DRAFT
NOVEMBER 2009 (N=26) 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

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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

NOVEMBER 2009 (N=26) 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=26 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 November, 2009. The monitoring is required by the North Carolina Department of Environmental and Natural Resources (NCDENR) Solid Waste Management Division. This in the twenty-sixth (N=26) 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 stations are SW-1 and SW-2. 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 9 groundwater samples for all Appendix I and triggered Appendix II constituents, collecting 2 surface-water monitoring samples for all Appendix I & II constituents, performing methane monitoring at 14 selected methane monitoring wells and 5 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 June 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, 1, 2-dichloroethane, and 1, 2-dichloropropane.

3.0 METHODS

3.1 Methane Monitoring

Methane monitoring was performed at 14 wells and 5 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 9 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 nine monitoring wells and two surface-water stations. 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 samples were 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 first 2009 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 one surface-water sample had detections exceeding the NC2L standards: wells SLMW-7, SLMW-8, SLMW-9, SLMW-10, SLMW-11R, and SW-1. The analytical results for each of those wells are discussed as follows:

- Well SLMW-8

  Monitoring well SLMW-8 was dry before groundwater could be attained.

- Well SLMW-9

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

Compound	2L	Concentration
Benzene	1 µg/L	1.4 µg/L
Vinyl Chloride	0.015 µg/L	1.2 µg/L

  No other constituents were above their 2L standards.

- Well SLMW-10

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

Compound	2L		Concentration	
1,2-dichloroethane	0.38	µg/L	0.45	µg/L
1,2-Dichloropropane	0.56	µg/L	2.8	µg/L
Benzene	1.0	µg/L	1.3	µg/L
Vinyl Chloride	0.015	µg/L	1.5	µg/L

No other constituents were above their 2L standard.

Groundwater samples from all other monitoring wells had detections. However, all were below NC2L standards (Table4).

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 the samples collected at the Longstreet Road Municipal Solid Waste Landfill did not exhibit any evidence of SSIs in the analytical results Future analytical results will be evaluated using the same 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 the next monitoring event.

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 50% 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=26 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-9 and SLMW-10. Vinyl chloride was detected above the NC2L standard at monitoring wells SLMW-9 and SLMW-10.

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 with the following exceptions: 1,1-dichloroethane data from MW-9 and chlorobenzene data from MW-8 represented SSIs. Future analytical results will be evaluated using the same 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. No SSIs were identified during this event, assessment monitoring will continue until the lack of SSIs is confirmed in the N=27 sampling event. Long-term monitoring should continue at the Longstreet Road Landfill because it is still an active site and NC Solid Waste Regulations require it.

The methane levels were measured at 19 locations at Longstreet. Five methane monitoring wells showed high levels of methane with only one reading at or above 50% 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

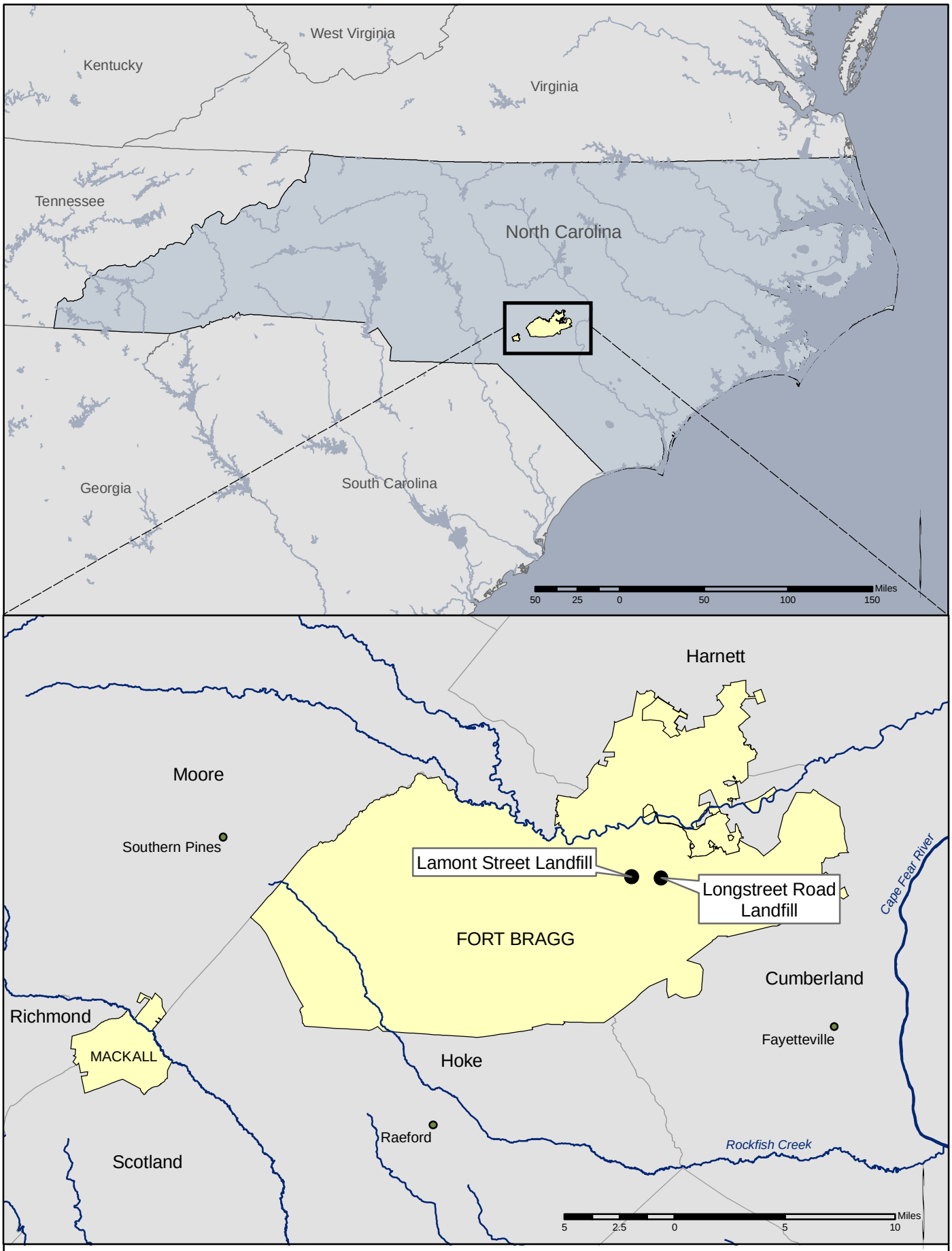

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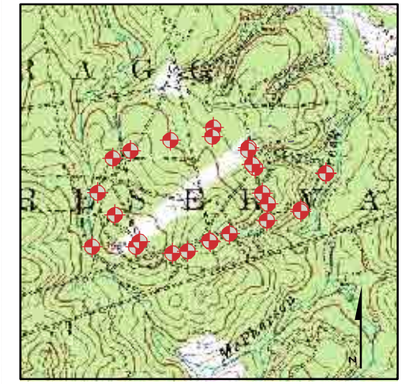
Figure 1

Site Map -- Ft. Bragg, NC



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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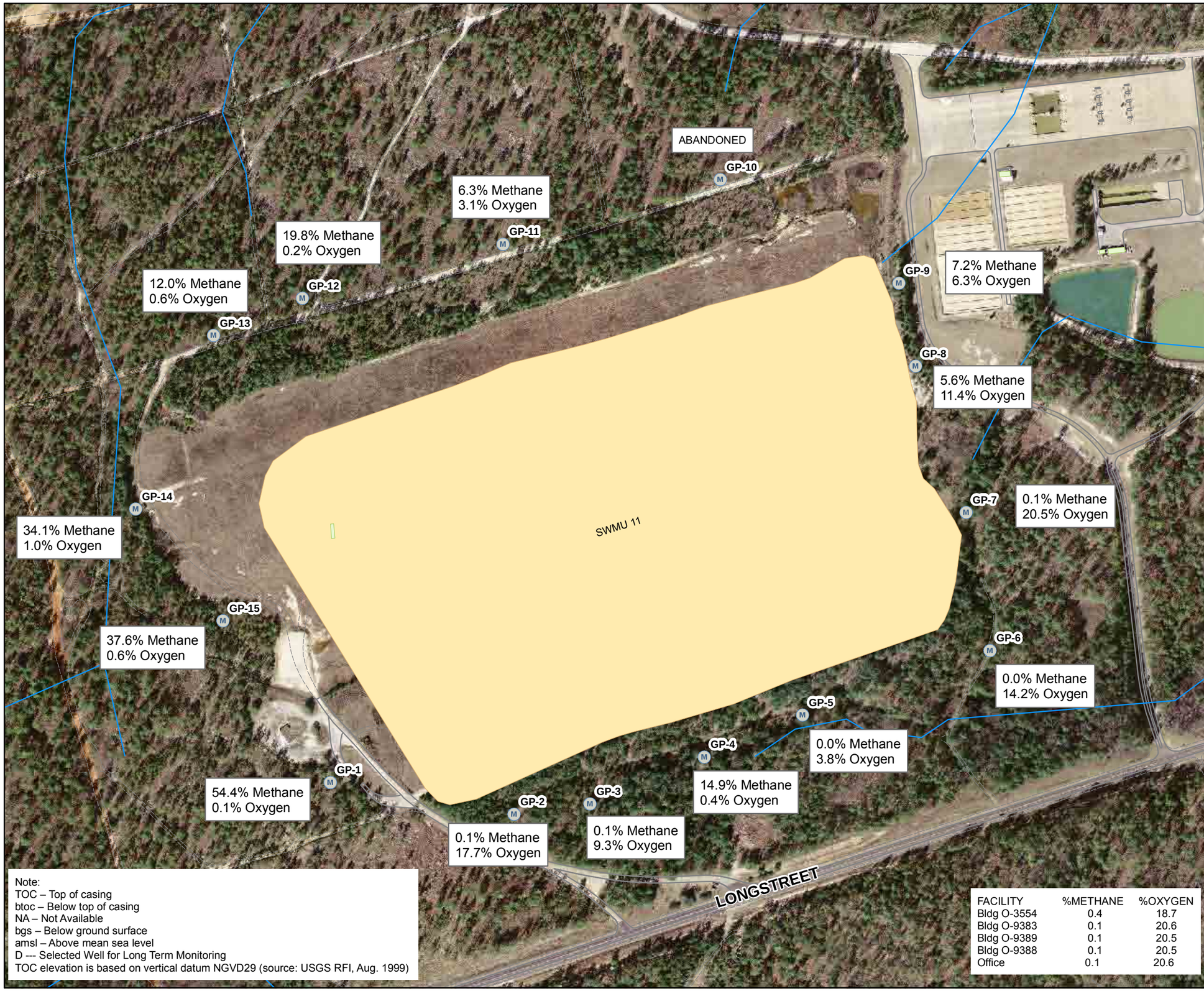
LOCATION MAP- LONGSTREET RD LANDFILL

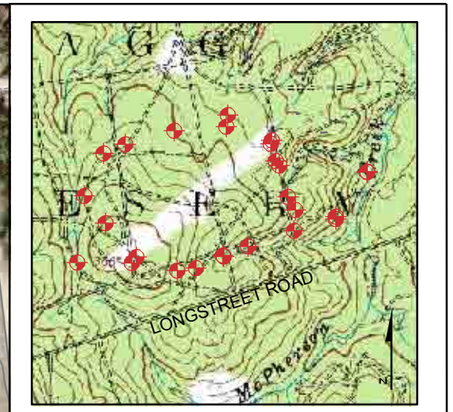
FT. BRAGG, NC

DATE: JAN 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	0.4	18.7
Bldg O-9383	0.1	20.6
Bldg O-9389	0.1	20.5
Bldg O-9388	0.1	20.5
Office	0.1	20.6



LEGEND

- METHANE SAMPLE
- STREAM
- BUILDING
- SWMU AREA
- ROAD
- TRAIL

1 inch = 320 feet

0 170 340 680'

N

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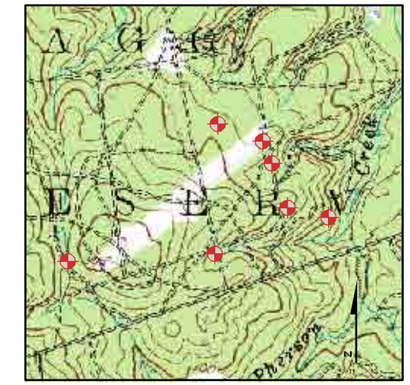
METHANE MONITORING RESULTS

LONGSTREET LANDFILL
FT. BRAGG, NC

DATE: JAN 2010 | FIGURE 3



LEGEND

- Groundwater Flow
- SWMU Area
- Longstreet Wells
- Stream

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

1 inch = 234 feet

0 112.5 225 450'

N

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LONGSTREET LANDFILL, FORT BRAGG, NC

POTENTIOMETRIC MAP

DATE: JAN 2010 | FIGURE 4

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	11-14-09	14:13	54.4 %	0.1 %	42.7 %
Gas-MW-2	11-14-09	13:00	0.1%	17.7 %	2.4 %
Gas-MW-3	11-14-09	12:53	0.1 %	9.3 %	10.1 %
Gas-MW-4	11-14-09	12:44	14.9 %	0.4 %	24.9 %
Gas-MW-5	11-14-09	13:11	0.0 %	3.8 %	14.2 %
Gas-MW-6	11-14-09	14:00	0.0 %	14.2 %	5.1%
Gas-MW-7	11-14-09	15:43	0.1%	20.5%	0.6%
Gas-MW-8	11-14-09	12:30	5.6%	11.4%	6.5 %
Gas-MW-9	11-14-09	12:25	7.2 %	6.3 %	9.1 %
Gas-MW-10**	11-14-09	N/A	N/A	N/A	N/A
Gas-MW-11	11-14-09	15:06	6.3 %	3.1 %	8.0 %
Gas-MW-12	11-14-09	14:50	19.8 %	0.2 %	29.5 %
Gas-MW-13	11-14-09	14:46	12.0%	0.6 %	18.8 %
Gas-MW-14	11-14-09	14:34	34.1 %	1.0 %	33.5 %
Gas-MW-15	11-14-09	14:25	37.6%	0.6 %	28.9 %
Scale House	11-14-09	14:15	0.4%	18.7%	0.1%
Bldg O-9383	11-14-09	15:30	0.1%	20.6 %	0.0 %
Bldg O-9389	11-14-09	15:40	0.1 %	20.5 %	0.0 %
Bldg O-9388	11-14-09	15:38	0.1 %	20.5 %	0.0 %
Office	11-14-09	15:25	0.1 %	20.6 %	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) 04/09	Water Elev. (ft. amsl) 04/09	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
SLMW-6	293.55	27.3	266.25	27.27	266.28	25.24	268.31	28.61	264.94	26.27	267.28	26.11	267.44	28.22	265.33
SLMW-7	290.5	20.69	269.81	21.48	269.02	20.03	270.47	22.45	268.05	20.76	269.74	20.59	269.91	22.19	268.31
SLMW-8	290.34	22.9	267.44	23.2	267.14	22.93	267.41	24.39	265.95	22.91	267.43	23.03	267.31	24.21	266.13
SLMW-9	289.54	39.2	250.34	39.57	249.97	37.3	252.24	39.29	250.25	38.31	251.23	37.3	252.24	38.72	250.82
SLMW-10	305.99	20.32	285.67	20.3	285.69	19.31	286.68	20.55	285.44	19.42	286.57	19.59	286.4	20.39	285.6
SLMW-11	357.8	78.36	279.44	78	279.8	74.83	282.97	77.48	280.32	78.96	278.84	77.62	280.18	79.2	278.6
SLMW-12AR	243.36	8.75	234.61	8.12	235.24	20.12	223.24	53.39	286.63	8.45	234.91	9.03	234.33	9.53	233.83
SLMW-12BR	243.42	9	234.42	9.1	234.32	9	234.42	9.45	233.91	9.23	234.19	8.09	235.33	9.2	234.22
SLMW-13	340.02	54.2	285.82	53.98	286.04	50.79	289.23	9.44	224.98	53.14	286.88	51.9	288.12	53.29	286.73

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-6-11-09	3.22	0.017	19.6	4.4	6.56	227.5
SLMW-7	GW-SLMW-7-11-09	5.53	0.225	15.0	10	0.86	-38.4
SLMW-8	GW-SLMW-8-11-09	N/A	N/A	N/A	N/A	N/A	N/A
SLMW-9	GW-SLMW-9-11-09	7.52	0.605	19.2	6.3	0.81	-94.7
SLMW-10	GW-SLMW-10-11-09	6.15	0.654	18.1	3	0.44	-6.4
SLMW-11R	GW-SLMW-11-11-09	4.67	0.021	17.7	5	4.25	209
SLMW-12AR	GW-SLMW-12AR-11-09	6.73	0.101	17.2	29.1	1.4	80.3
SLMW-12BR	GW-SLMW-12BR-11-09	4.77	0.076	17.6	3.0	1.59	175.8
SLMW-13	GW-SLMW-13-11-09	4.48	0.020	18.9	4.9	7.38	207.9
SW-1	SW-1-11-09	N/A	N/A	N/A	N/A	N/A	N/A
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.

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)	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-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-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
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	NS
1,1-dichloroethane	700	810*	<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
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	NS
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	NS
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	NS
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	NS
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	NS
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	NS
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	NS
1,4-dichlorobenzene	75	75	<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
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	NS
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	NS
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	NS
acetone	700	NA	NA	2.2	<2	<2	<2	<2	<2	7.6 J	<2	NA	6.97	<2	1.34J	<2	<2	24	52	6 J	NA	1.27J	<2	<2	<2	<2	9.72	9.8 J	NS
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	NS
benzene	1	5	<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	**3.22**	**4.99**	**2.54**	**4.03**	**3.2**	**4.5**	**2.72**	**3.6**	NS
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	1.24J	<2	<2	<2	<2	NS
chlorobenzene	50	100	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.29 J	<2	<2	1.78 J	2.75	1.69J	3.46	2.2	3.36	2.18	4.8	NS
chloroethane	2800	4.6*	<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	0.76 J	0.96J	0.30J	0.38J	<2	<2	1.10 J	9.1	NS
chloroform	70	80	0.24 J	<2	<2	<2	<2	0.27 J	0.21 J	0.31 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NS
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	2.13	<2	<2	<2	<2	NS
cis-1,2-dichloroethene	70	70	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.21 J	<2	<2	<2	<2	0.24 J	<2	<2	<2	55.9	**105**	42.5	42.4	25	60.9	35	39	NS
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	NS
dichlorodifluoromethane	1400	390*	<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
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	0.43 J	<2	<2	NS
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	NS
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	NS
methylene chloride (dichloromethane)	4.6	5	<2	<2	<2	<2	<2	0.21 J	<2	<2	<2	<2	<2	<2	<2	<2	0.26	<2	<2	<2	<2	<2	<2	0.75J	<2	0.43 J	<2	<2	NS
MTBE	200	13*	<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
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	NS
o-xylene	530#	10000#	<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
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	NS
tetrachloroethene	0.7	5	<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
toluene	1000	1000	<2	<2	0.43J	<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
trans-1,2-dichloroethene	70	100	<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
trichloroethene	2.8	5	<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
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	10.1	<2	NS
vinyl chloride	0.015	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	**59**	**54.2**	**24.6**	**36.6**	**19**	**33.2**	**10.1**	**12**	NS
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	NS
4-methylphenol (p-cresol)	3.5	180*	<10	<10	<10	<10	<10	<10	<10	<10	<10	1.87 J	<10	**14.6**	<10	**13.5**	<10	38.3	**12**	<10	**7.44 J**	<10	<10	<10	<10	<10	<10	<10	NS
benzoic acid	NA	NA	<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	NS
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	NS
diethylphthalate	5000	29000*	<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
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	NS
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	NS
phenol	300	NA	<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	NS
Pesticides (EPA 8081)																													
delta-BHC	NA	NA	<.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	NS
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	NS
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	NS
gamma-BHC	0.2	0.2	<.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	NS
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	NS
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	NS
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	NS
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	NS
Endosulfan I	NA	NA	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<.0505	<.0505	<0.025	<0.025	<0.025	<0.025	0.0143 J	<.0505	<0.025	<.0505	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	NS
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	NS
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	0.516 J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS
Arsenic	10	10	<2	<2	<2	<2	<2	<2	5.75	<2	<2	5.76	8.44	9.41	4.84	9.45	12.3	5.37	5.2	<2	5.17	6.67	4.63	3.32	5.92	5.85	1.05 J	3.6	NS
Barium	2000	2000	5.7 J	5.5	<2	6.07	7.22	6.22	8	7	6.9	46.8	47.5	50	37.7	63.2	8.3	59.6	47	<2	95.7	65.2	70	85.5	76.3	100	64.2	55	NS
Beryllium	NA	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	46.2	<4	NS
Cadmium	5	5	<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	NS
Chromium	50	100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	< 50	<5	<5	<5	<5	<5	<5	<5	<5	< 5	NS
Cobalt	NA	NA	<1	<1	<1	<1	<1	<1	<1	0.13 J	0.13 J	<1	<1	<1	0.586J	<1	<1	<1	0.48	<1	<1	<1	<1	1	<1	<1	<1	0.4	NS
Copper	1000	1000	<1	<1	<1	<1	<1	5.16J	<1	1.2	1.3	<1	<1	<1	3.41J	10.8	7.06	6 J	2.3 J	<1	<1	<1	<1	<1	<1	<1	<1	< 1	NS
Lead	15	15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.734 J	0.17 J	0.16 J	<1	<1	<1	<1	<1	<1	0.658 J	<1	NS
Nickel	100	730*	<50	<50	<50	4.96	<50	<50	<50	0.35 J	0.32 J	<50	<50	<50	1.74J	<50	<50	16.4	<50	<50	<50	<50	<50	<50	<50	<50	<50	< 50	NS
Selenium	50	50	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.34 J	<2	1.34J	<2	<2	<2	<2	0.27 J	<2	1.63 J	1.52J	1.04J	<2	<2	<2	<2	<2	NS
Silver	18	100*	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	NS
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	<2	<2	<2	<2	NS
Tin	NA	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	0.0347	<5	<5	<5	<5	<5	<5	<5	<5	0.317	<5	NS
Vanadium	NA	260*	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	8.33	<30	16.2	4.3 J	<30	<30	<30	<30	4.47J	12.0	21	9.1	1.4 J	NS
Zinc	2100	5000	<60	<60	<60	<60	<60	<60	<60	18	7.6 J	<60	<60	<60	5J	73.8	<60	76.5	3.9 J	<60	<60	<60	<60	6.59J	51.6	27J	27.7 J	<60	NS
Other Analyses																													
Sulfide (EPA 376.1)	250,000	250,000	NA	<200	<200	<200	<200	<200	<200	<200	<200	NA	<200	<200	<200	<200	<200	<200	<200	<200	NA	<200	<200	<200	<200	<200	<200	<200	NS
Cyanide (EPA 335.2)	154	200	NA	<20	<20	<20	14 J	<20	<20	<20	<20	NA	<20	<20	<20	<20	<20	<20	<20	<20	NA	<20	<20	<20	<20	<20	<20	<20	NS
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	<0.20	<0.20	<0.20	<0.20	NS
Nitrate/Nitrite (SM 4500 - NO3-E)	10,000	10,000	NA	60	0.055	0.021J	36 J	43	58	200	<40	NA	91	0.022J	0.058	74	30	<40	180 J	<40	NA	332	<40	0.017J	35 J	<40	35 J	NA	NS

Note: NA -- Not Available; NS -- Not Sampled; U -- Target analytes were not detected above the reporting limits; J -- Analyte was present but concentration is an estimated value. **Bold**--Concentratior for Chlordane.

