259	0.470004	33	4
1.45862 J	ND<2.30259	-0.8439733	5	
ND<-0.356675	ND<2.30259	-2.6592633	6	
1.54756 J H	ND<2.30259	-0.755023	33	7
4.80402	5.61313	-0.809107	33	8
ND<2.30259	5.61313	-3.3105433	9	
5.18178	5.61313	-0.431345	33	10
4.78749	5.61313	-0.825636	33	11
4.33073	5.61313	-1.2823933	12	
5.07517	5.61313	-0.537954	33	13
ND<2.30259	5.61313	-3.3105433	14	
ND<2.30259	5.61313	-3.3105433	15	
3.29584	5.61313	-2.3172933	16	
4.12713	5.61313	-1.4859933	17	
ND<2.30259	5.61313	-3.3105433	18	
ND<2.30259	5.61313	-3.3105433	19	
ND<2.30259	5.61313	-3.3105433	20	
ND<2.30259	5.61313	-3.3105433	21	
ND<2.30259	5.61313	-3.3105433	22	
ND<2.30259	5.61313	-3.3105433	23	
ND<2.30259	5.61313	-3.3105433	24	
2.11986	5.61313	-3.4932633	25	
ND<2.30259	5.61313	-3.3105433	26	
0.916291 J	5.61313	-4.6968433	27	
2.77259 J	5.61313	-2.8405433	28	
1.45862 J	5.61313	-4.1545133	29	
ND<-0.356675	5.61313	-5.9698 33	30	
1.54756 J H	5.61313	-4.0655733	31	
ND<2.30259	4.80402	-2.5014433	32	
5.18178	4.80402	0.377763	34	32
4.78749	4.80402	-0.0165293	34	33
4.33073	4.80402	-0.473288	34	34
5.07517	4.80402	0.271153	35	34
ND<2.30259	4.80402	-2.5014435	35	
ND<2.30259	4.80402	-2.5014435	36	
3.29584	4.80402	-1.5081835	37	
4.12713	4.80402	-0.676887	35	38
ND<2.30259	4.80402	-2.5014435	39	
ND<2.30259	4.80402	-2.5014435	40	
ND<2.30259	4.80402	-2.5014435	41	
ND<2.30259	4.80402	-2.5014435	42	
ND<2.30259	4.80402	-2.5014435	43	
ND<2.30259	4.80402	-2.5014435	44	
ND<2.30259	4.80402	-2.5014435	45	
2.11986	4.80402	-2.6841635	46	
ND<2.30259	4.80402	-2.5014435	47	
0.916291 J	4.80402	-3.8877335	48	
2.77259 J	4.80402	-2.0314335	49	
1.45862 J	4.80402	-3.3454135	50	
ND<-0.356675	4.80402	-5.1607 35	51	
1.54756 J H	4.80402	-3.2564635	52	
5.18178	ND<2.30259	2.8792 36	52	
4.78749	ND<2.30259	2.48491 37	52	
4.33073	ND<2.30259	2.02815 38	52	
5.07517	ND<2.30259	2.77259 39	52	
ND<2.30259	ND<2.30259	0 39	52	
ND<2.30259	ND<2.30259	0 39	52	
3.29584	ND<2.30259	0.993252	40	52
4.12713	ND<2.30259	1.82455 41	52	

ND<2.30259	ND<2.30259	0	41	52	
ND<2.30259	ND<2.30259	0	41	52	
ND<2.30259	ND<2.30259	0	41	52	
ND<2.30259	ND<2.30259	0	41	52	
ND<2.30259	ND<2.30259	0	41	52	
ND<2.30259	ND<2.30259	0	41	52	
ND<2.30259	ND<2.30259	0	41	52	
2.11986	ND<2.30259	-0.182722		41	53
ND<2.30259	ND<2.30259	0	41	53	
0.916291 J	ND<2.30259	-1.386294	1	54	
2.77259 J	ND<2.30259	0.470004		42	54
1.45862 J	ND<2.30259	-0.843974	2	55	
ND<-0.356675	ND<2.30259	-2.659264	2	56	
1.54756 J H	ND<2.30259	-0.755023		42	57
4.78749	5.18178	-0.394292		42	58
4.33073	5.18178	-0.851054	2	59	
5.07517	5.18178	-0.106614	2	60	
ND<2.30259	5.18178	-2.8792	42	61	
ND<2.30259	5.18178	-2.8792	42	62	
3.29584	5.18178	-1.885954	2	63	
4.12713	5.18178	-1.054654	2	64	
ND<2.30259	5.18178	-2.8792	42	65	
ND<2.30259	5.18178	-2.8792	42	66	
ND<2.30259	5.18178	-2.8792	42	67	
ND<2.30259	5.18178	-2.8792	42	68	
ND<2.30259	5.18178	-2.8792	42	69	
ND<2.30259	5.18178	-2.8792	42	70	
ND<2.30259	5.18178	-2.8792	42	71	
2.11986	5.18178	-3.061924	2	72	
ND<2.30259	5.18178	-2.8792	42	73	
0.916291 J	5.18178	-4.265494	2	74	
2.77259 J	5.18178	-2.409194	2	75	
1.45862 J	5.18178	-3.723174	2	76	
ND<-0.356675	5.18178	-5.538464	2	77	
1.54756 J H	5.18178	-3.634224	2	78	
4.33073	4.78749	-0.456758		42	79
5.07517	4.78749	0.287682		43	79
ND<2.30259	4.78749	-2.484914	3	80	
ND<2.30259	4.78749	-2.484914	3	81	
3.29584	4.78749	-1.491654	3	82	
4.12713	4.78749	-0.660357		43	83
ND<2.30259	4.78749	-2.484914	3	84	
ND<2.30259	4.78749	-2.484914	3	85	
ND<2.30259	4.78749	-2.484914	3	86	
ND<2.30259	4.78749	-2.484914	3	87	
ND<2.30259	4.78749	-2.484914	3	88	
ND<2.30259	4.78749	-2.484914	3	89	
ND<2.30259	4.78749	-2.484914	3	90	
2.11986	4.78749	-2.667634	3	91	
ND<2.30259	4.78749	-2.484914	3	92	
0.916291 J	4.78749	-3.8712	43	93	
2.77259 J	4.78749	-2.0149	43	94	
1.45862 J	4.78749	-3.328884	3	95	
ND<-0.356675	4.78749	-5.144174	3	96	
1.54756 J H	4.78749	-3.239934	3	97	
5.07517	4.33073	0.74444	44	97	
ND<2.30259	4.33073	-2.028154	4	98	
ND<2.30259	4.33073	-2.028154	4	99	
3.29584	4.33073	-1.0349	44	100	

4.12713	4.33073	-0.203599	44	101
ND<2.30259	4.33073	-2.0281544	102	
ND<2.30259	4.33073	-2.0281544	103	
ND<2.30259	4.33073	-2.0281544	104	
ND<2.30259	4.33073	-2.0281544	105	
ND<2.30259	4.33073	-2.0281544	106	
ND<2.30259	4.33073	-2.0281544	107	
ND<2.30259	4.33073	-2.0281544	108	
2.11986	4.33073	-2.2108744	109	
ND<2.30259	4.33073	-2.0281544	110	
0.916291 J	4.33073	-3.4144444	111	
2.77259 J	4.33073	-1.5581444	112	
1.45862 J	4.33073	-2.8721244	113	
ND<-0.356675	4.33073	-4.6874144	114	
1.54756 J H	4.33073	-2.7831744	115	
ND<2.30259	5.07517	-2.7725944	116	
ND<2.30259	5.07517	-2.7725944	117	
3.29584	5.07517	-1.7793444	118	
4.12713	5.07517	-0.948039	44	119
ND<2.30259	5.07517	-2.7725944	120	
ND<2.30259	5.07517	-2.7725944	121	
ND<2.30259	5.07517	-2.7725944	122	
ND<2.30259	5.07517	-2.7725944	123	
ND<2.30259	5.07517	-2.7725944	124	
ND<2.30259	5.07517	-2.7725944	125	
ND<2.30259	5.07517	-2.7725944	126	
2.11986	5.07517	-2.9553144	127	
ND<2.30259	5.07517	-2.7725944	128	
0.916291 J	5.07517	-4.1588844	129	
2.77259 J	5.07517	-2.3025944	130	
1.45862 J	5.07517	-3.6165644	131	
ND<-0.356675	5.07517	-5.4318544	132	
1.54756 J H	5.07517	-3.5276144	133	
ND<2.30259	ND<2.30259	0 44	133	
3.29584	ND<2.30259	0.993252	45	133
4.12713	ND<2.30259	1.82455 46	133	
ND<2.30259	ND<2.30259	0 46	133	
ND<2.30259	ND<2.30259	0 46	133	
ND<2.30259	ND<2.30259	0 46	133	
ND<2.30259	ND<2.30259	0 46	133	
ND<2.30259	ND<2.30259	0 46	133	
ND<2.30259	ND<2.30259	0 46	133	
ND<2.30259	ND<2.30259	0 46	133	
2.11986	ND<2.30259	-0.182722	46	134
ND<2.30259	ND<2.30259	0 46	134	
0.916291 J	ND<2.30259	-1.3862946	135	
2.77259 J	ND<2.30259	0.470004	47	135
1.45862 J	ND<2.30259	-0.8439747	136	
ND<-0.356675	ND<2.30259	-2.6592647	137	
1.54756 J H	ND<2.30259	-0.755023	47	138
3.29584	ND<2.30259	0.993252	48	138
4.12713	ND<2.30259	1.82455 49	138	
ND<2.30259	ND<2.30259	0 49	138	
ND<2.30259	ND<2.30259	0 49	138	
ND<2.30259	ND<2.30259	0 49	138	
ND<2.30259	ND<2.30259	0 49	138	
ND<2.30259	ND<2.30259	0 49	138	
ND<2.30259	ND<2.30259	0 49	138	
ND<2.30259	ND<2.30259	0 49	138	

2.11986	ND<2.30259	-0.182722	49	139
ND<2.30259	ND<2.30259	0	49	139
0.916291 J	ND<2.30259	-1.3862949	140	
2.77259 J	ND<2.30259	0.470004	50	140
1.45862 J	ND<2.30259	-0.8439750	141	
ND<-0.356675	ND<2.30259	-2.6592650	142	
1.54756 J H	ND<2.30259	-0.755023	50	143
4.12713	3.29584	0.831298	51	143
ND<2.30259	3.29584	-0.993252	51	144
ND<2.30259	3.29584	-0.993252	51	145
ND<2.30259	3.29584	-0.993252	51	146
ND<2.30259	3.29584	-0.993252	51	147
ND<2.30259	3.29584	-0.993252	51	148
ND<2.30259	3.29584	-0.993252	51	149
ND<2.30259	3.29584	-0.993252	51	150
2.11986	3.29584	-1.1759751	151	
ND<2.30259	3.29584	-0.993252	51	152
0.916291 J	3.29584	-2.3795551	153	
2.77259 J	3.29584	-0.523248	51	154
1.45862 J	3.29584	-1.8372251	155	
ND<-0.356675	3.29584	-3.6525151	156	
1.54756 J H	3.29584	-1.7482751	157	
ND<2.30259	4.12713	-1.8245551	158	
ND<2.30259	4.12713	-1.8245551	159	
ND<2.30259	4.12713	-1.8245551	160	
ND<2.30259	4.12713	-1.8245551	161	
ND<2.30259	4.12713	-1.8245551	162	
ND<2.30259	4.12713	-1.8245551	163	
ND<2.30259	4.12713	-1.8245551	164	
2.11986	4.12713	-2.0072751	165	
ND<2.30259	4.12713	-1.8245551	166	
0.916291 J	4.12713	-3.2108451	167	
2.77259 J	4.12713	-1.3545551	168	
1.45862 J	4.12713	-2.6685251	169	
ND<-0.356675	4.12713	-4.4838151	170	
1.54756 J H	4.12713	-2.5795751	171	
ND<2.30259	ND<2.30259	0	51	171
ND<2.30259	ND<2.30259	0	51	171
ND<2.30259	ND<2.30259	0	51	171
ND<2.30259	ND<2.30259	0	51	171
ND<2.30259	ND<2.30259	0	51	171
ND<2.30259	ND<2.30259	0	51	171
2.11986	ND<2.30259	-0.182722	51	172
ND<2.30259	ND<2.30259	0	51	172
0.916291 J	ND<2.30259	-1.3862951	173	
2.77259 J	ND<2.30259	0.470004	52	173
1.45862 J	ND<2.30259	-0.8439752	174	
ND<-0.356675	ND<2.30259	-2.6592652	175	
1.54756 J H	ND<2.30259	-0.755023	52	176
ND<2.30259	ND<2.30259	0	52	176
ND<2.30259	ND<2.30259	0	52	176
ND<2.30259	ND<2.30259	0	52	176
ND<2.30259	ND<2.30259	0	52	176
ND<2.30259	ND<2.30259	0	52	176
2.11986	ND<2.30259	-0.182722	52	177
ND<2.30259	ND<2.30259	0	52	177
0.916291 J	ND<2.30259	-1.3862952	178	
2.77259 J	ND<2.30259	0.470004	53	178

1.45862 J	ND<2.30259	-0.8439753	179	
ND<-0.356675	ND<2.30259	-2.6592653	180	
1.54756 J H	ND<2.30259	-0.755023	53	181
ND<2.30259	ND<2.30259	0 53	181	
ND<2.30259	ND<2.30259	0 53	181	
ND<2.30259	ND<2.30259	0 53	181	
ND<2.30259	ND<2.30259	0 53	181	
2.11986	ND<2.30259	-0.182722	53	182
ND<2.30259	ND<2.30259	0 53	182	
0.916291 J	ND<2.30259	-1.3862953	183	
2.77259 J	ND<2.30259	0.470004	54	183
1.45862 J	ND<2.30259	-0.8439754	184	
ND<-0.356675	ND<2.30259	-2.6592654	185	
1.54756 J H	ND<2.30259	-0.755023	54	186
ND<2.30259	ND<2.30259	0 54	186	
ND<2.30259	ND<2.30259	0 54	186	
ND<2.30259	ND<2.30259	0 54	186	
2.11986	ND<2.30259	-0.182722	54	187
ND<2.30259	ND<2.30259	0 54	187	
0.916291 J	ND<2.30259	-1.3862954	188	
2.77259 J	ND<2.30259	0.470004	55	188
1.45862 J	ND<2.30259	-0.8439755	189	
ND<-0.356675	ND<2.30259	-2.6592655	190	
1.54756 J H	ND<2.30259	-0.755023	55	191
ND<2.30259	ND<2.30259	0 55	191	
ND<2.30259	ND<2.30259	0 55	191	
2.11986	ND<2.30259	-0.182722	55	192
ND<2.30259	ND<2.30259	0 55	192	
0.916291 J	ND<2.30259	-1.3862955	193	
2.77259 J	ND<2.30259	0.470004	56	193
1.45862 J	ND<2.30259	-0.8439756	194	
ND<-0.356675	ND<2.30259	-2.6592656	195	
1.54756 J H	ND<2.30259	-0.755023	56	196
ND<2.30259	ND<2.30259	0 56	196	
2.11986	ND<2.30259	-0.182722	56	197
ND<2.30259	ND<2.30259	0 56	197	
0.916291 J	ND<2.30259	-1.3862956	198	
2.77259 J	ND<2.30259	0.470004	57	198
1.45862 J	ND<2.30259	-0.8439757	199	
ND<-0.356675	ND<2.30259	-2.6592657	200	
1.54756 J H	ND<2.30259	-0.755023	57	201
2.11986	ND<2.30259	-0.182722	57	202
ND<2.30259	ND<2.30259	0 57	202	
0.916291 J	ND<2.30259	-1.3862957	203	
2.77259 J	ND<2.30259	0.470004	58	203
1.45862 J	ND<2.30259	-0.8439758	204	
ND<-0.356675	ND<2.30259	-2.6592658	205	
1.54756 J H	ND<2.30259	-0.755023	58	206
ND<2.30259	2.11986	0.182722	59	206
0.916291 J	2.11986	-1.2035759	207	
2.77259 J	2.11986	0.652725	60	207
1.45862 J	2.11986	-0.661248	60	208
ND<-0.356675	2.11986	-2.4765460	209	
1.54756 J H	2.11986	-0.572301	60	210

0.916291 J	ND<2.30259	-1.3862960	211	
2.77259 J	ND<2.30259	0.470004	61	211
1.45862 J	ND<2.30259	-0.8439761	212	
ND<-0.356675	ND<2.30259	-2.6592661	213	
1.54756 J H	ND<2.30259	-0.755023	61	214
2.77259 J	0.916291 J	1.8563 62	214	
1.45862 J	0.916291 J	0.542324	63	214
ND<-0.356675	0.916291 J	-1.2729763	215	
1.54756 J H	0.916291 J	0.631272	64	215
1.45862 J	2.77259 J	-1.3139764	216	
ND<-0.356675	2.77259 J	-3.1292664	217	
1.54756 J H	2.77259 J	-1.2250364	218	
ND<-0.356675	1.45862 J	-1.8152964	219	
1.54756 J H	1.45862 J	0.0889475	65	219
1.54756 J H	ND<-0.356675	1.90424 66	219	

S Statistic = 66 - 219 = -153

Tied Group	Value	Members
1	2.30259	12

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
11/16/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 3828
B = 0
C = 1320
D = 0

E = 132
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 2088.33
Z-Score = -3.32616
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.32616| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: Vinyl acetate

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 207
Percent Non-Detects: 97.6415%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.28	ND<0.28
			11/16/2009	ND<0.28	ND<0.28
			6/30/2010	ND<0.28	ND<0.28

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-9	27	26 (96.2963%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	ND<2	ND<2
			10/26/1995	0.4 J	0.4 J
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2

		6/11/2009	ND<0.28		ND<0.28	
		11/16/2009	ND<0.28		ND<0.28	
		6/30/2010	ND<0.28		ND<0.28	
MW-12BR	17	17 (100%)	3/16/1999		ND<2	ND<2
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	ND<2	ND<2		
		10/25/2005	ND<2	ND<2		
		4/29/2006	ND<2	ND<2		
		11/18/2006	ND<2	ND<2		
		5/23/2007	ND<2	ND<2		
		11/28/2007	ND<2	ND<2		
		6/5/2008	ND<2	ND<2		
		11/20/2008	ND<2	ND<2		
		6/11/2009	ND<0.28		ND<0.28	
		11/16/2009	ND<0.28		ND<0.28	
		6/30/2010	ND<0.28		ND<0.28	
MW-12AR	17	17 (100%)	3/16/1999		ND<2	ND<2
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	ND<2	ND<2		
		10/25/2005	ND<2	ND<2		
		4/29/2006	ND<2	ND<2		
		11/18/2006	ND<2	ND<2		
		5/23/2007	ND<2	ND<2		
		11/28/2007	ND<2	ND<2		
		6/5/2008	ND<2	ND<2		
		11/20/2008	ND<2	ND<2		
		6/11/2009	ND<0.28		ND<0.28	
		11/16/2009	ND<0.28		ND<0.28	
		6/30/2010	ND<0.28		ND<0.28	
MW-11R	27	26 (96.2963%)	7/20/1995	ND<2	ND<2	
		8/24/1995	ND<2	ND<2		
		9/28/1995	ND<2	ND<2		
		10/26/1995	0.9 J	0.9 J		
		11/19/1996	ND<2	ND<2		
		12/19/1996	ND<2	ND<2		
		3/24/1997	ND<2	ND<2		
		9/24/1997	ND<2	ND<2		
		4/7/1998	ND<2	ND<2		
		9/23/1998	ND<2	ND<2		
		3/16/1999	ND<2	ND<2		
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	ND<2	ND<2		
		10/25/2005	ND<2	ND<2		
		4/29/2006	ND<2	ND<2		
		11/18/2006	ND<2	ND<2		
		5/23/2007	ND<2	ND<2		
		11/28/2007	ND<2	ND<2		

			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.28		ND<0.28
			11/16/2009	ND<0.28		ND<0.28
			6/30/2010	ND<0.28		ND<0.28
MW-10	27	24 (88.8889%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	3	3	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	0.71 J	0.71 J	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.28		ND<0.28
			11/16/2009	ND<0.28		ND<0.28
			6/30/2010	0.84 J Q	0.84 J Q	
MW-8	26	26 (100%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.28		ND<0.28
			6/30/2010	ND<0.28		ND<0.28
MW-7	27	27 (100%)	7/20/1995		ND<2	ND<2

			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.28		ND<0.28
			11/16/2009	ND<0.28		ND<0.28
			6/30/2010	ND<0.28		ND<0.28
MW-6	27	27 (100%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.28		ND<0.28
			11/16/2009	ND<0.28		ND<0.28
			6/30/2010	ND<0.28		ND<0.28

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Vinyl acetate

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.14	-2.65	2097.03356	-0.371292
2	0.14	-2.365	6112.6297	-0.702478
3	0.14	-2.197	2817.4578	-1.0101
4	0.14	-2.096	9321.8549	-1.30367
5	0.14	-1.995	3925.8365	-1.58302
6	0.14	-1.911	0329.4885	-1.85057
7	0.14	-1.852	1832.9191	-2.10987
8	0.14	-1.786	6136.111	-2.36
9	0.14	-1.727	9339.0968	-2.60191
10	0.14	-1.684	9441.9358	-2.8378
11	0.14	-1.635	2444.6098	-3.06673
12	0.14	-1.589	2747.1356	-3.28923
13	0.14	-1.546	4349.527	-3.50573
14	0.14	-1.514	51.8195	-3.71771
15	0.14	-1.475	7953.9975	-3.92432
16	0.14	-1.439	5356.0698	-4.12585
17	0.14	-1.411	8358.063	-4.32351
18	0.14	-1.378	6659.9637	-4.51652
19	0.14	-1.346	9461.778	-4.70509
20	0.14	-1.322	5163.527	-4.89024
21	0.14	-1.293	0365.1989	-5.07127
22	0.14	-1.264	6466.7982	-5.24832
23	0.14	-1.242	6468.3424	-5.42229
24	0.14	-1.215	9669.821	-5.59252
25	0.14	-1.190	1271.2373	-5.75914
26	0.4	-1.165	0572.5947	-6.22516
27	0.71	-1.145	73.9069	-7.03846
28	0.84	-1.121	6875.165	-7.98067
29	0.9	-1.098	4776.3716	-8.9693
30	1	-1.080	3277.5387	-10.0496
31	1	-1.058	1278.6584	-11.1077
32	1	-1.036	4379.7326	-12.1442
33	1	-1.019	4380.7718	-13.1636
34	1	-0.998575	81.7689	-14.1622
35	1	-0.978	1582.7257	-15.1403
36	1	-0.958125	83.6437	-16.0984
37	1	-0.942375	84.5318	-17.0408
38	1	-0.923014	85.3837	-17.9638
39	1	-0.903992	86.201	-18.8678
40	1	-0.889006	86.9913	-19.7568
41	1	-0.870	5587.7491	-20.6274
42	1	-0.852385	88.4757	-21.4798
43	1	-0.838054	89.178	-22.3178
44	1	-0.820379	89.8511	-23.1382
45	1	-0.802956	90.4958	-23.9412
46	1	-0.789191	91.1186	-24.7304
47	1	-0.772193	91.7149	-25.5025
48	1	-0.755415	92.2856	-26.258
49	1	-0.738846	92.8314	-26.9968

50	1	-0.725736	93.3581	-27.7225
51	1	-0.709522	93.8616	-28.4321
52	1	-0.693493	94.3425	-29.1256
53	1	-0.680797	94.806	-29.8064
54	1	-0.665079	95.2483	-30.4714
55	1	-0.649522	95.6702	-31.121
56	1	-0.637192	96.0762	-31.7581
57	1	-0.621911	96.463	-32.3801
58	1	-0.606775	96.8312	-32.9868
59	1	-0.594766	97.1849	-33.5816
60	1	-0.579873	97.5212	-34.1615
61	1	-0.565108	97.8405	-34.7266
62	1	-0.550465	98.1435	-35.277
63	1	-0.538836	98.4339	-35.8159
64	1	-0.524401	98.7088	-36.3403
65	1	-0.510074	98.969	-36.8504
66	1	-0.498687	99.2177	-37.349
67	1	-0.484544	99.4525	-37.8336
68	1	-0.470498	99.6739	-38.3041
69	1	-0.459327	99.8848	-38.7634
70	1	-0.445443	100.083	-39.2089
71	1	-0.431644	100.27	-39.6405
72	1	-0.417928	100.444	-40.0584
73	1	-0.40701	100.61	-40.4654
74	1	-0.393433	100.765	-40.8589
75	1	-0.379927	100.909	-41.2388
76	1	-0.369171	101.045	-41.608
77	1	-0.355788	101.172	-41.9638
78	1	-0.342466	101.289	-42.3062
79	1	-0.331854	101.399	-42.6381
80	1	-0.318639	101.501	-42.9567
81	1	-0.305481	101.594	-43.2622
82	1	-0.294992	101.681	-43.5572
83	1	-0.281926	101.761	-43.8391
84	1	-0.268908	101.833	-44.108
85	1	-0.255936	101.898	-44.364
86	1	-0.24559	101.959	-44.6095
87	1	-0.232693	102.013	-44.8422
88	1	-0.219834	102.061	-45.0621
89	1	-0.209575	102.105	-45.2716
90	1	-0.196779	102.144	-45.4684
91	1	-0.184017	102.178	-45.6524
92	1	-0.173829	102.208	-45.8263
93	1	-0.161119	102.234	-45.9874
94	1	-0.148434	102.256	-46.1358
95	1	-0.135774	102.274	-46.2716
96	1	-0.125661	102.29	-46.3973
97	1	-0.113039	102.303	-46.5103
98	1	-0.100433	102.313	-46.6107
99	1	-0.0903606	102.321	-46.7011
100	1	-0.0777834	102.327	-46.7789
101	1	-0.0652187	102.332	-46.8441
102	1	-0.0551734	102.335	-46.8993
103	1	-0.0426257	102.336	-46.9419
104	1	-0.0300838	102.337	-46.972
105	1	-0.0200544	102.338	-46.992
106	1	-0.00751925	102.338	-46.9996
107	1	0.00751925	102.338	-46.992
108	1	0.0200544	102.338	-46.972
109	1	0.0300838	102.339	-46.9419
110	1	0.0426257	102.341	-46.8993
111	1	0.0551734	102.344	-46.8441

112	1	0.0652187	102.348	-46.7789
113	1	0.0777834	102.354	-46.7011
114	1	0.0903606	102.362	-46.6107
115	1	0.100433	102.373	-46.5103
116	1	0.113039	102.385	-46.3973
117	1	0.125661	102.401	-46.2716
118	1	0.135774	102.42	-46.1358
119	1	0.148434	102.442	-45.9874
120	1	0.161119	102.468	-45.8263
121	1	0.173829	102.498	-45.6524
122	1	0.184017	102.532	-45.4684
123	1	0.196779	102.57	-45.2716
124	1	0.209575	102.614	-45.0621
125	1	0.219834	102.663	-44.8422
126	1	0.232693	102.717	-44.6095
127	1	0.24559	102.777	-44.364
128	1	0.255936	102.843	-44.108
129	1	0.268908	102.915	-43.8391
130	1	0.281926	102.994	-43.5572
131	1	0.294992	103.081	-43.2622
132	1	0.305481	103.175	-42.9567
133	1	0.318639	103.276	-42.6381
134	1	0.331854	103.386	-42.3062
135	1	0.342466	103.504	-41.9638
136	1	0.355788	103.63	-41.608
137	1	0.369171	103.767	-41.2388
138	1	0.379927	103.911	-40.8589
139	1	0.393433	104.066	-40.4654
140	1	0.40701	104.231	-40.0584
141	1	0.417928	104.406	-39.6405
142	1	0.431644	104.592	-39.2089
143	1	0.445443	104.791	-38.7634
144	1	0.459327	105.002	-38.3041
145	1	0.470498	105.223	-37.8336
146	1	0.484544	105.458	-37.349
147	1	0.498687	105.707	-36.8504
148	1	0.510074	105.967	-36.3403
149	1	0.524401	106.242	-35.8159
150	1	0.538836	106.532	-35.277
151	1	0.550465	106.835	-34.7266
152	1	0.565108	107.154	-34.1615
153	1	0.579873	107.491	-33.5816
154	1	0.594766	107.844	-32.9868
155	1	0.606775	108.213	-32.3801
156	1	0.621911	108.599	-31.7581
157	1	0.637192	109.005	-31.121
158	1	0.649522	109.427	-30.4714
159	1	0.665079	109.87	-29.8064
160	1	0.680797	110.333	-29.1256
161	1	0.693493	110.814	-28.4321
162	1	0.709522	111.317	-27.7225
163	1	0.725736	111.844	-26.9968
164	1	0.738846	112.39	-26.258
165	1	0.755415	112.961	-25.5025
166	1	0.772193	113.557	-24.7304
167	1	0.789191	114.18	-23.9412
168	1	0.802956	114.824	-23.1382
169	1	0.820379	115.498	-22.3178
170	1	0.838054	116.2	-21.4798
171	1	0.852385	116.926	-20.6274
172	1	0.87055	117.684	-19.7568
173	1	0.889006	118.475	-18.8678

174	1	0.903992	119.292	-17.9638
175	1	0.923014	120.144	-17.0408
176	1	0.942375	121.032	-16.0984
177	1	0.958125	121.95	-15.1403
178	1	0.97815	122.907	-14.1622
179	1	0.998575	123.904	-13.1636
180	1	1.01943	124.943	-12.1442
181	1	1.03643	126.017	-11.1077
182	1	1.05812	127.137	-10.0496
183	1	1.08032	128.304	-8.9693
184	1	1.09847	129.511	-7.87083
185	1	1.12168	130.769	-6.74915
186	1	1.1455	132.081	-5.60364
187	1	1.16505	133.438	-4.4386
188	1	1.19012	134.855	-3.24848
189	1	1.21596	136.333	-2.03252
190	1	1.24264	137.877	-0.789875
191	1	1.26464	139.477	0.474766
192	1	1.29303	141.149	1.7678
193	1	1.32251	142.898	3.0903
194	1	1.34694	144.712	4.43724
195	1	1.37866	146.613	5.8159
196	1	1.41183	148.606	7.22773
197	1	1.43953	150.678	8.66726
198	1	1.47579	152.856	10.1431
199	1	1.5141	155.149	11.6572
200	1	1.54643	157.54	13.2036
201	1	1.58927	160.066	14.7929
202	1	1.63524	162.74	16.4281
203	1	1.68494	165.579	18.113
204	1	1.72793	168.564	19.841
205	1	1.78661	171.756	21.6276
206	1	1.85218	175.187	23.4798
207	1	1.91103	178.839	25.3908
208	1	1.99539	182.821	27.3862
209	1	2.09693	187.218	29.4831
210	1	2.19728	192.046	31.6804
211	1	2.36561	197.642	34.046
212	3	2.65209	204.676	42.0023

Data Set Standard Deviation = 0.315164
Numerator = 1764.19
Denominator = 4289.65
W Statistic = 0.411267 = 1764.19 / 4289.65

5% Critical value of 0.976 exceeds 0.411267
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.411267
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Vinyl acetate

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.96611	-2.65209	7.03356	5.2143
2	-1.96611	-2.36561	12.6297	9.86537
3	-1.96611	-2.19728	17.4578	14.1855
4	-1.96611	-2.09693	21.8549	18.3083
5	-1.96611	-1.99539	25.8365	22.2314
6	-1.96611	-1.91103	29.4885	25.9888
7	-1.96611	-1.85218	32.9191	29.6303
8	-1.96611	-1.78661	36.111	33.143
9	-1.96611	-1.72793	39.0968	36.5403
10	-1.96611	-1.68494	41.9358	39.8531
11	-1.96611	-1.63524	44.6098	43.0682
12	-1.96611	-1.58927	47.1356	46.1928
13	-1.96611	-1.54643	49.527	49.2333
14	-1.96611	-1.5141	51.8195	52.2102
15	-1.96611	-1.47579	53.9975	55.1118
16	-1.96611	-1.43953	56.0698	57.9421
17	-1.96611	-1.41183	58.063	60.7179
18	-1.96611	-1.37866	59.9637	63.4285
19	-1.96611	-1.34694	61.778	66.0767
20	-1.96611	-1.32251	63.527	68.6769
21	-1.96611	-1.29303	65.1989	71.2192
22	-1.96611	-1.26464	66.7982	73.7056
23	-1.96611	-1.24264	68.3424	76.1488
24	-1.96611	-1.21596	69.821	78.5395
25	-1.96611	-1.19012	71.2373	80.8794
26	-0.916291	-1.16505	72.5947	81.9469
27	-0.34249	-1.1455	73.9069	82.3392
28	-0.174353	-1.12168	75.165	82.5348
29	-0.105361	-1.09847	76.3716	82.6505
30	0	-1.08032	77.5387	82.6505
31	0	-1.05812	78.6584	82.6505
32	0	-1.03643	79.7326	82.6505
33	0	-1.01943	80.7718	82.6505
34	0	-0.998575	81.7689	82.6505
35	0	-0.97815	82.7257	82.6505
36	0	-0.958125	83.6437	82.6505
37	0	-0.942375	84.5318	82.6505
38	0	-0.923014	85.3837	82.6505
39	0	-0.903992	86.201	82.6505
40	0	-0.889006	86.9913	82.6505
41	0	-0.87055	87.7491	82.6505
42	0	-0.852385	88.4757	82.6505
43	0	-0.838054	89.178	82.6505
44	0	-0.820379	89.8511	82.6505
45	0	-0.802956	90.4958	82.6505
46	0	-0.789191	91.1186	82.6505
47	0	-0.772193	91.7149	82.6505
48	0	-0.755415	92.2856	82.6505
49	0	-0.738846	92.8314	82.6505

50	0	-0.725736	93.3581	82.6505
51	0	-0.709522	93.8616	82.6505
52	0	-0.693493	94.3425	82.6505
53	0	-0.680797	94.806	82.6505
54	0	-0.665079	95.2483	82.6505
55	0	-0.649522	95.6702	82.6505
56	0	-0.637192	96.0762	82.6505
57	0	-0.621911	96.463	82.6505
58	0	-0.606775	96.8312	82.6505
59	0	-0.594766	97.1849	82.6505
60	0	-0.579873	97.5212	82.6505
61	0	-0.565108	97.8405	82.6505
62	0	-0.550465	98.1435	82.6505
63	0	-0.538836	98.4339	82.6505
64	0	-0.524401	98.7088	82.6505
65	0	-0.510074	98.969	82.6505
66	0	-0.498687	99.2177	82.6505
67	0	-0.484544	99.4525	82.6505
68	0	-0.470498	99.6739	82.6505
69	0	-0.459327	99.8848	82.6505
70	0	-0.445443	100.083	82.6505
71	0	-0.431644	100.27	82.6505
72	0	-0.417928	100.444	82.6505
73	0	-0.40701	100.61	82.6505
74	0	-0.393433	100.765	82.6505
75	0	-0.379927	100.909	82.6505
76	0	-0.369171	101.045	82.6505
77	0	-0.355788	101.172	82.6505
78	0	-0.342466	101.289	82.6505
79	0	-0.331854	101.399	82.6505
80	0	-0.318639	101.501	82.6505
81	0	-0.305481	101.594	82.6505
82	0	-0.294992	101.681	82.6505
83	0	-0.281926	101.761	82.6505
84	0	-0.268908	101.833	82.6505
85	0	-0.255936	101.898	82.6505
86	0	-0.24559	101.959	82.6505
87	0	-0.232693	102.013	82.6505
88	0	-0.219834	102.061	82.6505
89	0	-0.209575	102.105	82.6505
90	0	-0.196779	102.144	82.6505
91	0	-0.184017	102.178	82.6505
92	0	-0.173829	102.208	82.6505
93	0	-0.161119	102.234	82.6505
94	0	-0.148434	102.256	82.6505
95	0	-0.135774	102.274	82.6505
96	0	-0.125661	102.29	82.6505
97	0	-0.113039	102.303	82.6505
98	0	-0.100433	102.313	82.6505
99	0	-0.0903606	102.321	82.6505
100	0	-0.0777834	102.327	82.6505
101	0	-0.0652187	102.332	82.6505
102	0	-0.0551734	102.335	82.6505
103	0	-0.0426257	102.336	82.6505
104	0	-0.0300838	102.337	82.6505
105	0	-0.0200544	102.338	82.6505
106	0	-0.00751925	102.338	82.6505
107	0	0.00751925	102.338	82.6505
108	0	0.0200544	102.338	82.6505
109	0	0.0300838	102.339	82.6505
110	0	0.0426257	102.341	82.6505
111	0	0.0551734	102.344	82.6505

112	0	0.0652187	102.348	82.6505
113	0	0.0777834	102.354	82.6505
114	0	0.0903606	102.362	82.6505
115	0	0.100433	102.373	82.6505
116	0	0.113039	102.385	82.6505
117	0	0.125661	102.401	82.6505
118	0	0.135774	102.42	82.6505
119	0	0.148434	102.442	82.6505
120	0	0.161119	102.468	82.6505
121	0	0.173829	102.498	82.6505
122	0	0.184017	102.532	82.6505
123	0	0.196779	102.57	82.6505
124	0	0.209575	102.614	82.6505
125	0	0.219834	102.663	82.6505
126	0	0.232693	102.717	82.6505
127	0	0.24559	102.777	82.6505
128	0	0.255936	102.843	82.6505
129	0	0.268908	102.915	82.6505
130	0	0.281926	102.994	82.6505
131	0	0.294992	103.081	82.6505
132	0	0.305481	103.175	82.6505
133	0	0.318639	103.276	82.6505
134	0	0.331854	103.386	82.6505
135	0	0.342466	103.504	82.6505
136	0	0.355788	103.63	82.6505
137	0	0.369171	103.767	82.6505
138	0	0.379927	103.911	82.6505
139	0	0.393433	104.066	82.6505
140	0	0.40701	104.231	82.6505
141	0	0.417928	104.406	82.6505
142	0	0.431644	104.592	82.6505
143	0	0.445443	104.791	82.6505
144	0	0.459327	105.002	82.6505
145	0	0.470498	105.223	82.6505
146	0	0.484544	105.458	82.6505
147	0	0.498687	105.707	82.6505
148	0	0.510074	105.967	82.6505
149	0	0.524401	106.242	82.6505
150	0	0.538836	106.532	82.6505
151	0	0.550465	106.835	82.6505
152	0	0.565108	107.154	82.6505
153	0	0.579873	107.491	82.6505
154	0	0.594766	107.844	82.6505
155	0	0.606775	108.213	82.6505
156	0	0.621911	108.599	82.6505
157	0	0.637192	109.005	82.6505
158	0	0.649522	109.427	82.6505
159	0	0.665079	109.87	82.6505
160	0	0.680797	110.333	82.6505
161	0	0.693493	110.814	82.6505
162	0	0.709522	111.317	82.6505
163	0	0.725736	111.844	82.6505
164	0	0.738846	112.39	82.6505
165	0	0.755415	112.961	82.6505
166	0	0.772193	113.557	82.6505
167	0	0.789191	114.18	82.6505
168	0	0.802956	114.824	82.6505
169	0	0.820379	115.498	82.6505
170	0	0.838054	116.2	82.6505
171	0	0.852385	116.926	82.6505
172	0	0.87055	117.684	82.6505
173	0	0.889006	118.475	82.6505

174	0	0.903992	119.292	82.6505
175	0	0.923014	120.144	82.6505
176	0	0.942375	121.032	82.6505
177	0	0.958125	121.95	82.6505
178	0	0.97815	122.907	82.6505
179	0	0.998575	123.904	82.6505
180	0	1.01943	124.943	82.6505
181	0	1.03643	126.017	82.6505
182	0	1.05812	127.137	82.6505
183	0	1.08032	128.304	82.6505
184	0	1.09847	129.511	82.6505
185	0	1.12168	130.769	82.6505
186	0	1.1455	132.081	82.6505
187	0	1.16505	133.438	82.6505
188	0	1.19012	134.855	82.6505
189	0	1.21596	136.333	82.6505
190	0	1.24264	137.877	82.6505
191	0	1.26464	139.477	82.6505
192	0	1.29303	141.149	82.6505
193	0	1.32251	142.898	82.6505
194	0	1.34694	144.712	82.6505
195	0	1.37866	146.613	82.6505
196	0	1.41183	148.606	82.6505
197	0	1.43953	150.678	82.6505
198	0	1.47579	152.856	82.6505
199	0	1.5141	155.149	82.6505
200	0	1.54643	157.54	82.6505
201	0	1.58927	160.066	82.6505
202	0	1.63524	162.74	82.6505
203	0	1.68494	165.579	82.6505
204	0	1.72793	168.564	82.6505
205	0	1.78661	171.756	82.6505
206	0	1.85218	175.187	82.6505
207	0	1.91103	178.839	82.6505
208	0	1.99539	182.821	82.6505
209	0	2.09693	187.218	82.6505
210	0	2.19728	192.046	82.6505
211	0	2.36561	197.642	82.6505
212	1.09861	2.65209	204.676	85.5641

Data Set Standard Deviation = 0.643024
Numerator = 7321.22
Denominator = 17856.8
W Statistic = 0.409997 = 7321.22 / 17856.8

5% Critical value of 0.976 exceeds 0.409997
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.409997
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Vinyl acetate

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

Total Percent Non-Detects = 97.6415%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 17
Maximum Background Concentration = 0
Confidence Level = 68%
False Positive Rate = 32%

Location	Date	Samples	Mean	Significant
MW-9	6/30/2010	1	-1.96611	FALSE
MW-12BR	6/30/2010	1	-1.96611	FALSE
MW-12AR	6/30/2010	1	-1.96611	FALSE
MW-11R	6/30/2010	1	-1.96611	FALSE
MW-10	6/30/2010	1	-0.174353	FALSE
MW-8	6/30/2010	1	-1.96611	FALSE
MW-7	6/30/2010	1	-1.96611	FALSE
MW-6	6/30/2010	1	-1.96611	FALSE

Concentrations (ppb)

Parameter: Vinyl chloride

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 212
Total Non-Detect: 137
Percent Non-Detects: 64.6226%
Total Background Measurements: 17
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	17	17 (100%)	3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	ND<2	ND<2
			10/25/2005	ND<2	ND<2
			4/29/2006	ND<2	ND<2
			11/18/2006	ND<2	ND<2
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	ND<2	ND<2
			11/20/2008	ND<2	ND<2
			6/11/2009	ND<0.18	ND<0.18
			11/16/2009	ND<0.18	ND<0.18
			6/30/2010	ND<0.18	ND<0.18

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-7	27	20 (74.0741%)	7/20/1995	ND<2	ND<2
			8/24/1995	ND<2	ND<2
			9/28/1995	0.7 J	0.7 J
			10/26/1995	ND<2	ND<2
			11/19/1996	ND<2	ND<2
			12/19/1996	ND<2	ND<2
			3/24/1997	ND<2	ND<2
			9/24/1997	ND<2	ND<2
			4/7/1998	ND<2	ND<2
			9/23/1998	ND<2	ND<2
			3/16/1999	ND<2	ND<2
			9/23/1999	ND<2	ND<2
			3/15/2000	ND<2	ND<2
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	0.52 J	0.52 J
			10/25/2005	0.36 J	0.36 J
			4/29/2006	0.64 J	0.64 J
			11/18/2006	0.35 J	0.35 J
			5/23/2007	ND<2	ND<2
			11/28/2007	ND<2	ND<2
			6/5/2008	0.47 J	0.47 J
			11/20/2008	0.58 J	0.58 J