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-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-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	SLMW-10 11/07	SLMW-10 11/08	SLMW-10 DUP 11/08	SLMW-10 06/09	SLMW-10 11/09	SLMW-11 04/05	SLMW-11 10/05	SLMW-11 4/06	SLMW-11 11/06	GW-SLMW-11 06/07
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
1,1-dichloroethane	700	810*	2.04	1.38J	1.39J	<2	3.170	3.11	7.6	4.8	1.25 J	1.41 J	1.6J	1.91J	1.85J	1.12J	<2	<2	1.35 J	0.92 J	0.9 J	0.97 J	1.1	3.86	2.18	1.68J	2.07	<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
1,2,4-trimethylbenzene	350	15 *	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.43 J	<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
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
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	0.51 J	<2	<2	<2	<2	<2
1,2-dichloroethane	0.38	5	<2	<2	<2	<2	<2	0.24 J	**0.44 J**	<2	<2	<2	<2	**0.58J**	**0.61J**	<2	<2	<2	**0.42 J**	**0.48 J**	<2	<2	**0.45 J**	<2	<2	<2	<2	<2
1,2-dichloropropane	0.56	5	<2	<2	<2	<2	.23J	<2	<2	0.33 J	**2.12**	**2.28**	**3.32**	**3.97**	**3.72**	**2.93**	<2	<2	**3.78**	**3.27**	**3.09**	**2.2**	**2.8**	**1.3 J**	<2	0.5J	**0.6J**	<2
1,4-dichlorobenzene	75	75	0.54J	0.43J	0.4J	<2	.660J	<2	<2	<2	2.75	2.63	3.99	5.6	4.7	3.9	4.1	3.4	5.99	<2	<2	3.4	6.9 J	<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-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	2.29J	<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
acetone	700	NA	<2	<2	<2	<2	<2	<2	<2	<2	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	26	NA	<2	<2	13.9	100
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
benzene	1	5	**1.09J**	0.71J	0.8J	**2.2**	**1.54 J**	**1.35 J**	**1.9**	**1.4**	**1.8 J**	**1.72 J**	**1.32J**	**1.31J**	**1.24J**	0.96J	<2	<2	**1.38 J**	1.0 J	1.0 J	**1**	**1.3**	**4.58**	**1.54J**	0.83J	0.93J	**2.1**
carbon disulfide	700	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.54J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chlorobenzene	50	100	0.34J	0.25J	0.28J	1.1	0.740 J	0.65 J	0.81 J	0.8 J	0.33 J	0.35 J	0.43J	0.59J	0.50J	0.4J	<2	<2	0.59 J	0.62 J	0.61 J	0.45 J	0.63 J	<2	<2	<2	<2	<2
chloroethane	2800	4.6*	<2	<2	0.22J	<2	0.530 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.42J	0.56J	0.82J	<2
chloroform	70	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
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	0.45 J	<2	<2	<2	<2	2.44	<2
cis-1,2-dichloroethene	70	70	1.26J	0.88J	0.71J	3.0	1.570 J	1.79 J	2.3	<2	9.33	10	13.4	15.8	15.5	8.96	9.1	8.9	13.6	11.8	11.6	9	<2	9.47	4.56	2.88	1.71J	5.7
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
dichlorodifluoromethane	1400	390*	<2	<2	<2	<2	<2	<2	<2	<2	2.96	3.5	2.13	1.5J	1.18J	0.62J	<2	<2	<2	<2	<2	<2	<2	4.85	0.8J	<2	0.68J	<2
diisopropyl ether	70	NA	<2	<2	<2	<2	<2	<2	<2	<2	0.54 J	0.56 J	1.04J	1.15J	1.22J	0.88J	<2	<2	1.13 J	<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	<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	0.64 J	<2	<2	<2	0.23J	<2	<2	<2
methylene chloride (dichloromethane)	4.6	5	<2	<2	<2	<2	0.200 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.28 J	<2	<2	<2	<2	<2	<2	<2	<2	<2
MTBE	200	13*	0.39J	0.22J	<2	<2	<2	0.29 J	<2	<2	0.2 J	0.2 J	0.37J	0.44J	0.42J	0.28J	<2	<2	0.39 J	0.57 J	0.54 J	<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	0.95 J	<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	0.33 J	<2	<2	0.34 J	0.26J	<2	<2	<2
sec-butylbenzene	70	NA	<2	<2	<2	<2	0.230 J	<2	<2	<2	<2	<2	<2	0.28J	0.22J	0.21J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
tetrachloroethene	0.7	5	0.32J	0.29J	0.21J	<2	0.280 J	0.41 J	0.39 J	0.58 J	**0.75 J**	0.45 J	**0.71J**	**0.96J**	**0.74J**	0.55J	<2	<2	0.31 J	0.25 J	0.26 J	<2	0.29 J	**2.64**	0.46J	<2	0.49J	<2
toluene	1000	1000	<2	0.46J	<2	<2	0.200 J	0.33 J	0.35 J	<2	<2	<2	<2	0.35J	0.55J	<2	<2	<2	<2	<2	0.24 J	<2	<2	<2	<2	3.16	<2	<2
trans-1,2-dichloroethene	70	100	<2	<2	<2	<2	<2	<2	<2	<2	0.24 J	0.23 J	0.24J	0.29J	0.30J	0.59J	<2	<2	0.28 J	0.21 J	0.22 J	<2	0.27 J	<2	<2	<2	<2	<2
trichloroethene	2.8	5	<2	0.45J	0.43J	0.6 J	0.740 J	0.6 J	0.67 J	0.73 J	0.88 J	1.01 J	1.15J	1.27J	1.29J	0.89J	<2	<2	1.00 J	0.91 J	0.89 J	0.59 J	0.94 J	**3.01**	1.28J	0.59J	0.96J	2.0
trichlorofluoromethane	2100	1300*	0.53J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.28J	<2	<2	<2
vinyl chloride	0.015	2	**1.45J**	**0.69J**	**0.73J**	<2	**1.71 J**	**1.41 J**	**2**	**1.2**	**1.91 J**	**3.58**	**2.48**	**2.8**	**2.62**	**1.7**	<2	<2	**2.59 J**	**1.58 J**	**1.72 J**	**1.3**	**1.5**	**3.57**	**0.9J**	**0.78J**	**0.8J**	<2
SVOCs (EPA 8270C)																												
1,4-dichlorobenzene (para)	1.4	75	<10	<10	<10	<10	<10	0.54 J	<10	<10	1.31 J	1.57 J	1.75J	2.79J	2.62J	**2.7J**	**1.94 J**	**1.75 J**	<10	**3.37 J**	**4.25 J**	<10	<10	<10	<10	<10	<10	<10
4-methylphenol (p-cresol)	3.5	180*	<10	<10	<10	<10	<10	<10	2.1 J	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	1.95 J	<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	<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
diethylphthalate	5000	29000*	<10	<10	<10	2.55 J	1.44 J	<10	0.95 J	<10	<10	<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	3 J	<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	<10	<10	<10	5.02	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	4.41	<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
Pesticides (EPA 8081)																												
delta-BHC	NA	NA	<.0505	<.0505	<.0505	<.0505	.015 PJ	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.124	<.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	0.0496	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
beta-BHC	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	0.065	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.123	<.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	0.0496	<.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	**0.1**	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
gamma-Chlordane*	0.1	2	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	**0.11J**	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.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	<.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
Endosulfan I	NA	NA	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<.0505	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<.0505	<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	**0.06J**	<.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**
Arsenic	10	10	6.28	**11**	**11.4**	**10.8**	8.98	**13.8**	8.6	8.7	1.13 J	1.17 J	<2	1.31J	1.31J	1.88J	3.62	3.75	4.82	2.11	2.34	3.1	3.6	10.4	7.5	7.92	2.65	**25.5**
Barium	2000	2000	39	40	49.3	70.4	46.8	49	46	41	77.9	79.2	76.8	<2	110	123	139	129	118	0.15	0.151	170	130	28.8	19.1	30	116	50.0
Beryllium	NA	4	<4	<4	<4	<4	<4	41	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	56.3	56.8	<4	<4	<4	<4	<4	<4	<4
Cadmium	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.50J	<1	0.532 J	0.518 J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	50	100	<5	<5	<5	<5	<5	<5	0.62 J	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	0.22 J	0.27 J	<5	<5	<5	<5	4.61 J
Cobalt	NA	NA	<1	0.01J	1.25	<1	<1	3.11 J	1	0.93	<1	<1	<1	<1	<1	1.45	<1	1.29 J	3 J	5.7	6.1	2	2.8	<1	<1	0.01J	2.13	1.02 J
Copper	1000	1000	<1	0.01J	13.8	5.59 J	<5	<1	0.76 J	0.33 J	<1	<1	<1	<1	<1	<1	6.64 J	5.65 J	<1	<1	<1	0.39 J	0.37 J	<1	<1	0.01J	<1	9.94 J
Lead	15	15	<1	0.66J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.14 J	<1	<1	<1	1.22	<1	<1
Nickel	100	730*	<50	<50	<50	<50	<50	<50	0.87	0.69 J	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	0.59 J	<50	<50	<50	<50	1.41J	<50
Selenium	50	50	1.83J	1.32J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.04J	<2	<2	<2	<2	<2	0.25 J	0.25 J	<2	<2	1.39J	1.12J	<2
Silver	18	100*	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<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	<2	<2	<2	<2
Tin	NA	NA	<5	<5	<5	<5	<5	0.0139 J	0.45 J	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	0.0116 J	<5	<5	<5	<5	<5	<5	<5
Vanadium	NA	260*	<30	<30	<30	3.07 J	7.1	25	<30	<30	<30	<30	<30	<30	<30	<30	3.77 J	4.23	9	39.4	39	1.9 J	1.5 J	<30	<30	<30	<30	5.32
Zinc	2100	5000	<60	<60	5.56J	56.6	25.6	<60	22	70	<60	<60	<60	<60	<60	<60	62.4	62.8	41 J	<60	<60	28	3.1 J	<60	<60	0.02J	<60	39.7
Other Analyses																												
Sulfide (EPA 376.1)	250,000	250,000	<200	<200	<200	<200	<200	<200	<200	<200	NA	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	NA	<200	<200	<200	<200
Cyanide (EPA 335.2)	154	200	<20	<20	<20	<20	<20	<20	<20	<20	NA	NA	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	NA	<20	<20	<20	14 J
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	<0.20	<0.20	<0.20	<0.20
Nitrate/Nitrite (SM 4500 - NO3-E)	10,000	10,000	<40	0.01J	0.015J	29 J	32	<40	<40	<40	NA	NA	19	0.038J	0.038J	<40	38 J	49	86	84	65	NA	<40	NA	51	0.018J	0.060	33 J

ı exceeds NC 2L Std. * No MCL, used PRG. #Used total values. **Used values

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	GW-SLMW-11 11/07	GW-SLMW-11R 11/08	SLMW-11R 06-09	SLMW-11R 11-09	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-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
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
1,1-dichloroethane	700	810*	4.05	0.56 J	2.9	0.42 J	<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	1.41J	1.39J	<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
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
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
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
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
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
1,2-dichloropropane	0.56	5	**.950 J**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.23 J	<2	<2	<2	0.42J	0.45J	<2	<2	<2	<2	<2	<2	<2	<2
1,4-dichlorobenzene	75	75	0.300 J	<2	0.48 J	<2	<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	1.07J	1.15J	<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	9.8	<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
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
acetone	700	NA	100	<2	<2	<2	NA	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NA	NA	<2	<2	<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
benzene	1	5	**1.30 J**	<2	0.59 J	<2	<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	**1.11J**	**1.15J**	<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
chlorobenzene	50	100	<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	0.58J	0.6J	<2	<2	<2	<2	<2	<2	<2	<2
chloroethane	2800	4.6*	.200 J	<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
chloroform	70	80	<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
chloromethane (methyl chloride)	2.6	NA	<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
cis-1,2-dichloroethene	70	70	3.24	<2	1.3	<2	<2	10.7	<2	2.9	2.58	3.19	1.09J	<2	1.22 J	1.08 J	0.83 J	<2	<2	3.79	4.02	<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
dichlorodifluoromethane	1400	390*	0.410 J	1.64 J	1.3	1.1	<2	3.73	<2	5.11	5.15	4.41	3.61	<2	1.81 J	1.78 J	<2	<2	<2	10.2	11.6	<2	<2	<2	<2	<2	<2	<2	<2
diisopropyl ether	70	NA	.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
isopropylbenzene	70	660*	<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
m&p xylene	530#	10000#	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
methylene chloride (dichloromethane)	4.6	5	0.230 J	<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	0.25 J	<2	<2	<2
MTBE	200	13*	<2	<2	<2	<2	<2	<2	<2	0.32J	0.35J	0.31J	<2	<2	0.22 J	0.21 J	<2	<2	<2	0.36J	0.38J	<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	<2	<2	<2	<2	<2
o-xylene	530#	10000#	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
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
tetrachloroethene	0.7	5	0.380J	0.4 J	**2.3**	0.3 J	<2	0.42 J	<2	0.32J	0.3J	0.35J	<2	<2	<2	<2	<2	<2	<2	0.4J	0.38J	<2	<2	<2	<2	<2	<2	<2	<2
toluene	1000	1000	0.550 J	<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
trans-1,2-dichloroethene	70	100	<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
trichloroethene	2.8	5	1.01 J	0.29 J	1.5	0.22 J	<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	0.71J	0.68J	<2	<2	<2	<2	<2	<2	<2	<2
trichlorofluoromethane	2100	1300*	<2	0.2 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
vinyl chloride	0.015	2	**0.48 J**	<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	**3.25**	**3.5**	<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	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	1.98J	<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	<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	<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
diethylphthalate	5000	29000*	<10	<10	<10	<10	<10	3.49 J	<10	1.51J	1.23J	<10	1.15J	1.28 J	<10	<10	<10	<10	<10	1.46J	2.2J	<10	<10	<10	<10	<10	<10	<10	<10
di-n-butylphthalate	700	3600*	<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
bis(2-Ethylhexyl)phthalate	2.5	6	<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
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
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	<.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
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
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	<.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
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
Aldrin	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.095	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.0918	<.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
Endosulfan I	NA	NA	<0.025	<0.025	<0.025	<.0505	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<.0505	<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	0.125	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	**0.0255J**	<.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
Arsenic	10	10	4.87	<2	<2	<2	<2	1.95 J	<2	2.02	1.61J	<2	1.05J	1.05 J	<2	<2	<2	0.42 J	0.5 J	1.26J	1.61J	<2	<2	<2	<2	<2	<2	<2	<2
Barium	2000	2000	33.7	10.5	11 J	7.2	36	40.1	43.4	27.7	27.7	30	33.2	34.1	42.0	41.0	44.8	38	41	27.2	28.4	35	30	34.5	41.5	41	43.2	42	37
Beryllium	NA	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.13 J	0.12 J	<4	<4	<4	<4	<4	<4	<4	<4	0.36	0.33
Cadmium	5	5	<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
Chromium	50	100	<5	<5	< 5	0.22 J	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	< 5	0.74 J	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Cobalt	NA	NA	<1	<1	0.25	0.15 J	<1	<1	<1	<1	<1	<1	0.698J	<1	<1	<1	<1	< 1	0.8	<1	<1	<1	<1	1.46	<1	<1	<1	1.1	1
Copper	1000	1000	8.4	<1	< 1	0.73 J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	< 1	0.53 J	<1	<1	<1	<1	<1	<1	6 JB	<1	< 1	1.2
Lead	15	15	<1	0.636 J	<1	<1	<1	<1	0.611	<1	<1	0.50J	<1	0.819 J	<1	<1	0.738 J	0.34	0.44	<1	<1	0.623J	0.50J	<1	<1	<1	2.72	0.17 J	0.26 J
Nickel	100	730*	<50	<50	< 50	0.58	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	< 50	1	<50	<50	<50	<50	2.29	<50	4 J	<50	2.2 J	1.8
Selenium	50	50	<2	<2	<2	<2	<2	1.89 J	<2	1.54J	2.24	<2	<2	<2	<2	<2	<2	<2	<2	1.48J	1.46J	<2	<2	<2	<2	<2	<2	<2	<2
Silver	18	100*	<30	5.7 J	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<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	<2	<2	<2	<2	0.1 J
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	<5	<5	<5	<5	<5
Vanadium	NA	260*	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
Zinc	2100	5000	<60	<60	46	3.9 J	<60	<60	21.4	<60	<60	<60	<60	12.6 J	<60	<60	<60	4.5 J	12	99.7	<60	<60	<60	6.33J	<60	<60	<60	8.3 J	20
Other Analyses																													
Sulfide (EPA 376.1)	250,000	250,000	<200	<200	<200	<200	NA	NA	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	NA	NA	<200	<200	<200	<200	<200	<200	<200	<200
Cyanide (EPA 335.2)	154	200	<20	<20	<20	<20	NA	NA	NA	<20	<20	<20	<20	<20	<20	<20	<20	<20	4.2 J	NA	NA	<20	<20	<20	<20	<20	<20	<20	<20
Mercury	1.05	2	<0.20	0.2	<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	<0.20	<0.20	<0.20
Nitrate/Nitrite (SM 4500 - NO3-E)	10,000	10,000	45	130	270 J	<40	NA	NA	NA	25J	<40	0.033J	0.276	217	398	336	244	240 J	640 J	NA	NA	48	0.033J	0.022J	20 J	52	146	150 J	<40

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	Longstreet																										
			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	SLMW-13 06/09	SLMW-13 11/09	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-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
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
1,1-dichloroethane	700	810*	<2	<2	<2	<2	<2	<2	<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	0.20 J	0.31 J	<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
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
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
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
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
1,2-dichloroethane	0.38	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.41J	<2	<2	<2	<2	0.34 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dichloropropane	0.56	5	<2	<2	<2	<2	<2	<2	<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
1,4-dichlorobenzene	75	75	<2	<2	<2	<2	<2	<2	<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
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	7.7 J
2-butanone	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.78J	<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	0.21 J	<2	<2
acetone	700	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	NA	<2	<2	<2	<2	<2	<2	<2	<2	NA	3.5	<2	<2	<2	4.29 J	<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	2.59J	<2	<2	<2	<2	<2	<2	<2
benzene	1	5	<2	<2	<2	<2	<2	<2	<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
carbon disulfide	700	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.28J	<2	<2	<2	<2	<2	<2	<2
chlorobenzene	50	100	<2	<2	<2	<2	<2	<2	<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
chloroethane	2800	4.6*	<2	<2	<2	<2	<2	<2	<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
chloroform	70	80	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.43 J	<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	0.51J	0.52J	<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	5.02	5.01	1.79J	6.1	4.73	5.24	4.8	<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
dichlorodifluoromethane	1400	390*	<2	<2	<2	<2	<2	<2	<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	0.23 J	<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	<2	<2
isopropylbenzene	70	660*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.2J	<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
methylene chloride (dichloromethane)	4.6	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.30 J	<2	<2	<2	<2	<2	<2	<2	<2	0.22 J	<2	<2	<2
MTBE	200	13*	<2	<2	<2	<2	<2	<2	<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
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
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	<2	<2	<2	<2	<2
sec-butylbenzene	70	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.20 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
tetrachloroethene	0.7	5	<2	<2	<2	<2	<2	<2	<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
toluene	1000	1000	<2	<2	1.15J	<2	<2	<2	<2	<2	<2	<2	<2	0.42J	<2	<2	<2	<2	<2	<2	<2	<2	1.62J	<2	<2	<2	<2	<2	<2
trans-1,2-dichloroethene	70	100	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.27J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
trichloroethene	2.8	5	<2	<2	<2	<2	<2	<2	<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
trichlorofluoromethane	2100	1300*	<2	<2	<2	<2	<2	<2	<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
vinyl chloride	0.015	2	<2	<2	<2	<2	<2	<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
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	0.91 J	<10	<10	<10	<10	<10	<10	<10	**1.87 J**	<10	<10	<10
4-methylphenol (p-cresol)	3.5	180*	<10	<10	<10	<10	**13.1**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<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	<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
diethylphthalate	5000	29000*	<10	<10	<10	<10	<10	<10	<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
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
bis(2-Ethylhexyl)phthalate	2.5	6	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	1.35J	<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
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	<.0505	<.0505	<.0505	<.0505	<.0505	0.038 J
alpha-BHC	NA	NA	<.0505	<.0505	<.0505	0.0255J	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.04 J
beta-BHC	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.042	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.03	<.0505	0.051 J
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	<.0505	<.0505	<.0505	<.0505	<.0505
alpha-Chlordane*	0.1	2	<.0505	<.0505	<.0505	0.0306J	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
gamma-Chlordane*	0.1	2	<.0505	<.0505	<.0505	0.0255J	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.0354J	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
Aldrin	NA	NA	<.0505	<.0505	<.0505	0.0306J	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	0.131	<.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	**0.0505J**	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	**0.0306J**	<.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	<.0505	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<.0505	<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	<.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
Arsenic	10	10	<2	<2	<2	<2	1.11 J	<2	<2	<2	<2	<2	2.37	3.89	5.69	**14.0**	**27.7**	**14.4**	6.6	1.2	<2	1.09J	1.08J	<2	1.18 J	1.85 J	5.79	0.53 J	0.76 J
Barium	2000	2000	8.7 J	<2	5	5.43	10.9	7	8.3	9	6.9	10.2	31.7	20	22	35.0	21	28	26	8.2	10.3	15.6	10	11.6	9.3	20	22	23	15
Beryllium	NA	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	19	<4	<4	<4	<4	<4	<4	<4	<4	<4	0.36 J	0.094 J
Cadmium	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.774J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	50	100	<5	<5	<5	<5	<5	<5	<5	0.17 J	0.19 J	<5	<5	<5	<5	<5	<5	<5	0.16 J	0.74 J	<5	<5	<5	<5	<5	<5	<5	<5	1.4 B
Cobalt	NA	NA	<1	<1	<1	<1	<1	<1	<1	0.11 J	0.083 J	<1	<1	<1	<1	<1	<1	<1	0.19 J	0.18 J	<1	<1	<1	<1	<1	<1	<1	0.26	0.3
Copper	1000	1000	<1	<1	<1	<1	<1	<1	<1	0.50 J	0.3 J	<1	<1	<1	<1	7.68 J	<1	<1	0.39 J	4.4	<1	<1	<1	<1	<1	5.4	<1	0.51 J	1.8
Lead	15	15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.08	<1	<1	1.85	<1	<1	0.12 J	0.51	<1	<1	2.36	0.56J	<1	<1	<1	0.19 J	0.72
Nickel	100	730*	<50	<50	<50	1.27J	<50	<50	<50	0.36 J	0.42 J	<50	22.9J	<50	<50	<50	<50	<50	0.54 J	1.7	<50	<50	<50	<50	<50	<50	<50	0.6	1.2
Selenium	50	50	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.07J	1.16J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Silver	18	100*	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	10.1J	<30	<30	<30	<30	<30	<30	<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	<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	<5	<5	<5	<5	<5
Vanadium	NA	260*	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	10.1J	<30	<30	13.1	11	11	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
Zinc	2100	5000	<60	<60	<60	10.3	<60	<60	<60	14	3.4 J	<60	55.3J	<60	5.73J	117	42 J	<60	20	15	37.1 J	<60	0.02J	34.5	24.5 J	<60	<60	12	24
Other Analyses																													
Sulfide (EPA 376.1)	250,000	250,000	NA	<200	<200	<200	<200	<200	<200	<200	<200	NA	<200	<200	<200	<200	<200	<200	<200	<200	NA	<200	<200	<200	<200	<200	<200	<200	<200
Cyanide (EPA 335.2)	154	200	NA	<20	<20	<20	<20	<20	<20	<20	2.6 J	NA	<20	<20	<20	18 J	<20	<20	<20	4.2 J	NA	<20	<20	<20	18 J	<20	<20	<20	2.7 J
Mercury	1.05	2	<0.20	<0.20	<0.20	<0.20	0.12 J	<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
Nitrate/Nitrite (SM 4500 - NO3-E)	10,000	10,000	NA	36J	0.068	0.094	140	387	151	420	<40	NA	78	0.058J	0.03J	11 J	<40	541	NA	<40	NA	<40	0.331J	0.492	68	<40	<40	880	<40

COMPOUNDS (µg/L)	Groundwater NC 2L Standard (ug/l)	EPA Drinking water MCL (ug/l)	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
1,1-dichloroethane	700	810*	<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
1,2,4-trimethylbenzene	350	15 *	<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
1,2-dibromoethane	0.0004	0.05	<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
1,2-dichloroethane	0.38	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-dichloropropane	0.56	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,4-dichlorobenzene	75	75	<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-butanone	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
4-isopropyltoluene	NA	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
acetone	700	NA	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
benzene	1	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
carbon disulfide	700	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chlorobenzene	50	100	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chloroethane	2800	4.6*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
chloroform	70	80	<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
cis-1,2-dichloroethene	70	70	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
dibromochloromethane	0.41	80	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
dichlorodifluoromethane	1400	390*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
diisopropyl ether	70	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
isopropylbenzene	70	660*	<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
methylene chloride (dichloromethane)	4.6	5	<2	<2	<2	<2	<2	<2	<2	<2	0.23 J	<2
MTBE	200	13*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
naphthalene	21	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-xylene	530#	10000#	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
sec-butylbenzene	70	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
tetrachloroethene	0.7	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
toluene	1000	1000	0.22J	<2	<2	<2	<2	<2	<2	<2	<2	<2
trans-1,2-dichloroethene	70	100	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
trichloroethene	2.8	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
trichlorofluoromethane	2100	1300*	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
vinyl chloride	0.015	2	<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	<10
4-methylphenol (p-cresol)	3.5	180*	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
benzoic acid	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
benzyl alcohol	NA	NA	<10	<10	<10	<10	6.48 J	<10	<10	<10	<10	<10
diethylphthalate	5000	29000*	<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
bis(2-Ethylhexyl)phthalate	2.5	6	<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
Pesticides (EPA 8081)												
delta-BHC	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
alpha-BHC	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
beta-BHC	NA	NA	<.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
alpha-Chlordane*	0.1	2	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
gamma-Chlordane*	0.1	2	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
Aldrin	NA	NA	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505	<.0505
Dieldrin	0.0022	NA	<.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	<.0505
Heptachlor	0.0078	0.4	**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
Arsenic	10	10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Barium	2000	2000	<2	<2	<2	<2	<2	<2	113	<2	<2	<10
Beryllium	NA	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cadmium	5	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	50	100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<20
Cobalt	NA	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2
Copper	1000	1000	<1	<1	<1	<1	<1	<1	<1	<1	5.04 J	<20
Lead	15	15	<1	<1	<1	<1	0.631 J	<1	<1	<1	<1	<1
Nickel	100	730*	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium	50	50	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Silver	18	100*	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
Thallium	NA	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Tin	NA	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vanadium	NA	260*	<30	<30	<30	<30	<30	<30	<30	<30	<30	<20
Zinc	2100	5000	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60
Other Analyses												
Sulfide (EPA 376.1)	250,000	250,000	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Cyanide (EPA 335.2)	154	200	<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	<20
Nitrate/Nitrite (SM 4500 - NO3-E)	10,000	10,000	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:6/1/07 TIME: 1040
SAMPLED BY: Horace Cooper
WEATHER CONDITIONS: Warm, partly cloudy

Location: Longstreet landfill	**Sample ID:GW-SLMW-8-06-07**

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): 62.91 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 22.93 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 6.6 (gallons)
Flow Rate : 350 (ml/min) Purge vol: 19.80 (gallons)
Length of Time Purged: 45 (minutes) Purge time: 955
Amount Purged= 4.2 (gallons)

4. **FIELD PARAMETERS**

INSTRUMENT	CALIBRATED
pH Meter –Hydrolab Minisonde 4a	☒
Conductivity Meter - Hydrolab Minisonde 4a	☒
Temperature – Hydrolab Minisonde 4a	☒
Turbidity Meter – Hach 2100 P	☒
DO Meter – Hydrolab Minisonde 4a	☒
ORP Meter – Hydrolab Minisonde 4a	☒
CO_2– Hach Digital Titrator	☐

Time	1010	1020	1029	1039		
pH	4.99	5.06	5.11	5.13		
Sp. Cond	206.2	222.0	237.1	246.1		
Temp. °C	21.46	21.72	22.00	22.02		
Turbidity	10.4	10.7	10.0	11.1		
DO	5.17	1.93	1.65	1.41		
ORP	74	66	63	60		

5. COMMENTS: Went dry, not done.

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

1. CLIENT: Ft. Bragg, NC
DATE:9/16/09 TIME: 0930
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Warm, partly cloudy

Location: Longstreet landfill	**Sample ID:GW-SLMW-9-11-09**

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): 46.00 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 38.58 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 1.2 (gallons)
Flow Rate : 400 (ml/min) Purge vol: 3.60 (gallons)
Length of Time Purged: 45 (minutes) Purge time: 845
Amount Purged= 4.8 (gallons)

4. **FIELD PARAMETERS**

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

Time	0910	0915	0920			
pH	7.18	7.49	7.52			
Sp. Cond	622	604	605			
Temp. °C	19.4	19.3	19.2			
Turbidity	9.5	7.9	6.3			
DO	0.91	0.81	0.91			
ORP	-75.1	-97.8	-94.7			

5. COMMENTS: Oil sheen was on top of water sample. Access problems. No road, overgrown. Dup taken at 1115

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

1. CLIENT: Ft. Bragg, NC
DATE:11/13/09 TIME: 1550
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Warm, partly cloudy

Location: Longstreet landfill	**Sample ID:GW-SLMW-11R-11-09**

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): 87.00 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 79.00 (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: 3.60 (gallons)
Length of Time Purged: 44 (minutes) Purge time: 1545
Amount Purged= 5.8 (gallons)

4. **FIELD PARAMETERS**

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

Time	1537	1542	1547			
pH	4.78	4.73	4.67			
Sp. Cond	23	21	21			
Temp. °C	17.5	17.6	17.7			
Turbidity	9	6	5			
DO	4.45	4.34	4.25			
ORP	190.5	205	209			

5. COMMENTS: PID: 3.7 ppm

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

1. CLIENT: Ft. Bragg, NC
DATE:11/16/09 TIME: 0800
SAMPLED BY: Horace Cooper
WEATHER CONDITIONS: Warm, partly cloudy

Location: Longstreet landfill	**Sample ID:GW-SLMW-13-11-09**

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): 59.45 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 53.35 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 1.0 (gallons)
Flow Rate : 500 (ml/min) Purge vol: 4.20 (gallons)
Length of Time Purged: 30 (minutes) Purge time: 800
Amount Purged= 4.0 (gallons)

4. **FIELD PARAMETERS**

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

Time	0745	0750	0755			
pH	34.58	4.48	4.48			
Sp. Cond	22	18	20			
Temp. °C	19.0	19.0	18.9			
Turbidity	9.3	5.7	4.9			
DO	7.40	7.41	7.38			
ORP	190.4	207.2	207.9			

5. COMMENTS: PID: 0.0 ppm

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

1. CLIENT: Ft. Bragg, NC
DATE:11/16/09 TIME: 1315
SAMPLED BY: Louis and James
WEATHER CONDITIONS: Warm, partly cloudy

Location: Longstreet landfill	**Sample ID:GW-SLMW-06-11-09**

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**
Flow Rate : 500 (ml/min) Purge vol: 4.20 (gallons)
Length of Time Purged: 25 (minutes) Purge time: 800
Amount Purged= 3.3 (gallons)

4. **FIELD PARAMETERS**

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

Time	1255	1300	1305			
pH	3.18	3.19	3.12			
Sp. Cond	18	17	17			
Temp. °C	19.4	19.5	19.6			
Turbidity	9.9	1.7	4.4			
DO	6.56	6.54	6.56			
ORP	220.1	223.6	227.5			

5. COMMENTS: PID: 1.7 ppm

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

1. CLIENT: Ft. Bragg, NC
DATE:11/16/09 TIME: 1330
SAMPLED BY: Horace Cooper
WEATHER CONDITIONS: Warm, partly cloudy

Location: Longstreet landfill	**Sample ID:GW-SLMW-10-11-09**

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): 20.39 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 25.00 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = -0.8 (gallons)
Flow Rate : 500 (ml/min) Purge vol: 4.20 (gallons)
Length of Time Purged: 30 (minutes) Purge time: 1300
Amount Purged= 4.0 (gallons)

4. **FIELD PARAMETERS**

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

Time	1305	1310	1315	1320	1325	
pH	5.98	606	6.11	6.14	6.15	
Sp. Cond	663	653	650	652	654	
Temp. °C	17.7	17.8	18.0	18.1	18.1	
Turbidity	4	4	7	3	3	
DO	1.07	.98	.48	.45	.44	
ORP	17.1	1.3	-2.3	-4.7	.6.4	

5. COMMENTS: PID: 2.5 ppm; Dup1, MS (1400) and MSD (1500) were taken.

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

1. CLIENT: Ft. Bragg, NC
DATE:11/13/09 TIME: 1205
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Warm, partly cloudy

Location: Longstreet landfill	**Sample ID:GW-SLMW-12BR-11-09**

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): 25.00 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 9.20 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 2.6 (gallons)
Flow Rate : 500 (ml/min) Purge vol: 4.20 (gallons)
Length of Time Purged: 15 (minutes) Purge time: 800
Amount Purged= 2.0 (gallons)

4. **FIELD PARAMETERS**

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

Time	1150	1155	1200			
pH	5.13	4.79	4.77			
Sp. Cond	74	75	76			
Temp. °C	17.4	17.5	17.6			
Turbidity	4.0	3.0	3.0			
DO	1.55	1.52	1.59			
ORP	186.7	175.9	175.8			

5. COMMENTS: PID: 0.0 ppm

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

1. CLIENT: Ft. Bragg, NC
DATE:11/13/09 TIME: XXXX
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Warm, partly cloudy

Location: Longstreet landfill	**Sample ID:GW-SLMW-08-11-09**

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): 25.00 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 24.21 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 0.1 (gallons)
Flow Rate : 500 (ml/min) Purge vol: 4.20 (gallons)
Length of Time Purged: 0 (minutes) Purge time: 1110
Amount Purged= 0.0 (gallons)

4. **FIELD PARAMETERS**

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

Time	1100					
pH						
Sp. Cond						
Temp. °C						
Turbidity						
DO						
ORP						

5. COMMENTS: PID: 0.0 ppm, well had approx 400 mL of turbid water in it and went dry. Kevin Haborak (TM) was notified.

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

1. CLIENT: Ft. Bragg, NC
DATE:11/13/09 TIME: 1235
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Warm, partly cloudy

Location: Longstreet landfill	**Sample ID:GW-SLMW-7-11-09**

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): 30.00 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 22.19 (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: 4.20 (gallons)
Length of Time Purged: 30 (minutes) Purge time: 800
Amount Purged= 4.0 (gallons)

4. **FIELD PARAMETERS**

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

Time	1200	1205	1215	1225		
pH	6.24	5.57	5.49	5.53		
Sp. Cond	225	275	276	276		
Temp. °C	15.4	14.9	15.0	15.0		
Turbidity	14.1	18.7	14.6	10.0		
DO	1.17	1.32	0.86	0.86		
ORP	37.8	2-28.0	-33.6	-38.4		

5. COMMENTS: PID: 1.8 ppm. Replaced well cap.

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

1. CLIENT: Ft. Bragg, NC
DATE:11/12/09 TIME: 1235
SAMPLED BY: Louis and Jackson
WEATHER CONDITIONS: Warm, partly cloudy

Location: Longstreet landfill	**Sample ID:GW-SLMW-12AR-11-09**

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): 25.00 (ft) Diameter (d): 2.00 (in)
Depth to Water (dw): 9.53 (ft) Diameter (d): 0.167 (ft)
Well Volume = ($5.904 \times d^2$ (wd-dw)) = 2.5 (gallons)
Flow Rate : 500 (ml/min) Purge vol: 4.20 (gallons)
Length of Time Purged: 30 (minutes) Purge time: 950
Amount Purged= 4.0 (gallons)

4. **FIELD PARAMETERS**

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

Time	1050	1055	1100			
pH	6.78	6.75	6.73			
Sp. Cond	84	95	101			
Temp. °C	17.1	17.1	17.2			
Turbidity	35.2	32.9	28.1			
DO	1.42	1.36	1.40			
ORP	84.8	81.9	80.3			

5. COMMENTS: PID: 0.0 ppm. Pumped more than five times the volume.
SW1 10:25 SW2 1200

APPENDIX B

DATA VALIDATION REPORTS

QA LEVEL II - DATA EVALUATION CHECKLIST

Company Name: USACE
Project Name: Longstreet
Reviewer: Kevin Kalogeraki
Laboratory: TestAmerica
Analytical Method (type and no.): 8260B (4), 8270C (3), 8081A (3), 6020 (3), 7470A (3), 300 (3), 8141 (3), 335 (3), 9034 (3)
Matrix: ☐ Air ☐ Soil/Sed. ☒ Water ☐ Waste ☐
Sample Names GW-SW2, GW-SW1, GW-LMW-12AR-11-09, trip blank

Project Manager: Bairul Kidwai
Project Number:
Validation Date: 1/22/10
SDG #:

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

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	☑	☐	☐	
b) Sampling team indicated?	☑	☐	☐	
c) Sample location noted?	☑	☐	☐	
d) Sample depth indicated (Soils)?	☐	☐	☑	
e) Sample type indicated (grab/composite)?	☐	☑	☐	grab samples
f) Field QC noted?	☑	☐	☐	
g) Field parameters collected (note types)?	☑	☐	☐	pH, cond, temp, turb, DO, ORP
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: insufficient sample volume for MS/MSD for 9034 method

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
k) Was the COC properly completed?	☐	☑	☐	didn't mark grab
l) Was the COC signed by both field and laboratory personnel?	☑	☐	☐	
m) Were samples received in good condition?	☑	☐	☐	

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

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	☑	☐	☐	Cr @ estimated levels
b) Were analytes detected in the field blank(s)?	☐	☐	☑	(0.22J)
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?	☐ but	☑	☐	labs qualified as necessary

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: Cromium detected in blank @ estimated levels (0.229), associated samples 1.4, 0.79, + 0.79. Data were qualified by the lab.

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: [illegible] Date: 1/22/[illegible]

QA LEVEL II - DATA EVALUATION CHECKLIST

Company Name: USACE
Project Name: Longstreet
Reviewer: Kevin Habarak
Laboratory: Test America
Project Manager: Zainul Kidwai
Project Number:
Validation Date: 1/22
SDG #: 680-52658-1
Analytical Method (type and no.): 8260B (7) + 6 each 8270C, 8081A, 6020, 8082, 7470A, 300, 3354, 1031
Matrix: ☐ Air ☐ Soil/Sed. ☒ Water ☐ Waste ☐
Sample Names GW-SLMW-12BR-11-09, GW-SLMW-10-11-09 (MS+MSD) Dup-1, GW-SLMW-11R-11-09, trip blank, SLMW-7-11-09

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

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	☑	☐	☐	
b) Sampling team indicated?	☑	☐	☐	
c) Sample location noted?	☑	☐	☐	
d) Sample depth indicated (Soils)?	☐	☐	☑	
e) Sample type indicated (grab/composite)?	☑	☐	☐	
f) Field QC noted?	☑	☐	☐	
g) Field parameters collected (note types)?	☑	☐	☐	pH, cond, temp, turb, DO, ORP
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: LCS + MS/MSD deficiencies

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

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

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	☑	☐	☐	Cr (0.218) @ estimated levels
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)?	☑	☐	☐	Dup-1 / LMW-10
b) Were field dup. precision criteria met (note RPD)?	☑	☐	☐	see notes for calcs for analytes above estimated levels
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: Cr was detected @ estimated levels in the method blank, the associated samples were either non-detect or had chromium reported @ estimated levels above the levels in the blank. These sample were already marked as estimated.

- LMW-10 / Dup-1 Acetone 26/14J, Benzene 1.3/1.1, 1-1 DCA 1.1/1.0, 1,2 DCP 2.8/2.8 Vinyl Chloride 1.5/U, As 3.6/4.2, Ba 130/130, Co 2.8/3.3
  Respective RPD not calculated, 16%, 9%, 0%, not calculated, 16%, 0%, 16%
  RPDs are w/in control limits
- several analyte PQL were out of control limits RPD + LCS met precision criteria no qualification necessary
- LCS ~~was~~ high low for NO_3, MS/MSD met limits samples were run & both ~~the~~ sets of data reported

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
no qualification		necessary		

Signature: [signature] Date: 1/22/10

QA LEVEL II - DATA EVALUATION CHECKLIST

Company Name: USACE
Project Name: Longstreet
Reviewer: Kevin Haberer
Laboratory: TestAmerica
Analytical Method (type and no.): 8260B (5), 4each of 8270C, 8081A, 8082, 8141A, 6020, 7470A, 300, 335.4, 9034
Matrix: ☐ Air ☐ Soil/Sed. ☒ Water ☐ Waste ☐
Sample Names trip blank, GW-LSMW-13-11-09, GW-LSMW-09-11-09, GW-LSMW-Dup2, GW-Blank-11-09, SLMW-6-11-09

Project Manager: Zaiad Khalwai
Project Number: —
Validation Date: 1/22
SDG #: 680-52691-1

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

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	☑	☐	☐	
b) Sampling team indicated?	☑	☐	☐	
c) Sample location noted?	☑	☐	☐	
d) Sample depth indicated (Soils)?	☐	☐	☑	
e) Sample type indicated (grab/composite)?	☑	☐	☐	
f) Field QC noted?	☑	☐	☐	
g) Field parameters collected (note types)?	☑	☐	☐	pH, cond, turb, temp, ORP, DO
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: Surrogate + LCS recoveries outside control limits

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

General (Reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	☑	☐	☐	
b) Were hold times met for sample analysis?	☑	☐	☐	
c) Were the correct preservatives used?	☑	☐	☐	
d) Was the correct method used?	☑	☐	☐	
e) Were appropriate reporting limits achieved?	☑	☐	☐	
f) Were any sample dilutions noted?	☑	☐	☐	Nitrate 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)?	☑	☐	☐	Acetone, Cu, Sn, Zn @ estimated levels
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?	☐	☑	☐	LCS OR low for 1,1,2-TCA all other criteria w/in limits

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	☑	☐	☐	SLMW-9 / Dup-2
b) Were field dup. precision criteria met (note RPD)?	☐	☐	☐	See notes for analytes detected above RL
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?	☐	☑	☐	MS/MSD surrogate recovery out
b) Were surrogate recoveries not calculated due to dilutions?	☐	☑	☐	Parent sample w/in limits Dup-2 out for 8082 parent sample in control limits & ND Dup-2 was rerun & both sets reported

Comments/Notes:

SL MW-9/Dup (RPD) — Benzene 1.4/1.2 (15%), 1,1-DCA 4.8/5.1 (6%), Vinyl chloride 1.2/1.4 (15%)
As 8.7/8.6 (1%), Ba 41/41 (0), Co 0.93/0.99 (6%), Zn 70/18 (118%)

Analytes detected in method blank associated samples were ND or positive @ 5x greater levels. No qualifiers necessary.

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
SL MW-9/Dup-2	Zn	Var	J	RPD out of control limits

Signature: _____ Date: 1/22/10

APPENDIX C

CHAIN OF CUSTODY AND LABORATORY ANALYTICAL REPORTS

(Electronic Only)

ANALYTICAL REPORT

Job Number: 680-52599-1

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.
Terry Hornsby
Project Manager I
11/27/2009 12:19 PM

Terry Hornsby
Project Manager I
terry.hornsby@testamericainc.com
11/27/2009

cc: Mr. Judson Smith

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

Job Narrative
680-52599-1

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 8270C: Manual integration was performed on the following sample: (LCS 680-153727/21-A).

Method 8270C: The laboratory control sample (LCS) for batch 153727 exceeded control limits for the following analyte: 1,4 naphthoquinone, 1 naphthylamine, methyl methanesulfonate and 000 triethylphosphorothioate. These have been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

No other analytical or quality issues were noted.

GC Semi VOA
Method 8141A: A laboratory control sample (LCS) and a laboratory control standard duplicate (LCSD) were performed for batch 680-154011. The LCSD recoveries were within acceptable limits; however, the LCS recovery of demeton-O were outside acceptable limits. The data have been reported and qualified.

Method 8141A: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 680-154011exceeded control limits for the following analytes: Fensulfothion.

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
Method 9034: Insufficient sample volume was provided to perform matrix spike/matrix spike duplicate (MS/MSD) for batch 153633.

No other 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 / ANALYST SUMMARY

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8270C	Davis, Nancy	ND
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8141A	Kellar, Joshua	JK
SW846 6020	Boyuk, Brian	BB
SW846 7470A	Walton, Ernie	EW
MCAWW 300.0	Campbell, Sophia M	SMC
MCAWW 335.4	Johnson, Brad	BJ
SW846 9034	Vasquez, Juana	JV

SAMPLE SUMMARY

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-52599-1	GW-SW2	Water	11/12/2009 0910	11/13/2009 1010
680-52599-2	GW-SW1	Water	11/12/2009 1025	11/13/2009 1010
680-52599-3	GW-LMW-12AR-1109	Water	11/12/2009 1105	11/13/2009 1010
680-52599-4	Trip Blank	Water	11/12/2009 0000	11/13/2009 1010

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW2**

Lab Sample ID: 680-52599-1

Client Matrix: Water

Date Sampled: 11/12/2009 0910

Date Received: 11/13/2009 1010

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153993	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3054.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/19/2009 1546		Final Weight/Volume:	5 mL
Date Prepared:	11/19/2009 1546			

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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW2**

Lab Sample ID: 680-52599-1

Client Matrix: Water

Date Sampled: 11/12/2009 0910

Date Received: 11/13/2009 1010

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153993	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3054.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/19/2009 1546		Final Weight/Volume:	5 mL
Date Prepared:	11/19/2009 1546			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	99		75 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW1**

Lab Sample ID: 680-52599-2

Client Matrix: Water

Date Sampled: 11/12/2009 1025

Date Received: 11/13/2009 1010

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153862	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3012.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1351		Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1351			

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
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-1,3-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
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.46	J	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
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
Pentachloroethane	1.2	U	1.2	5.0
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
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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW1**

Lab Sample ID: 680-52599-2

Client Matrix: Water

Date Sampled: 11/12/2009 1025

Date Received: 11/13/2009 1010

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153862	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3012.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1351		Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1351			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	97		75 - 121
Toluene-d8 (Surr)	95		75 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-LMW-12AR-1109**

Lab Sample ID: 680-52599-3

Client Matrix: Water

Date Sampled: 11/12/2009 1105

Date Received: 11/13/2009 1010

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 1.0

Date Analyzed: 11/18/2009 1420

Date Prepared: 11/18/2009 1420

Analysis Batch: 680-153862

Instrument ID: MSO2

Lab File ID: o3014.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

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	0.26	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	0.25	U	0.25	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-1,3-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
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	0.35	J	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
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
Pentachloroethane	1.2	U	1.2	5.0
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
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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-LMW-12AR-1109**

Lab Sample ID: 680-52599-3

Client Matrix: Water

Date Sampled: 11/12/2009 1105

Date Received: 11/13/2009 1010

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153862	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3014.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1420		Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1420			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
Trichloroethene	0.13	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	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	97		75 - 121
Toluene-d8 (Surr)	96		75 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 680-52599-4

Client Matrix: Water

Date Sampled: 11/12/2009 0000

Date Received: 11/13/2009 1010

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153862	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3004.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1153		Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1153			

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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 680-52599-4

Client Matrix: Water

Date Sampled: 11/12/2009 0000

Date Received: 11/13/2009 1010

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153862	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3004.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1153		Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1153			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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
4-Bromofluorobenzene	94		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	95		75 - 120

Client: U.S. Army Corps of Engineers | Job Number: 680-52599-1

Client Sample ID: **GW-SW2**

Lab Sample ID: 680-52599-1 | Date Sampled: 11/12/2009 0910
Client Matrix: Water | Date Received: 11/13/2009 1010