			6/11/2009	ND<0.18		ND<0.18
			11/16/2009	ND<0.18		ND<0.18
			6/30/2010	ND<0.18		ND<0.18
MW-6	27	27 (100%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	ND<2	ND<2	
			11/19/1996	ND<2	ND<2	
			12/19/1996	ND<2	ND<2	
			3/24/1997	ND<2	ND<2	
			9/24/1997	ND<2	ND<2	
			4/7/1998	ND<2	ND<2	
			9/23/1998	ND<2	ND<2	
			3/16/1999	ND<2	ND<2	
			9/23/1999	ND<2	ND<2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	ND<2	ND<2	
			3/11/2004	ND<2	ND<2	
			10/12/2004	ND<2	ND<2	
			4/1/2005	ND<2	ND<2	
			10/25/2005	ND<2	ND<2	
			4/29/2006	ND<2	ND<2	
			11/18/2006	ND<2	ND<2	
			5/23/2007	ND<2	ND<2	
			11/28/2007	ND<2	ND<2	
			6/5/2008	ND<2	ND<2	
			11/20/2008	ND<2	ND<2	
			6/11/2009	ND<0.18		ND<0.18
			11/16/2009	ND<0.18		ND<0.18
			6/30/2010	ND<0.18		ND<0.18
MW-8	26	2 (7.69231%)	7/20/1995		2.4	2.4
			8/24/1995	46	46	
			9/28/1995	36	36	
			10/26/1995	4	4	
			11/19/1996	ND<2	ND<2	
			12/19/1996	46	46	
			3/24/1997	48	48	
			9/24/1997	25	25	
			4/7/1998	39	39	
			9/23/1998	16	16	
			3/16/1999	13.7	13.7	
			9/23/1999	15.2	15.2	
			3/15/2000	ND<2	ND<2	
			9/24/2003	230	230	
			3/11/2004	78	78	
			10/12/2004	130	130	
			4/1/2005	59	59	
			10/25/2005	54.2	54.2	
			4/29/2006	24.6	24.6	
			11/18/2006	36.6	36.6	
			5/23/2007	19	19	
			11/28/2007	33.2	33.2	
			6/5/2008	21.8	21.8	
			11/20/2008	10.1	10.1	
			6/11/2009	12	12	
			6/30/2010	10	10	
MW-10	27	14 (51.8519%)	7/20/1995		ND<2	ND<2
			8/24/1995	3	3	
			9/28/1995	4	4	

		10/26/1995	5	5		
		11/19/1996	ND<2	ND<2		
		12/19/1996	ND<2	ND<2		
		3/24/1997	ND<2	ND<2		
		9/24/1997	ND<2	ND<2		
		4/7/1998	ND<2	ND<2		
		9/23/1998	ND<2	ND<2		
		3/16/1999	3.6	3.6		
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	1.91 J	1.91 J		
		10/25/2005	2.48	2.48		
		4/29/2006	2.8	2.8		
		11/18/2006	1.7 J	1.7 J		
		5/23/2007	ND<2	ND<2		
		11/28/2007	2.59	2.59		
		6/5/2008	1.65 J	1.65 J		
		11/20/2008	1.58 J	1.58 J		
		6/11/2009	1.3	1.3		
		11/16/2009	1.5	1.5		
		6/30/2010	ND<0.18		ND<0.18	
MW-11R	27	18 (66.6667%)	7/20/1995	ND<2	ND<2	
		8/24/1995	1.9 J	1.9 J		
		9/28/1995	0.8 J	0.8 J		
		10/26/1995	4	4		
		11/19/1996	ND<2	ND<2		
		12/19/1996	ND<2	ND<2		
		3/24/1997	ND<2	ND<2		
		9/24/1997	ND<2	ND<2		
		4/7/1998	ND<2	ND<2		
		9/23/1998	ND<2	ND<2		
		3/16/1999	2.6	2.6		
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	3.57	3.57		
		10/25/2005	0.9 J	0.9 J		
		4/29/2006	0.78 J	0.78 J		
		11/18/2006	0.8 J	0.8 J		
		5/23/2007	ND<2	ND<2		
		11/28/2007	0.48 J	0.48 J		
		6/5/2008	ND<2	ND<2		
		11/20/2008	ND<2	ND<2		
		6/11/2009	ND<0.18		ND<0.18	
		11/16/2009	ND<0.18		ND<0.18	
		6/30/2010	ND<0.18		ND<0.18	
MW-12AR	17	11 (64.7059%)	3/16/1999	ND<2	ND<2	
		9/23/1999	ND<2	ND<2		
		3/15/2000	ND<2	ND<2		
		9/24/2003	ND<2	ND<2		
		3/11/2004	ND<2	ND<2		
		10/12/2004	ND<2	ND<2		
		4/1/2005	ND<2	ND<2		
		10/25/2005	2.08	2.08		
		4/29/2006	2.44	2.44		

			11/18/2006	1.17 J	1.17 J		
			5/23/2007	ND<2	ND<2		
			11/28/2007	0.97 J	0.97 J		
			6/5/2008	0.8 J	0.8 J		
			11/20/2008	0.52 J	0.52 J		
			6/11/2009	ND<0.18		ND<0.18	
			11/16/2009	ND<0.18		ND<0.18	
			6/30/2010	ND<0.18		ND<0.18	
MW-12BR		17	15 (88.2353%)	3/16/1999		7.2	7.2
			9/23/1999	ND<2	ND<2		
			3/15/2000	ND<2	ND<2		
			9/24/2003	ND<2	ND<2		
			3/11/2004	ND<2	ND<2		
			10/12/2004	ND<2	ND<2		
			4/1/2005	5.41	5.41		
			10/25/2005	ND<2	ND<2		
			4/29/2006	ND<2	ND<2		
			11/18/2006	ND<2	ND<2		
			5/23/2007	ND<2	ND<2		
			11/28/2007	ND<2	ND<2		
			6/5/2008	ND<2	ND<2		
			11/20/2008	ND<2	ND<2		
			6/11/2009	ND<0.18		ND<0.18	
			11/16/2009	ND<0.18		ND<0.18	
			6/30/2010	ND<0.18		ND<0.18	
MW-9	27	13 (48.1481%)	7/20/1995		ND<2	ND<2	
			8/24/1995	ND<2	ND<2		
			9/28/1995	0.8 J	0.8 J		
			10/26/1995	0.9 J	0.9 J		
			11/19/1996	ND<2	ND<2		
			12/19/1996	ND<2	ND<2		
			3/24/1997	ND<2	ND<2		
			9/24/1997	ND<2	ND<2		
			4/7/1998	ND<2	ND<2		
			9/23/1998	ND<2	ND<2		
			3/16/1999	2.7	2.7		
			9/23/1999	ND<2	ND<2		
			3/15/2000	ND<2	ND<2		
			9/24/2003	ND<2	ND<2		
			3/11/2004	37	37		
			10/12/2004	ND<2	ND<2		
			4/1/2005	2.81	2.81		
			10/25/2005	1.45 J	1.45 J		
			4/29/2006	0.69 J	0.69 J		
			11/18/2006	0.73 J	0.73 J		
			5/23/2007	ND<2	ND<2		
			11/28/2007	1.71 J	1.71 J		
			6/5/2008	1.6 J	1.6 J		
			11/20/2008	1.41 J	1.41 J		
			6/11/2009	2	2		
			11/16/2009	1.2	1.2		
			6/30/2010	2.1	2.1		

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Vinyl chloride

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.09	-2.65209	7.03356	-0.238688
2	0.09	-2.365	11.2629	7 -0.451593
3	0.09	-2.197	28.1457	8 -0.649349
4	0.09	-2.096	32.8549	-0.838072
5	0.09	-1.995	39.2583	65 -1.01766
6	0.09	-1.911	03.2948	85 -1.18965
7	0.09	-1.852	18.3291	91 -1.35635
8	0.09	-1.786	13.6111	-1.51714
9	0.09	-1.727	93.3909	68 -1.67266
10	0.09	-1.684	94.1935	8 -1.8243
11	0.09	-1.635	24.4609	8 -1.97147
12	0.09	-1.589	27.1356	-2.11451
13	0.09	-1.546	43.527	-2.25368
14	0.09	-1.514	1 51.8195	-2.38995
15	0.09	-1.475	79.9975	-2.52277
16	0.09	-1.439	53.0698	-2.65233
17	0.09	-1.411	83.063	-2.7794
18	0.09	-1.378	65.9637	-2.90348
19	0.09	-1.346	46.778	-3.0247
20	0.35	-1.322	51.527	-3.48758
21	0.36	-1.293	03.1989	-3.95307
22	0.47	-1.264	64.7982	-4.54745
23	0.48	-1.242	64.3424	-5.14392
24	0.52	-1.215	96.821	-5.77622
25	0.52	-1.190	12.2373	-6.39508
26	0.58	-1.165	05.5947	-7.07081
27	0.64	-1.145	5 73.9069	-7.80393
28	0.69	-1.121	68.165	-8.57789
29	0.7	-1.098	47.3716	-9.34682
30	0.73	-1.080	32.5387	-10.1355
31	0.78	-1.058	12.6584	-10.9608
32	0.8	-1.036	43.7326	-11.7899
33	0.8	-1.019	43.7718	-12.6055
34	0.8	-0.998575	81.7689	-13.4043
35	0.8	-0.978	15.7257	-14.1869
36	0.9	-0.958125	83.6437	-15.0492
37	0.9	-0.942375	84.5318	-15.8973
38	0.97	-0.923014	85.3837	-16.7926
39	1	-0.903992	86.201	-17.6966
40	1	-0.889006	86.9913	-18.5856
41	1	-0.870	55.7491	-19.4562
42	1	-0.852385	88.4757	-20.3086
43	1	-0.838054	89.178	-21.1466
44	1	-0.820379	89.8511	-21.967
45	1	-0.802956	90.4958	-22.77
46	1	-0.789191	91.1186	-23.5591
47	1	-0.772193	91.7149	-24.3313
48	1	-0.755415	92.2856	-25.0868
49	1	-0.738846	92.8314	-25.8256

50	1	-0.725736	93.3581	-26.5513
51	1	-0.709522	93.8616	-27.2609
52	1	-0.693493	94.3425	-27.9543
53	1	-0.680797	94.806	-28.6351
54	1	-0.665079	95.2483	-29.3002
55	1	-0.649522	95.6702	-29.9497
56	1	-0.637192	96.0762	-30.5869
57	1	-0.621911	96.463	-31.2089
58	1	-0.606775	96.8312	-31.8156
59	1	-0.594766	97.1849	-32.4104
60	1	-0.579873	97.5212	-32.9903
61	1	-0.565108	97.8405	-33.5554
62	1	-0.550465	98.1435	-34.1058
63	1	-0.538836	98.4339	-34.6447
64	1	-0.524401	98.7088	-35.1691
65	1	-0.510074	98.969	-35.6791
66	1	-0.498687	99.2177	-36.1778
67	1	-0.484544	99.4525	-36.6624
68	1	-0.470498	99.6739	-37.1329
69	1	-0.459327	99.8848	-37.5922
70	1	-0.445443	100.083	-38.0376
71	1	-0.431644	100.27	-38.4693
72	1	-0.417928	100.444	-38.8872
73	1	-0.40701	100.61	-39.2942
74	1	-0.393433	100.765	-39.6877
75	1	-0.379927	100.909	-40.0676
76	1	-0.369171	101.045	-40.4368
77	1	-0.355788	101.172	-40.7925
78	1	-0.342466	101.289	-41.135
79	1	-0.331854	101.399	-41.4669
80	1	-0.318639	101.501	-41.7855
81	1	-0.305481	101.594	-42.091
82	1	-0.294992	101.681	-42.386
83	1	-0.281926	101.761	-42.6679
84	1	-0.268908	101.833	-42.9368
85	1	-0.255936	101.898	-43.1927
86	1	-0.24559	101.959	-43.4383
87	1	-0.232693	102.013	-43.671
88	1	-0.219834	102.061	-43.8909
89	1	-0.209575	102.105	-44.1004
90	1	-0.196779	102.144	-44.2972
91	1	-0.184017	102.178	-44.4812
92	1	-0.173829	102.208	-44.6551
93	1	-0.161119	102.234	-44.8162
94	1	-0.148434	102.256	-44.9646
95	1	-0.135774	102.274	-45.1004
96	1	-0.125661	102.29	-45.2261
97	1	-0.113039	102.303	-45.3391
98	1	-0.100433	102.313	-45.4395
99	1	-0.0903606	102.321	-45.5299
100	1	-0.0777834	102.327	-45.6077
101	1	-0.0652187	102.332	-45.6729
102	1	-0.0551734	102.335	-45.7281
103	1	-0.0426257	102.336	-45.7707
104	1	-0.0300838	102.337	-45.8008
105	1	-0.0200544	102.338	-45.8208
106	1	-0.00751925	102.338	-45.8283
107	1	0.00751925	102.338	-45.8208
108	1	0.0200544	102.338	-45.8008
109	1	0.0300838	102.339	-45.7707
110	1	0.0426257	102.341	-45.7281
111	1	0.0551734	102.344	-45.6729

112	1	0.0652187	102.348	-45.6077
113	1	0.0777834	102.354	-45.5299
114	1	0.0903606	102.362	-45.4395
115	1	0.100433	102.373	-45.3391
116	1	0.113039	102.385	-45.2261
117	1	0.125661	102.401	-45.1004
118	1	0.135774	102.42	-44.9646
119	1	0.148434	102.442	-44.8162
120	1	0.161119	102.468	-44.6551
121	1	0.173829	102.498	-44.4812
122	1	0.184017	102.532	-44.2972
123	1	0.196779	102.57	-44.1004
124	1	0.209575	102.614	-43.8909
125	1	0.219834	102.663	-43.671
126	1	0.232693	102.717	-43.4383
127	1	0.24559	102.777	-43.1927
128	1	0.255936	102.843	-42.9368
129	1	0.268908	102.915	-42.6679
130	1	0.281926	102.994	-42.386
131	1	0.294992	103.081	-42.091
132	1	0.305481	103.175	-41.7855
133	1	0.318639	103.276	-41.4669
134	1	0.331854	103.386	-41.135
135	1	0.342466	103.504	-40.7925
136	1	0.355788	103.63	-40.4368
137	1	0.369171	103.767	-40.0676
138	1	0.379927	103.911	-39.6877
139	1	0.393433	104.066	-39.2942
140	1	0.40701	104.231	-38.8872
141	1	0.417928	104.406	-38.4693
142	1	0.431644	104.592	-38.0376
143	1	0.445443	104.791	-37.5922
144	1	0.459327	105.002	-37.1329
145	1	0.470498	105.223	-36.6624
146	1	0.484544	105.458	-36.1778
147	1	0.498687	105.707	-35.6791
148	1	0.510074	105.967	-35.1691
149	1	0.524401	106.242	-34.6447
150	1	0.538836	106.532	-34.1058
151	1	0.550465	106.835	-33.5554
152	1	0.565108	107.154	-32.9903
153	1	0.579873	107.491	-32.4104
154	1	0.594766	107.844	-31.8156
155	1	0.606775	108.213	-31.2089
156	1	0.621911	108.599	-30.5869
157	1.17	0.637192	109.005	-29.8414
158	1.2	0.649522	109.427	-29.062
159	1.3	0.665079	109.87	-28.1974
160	1.41	0.680797	110.333	-27.2375
161	1.45	0.693493	110.814	-26.2319
162	1.5	0.709522	111.317	-25.1676
163	1.58	0.725736	111.844	-24.021
164	1.6	0.738846	112.39	-22.8388
165	1.65	0.755415	112.961	-21.5924
166	1.7	0.772193	113.557	-20.2796
167	1.71	0.789191	114.18	-18.9301
168	1.9	0.802956	114.824	-17.4045
169	1.91	0.820379	115.498	-15.8376
170	2	0.838054	116.2	-14.1615
171	2.08	0.852385	116.926	-12.3885
172	2.1	0.87055	117.684	-10.5604
173	2.4	0.889006	118.475	-8.42675

174	2.44	0.903992		119.292	-6.22101
175	2.48	0.923014		120.144	-3.93193
176	2.59	0.942375		121.032	-1.49118
177	2.6	0.958125		121.95	0.999948
178	2.7	0.97815	122.907	3.64095	
179	2.8	0.998575		123.904	6.43696
180	2.81	1.01943	124.943	9.30156	
181	3	1.03643	126.017	12.4109	
182	3.57	1.05812	127.137	16.1883	
183	3.6	1.08032	128.304	20.0775	
184	4	1.09847	129.511	24.4714	
185	4	1.12168	130.769	28.9581	
186	4	1.1455	132.081	33.5401	
187	5	1.16505	133.438	39.3653	
188	5.41	1.19012	134.855	45.8039	
189	7.2	1.21596	136.333	54.5588	
190	10	1.24264	137.877	66.9852	
191	10.1	1.26464	139.477	79.7581	
192	12	1.29303	141.149	95.2745	
193	13.7	1.32251	142.898	113.393	
194	15.2	1.34694	144.712	133.866	
195	16	1.37866	146.613	155.925	
196	19	1.41183	148.606	182.75	
197	21.8	1.43953	150.678	214.131	
198	24.6	1.47579	152.856	250.436	
199	25	1.5141	155.149	288.288	
200	33.2	1.54643	157.54	339.63	
201	36	1.58927	160.066	396.844	
202	36.6	1.63524	162.74	456.693	
203	37	1.68494	165.579	519.036	
204	39	1.72793	168.564	586.425	
205	46	1.78661	171.756	668.609	
206	46	1.85218	175.187	753.81	
207	48	1.91103	178.839	845.539	
208	54.2	1.99539	182.821	953.689	
209	59	2.09693	187.218	1077.41	
210	78	2.19728	192.046	1248.8	
211	130	2.36561	197.642	1556.33	
212	230	2.65209	204.676	2166.31	

Data Set Standard Deviation = 20.8223
Numerator = 4.69288e+006
Denominator = 1.87243e+007
W Statistic = 0.250631 = 4.69288e+006 / 1.87243e+007

5% Critical value of 0.976 exceeds 0.250631
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.250631
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Vinyl chloride

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 212

i	x(i)	m(i)	sum(m^2)	sum(mx)	
1	-2.40795	-2.65209	7.03356	6.38608	
2	-2.40795	-2.36561	12.6297	12.0823	
3	-2.40795	-2.19728	17.4578	17.3733	
4	-2.40795	-2.09693	21.8549	22.4226	
5	-2.40795	-1.99539	25.8365	27.2274	
6	-2.40795	-1.91103	29.4885	31.829	
7	-2.40795	-1.85218	32.9191	36.289	
8	-2.40795	-1.78661	36.111	40.5911	
9	-2.40795	-1.72793	39.0968	44.7518	
10	-2.40795	-1.68494	41.9358	48.8091	
11	-2.40795	-1.63524	44.6098	52.7466	
12	-2.40795	-1.58927	47.1356	56.5735	
13	-2.40795	-1.54643	49.527	60.2972	
14	-2.40795	-1.5141	51.8195	63.9431	
15	-2.40795	-1.47579	53.9975	67.4967	
16	-2.40795	-1.43953	56.0698	70.963	
17	-2.40795	-1.41183	58.063	74.3626	
18	-2.40795	-1.37866	59.9637	77.6824	
19	-2.40795	-1.34694	61.778	80.9257	
20	-1.04982	-1.32251	63.527	82.3141	
21	-1.02165	-1.29303	65.1989	83.6352	
22	-0.755023	-1.26464	66.7982	84.59	
23	-0.733969	-1.24264	68.3424	85.502	
24	-0.653926	-1.21596	69.821	86.2972	
25	-0.653926	-1.19012	71.2373	87.0754	
26	-0.544727	-1.16505	72.5947	87.7101	
27	-0.446287	-1.1455	73.9069	88.2213	
28	-0.371064	-1.12168	75.165	88.6375	
29	-0.356675	-1.09847	76.3716	89.0293	
30	-0.314711	-1.08032	77.5387	89.3693	
31	-0.248461	-1.05812	78.6584	89.6322	
32	-0.223144	-1.03643	79.7326	89.8635	
33	-0.223144	-1.01943	80.7718	90.091	
34	-0.223144	-0.998575	81.7689	90.3138	
35	-0.223144	-0.97815	82.7257	90.532	
36	-0.105361	-0.958125	83.6437	90.633	
37	-0.105361	-0.942375	84.5318	90.7323	
38	-0.0304592	-0.923014	85.3837	90.7604	
39	0	-0.903992	86.201	90.7604	
40	0	-0.889006	86.9913	90.7604	
41	0	-0.870558	87.7491	90.7604	
42	0	-0.852385	88.4757	90.7604	
43	0	-0.838054	89.178	90.7604	
44	0	-0.820379	89.8511	90.7604	
45	0	-0.802956	90.4958	90.7604	
46	0	-0.789191	91.1186	90.7604	
47	0	-0.772193	91.7149	90.7604	
48	0	-0.755415	92.2856	90.7604	
49	0	-0.738846	92.8314	90.7604	

50	0	-0.725736	93.3581	90.7604
51	0	-0.709522	93.8616	90.7604
52	0	-0.693493	94.3425	90.7604
53	0	-0.680797	94.806	90.7604
54	0	-0.665079	95.2483	90.7604
55	0	-0.649522	95.6702	90.7604
56	0	-0.637192	96.0762	90.7604
57	0	-0.621911	96.463	90.7604
58	0	-0.606775	96.8312	90.7604
59	0	-0.594766	97.1849	90.7604
60	0	-0.579873	97.5212	90.7604
61	0	-0.565108	97.8405	90.7604
62	0	-0.550465	98.1435	90.7604
63	0	-0.538836	98.4339	90.7604
64	0	-0.524401	98.7088	90.7604
65	0	-0.510074	98.969	90.7604
66	0	-0.498687	99.2177	90.7604
67	0	-0.484544	99.4525	90.7604
68	0	-0.470498	99.6739	90.7604
69	0	-0.459327	99.8848	90.7604
70	0	-0.445443	100.083	90.7604
71	0	-0.431644	100.27	90.7604
72	0	-0.417928	100.444	90.7604
73	0	-0.40701	100.61	90.7604
74	0	-0.393433	100.765	90.7604
75	0	-0.379927	100.909	90.7604
76	0	-0.369171	101.045	90.7604
77	0	-0.355788	101.172	90.7604
78	0	-0.342466	101.289	90.7604
79	0	-0.331854	101.399	90.7604
80	0	-0.318639	101.501	90.7604
81	0	-0.305481	101.594	90.7604
82	0	-0.294992	101.681	90.7604
83	0	-0.281926	101.761	90.7604
84	0	-0.268908	101.833	90.7604
85	0	-0.255936	101.898	90.7604
86	0	-0.24559	101.959	90.7604
87	0	-0.232693	102.013	90.7604
88	0	-0.219834	102.061	90.7604
89	0	-0.209575	102.105	90.7604
90	0	-0.196779	102.144	90.7604
91	0	-0.184017	102.178	90.7604
92	0	-0.173829	102.208	90.7604
93	0	-0.161119	102.234	90.7604
94	0	-0.148434	102.256	90.7604
95	0	-0.135774	102.274	90.7604
96	0	-0.125661	102.29	90.7604
97	0	-0.113039	102.303	90.7604
98	0	-0.100433	102.313	90.7604
99	0	-0.0903606	102.321	90.7604
100	0	-0.0777834	102.327	90.7604
101	0	-0.0652187	102.332	90.7604
102	0	-0.0551734	102.335	90.7604
103	0	-0.0426257	102.336	90.7604
104	0	-0.0300838	102.337	90.7604
105	0	-0.0200544	102.338	90.7604
106	0	-0.00751925	102.338	90.7604
107	0	0.00751925	102.338	90.7604
108	0	0.0200544	102.338	90.7604
109	0	0.0300838	102.339	90.7604
110	0	0.0426257	102.341	90.7604
111	0	0.0551734	102.344	90.7604