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-154410		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-153727		Lab File ID:	t1092.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	11/21/2009 1913			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.48	U	0.48	9.5
Acenaphthylene	0.48	U	0.48	9.5
Acetophenone	0.48	U	0.48	9.5
2-Acetylaminofluorene	0.53	U	0.53	9.5
alpha,alpha-Dimethyl phenethylamine	9.5	U	9.5	1900
4-Aminobiphenyl	0.48	U	0.48	9.5
Aniline	8.2	U	8.2	19
Anthracene	0.48	U	0.48	9.5
Aramite, Total	0.50	U	0.50	9.5
Benzo[a]anthracene	0.48	U	0.48	9.5
Benzo[a]pyrene	0.48	U	0.48	9.5
Benzo[b]fluoranthene	0.64	U	0.64	9.5
Benzo[g,h,i]perylene	0.64	U	0.64	9.5
Benzo[k]fluoranthene	0.48	U	0.48	9.5
Benzyl alcohol	0.76	U	0.76	9.5
1,1'-Biphenyl	0.48	U	0.48	9.5
Bis(2-chloroethoxy)methane	0.48	U	0.48	9.5
Bis(2-chloroethyl)ether	0.56	U	0.56	9.5
bis(chloroisopropyl) ether	0.48	U	0.48	9.5
Bis(2-ethylhexyl) phthalate	0.90	U	0.90	9.5
4-Bromophenyl phenyl ether	0.48	U	0.48	9.5
Butyl benzyl phthalate	0.70	U	0.70	9.5
4-Chloroaniline	4.6	U	4.6	19
4-Chloro-3-methylphenol	0.50	U	0.50	9.5
2-Chloronaphthalene	0.48	U	0.48	9.5
2-Chlorophenol	0.95	U	0.95	9.5
4-Chlorophenyl phenyl ether	0.95	U	0.95	9.5
Chrysene	0.48	U	0.48	9.5
Diallate	0.33	U	0.33	9.5
Dibenz(a,h)anthracene	0.48	U	0.48	9.5
Dibenzofuran	0.48	U	0.48	9.5
1,2-Dichlorobenzene	0.48	U	0.48	9.5
1,3-Dichlorobenzene	0.48	U	0.48	9.5
1,4-Dichlorobenzene	0.48	U	0.48	9.5
3,3'-Dichlorobenzidine	3.0	U	3.0	19
2,4-Dichlorophenol	0.95	U	0.95	9.5
2,6-Dichlorophenol	0.48	U	0.48	9.5
Diethyl phthalate	0.48	U	0.48	9.5
Dimethoate	0.60	U	0.60	9.5
7,12-Dimethylbenz(a)anthracene	0.95	U	0.95	9.5
3,3'-Dimethylbenzidine	0.48	U	0.48	19
2,4-Dimethylphenol	1.0	U	1.0	9.5
Dimethyl phthalate	4.8	U	4.8	9.5
Di-n-butyl phthalate	0.48	U	0.48	9.5
1,3-Dinitrobenzene	0.54	U	0.54	9.5
4,6-Dinitro-2-methylphenol	4.8	U	4.8	48

Client: U.S. Army Corps of Engineers | Job Number: 680-52599-1

Client Sample ID: **GW-SW2**

Lab Sample ID: 680-52599-1 | Date Sampled: 11/12/2009 0910
Client Matrix: Water | Date Received: 11/13/2009 1010

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-154410		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-153727		Lab File ID:	t1092.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	11/21/2009 1913			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
2,4-Dinitrophenol	9.5	U	9.5	48
2,4-Dinitrotoluene	0.48	U	0.48	9.5
2,6-Dinitrotoluene	0.48	U	0.48	9.5
Di-n-octyl phthalate	0.72	U	0.72	9.5
Dinoseb	4.8	U	4.8	9.5
1,4-Dioxane	7.7	J	2.5	9.5
Disulfoton	0.90	U	0.90	9.5
Ethyl methanesulfonate	0.53	U	0.53	9.5
Ethyl Parathion	0.78	U	0.78	9.5
Famphur	0.52	U	0.52	9.5
Fluoranthene	0.48	U	0.48	9.5
Fluorene	0.48	U	0.48	9.5
Hexachlorobenzene	0.48	U	0.48	9.5
Hexachlorobutadiene	4.8	U	4.8	9.5
Hexachlorocyclopentadiene	4.8	U	4.8	9.5
Hexachloroethane	0.48	U	0.48	9.5
Hexachlorophene	38	U	38	4800
Hexachloropropene	0.48	U	0.48	9.5
Indeno[1,2,3-cd]pyrene	0.82	U	0.82	9.5
Isophorone	0.48	U	0.48	9.5
Isosafrole	0.30	U	0.30	9.5
Methapyrilene	4.8	U	4.8	1900
3-Methylcholanthrene	0.48	U	0.48	9.5
Methyl methanesulfonate	0.48	U Q	0.48	9.5
2-Methylnaphthalene	0.48	U	0.48	9.5
Methyl parathion	0.71	U	0.71	9.5
2-Methylphenol	0.61	U	0.61	9.5
3 & 4 Methylphenol	0.95	U	0.95	9.5
Naphthalene	0.48	U	0.48	9.5
1,4-Naphthoquinone	0.95	U Q	0.95	9.5
1-Naphthylamine	0.48	U Q	0.48	9.5
2-Naphthylamine	0.95	U	0.95	9.5
2-Nitroaniline	4.8	U	4.8	48
3-Nitroaniline	2.7	U	2.7	48
4-Nitroaniline	1.9	U	1.9	48
Nitrobenzene	0.48	U	0.48	9.5
2-Nitrophenol	4.8	U	4.8	9.5
4-Nitrophenol	9.5	U	9.5	48
4-Nitroquinoline-1-oxide	4.8	U	4.8	19
N-Nitro-o-toluidine	0.95	U	0.95	9.5
N-Nitrosodiethylamine	0.48	U	0.48	9.5
N-Nitrosodimethylamine	1.1	U	1.1	9.5
N-Nitrosodi-n-butylamine	0.95	U	0.95	9.5
N-Nitrosodi-n-propylamine	0.48	U	0.48	9.5
N-Nitrosodiphenylamine	0.70	U	0.70	9.5
N-Nitrosomethylethylamine	4.8	U	4.8	9.5

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW2**

Lab Sample ID: 680-52599-1

Client Matrix: Water

Date Sampled: 11/12/2009 0910

Date Received: 11/13/2009 1010

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-154410		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-153727		Lab File ID:	t1092.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	11/21/2009 1913			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosomorpholine	0.56	U	0.56	9.5
N-Nitrosopiperidine	0.95	U	0.95	9.5
N-Nitrosopyrrolidine	0.95	U	0.95	9.5
o,o',o"-Triethylphosphorothioate	0.75	U Q	0.75	9.5
p-Dimethylamino azobenzene	0.57	U	0.57	9.5
Pentachlorobenzene	0.54	U	0.54	9.5
Pentachloronitrobenzene	0.95	U	0.95	9.5
Pentachlorophenol	4.8	U	4.8	48
Phenacetin	0.48	U	0.48	9.5
Phenanthrene	0.48	U	0.48	9.5
Phenol	0.48	U	0.48	9.5
Phorate	0.78	U	0.78	9.5
2-Picoline	0.64	U	0.64	9.5
p-Phenylene diamine	9.5	U	9.5	1900
Pronamide	0.95	U	0.95	9.5
Pyrene	0.48	U	0.48	9.5
Pyridine	9.5	U	9.5	48
Safrole, Total	0.48	U	0.48	9.5
Sulfotepp	0.48	U	0.48	9.5
1,2,4,5-Tetrachlorobenzene	0.49	U	0.49	9.5
2,3,4,6-Tetrachlorophenol	0.48	U	0.48	9.5
Thionazin	0.48	U	0.48	9.5
2-Toluidine	0.48	U	0.48	9.5
1,2,4-Trichlorobenzene	0.68	U	0.68	9.5
2,4,5-Trichlorophenol	0.76	U	0.76	9.5
2,4,6-Trichlorophenol	0.48	U	0.48	9.5
1,3,5-Trinitrobenzene	4.8	U	4.8	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	82		40 - 139
2-Fluorobiphenyl	78		50 - 113
2-Fluorophenol	64		36 - 110
Terphenyl-d14	46		10 - 121
Phenol-d5	53		38 - 116
Nitrobenzene-d5	76		45 - 112

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW1**

Lab Sample ID: 680-52599-2

Client Matrix: Water

Date Sampled: 11/12/2009 1025

Date Received: 11/13/2009 1010

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-154410		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-153727		Lab File ID:	t1091.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	11/21/2009 1850			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.48	U	0.48	9.5
Acenaphthylene	0.48	U	0.48	9.5
Acetophenone	0.48	U	0.48	9.5
2-Acetylaminofluorene	0.53	U	0.53	9.5
alpha,alpha-Dimethyl phenethylamine	9.5	U	9.5	1900
4-Aminobiphenyl	0.48	U	0.48	9.5
Aniline	8.2	U	8.2	19
Anthracene	0.48	U	0.48	9.5
Aramite, Total	0.50	U	0.50	9.5
Benzo[a]anthracene	0.48	U	0.48	9.5
Benzo[a]pyrene	0.48	U	0.48	9.5
Benzo[b]fluoranthene	0.64	U	0.64	9.5
Benzo[g,h,i]perylene	0.64	U	0.64	9.5
Benzo[k]fluoranthene	0.48	U	0.48	9.5
Benzyl alcohol	0.76	U	0.76	9.5
1,1'-Biphenyl	0.48	U	0.48	9.5
Bis(2-chloroethoxy)methane	0.48	U	0.48	9.5
Bis(2-chloroethyl)ether	0.56	U	0.56	9.5
bis(chloroisopropyl) ether	0.48	U	0.48	9.5
Bis(2-ethylhexyl) phthalate	0.90	U	0.90	9.5
4-Bromophenyl phenyl ether	0.48	U	0.48	9.5
Butyl benzyl phthalate	0.70	U	0.70	9.5
4-Chloroaniline	4.6	U	4.6	19
4-Chloro-3-methylphenol	0.50	U	0.50	9.5
2-Chloronaphthalene	0.48	U	0.48	9.5
2-Chlorophenol	0.95	U	0.95	9.5
4-Chlorophenyl phenyl ether	0.95	U	0.95	9.5
Chrysene	0.48	U	0.48	9.5
Diallate	0.33	U	0.33	9.5
Dibenz(a,h)anthracene	0.48	U	0.48	9.5
Dibenzofuran	0.48	U	0.48	9.5
1,2-Dichlorobenzene	0.48	U	0.48	9.5
1,3-Dichlorobenzene	0.48	U	0.48	9.5
1,4-Dichlorobenzene	0.48	U	0.48	9.5
3,3'-Dichlorobenzidine	3.0	U	3.0	19
2,4-Dichlorophenol	0.95	U	0.95	9.5
2,6-Dichlorophenol	0.48	U	0.48	9.5
Diethyl phthalate	0.48	U	0.48	9.5
Dimethoate	0.60	U	0.60	9.5
7,12-Dimethylbenz(a)anthracene	0.95	U	0.95	9.5
3,3'-Dimethylbenzidine	0.48	U	0.48	19
2,4-Dimethylphenol	1.0	U	1.0	9.5
Dimethyl phthalate	4.8	U	4.8	9.5
Di-n-butyl phthalate	0.48	U	0.48	9.5
1,3-Dinitrobenzene	0.54	U	0.54	9.5
4,6-Dinitro-2-methylphenol	4.8	U	4.8	48

Client: U.S. Army Corps of Engineers | Job Number: 680-52599-1

Client Sample ID: **GW-SW1**

Lab Sample ID: 680-52599-2 | Date Sampled: 11/12/2009 1025
Client Matrix: Water | Date Received: 11/13/2009 1010

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-154410		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-153727		Lab File ID:	t1091.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	11/21/2009 1850			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
2,4-Dinitrophenol	9.5	U	9.5	48
2,4-Dinitrotoluene	0.48	U	0.48	9.5
2,6-Dinitrotoluene	0.48	U	0.48	9.5
Di-n-octyl phthalate	0.72	U	0.72	9.5
Dinoseb	4.8	U	4.8	9.5
1,4-Dioxane	2.5	U	2.5	9.5
Disulfoton	0.90	U	0.90	9.5
Ethyl methanesulfonate	0.53	U	0.53	9.5
Ethyl Parathion	0.78	U	0.78	9.5
Famphur	0.52	U	0.52	9.5
Fluoranthene	0.48	U	0.48	9.5
Fluorene	0.48	U	0.48	9.5
Hexachlorobenzene	0.48	U	0.48	9.5
Hexachlorobutadiene	4.8	U	4.8	9.5
Hexachlorocyclopentadiene	4.8	U	4.8	9.5
Hexachloroethane	0.48	U	0.48	9.5
Hexachlorophene	38	U	38	4800
Hexachloropropene	0.48	U	0.48	9.5
Indeno[1,2,3-cd]pyrene	0.82	U	0.82	9.5
Isophorone	0.48	U	0.48	9.5
Isosafrole	0.30	U	0.30	9.5
Methapyrilene	4.8	U	4.8	1900
3-Methylcholanthrene	0.48	U	0.48	9.5
Methyl methanesulfonate	0.48	U Q	0.48	9.5
2-Methylnaphthalene	0.48	U	0.48	9.5
Methyl parathion	0.71	U	0.71	9.5
2-Methylphenol	0.61	U	0.61	9.5
3 & 4 Methylphenol	0.95	U	0.95	9.5
Naphthalene	0.48	U	0.48	9.5
1,4-Naphthoquinone	0.95	U Q	0.95	9.5
1-Naphthylamine	0.48	U Q	0.48	9.5
2-Naphthylamine	0.95	U	0.95	9.5
2-Nitroaniline	4.8	U	4.8	48
3-Nitroaniline	2.7	U	2.7	48
4-Nitroaniline	1.9	U	1.9	48
Nitrobenzene	0.48	U	0.48	9.5
2-Nitrophenol	4.8	U	4.8	9.5
4-Nitrophenol	9.5	U	9.5	48
4-Nitroquinoline-1-oxide	4.8	U	4.8	19
N-Nitro-o-toluidine	0.95	U	0.95	9.5
N-Nitrosodiethylamine	0.48	U	0.48	9.5
N-Nitrosodimethylamine	1.1	U	1.1	9.5
N-Nitrosodi-n-butylamine	0.95	U	0.95	9.5
N-Nitrosodi-n-propylamine	0.48	U	0.48	9.5
N-Nitrosodiphenylamine	0.70	U	0.70	9.5
N-Nitrosomethylethylamine	4.8	U	4.8	9.5

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW1**

Lab Sample ID: 680-52599-2

Client Matrix: Water

Date Sampled: 11/12/2009 1025

Date Received: 11/13/2009 1010

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-154410		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-153727		Lab File ID:	t1091.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	11/21/2009 1850			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosomorpholine	0.56	U	0.56	9.5
N-Nitrosopiperidine	0.95	U	0.95	9.5
N-Nitrosopyrrolidine	0.95	U	0.95	9.5
o,o',o''-Triethylphosphorothioate	0.75	U Q	0.75	9.5
p-Dimethylamino azobenzene	0.57	U	0.57	9.5
Pentachlorobenzene	0.54	U	0.54	9.5
Pentachloronitrobenzene	0.95	U	0.95	9.5
Pentachlorophenol	4.8	U	4.8	48
Phenacetin	0.48	U	0.48	9.5
Phenanthrene	0.48	U	0.48	9.5
Phenol	0.48	U	0.48	9.5
Phorate	0.78	U	0.78	9.5
2-Picoline	0.64	U	0.64	9.5
p-Phenylene diamine	9.5	U	9.5	1900
Pronamide	0.95	U	0.95	9.5
Pyrene	0.48	U	0.48	9.5
Pyridine	9.5	U	9.5	48
Safrole, Total	0.48	U	0.48	9.5
Sulfotepp	0.48	U	0.48	9.5
1,2,4,5-Tetrachlorobenzene	0.49	U	0.49	9.5
2,3,4,6-Tetrachlorophenol	0.48	U	0.48	9.5
Thionazin	0.48	U	0.48	9.5
2-Toluidine	0.48	U	0.48	9.5
1,2,4-Trichlorobenzene	0.68	U	0.68	9.5
2,4,5-Trichlorophenol	0.76	U	0.76	9.5
2,4,6-Trichlorophenol	0.48	U	0.48	9.5
1,3,5-Trinitrobenzene	4.8	U	4.8	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	77		40 - 139
2-Fluorobiphenyl	77		50 - 113
2-Fluorophenol	65		36 - 110
Terphenyl-d14	66		10 - 121
Phenol-d5	57		38 - 116
Nitrobenzene-d5	75		45 - 112

Client: U.S. Army Corps of Engineers | Job Number: 680-52599-1

Client Sample ID: **GW-LMW-12AR-1109**

Lab Sample ID: 680-52599-3 | Date Sampled: 11/12/2009 1105
Client Matrix: Water | Date Received: 11/13/2009 1010

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-154410		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-153727		Lab File ID:	t1093.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	11/21/2009 1937			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.47	U	0.47	9.4
Acenaphthylene	0.47	U	0.47	9.4
Acetophenone	0.47	U	0.47	9.4
2-Acetylaminofluorene	0.53	U	0.53	9.4
alpha,alpha-Dimethyl phenethylamine	9.4	U	9.4	1900
4-Aminobiphenyl	0.47	U	0.47	9.4
Aniline	8.1	U	8.1	19
Anthracene	0.47	U	0.47	9.4
Aramite, Total	0.50	U	0.50	9.4
Benzo[a]anthracene	0.47	U	0.47	9.4
Benzo[a]pyrene	0.47	U	0.47	9.4
Benzo[b]fluoranthene	0.63	U	0.63	9.4
Benzo[g,h,i]perylene	0.63	U	0.63	9.4
Benzo[k]fluoranthene	0.47	U	0.47	9.4
Benzyl alcohol	0.75	U	0.75	9.4
1,1'-Biphenyl	0.47	U	0.47	9.4
Bis(2-chloroethoxy)methane	0.47	U	0.47	9.4
Bis(2-chloroethyl)ether	0.56	U	0.56	9.4
bis(chloroisopropyl) ether	0.47	U	0.47	9.4
Bis(2-ethylhexyl) phthalate	1.5	J	0.89	9.4
4-Bromophenyl phenyl ether	0.47	U	0.47	9.4
Butyl benzyl phthalate	0.70	U	0.70	9.4
4-Chloroaniline	4.5	U	4.5	19
4-Chloro-3-methylphenol	0.49	U	0.49	9.4
2-Chloronaphthalene	0.47	U	0.47	9.4
2-Chlorophenol	0.94	U	0.94	9.4
4-Chlorophenyl phenyl ether	0.94	U	0.94	9.4
Chrysene	0.47	U	0.47	9.4
Diallate	0.33	U	0.33	9.4
Dibenz(a,h)anthracene	0.47	U	0.47	9.4
Dibenzofuran	0.47	U	0.47	9.4
1,2-Dichlorobenzene	0.47	U	0.47	9.4
1,3-Dichlorobenzene	0.47	U	0.47	9.4
1,4-Dichlorobenzene	0.47	U	0.47	9.4
3,3'-Dichlorobenzidine	3.0	U	3.0	19
2,4-Dichlorophenol	0.94	U	0.94	9.4
2,6-Dichlorophenol	0.47	U	0.47	9.4
Diethyl phthalate	0.47	U	0.47	9.4
Dimethoate	0.59	U	0.59	9.4
7,12-Dimethylbenz(a)anthracene	0.94	U	0.94	9.4
3,3'-Dimethylbenzidine	0.47	U	0.47	19
2,4-Dimethylphenol	1.0	U	1.0	9.4
Dimethyl phthalate	4.7	U	4.7	9.4
Di-n-butyl phthalate	0.47	U	0.47	9.4
1,3-Dinitrobenzene	0.54	U	0.54	9.4
4,6-Dinitro-2-methylphenol	4.7	U	4.7	47

Client: U.S. Army Corps of Engineers | Job Number: 680-52599-1

Client Sample ID: **GW-LMW-12AR-1109**

Lab Sample ID: 680-52599-3 | Date Sampled: 11/12/2009 1105
Client Matrix: Water | Date Received: 11/13/2009 1010

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-154410		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-153727		Lab File ID:	t1093.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	11/21/2009 1937			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	0.47	U	0.47	9.4
2,6-Dinitrotoluene	0.47	U	0.47	9.4
Di-n-octyl phthalate	0.72	U	0.72	9.4
Dinoseb	4.7	U	4.7	9.4
1,4-Dioxane	9.8		2.5	9.4
Disulfoton	0.90	U	0.90	9.4
Ethyl methanesulfonate	0.53	U	0.53	9.4
Ethyl Parathion	0.77	U	0.77	9.4
Famphur	0.52	U	0.52	9.4
Fluoranthene	0.47	U	0.47	9.4
Fluorene	0.47	U	0.47	9.4
Hexachlorobenzene	0.47	U	0.47	9.4
Hexachlorobutadiene	4.7	U	4.7	9.4
Hexachlorocyclopentadiene	4.7	U	4.7	9.4
Hexachloroethane	0.47	U	0.47	9.4
Hexachlorophene	38	U	38	4700
Hexachloropropene	0.47	U	0.47	9.4
Indeno[1,2,3-cd]pyrene	0.81	U	0.81	9.4
Isophorone	0.47	U	0.47	9.4
Isosafrole	0.29	U	0.29	9.4
Methapyrilene	4.7	U	4.7	1900
3-Methylcholanthrene	0.47	U	0.47	9.4
Methyl methanesulfonate	0.47	U Q	0.47	9.4
2-Methylnaphthalene	0.47	U	0.47	9.4
Methyl parathion	0.71	U	0.71	9.4
2-Methylphenol	0.60	U	0.60	9.4
3 & 4 Methylphenol	0.94	U	0.94	9.4
Naphthalene	0.47	U	0.47	9.4
1,4-Naphthoquinone	0.94	U Q	0.94	9.4
1-Naphthylamine	0.47	U Q	0.47	9.4
2-Naphthylamine	0.94	U	0.94	9.4
2-Nitroaniline	4.7	U	4.7	47
3-Nitroaniline	2.6	U	2.6	47
4-Nitroaniline	1.9	U	1.9	47
Nitrobenzene	0.47	U	0.47	9.4
2-Nitrophenol	4.7	U	4.7	9.4
4-Nitrophenol	9.4	U	9.4	47
4-Nitroquinoline-1-oxide	4.7	U	4.7	19
N-Nitro-o-toluidine	0.94	U	0.94	9.4
N-Nitrosodiethylamine	0.47	U	0.47	9.4
N-Nitrosodimethylamine	1.1	U	1.1	9.4
N-Nitrosodi-n-butylamine	0.94	U	0.94	9.4
N-Nitrosodi-n-propylamine	0.47	U	0.47	9.4
N-Nitrosodiphenylamine	0.69	U	0.69	9.4
N-Nitrosomethylethylamine	4.7	U	4.7	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-LMW-12AR-1109**

Lab Sample ID: 680-52599-3

Client Matrix: Water

Date Sampled: 11/12/2009 1105

Date Received: 11/13/2009 1010

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-154410		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-153727		Lab File ID:	t1093.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	11/21/2009 1937			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosomorpholine	0.56	U	0.56	9.4
N-Nitrosopiperidine	0.94	U	0.94	9.4
N-Nitrosopyrrolidine	0.94	U	0.94	9.4
o,o',o''-Triethylphosphorothioate	0.75	U Q	0.75	9.4
p-Dimethylamino azobenzene	0.57	U	0.57	9.4
Pentachlorobenzene	0.54	U	0.54	9.4
Pentachloronitrobenzene	0.94	U	0.94	9.4
Pentachlorophenol	4.7	U	4.7	47
Phenacetin	0.47	U	0.47	9.4
Phenanthrene	0.47	U	0.47	9.4
Phenol	0.47	U	0.47	9.4
Phorate	0.77	U	0.77	9.4
2-Picoline	0.63	U	0.63	9.4
p-Phenylene diamine	9.4	U	9.4	1900
Pronamide	0.94	U	0.94	9.4
Pyrene	0.47	U	0.47	9.4
Pyridine	9.4	U	9.4	47
Safrole, Total	0.47	U	0.47	9.4
Sulfotepp	0.47	U	0.47	9.4
1,2,4,5-Tetrachlorobenzene	0.48	U	0.48	9.4
2,3,4,6-Tetrachlorophenol	0.47	U	0.47	9.4
Thionazin	0.47	U	0.47	9.4
2-Toluidine	0.47	U	0.47	9.4
1,2,4-Trichlorobenzene	0.67	U	0.67	9.4
2,4,5-Trichlorophenol	0.75	U	0.75	9.4
2,4,6-Trichlorophenol	0.47	U	0.47	9.4
1,3,5-Trinitrobenzene	4.7	U	4.7	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	70		40 - 139
2-Fluorobiphenyl	68		50 - 113
2-Fluorophenol	63		36 - 110
Terphenyl-d14	71		10 - 121
Phenol-d5	56		38 - 116
Nitrobenzene-d5	67		45 - 112

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW2**

Lab Sample ID: 680-52599-1

Client Matrix: Water

Date Sampled: 11/12/2009 0910

Date Received: 11/13/2009 1010

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154738		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154011		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/25/2009 1346			Injection Volume:	2 uL
Date Prepared:	11/19/2009 1529			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	0.040	J	0.0054	0.047
beta-BHC	0.051		0.0063	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
delta-BHC	0.038	J J	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
Toxaphene	0.47	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	64		35 - 120
DCB Decachlorobiphenyl	20		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW2**

Lab Sample ID: 680-52599-1

Client Matrix: Water

Date Sampled: 11/12/2009 0910

Date Received: 11/13/2009 1010

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154738	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154011	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	11/25/2009 1346		Injection Volume:	2 uL
Date Prepared:	11/19/2009 1529		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	63		35 - 120
DCB Decachlorobiphenyl	18		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW1**

Lab Sample ID: 680-52599-2

Client Matrix: Water

Date Sampled: 11/12/2009 1025

Date Received: 11/13/2009 1010

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154738		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154011		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/25/2009 1409			Injection Volume:	2 uL
Date Prepared:	11/19/2009 1529			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
Toxaphene	0.47	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	66		35 - 120
DCB Decachlorobiphenyl	48		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW1**

Lab Sample ID: 680-52599-2

Client Matrix: Water

Date Sampled: 11/12/2009 1025

Date Received: 11/13/2009 1010

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154738	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154011	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	11/25/2009 1409		Injection Volume:	2 uL
Date Prepared:	11/19/2009 1529		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	66		35 - 120
DCB Decachlorobiphenyl	39		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-LMW-12AR-1109**

Lab Sample ID: 680-52599-3

Client Matrix: Water

Date Sampled: 11/12/2009 1105

Date Received: 11/13/2009 1010

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154738		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154011		Initial Weight/Volume:	1030 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/25/2009 1432			Injection Volume:	2 uL
Date Prepared:	11/19/2009 1529			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
4,4'-DDD	0.0063	U	0.0063	0.097
4,4'-DDE	0.0075	U	0.0075	0.097
4,4'-DDT	0.0094	U	0.0094	0.097
Aldrin	0.0068	U	0.0068	0.049
alpha-BHC	0.0055	U	0.0055	0.049
beta-BHC	0.0065	U	0.0065	0.049
Chlordane (technical)	0.097	U	0.097	0.49
Chlorobenzilate	0.49	U	0.49	0.49
delta-BHC	0.0047	U	0.0047	0.049
Dieldrin	0.0088	U	0.0088	0.097
Endosulfan I	0.0041	U	0.0041	0.049
Endosulfan II	0.0095	U	0.0095	0.097
Endosulfan sulfate	0.0066	U	0.0066	0.097
Endrin	0.0094	U	0.0094	0.097
Endrin aldehyde	0.016	U	0.016	0.097
gamma-BHC (Lindane)	0.0057	U	0.0057	0.049
Heptachlor	0.0068	U	0.0068	0.049
Heptachlor epoxide	0.0058	U	0.0058	0.049
Isodrin	0.049	U	0.049	0.049
Methoxychlor	0.013	U	0.013	0.097
PCB-1016	0.069	U	0.069	0.97
PCB-1221	0.27	U	0.27	1.9
PCB-1232	0.11	U	0.11	0.97
PCB-1242	0.17	U	0.17	0.97
PCB-1248	0.35	U	0.35	0.97
PCB-1254	0.25	U	0.25	0.97
PCB-1260	0.19	U	0.19	0.97
Toxaphene	0.49	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	65	J	35 - 120
DCB Decachlorobiphenyl	48		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-LMW-12AR-1109**

Lab Sample ID: 680-52599-3

Client Matrix: Water

Date Sampled: 11/12/2009 1105

Date Received: 11/13/2009 1010

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154738		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154011		Initial Weight/Volume:	1030 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/25/2009 1432			Injection Volume:	2 uL
Date Prepared:	11/19/2009 1529			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	2950	J	35 - 120
DCB Decachlorobiphenyl	43		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW2**

Lab Sample ID: 680-52599-1

Client Matrix: Water

Date Sampled: 11/12/2009 0910

Date Received: 11/13/2009 1010

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154486		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154011		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 0047			Injection Volume:	2 uL
Date Prepared:	11/19/2009 1529			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 Q	2.4	4.7
Fenthion	0.47	U	0.47	0.94
Malathion	0.47	U	0.47	0.94
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	87		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW1**

Lab Sample ID: 680-52599-2

Client Matrix: Water

Date Sampled: 11/12/2009 1025

Date Received: 11/13/2009 1010

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154486		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154011		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 0112			Injection Volume:	2 uL
Date Prepared:	11/19/2009 1529			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 Q	2.4	4.7
Fenthion	0.47	U	0.47	0.94
Malathion	0.47	U	0.47	0.94
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	88		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-LMW-12AR-1109**

Lab Sample ID: 680-52599-3

Client Matrix: Water

Date Sampled: 11/12/2009 1105

Date Received: 11/13/2009 1010

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154486		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154011		Initial Weight/Volume:	1030 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 0137			Injection Volume:	2 uL
Date Prepared:	11/19/2009 1529			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Azinphos-methyl	0.49	U	0.49	0.97
Bolstar	0.49	U	0.49	0.97
Chlorpyrifos	0.49	U	0.49	0.97
Coumaphos	0.49	U	0.49	0.97
Demeton-O	1.3	U Q	1.3	2.4
Demeton-S	1.3	U	1.3	2.4
Diazinon	0.49	U	0.49	0.97
Dichlorvos	0.97	U	0.97	1.9
Dimethoate	0.97	U	0.97	1.9
Disulfoton	0.97	U	0.97	1.9
EPN	0.49	U	0.49	0.97
Famphur	0.97	U	0.97	1.9
Fensulfothion	2.4	U Q	2.4	4.9
Fenthion	0.49	U	0.49	0.97
Malathion	0.49	U	0.49	0.97
Merphos	0.73	U	0.73	1.5
Methyl parathion	0.24	U	0.24	0.49
Mevinphos	0.97	U	0.97	1.9
Ethoprop	0.24	U	0.24	0.49
Monochrotophos	4.9	U	4.9	9.7
Naled	2.4	U	2.4	4.9
Ethyl Parathion	0.49	U	0.49	0.97
Phorate	0.49	U	0.49	0.97
Ronnel	0.49	U	0.49	0.97
Stirophos	0.49	U	0.49	0.97
Sulfotepp	0.24	U	0.24	0.49
Thionazin	0.49	U	0.49	0.97
Tokuthion	0.49	U	0.49	0.97
Trichloronate	0.49	U	0.49	0.97

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	98		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW2**

Lab Sample ID: 680-52599-1

Client Matrix: Water

Date Sampled: 11/12/2009 0910

Date Received: 11/13/2009 1010

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-153756		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153378		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/16/2009 2200			Final Weight/Volume:	50 mL
Date Prepared:	11/13/2009 1152				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	0.76	J	0.40	1.0
Barium	15		0.15	1.0
Beryllium	0.094	J	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	1.4	B	0.16	1.0
Cobalt	0.30		0.078	0.20
Copper	1.8		0.21	1.0
Lead	0.72		0.080	0.30
Nickel	1.2		0.20	0.50
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	2.0	J	1.4	5.0
Zinc	24		2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-153963		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1739			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-SW1**

Lab Sample ID: 680-52599-2

Client Matrix: Water

Date Sampled: 11/12/2009 1025

Date Received: 11/13/2009 1010

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-153756		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153378		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/16/2009 2207			Final Weight/Volume:	50 mL
Date Prepared:	11/13/2009 1152				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	1.2		0.40	1.0
Barium	8.2		0.15	1.0
Beryllium	0.070	U	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.74	J B	0.16	1.0
Cobalt	0.18	J	0.078	0.20
Copper	4.4		0.21	1.0
Lead	0.51		0.080	0.30
Nickel	1.7		0.20	0.50
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	15		2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-153963		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1742			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Client Sample ID: **GW-LMW-12AR-1109**

Lab Sample ID: 680-52599-3

Client Matrix: Water

Date Sampled: 11/12/2009 1105

Date Received: 11/13/2009 1010

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-153756		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153378		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/16/2009 2213			Final Weight/Volume:	50 mL
Date Prepared:	11/13/2009 1152				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	0.50	J	0.40	1.0
Barium	41		0.15	1.0
Beryllium	0.12	J	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.74	J B	0.16	1.0
Cobalt	0.80		0.078	0.20
Copper	0.53	J	0.21	1.0
Lead	0.44		0.080	0.30
Nickel	1.0		0.20	0.50
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	12		2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-153963		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1745			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

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

General Chemistry

Client Sample ID: **GW-SW2**

Lab Sample ID: 680-52599-1

Client Matrix: Water

Date Sampled: 11/12/2009 0910

Date Received: 11/13/2009 1010

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: 680-153436	Date Analyzed: 11/13/2009 2035						
Cyanide, Total	0.0027	J	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-153987	Date Analyzed: 11/19/2009 1111						
Prep Batch: 680-153879	Date Prepared: 11/18/2009 1354						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
Analysis Batch: 680-153633	Date Analyzed: 11/16/2009 1648						
Prep Batch: 680-153533	Date Prepared: 11/16/2009 1025						

General Chemistry

Client Sample ID: **GW-SW1**

Lab Sample ID: 680-52599-2

Client Matrix: Water

Date Sampled: 11/12/2009 1025

Date Received: 11/13/2009 1010

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: 680-153436	Date Analyzed: 11/13/2009 2104						
Cyanide, Total	0.0042	J	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-153987	Date Analyzed: 11/19/2009 1111						
Prep Batch: 680-153879	Date Prepared: 11/18/2009 1354						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
Analysis Batch: 680-153633	Date Analyzed: 11/16/2009 1648						
Prep Batch: 680-153533	Date Prepared: 11/16/2009 1025						

General Chemistry

Client Sample ID: **GW-LMW-12AR-1109**

Lab Sample ID: 680-52599-3

Client Matrix: Water

Date Sampled: 11/12/2009 1105

Date Received: 11/13/2009 1010

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.64	J	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-153436	Date Analyzed: 11/13/2009 2119						
Cyanide, Total	0.0042	J	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-153987	Date Analyzed: 11/19/2009 1111						
Prep Batch: 680-153879	Date Prepared: 11/18/2009 1354						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
Analysis Batch: 680-153633	Date Analyzed: 11/16/2009 1648						
Prep Batch: 680-153533	Date Prepared: 11/16/2009 1025						

DATA REPORTING QUALIFIERS

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

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
	M	Manual integrated compound.
	Q	One or more quality control criteria failed.
	U	Undetected at the Limit of Detection.
Metals		
	B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	U	Undetected at the Limit of Detection.

DATA REPORTING QUALIFIERS

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Section	Qualifier	Description
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: 680-52599-1

Method Blank - Batch: 680-153862

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-153862/10
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/18/2009 1055
Date Prepared: 11/18/2009 1055

Analysis Batch: 680-153862
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq306.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-153862

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-153862/10
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/18/2009 1055
Date Prepared: 11/18/2009 1055

Analysis Batch: 680-153862
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq306.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
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
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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	Acceptance Limits
4-Bromofluorobenzene	95	75 - 120
Dibromofluoromethane	100	75 - 121
Toluene-d8 (Surr)	95	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153862

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-153862/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/18/2009 0858
Date Prepared: 11/18/2009 0858

Analysis Batch: 680-153862
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq298.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-153862/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/18/2009 0927
Date Prepared: 11/18/2009 0927

Analysis Batch: 680-153862
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq300.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	96	103	17 - 175	7	50		
Benzene	99	101	77 - 119	2	30		
Bromoform	92	92	62 - 133	0	30		
Bromomethane	108	129	12 - 184	18	50		
2-Butanone (MEK)	103	103	33 - 157	0	30		
Carbon disulfide	96	110	55 - 131	14	30		
Carbon tetrachloride	82	87	71 - 135	6	30		
Chlorobenzene	99	101	85 - 116	1	30		
Chlorodibromomethane	94	92	75 - 133	2	30		
Chloroethane	95	104	40 - 165	8	50		
Chloroform	99	106	82 - 120	7	30		
Chloromethane	94	108	48 - 142	14	50		
cis-1,3-Dichloropropene	105	105	76 - 126	0	30		
1,2-Dibromo-3-Chloropropane	102	110	49 - 140	8	30		
Dibromomethane	97	99	78 - 119	2	30		
Dichlorobromomethane	96	98	78 - 127	2	30		
Dichlorodifluoromethane	93	107	34 - 154	13	30		
1,1-Dichloroethane	101	108	74 - 127	7	30		
1,2-Dichloroethane	95	95	66 - 132	0	30		
1,1-Dichloroethene	101	108	62 - 141	7	30		
1,2-Dichloropropane	99	100	73 - 124	0	30		
Ethylbenzene	100	102	86 - 116	2	30		
Ethylene Dibromide	100	102	80 - 121	2	30		
2-Hexanone	105	102	34 - 161	3	30		
Methylene Chloride	95	107	70 - 125	11	30		
4-Methyl-2-pentanone (MIBK)	101	100	40 - 151	1	30		
Styrene	102	106	82 - 122	3	30		
1,1,1,2-Tetrachloroethane	85	81	81 - 128	4	30		
1,1,2,2-Tetrachloroethane	101	100	69 - 129	1	30		
Tetrachloroethene	100	99	76 - 126	1	30		
Toluene	98	105	81 - 117	6	30		
trans-1,2-Dichloroethene	102	107	72 - 131	4	30		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153862

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-153862/7	Analysis Batch:	680-153862	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq298.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 0858			Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 0858				

LCSD Lab Sample ID:	LCSD 680-153862/8	Analysis Batch:	680-153862	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq300.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 0927			Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 0927				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
trans-1,3-Dichloropropene	104	102	73 - 128	2	30		
1,1,1-Trichloroethane	100	104	76 - 127	4	30		
1,1,2-Trichloroethane	98	97	75 - 121	1	30		
Trichloroethene	97	98	84 - 115	1	30		
Trichlorofluoromethane	94	103	58 - 149	10	50		
1,2,3-Trichloropropane	104	101	70 - 130	3	30		
Vinyl acetate	121	116	10 - 217	4	30		
Vinyl chloride	98	111	59 - 144	12	50		
Xylenes, Total	102	105	84 - 118	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	99	102	75 - 120
Dibromofluoromethane	99	108	75 - 121
Toluene-d8 (Surr)	99	106	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-153993

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-153993/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1053
Date Prepared: 11/19/2009 1053

Analysis Batch: 680-153993
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq320.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-153993

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-153993/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1053
Date Prepared: 11/19/2009 1053

Analysis Batch: 680-153993
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq320.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
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
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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	Acceptance Limits
4-Bromofluorobenzene	97	75 - 120
Dibromofluoromethane	104	75 - 121
Toluene-d8 (Surr)	98	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153993

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-153993/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 0856
Date Prepared: 11/19/2009 0856

Analysis Batch: 680-153993
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq312.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-153993/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 0925
Date Prepared: 11/19/2009 0925

Analysis Batch: 680-153993
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq314.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	93	98	17 - 175	5	50		
Benzene	101	98	77 - 119	3	30		
Bromoform	101	100	62 - 133	1	30		
Bromomethane	86	105	12 - 184	20	50		
2-Butanone (MEK)	105	103	33 - 157	3	30		
Carbon disulfide	83	89	55 - 131	7	30		
Carbon tetrachloride	82	82	71 - 135	1	30		
Chlorobenzene	102	100	85 - 116	1	30		
Chlorodibromomethane	106	102	75 - 133	5	30		
Chloroethane	70	79	40 - 165	12	50		
Chloroform	100	98	82 - 120	2	30		
Chloromethane	78	84	48 - 142	8	50		
cis-1,3-Dichloropropene	110	106	76 - 126	4	30		
1,2-Dibromo-3-Chloropropane	93	98	49 - 140	6	30		
Dibromomethane	97	95	78 - 119	2	30		
Dichlorobromomethane	98	96	78 - 127	2	30		
Dichlorodifluoromethane	80	83	34 - 154	4	30		
1,1-Dichloroethane	99	100	74 - 127	1	30		
1,2-Dichloroethane	95	91	66 - 132	4	30		
1,1-Dichloroethene	97	101	62 - 141	4	30		
1,2-Dichloropropane	103	99	73 - 124	4	30		
Ethylbenzene	101	100	86 - 116	1	30		
Ethylene Dibromide	100	98	80 - 121	2	30		
2-Hexanone	108	106	34 - 161	1	30		
Methylene Chloride	83	89	70 - 125	6	30		
4-Methyl-2-pentanone (MIBK)	98	95	40 - 151	3	30		
Styrene	101	102	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	94	91	81 - 128	3	30		
1,1,2,2-Tetrachloroethane	103	103	69 - 129	0	30		
Tetrachloroethene	109	105	76 - 126	4	30		
Toluene	92	93	81 - 117	1	30		
trans-1,2-Dichloroethene	106	103	72 - 131	2	30		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153993

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-153993/4	Analysis Batch:	680-153993	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq312.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/19/2009 0856			Final Weight/Volume:	5 mL
Date Prepared:	11/19/2009 0856				

LCSD Lab Sample ID:	LCSD 680-153993/5	Analysis Batch:	680-153993	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq314.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/19/2009 0925			Final Weight/Volume:	5 mL
Date Prepared:	11/19/2009 0925				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
trans-1,3-Dichloropropene	105	102	73 - 128	3	30		
1,1,1-Trichloroethane	98	97	76 - 127	1	30		
1,1,2-Trichloroethane	102	99	75 - 121	3	30		
Trichloroethene	102	100	84 - 115	2	30		
Trichlorofluoromethane	84	86	58 - 149	3	50		
1,2,3-Trichloropropane	108	106	70 - 130	2	30		
Vinyl acetate	128	123	10 - 217	4	30		
Vinyl chloride	80	87	59 - 144	9	50		
Xylenes, Total	100	101	84 - 118	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	97	96	75 - 120
Dibromofluoromethane	100	102	75 - 121
Toluene-d8 (Surr)	93	94	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-153727

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 680-153727/20-A	Analysis Batch:	680-154410	Instrument ID:	GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch:	680-153727	Lab File ID:	t1073.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/21/2009 1146			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Acenaphthene	0.50	U	0.50	10
Acenaphthylene	0.50	U	0.50	10
Acetophenone	0.50	U	0.50	10
2-Acetylaminofluorene	0.56	U	0.56	10
alpha,alpha-Dimethyl phenethylamine	10	U	10	2000
4-Aminobiphenyl	0.50	U	0.50	10
Aniline	8.6	U	8.6	20
Anthracene	0.50	U	0.50	10
Aramite, Total	0.53	U	0.53	10
Benzo[a]anthracene	0.50	U	0.50	10
Benzo[a]pyrene	0.50	U	0.50	10
Benzo[b]fluoranthene	0.67	U	0.67	10
Benzo[g,h,i]perylene	0.67	U	0.67	10
Benzo[k]fluoranthene	0.50	U	0.50	10
Benzyl alcohol	0.80	U	0.80	10
1,1'-Biphenyl	0.50	U	0.50	10
Bis(2-chloroethoxy)methane	0.50	U	0.50	10
Bis(2-chloroethyl)ether	0.59	U	0.59	10
bis(chloroisopropyl) ether	0.50	U	0.50	10
Bis(2-ethylhexyl) phthalate	0.94	U	0.94	10
4-Bromophenyl phenyl ether	0.50	U	0.50	10
Butyl benzyl phthalate	0.74	U	0.74	10
4-Chloroaniline	4.8	U	4.8	20
4-Chloro-3-methylphenol	0.52	U	0.52	10
2-Chloronaphthalene	0.50	U	0.50	10
2-Chlorophenol	1.0	U	1.0	10
4-Chlorophenyl phenyl ether	1.0	U	1.0	10
Chrysene	0.50	U	0.50	10
Diallate	0.35	U	0.35	10
Dibenz(a,h)anthracene	0.50	U	0.50	10
Dibenzofuran	0.50	U	0.50	10
1,2-Dichlorobenzene	0.50	U	0.50	10
1,3-Dichlorobenzene	0.50	U	0.50	10
1,4-Dichlorobenzene	0.50	U	0.50	10
3,3'-Dichlorobenzidine	3.2	U	3.2	20
2,4-Dichlorophenol	1.0	U	1.0	10
2,6-Dichlorophenol	0.50	U	0.50	10
Diethyl phthalate	0.50	U	0.50	10
Dimethoate	0.63	U	0.63	10
7,12-Dimethylbenz(a)anthracene	1.0	U	1.0	10
3,3'-Dimethylbenzidine	0.50	U	0.50	20

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-153727

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 680-153727/20-A	Analysis Batch:	680-154410	Instrument ID:	GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch:	680-153727	Lab File ID:	t1073.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/21/2009 1146			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
2,4-Dimethylphenol	1.1	U	1.1	10
Dimethyl phthalate	5.0	U	5.0	10
Di-n-butyl phthalate	0.50	U	0.50	10
1,3-Dinitrobenzene	0.57	U	0.57	10
4,6-Dinitro-2-methylphenol	5.0	U	5.0	50
2,4-Dinitrophenol	10	U	10	50
2,4-Dinitrotoluene	0.50	U	0.50	10
2,6-Dinitrotoluene	0.50	U	0.50	10
Di-n-octyl phthalate	0.76	U	0.76	10
Dinoseb	5.0	U	5.0	10
1,4-Dioxane	2.6	U	2.6	10
Disulfoton	0.95	U	0.95	10
Ethyl methanesulfonate	0.56	U	0.56	10
Ethyl Parathion	0.82	U	0.82	10
Famphur	0.55	U	0.55	10
Fluoranthene	0.50	U	0.50	10
Fluorene	0.50	U	0.50	10
Hexachlorobenzene	0.50	U	0.50	10
Hexachlorobutadiene	5.0	U	5.0	10
Hexachlorocyclopentadiene	5.0	U	5.0	10
Hexachloroethane	0.50	U	0.50	10
Hexachlorophene	40	U	40	5000
Hexachloropropene	0.50	U	0.50	10
Indeno[1,2,3-cd]pyrene	0.86	U	0.86	10
Isophorone	0.50	U	0.50	10
Isosafrole	0.31	U	0.31	10
Methapyrilene	5.0	U	5.0	2000
3-Methylcholanthrene	0.50	U	0.50	10
Methyl methanesulfonate	0.50	U	0.50	10
2-Methylnaphthalene	0.50	U	0.50	10
Methyl parathion	0.75	U	0.75	10
2-Methylphenol	0.64	U	0.64	10
3 & 4 Methylphenol	1.0	U	1.0	10
Naphthalene	0.50	U	0.50	10
1,4-Naphthoquinone	1.0	U	1.0	10
1-Naphthylamine	0.50	U	0.50	10
2-Naphthylamine	1.0	U	1.0	10
2-Nitroaniline	5.0	U	5.0	50
3-Nitroaniline	2.8	U	2.8	50
4-Nitroaniline	2.0	U	2.0	50
Nitrobenzene	0.50	U	0.50	10

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-153727

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 680-153727/20-A	Analysis Batch:	680-154410	Instrument ID:	GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch:	680-153727	Lab File ID:	t1073.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/21/2009 1146			Final Weight/Volume:	1 mL
Date Prepared:	11/17/2009 1558			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
2-Nitrophenol	5.0	U	5.0	10
4-Nitrophenol	10	U	10	50
4-Nitroquinoline-1-oxide	5.0	U	5.0	20
N-Nitro-o-toluidine	1.0	U	1.0	10
N-Nitrosodiethylamine	0.50	U	0.50	10
N-Nitrosodimethylamine	1.2	U	1.2	10
N-Nitrosodi-n-butylamine	1.0	U	1.0	10
N-Nitrosodi-n-propylamine	0.50	U	0.50	10
N-Nitrosodiphenylamine	0.73	U	0.73	10
N-Nitrosomethylethylamine	5.0	U	5.0	10
N-Nitrosomorpholine	0.59	U	0.59	10
N-Nitrosopiperidine	1.0	U	1.0	10
N-Nitrosopyrrolidine	1.0	U	1.0	10
o,o',o''-Triethylphosphorothioate	0.79	U	0.79	10
p-Dimethylamino azobenzene	0.60	U	0.60	10
Pentachlorobenzene	0.57	U	0.57	10
Pentachloronitrobenzene	1.0	U	1.0	10
Pentachlorophenol	5.0	U	5.0	50
Phenacetin	0.50	U	0.50	10
Phenanthrene	0.50	U	0.50	10
Phenol	0.50	U	0.50	10
Phorate	0.82	U	0.82	10
2-Picoline	0.67	U	0.67	10
p-Phenylene diamine	10	U	10	2000
Pronamide	1.0	U	1.0	10
Pyrene	0.50	U	0.50	10
Pyridine	10	U	10	50
Safrole, Total	0.50	U	0.50	10
Sulfotepp	0.50	U	0.50	10
1,2,4,5-Tetrachlorobenzene	0.51	U	0.51	10
2,3,4,6-Tetrachlorophenol	0.50	U	0.50	10
Thionazin	0.50	U	0.50	10
2-Toluidine	0.50	U	0.50	10
1,2,4-Trichlorobenzene	0.71	U	0.71	10
2,4,5-Trichlorophenol	0.80	U	0.80	10
2,4,6-Trichlorophenol	0.50	U	0.50	10
1,3,5-Trinitrobenzene	5.0	U	5.0	10