112	0	0.0652187	102.348	90.7604
113	0	0.0777834	102.354	90.7604
114	0	0.0903606	102.362	90.7604
115	0	0.100433	102.373	90.7604
116	0	0.113039	102.385	90.7604
117	0	0.125661	102.401	90.7604
118	0	0.135774	102.42	90.7604
119	0	0.148434	102.442	90.7604
120	0	0.161119	102.468	90.7604
121	0	0.173829	102.498	90.7604
122	0	0.184017	102.532	90.7604
123	0	0.196779	102.57	90.7604
124	0	0.209575	102.614	90.7604
125	0	0.219834	102.663	90.7604
126	0	0.232693	102.717	90.7604
127	0	0.24559	102.777	90.7604
128	0	0.255936	102.843	90.7604
129	0	0.268908	102.915	90.7604
130	0	0.281926	102.994	90.7604
131	0	0.294992	103.081	90.7604
132	0	0.305481	103.175	90.7604
133	0	0.318639	103.276	90.7604
134	0	0.331854	103.386	90.7604
135	0	0.342466	103.504	90.7604
136	0	0.355788	103.63	90.7604
137	0	0.369171	103.767	90.7604
138	0	0.379927	103.911	90.7604
139	0	0.393433	104.066	90.7604
140	0	0.40701	104.231	90.7604
141	0	0.417928	104.406	90.7604
142	0	0.431644	104.592	90.7604
143	0	0.445443	104.791	90.7604
144	0	0.459327	105.002	90.7604
145	0	0.470498	105.223	90.7604
146	0	0.484544	105.458	90.7604
147	0	0.498687	105.707	90.7604
148	0	0.510074	105.967	90.7604
149	0	0.524401	106.242	90.7604
150	0	0.538836	106.532	90.7604
151	0	0.550465	106.835	90.7604
152	0	0.565108	107.154	90.7604
153	0	0.579873	107.491	90.7604
154	0	0.594766	107.844	90.7604
155	0	0.606775	108.213	90.7604
156	0	0.621911	108.599	90.7604
157	0.157004	0.637192	109.005	90.8604
158	0.182322	0.649522	109.427	90.9789
159	0.262364	0.665079	109.87	91.1534
160	0.34359	0.680797	110.333	91.3873
161	0.371564	0.693493	110.814	91.6449
162	0.405465	0.709522	111.317	91.9326
163	0.457425	0.725736	111.844	92.2646
164	0.470004	0.738846	112.39	92.6119
165	0.500775	0.755415	112.961	92.9902
166	0.530628	0.772193	113.557	93.3999
167	0.536493	0.789191	114.18	93.8233
168	0.641854	0.802956	114.824	94.3387
169	0.647103	0.820379	115.498	94.8696
170	0.693147	0.838054	116.2	95.4504
171	0.732368	0.852385	116.926	96.0747
172	0.741937	0.87055	117.684	96.7206
173	0.875469	0.889006	118.475	97.4989

174	0.891998		0.903992		119.292	98.3053
175	0.908259		0.923014		120.144	99.1436
176	0.951658		0.942375		121.032	100.04
177	0.955511		0.958125		121.95	100.956
178	0.993252		0.97815	122.907	101.927	
179	1.02962	0.998575		123.904	102.956	
180	1.03318	1.01943	124.943	104.009		
181	1.09861	1.03643	126.017	105.148		
182	1.27257	1.05812	127.137	106.494		
183	1.28093	1.08032	128.304	107.878		
184	1.38629	1.09847	129.511	109.401		
185	1.38629	1.12168	130.769	110.956		
186	1.38629	1.1455	132.081	112.544		
187	1.60944	1.16505	133.438	114.419		
188	1.68825	1.19012	134.855	116.428		
189	1.97408	1.21596	136.333	118.828		
190	2.30259	1.24264	137.877	121.69		
191	2.31254	1.26464	139.477	124.614		
192	2.48491	1.29303	141.149	127.827		
193	2.6174	1.32251	142.898	131.289		
194	2.7213	1.34694	144.712	134.954		
195	2.77259	1.37866	146.613	138.777		
196	2.94444	1.41183	148.606	142.934		
197	3.08191	1.43953	150.678	147.37		
198	3.20275	1.47579	152.856	152.097		
199	3.21888	1.5141	155.149	156.97		
200	3.50255	1.54643	157.54	162.387		
201	3.58352	1.58927	160.066	168.082		
202	3.60005	1.63524	162.74	173.969		
203	3.61092	1.68494	165.579	180.053		
204	3.66356	1.72793	168.564	186.384		
205	3.82864	1.78661	171.756	193.224		
206	3.82864	1.85218	175.187	200.315		
207	3.8712	1.91103	178.839	207.713		
208	3.99268	1.99539	182.821	215.68		
209	4.07754	2.09693	187.218	224.23		
210	4.35671	2.19728	192.046	233.803		
211	4.86753	2.36561	197.642	245.318		
212	5.43808	2.65209	204.676	259.74		

Data Set Standard Deviation = 1.41728
Numerator = 67465.1
Denominator = 86747.5
W Statistic = 0.777718 = 67465.1 / 86747.5

5% Critical value of 0.976 exceeds 0.777718
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.777718
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Vinyl chloride

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<0	69
	9/23/1999	ND<0	69
	3/15/2000	ND<0	69
	9/24/2003	ND<0	69
	3/11/2004	ND<0	69
	10/12/2004	ND<0	69
	4/1/2005	ND<0	69
	10/25/2005	ND<0	69
	4/29/2006	ND<0	69
	11/18/2006	ND<0	69
	5/23/2007	ND<0	69
	11/28/2007	ND<0	69
	6/5/2008	ND<0	69
	11/20/2008	ND<0	69
	6/11/2009	ND<-2.40795	69
	11/16/2009	ND<-2.40795	69
	6/30/2010	ND<-2.40795	69

Rank Sum = 1173
Rank Mean = 69

Background Rank Sum = 1173
Background Rank Mean = 69

Compliance Wells

Well ID	Date	Result	Rank
MW-7	7/20/1995	ND<0	69
	8/24/1995	ND<0	69
	9/28/1995	-0.356675 J	147
	10/26/1995	ND<0	69
	11/19/1996	ND<0	69
	12/19/1996	ND<0	69
	3/24/1997	ND<0	69
	9/24/1997	ND<0	69
	4/7/1998	ND<0	69
	9/23/1998	ND<0	69
	3/16/1999	ND<0	69
	9/23/1999	ND<0	69
	3/15/2000	ND<0	69
	9/24/2003	ND<0	69
	3/11/2004	ND<0	69
	10/12/2004	ND<0	69
	4/1/2005	-0.653926 J	142
	10/25/2005	-1.02165 J	139
	4/29/2006	-0.446287 J	145
	11/18/2006	-1.04982 J	138
	5/23/2007	ND<0	69

	11/28/2007	ND<0	69	
	6/5/2008	-0.755023 J	140	
	11/20/2008	-0.544727 J		144
	6/11/2009	ND<-2.40795		69
	11/16/2009	ND<-2.40795		69
	6/30/2010	ND<-2.40795		69

Rank Sum = 2375
Rank Mean = 87.963

MW-6	7/20/1995	ND<0	69	
	8/24/1995	ND<0	69	
	9/28/1995	ND<0	69	
	10/26/1995	ND<0	69	
	11/19/1996	ND<0	69	
	12/19/1996	ND<0	69	
	3/24/1997	ND<0	69	
	9/24/1997	ND<0	69	
	4/7/1998	ND<0	69	
	9/23/1998	ND<0	69	
	3/16/1999	ND<0	69	
	9/23/1999	ND<0	69	
	3/15/2000	ND<0	69	
	9/24/2003	ND<0	69	
	3/11/2004	ND<0	69	
	10/12/2004	ND<0	69	
	4/1/2005	ND<0	69	
	10/25/2005	ND<0	69	
	4/29/2006	ND<0	69	
	11/18/2006	ND<0	69	
	5/23/2007	ND<0	69	
	11/28/2007	ND<0	69	
	6/5/2008	ND<0	69	
	11/20/2008	ND<0	69	
	6/11/2009	ND<-2.40795		69
	11/16/2009	ND<-2.40795		69
	6/30/2010	ND<-2.40795		69

Rank Sum = 1863
Rank Mean = 69

MW-8	7/20/1995	0.875469		173
	8/24/1995	3.82864		205
	9/28/1995	3.58352		201
	10/26/1995	1.38629		184
	11/19/1996	ND<0	69	
	12/19/1996	3.82864		206
	3/24/1997	3.8712	207	
	9/24/1997	3.21888		199
	4/7/1998	3.66356	204	
	9/23/1998	2.77259		195
	3/16/1999	2.6174	193	
	9/23/1999	2.7213	194	
	3/15/2000	ND<0	69	
	9/24/2003	5.43808		212
	3/11/2004	4.35671		210
	10/12/2004	4.86753		211
	4/1/2005	4.07754	209	
	10/25/2005	3.99268		208
	4/29/2006	3.20275		198
	11/18/2006	3.60005		202
	5/23/2007	2.94444		196
	11/28/2007	3.50255		200
	6/5/2008	3.08191	197	

	11/20/2008	2.31254		191
	6/11/2009	2.48491		192
	6/30/2010	2.30259		190

Rank Sum = 4915
Rank Mean = 189.038

MW-10	7/20/1995	ND<0	69	
	8/24/1995	1.09861		181
	9/28/1995	1.38629		185
	10/26/1995	1.60944		187
	11/19/1996	ND<0	69	
	12/19/1996	ND<0	69	
	3/24/1997	ND<0	69	
	9/24/1997	ND<0	69	
	4/7/1998	ND<0	69	
	9/23/1998	ND<0	69	
	3/16/1999	1.28093		183
	9/23/1999	ND<0	69	
	3/15/2000	ND<0	69	
	9/24/2003	ND<0	69	
	3/11/2004	ND<0	69	
	10/12/2004	ND<0	69	
	4/1/2005	0.647103 J	169	
	10/25/2005	0.908259		175
	4/29/2006	1.02962		179
	11/18/2006	0.530628 J		166
	5/23/2007	ND<0	69	
	11/28/2007	0.951658		176
	6/5/2008	0.500775 J	165	
	11/20/2008	0.457425 J		163
	6/11/2009	0.262364		159
	11/16/2009	0.405465		162
	6/30/2010	ND<-2.40795		69

Rank Sum = 3216
Rank Mean = 119.111

MW-11R	7/20/1995	ND<0	69	
	8/24/1995	0.641854 J		168
	9/28/1995	-0.223144 J		150
	10/26/1995	1.38629		186
	11/19/1996	ND<0	69	
	12/19/1996	ND<0	69	
	3/24/1997	ND<0	69	
	9/24/1997	ND<0	69	
	4/7/1998	ND<0	69	
	9/23/1998	ND<0	69	
	3/16/1999	0.955511		177
	9/23/1999	ND<0	69	
	3/15/2000	ND<0	69	
	9/24/2003	ND<0	69	
	3/11/2004	ND<0	69	
	10/12/2004	ND<0	69	
	4/1/2005	1.27257	182	
	10/25/2005	-0.105361 J		154
	4/29/2006	-0.248461 J		149
	11/18/2006	-0.223144 J		151
	5/23/2007	ND<0	69	
	11/28/2007	-0.733969 J		141
	6/5/2008	ND<0	69	
	11/20/2008	ND<0	69	
	6/11/2009	ND<-2.40795		69
	11/16/2009	ND<-2.40795		69

	6/30/2010	ND<-2.40795	69

Rank Sum = 2700
Rank Mean = 100

MW-12AR	3/16/1999	ND<0	69
	9/23/1999	ND<0	69
	3/15/2000	ND<0	69
	9/24/2003	ND<0	69
	3/11/2004	ND<0	69
	10/12/2004	ND<0	69
	4/1/2005	ND<0	69
	10/25/2005	0.732368	171
	4/29/2006	0.891998	174
	11/18/2006	0.157004 J	157
	5/23/2007	ND<0	69
	11/28/2007	-0.0304592 J	156
	6/5/2008	-0.223144 J	152
	11/20/2008	-0.653926 J	143
	6/11/2009	ND<-2.40795	69
	11/16/2009	ND<-2.40795	69
	6/30/2010	ND<-2.40795	69

Rank Sum = 1712
Rank Mean = 100.706

MW-12BR	3/16/1999	1.97408	189
	9/23/1999	ND<0	69
	3/15/2000	ND<0	69
	9/24/2003	ND<0	69
	3/11/2004	ND<0	69
	10/12/2004	ND<0	69
	4/1/2005	1.68825	188
	10/25/2005	ND<0	69
	4/29/2006	ND<0	69
	11/18/2006	ND<0	69
	5/23/2007	ND<0	69
	11/28/2007	ND<0	69
	6/5/2008	ND<0	69
	11/20/2008	ND<0	69
	6/11/2009	ND<-2.40795	69
	11/16/2009	ND<-2.40795	69
	6/30/2010	ND<-2.40795	69

Rank Sum = 1412
Rank Mean = 83.0588

MW-9	7/20/1995	ND<0	69
	8/24/1995	ND<0	69
	9/28/1995	-0.223144 J	153
	10/26/1995	-0.105361 J	155
	11/19/1996	ND<0	69
	12/19/1996	ND<0	69
	3/24/1997	ND<0	69
	9/24/1997	ND<0	69
	4/7/1998	ND<0	69
	9/23/1998	ND<0	69
	3/16/1999	0.993252	178
	9/23/1999	ND<0	69
	3/15/2000	ND<0	69
	9/24/2003	ND<0	69
	3/11/2004	3.61092	203
	10/12/2004	ND<0	69
	4/1/2005	1.03318	180
	10/25/2005	0.371564 J	161

4/29/2006	-0.371064	J	146
11/18/2006	-0.314711	J	148
5/23/2007	ND<0	69	
11/28/2007	0.536493	J	167
6/5/2008	0.470004	J	164
11/20/2008	0.34359	J	160
6/11/2009	0.693147		170
11/16/2009	0.182322		158
6/30/2010	0.741937		172

Rank Sum = 3212
Rank Mean = 118.963

Calculation Results:

Kruskal-Wallis H Statistic = 71.1722
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 97.4776
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
71.1722 > 15.5073 indicating a significant group difference at 5% significance level
97.4776 > 15.5073 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 69

Well	Mean Rank	Dif from Bkg	Critical Value
MW-7	87.963	18.963	44.1836
MW-6	69	0	44.1836
MW-8	189.038	120.038	44.5106
MW-10	119.111	50.1111	44.1836
MW-11R	100	31	44.1836
MW-12AR	100.706	31.7059	48.9476
MW-12BR	83.0588	14.0588	48.9476
MW-9	118.963	49.963	44.1836

Individual Well Comparisons at Groupwise 5% Significance Level (0.625% Significance Level per comparison)

0.625% Z score is 2.51213
Mean background rank is 69

Well	Mean Rank	Dif from Bkg	Critical Value
MW-7	87.963	18.963	47.7122
MW-6	69	0	47.7122
MW-8	189.038	120.038	48.0654
MW-10	119.111	50.1111	47.7122
MW-11R	100	31	47.7122
MW-12AR	100.706	31.7059	52.8567
MW-12BR	83.0588	14.0588	52.8567
MW-9	118.963	49.963	47.7122

Mann-Kendall Trend Analysis

Parameter: Vinyl chloride

Location: MW-8

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

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
3.82864	0.875469	2.95317	1	0
3.58352	0.875469	2.70805	2	0
1.38629	0.875469	0.510826	3	0
ND<0	0.875469	-0.875469	3	1
3.82864	0.875469	2.95317	4	1
3.8712	0.875469	2.99573	5	1
3.21888	0.875469	2.34341	6	1
3.66356	0.875469	2.78809	7	1
2.77259	0.875469	1.89712	8	1
2.6174	0.875469	1.74193	9	1
2.7213	0.875469	1.84583	10	1
ND<0	0.875469	-0.875469	10	2
5.43808	0.875469	4.56261	11	2
4.35671	0.875469	3.48124	12	2
4.86753	0.875469	3.99207	13	2
4.07754	0.875469	3.20207	14	2
3.99268	0.875469	3.11721	15	2
3.20275	0.875469	2.32728	16	2
3.60005	0.875469	2.72458	17	2
2.94444	0.875469	2.06897	18	2
3.50255	0.875469	2.62708	19	2
3.08191	0.875469	2.20644	20	2
2.31254	0.875469	1.43707	21	2
2.48491	0.875469	1.60944	22	2
2.30259	0.875469	1.42712	23	2
3.58352	3.82864	-0.245122	23	3
1.38629	3.82864	-2.442352	3	4
ND<0	3.82864	-3.828642	3	5
3.82864	3.82864	0	23	5
3.8712	3.82864	0.0425596	24	5
3.21888	3.82864	-0.609766	24	6
3.66356	3.82864	-0.165082	4	7
2.77259	3.82864	-1.056052	4	8
2.6174	3.82864	-1.211252	4	9
2.7213	3.82864	-1.107352	4	10
ND<0	3.82864	-3.828642	4	11
5.43808	3.82864	1.60944	25	11
4.35671	3.82864	0.528067	26	11
4.86753	3.82864	1.03889	27	11
4.07754	3.82864	0.248896	28	11
3.99268	3.82864	0.16404	29	11
3.20275	3.82864	-0.625895	29	12
3.60005	3.82864	-0.228593	29	13
2.94444	3.82864	-0.884202	29	14
3.50255	3.82864	-0.326092	29	15
3.08191	3.82864	-0.746731	29	16
2.31254	3.82864	-1.516112	9	17

2.48491		3.82864		-1.3437329	18	
2.30259		3.82864		-1.5260629	19	
1.38629		3.58352		-2.1972229	20	
ND<0	3.58352		-3.5835229	21		
3.82864		3.58352		0.245122	30	21
3.8712	3.58352		0.287682	31	21	
3.21888		3.58352		-0.364643	31	22
3.66356		3.58352		0.0800427	32	22
2.77259		3.58352		-0.8109332	23	
2.6174	3.58352		-0.966123	32	24	
2.7213	3.58352		-0.862224	32	25	
ND<0	3.58352		-3.5835232	26		
5.43808		3.58352		1.85456 33	26	
4.35671		3.58352		0.77319 34	26	
4.86753		3.58352		1.28402 35	26	
4.07754		3.58352		0.494019	36	26
3.99268		3.58352		0.409162	37	26
3.20275		3.58352		-0.380772	37	27
3.60005		3.58352		0.0165293	38	27
2.94444		3.58352		-0.6390838	28	
3.50255		3.58352		-0.0809691	38	29
3.08191		3.58352		-0.501609	38	30
2.31254		3.58352		-1.2709838	31	
2.48491		3.58352		-1.0986138	32	
2.30259		3.58352		-1.2809338	33	
ND<0	1.38629		-1.3862938	34		
3.82864		1.38629		2.44235 39	34	
3.8712	1.38629		2.48491 40	34		
3.21888		1.38629		1.83258 41	34	
3.66356		1.38629		2.27727 42	34	
2.77259		1.38629		1.38629 43	34	
2.6174	1.38629		1.2311 44	34		
2.7213	1.38629		1.335 45	34		
ND<0	1.38629		-1.3862945	35		
5.43808		1.38629		4.05178 46	35	
4.35671		1.38629		2.97041 47	35	
4.86753		1.38629		3.48124 48	35	
4.07754		1.38629		2.69124 49	35	
3.99268		1.38629		2.60639 50	35	
3.20275		1.38629		1.81645 51	35	
3.60005		1.38629		2.21375 52	35	
2.94444		1.38629		1.55814 53	35	
3.50255		1.38629		2.11626 54	35	
3.08191		1.38629		1.69562 55	35	
2.31254		1.38629		0.926241	56	35
2.48491		1.38629		1.09861 57	35	
2.30259		1.38629		0.916291	58	35
3.82864		ND<0	3.82864 59	35		
3.8712	ND<0	3.8712	60	35		
3.21888		ND<0	3.21888 61	35		
3.66356		ND<0	3.66356 62	35		
2.77259		ND<0	2.77259 63	35		
2.6174	ND<0	2.6174	64	35		
2.7213	ND<0	2.7213	65	35		
ND<0	ND<0	0	65	35		
5.43808		ND<0	5.43808 66	35		
4.35671		ND<0	4.35671 67	35		
4.86753		ND<0	4.86753 68	35		
4.07754		ND<0	4.07754 69	35		