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	71	40 - 139
2-Fluorobiphenyl	86	50 - 113

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Surrogate	% Rec	Acceptance Limits
2-Fluorophenol	70	36 - 110
Terphenyl-d14	88	10 - 121
Phenol-d5	64	38 - 116
Nitrobenzene-d5	75	45 - 112

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Control Sample - Batch: 680-153727

Method: 8270C
Preparation: 3520C

Lab Sample ID: LCS 680-153727/21-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/21/2009 1209
Date Prepared: 11/17/2009 1558

Analysis Batch: 680-154410
Prep Batch: 680-153727
Units: ug/L

Instrument ID: GC/MS SemiVolatiles - T
Lab File ID: t1074.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	100	78.6	79	45 - 117	
Acenaphthylene	100	85.1	85	51 - 112	
Aniline	100	74.3	74	10 - 114	
Anthracene	100	95.2	95	52 - 116	
Benzo[a]anthracene	100	90.4	90	49 - 124	
Benzo[a]pyrene	100	94.8	95	48 - 120	
Benzo[b]fluoranthene	100	93.7	94	46 - 126	
Benzo[g,h,i]perylene	100	82.1	82	51 - 117	
Benzo[k]fluoranthene	100	85.1	85	47 - 126	
Benzyl alcohol	100	75.4	75	34 - 113	
Bis(2-chloroethoxy)methane	100	112	112	50 - 112	
Bis(2-chloroethyl)ether	100	78.3	78	43 - 110	
bis(chloroisopropyl) ether	100	76.0	76	42 - 110	
Bis(2-ethylhexyl) phthalate	100	89.3	89	47 - 134	
4-Bromophenyl phenyl ether	100	86.5	86	42 - 110	
Butyl benzyl phthalate	100	95.1	95	52 - 135	
4-Chloroaniline	100	87.7	88	10 - 110	
4-Chloro-3-methylphenol	100	95.1	95	46 - 118	
2-Chloronaphthalene	100	92.4	92	47 - 110	
2-Chlorophenol	100	77.5	78	47 - 110	
4-Chlorophenyl phenyl ether	100	83.2	83	46 - 114	
Chrysene	100	91.4	91	51 - 123	
Dibenz(a,h)anthracene	100	83.2	83	46 - 124	
Dibenzofuran	100	86.2	86	50 - 112	
1,2-Dichlorobenzene	100	65.1	65	39 - 110	
1,3-Dichlorobenzene	100	62.4	62	36 - 110	
1,4-Dichlorobenzene	100	64.4	64	38 - 110	
3,3'-Dichlorobenzidine	100	81.4	81	10 - 113	
2,4-Dichlorophenol	100	79.8	80	46 - 115	
Diethyl phthalate	100	86.9	87	51 - 119	
2,4-Dimethylphenol	200	169	85	36 - 110	
Dimethyl phthalate	100	84.9	85	50 - 116	
Di-n-butyl phthalate	100	98.2	98	49 - 123	
4,6-Dinitro-2-methylphenol	100	102	102	29 - 167	
2,4-Dinitrophenol	100	109	109	10 - 189	
2,4-Dinitrotoluene	100	88.8	89	49 - 128	
2,6-Dinitrotoluene	100	89.5	90	45 - 131	
Di-n-octyl phthalate	100	93.5	94	44 - 134	
1,4-Dioxane	100	58.6	59	11 - 110	M
Fluoranthene	100	92.8	93	50 - 120	
Fluorene	100	79.4	79	50 - 115	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Control Sample - Batch: 680-153727

Method: 8270C
Preparation: 3520C

Lab Sample ID: LCS 680-153727/21-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/21/2009 1209
Date Prepared: 11/17/2009 1558

Analysis Batch: 680-154410
Prep Batch: 680-153727
Units: ug/L

Instrument ID: GC/MS SemiVolatiles - T
Lab File ID: t1074.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorobenzene	100	87.9	88	48 - 119	
Hexachlorobutadiene	100	78.7	79	40 - 110	
Hexachlorocyclopentadiene	100	49.7	50	10 - 110	
Hexachloroethane	100	59.4	59	33 - 110	
Indeno[1,2,3-cd]pyrene	100	78.8	79	40 - 126	
Isophorone	100	84.1	84	50 - 111	
2-Methylnaphthalene	100	88.8	89	46 - 110	
2-Methylphenol	100	76.7	77	46 - 110	
3 & 4 Methylphenol	100	74.8	75	43 - 110	
Naphthalene	100	88.7	89	41 - 110	
2-Nitroaniline	100	85.7	86	45 - 122	
3-Nitroaniline	100	87.1	87	30 - 116	
4-Nitroaniline	100	86.8	87	36 - 125	
Nitrobenzene	100	85.9	86	46 - 110	
2-Nitrophenol	100	85.4	85	42 - 120	
4-Nitrophenol	100	83.6	84	30 - 122	
N-Nitrosodimethylamine	100	78.4	78	33 - 110	
N-Nitrosodi-n-propylamine	100	74.0	74	45 - 112	
N-Nitrosodiphenylamine	100	94.2	94	47 - 119	
Pentachlorophenol	100	104	104	37 - 132	
Phenanthrene	100	94.3	94	52 - 117	
Phenol	100	74.2	74	39 - 110	
Pyrene	100	92.0	92	52 - 125	
Pyridine	100	62.2	62	10 - 110	
1,2,4-Trichlorobenzene	100	72.0	72	41 - 110	
2,4,5-Trichlorophenol	100	88.6	89	47 - 122	
2,4,6-Trichlorophenol	100	86.0	86	46 - 120	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	89	40 - 139
2-Fluorobiphenyl	82	50 - 113
2-Fluorophenol	70	36 - 110
Terphenyl-d14	91	10 - 121
Phenol-d5	70	38 - 116
Nitrobenzene-d5	84	45 - 112

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-154011

Method: 8081A_8082
Preparation: 3520C

Lab Sample ID: MB 680-154011/16-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/25/2009 0933
Date Prepared: 11/19/2009 1529

Analysis Batch: 680-154738
Prep Batch: 680-154011
Units: ug/L

Instrument ID: GC SemiVolatiles - J
Lab File ID: jk24053.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
Toxaphene	0.50	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	83	35 - 120
DCB Decachlorobiphenyl	81	14 - 115

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	80	35 - 120
DCB Decachlorobiphenyl	71	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154011

Method: 8081A_8082
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154011/17-A	Analysis Batch:	680-154738	Instrument ID:	GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch:	680-154011	Lab File ID:	jk24054.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/25/2009 0956			Final Weight/Volume:	10 mL
Date Prepared:	11/19/2009 1529			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154011/18-A	Analysis Batch:	680-154738	Instrument ID:	GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch:	680-154011	Lab File ID:	jk24055.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/25/2009 1019			Final Weight/Volume:	10 mL
Date Prepared:	11/19/2009 1529			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
4,4'-DDD	69	70	37 - 179	2	40		
4,4'-DDE	64	67	33 - 142	4	40		
4,4'-DDT	95	96	27 - 141	1	40		
Aldrin	77	78	32 - 114	1	40		
alpha-BHC	87	87	29 - 112	0	40		
beta-BHC	103	98	15 - 204	5	40		
delta-BHC	79	82	25 - 123	3	40		
Dieldrin	89	90	45 - 137	0	40		
Endosulfan I	81	82	31 - 134	1	40		
Endosulfan II	75	74	24 - 144	1	40		
Endosulfan sulfate	81	80	44 - 128	1	40		
Endrin	79	82	38 - 144	3	40		
Endrin aldehyde	106	104	37 - 135	2	40		
gamma-BHC (Lindane)	85	85	31 - 118	1	40		
Heptachlor	104	105	30 - 133	1	40		
Heptachlor epoxide	85	86	34 - 126	2	40		
Methoxychlor	90	88	10 - 243	2	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	91	87	35 - 120
DCB Decachlorobiphenyl	84	80	14 - 115

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	83	85	35 - 120
DCB Decachlorobiphenyl	71	71	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154011

Method: 8081A_8082
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154011/19-A	Analysis Batch:	680-154738	Instrument ID:	GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch:	680-154011	Lab File ID:	jk24056.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/25/2009 1042			Final Weight/Volume:	10 mL
Date Prepared:	11/19/2009 1529			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154011/20-A	Analysis Batch:	680-154738	Instrument ID:	GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch:	680-154011	Lab File ID:	jk24057.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/25/2009 1105			Final Weight/Volume:	10 mL
Date Prepared:	11/19/2009 1529			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	94	91	57 - 124	2	40		
PCB-1260	86	90	58 - 124	5	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	84	90	35 - 120
DCB Decachlorobiphenyl	70	61	14 - 115

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	70	82	35 - 120
DCB Decachlorobiphenyl	59	52	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-154011

Method: 8141A
Preparation: 3520C

Lab Sample ID: MB 680-154011/16-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/23/2009 2243
Date Prepared: 11/19/2009 1529

Analysis Batch: 680-154486
Prep Batch: 680-154011
Units: ug/L

Instrument ID: GC SemiVolatiles - O
Lab File ID: ok23011.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
Merphos	0.75	U	0.75	1.5
Methyl parathion	0.25	U	0.25	0.50
Mevinphos	1.0	U	1.0	2.0
Ethoprop	0.25	U	0.25	0.50
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

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	102	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154011

Method: 8141A
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154011/21-A	Analysis Batch:	680-154486	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154011	Lab File ID:	ok23012.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/23/2009 2308			Final Weight/Volume:	10 mL
Date Prepared:	11/19/2009 1529			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154011/22-A	Analysis Batch:	680-154486	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154011	Lab File ID:	ok23013.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/23/2009 2333			Final Weight/Volume:	10 mL
Date Prepared:	11/19/2009 1529			Injection Volume:	2 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diazinon	98	105	53 - 138	7	40		
Methyl parathion	87	71	31 - 130	20	40		
Ronnel	92	105	46 - 142	13	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Triphenylphosphate	106	110	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154011

Method: 8141A
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154011/23-A	Analysis Batch:	680-154486	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154011	Lab File ID:	ok23014.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/23/2009 2358			Final Weight/Volume:	10 mL
Date Prepared:	11/19/2009 1529			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154011/24-A	Analysis Batch:	680-154486	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154011	Lab File ID:	ok23015.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/24/2009 0023			Final Weight/Volume:	10 mL
Date Prepared:	11/19/2009 1529			Injection Volume:	2 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ethyl Parathion	85	95	45 - 132	11	40		
Thionazin	65	52	37 - 134	22	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Triphenylphosphate	103	95	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-153378

Method: 6020
Preparation: 3030C

Lab Sample ID:	MB 680-153378/4-A	Analysis Batch:	680-153756	Instrument ID:	ICP MS - A
Client Matrix:	Water	Prep Batch:	680-153378	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	11/16/2009 2146			Final Weight/Volume:	50 mL
Date Prepared:	11/13/2009 1152				

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	0.224	J	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	0.20	U	0.20	0.50
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

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Lab Control Sample - Batch: 680-153378

Method: 6020
Preparation: 3030C

Lab Sample ID: LCS 680-153378/5-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/16/2009 2153
Date Prepared: 11/13/2009 1152

Analysis Batch: 680-153756
Prep Batch: 680-153378
Units: ug/L

Instrument ID: ICP MS - A
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	10.0	9.21	92	75 - 125	
Arsenic	20.0	18.6	93	75 - 125	
Barium	20.0	18.3	91	75 - 125	
Beryllium	10.0	9.42	94	75 - 125	
Cadmium	10.0	9.15	91	75 - 125	
Chromium	20.0	17.9	90	75 - 125	
Cobalt	10.0	8.58	86	75 - 125	
Copper	20.0	18.6	93	75 - 125	
Lead	10.0	9.10	91	75 - 125	
Nickel	20.0	18.4	92	75 - 125	
Selenium	20.0	18.8	94	75 - 125	
Silver	10.0	8.79	88	75 - 125	
Thallium	8.00	7.18	90	75 - 125	
Tin	20.0	17.0	85	75 - 125	
Vanadium	20.0	18.0	90	75 - 125	
Zinc	20.0	20.8	104	75 - 125	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-153378

Method: 6020
Preparation: 3030C

MS Lab Sample ID:	680-52599-3	Analysis Batch:	680-153756	Instrument ID:	ICP MS - A
Client Matrix:	Water	Prep Batch:	680-153378	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/16/2009 2233			Final Weight/Volume:	50 mL
Date Prepared:	11/13/2009 1152				

MSD Lab Sample ID:	680-52599-3	Analysis Batch:	680-153756	Instrument ID:	ICP MS - A
Client Matrix:	Water	Prep Batch:	680-153378	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/16/2009 2240			Final Weight/Volume:	50 mL
Date Prepared:	11/13/2009 1152				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	98	97	75 - 125	1	20		
Arsenic	95	92	75 - 125	3	20		
Barium	89	91	75 - 125	1	20		
Beryllium	101	102	75 - 125	1	20		
Cadmium	100	100	75 - 125	1	20		
Chromium	90	87	75 - 125	3	20		
Cobalt	86	83	75 - 125	3	20		
Copper	92	90	75 - 125	2	20		
Lead	92	93	75 - 125	1	20		
Nickel	92	88	75 - 125	4	20		
Selenium	95	96	75 - 125	0	20		
Silver	93	93	75 - 125	0	20		
Thallium	92	93	75 - 125	1	20		
Tin	92	91	75 - 125	2	20		
Vanadium	96	94	75 - 125	2	20		
Zinc	81	80	75 - 125	0	20		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-153963

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 680-153963/21-A	Analysis Batch:	680-154464	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-153963	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1651			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

Analyte	Result	Qual	MDL	RL
Mercury	0.091	U	0.091	0.20

Lab Control Sample - Batch: 680-153963

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 680-153963/22-A	Analysis Batch:	680-154464	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-153963	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1700			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.49	100	80 - 120	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-153436

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 680-153436/36
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 11/13/2009 1636
Date Prepared: N/A

Analysis Batch: 680-153436
Prep Batch: N/A
Units: mg/L

Instrument ID: ICCS200 - G
Lab File ID: 0011.d
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

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

Lab Control Sample - Batch: 680-153436

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 680-153436/10
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 11/13/2009 1707
Date Prepared: N/A

Analysis Batch: 680-153436
Prep Batch: N/A
Units: mg/L

Instrument ID: ICCS200 - G
Lab File ID: 0013.d
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as NO3	11.0	10.0	91	90 - 110	

Matrix Spike - Batch: 680-153436

Method: 300.0
Preparation: N/A

Lab Sample ID: 680-52599-1
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 11/13/2009 2050
Date Prepared: N/A

Analysis Batch: 680-153436
Prep Batch: N/A
Units: mg/L

Instrument ID: ICCS200 - G
Lab File ID: 0028.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	21.6	98	90 - 110	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-153879

Method: 335.4
Preparation: Distill/CN

Lab Sample ID: MB 680-153879/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1111
Date Prepared: 11/18/2009 1354

Analysis Batch: 680-153987
Prep Batch: 680-153879
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

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

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153879

Method: 335.4
Preparation: Distill/CN

LCS Lab Sample ID: LCS 680-153879/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1111
Date Prepared: 11/18/2009 1354

Analysis Batch: 680-153987
Prep Batch: 680-153879
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 680-153879/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1111
Date Prepared: 11/18/2009 1354

Analysis Batch: 680-153987
Prep Batch: 680-153879
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Cyanide, Total	96	96	90 - 110	0	20		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52599-1

Method Blank - Batch: 680-153533

Method: 9034
Preparation: 9030B

Lab Sample ID: MB 680-153533/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/16/2009 1648
Date Prepared: 11/16/2009 1025

Analysis Batch: 680-153633
Prep Batch: 680-153533
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 250 mL

Analyte	Result	Qual	RL	RL
Sulfide	1.0	U	1.0	1.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153533

Method: 9034
Preparation: 9030B

LCS Lab Sample ID: LCS 680-153533/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/16/2009 1648
Date Prepared: 11/16/2009 1025

Analysis Batch: 680-153633
Prep Batch: 680-153533
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 250 mL

LCSD Lab Sample ID: LCSD 680-153533/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/16/2009 1648
Date Prepared: 11/16/2009 1025

Analysis Batch: 680-153633
Prep Batch: 680-153533
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 250 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Sulfide	82	80	50 - 150	2	50		

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

Serial Number 020641

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

◯ TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

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

◯ Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	Ft Bragg (Long Street)
PROJECT NO.	
PROJECT LOCATION (STATE)	
TAL (LAB) PROJECT MANAGER	Terry Hornsby
P.O. NUMBER	
CONTRACT NO.	
CLIENT (SITE) PM	Kevin G. Haborak
CLIENT PHONE	912 652 6083
CLIENT FAX	
CLIENT NAME	USACE
CLIENT E-MAIL	
CLIENT ADDRESS	100 W Oglethorpe Ave Savannah, Georgia 31402
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:

PRESERVATIVE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	VOC 8260 (ICE)	Sulfate (ZNAc NaOH)	8270 SVOC (ICE)	Pesticide 8081 (ICE)	PCB 8082 (ICE)	App IX metals (HNO3)	Cyanide (NaOH)	Nitrate (ICE)	Organophosphorus 8141 (ICE)	REMARKS
11/12/09	0910	GW-SW2						3	1	2	1	1	1	1	1	2	
11/12/09	1025	GW-SW1						3	1	2	1	1	1	1	1	2	
11/12/09	1105	GW-LMW-12AR-01-09						3	1	2	1	1	1	1	1	2	
11/12/09		Trip Blank						2	0	0	0	0	0	0	0	0	

NUMBER OF CONTAINERS SUBMITTED

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
James L. Jackson	11/12/09	1700	Shipped By 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
Gregory L	11/13/09	1010	YES ◯ NO ◯		680-52549	4.1°C

11/27/2009

TAL8240-680 (1207)

ANALYTICAL REPORT

Job Number: 680-52658-1

Job Description: Ft. Bragg Longstreet Landfill

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

Attention: Mr. Judson Smith

Approved for release.
Kathryn Smith
Project Manager I
12/11/2009 11:26 AM

Designee for
Terry Hornsby
Project Manager I
terry.hornsby@testamericainc.com
12/11/2009

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

Job Narrative
680-52658-1

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
Method(s) 8270C: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for 4 analytes to recover outside criteria for this method when a full list spike is utilized. The LCS associated with batch 154149 had 1 analyte outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8270C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 154149 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

GC Semi VOA
Method(s) 8141A: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for one analyte to recover outside criteria for this method when a full list spike is utilized. The LCS/LCSD/MS/MSD associated with batch 680-154155 had one analyte outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
Method(s) 300.0: Reanalysis of the following sample(s) was performed due to the LCS failing QC criteria in the initial batch (153866). The reanalysis was performed outside of the analytical holding time: DUP-1 (680-52658-3), GL-SLMW-11R-11-09 (680-52658-4), GW-SLMW-10-11-09 (680-52658-2), GW-SLMW-10-11-09 (680-52658-2 MS), GW-SLMW-10-11-09 (680-52658-2 MSD), GW-SLMW-12BR-11-09 (680-52658-1), SLMW-7-11-09 (680-52658-6). Both sets of data have been reported.

Method(s) 335.4: The matrix spike (MS) recovery for batch 154047 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other 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: 680-52658-1

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 Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	TAL SAV	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides & PCBs (GC)	TAL SAV	SW846 8081A_8082	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organophosphorous Pesticides (GC)	TAL SAV	SW846 8141A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Inductively Coupled Plasma - Mass Spectrometry	TAL SAV	SW846 6020	
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: 680-52658-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8270C	Haynes, Carion	CRH
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8141A	Kellar, Joshua	JK
SW846 6020	Boyuk, Brian	BB
SW846 7470A	Walton, Ernie	EW
MCAWW 300.0	Brazell, Connie	CB
MCAWW 335.4	Johnson, Brad	BJ
SW846 9034	Vasquez, Juana	JV

SAMPLE SUMMARY

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-52658-1	GW-SLMW-12BR-11-09	Water	11/13/2009 1205	11/14/2009 0935
680-52658-2	GW-SLMW-10-11-09	Water	11/13/2009 1330	11/14/2009 0935
680-52658-2MS	GW-SLMW-10-11-09	Water	11/13/2009 1330	11/14/2009 0935
680-52658-2MSD	GW-SLMW-10-11-09	Water	11/13/2009 1330	11/14/2009 0935
680-52658-3	DUP-1	Water	11/13/2009 1100	11/14/2009 0935
680-52658-4	GL-SLMW-11R-11-09	Water	11/13/2009 1550	11/14/2009 0935
680-52658-5	TRIP BLANK	Water	11/13/2009 0000	11/14/2009 0935
680-52658-6	SLMW-7-11-09	Water	11/13/2009 1025	11/14/2009 0935

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-12BR-11-09**

Lab Sample ID: 680-52658-1

Client Matrix: Water

Date Sampled: 11/13/2009 1205

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 1.0

Date Analyzed: 11/18/2009 1814

Date Prepared: 11/18/2009 1814

Analysis Batch: 680-153862

Instrument ID: MSO2

Lab File ID: o3030.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-12BR-11-09**

Lab Sample ID: 680-52658-1

Client Matrix: Water

Date Sampled: 11/13/2009 1205

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153862	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3030.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1814		Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1814			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	98		75 - 121
Toluene-d8 (Surr)	97		75 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-10-11-09**

Lab Sample ID: 680-52658-2

Client Matrix: Water

Date Sampled: 11/13/2009 1330

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 1.0

Date Analyzed: 11/18/2009 1519

Date Prepared: 11/18/2009 1519

Analysis Batch: 680-153862

Instrument ID: MSO2

Lab File ID: o3018.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	26		5.0	25
Acetonitrile	10	U	10	40
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Benzene	1.3		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	0.63	J	0.25	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-1,3-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
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	1.1		0.25	1.0
1,2-Dichloroethane	0.45	J	0.10	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
1,2-Dichloropropane	2.8		0.13	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
Pentachloroethane	1.2	U	1.2	5.0
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
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.29	J	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	0.27	J	0.20	1.0
trans-1,3-Dichloropropene	0.21	U	0.21	1.0

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-10-11-09**

Lab Sample ID: 680-52658-2

Client Matrix: Water

Date Sampled: 11/13/2009 1330

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153862	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3018.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1519		Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1519			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
Trichloroethene	0.94	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	1.5		0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	102		75 - 121
Toluene-d8 (Surr)	100		75 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **DUP-1**

Lab Sample ID: 680-52658-3

Client Matrix: Water

Date Sampled: 11/13/2009 1100

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 1.0

Date Analyzed: 11/18/2009 1548

Date Prepared: 11/18/2009 1548

Analysis Batch: 680-153862

Instrument ID: MSO2

Lab File ID: o3020.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	14	J	5.0	25
Acetonitrile	10	U	10	40
Acrolein	7.4	U	7.4	20
Acrylonitrile	7.2	U	7.2	20
Benzene	1.1		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	0.61	J	0.25	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-1,3-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
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	1.0		0.25	1.0
1,2-Dichloroethane	0.42	J	0.10	1.0
1,1-Dichloroethene	0.11	U	0.11	1.0
1,2-Dichloropropane	2.8		0.13	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
Pentachloroethane	1.2	U	1.2	5.0
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
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.21	J	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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **DUP-1**