3.99268		ND<0	3.99268	70	35	
3.20275		ND<0	3.20275	71	35	
3.60005		ND<0	3.60005	72	35	
2.94444		ND<0	2.94444	73	35	
3.50255		ND<0	3.50255	74	35	
3.08191		ND<0	3.08191	75	35	
2.31254		ND<0	2.31254	76	35	
2.48491		ND<0	2.48491	77	35	
2.30259		ND<0	2.30259	78	35	
3.8712	3.82864		0.0425596	79	35	
3.21888		3.82864	-0.609766	79	36	
3.66356		3.82864	-0.1650879	37		
2.77259		3.82864	-1.0560579	38		
2.6174	3.82864		-1.2112579	39		
2.7213	3.82864		-1.1073579	40		
ND<0	3.82864		-3.8286479	41		
5.43808		3.82864	1.60944	80	41	
4.35671		3.82864	0.528067	81	41	
4.86753		3.82864	1.03889	82	41	
4.07754		3.82864	0.248896	83	41	
3.99268		3.82864	0.16404	84	41	
3.20275		3.82864	-0.625895	84	42	
3.60005		3.82864	-0.228593	84	43	
2.94444		3.82864	-0.884202	84	44	
3.50255		3.82864	-0.326092	84	45	
3.08191		3.82864	-0.746731	84	46	
2.31254		3.82864	-1.5161184	47		
2.48491		3.82864	-1.3437384	48		
2.30259		3.82864	-1.5260684	49		
3.21888		3.8712	-0.652325	84	50	
3.66356		3.8712	-0.207639	84	51	
2.77259		3.8712	-1.0986184	52		
2.6174	3.8712	-1.2538184	53			
2.7213	3.8712	-1.1499184	54			
ND<0	3.8712	-3.8712 84	55			
5.43808		3.8712	1.56688	85	55	
4.35671		3.8712	0.485508	86	55	
4.86753		3.8712	0.996333	87	55	
4.07754		3.8712	0.206336	88	55	
3.99268		3.8712	0.12148	89	55	
3.20275		3.8712	-0.668455	89	56	
3.60005		3.8712	-0.271153	89	57	
2.94444		3.8712	-0.926762	89	58	
3.50255		3.8712	-0.368651	89	59	
3.08191		3.8712	-0.789291	89	60	
2.31254		3.8712	-1.5586789	61		
2.48491		3.8712	-1.3862989	62		
2.30259		3.8712	-1.5686289	63		
3.66356		3.21888	0.444686	90	63	
2.77259		3.21888	-0.446287	90	64	
2.6174	3.21888		-0.6014890	65		
2.7213	3.21888		-0.4975890	66		
ND<0	3.21888		-3.2188890	67		
5.43808		3.21888	2.2192	91	67	
4.35671		3.21888	1.13783	92	67	
4.86753		3.21888	1.64866	93	67	
4.07754		3.21888	0.858662	94	67	
3.99268		3.21888	0.773805	95	67	
3.20275		3.21888	-0.0161294	95	68	

3.60005	3.21888	0.381172	96	68
2.94444	3.21888	-0.274437	96	69
3.50255	3.21888	0.283674	97	69
3.08191	3.21888	-0.136966	97	70
2.31254	3.21888	-0.9063497	71	
2.48491	3.21888	-0.733969	97	72
2.30259	3.21888	-0.916291	97	73
2.77259	3.66356	-0.890973	97	74
2.6174	3.66356	-1.0461797	75	
2.7213	3.66356	-0.942266	97	76
ND<0	3.66356	-3.6635697	77	
5.43808	3.66356	1.77452	98	77
4.35671	3.66356	0.693147	99	77
4.86753	3.66356	1.20397	100	77
4.07754	3.66356	0.413976	101	77
3.99268	3.66356	0.329119	102	77
3.20275	3.66356	-0.460815	102	78
3.60005	3.66356	-0.0635134	102	79
2.94444	3.66356	-0.719123	102	80
3.50255	3.66356	-0.161012	102	81
3.08191	3.66356	-0.581652	102	82
2.31254	3.66356	-1.35103	102	83
2.48491	3.66356	-1.17865	102	84
2.30259	3.66356	-1.36098	102	85
2.6174	2.77259	-0.155193	102	86
2.7213	2.77259	-0.0512933	102	87
ND<0	2.77259	-2.77259	102	88
5.43808	2.77259	2.66549	103	88
4.35671	2.77259	1.58412	104	88
4.86753	2.77259	2.09495	105	88
4.07754	2.77259	1.30495	106	88
3.99268	2.77259	1.22009	107	88
3.20275	2.77259	0.430158	108	88
3.60005	2.77259	0.82746	109	88
2.94444	2.77259	0.17185	110	88
3.50255	2.77259	0.729961	111	88
3.08191	2.77259	0.309321	112	88
2.31254	2.77259	-0.460053	112	89
2.48491	2.77259	-0.287682	112	90
2.30259	2.77259	-0.470004	112	91
2.7213	2.6174	0.1039	113	91
ND<0	2.6174	-2.6174	113	92
5.43808	2.6174	2.82068	114	92
4.35671	2.6174	1.73931	115	92
4.86753	2.6174	2.25014	116	92
4.07754	2.6174	1.46014	117	92
3.99268	2.6174	1.37529	118	92
3.20275	2.6174	0.585351	119	92
3.60005	2.6174	0.982652	120	92
2.94444	2.6174	0.327043	121	92
3.50255	2.6174	0.885154	122	92
3.08191	2.6174	0.464514	123	92
2.31254	2.6174	-0.30486	123	93
2.48491	2.6174	-0.132489	123	94
2.30259	2.6174	-0.314811	123	95
ND<0	2.7213	-2.7213	123	96
5.43808	2.7213	2.71678	124	96
4.35671	2.7213	1.63541	125	96

4.86753	2.7213	2.14624	126	96
4.07754	2.7213	1.35624	127	96
3.99268	2.7213	1.27139	128	96
3.20275	2.7213	0.481451	129	96
3.60005	2.7213	0.878753	130	96
2.94444	2.7213	0.223144	131	96
3.50255	2.7213	0.781254	132	96
3.08191	2.7213	0.360615	133	96
2.31254	2.7213	-0.40876	133	97
2.48491	2.7213	-0.236389	133	98
2.30259	2.7213	-0.41871	133	99

5.43808	ND<0	5.43808	134	99
4.35671	ND<0	4.35671	135	99
4.86753	ND<0	4.86753	136	99
4.07754	ND<0	4.07754	137	99
3.99268	ND<0	3.99268	138	99
3.20275	ND<0	3.20275	139	99
3.60005	ND<0	3.60005	140	99
2.94444	ND<0	2.94444	141	99
3.50255	ND<0	3.50255	142	99
3.08191	ND<0	3.08191	143	99
2.31254	ND<0	2.31254	144	99
2.48491	ND<0	2.48491	145	99
2.30259	ND<0	2.30259	146	99

4.35671	5.43808	-1.08137	146	100
4.86753	5.43808	-0.570545	146	101
4.07754	5.43808	-1.36054	146	102
3.99268	5.43808	-1.4454	146	103
3.20275	5.43808	-2.23533	146	104
3.60005	5.43808	-1.83803	146	105
2.94444	5.43808	-2.49364	146	106
3.50255	5.43808	-1.93553	146	107
3.08191	5.43808	-2.35617	146	108
2.31254	5.43808	-3.12554	146	109
2.48491	5.43808	-2.95317	146	110
2.30259	5.43808	-3.13549	146	111

4.86753	4.35671	0.510826	147	111
4.07754	4.35671	-0.279171	147	112
3.99268	4.35671	-0.364028	147	113
3.20275	4.35671	-1.15396	147	114
3.60005	4.35671	-0.756661	147	115
2.94444	4.35671	-1.41227	147	116
3.50255	4.35671	-0.854159	147	117
3.08191	4.35671	-1.2748	147	118
2.31254	4.35671	-2.04417	147	119
2.48491	4.35671	-1.8718	147	120
2.30259	4.35671	-2.05412	147	121

4.07754	4.86753	-0.789997	147	122
3.99268	4.86753	-0.874854	147	123
3.20275	4.86753	-1.66479	147	124
3.60005	4.86753	-1.26749	147	125
2.94444	4.86753	-1.9231	147	126
3.50255	4.86753	-1.36498	147	127
3.08191	4.86753	-1.78562	147	128
2.31254	4.86753	-2.555	147	129
2.48491	4.86753	-2.38263	147	130
2.30259	4.86753	-2.56495	147	131

3.99268	4.07754	-0.0848565	147	132
3.20275	4.07754	-0.874791	147	133
3.60005	4.07754	-0.477489	147	134
2.94444	4.07754	-1.1331 147	135	
3.50255	4.07754	-0.574988	147	136
3.08191	4.07754	-0.995627	147	137
2.31254	4.07754	-1.765 147	138	
2.48491	4.07754	-1.59263147	139	
2.30259	4.07754	-1.77495147	140	
3.20275	3.99268	-0.789934	147	141
3.60005	3.99268	-0.392633	147	142
2.94444	3.99268	-1.04824147	143	
3.50255	3.99268	-0.490131	147	144
3.08191	3.99268	-0.910771	147	145
2.31254	3.99268	-1.68015147	146	
2.48491	3.99268	-1.50777147	147	
2.30259	3.99268	-1.6901 147	148	
3.60005	3.20275	0.397302	148	148
2.94444	3.20275	-0.258307	148	149
3.50255	3.20275	0.299803	149	149
3.08191	3.20275	-0.120836	149	150
2.31254	3.20275	-0.890211	149	151
2.48491	3.20275	-0.71784149	152	
2.30259	3.20275	-0.900161	149	153
2.94444	3.60005	-0.655609	149	154
3.50255	3.60005	-0.0974984	149	155
3.08191	3.60005	-0.518138	149	156
2.31254	3.60005	-1.28751149	157	
2.48491	3.60005	-1.11514149	158	
2.30259	3.60005	-1.29746149	159	
3.50255	2.94444	0.558111	150	159
3.08191	2.94444	0.137471	151	159
2.31254	2.94444	-0.631904	151	160
2.48491	2.94444	-0.459532	151	161
2.30259	2.94444	-0.641854	151	162
3.08191	3.50255	-0.42064151	163	
2.31254	3.50255	-1.19001151	164	
2.48491	3.50255	-1.01764151	165	
2.30259	3.50255	-1.19996151	166	
2.31254	3.08191	-0.769375	151	167
2.48491	3.08191	-0.597003	151	168
2.30259	3.08191	-0.779325	151	169
2.48491	2.31254	0.172371	152	169
2.30259	2.31254	-0.00995033	152	170
2.30259	2.48491	-0.182322	152	171

S Statistic = 152 - 171 = -19

Tied Group Value Members

1	3.82864	2
2	0	2

Time Period	Observations
7/20/1995	1
8/24/1995	1
9/28/1995	1
10/26/1995	1
11/19/1996	1
12/19/1996	1
3/24/1997	1
9/24/1997	1
4/7/1998	1
9/23/1998	1
3/16/1999	1
9/23/1999	1
3/15/2000	1
9/24/2003	1
3/11/2004	1
10/12/2004	1
4/1/2005	1
10/25/2005	1
4/29/2006	1
11/18/2006	1
5/23/2007	1
11/28/2007	1
6/5/2008	1
11/20/2008	1
6/11/2009	1
6/30/2010	1

There are 0 time periods with multiple data

A = 36
B = 0
C = 0
D = 0
E = 4
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 2056.33
Z-Score = -0.396941
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.396941| <= 1.97737 indicating no evidence of a trend

Mann-Kendall Trend Analysis

Parameter: Vinyl chloride

Location: MW-10

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

95% Confidence Level

Xj	Xk	Xj - Xk		Positives	Negatives
1.09861		ND<0	1.09861	1	0
1.38629		ND<0	1.38629	2	0
1.60944		ND<0	1.60944	3	0
ND<0	ND<0	0	3	0	
ND<0	ND<0	0	3	0	
ND<0	ND<0	0	3	0	
ND<0	ND<0	0	3	0	
ND<0	ND<0	0	3	0	
ND<0	ND<0	0	3	0	
1.28093		ND<0	1.28093	4	0
ND<0	ND<0	0	4	0	
ND<0	ND<0	0	4	0	
ND<0	ND<0	0	4	0	
ND<0	ND<0	0	4	0	
ND<0	ND<0	0	4	0	
0.647103 J		ND<0	0.647103	5	0
0.908259		ND<0	0.908259	6	0
1.02962		ND<0	1.02962	7	0
0.530628 J		ND<0	0.530628	8	0
ND<0	ND<0	0	8	0	
0.951658		ND<0	0.951658	9	0
0.500775 J		ND<0	0.500775	10	0
0.457425 J		ND<0	0.457425	11	0
0.262364		ND<0	0.262364	12	0
0.405465		ND<0	0.405465	13	0
ND<-2.40795		ND<0	-2.407951	13	1

1.38629		1.09861	0.287682	14	1
1.60944		1.09861	0.510826	15	1
ND<0	1.09861	-1.098611	5	2	
ND<0	1.09861	-1.098611	5	3	
ND<0	1.09861	-1.098611	5	4	
ND<0	1.09861	-1.098611	5	5	
ND<0	1.09861	-1.098611	5	6	
ND<0	1.09861	-1.098611	5	7	
1.28093		1.09861	0.182322	16	7
ND<0	1.09861	-1.098611	6	8	
ND<0	1.09861	-1.098611	6	9	
ND<0	1.09861	-1.098611	6	10	
ND<0	1.09861	-1.098611	6	11	
ND<0	1.09861	-1.098611	6	12	
0.647103 J		1.09861	-0.451509	16	13
0.908259		1.09861	-0.190354	16	14
1.02962		1.09861	-0.0689929	16	15
0.530628 J		1.09861	-0.567984	16	16
ND<0	1.09861	-1.098611	6	17	
0.951658		1.09861	-0.146954	16	18
0.500775 J		1.09861	-0.597837	16	19

0.457425 J	1.09861	-0.641187	16	20
0.262364	1.09861	-0.836248	16	21
0.405465	1.09861	-0.693147	16	22
ND<-2.40795	1.09861	-3.5065616	23	

1.60944	1.38629	0.223144	17	23
ND<0	1.38629	-1.3862917	24	
ND<0	1.38629	-1.3862917	25	
ND<0	1.38629	-1.3862917	26	
ND<0	1.38629	-1.3862917	27	
ND<0	1.38629	-1.3862917	28	
ND<0	1.38629	-1.3862917	29	
1.28093	1.38629	-0.105361	17	30
ND<0	1.38629	-1.3862917	31	
ND<0	1.38629	-1.3862917	32	
ND<0	1.38629	-1.3862917	33	
ND<0	1.38629	-1.3862917	34	
ND<0	1.38629	-1.3862917	35	
0.647103 J	1.38629	-0.739191	17	36
0.908259	1.38629	-0.478036	17	37
1.02962	1.38629	-0.356675	17	38
0.530628 J	1.38629	-0.855666	17	39
ND<0	1.38629	-1.3862917	40	
0.951658	1.38629	-0.434636	17	41
0.500775 J	1.38629	-0.885519	17	42
0.457425 J	1.38629	-0.9288717	43	
0.262364	1.38629	-1.1239317	44	
0.405465	1.38629	-0.980829	17	45
ND<-2.40795	1.38629	-3.7942417	46	

ND<0	1.60944	-1.6094417	47
ND<0	1.60944	-1.6094417	48
ND<0	1.60944	-1.6094417	49
ND<0	1.60944	-1.6094417	50
ND<0	1.60944	-1.6094417	51
ND<0	1.60944	-1.6094417	52
1.28093	1.60944	-0.328504	17 53
ND<0	1.60944	-1.6094417	54
ND<0	1.60944	-1.6094417	55
ND<0	1.60944	-1.6094417	56
ND<0	1.60944	-1.6094417	57
ND<0	1.60944	-1.6094417	58
0.647103 J	1.60944	-0.962335	17 59
0.908259	1.60944	-0.701179	17 60
1.02962	1.60944	-0.579818	17 61
0.530628 J	1.60944	-1.0788117	62
ND<0	1.60944	-1.6094417	63
0.951658	1.60944	-0.6577817	64
0.500775 J	1.60944	-1.1086617	65
0.457425 J	1.60944	-1.1520117	66
0.262364	1.60944	-1.3470717	67
0.405465	1.60944	-1.2039717	68
ND<-2.40795	1.60944	-4.0173817	69

ND<0	ND<0	0	17	69	
ND<0	ND<0	0	17	69	
ND<0	ND<0	0	17	69	
ND<0	ND<0	0	17	69	
ND<0	ND<0	0	17	69	
1.28093		ND<0	1.28093	18	69
ND<0	ND<0	0	18	69	
ND<0	ND<0	0	18	69	

ND<0	ND<0	0	18	69		
ND<0	ND<0	0	18	69		
ND<0	ND<0	0	18	69		
0.647103 J		ND<0	0.647103		19	69
0.908259		ND<0	0.908259		20	69
1.02962		ND<0	1.02962	21	69	
0.530628 J		ND<0	0.530628		22	69
ND<0	ND<0	0	22	69		
0.951658		ND<0	0.951658		23	69
0.500775 J		ND<0	0.500775		24	69
0.457425 J		ND<0	0.457425		25	69
0.262364		ND<0	0.262364		26	69
0.405465		ND<0	0.405465		27	69
ND<-2.40795		ND<0	-2.4079	27	70	
ND<0	ND<0	0	27	70		
ND<0	ND<0	0	27	70		
ND<0	ND<0	0	27	70		
ND<0	ND<0	0	27	70		
1.28093		ND<0	1.28093	28	70	
ND<0	ND<0	0	28	70		
ND<0	ND<0	0	28	70		
ND<0	ND<0	0	28	70		
ND<0	ND<0	0	28	70		
ND<0	ND<0	0	28	70		
0.647103 J		ND<0	0.647103		29	70
0.908259		ND<0	0.908259		30	70
1.02962		ND<0	1.02962	31	70	
0.530628 J		ND<0	0.530628		32	70
ND<0	ND<0	0	32	70		
0.951658		ND<0	0.951658		33	70
0.500775 J		ND<0	0.500775		34	70
0.457425 J		ND<0	0.457425		35	70
0.262364		ND<0	0.262364		36	70
0.405465		ND<0	0.405465		37	70
ND<-2.40795		ND<0	-2.4079	37	71	
ND<0	ND<0	0	37	71		
ND<0	ND<0	0	37	71		
ND<0	ND<0	0	37	71		
1.28093		ND<0	1.28093	38	71	
ND<0	ND<0	0	38	71		
ND<0	ND<0	0	38	71		
ND<0	ND<0	0	38	71		
ND<0	ND<0	0	38	71		
ND<0	ND<0	0	38	71		
0.647103 J		ND<0	0.647103		39	71
0.908259		ND<0	0.908259		40	71
1.02962		ND<0	1.02962	41	71	
0.530628 J		ND<0	0.530628		42	71
ND<0	ND<0	0	42	71		
0.951658		ND<0	0.951658		43	71
0.500775 J		ND<0	0.500775		44	71
0.457425 J		ND<0	0.457425		45	71
0.262364		ND<0	0.262364		46	71
0.405465		ND<0	0.405465		47	71
ND<-2.40795		ND<0	-2.4079	47	72	
ND<0	ND<0	0	47	72		
ND<0	ND<0	0	47	72		
1.28093		ND<0	1.28093	48	72	
ND<0	ND<0	0	48	72		

ND<0	ND<0	0	48	72		
ND<0	ND<0	0	48	72		
ND<0	ND<0	0	48	72		
ND<0	ND<0	0	48	72		
0.647103 J		ND<0	0.647103		49	72
0.908259		ND<0	0.908259		50	72
1.02962		ND<0	1.02962	51	72	
0.530628 J		ND<0	0.530628		52	72
ND<0	ND<0	0	52	72		
0.951658		ND<0	0.951658		53	72
0.500775 J		ND<0	0.500775		54	72
0.457425 J		ND<0	0.457425		55	72
0.262364		ND<0	0.262364		56	72
0.405465		ND<0	0.405465		57	72
ND<-2.40795		ND<0	-2.4079	557	73	
ND<0	ND<0	0	57	73		
1.28093		ND<0	1.28093	58	73	
ND<0	ND<0	0	58	73		
ND<0	ND<0	0	58	73		
ND<0	ND<0	0	58	73		
ND<0	ND<0	0	58	73		
ND<0	ND<0	0	58	73		
0.647103 J		ND<0	0.647103		59	73
0.908259		ND<0	0.908259		60	73
1.02962		ND<0	1.02962	61	73	
0.530628 J		ND<0	0.530628		62	73
ND<0	ND<0	0	62	73		
0.951658		ND<0	0.951658		63	73
0.500775 J		ND<0	0.500775		64	73
0.457425 J		ND<0	0.457425		65	73
0.262364		ND<0	0.262364		66	73
0.405465		ND<0	0.405465		67	73
ND<-2.40795		ND<0	-2.4079	567	74	
1.28093		ND<0	1.28093	68	74	
ND<0	ND<0	0	68	74		
ND<0	ND<0	0	68	74		
ND<0	ND<0	0	68	74		
ND<0	ND<0	0	68	74		
ND<0	ND<0	0	68	74		
0.647103 J		ND<0	0.647103		69	74
0.908259		ND<0	0.908259		70	74
1.02962		ND<0	1.02962	71	74	
0.530628 J		ND<0	0.530628		72	74
ND<0	ND<0	0	72	74		
0.951658		ND<0	0.951658		73	74
0.500775 J		ND<0	0.500775		74	74
0.457425 J		ND<0	0.457425		75	74
0.262364		ND<0	0.262364		76	74
0.405465		ND<0	0.405465		77	74
ND<-2.40795		ND<0	-2.4079	577	75	
ND<0	1.28093		-1.2809	377	76	
ND<0	1.28093		-1.2809	377	77	
ND<0	1.28093		-1.2809	377	78	
ND<0	1.28093		-1.2809	377	79	
ND<0	1.28093		-1.2809	377	80	
0.647103 J		1.28093		-0.633831	77	81
0.908259		1.28093		-0.372675	77	82
1.02962		1.28093		-0.251314	77	83
0.530628 J		1.28093		-0.750306	77	84

ND<0	1.28093	-1.2809377	85		
0.951658	1.28093	-0.329276	77	86	
0.500775 J	1.28093	-0.780159	77	87	
0.457425 J	1.28093	-0.823509	77	88	
0.262364	1.28093	-1.0185777	89		
0.405465	1.28093	-0.875469	77	90	
ND<-2.40795	1.28093	-3.6888877	91		

ND<0	ND<0	0	77	91	
ND<0	ND<0	0	77	91	
ND<0	ND<0	0	77	91	
ND<0	ND<0	0	77	91	
0.647103 J	ND<0	0.647103	78	91	
0.908259	ND<0	0.908259	79	91	
1.02962	ND<0	1.02962 80	91		
0.530628 J	ND<0	0.530628	81	91	
ND<0	ND<0	0	81	91	
0.951658	ND<0	0.951658	82	91	
0.500775 J	ND<0	0.500775	83	91	
0.457425 J	ND<0	0.457425	84	91	
0.262364	ND<0	0.262364	85	91	
0.405465	ND<0	0.405465	86	91	
ND<-2.40795	ND<0	-2.4079586	92		

ND<0	ND<0	0	86	92	
ND<0	ND<0	0	86	92	
ND<0	ND<0	0	86	92	
0.647103 J	ND<0	0.647103	87	92	
0.908259	ND<0	0.908259	88	92	
1.02962	ND<0	1.02962 89	92		
0.530628 J	ND<0	0.530628	90	92	
ND<0	ND<0	0	90	92	
0.951658	ND<0	0.951658	91	92	
0.500775 J	ND<0	0.500775	92	92	
0.457425 J	ND<0	0.457425	93	92	
0.262364	ND<0	0.262364	94	92	
0.405465	ND<0	0.405465	95	92	
ND<-2.40795	ND<0	-2.4079595	93		

ND<0	ND<0	0	95	93	
ND<0	ND<0	0	95	93	
0.647103 J	ND<0	0.647103	96	93	
0.908259	ND<0	0.908259	97	93	
1.02962	ND<0	1.02962 98	93		
0.530628 J	ND<0	0.530628	99	93	
ND<0	ND<0	0	99	93	
0.951658	ND<0	0.951658	100	93	
0.500775 J	ND<0	0.500775	101	93	
0.457425 J	ND<0	0.457425	102	93	
0.262364	ND<0	0.262364	103	93	
0.405465	ND<0	0.405465	104	93	
ND<-2.40795	ND<0	-2.40795104	94		

ND<0	ND<0	0	104	94	
0.647103 J	ND<0	0.647103	105	94	
0.908259	ND<0	0.908259	106	94	
1.02962	ND<0	1.02962 107	94		
0.530628 J	ND<0	0.530628	108	94	
ND<0	ND<0	0	108	94	
0.951658	ND<0	0.951658	109	94	
0.500775 J	ND<0	0.500775	110	94	
0.457425 J	ND<0	0.457425	111	94	

0.262364	ND<0	0.262364	112	94
0.405465	ND<0	0.405465	113	94
ND<-2.40795	ND<0	-2.40795	113	95
0.647103 J	ND<0	0.647103	114	95
0.908259	ND<0	0.908259	115	95
1.02962	ND<0	1.02962	116	95
0.530628 J	ND<0	0.530628	117	95
ND<0	ND<0	0	117	95
0.951658	ND<0	0.951658	118	95
0.500775 J	ND<0	0.500775	119	95
0.457425 J	ND<0	0.457425	120	95
0.262364	ND<0	0.262364	121	95
0.405465	ND<0	0.405465	122	95
ND<-2.40795	ND<0	-2.40795	122	96
0.908259	0.647103 J	0.261155	123	96
1.02962	0.647103 J	0.382516	124	96
0.530628 J	0.647103 J	-0.116475	124	97
ND<0	0.647103 J	-0.647103	124	98
0.951658	0.647103 J	0.304555	125	98
0.500775 J	0.647103 J	-0.146328	125	99
0.457425 J	0.647103 J	-0.189678	125	100
0.262364	0.647103 J	-0.384739	125	101
0.405465	0.647103 J	-0.241638	125	102
ND<-2.40795	0.647103 J	-3.05505	125	103
1.02962	0.908259	0.121361	126	103
0.530628 J	0.908259	-0.37763	126	104
ND<0	0.908259	-0.908259	126	105
0.951658	0.908259	0.0433993	127	105
0.500775 J	0.908259	-0.407483	127	106
0.457425 J	0.908259	-0.450834	127	107
0.262364	0.908259	-0.645894	127	108
0.405465	0.908259	-0.502793	127	109
ND<-2.40795	0.908259	-3.3162	127	110
0.530628 J	1.02962	-0.498991	127	111
ND<0	1.02962	-1.02962	127	112
0.951658	1.02962	-0.0779615	127	113
0.500775 J	1.02962	-0.528844	127	114
0.457425 J	1.02962	-0.572195	127	115
0.262364	1.02962	-0.767255	127	116
0.405465	1.02962	-0.624154	127	117
ND<-2.40795	1.02962	-3.43757	127	118
ND<0	0.530628 J	-0.530628	127	119
0.951658	0.530628 J	0.42103	128	119
0.500775 J	0.530628 J	-0.029853	128	120
0.457425 J	0.530628 J	-0.0732034	128	121
0.262364	0.530628 J	-0.268264	128	122
0.405465	0.530628 J	-0.125163	128	123
ND<-2.40795	0.530628 J	-2.93857	128	124
0.951658	ND<0	0.951658	129	124
0.500775 J	ND<0	0.500775	130	124
0.457425 J	ND<0	0.457425	131	124
0.262364	ND<0	0.262364	132	124
0.405465	ND<0	0.405465	133	124
ND<-2.40795	ND<0	-2.40795	133	125

0.500775 J	0.951658	-0.450883	133	126
0.457425 J	0.951658	-0.494233	133	127
0.262364	0.951658	-0.689294	133	128
0.405465	0.951658	-0.546193	133	129
ND<-2.40795	0.951658	-3.3596 133	130	
0.457425 J	0.500775 J	-0.0433504	133	131
0.262364	0.500775 J	-0.238411	133	132
0.405465	0.500775 J	-0.0953102	133	133
ND<-2.40795	0.500775 J	-2.90872133	134	
0.262364	0.457425 J	-0.195061	133	135
0.405465	0.457425 J	-0.0519597	133	136
ND<-2.40795	0.457425 J	-2.86537133	137	
0.405465	0.262364	0.143101	134	137
ND<-2.40795	0.262364	-2.67031134	138	
ND<-2.40795	0.405465	-2.81341134	139	

S Statistic = 134 - 139 = -5

Tied Group	Value	Members
1	0	13

Time Period		Observations
7/20/1995		1
8/24/1995		1
9/28/1995		1
10/26/1995		1
11/19/1996		1
12/19/1996		1
3/24/1997		1
9/24/1997		1
4/7/1998	1	
9/23/1998		1
3/16/1999		1
9/23/1999		1
3/15/2000		1
9/24/2003		1
3/11/2004		1
10/12/2004		1
4/1/2005	1	
10/25/2005		1
4/29/2006		1
11/18/2006		1
5/23/2007		1
11/28/2007		1
6/5/2008	1	
11/20/2008		1
6/11/2009		1
11/16/2009		1
6/30/2010		1

There are 0 time periods with multiple data

A = 4836
B = 0
C = 1716
D = 0

E = 156
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 2032.33
Z-Score = -0.0887284
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.0887284| <= 1.97737 indicating no evidence of a trend

Mann-Kendall Trend Analysis

Parameter: Vinyl chloride

Location: MW-9

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
-0.223144 J	ND<0	-0.223144	0	1
-0.105361 J	ND<0	-0.105361	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
ND<0	ND<0	0	0	2
0.993252	ND<0	0.993252	1	2
ND<0	ND<0	0	1	2
ND<0	ND<0	0	1	2
ND<0	ND<0	0	1	2
3.61092	ND<0	3.61092	2	2
ND<0	ND<0	0	2	2
1.03318	ND<0	1.03318	3	2
0.371564 J	ND<0	0.371564	4	2
-0.371064 J	ND<0	-0.371064	4	3
-0.314711 J	ND<0	-0.314711	4	4
ND<0	ND<0	0	4	4
0.536493 J	ND<0	0.536493	5	4
0.470004 J	ND<0	0.470004	6	4
0.34359 J	ND<0	0.34359	7	4
0.693147	ND<0	0.693147	8	4
0.182322	ND<0	0.182322	9	4
0.741937	ND<0	0.741937	10	4
-0.223144 J	ND<0	-0.223144	10	5
-0.105361 J	ND<0	-0.105361	10	6
ND<0	ND<0	0	10	6
ND<0	ND<0	0	10	6
ND<0	ND<0	0	10	6
ND<0	ND<0	0	10	6
ND<0	ND<0	0	10	6
ND<0	ND<0	0	10	6
0.993252	ND<0	0.993252	11	6
ND<0	ND<0	0	11	6
ND<0	ND<0	0	11	6
ND<0	ND<0	0	11	6
3.61092	ND<0	3.61092	12	6
ND<0	ND<0	0	12	6
1.03318	ND<0	1.03318	13	6
0.371564 J	ND<0	0.371564	14	6
-0.371064 J	ND<0	-0.371064	14	7
-0.314711 J	ND<0	-0.314711	14	8
ND<0	ND<0	0	14	8
0.536493 J	ND<0	0.536493	15	8
0.470004 J	ND<0	0.470004	16	8

0.34359 J	ND<0	0.34359	17	8	
0.693147	ND<0	0.693147	18	8	
0.182322	ND<0	0.182322	19	8	
0.741937	ND<0	0.741937	20	8	
-0.105361 J	-0.223144 J	0.117783	21	8	
ND<0	-0.223144 J	0.223144	22	8	
ND<0	-0.223144 J	0.223144	23	8	
ND<0	-0.223144 J	0.223144	24	8	
ND<0	-0.223144 J	0.223144	25	8	
ND<0	-0.223144 J	0.223144	26	8	
ND<0	-0.223144 J	0.223144	27	8	
0.993252	-0.223144 J	1.2164	28	8	
ND<0	-0.223144 J	0.223144	29	8	
ND<0	-0.223144 J	0.223144	30	8	
ND<0	-0.223144 J	0.223144	31	8	
3.61092	-0.223144 J	3.83406	32	8	
ND<0	-0.223144 J	0.223144	33	8	
1.03318	-0.223144 J	1.25633	34	8	
0.371564 J	-0.223144 J	0.594707	35	8	
-0.371064 J	-0.223144 J	-0.1479235	9		
-0.314711 J	-0.223144 J	-0.0915672	35	10	
ND<0	-0.223144 J	0.223144	36	10	
0.536493 J	-0.223144 J	0.759637	37	10	
0.470004 J	-0.223144 J	0.693147	38	10	
0.34359 J	-0.223144 J	0.566733	39	10	
0.693147	-0.223144 J	0.916291	40	10	
0.182322	-0.223144 J	0.405465	41	10	
0.741937	-0.223144 J	0.965081	42	10	
ND<0	-0.105361 J	0.105361	43	10	
ND<0	-0.105361 J	0.105361	44	10	
ND<0	-0.105361 J	0.105361	45	10	
ND<0	-0.105361 J	0.105361	46	10	
ND<0	-0.105361 J	0.105361	47	10	
ND<0	-0.105361 J	0.105361	48	10	
0.993252	-0.105361 J	1.09861	49	10	
ND<0	-0.105361 J	0.105361	50	10	
ND<0	-0.105361 J	0.105361	51	10	
ND<0	-0.105361 J	0.105361	52	10	
3.61092	-0.105361 J	3.71628	53	10	
ND<0	-0.105361 J	0.105361	54	10	
1.03318	-0.105361 J	1.13854	55	10	
0.371564 J	-0.105361 J	0.476924	56	10	
-0.371064 J	-0.105361 J	-0.265703	56	11	
-0.314711 J	-0.105361 J	-0.2093556	12		
ND<0	-0.105361 J	0.105361	57	12	
0.536493 J	-0.105361 J	0.641854	58	12	
0.470004 J	-0.105361 J	0.575364	59	12	
0.34359 J	-0.105361 J	0.44895	60	12	
0.693147	-0.105361 J	0.798508	61	12	
0.182322	-0.105361 J	0.287682	62	12	
0.741937	-0.105361 J	0.847298	63	12	
ND<0	ND<0	0	63	12	
ND<0	ND<0	0	63	12	
ND<0	ND<0	0	63	12	
ND<0	ND<0	0	63	12	
ND<0	ND<0	0	63	12	
0.993252	ND<0	0.993252	64	12	
ND<0	ND<0	0	64	12	
ND<0	ND<0	0	64	12	

ND<0	ND<0	0	64	12		
3.61092		ND<0	3.61092	65	12	
ND<0	ND<0	0	65	12		
1.03318		ND<0	1.03318	66	12	
0.371564 J		ND<0	0.371564		67	12
-0.371064 J		ND<0	-0.371064		67	13
-0.314711 J		ND<0	-0.314711		67	14
ND<0	ND<0	0	67	14		
0.536493 J		ND<0	0.536493		68	14
0.470004 J		ND<0	0.470004		69	14
0.34359 J		ND<0	0.34359	70	14	
0.693147		ND<0	0.693147		71	14
0.182322		ND<0	0.182322		72	14
0.741937		ND<0	0.741937		73	14
ND<0	ND<0	0	73	14		
ND<0	ND<0	0	73	14		
ND<0	ND<0	0	73	14		
ND<0	ND<0	0	73	14		
0.993252		ND<0	0.993252		74	14
ND<0	ND<0	0	74	14		
ND<0	ND<0	0	74	14		
ND<0	ND<0	0	74	14		
3.61092		ND<0	3.61092	75	14	
ND<0	ND<0	0	75	14		
1.03318		ND<0	1.03318	76	14	
0.371564 J		ND<0	0.371564		77	14
-0.371064 J		ND<0	-0.371064		77	15
-0.314711 J		ND<0	-0.314711		77	16
ND<0	ND<0	0	77	16		
0.536493 J		ND<0	0.536493		78	16
0.470004 J		ND<0	0.470004		79	16
0.34359 J		ND<0	0.34359	80	16	
0.693147		ND<0	0.693147		81	16
0.182322		ND<0	0.182322		82	16
0.741937		ND<0	0.741937		83	16
ND<0	ND<0	0	83	16		
ND<0	ND<0	0	83	16		
ND<0	ND<0	0	83	16		
0.993252		ND<0	0.993252		84	16
ND<0	ND<0	0	84	16		
ND<0	ND<0	0	84	16		
ND<0	ND<0	0	84	16		
3.61092		ND<0	3.61092	85	16	
ND<0	ND<0	0	85	16		
1.03318		ND<0	1.03318	86	16	
0.371564 J		ND<0	0.371564		87	16
-0.371064 J		ND<0	-0.371064		87	17
-0.314711 J		ND<0	-0.314711		87	18
ND<0	ND<0	0	87	18		
0.536493 J		ND<0	0.536493		88	18
0.470004 J		ND<0	0.470004		89	18
0.34359 J		ND<0	0.34359	90	18	
0.693147		ND<0	0.693147		91	18
0.182322		ND<0	0.182322		92	18
0.741937		ND<0	0.741937		93	18
ND<0	ND<0	0	93	18		
ND<0	ND<0	0	93	18		
0.993252		ND<0	0.993252		94	18
ND<0	ND<0	0	94	18		

ND<0	ND<0	0	94	18		
ND<0	ND<0	0	94	18		
3.61092		ND<0	3.61092	95	18	
ND<0	ND<0	0	95	18		
1.03318		ND<0	1.03318	96	18	
0.371564 J		ND<0	0.371564		97	18
-0.371064 J		ND<0	-0.371064		97	19
-0.314711 J		ND<0	-0.314711		97	20
ND<0	ND<0	0	97	20		
0.536493 J		ND<0	0.536493		98	20
0.470004 J		ND<0	0.470004		99	20
0.34359 J		ND<0	0.34359	100	20	
0.693147		ND<0	0.693147		101	20
0.182322		ND<0	0.182322		102	20
0.741937		ND<0	0.741937		103	20
ND<0	ND<0	0	103	20		
0.993252		ND<0	0.993252		104	20
ND<0	ND<0	0	104	20		
ND<0	ND<0	0	104	20		
ND<0	ND<0	0	104	20		
3.61092		ND<0	3.61092	105	20	
ND<0	ND<0	0	105	20		
1.03318		ND<0	1.03318	106	20	
0.371564 J		ND<0	0.371564		107	20
-0.371064 J		ND<0	-0.371064		107	21
-0.314711 J		ND<0	-0.314711		107	22
ND<0	ND<0	0	107	22		
0.536493 J		ND<0	0.536493		108	22
0.470004 J		ND<0	0.470004		109	22
0.34359 J		ND<0	0.34359	110	22	
0.693147		ND<0	0.693147		111	22
0.182322		ND<0	0.182322		112	22
0.741937		ND<0	0.741937		113	22
0.993252		ND<0	0.993252		114	22
ND<0	ND<0	0	114	22		
ND<0	ND<0	0	114	22		
ND<0	ND<0	0	114	22		
3.61092		ND<0	3.61092	115	22	
ND<0	ND<0	0	115	22		
1.03318		ND<0	1.03318	116	22	
0.371564 J		ND<0	0.371564		117	22
-0.371064 J		ND<0	-0.371064		117	23
-0.314711 J		ND<0	-0.314711		117	24
ND<0	ND<0	0	117	24		
0.536493 J		ND<0	0.536493		118	24
0.470004 J		ND<0	0.470004		119	24
0.34359 J		ND<0	0.34359	120	24	
0.693147		ND<0	0.693147		121	24
0.182322		ND<0	0.182322		122	24
0.741937		ND<0	0.741937		123	24
ND<0	0.993252		-0.993252		123	25
ND<0	0.993252		-0.993252		123	26
ND<0	0.993252		-0.993252		123	27
3.61092		0.993252		2.61767	124	27
ND<0	0.993252		-0.993252		124	28
1.03318		0.993252		0.0399327		125	28
0.371564 J		0.993252		-0.621688		125	29
-0.371064 J		0.993252		-1.36432	125	30
-0.314711 J		0.993252		-1.30796	125	31

ND<0	0.993252	-0.993252	125	32	
0.536493 J	0.993252	-0.456758	125	33	
0.470004 J	0.993252	-0.523248	125	34	
0.34359 J	0.993252	-0.649662	125	35	
0.693147	0.993252	-0.300105	125	36	
0.182322	0.993252	-0.81093125	37		
0.741937	0.993252	-0.251314	125	38	

ND<0	ND<0	0	125	38	
ND<0	ND<0	0	125	38	
3.61092	ND<0	3.61092	126	38	
ND<0	ND<0	0	126	38	
1.03318	ND<0	1.03318	127	38	
0.371564 J	ND<0	0.371564	128	38	
-0.371064 J	ND<0	-0.371064	128	39	
-0.314711 J	ND<0	-0.314711	128	40	
ND<0	ND<0	0	128	40	
0.536493 J	ND<0	0.536493	129	40	
0.470004 J	ND<0	0.470004	130	40	
0.34359 J	ND<0	0.34359	131	40	
0.693147	ND<0	0.693147	132	40	
0.182322	ND<0	0.182322	133	40	
0.741937	ND<0	0.741937	134	40	

ND<0	ND<0	0	134	40	
3.61092	ND<0	3.61092	135	40	
ND<0	ND<0	0	135	40	
1.03318	ND<0	1.03318	136	40	
0.371564 J	ND<0	0.371564	137	40	
-0.371064 J	ND<0	-0.371064	137	41	
-0.314711 J	ND<0	-0.314711	137	42	
ND<0	ND<0	0	137	42	
0.536493 J	ND<0	0.536493	138	42	
0.470004 J	ND<0	0.470004	139	42	
0.34359 J	ND<0	0.34359	140	42	
0.693147	ND<0	0.693147	141	42	
0.182322	ND<0	0.182322	142	42	
0.741937	ND<0	0.741937	143	42	

3.61092	ND<0	3.61092	144	42	
ND<0	ND<0	0	144	42	
1.03318	ND<0	1.03318	145	42	
0.371564 J	ND<0	0.371564	146	42	
-0.371064 J	ND<0	-0.371064	146	43	
-0.314711 J	ND<0	-0.314711	146	44	
ND<0	ND<0	0	146	44	
0.536493 J	ND<0	0.536493	147	44	
0.470004 J	ND<0	0.470004	148	44	
0.34359 J	ND<0	0.34359	149	44	
0.693147	ND<0	0.693147	150	44	
0.182322	ND<0	0.182322	151	44	
0.741937	ND<0	0.741937	152	44	

ND<0	3.61092	-3.61092152	45		
1.03318	3.61092	-2.57773152	46		
0.371564 J	3.61092	-3.23935152	47		
-0.371064 J	3.61092	-3.98198152	48		
-0.314711 J	3.61092	-3.92563152	49		
ND<0	3.61092	-3.61092152	50		
0.536493 J	3.61092	-3.07442152	51		
0.470004 J	3.61092	-3.14091152	52		
0.34359 J	3.61092	-3.26733152	53		

0.693147	3.61092	-2.91777	152	54
0.182322	3.61092	-3.4286	152	55
0.741937	3.61092	-2.86898	152	56

1.03318	ND<0	1.03318	153	56
0.371564 J	ND<0	0.371564	154	56
-0.371064 J	ND<0	-0.371064	154	57
-0.314711 J	ND<0	-0.314711	154	58
ND<0	ND<0	0	154	58
0.536493 J	ND<0	0.536493	155	58
0.470004 J	ND<0	0.470004	156	58
0.34359 J	ND<0	0.34359	157	58
0.693147	ND<0	0.693147	158	58
0.182322	ND<0	0.182322	159	58
0.741937	ND<0	0.741937	160	58

0.371564 J	1.03318	-0.661621	160	59
-0.371064 J	1.03318	-1.40425	160	60
-0.314711 J	1.03318	-1.3479	160	61
ND<0	1.03318	-1.03318	160	62
0.536493 J	1.03318	-0.496691	160	63
0.470004 J	1.03318	-0.563181	160	64
0.34359 J	1.03318	-0.689595	160	65
0.693147	1.03318	-0.340037	160	66
0.182322	1.03318	-0.850863	160	67
0.741937	1.03318	-0.291247	160	68