Lab Sample ID: 680-52658-3

Client Matrix: Water

Date Sampled: 11/13/2009 1100

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153862	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3020.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1548		Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1548			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
Trichloroethene	0.89	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	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		75 - 120
Dibromofluoromethane	100		75 - 121
Toluene-d8 (Surr)	100		75 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GL-SLMW-11R-11-09**

Lab Sample ID: 680-52658-4

Client Matrix: Water

Date Sampled: 11/13/2009 1550

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 1.0

Date Analyzed: 11/18/2009 1617

Date Prepared: 11/18/2009 1617

Analysis Batch: 680-153862

Instrument ID: MSO2

Lab File ID: o3022.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

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
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	0.23	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-1,3-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
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	1.1		0.25	1.0
1,1-Dichloroethane	0.42	J	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
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
Pentachloroethane	1.2	U	1.2	5.0
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
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.30	J	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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GL-SLMW-11R-11-09**

Lab Sample ID: 680-52658-4

Client Matrix: Water

Date Sampled: 11/13/2009 1550

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153862	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3022.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1617		Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1617			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
Trichloroethene	0.22	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	0.18	U	0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 680-52658-5

Client Matrix: Water

Date Sampled: 11/13/2009 0000

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 1.0

Date Analyzed: 11/18/2009 1223

Date Prepared: 11/18/2009 1223

Analysis Batch: 680-153862

Instrument ID: MSO2

Lab File ID: o3006.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 680-52658-5

Client Matrix: Water

Date Sampled: 11/13/2009 0000

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 1.0

Date Analyzed: 11/18/2009 1223

Date Prepared: 11/18/2009 1223

Analysis Batch: 680-153862

Instrument ID: MSO2

Lab File ID: o3006.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	103		75 - 121
Toluene-d8 (Surr)	98		75 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **SLMW-7-11-09**

Lab Sample ID: 680-52658-6

Client Matrix: Water

Date Sampled: 11/13/2009 1025

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 1.0

Date Analyzed: 11/19/2009 1447

Date Prepared: 11/19/2009 1447

Analysis Batch: 680-153993

Instrument ID: MSO2

Lab File ID: o3050.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	6.0	J	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	1.5		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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **SLMW-7-11-09**

Lab Sample ID: 680-52658-6

Client Matrix: Water

Date Sampled: 11/13/2009 1025

Date Received: 11/14/2009 0935

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-153993	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3050.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/19/2009 1447		Final Weight/Volume:	5 mL
Date Prepared:	11/19/2009 1447			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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
4-Bromofluorobenzene	94		75 - 120
Dibromofluoromethane	98		75 - 121
Toluene-d8 (Surr)	98		75 - 120

Client: U.S. Army Corps of Engineers | Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-12BR-11-09**

Lab Sample ID: 680-52658-1 | Date Sampled: 11/13/2009 1205
Client Matrix: Water | Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1277.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1151			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Thionazin	0.47	U	0.47	9.4
Sulfotepp	0.47	U	0.47	9.4
Pyridine	9.4	U	9.4	47
1,1'-Biphenyl	0.47	U	0.47	9.4
1,2,4,5-Tetrachlorobenzene	0.48	U	0.48	9.4
1,2,4-Trichlorobenzene	0.67	U	0.67	9.4
1,2-Dichlorobenzene	0.47	U	0.47	9.4
1,3,5-Trinitrobenzene	4.7	U	4.7	9.4
1,3-Dichlorobenzene	0.47	U	0.47	9.4
1,3-Dinitrobenzene	0.54	U	0.54	9.4
1,4-Dichlorobenzene	0.47	U	0.47	9.4
1,4-Dioxane	2.5	U	2.5	9.4
1,4-Naphthoquinone	0.94	U	0.94	9.4
1-Naphthylamine	0.47	U	0.47	9.4
2,3,4,6-Tetrachlorophenol	0.47	U	0.47	9.4
2,4,5-Trichlorophenol	0.75	U	0.75	9.4
2,4,6-Trichlorophenol	0.47	U	0.47	9.4
2,4-Dichlorophenol	0.94	U	0.94	9.4
2,4-Dimethylphenol	1.0	U	1.0	9.4
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	0.47	U	0.47	9.4
2,6-Dichlorophenol	0.47	U	0.47	9.4
2,6-Dinitrotoluene	0.47	U	0.47	9.4
2-Acetylaminofluorene	0.53	U	0.53	9.4
2-Chlorophenol	0.94	U	0.94	9.4
2-Chloronaphthalene	0.47	U	0.47	9.4
2-Methylnaphthalene	0.47	U	0.47	9.4
2-Methylphenol	0.60	U	0.60	9.4
2-Naphthylamine	0.94	U	0.94	9.4
2-Nitroaniline	4.7	U	4.7	47
2-Nitrophenol	4.7	U	4.7	9.4
2-Picoline	0.63	U	0.63	9.4
2-Toluidine	0.47	U	0.47	9.4
3 & 4 Methylphenol	0.94	U	0.94	9.4
3,3'-Dichlorobenzidine	3.0	U	3.0	19
3,3'-Dimethylbenzidine	0.47	U	0.47	19
3-Methylcholanthrene	0.47	U	0.47	9.4
3-Nitroaniline	2.6	U	2.6	47
4,6-Dinitro-2-methylphenol	4.7	U	4.7	47
4-Aminobiphenyl	0.47	U	0.47	9.4
4-Bromophenyl phenyl ether	0.47	U	0.47	9.4
4-Chloro-3-methylphenol	0.49	U	0.49	9.4
4-Chloroaniline	4.5	U	4.5	19
4-Chlorophenyl phenyl ether	0.94	U	0.94	9.4
4-Nitroaniline	1.9	U	1.9	47
4-Nitrophenol	9.4	U	9.4	47

Client: U.S. Army Corps of Engineers | Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-12BR-11-09**

Lab Sample ID: 680-52658-1 | Date Sampled: 11/13/2009 1205
Client Matrix: Water | Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1277.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1151			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
4-Nitroquinoline-1-oxide	4.7	U	4.7	19
7,12-Dimethylbenz(a)anthracene	0.94	U	0.94	9.4
Acenaphthene	0.47	U	0.47	9.4
Acenaphthylene	0.47	U	0.47	9.4
Acetophenone	0.47	U	0.47	9.4
alpha,alpha-Dimethyl phenethylamine	9.4	U	9.4	1900
Aniline	8.1	U	8.1	19
Anthracene	0.47	U	0.47	9.4
Aramite, Total	0.50	U	0.50	9.4
Benzo[a]anthracene	0.47	U	0.47	9.4
Benzo[a]pyrene	0.47	U	0.47	9.4
Benzo[b]fluoranthene	0.63	U	0.63	9.4
Benzo[g,h,i]perylene	0.63	U	0.63	9.4
Benzo[k]fluoranthene	0.47	U	0.47	9.4
Benzyl alcohol	0.75	U	0.75	9.4
Bis(2-chloroethoxy)methane	0.47	U	0.47	9.4
Bis(2-chloroethyl)ether	0.56	U	0.56	9.4
Bis(2-ethylhexyl) phthalate	0.89	U	0.89	9.4
Chrysene	0.47	U	0.47	9.4
Diallate	0.33	U	0.33	9.4
Dibenz(a,h)anthracene	0.47	U	0.47	9.4
Dibenzofuran	0.47	U	0.47	9.4
Di-n-butyl phthalate	0.47	U	0.47	9.4
Diethyl phthalate	0.47	U	0.47	9.4
p-Dimethylamino azobenzene	0.57	U	0.57	9.4
Dimethyl phthalate	4.7	U	4.7	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	0.72	U	0.72	9.4
Ethyl methanesulfonate	0.53	U	0.53	9.4
Fluoranthene	0.47	U	0.47	9.4
Fluorene	0.47	U	0.47	9.4
Hexachlorobenzene	0.47	U	0.47	9.4
Hexachlorobutadiene	4.7	U	4.7	9.4
Hexachlorocyclopentadiene	4.7	U	4.7	9.4
Hexachloroethane	0.47	U	0.47	9.4
Hexachlorophene	38	U	38	4700
Hexachloropropene	0.47	U Q	0.47	9.4
Indeno[1,2,3-cd]pyrene	0.81	U	0.81	9.4
Isophorone	0.47	U	0.47	9.4
Isosafrole	0.29	U	0.29	9.4
Methapyrilene	4.7	U	4.7	1900
Methyl methanesulfonate	0.47	U Q	0.47	9.4
Naphthalene	0.47	U	0.47	9.4
Nitrobenzene	0.47	U	0.47	9.4
N-Nitrosodi-n-butylamine	0.94	U	0.94	9.4
N-Nitrosodiethylamine	0.47	U	0.47	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-12BR-11-09**

Lab Sample ID: 680-52658-1

Client Matrix: Water

Date Sampled: 11/13/2009 1205

Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1277.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1151			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	1.1	U	1.1	9.4
N-Nitrosodiphenylamine	0.69	U	0.69	9.4
N-Nitrosodi-n-propylamine	0.47	U	0.47	9.4
N-Nitrosomethylethylamine	4.7	U	4.7	9.4
N-Nitrosomorpholine	0.56	U	0.56	9.4
N-Nitrosopiperidine	0.94	U	0.94	9.4
N-Nitrosopyrrolidine	0.94	U	0.94	9.4
N-Nitro-o-toluidine	0.94	U	0.94	9.4
Pentachlorobenzene	0.54	U	0.54	9.4
Pentachloronitrobenzene	0.94	U	0.94	9.4
Pentachlorophenol	4.7	U	4.7	47
Phenacetin	0.47	U	0.47	9.4
Phenanthrene	0.47	U	0.47	9.4
Phenol	0.47	U	0.47	9.4
p-Phenylene diamine	9.4	U	9.4	1900
Pronamide	0.94	U	0.94	9.4
Pyrene	0.47	U	0.47	9.4
Safrole, Total	0.47	U	0.47	9.4
o,o',o"-Triethylphosphorothioate	0.75	U	0.75	9.4
Disulfoton	0.90	U	0.90	9.4
Ethyl Parathion	0.77	U	0.77	9.4
Methyl parathion	0.71	U	0.71	9.4
Phorate	0.77	U	0.77	9.4
Famphur	0.52	U	0.52	9.4
Dimethoate	0.59	U	0.59	9.4
Butyl benzyl phthalate	0.70	U	0.70	9.4
bis(chloroisopropyl) ether	0.47	U	0.47	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	105		40 - 139
2-Fluorobiphenyl	84		50 - 113
2-Fluorophenol	70		36 - 110
Terphenyl-d14	86		10 - 121
Phenol-d5	68		38 - 116
Nitrobenzene-d5	85		45 - 112

Client: U.S. Army Corps of Engineers | Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-10-11-09**

Lab Sample ID: 680-52658-2 | Date Sampled: 11/13/2009 1330
Client Matrix: Water | Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1278.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1217			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Thionazin	0.47	U	0.47	9.4
Sulfotepp	0.47	U	0.47	9.4
Pyridine	9.4	U	9.4	47
1,1'-Biphenyl	0.47	U	0.47	9.4
1,2,4,5-Tetrachlorobenzene	0.48	U	0.48	9.4
1,2,4-Trichlorobenzene	0.67	U	0.67	9.4
1,2-Dichlorobenzene	0.51	J	0.47	9.4
1,3,5-Trinitrobenzene	4.7	U	4.7	9.4
1,3-Dichlorobenzene	0.47	U	0.47	9.4
1,3-Dinitrobenzene	0.54	U	0.54	9.4
1,4-Dichlorobenzene	6.9	J	0.47	9.4
1,4-Dioxane	2.5	U	2.5	9.4
1,4-Naphthoquinone	0.94	U	0.94	9.4
1-Naphthylamine	0.47	U	0.47	9.4
2,3,4,6-Tetrachlorophenol	0.47	U	0.47	9.4
2,4,5-Trichlorophenol	0.75	U	0.75	9.4
2,4,6-Trichlorophenol	0.47	U	0.47	9.4
2,4-Dichlorophenol	0.94	U	0.94	9.4
2,4-Dimethylphenol	1.0	U	1.0	9.4
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	0.47	U	0.47	9.4
2,6-Dichlorophenol	0.47	U	0.47	9.4
2,6-Dinitrotoluene	0.47	U	0.47	9.4
2-Acetylaminofluorene	0.53	U	0.53	9.4
2-Chlorophenol	0.94	U	0.94	9.4
2-Chloronaphthalene	0.47	U	0.47	9.4
2-Methylnaphthalene	0.47	U	0.47	9.4
2-Methylphenol	0.60	U	0.60	9.4
2-Naphthylamine	0.94	U	0.94	9.4
2-Nitroaniline	4.7	U	4.7	47
2-Nitrophenol	4.7	U	4.7	9.4
2-Picoline	0.63	U	0.63	9.4
2-Toluidine	0.47	U	0.47	9.4
3 & 4 Methylphenol	0.94	U	0.94	9.4
3,3'-Dichlorobenzidine	3.0	U	3.0	19
3,3'-Dimethylbenzidine	0.47	U	0.47	19
3-Methylcholanthrene	0.47	U	0.47	9.4
3-Nitroaniline	2.6	U	2.6	47
4,6-Dinitro-2-methylphenol	4.7	U	4.7	47
4-Aminobiphenyl	0.47	U	0.47	9.4
4-Bromophenyl phenyl ether	0.47	U	0.47	9.4
4-Chloro-3-methylphenol	0.49	U	0.49	9.4
4-Chloroaniline	4.5	U	4.5	19
4-Chlorophenyl phenyl ether	0.94	U	0.94	9.4
4-Nitroaniline	1.9	U	1.9	47
4-Nitrophenol	9.4	U	9.4	47

Client: U.S. Army Corps of Engineers | Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-10-11-09**

Lab Sample ID: 680-52658-2 | Date Sampled: 11/13/2009 1330
Client Matrix: Water | Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1278.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1217			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
4-Nitroquinoline-1-oxide	4.7	U	4.7	19
7,12-Dimethylbenz(a)anthracene	0.94	U	0.94	9.4
Acenaphthene	0.47	U	0.47	9.4
Acenaphthylene	0.47	U	0.47	9.4
Acetophenone	0.47	U	0.47	9.4
alpha,alpha-Dimethyl phenethylamine	9.4	U	9.4	1900
Aniline	8.1	U	8.1	19
Anthracene	0.47	U	0.47	9.4
Aramite, Total	0.50	U	0.50	9.4
Benzo[a]anthracene	0.47	U	0.47	9.4
Benzo[a]pyrene	0.47	U	0.47	9.4
Benzo[b]fluoranthene	0.63	U	0.63	9.4
Benzo[g,h,i]perylene	0.63	U	0.63	9.4
Benzo[k]fluoranthene	0.47	U	0.47	9.4
Benzyl alcohol	0.75	U	0.75	9.4
Bis(2-chloroethoxy)methane	0.47	U	0.47	9.4
Bis(2-chloroethyl)ether	0.56	U	0.56	9.4
Bis(2-ethylhexyl) phthalate	0.89	U	0.89	9.4
Chrysene	0.47	U	0.47	9.4
Diallate	0.33	U	0.33	9.4
Dibenz(a,h)anthracene	0.47	U	0.47	9.4
Dibenzofuran	0.47	U	0.47	9.4
Di-n-butyl phthalate	0.47	U	0.47	9.4
Diethyl phthalate	0.47	U	0.47	9.4
p-Dimethylamino azobenzene	0.57	U	0.57	9.4
Dimethyl phthalate	4.7	U	4.7	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	0.72	U	0.72	9.4
Ethyl methanesulfonate	0.53	U	0.53	9.4
Fluoranthene	0.47	U	0.47	9.4
Fluorene	0.47	U	0.47	9.4
Hexachlorobenzene	0.47	U	0.47	9.4
Hexachlorobutadiene	4.7	U	4.7	9.4
Hexachlorocyclopentadiene	4.7	U	4.7	9.4
Hexachloroethane	0.47	U	0.47	9.4
Hexachlorophene	38	U	38	4700
Hexachloropropene	0.47	U	0.47	9.4
Indeno[1,2,3-cd]pyrene	0.81	U	0.81	9.4
Isophorone	0.47	U	0.47	9.4
Isosafrole	0.29	U	0.29	9.4
Methapyrilene	4.7	U	4.7	1900
Methyl methanesulfonate	0.47	U	0.47	9.4
Naphthalene	0.47	U	0.47	9.4
Nitrobenzene	0.47	U	0.47	9.4
N-Nitrosodi-n-butylamine	0.94	U	0.94	9.4
N-Nitrosodiethylamine	0.47	U	0.47	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-10-11-09**

Lab Sample ID: 680-52658-2

Client Matrix: Water

Date Sampled: 11/13/2009 1330

Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1278.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1217			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	1.1	U	1.1	9.4
N-Nitrosodiphenylamine	0.69	U	0.69	9.4
N-Nitrosodi-n-propylamine	0.47	U	0.47	9.4
N-Nitrosomethylethylamine	4.7	U	4.7	9.4
N-Nitrosomorpholine	0.56	U	0.56	9.4
N-Nitrosopiperidine	0.94	U	0.94	9.4
N-Nitrosopyrrolidine	0.94	U	0.94	9.4
N-Nitro-o-toluidine	0.94	U	0.94	9.4
Pentachlorobenzene	0.54	U	0.54	9.4
Pentachloronitrobenzene	0.94	U	0.94	9.4
Pentachlorophenol	4.7	U	4.7	47
Phenacetin	0.47	U	0.47	9.4
Phenanthrene	0.47	U	0.47	9.4
Phenol	0.47	U	0.47	9.4
p-Phenylene diamine	9.4	U	9.4	1900
Pronamide	0.94	U	0.94	9.4
Pyrene	0.47	U	0.47	9.4
Safrole, Total	0.47	U	0.47	9.4
o,o',o"-Triethylphosphorothioate	0.75	U	0.75	9.4
Disulfoton	0.90	U	0.90	9.4
Ethyl Parathion	0.77	U	0.77	9.4
Methyl parathion	0.71	U	0.71	9.4
Phorate	0.77	U	0.77	9.4
Famphur	0.52	U	0.52	9.4
Dimethoate	0.59	U	0.59	9.4
Butyl benzyl phthalate	0.70	U	0.70	9.4
bis(chloroisopropyl) ether	0.47	U	0.47	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	106		40 - 139
2-Fluorobiphenyl	91		50 - 113
2-Fluorophenol	73		36 - 110
Terphenyl-d14	75		10 - 121
Phenol-d5	72		38 - 116
Nitrobenzene-d5	87		45 - 112

Client: U.S. Army Corps of Engineers | Job Number: 680-52658-1

Client Sample ID: **DUP-1**

Lab Sample ID: 680-52658-3 | Date Sampled: 11/13/2009 1100
Client Matrix: Water | Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1279.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1243			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Thionazin	0.47	U	0.47	9.4
Sulfotepp	0.47	U	0.47	9.4
Pyridine	9.4	U	9.4	47
1,1'-Biphenyl	0.47	U	0.47	9.4
1,2,4,5-Tetrachlorobenzene	0.48	U	0.48	9.4
1,2,4-Trichlorobenzene	0.67	U	0.67	9.4
1,2-Dichlorobenzene	0.47	U	0.47	9.4
1,3,5-Trinitrobenzene	4.7	U	4.7	9.4
1,3-Dichlorobenzene	0.47	U	0.47	9.4
1,3-Dinitrobenzene	0.54	U	0.54	9.4
1,4-Dichlorobenzene	6.1	J	0.47	9.4
1,4-Dioxane	2.5	U	2.5	9.4
1,4-Naphthoquinone	0.94	U	0.94	9.4
1-Naphthylamine	0.47	U	0.47	9.4
2,3,4,6-Tetrachlorophenol	0.47	U	0.47	9.4
2,4,5-Trichlorophenol	0.75	U	0.75	9.4
2,4,6-Trichlorophenol	0.47	U	0.47	9.4
2,4-Dichlorophenol	0.94	U	0.94	9.4
2,4-Dimethylphenol	1.0	U	1.0	9.4
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	0.47	U	0.47	9.4
2,6-Dichlorophenol	0.47	U	0.47	9.4
2,6-Dinitrotoluene	0.47	U	0.47	9.4
2-Acetylaminofluorene	0.53	U	0.53	9.4
2-Chlorophenol	0.94	U	0.94	9.4
2-Chloronaphthalene	0.47	U	0.47	9.4
2-Methylnaphthalene	0.47	U	0.47	9.4
2-Methylphenol	0.60	U	0.60	9.4
2-Naphthylamine	0.94	U	0.94	9.4
2-Nitroaniline	4.7	U	4.7	47
2-Nitrophenol	4.7	U	4.7	9.4
2-Picoline	0.63	U	0.63	9.4
2-Toluidine	0.47	U	0.47	9.4
3 & 4 Methylphenol	0.94	U	0.94	9.4
3,3'-Dichlorobenzidine	3.0	U	3.0	19
3,3'-Dimethylbenzidine	0.47	U	0.47	19
3-Methylcholanthrene	0.47	U	0.47	9.4
3-Nitroaniline	2.6	U	2.6	47
4,6-Dinitro-2-methylphenol	4.7	U	4.7	47
4-Aminobiphenyl	0.47	U	0.47	9.4
4-Bromophenyl phenyl ether	0.47	U	0.47	9.4
4-Chloro-3-methylphenol	0.49	U	0.49	9.4
4-Chloroaniline	4.5	U	4.5	19
4-Chlorophenyl phenyl ether	0.94	U	0.94	9.4
4-Nitroaniline	1.9	U	1.9	47
4-Nitrophenol	9.4	U	9.4	47

Client: U.S. Army Corps of Engineers | Job Number: 680-52658-1

Client Sample ID: **DUP-1**

Lab Sample ID: 680-52658-3 | Date Sampled: 11/13/2009 1100
Client Matrix: Water | Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1279.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1243			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
4-Nitroquinoline-1-oxide	4.7	U	4.7	19
7,12-Dimethylbenz(a)anthracene	0.94	U	0.94	9.4
Acenaphthene	0.47	U	0.47	9.4
Acenaphthylene	0.47	U	0.47	9.4
Acetophenone	0.47	U	0.47	9.4
alpha,alpha-Dimethyl phenethylamine	9.4	U	9.4	1900
Aniline	8.1	U	8.1	19
Anthracene	0.47	U	0.47	9.4
Aramite, Total	0.50	U	0.50	9.4
Benzo[a]anthracene	0.47	U	0.47	9.4
Benzo[a]pyrene	0.47	U	0.47	9.4
Benzo[b]fluoranthene	0.63	U	0.63	9.4
Benzo[g,h,i]perylene	0.63	U	0.63	9.4
Benzo[k]fluoranthene	0.47	U	0.47	9.4
Benzyl alcohol	0.75	U	0.75	9.4
Bis(2-chloroethoxy)methane	0.47	U	0.47	9.4
Bis(2-chloroethyl)ether	0.56	U	0.56	9.4
Bis(2-ethylhexyl) phthalate	1.5	J	0.89	9.4
Chrysene	0.47	U	0.47	9.4
Diallate	0.33	U	0.33	9.4
Dibenz(a,h)anthracene	0.47	U	0.47	9.4
Dibenzofuran	0.47	U	0.47	9.4
Di-n-butyl phthalate	0.47	U	0.47	9.4
Diethyl phthalate	0.47	U	0.47	9.4
p-Dimethylamino azobenzene	0.57	U	0.57	9.4
Dimethyl phthalate	4.7	U	4.7	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	0.72	U	0.72	9.4
Ethyl methanesulfonate	0.53	U	0.53	9.4
Fluoranthene	0.47	U	0.47	9.4
Fluorene	0.47	U	0.47	9.4
Hexachlorobenzene	0.47	U	0.47	9.4
Hexachlorobutadiene	4.7	U	4.7	9.4
Hexachlorocyclopentadiene	4.7	U	4.7	9.4
Hexachloroethane	0.47	U	0.47	9.4
Hexachlorophene	38	U	38	4700
Hexachloropropene	0.47	U	0.47	9.4
Indeno[1,2,3-cd]pyrene	0.81	U	0.81	9.4
Isophorone	0.47	U	0.47	9.4
Isosafrole	0.29	U	0.29	9.4
Methapyrilene	4.7	U	4.7	1900
Methyl methanesulfonate	0.47	U	0.47	9.4
Naphthalene	0.47	U	0.47	9.4
Nitrobenzene	0.47	U	0.47	9.4
N-Nitrosodi-n-butylamine	0.94	U	0.94	9.4
N-Nitrosodiethylamine	0.47	U	0.47	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **DUP-1**