-0.371064 J	0.371564 J	-0.742627	160	69
-0.314711 J	0.371564 J	-0.686274	160	70
ND<0	0.371564 J	-0.371564	160	71
0.536493 J	0.371564 J	0.16493	161	71
0.470004 J	0.371564 J	0.0984401	162	71
0.34359 J	0.371564 J	-0.0279739	162	72
0.693147	0.371564 J	0.321584	163	72
0.182322	0.371564 J	-0.189242	163	73
0.741937	0.371564 J	0.370374	164	73

-0.314711 J	-0.371064 J	0.0563529	165	73
ND<0	-0.371064 J	0.371064	166	73
0.536493 J	-0.371064 J	0.907557	167	73
0.470004 J	-0.371064 J	0.841067	168	73
0.34359 J	-0.371064 J	0.714653	169	73
0.693147	-0.371064 J	1.06421	170	73
0.182322	-0.371064 J	0.553385	171	73
0.741937	-0.371064 J	1.113	172	73

ND<0	-0.314711 J	0.314711	173	73
0.536493 J	-0.314711 J	0.851204	174	73
0.470004 J	-0.314711 J	0.784714	175	73
0.34359 J	-0.314711 J	0.6583	176	73
0.693147	-0.314711 J	1.00786	177	73
0.182322	-0.314711 J	0.497032	178	73
0.741937	-0.314711 J	1.05665	179	73

0.536493 J	ND<0	0.536493	180	73
0.470004 J	ND<0	0.470004	181	73
0.34359 J	ND<0	0.34359	182	73
0.693147	ND<0	0.693147	183	73
0.182322	ND<0	0.182322	184	73
0.741937	ND<0	0.741937	185	73

0.470004 J	0.536493 J	-0.0664897	185	74
0.34359 J	0.536493 J	-0.192904	185	75
0.693147	0.536493 J	0.156654	186	75
0.182322	0.536493 J	-0.354172	186	76
0.741937	0.536493 J	0.205444	187	76
0.34359 J	0.470004 J	-0.126414	187	77
0.693147	0.470004 J	0.223144	188	77
0.182322	0.470004 J	-0.287682	188	78
0.741937	0.470004 J	0.271934	189	78
0.693147	0.34359 J	0.349557	190	78
0.182322	0.34359 J	-0.161268	190	79
0.741937	0.34359 J	0.398348	191	79
0.182322	0.693147	-0.510826	191	80
0.741937	0.693147	0.0487902	192	80
0.741937	0.182322	0.559616	193	80

S Statistic = 193 - 80 = 113

Tied Group	Value	Members
1	0	13

Time Period		Observations
7/20/1995		1
8/24/1995		1
9/28/1995		1
10/26/1995		1
11/19/1996		1
12/19/1996		1
3/24/1997		1
9/24/1997		1
4/7/1998	1	
9/23/1998		1
3/16/1999		1
9/23/1999		1
3/15/2000		1
9/24/2003		1
3/11/2004		1
10/12/2004		1
4/1/2005	1	
10/25/2005		1
4/29/2006		1
11/18/2006		1
5/23/2007		1
11/28/2007		1
6/5/2008	1	
11/20/2008		1
6/11/2009		1
11/16/2009		1
6/30/2010		1

There are 0 time periods with multiple data

A = 4836
B = 0
C = 1716
D = 0

E = 156
F = 0
a = 41418
b = 157950
c = 1404
Group Variance = 2032.33
Z-Score = 2.48439
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|2.48439| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: Zinc

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 204
Total Non-Detect: 128
Percent Non-Detects: 62.7451%
Total Background Measurements: 16
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	16	9 (56.25%)	3/16/1999	ND<60	ND<60
			9/23/1999	26 J	26 J
			3/15/2000	96	96
			9/24/2003	610	610
			3/11/2004	ND<60	ND<60
			10/12/2004	ND<60	ND<60
			4/1/2005	ND<60	ND<60
			10/25/2005	ND<60	ND<60
			4/29/2006	ND<60	ND<60
			11/18/2006	10.3 J	10.3 J
			5/23/2007	ND<60	ND<60
			11/28/2007	ND<60	ND<60
			6/5/2008	11.2 J	11.2 J
			11/20/2008	ND<60	ND<60
			6/11/2009	14	14
			6/30/2010	4.6 J H	4.6 J H

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12AR	16	12 (75%)	3/16/1999	ND<60	ND<60
			9/23/1999	ND<60	ND<60
			3/15/2000	ND<60	ND<60
			9/24/2003	250	250
			3/11/2004	ND<60	ND<60
			10/12/2004	ND<60	ND<60
			4/1/2005	ND<60	ND<60
			10/25/2005	ND<60	ND<60
			4/29/2006	ND<60	ND<60
			11/18/2006	ND<60	ND<60
			5/23/2007	12.6 J	12.6 J
			11/28/2007	ND<60	ND<60
			6/5/2008	ND<60	ND<60
			11/20/2008	ND<60	ND<60
			6/11/2009	4.5 J	4.5 J
			6/30/2010	8.8 J	8.8 J
MW-12BR	16	12 (75%)	3/16/1999	ND<60	ND<60
			9/23/1999	ND<60	ND<60
			3/15/2000	ND<60	ND<60
			9/24/2003	ND<60	ND<60
			3/11/2004	ND<60	ND<60
			10/12/2004	ND<60	ND<60
			4/1/2005	ND<60	ND<60
			10/25/2005	ND<60	ND<60

			4/29/2006	ND<60	ND<60
			11/18/2006	6.33 J	6.33 J
			5/23/2007	ND<60	ND<60
			11/28/2007	ND<60	ND<60
			6/5/2008	13.1 J	13.1 J
			11/20/2008	ND<60	ND<60
			6/11/2009	8.3 J	8.3 J
			6/30/2010	34	34
MW-11R	26	15 (57.6923%)	7/20/1995	ND<60	ND<60
			8/24/1995	34.1 J	34.1 J
			9/28/1995	30.5	30.5
			10/26/1995	ND<60	ND<60
			11/19/1996	ND<60	ND<60
			12/19/1996	ND<60	ND<60
			3/24/1997	ND<60	ND<60
			9/24/1997	92	92
			4/7/1998	330	330
			9/23/1998	110	110
			3/16/1999	ND<60	ND<60
			9/23/1999	27 J	27 J
			3/15/2000	ND<60	ND<60
			9/24/2003	60	60
			3/11/2004	ND<60	ND<60
			10/12/2004	ND<60	ND<60
			4/1/2005	ND<60	ND<60
			10/25/2005	ND<60	ND<60
			4/29/2006	20 J	20 J
			11/18/2006	ND<60	ND<60
			5/23/2007	39.7	39.7
			11/28/2007	ND<60	ND<60
			6/5/2008	ND<60	ND<60
			11/20/2008	ND<60	ND<60
			6/11/2009	46	46
			6/30/2010	6.9 J H	6.9 J H
MW-10	26	19 (73.0769%)	7/20/1995	ND<60	ND<60
			8/24/1995	ND<60	ND<60
			9/28/1995	ND<60	ND<60
			10/26/1995	ND<60	ND<60
			11/19/1996	ND<60	ND<60
			12/19/1996	ND<60	ND<60
			3/24/1997	110	110
			9/24/1997	ND<60	ND<60
			4/7/1998	150	150
			9/23/1998	ND<60	ND<60
			3/16/1999	ND<60	ND<60
			9/23/1999	ND<60	ND<60
			3/15/2000	ND<60	ND<60
			9/24/2003	ND<60	ND<60
			3/11/2004	ND<60	ND<60
			10/12/2004	ND<60	ND<60
			4/1/2005	ND<60	ND<60
			10/25/2005	ND<60	ND<60
			4/29/2006	ND<60	ND<60
			11/18/2006	ND<60	ND<60
			5/23/2007	62.4	62.4
			11/28/2007	410	410
			6/5/2008	10.8 J	10.8 J
			11/20/2008	ND<60	ND<60
			6/11/2009	28	28
			6/30/2010	220 H	220 H

MW-8	26	15 (57.6923%)	7/20/1995		ND<60	ND<60
			8/24/1995	21 J	21 J	
			9/28/1995	33.6 J	33.6 J	
			10/26/1995	ND<60	ND<60	
			11/19/1996	ND<60	ND<60	
			12/19/1996	ND<60	ND<60	
			3/24/1997	ND<60	ND<60	
			9/24/1997	62	62	
			4/7/1998	150	150	
			9/23/1998	120	120	
			3/16/1999	ND<60	ND<60	
			9/23/1999	ND<60	ND<60	
			3/15/2000	ND<60	ND<60	
			9/24/2003	ND<60	ND<60	
			3/11/2004	ND<60	ND<60	
			10/12/2004	ND<60	ND<60	
			4/1/2005	ND<60	ND<60	
			10/25/2005	ND<60	ND<60	
			4/29/2006	ND<60	ND<60	
			11/18/2006	6.59 J	6.59 J	
			5/23/2007	51.6	51.6	
			11/28/2007	27 J	27 J	
			6/5/2008	8.7 J	8.7 J	
			11/20/2008	28 J	28 J	
			6/11/2009	ND<2.6	ND<2.6	
			6/30/2010	6.1 J H	6.1 J H	
MW-7	26	13 (50%)	7/20/1995		ND<60	ND<60
			8/24/1995	40 J	40 J	
			9/28/1995	35 J	35 J	
			10/26/1995	ND<60	ND<60	
			11/19/1996	ND<60	ND<60	
			12/19/1996	ND<60	ND<60	
			3/24/1997	ND<60	ND<60	
			9/24/1997	79	79	
			4/7/1998	ND<60	ND<60	
			9/23/1998	95	95	
			3/16/1999	ND<60	ND<60	
			9/23/1999	5 J	5 J	
			3/15/2000	11 J	11 J	
			9/24/2003	180	180	
			3/11/2004	ND<60	ND<60	
			10/12/2004	ND<60	ND<60	
			4/1/2005	ND<60	ND<60	
			10/25/2005	ND<60	ND<60	
			4/29/2006	ND<60	ND<60	
			11/18/2006	5 J	5 J	
			5/23/2007	73.8	73.8	
			11/28/2007	ND<60	ND<60	
			6/5/2008	11.6 J	11.6 J	
			11/20/2008	76	76	
			6/11/2009	3.9 J	3.9 J	
			6/30/2010	3.7 J H	3.7 J H	
MW-6	26	17 (65.3846%)	7/20/1995		ND<60	ND<60
			8/24/1995	346	346	
			9/28/1995	9.5 J	9.5 J	
			10/26/1995	ND<60	ND<60	
			11/19/1996	ND<60	ND<60	
			12/19/1996	ND<60	ND<60	
			3/24/1997	ND<60	ND<60	

			9/24/1997	72	72	
			4/7/1998	75	75	
			9/23/1998	200	200	
			3/16/1999	ND<60	ND<60	
			9/23/1999	ND<60	ND<60	
			3/15/2000	ND<60	ND<60	
			9/24/2003	320	320	
			3/11/2004	ND<60	ND<60	
			10/12/2004	ND<60	ND<60	
			4/1/2005	ND<60	ND<60	
			10/25/2005	ND<60	ND<60	
			4/29/2006	ND<60	ND<60	
			11/18/2006	ND<60	ND<60	
			5/23/2007	ND<60	ND<60	
			11/28/2007	ND<60	ND<60	
			6/5/2008	7.99 J	7.99 J	
			11/20/2008	ND<60	ND<60	
			6/11/2009	18	18	
			6/30/2010	2.7 J H	2.7 J H	
MW-9	26	16 (61.5385%)	7/20/1995	ND<60	ND<60	
			8/24/1995	33.1 J	33.1 J	
			9/28/1995	ND<60	ND<60	
			10/26/1995	ND<60	ND<60	
			11/19/1996	ND<60	ND<60	
			12/19/1996	ND<60	ND<60	
			3/24/1997	110	110	
			9/24/1997	ND<60	ND<60	
			4/7/1998	ND<60	ND<60	
			9/23/1998	88	88	
			3/16/1999	ND<60	ND<60	
			9/23/1999	5 J	5 J	
			3/15/2000	ND<60	ND<60	
			9/24/2003	120	120	
			3/11/2004	ND<60	ND<60	
			10/12/2004	ND<60	ND<60	
			4/1/2005	ND<60	ND<60	
			10/25/2005	ND<60	ND<60	
			4/29/2006	ND<60	ND<60	
			11/18/2006	5.56 J	5.56 J	
			5/23/2007	56.6	56.6	
			11/28/2007	26 J	26 J	
			6/5/2008	ND<60	ND<60	
			11/20/2008	ND<60	ND<60	
			6/11/2009	22	22	
			6/30/2010	3.6 J H	3.6 J H	

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 = 204

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1.3	-2.65209	7.03356	-3.44771
2	2.7	-2.36561	12.6297	-9.83487
3	3.6	-2.19728	17.4578	-17.7451
4	3.7	-2.07485	21.7627	-25.422
5	3.9	-1.97737	25.6727	-33.1338
6	4.5	-1.8957	29.2664	-41.6644
7	4.6	-1.82501	32.597	-50.0594
8	5	-1.76241	35.7031	-58.8715
9	5	-1.71688	38.6508	-67.4559
10	5	-1.66456	41.4216	-75.7787
11	5.56	-1.61644	44.0345	-84.7661
12	6.1	-1.57179	46.505	-94.354
13	6.33	-1.53007	48.8461	-104.039
14	6.59	-1.49085	51.0687	-113.864
15	6.9	-1.4538	53.1823	-123.895
16	7.99	-1.41865	55.1948	-135.23
17	8.3	-1.39175	57.1318	-146.782
18	8.7	-1.35946	58.9799	-158.609
19	8.8	-1.32854	60.745	-170.3
20	9.5	-1.29884	62.4319	-182.639
21	10.3	-1.27024	64.0454	-195.723
22	10.8	-1.24264	65.5896	-209.143
23	11	-1.21596	67.0682	-222.519
24	11.2	-1.19012	68.4845	-235.848
25	11.6	-1.17	69.8534	-249.42
26	12.6	-1.1455	71.1656	-263.853
27	13.1	-1.12168	72.4238	-278.547
28	14	-1.09847	73.6304	-293.926
29	18	-1.07584	74.7878	-313.291
30	20	-1.05375	75.8982	-334.366
31	21	-1.03215	76.9636	-356.041
32	22	-1.01104	77.9858	-378.284
33	26	-0.994457	78.9747	-404.14
34	26	-0.974114	79.9236	-429.467
35	27	-0.954165	80.834	-455.229
36	27	-0.93459	81.7075	-480.463
37	28	-0.915365	82.5454	-506.093
38	28	-0.896473	83.349	-531.195
39	30	-0.877897	84.1197	-557.532
40	30	-0.859618	84.8587	-583.32
41	30	-0.841621	85.567	-608.569
42	30	-0.827417	86.2516	-633.391
43	30	-0.809896	86.9076	-657.688
44	30	-0.792618	87.5358	-681.467
45	30	-0.775574	88.1373	-704.734
46	30	-0.758753	88.713	-727.497
47	30	-0.742143	89.2638	-749.761
48	30	-0.725736	89.7905	-771.533
49	30	-0.709522	90.2939	-792.819

50	30	-0.696684	90.7793	-813.719
51	30	-0.680797	91.2428	-834.143
52	30	-0.665079	91.6851	-854.095
53	30	-0.649522	92.107	-873.581
54	30	-0.634124	92.5091	-892.605
55	30	-0.618872	92.8921	-911.171
56	30	-0.603765	93.2566	-929.284
57	30	-0.588793	93.6033	-946.948
58	30	-0.576911	93.9361	-964.255
59	30	-0.5621794.2522	-981.12	
60	30	-0.547551	94.552	-997.547
61	30	-0.533048	94.8361	-1013.54
62	30	-0.518658	95.1051	-1029.1
63	30	-0.504372	95.3595	-1044.23
64	30	-0.490189	95.5998	-1058.93
65	30	-0.476105	95.8265	-1073.22
66	30	-0.464904	96.0426	-1087.16
67	30	-0.450985	96.246	-1100.69
68	30	-0.437153	96.4371	-1113.81
69	30	-0.423405	96.6164	-1126.51
70	30	-0.409735	96.7843	-1138.8
71	30	-0.396142	96.9412	-1150.69
72	30	-0.382622	97.0876	-1162.17
73	30	-0.369171	97.2239	-1173.24
74	30	-0.358459	97.3524	-1184
75	30	-0.345126	97.4715	-1194.35
76	30	-0.331854	97.5816	-1204.3
77	30	-0.318639	97.6831	-1213.86
78	30	-0.305481	97.7765	-1223.03
79	30	-0.292375	97.8619	-1231.8
80	30	-0.279319	97.94	-1240.18
81	30	-0.266311	98.0109	-1248.17
82	30	-0.253347	98.0751	-1255.77
83	30	-0.243007	98.1341	-1263.06
84	30	-0.230118	98.1871	-1269.96
85	30	-0.217267	98.2343	-1276.48
86	30	-0.204452	98.2761	-1282.61
87	30	-0.191671	98.3128	-1288.36
88	30	-0.1789298.3448	-1293.73	
89	30	-0.166199	98.3724	-1298.72
90	30	-0.153505	98.396	-1303.32
91	30	-0.143367	98.4166	-1307.62
92	30	-0.130716	98.4337	-1311.55
93	30	-0.118085	98.4476	-1315.09
94	30	-0.105474	98.4587	-1318.25
95	30	-0.0928787	98.4673	-1321.04
96	30	-0.0802981	98.4738	-1323.45
97	30	-0.0677301	98.4784	-1325.48
98	30	-0.0551734	98.4814	-1327.13
99	30	-0.0451348	98.4835	-1328.49
100	30	-0.0325917	98.4845	-1329.47
101	30	-0.0200544	98.4849	-1330.07
102	30	-0.00751925	98.485	-1330.29
103	30	0.00751925	98.485	-1330.07
104	30	0.0200544	98.4854	-1329.47
105	30	0.0325917	98.4865	-1328.49
106	30	0.0451348	98.4885	-1327.13
107	30	0.0551734	98.4916	-1325.48
108	30	0.0677301	98.4962	-1323.45
109	30	0.0802981	98.5026	-1321.04
110	30	0.0928787	98.5112	-1318.25
111	30	0.105474	98.5224	-1315.09

112	30	0.118085	98.5363	-1311.55
113	30	0.130716	98.5534	-1307.62
114	30	0.143367	98.574	-1303.32
115	30	0.153505	98.5975	-1298.72
116	30	0.166199	98.6251	-1293.73
117	30	0.17892	98.6572	-1288.36
118	30	0.191671	98.6939	-1282.61
119	30	0.204452	98.7357	-1276.48
120	30	0.217267	98.7829	-1269.96
121	30	0.230118	98.8359	-1263.06
122	30	0.243007	98.8949	-1255.77
123	30	0.253347	98.9591	-1248.17
124	30	0.266311	99.03	-1240.18
125	30	0.279319	99.108	-1231.8
126	30	0.292375	99.1935	-1223.03
127	30	0.305481	99.2868	-1213.86
128	30	0.318639	99.3884	-1204.3
129	30	0.331854	99.4985	-1194.35
130	30	0.345126	99.6176	-1184
131	30	0.358459	99.7461	-1173.24
132	30	0.369171	99.8824	-1162.17
133	30	0.382622	100.029	-1150.69
134	30	0.396142	100.186	-1138.8
135	30	0.409735	100.354	-1126.51
136	30	0.423405	100.533	-1113.81
137	30	0.437153	100.724	-1100.69
138	30	0.450985	100.927	-1087.16
139	30	0.464904	101.143	-1073.22
140	30	0.476105	101.37	-1058.93
141	30	0.490189	101.61	-1044.23
142	30	0.504372	101.865	-1029.1
143	30	0.518658	102.134	-1013.54
144	30	0.533048	102.418	-997.547
145	30	0.547551	102.718	-981.12
146	30	0.56217	103.034	-964.255
147	30	0.576911	103.367	-946.948
148	30	0.588793	103.713	-929.284
149	30	0.603765	104.078	-911.171
150	30	0.618872	104.461	-892.605
151	30	0.634124	104.863	-873.581
152	30	0.649522	105.285	-854.095
153	30	0.665079	105.727	-834.143
154	30	0.680797	106.191	-813.719
155	30	0.696684	106.676	-792.819
156	30	0.709522	107.179	-771.533
157	30	0.725736	107.706	-749.761
158	30	0.742143	108.257	-727.497
159	30	0.758753	108.833	-704.734
160	30	0.775574	109.434	-681.467
161	30	0.792618	110.062	-657.688
162	30	0.809896	110.718	-633.391
163	30	0.827417	111.403	-608.569
164	30	0.841621	112.111	-583.32
165	30	0.859618	112.85	-557.532
166	30.5	0.877897	113.621	-530.756
167	33.1	0.896473	114.425	-501.082
168	33.6	0.915365	115.262	-470.326
169	34	0.93459	116.136	-438.55
170	34.1	0.954165	117.046	-406.013
171	35	0.974114	117.995	-371.919
172	39.7	0.994457	118.984	-332.439
173	40	1.01104	120.006	-291.998

174	46	1.03215	121.072	-244.519
175	51.6	1.05375	122.182	-190.145
176	56.6	1.07584	123.34	-129.253
177	60	1.09847	124.546	-63.3449
178	62	1.12168	125.804	6.19908
179	62.4	1.1455	127.117	77.6785
180	72	1.17	128.485	161.919
181	73.8	1.19012	129.902	249.749
182	75	1.21596	131.38	340.946
183	76	1.24264	132.925	435.387
184	79	1.27024	134.538	535.736
185	88	1.29884	136.225	650.034
186	92	1.32854	137.99	772.259
187	95	1.35946	139.838	901.408
188	96	1.39175	141.775	1035.02
189	110	1.41865	143.788	1191.07
190	110	1.4538	145.901	1350.99
191	110	1.49085	148.124	1514.98
192	120	1.53007	150.465	1698.59
193	120	1.57179	152.936	1887.2
194	150	1.61644	155.548	2129.67
195	150	1.66456	158.319	2379.35
196	180	1.71688	161.267	2688.39
197	200	1.76241	164.373	3040.87
198	220	1.82501	167.704	3442.37
199	250	1.8957	171.297	3916.3
200	320	1.97737	175.207	4549.06
201	330	2.07485	179.512	5233.76
202	346	2.19728	184.34	5994.02
203	410	2.36561	189.936	6963.92
204	610	2.65209	196.97	8581.69