Lab Sample ID: 680-52658-3

Client Matrix: Water

Date Sampled: 11/13/2009 1100

Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1279.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1243			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	1.1	U	1.1	9.4
N-Nitrosodiphenylamine	0.69	U	0.69	9.4
N-Nitrosodi-n-propylamine	0.47	U	0.47	9.4
N-Nitrosomethylethylamine	4.7	U	4.7	9.4
N-Nitrosomorpholine	0.56	U	0.56	9.4
N-Nitrosopiperidine	0.94	U	0.94	9.4
N-Nitrosopyrrolidine	0.94	U	0.94	9.4
N-Nitro-o-toluidine	0.94	U	0.94	9.4
Pentachlorobenzene	0.54	U	0.54	9.4
Pentachloronitrobenzene	0.94	U	0.94	9.4
Pentachlorophenol	4.7	U	4.7	47
Phenacetin	0.47	U	0.47	9.4
Phenanthrene	0.47	U	0.47	9.4
Phenol	0.47	U	0.47	9.4
p-Phenylene diamine	9.4	U	9.4	1900
Pronamide	0.94	U	0.94	9.4
Pyrene	0.47	U	0.47	9.4
Safrole, Total	0.47	U	0.47	9.4
o,o',o"-Triethylphosphorothioate	0.75	U	0.75	9.4
Disulfoton	0.90	U	0.90	9.4
Ethyl Parathion	0.77	U	0.77	9.4
Methyl parathion	0.71	U	0.71	9.4
Phorate	0.77	U	0.77	9.4
Famphur	0.52	U	0.52	9.4
Dimethoate	0.59	U	0.59	9.4
Butyl benzyl phthalate	0.70	U	0.70	9.4
bis(chloroisopropyl) ether	0.47	U	0.47	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	109		40 - 139
2-Fluorobiphenyl	83		50 - 113
2-Fluorophenol	65		36 - 110
Terphenyl-d14	74		10 - 121
Phenol-d5	63		38 - 116
Nitrobenzene-d5	79		45 - 112

Client: U.S. Army Corps of Engineers | Job Number: 680-52658-1

Client Sample ID: **GL-SLMW-11R-11-09**

Lab Sample ID: 680-52658-4 | Date Sampled: 11/13/2009 1550
Client Matrix: Water | Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1280.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1308			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Thionazin	0.47	U	0.47	9.4
Sulfotepp	0.47	U	0.47	9.4
Pyridine	9.4	U	9.4	47
1,1'-Biphenyl	0.47	U	0.47	9.4
1,2,4,5-Tetrachlorobenzene	0.48	U	0.48	9.4
1,2,4-Trichlorobenzene	0.67	U	0.67	9.4
1,2-Dichlorobenzene	0.47	U	0.47	9.4
1,3,5-Trinitrobenzene	4.7	U	4.7	9.4
1,3-Dichlorobenzene	0.47	U	0.47	9.4
1,3-Dinitrobenzene	0.54	U	0.54	9.4
1,4-Dichlorobenzene	0.47	U	0.47	9.4
1,4-Dioxane	2.5	U	2.5	9.4
1,4-Naphthoquinone	0.94	U	0.94	9.4
1-Naphthylamine	0.47	U	0.47	9.4
2,3,4,6-Tetrachlorophenol	0.47	U	0.47	9.4
2,4,5-Trichlorophenol	0.75	U	0.75	9.4
2,4,6-Trichlorophenol	0.47	U	0.47	9.4
2,4-Dichlorophenol	0.94	U	0.94	9.4
2,4-Dimethylphenol	1.0	U	1.0	9.4
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	0.47	U	0.47	9.4
2,6-Dichlorophenol	0.47	U	0.47	9.4
2,6-Dinitrotoluene	0.47	U	0.47	9.4
2-Acetylaminofluorene	0.53	U	0.53	9.4
2-Chlorophenol	0.94	U	0.94	9.4
2-Chloronaphthalene	0.47	U	0.47	9.4
2-Methylnaphthalene	0.47	U	0.47	9.4
2-Methylphenol	0.60	U	0.60	9.4
2-Naphthylamine	0.94	U	0.94	9.4
2-Nitroaniline	4.7	U	4.7	47
2-Nitrophenol	4.7	U	4.7	9.4
2-Picoline	0.63	U	0.63	9.4
2-Toluidine	0.47	U	0.47	9.4
3 & 4 Methylphenol	0.94	U	0.94	9.4
3,3'-Dichlorobenzidine	3.0	U	3.0	19
3,3'-Dimethylbenzidine	0.47	U	0.47	19
3-Methylcholanthrene	0.47	U	0.47	9.4
3-Nitroaniline	2.6	U	2.6	47
4,6-Dinitro-2-methylphenol	4.7	U	4.7	47
4-Aminobiphenyl	0.47	U	0.47	9.4
4-Bromophenyl phenyl ether	0.47	U	0.47	9.4
4-Chloro-3-methylphenol	0.49	U	0.49	9.4
4-Chloroaniline	4.5	U	4.5	19
4-Chlorophenyl phenyl ether	0.94	U	0.94	9.4
4-Nitroaniline	1.9	U	1.9	47
4-Nitrophenol	9.4	U	9.4	47

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GL-SLMW-11R-11-09**

Lab Sample ID: 680-52658-4

Client Matrix: Water

Date Sampled: 11/13/2009 1550

Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1280.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1308			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
4-Nitroquinoline-1-oxide	4.7	U	4.7	19
7,12-Dimethylbenz(a)anthracene	0.94	U	0.94	9.4
Acenaphthene	0.47	U	0.47	9.4
Acenaphthylene	0.47	U	0.47	9.4
Acetophenone	0.47	U	0.47	9.4
alpha,alpha-Dimethyl phenethylamine	9.4	U	9.4	1900
Aniline	8.1	U	8.1	19
Anthracene	0.47	U	0.47	9.4
Aramite, Total	0.50	U	0.50	9.4
Benzo[a]anthracene	0.47	U	0.47	9.4
Benzo[a]pyrene	0.47	U	0.47	9.4
Benzo[b]fluoranthene	0.63	U	0.63	9.4
Benzo[g,h,i]perylene	0.63	U	0.63	9.4
Benzo[k]fluoranthene	0.47	U	0.47	9.4
Benzyl alcohol	0.75	U	0.75	9.4
Bis(2-chloroethoxy)methane	0.47	U	0.47	9.4
Bis(2-chloroethyl)ether	0.56	U	0.56	9.4
Bis(2-ethylhexyl) phthalate	0.89	U	0.89	9.4
Chrysene	0.47	U	0.47	9.4
Diallate	0.33	U	0.33	9.4
Dibenz(a,h)anthracene	0.47	U	0.47	9.4
Dibenzofuran	0.47	U	0.47	9.4
Di-n-butyl phthalate	0.47	U	0.47	9.4
Diethyl phthalate	0.47	U	0.47	9.4
p-Dimethylamino azobenzene	0.57	U	0.57	9.4
Dimethyl phthalate	4.7	U	4.7	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	0.72	U	0.72	9.4
Ethyl methanesulfonate	0.53	U	0.53	9.4
Fluoranthene	0.47	U	0.47	9.4
Fluorene	0.47	U	0.47	9.4
Hexachlorobenzene	0.47	U	0.47	9.4
Hexachlorobutadiene	4.7	U	4.7	9.4
Hexachlorocyclopentadiene	4.7	U	4.7	9.4
Hexachloroethane	0.47	U	0.47	9.4
Hexachlorophene	38	U	38	4700
Hexachloropropene	0.47	U Q	0.47	9.4
Indeno[1,2,3-cd]pyrene	0.81	U	0.81	9.4
Isophorone	0.47	U	0.47	9.4
Isosafrole	0.29	U	0.29	9.4
Methapyrilene	4.7	U	4.7	1900
Methyl methanesulfonate	0.47	U Q	0.47	9.4
Naphthalene	0.47	U	0.47	9.4
Nitrobenzene	0.47	U	0.47	9.4
N-Nitrosodi-n-butylamine	0.94	U	0.94	9.4
N-Nitrosodiethylamine	0.47	U	0.47	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GL-SLMW-11R-11-09**

Lab Sample ID: 680-52658-4

Client Matrix: Water

Date Sampled: 11/13/2009 1550

Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1280.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1308			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	1.1	U	1.1	9.4
N-Nitrosodiphenylamine	0.69	U	0.69	9.4
N-Nitrosodi-n-propylamine	0.47	U	0.47	9.4
N-Nitrosomethylethylamine	4.7	U	4.7	9.4
N-Nitrosomorpholine	0.56	U	0.56	9.4
N-Nitrosopiperidine	0.94	U	0.94	9.4
N-Nitrosopyrrolidine	0.94	U	0.94	9.4
N-Nitro-o-toluidine	0.94	U	0.94	9.4
Pentachlorobenzene	0.54	U	0.54	9.4
Pentachloronitrobenzene	0.94	U	0.94	9.4
Pentachlorophenol	4.7	U	4.7	47
Phenacetin	0.47	U	0.47	9.4
Phenanthrene	0.47	U	0.47	9.4
Phenol	0.47	U	0.47	9.4
p-Phenylene diamine	9.4	U	9.4	1900
Pronamide	0.94	U	0.94	9.4
Pyrene	0.47	U	0.47	9.4
Safrole, Total	0.47	U	0.47	9.4
o,o',o"-Triethylphosphorothioate	0.75	U	0.75	9.4
Disulfoton	0.90	U	0.90	9.4
Ethyl Parathion	0.77	U	0.77	9.4
Methyl parathion	0.71	U	0.71	9.4
Phorate	0.77	U	0.77	9.4
Famphur	0.52	U	0.52	9.4
Dimethoate	0.59	U	0.59	9.4
Butyl benzyl phthalate	0.70	U	0.70	9.4
bis(chloroisopropyl) ether	0.47	U	0.47	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	103		40 - 139
2-Fluorobiphenyl	87		50 - 113
2-Fluorophenol	75		36 - 110
Terphenyl-d14	87		10 - 121
Phenol-d5	73		38 - 116
Nitrobenzene-d5	86		45 - 112

Client: U.S. Army Corps of Engineers | Job Number: 680-52658-1

Client Sample ID: **SLMW-7-11-09**

Lab Sample ID: 680-52658-6 | Date Sampled: 11/13/2009 1025
Client Matrix: Water | Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1281.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1334			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Thionazin	0.47	U	0.47	9.4
Sulfotepp	0.47	U	0.47	9.4
Pyridine	9.4	U	9.4	47
1,1'-Biphenyl	0.47	U	0.47	9.4
1,2,4,5-Tetrachlorobenzene	0.48	U	0.48	9.4
1,2,4-Trichlorobenzene	0.67	U	0.67	9.4
1,2-Dichlorobenzene	0.47	U	0.47	9.4
1,3,5-Trinitrobenzene	4.7	U	4.7	9.4
1,3-Dichlorobenzene	0.47	U	0.47	9.4
1,3-Dinitrobenzene	0.54	U	0.54	9.4
1,4-Dichlorobenzene	0.47	U	0.47	9.4
1,4-Dioxane	2.5	U	2.5	9.4
1,4-Naphthoquinone	0.94	U	0.94	9.4
1-Naphthylamine	0.47	U	0.47	9.4
2,3,4,6-Tetrachlorophenol	0.47	U	0.47	9.4
2,4,5-Trichlorophenol	0.75	U	0.75	9.4
2,4,6-Trichlorophenol	0.47	U	0.47	9.4
2,4-Dichlorophenol	0.94	U	0.94	9.4
2,4-Dimethylphenol	1.0	U	1.0	9.4
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	0.47	U	0.47	9.4
2,6-Dichlorophenol	0.47	U	0.47	9.4
2,6-Dinitrotoluene	0.47	U	0.47	9.4
2-Acetylaminofluorene	0.53	U	0.53	9.4
2-Chlorophenol	0.94	U	0.94	9.4
2-Chloronaphthalene	0.47	U	0.47	9.4
2-Methylnaphthalene	0.47	U	0.47	9.4
2-Methylphenol	0.60	U	0.60	9.4
2-Naphthylamine	0.94	U	0.94	9.4
2-Nitroaniline	4.7	U	4.7	47
2-Nitrophenol	4.7	U	4.7	9.4
2-Picoline	0.63	U	0.63	9.4
2-Toluidine	0.47	U	0.47	9.4
3 & 4 Methylphenol	0.94	U	0.94	9.4
3,3'-Dichlorobenzidine	3.0	U	3.0	19
3,3'-Dimethylbenzidine	0.47	U	0.47	19
3-Methylcholanthrene	0.47	U	0.47	9.4
3-Nitroaniline	2.6	U	2.6	47
4,6-Dinitro-2-methylphenol	4.7	U	4.7	47
4-Aminobiphenyl	0.47	U	0.47	9.4
4-Bromophenyl phenyl ether	0.47	U	0.47	9.4
4-Chloro-3-methylphenol	0.49	U	0.49	9.4
4-Chloroaniline	4.5	U	4.5	19
4-Chlorophenyl phenyl ether	0.94	U	0.94	9.4
4-Nitroaniline	1.9	U	1.9	47
4-Nitrophenol	9.4	U	9.4	47

Client: U.S. Army Corps of Engineers | Job Number: 680-52658-1

Client Sample ID: **SLMW-7-11-09**

Lab Sample ID: 680-52658-6 | Date Sampled: 11/13/2009 1025
Client Matrix: Water | Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1281.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1334			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
4-Nitroquinoline-1-oxide	4.7	U	4.7	19
7,12-Dimethylbenz(a)anthracene	0.94	U	0.94	9.4
Acenaphthene	0.47	U	0.47	9.4
Acenaphthylene	0.47	U	0.47	9.4
Acetophenone	0.47	U	0.47	9.4
alpha,alpha-Dimethyl phenethylamine	9.4	U	9.4	1900
Aniline	8.1	U	8.1	19
Anthracene	0.47	U	0.47	9.4
Aramite, Total	0.50	U	0.50	9.4
Benzo[a]anthracene	0.47	U	0.47	9.4
Benzo[a]pyrene	0.47	U	0.47	9.4
Benzo[b]fluoranthene	0.63	U	0.63	9.4
Benzo[g,h,i]perylene	0.63	U	0.63	9.4
Benzo[k]fluoranthene	0.47	U	0.47	9.4
Benzyl alcohol	0.75	U	0.75	9.4
Bis(2-chloroethoxy)methane	0.47	U	0.47	9.4
Bis(2-chloroethyl)ether	0.56	U	0.56	9.4
Bis(2-ethylhexyl) phthalate	0.89	U	0.89	9.4
Chrysene	0.47	U	0.47	9.4
Diallate	0.33	U	0.33	9.4
Dibenz(a,h)anthracene	0.47	U	0.47	9.4
Dibenzofuran	0.47	U	0.47	9.4
Di-n-butyl phthalate	0.47	U	0.47	9.4
Diethyl phthalate	0.47	U	0.47	9.4
p-Dimethylamino azobenzene	0.57	U	0.57	9.4
Dimethyl phthalate	4.7	U	4.7	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	0.72	U	0.72	9.4
Ethyl methanesulfonate	0.53	U	0.53	9.4
Fluoranthene	0.47	U	0.47	9.4
Fluorene	0.47	U	0.47	9.4
Hexachlorobenzene	0.47	U	0.47	9.4
Hexachlorobutadiene	4.7	U	4.7	9.4
Hexachlorocyclopentadiene	4.7	U	4.7	9.4
Hexachloroethane	0.47	U	0.47	9.4
Hexachlorophene	38	U	38	4700
Hexachloropropene	0.47	U Q	0.47	9.4
Indeno[1,2,3-cd]pyrene	0.81	U	0.81	9.4
Isophorone	0.47	U	0.47	9.4
Isosafrole	0.29	U	0.29	9.4
Methapyrilene	4.7	U	4.7	1900
Methyl methanesulfonate	0.47	U Q	0.47	9.4
Naphthalene	0.47	U	0.47	9.4
Nitrobenzene	0.47	U	0.47	9.4
N-Nitrosodi-n-butylamine	0.94	U	0.94	9.4
N-Nitrosodiethylamine	0.47	U	0.47	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **SLMW-7-11-09**

Lab Sample ID: 680-52658-6

Client Matrix: Water

Date Sampled: 11/13/2009 1025

Date Received: 11/14/2009 0935

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155086		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154149		Lab File ID:	t1281.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1334			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	1.1	U	1.1	9.4
N-Nitrosodiphenylamine	0.69	U	0.69	9.4
N-Nitrosodi-n-propylamine	0.47	U	0.47	9.4
N-Nitrosomethylethylamine	4.7	U	4.7	9.4
N-Nitrosomorpholine	0.56	U	0.56	9.4
N-Nitrosopiperidine	0.94	U	0.94	9.4
N-Nitrosopyrrolidine	0.94	U	0.94	9.4
N-Nitro-o-toluidine	0.94	U	0.94	9.4
Pentachlorobenzene	0.54	U	0.54	9.4
Pentachloronitrobenzene	0.94	U	0.94	9.4
Pentachlorophenol	4.7	U	4.7	47
Phenacetin	0.47	U	0.47	9.4
Phenanthrene	0.47	U	0.47	9.4
Phenol	0.47	U	0.47	9.4
p-Phenylene diamine	9.4	U	9.4	1900
Pronamide	0.94	U	0.94	9.4
Pyrene	0.47	U	0.47	9.4
Safrole, Total	0.47	U	0.47	9.4
o,o',o"-Triethylphosphorothioate	0.75	U	0.75	9.4
Disulfoton	0.90	U	0.90	9.4
Ethyl Parathion	0.77	U	0.77	9.4
Methyl parathion	0.71	U	0.71	9.4
Phorate	0.77	U	0.77	9.4
Famphur	0.52	U	0.52	9.4
Dimethoate	0.59	U	0.59	9.4
Butyl benzyl phthalate	0.70	U	0.70	9.4
bis(chloroisopropyl) ether	0.47	U	0.47	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	112		40 - 139
2-Fluorobiphenyl	94		50 - 113
2-Fluorophenol	80		36 - 110
Terphenyl-d14	91		10 - 121
Phenol-d5	78		38 - 116
Nitrobenzene-d5	92		45 - 112

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-12BR-11-09**

Lab Sample ID: 680-52658-1

Client Matrix: Water

Date Sampled: 11/13/2009 1205

Date Received: 11/14/2009 0935

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154733		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0642			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aldrin	0.0066	U	0.0066	0.047
Isodrin	0.047	U	0.047	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
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
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
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
delta-BHC	0.0045	U	0.0045	0.047
Methoxychlor	0.012	U	0.012	0.094
Toxaphene	0.47	U	0.47	4.7
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

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	49		35 - 120
DCB Decachlorobiphenyl	68		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-12BR-11-09**

Lab Sample ID: 680-52658-1

Client Matrix: Water

Date Sampled: 11/13/2009 1205

Date Received: 11/14/2009 0935

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154733		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0642			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	46		35 - 120
DCB Decachlorobiphenyl	61		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-10-11-09**

Lab Sample ID: 680-52658-2

Client Matrix: Water

Date Sampled: 11/13/2009 1330

Date Received: 11/14/2009 0935

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154733		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0705			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aldrin	0.0066	U	0.0066	0.047
Isodrin	0.047	U	0.047	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
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
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
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
delta-BHC	0.0045	U	0.0045	0.047
Methoxychlor	0.012	U	0.012	0.094
Toxaphene	0.47	U	0.47	4.7
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

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	43		35 - 120
DCB Decachlorobiphenyl	34		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-10-11-09**

Lab Sample ID: 680-52658-2

Client Matrix: Water

Date Sampled: 11/13/2009 1330

Date Received: 11/14/2009 0935

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154733		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0705			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	40		35 - 120
DCB Decachlorobiphenyl	31		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **DUP-1**

Lab Sample ID: 680-52658-3

Client Matrix: Water

Date Sampled: 11/13/2009 1100

Date Received: 11/14/2009 0935

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154733		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0728			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aldrin	0.0066	U	0.0066	0.047
Isodrin	0.047	U	0.047	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
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
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
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
delta-BHC	0.0045	U	0.0045	0.047
Methoxychlor	0.012	U	0.012	0.094
Toxaphene	0.47	U	0.47	4.7
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

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	45		35 - 120
DCB Decachlorobiphenyl	40		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **DUP-1**

Lab Sample ID: 680-52658-3

Client Matrix: Water

Date Sampled: 11/13/2009 1100

Date Received: 11/14/2009 0935

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154733		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0728			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	44		35 - 120
DCB Decachlorobiphenyl	28		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GL-SLMW-11R-11-09**

Lab Sample ID: 680-52658-4

Client Matrix: Water

Date Sampled: 11/13/2009 1550

Date Received: 11/14/2009 0935

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154733		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0751			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aldrin	0.0066	U	0.0066	0.047
Isodrin	0.047	U	0.047	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
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
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
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
delta-BHC	0.0045	U	0.0045	0.047
Methoxychlor	0.012	U	0.012	0.094
Toxaphene	0.47	U	0.47	4.7
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

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	64		35 - 120
DCB Decachlorobiphenyl	76		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GL-SLMW-11R-11-09**

Lab Sample ID: 680-52658-4

Client Matrix: Water

Date Sampled: 11/13/2009 1550

Date Received: 11/14/2009 0935

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154733	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154155	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0751		Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	59		35 - 120
DCB Decachlorobiphenyl	68		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **SLMW-7-11-09**

Lab Sample ID: 680-52658-6

Client Matrix: Water

Date Sampled: 11/13/2009 1025

Date Received: 11/14/2009 0935

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154733		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0814			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aldrin	0.0066	U	0.0066	0.047
Isodrin	0.047	U	0.047	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
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
Dieldrin	0.0086	U	0.0086	0.094
Endosulfan I	0.0078	J	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
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
delta-BHC	0.0045	U	0.0045	0.047
Methoxychlor	0.012	U	0.012	0.094
Toxaphene	0.47	U	0.47	4.7
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

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	51		35 - 120
DCB Decachlorobiphenyl	26		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **SLMW-7-11-09**

Lab Sample ID: 680-52658-6

Client Matrix: Water

Date Sampled: 11/13/2009 1025

Date Received: 11/14/2009 0935

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154733	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154155	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0814		Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	37		35 - 120
DCB Decachlorobiphenyl	25		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-12BR-11-09**

Lab Sample ID: 680-52658-1

Client Matrix: Water

Date Sampled: 11/13/2009 1205

Date Received: 11/14/2009 0935

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154486		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 0316			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			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
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	96		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-10-11-09**

Lab Sample ID: 680-52658-2

Client Matrix: Water

Date Sampled: 11/13/2009 1330

Date Received: 11/14/2009 0935

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154486		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 0341			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			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
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	102		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **DUP-1**

Lab Sample ID: 680-52658-3

Client Matrix: Water

Date Sampled: 11/13/2009 1100

Date Received: 11/14/2009 0935

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154486		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 0406			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			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
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	94		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GL-SLMW-11R-11-09**

Lab Sample ID: 680-52658-4

Client Matrix: Water

Date Sampled: 11/13/2009 1550

Date Received: 11/14/2009 0935

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154486		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 0431			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			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
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	103		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **SLMW-7-11-09**

Lab Sample ID: 680-52658-6

Client Matrix: Water

Date Sampled: 11/13/2009 1025

Date Received: 11/14/2009 0935

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154486		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154155		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 0456			Injection Volume:	2 uL
Date Prepared:	11/20/2009 1528			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
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	90		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-12BR-11-09**

Lab Sample ID: 680-52658-1

Client Matrix: Water

Date Sampled: 11/13/2009 1205

Date Received: 11/14/2009 0935

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-153749		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153528		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/17/2009 1319			Final Weight/Volume:	50 mL
Date Prepared:	11/16/2009 0930				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	0.40	U	0.40	1.0
Barium	37		0.15	1.0
Beryllium	0.33		0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.16	U	0.16	1.0
Cobalt	1.0		0.078	0.20
Copper	1.2		0.21	1.0
Lead	0.26	J	0.080	0.30
Nickel	1.8		0.20	0.50
Selenium	0.21	U	0.21	