Data Set Standard Deviation = 68.3728
Numerator = 7.36454e+007
Denominator = 1.86923e+008
W Statistic = 0.393989 = 7.36454e+007 / 1.86923e+008

5% Critical value of 0.976 exceeds 0.393989
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.393989
Evidence of non-normality at 99% level of significance

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 = 204

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.262364	-2.65209	7.03356	-0.695813
2	0.993252	-2.36561	12.6297	-3.04546
3	1.28093	-2.19728	17.4578	-5.86004
4	1.30833	-2.07485	21.7627	-8.57463
5	1.36098	-1.97737	25.6727	-11.2658
6	1.50408	-1.8957	29.2664	-14.1171
7	1.52606	-1.82501	32.597	-16.9021
8	1.60944	-1.76241	35.7031	-19.7386
9	1.60944	-1.71688	38.6508	-22.5018
10	1.60944	-1.66456	41.4216	-25.1808
11	1.7156	-1.61644	44.0345	-27.954
12	1.80829	-1.57179	46.505	-30.7962
13	1.8453	-1.53007	48.8461	-33.6197
14	1.88555	-1.49085	51.0687	-36.4308
15	1.93152	-1.4538	53.1823	-39.2388
16	2.07819	-1.41865	55.1948	-42.187
17	2.11626	-1.39175	57.1318	-45.1323
18	2.16332	-1.35946	58.9799	-48.0733
19	2.17475	-1.32854	60.745	-50.9625
20	2.25129	-1.29884	62.4319	-53.8866
21	2.33214	-1.27024	64.0454	-56.849
22	2.37955	-1.24264	65.5896	-59.8059
23	2.3979	-1.21596	67.0682	-62.7216
24	2.41591	-1.19012	68.4845	-65.5969
25	2.45101	-1.17	69.8534	-68.4645
26	2.5337	-1.1455	71.1656	-71.3669
27	2.57261	-1.12168	72.4238	-74.2525
28	2.63906	-1.09847	73.6304	-77.1515
29	2.89037	-1.07584	74.7878	-80.261
30	2.99573	-1.05375	75.8982	-83.4178
31	3.04452	-1.03215	76.9636	-86.5602
32	3.09104	-1.01104	77.9858	-89.6853
33	3.2581	-0.994457	78.9747	-92.9254
34	3.2581	-0.974114	79.9236	-96.0991
35	3.29584	-0.954165	80.834	-99.2439
36	3.29584	-0.93459	81.7075	-102.324
37	3.3322	-0.915365	82.5454	-105.374
38	3.3322	-0.896473	83.349	-108.362
39	3.4012	-0.877897	84.1197	-111.347
40	3.4012	-0.859618	84.8587	-114.271
41	3.4012	-0.841621	85.567	-117.134
42	3.4012	-0.827417	86.2516	-119.948
43	3.4012	-0.809896	86.9076	-122.703
44	3.4012	-0.792618	87.5358	-125.398
45	3.4012	-0.775574	88.1373	-128.036
46	3.4012	-0.758753	88.713	-130.617
47	3.4012	-0.742143	89.2638	-133.141
48	3.4012	-0.725736	89.7905	-135.609
49	3.4012	-0.709522	90.2939	-138.023

50	3.4012	-0.696684	90.7793	-140.392
51	3.4012	-0.680797	91.2428	-142.708
52	3.4012	-0.665079	91.6851	-144.97
53	3.4012	-0.649522	92.107	-147.179
54	3.4012	-0.634124	92.5091	-149.336
55	3.4012	-0.618872	92.8921	-151.441
56	3.4012	-0.603765	93.2566	-153.494
57	3.4012	-0.588793	93.6033	-155.497
58	3.4012	-0.576911	93.9361	-157.459
59	3.4012	-0.5621794.2522	-159.371	
60	3.4012	-0.547551	94.552	-161.233
61	3.4012	-0.533048	94.8361	-163.046
62	3.4012	-0.518658	95.1051	-164.81
63	3.4012	-0.504372	95.3595	-166.526
64	3.4012	-0.490189	95.5998	-168.193
65	3.4012	-0.476105	95.8265	-169.812
66	3.4012	-0.464904	96.0426	-171.394
67	3.4012	-0.450985	96.246	-172.928
68	3.4012	-0.437153	96.4371	-174.414
69	3.4012	-0.423405	96.6164	-175.855
70	3.4012	-0.409735	96.7843	-177.248
71	3.4012	-0.396142	96.9412	-178.595
72	3.4012	-0.382622	97.0876	-179.897
73	3.4012	-0.369171	97.2239	-181.152
74	3.4012	-0.358459	97.3524	-182.372
75	3.4012	-0.345126	97.4715	-183.546
76	3.4012	-0.331854	97.5816	-184.674
77	3.4012	-0.318639	97.6831	-185.758
78	3.4012	-0.305481	97.7765	-186.797
79	3.4012	-0.292375	97.8619	-187.791
80	3.4012	-0.279319	97.94	-188.741
81	3.4012	-0.266311	98.0109	-189.647
82	3.4012	-0.253347	98.0751	-190.509
83	3.4012	-0.243007	98.1341	-191.335
84	3.4012	-0.230118	98.1871	-192.118
85	3.4012	-0.217267	98.2343	-192.857
86	3.4012	-0.204452	98.2761	-193.552
87	3.4012	-0.191671	98.3128	-194.204
88	3.4012	-0.1789298.3448	-194.813	
89	3.4012	-0.166199	98.3724	-195.378
90	3.4012	-0.153505	98.396	-195.9
91	3.4012	-0.143367	98.4166	-196.388
92	3.4012	-0.130716	98.4337	-196.832
93	3.4012	-0.118085	98.4476	-197.234
94	3.4012	-0.105474	98.4587	-197.593
95	3.4012	-0.0928787	98.4673	-197.909
96	3.4012	-0.0802981	98.4738	-198.182
97	3.4012	-0.0677301	98.4784	-198.412
98	3.4012	-0.0551734	98.4814	-198.6
99	3.4012	-0.0451348	98.4835	-198.753
100	3.4012	-0.0325917	98.4845	-198.864
101	3.4012	-0.0200544	98.4849	-198.932
102	3.4012	-0.00751925	98.485	-198.958
103	3.4012	0.00751925	98.485	-198.932
104	3.4012	0.0200544	98.4854	-198.864
105	3.4012	0.0325917	98.4865	-198.753
106	3.4012	0.0451348	98.4885	-198.6
107	3.4012	0.0551734	98.4916	-198.412
108	3.4012	0.0677301	98.4962	-198.182
109	3.4012	0.0802981	98.5026	-197.909
110	3.4012	0.0928787	98.5112	-197.593
111	3.4012	0.105474	98.5224	-197.234

112	3.4012	0.118085	98.5363	-196.832
113	3.4012	0.130716	98.5534	-196.388
114	3.4012	0.143367	98.574	-195.9
115	3.4012	0.153505	98.5975	-195.378
116	3.4012	0.166199	98.6251	-194.813
117	3.4012	0.17892	98.6572	-194.204
118	3.4012	0.191671	98.6939	-193.552
119	3.4012	0.204452	98.7357	-192.857
120	3.4012	0.217267	98.7829	-192.118
121	3.4012	0.230118	98.8359	-191.335
122	3.4012	0.243007	98.8949	-190.509
123	3.4012	0.253347	98.9591	-189.647
124	3.4012	0.266311	99.03	-188.741
125	3.4012	0.279319	99.108	-187.791
126	3.4012	0.292375	99.1935	-186.797
127	3.4012	0.305481	99.2868	-185.758
128	3.4012	0.318639	99.3884	-184.674
129	3.4012	0.331854	99.4985	-183.546
130	3.4012	0.345126	99.6176	-182.372
131	3.4012	0.358459	99.7461	-181.152
132	3.4012	0.369171	99.8824	-179.897
133	3.4012	0.382622	100.029	-178.595
134	3.4012	0.396142	100.186	-177.248
135	3.4012	0.409735	100.354	-175.855
136	3.4012	0.423405	100.533	-174.414
137	3.4012	0.437153	100.724	-172.928
138	3.4012	0.450985	100.927	-171.394
139	3.4012	0.464904	101.143	-169.812
140	3.4012	0.476105	101.37	-168.193
141	3.4012	0.490189	101.61	-166.526
142	3.4012	0.504372	101.865	-164.81
143	3.4012	0.518658	102.134	-163.046
144	3.4012	0.533048	102.418	-161.233
145	3.4012	0.547551	102.718	-159.371
146	3.4012	0.56217	103.034	-157.459
147	3.4012	0.576911	103.367	-155.497
148	3.4012	0.588793	103.713	-153.494
149	3.4012	0.603765	104.078	-151.441
150	3.4012	0.618872	104.461	-149.336
151	3.4012	0.634124	104.863	-147.179
152	3.4012	0.649522	105.285	-144.97
153	3.4012	0.665079	105.727	-142.708
154	3.4012	0.680797	106.191	-140.392
155	3.4012	0.696684	106.676	-138.023
156	3.4012	0.709522	107.179	-135.609
157	3.4012	0.725736	107.706	-133.141
158	3.4012	0.742143	108.257	-130.617
159	3.4012	0.758753	108.833	-128.036
160	3.4012	0.775574	109.434	-125.398
161	3.4012	0.792618	110.062	-122.703
162	3.4012	0.809896	110.718	-119.948
163	3.4012	0.827417	111.403	-117.134
164	3.4012	0.841621	112.111	-114.271
165	3.4012	0.859618	112.85	-111.347
166	3.41773	0.877897	113.621	-108.347
167	3.49953	0.896473	114.425	-105.21
168	3.51453	0.915365	115.262	-101.993
169	3.52636	0.93459	116.136	-98.697
170	3.5293	0.954165	117.046	-95.3295
171	3.55535	0.974114	117.995	-91.8662
172	3.68135	0.994457	118.984	-88.2053
173	3.68888	1.01104	120.006	-84.4757

174	3.82864	1.03215	121.072	-80.5239
175	3.94352	1.05375	122.182	-76.3685
176	4.03601	1.07584	123.34	-72.0264
177	4.09434	1.09847	124.546	-67.5289
178	4.12713	1.12168	125.804	-62.8995
179	4.13357	1.1455	127.117	-58.1645
180	4.27667	1.17	128.485	-53.1608
181	4.30136	1.19012	129.902	-48.0417
182	4.31749	1.21596	131.38	-42.7918
183	4.33073	1.24264	132.925	-37.4102
184	4.36945	1.27024	134.538	-31.86
185	4.47734	1.29884	136.225	-26.0447
186	4.52179	1.32854	137.99	-20.0373
187	4.55388	1.35946	139.838	-13.8465
188	4.56435	1.39175	141.775	-7.49408
189	4.70048	1.41865	143.788	-0.825727
190	4.70048	1.4538	145.901	6.00785
191	4.70048	1.49085	148.124	13.0156
192	4.78749	1.53007	150.465	20.3408
193	4.78749	1.57179	152.936	27.8657
194	5.01064	1.61644	155.548	35.965
195	5.01064	1.66456	158.319	44.3056
196	5.19296	1.71688	161.267	53.2213
197	5.29832	1.76241	164.373	62.5591
198	5.39363	1.82501	167.704	72.4025
199	5.52146	1.8957	171.297	82.8695
200	5.76832	1.97737	175.207	94.2756
201	5.79909	2.07485	179.512	106.308
202	5.84644	2.19728	184.34	119.154
203	6.01616	2.36561	189.936	133.386
204	6.41346	2.65209	196.97	150.395

Data Set Standard Deviation = 0.853403
Numerator = 22618.7
Denominator = 29120.9
W Statistic = 0.776717 = 22618.7 / 29120.9

5% Critical value of 0.976 exceeds 0.776717
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.776717
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Zinc

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

Kruskal Wallis Ranks

Background Wells

Well ID	Date	Result	Rank
MW-13	3/16/1999	ND<3.4012	64.5
	9/23/1999	3.2581 J	160
	3/15/2000	4.56435	188
	9/24/2003	6.41346	204
	3/11/2004	ND<3.4012	64.5
	10/12/2004	ND<3.4012	64.5
	4/1/2005	ND<3.4012	64.5
	10/25/2005	ND<3.4012	64.5
	4/29/2006	ND<3.4012	64.5
	11/18/2006	2.33214 J	148
	5/23/2007	ND<3.4012	64.5
	11/28/2007	ND<3.4012	64.5
	6/5/2008	2.41591 J	151
	11/20/2008	ND<3.4012	64.5
	6/11/2009	2.63906	155
	6/30/2010	1.52606 J H	134

Rank Sum = 1720.5
Rank Mean = 107.531

Background Rank Sum = 1720.5
Background Rank Mean = 107.531

Compliance Wells

Well ID	Date	Result	Rank
MW-12AR	3/16/1999	ND<3.4012	64.5
	9/23/1999	ND<3.4012	64.5
	3/15/2000	ND<3.4012	64.5
	9/24/2003	5.52146	199
	3/11/2004	ND<3.4012	64.5
	10/12/2004	ND<3.4012	64.5
	4/1/2005	ND<3.4012	64.5
	10/25/2005	ND<3.4012	64.5
	4/29/2006	ND<3.4012	64.5
	11/18/2006	ND<3.4012	64.5
	5/23/2007	2.5337 J	153
	11/28/2007	ND<3.4012	64.5
	6/5/2008	ND<3.4012	64.5
	11/20/2008	ND<3.4012	64.5
	6/11/2009	1.50408 J	133
	6/30/2010	2.17475 J	146

Rank Sum = 1405
Rank Mean = 87.8125

MW-12BR	3/16/1999	ND<3.4012	64.5
	9/23/1999	ND<3.4012	64.5

	3/15/2000	ND<3.4012	64.5
	9/24/2003	ND<3.4012	64.5
	3/11/2004	ND<3.4012	64.5
	10/12/2004	ND<3.4012	64.5
	4/1/2005	ND<3.4012	64.5
	10/25/2005	ND<3.4012	64.5
	4/29/2006	ND<3.4012	64.5
	11/18/2006	1.8453 J	140
	5/23/2007	ND<3.4012	64.5
	11/28/2007	ND<3.4012	64.5
	6/5/2008	2.57261 J	154
	11/20/2008	ND<3.4012	64.5
	6/11/2009	2.11626 J	144
	6/30/2010	3.52636	169

Rank Sum = 1381
Rank Mean = 86.3125

MW-11R	7/20/1995	ND<3.4012	64.5
	8/24/1995	3.5293 J	170
	9/28/1995	3.41773	166
	10/26/1995	ND<3.4012	64.5
	11/19/1996	ND<3.4012	64.5
	12/19/1996	ND<3.4012	64.5
	3/24/1997	ND<3.4012	64.5
	9/24/1997	4.52179	186
	4/7/1998	5.79909	201
	9/23/1998	4.70048	189
	3/16/1999	ND<3.4012	64.5
	9/23/1999	3.29584 J	162
	3/15/2000	ND<3.4012	64.5
	9/24/2003	4.09434	177
	3/11/2004	ND<3.4012	64.5
	10/12/2004	ND<3.4012	64.5
	4/1/2005	ND<3.4012	64.5
	10/25/2005	ND<3.4012	64.5
	4/29/2006	2.99573 J	157
	11/18/2006	ND<3.4012	64.5
	5/23/2007	3.68135	172
	11/28/2007	ND<3.4012	64.5
	6/5/2008	ND<3.4012	64.5
	11/20/2008	ND<3.4012	64.5
	6/11/2009	3.82864	174
	6/30/2010	1.93152 J H	142

Rank Sum = 2863.5
Rank Mean = 110.135

MW-10	7/20/1995	ND<3.4012	64.5
	8/24/1995	ND<3.4012	64.5
	9/28/1995	ND<3.4012	64.5
	10/26/1995	ND<3.4012	64.5
	11/19/1996	ND<3.4012	64.5
	12/19/1996	ND<3.4012	64.5
	3/24/1997	4.70048	190
	9/24/1997	ND<3.4012	64.5
	4/7/1998	5.01064	194
	9/23/1998	ND<3.4012	64.5
	3/16/1999	ND<3.4012	64.5
	9/23/1999	ND<3.4012	64.5
	3/15/2000	ND<3.4012	64.5
	9/24/2003	ND<3.4012	64.5
	3/11/2004	ND<3.4012	64.5
	10/12/2004	ND<3.4012	64.5

	4/1/2005	ND<3.4012	64.5
	10/25/2005	ND<3.4012	64.5
	4/29/2006	ND<3.4012	64.5
	11/18/2006	ND<3.4012	64.5
	5/23/2007	4.13357	179
	11/28/2007	6.01616	203
	6/5/2008	2.37955 J	149
	11/20/2008	ND<3.4012	64.5
	6/11/2009	3.3322	164
	6/30/2010	5.39363 H	198

Rank Sum = 2502.5
Rank Mean = 96.25

MW-8	7/20/1995	ND<3.4012	64.5
	8/24/1995	3.04452 J	158
	9/28/1995	3.51453 J	168
	10/26/1995	ND<3.4012	64.5
	11/19/1996	ND<3.4012	64.5
	12/19/1996	ND<3.4012	64.5
	3/24/1997	ND<3.4012	64.5
	9/24/1997	4.12713	178
	4/7/1998	5.01064	195
	9/23/1998	4.78749	192
	3/16/1999	ND<3.4012	64.5
	9/23/1999	ND<3.4012	64.5
	3/15/2000	ND<3.4012	64.5
	9/24/2003	ND<3.4012	64.5
	3/11/2004	ND<3.4012	64.5
	10/12/2004	ND<3.4012	64.5
	4/1/2005	ND<3.4012	64.5
	10/25/2005	ND<3.4012	64.5
	4/29/2006	ND<3.4012	64.5
	11/18/2006	1.88555 J	141
	5/23/2007	3.94352	175
	11/28/2007	3.29584 J	163
	6/5/2008	2.16332 J	145
	11/20/2008	3.3322 J	165
	6/11/2009	ND<0.262364	64.5
	6/30/2010	1.80829 J H	139

Rank Sum = 2786.5
Rank Mean = 107.173

MW-7	7/20/1995	ND<3.4012	64.5
	8/24/1995	3.68888 J	173
	9/28/1995	3.55535 J	171
	10/26/1995	ND<3.4012	64.5
	11/19/1996	ND<3.4012	64.5
	12/19/1996	ND<3.4012	64.5
	3/24/1997	ND<3.4012	64.5
	9/24/1997	4.36945	184
	4/7/1998	ND<3.4012	64.5
	9/23/1998	4.55388	187
	3/16/1999	ND<3.4012	64.5
	9/23/1999	1.60944 J	135
	3/15/2000	2.3979 J	150
	9/24/2003	5.19296	196
	3/11/2004	ND<3.4012	64.5
	10/12/2004	ND<3.4012	64.5
	4/1/2005	ND<3.4012	64.5
	10/25/2005	ND<3.4012	64.5
	4/29/2006	ND<3.4012	64.5
	11/18/2006	1.60944 J	136

	5/23/2007	4.30136	181
	11/28/2007	ND<3.4012	64.5
	6/5/2008	2.45101 J	152
	11/20/2008	4.33073	183
	6/11/2009	1.36098 J	132
	6/30/2010	1.30833 J H	131

Rank Sum = 2949.5
Rank Mean = 113.442

MW-6	7/20/1995	ND<3.4012	64.5
	8/24/1995	5.84644	202
	9/28/1995	2.25129 J	147
	10/26/1995	ND<3.4012	64.5
	11/19/1996	ND<3.4012	64.5
	12/19/1996	ND<3.4012	64.5
	3/24/1997	ND<3.4012	64.5
	9/24/1997	4.27667	180
	4/7/1998	4.31749	182
	9/23/1998	5.29832	197
	3/16/1999	ND<3.4012	64.5
	9/23/1999	ND<3.4012	64.5
	3/15/2000	ND<3.4012	64.5
	9/24/2003	5.76832	200
	3/11/2004	ND<3.4012	64.5
	10/12/2004	ND<3.4012	64.5
	4/1/2005	ND<3.4012	64.5
	10/25/2005	ND<3.4012	64.5
	4/29/2006	ND<3.4012	64.5
	11/18/2006	ND<3.4012	64.5
	5/23/2007	ND<3.4012	64.5
	11/28/2007	ND<3.4012	64.5
	6/5/2008	2.07819 J	143
	11/20/2008	ND<3.4012	64.5
	6/11/2009	2.89037	156
	6/30/2010	0.993252 J H	129

Rank Sum = 2632.5
Rank Mean = 101.25

MW-9	7/20/1995	ND<3.4012	64.5
	8/24/1995	3.49953 J	167
	9/28/1995	ND<3.4012	64.5
	10/26/1995	ND<3.4012	64.5
	11/19/1996	ND<3.4012	64.5
	12/19/1996	ND<3.4012	64.5
	3/24/1997	4.70048	191
	9/24/1997	ND<3.4012	64.5
	4/7/1998	ND<3.4012	64.5
	9/23/1998	4.47734	185
	3/16/1999	ND<3.4012	64.5
	9/23/1999	1.60944 J	137
	3/15/2000	ND<3.4012	64.5
	9/24/2003	4.78749	193
	3/11/2004	ND<3.4012	64.5
	10/12/2004	ND<3.4012	64.5
	4/1/2005	ND<3.4012	64.5
	10/25/2005	ND<3.4012	64.5
	4/29/2006	ND<3.4012	64.5
	11/18/2006	1.7156 J	138
	5/23/2007	4.03601	176
	11/28/2007	3.2581 J	161
	6/5/2008	ND<3.4012	64.5
	11/20/2008	ND<3.4012	64.5

6/11/2009	3.09104	159
6/30/2010	1.28093 J H	130

Rank Sum = 2669
Rank Mean = 102.654

Calculation Results:

Kruskal-Wallis H Statistic = 4.10397
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 5.45027
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
4.10397 < 15.5073 indicating no significant group difference at 5% significance level
5.45027 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties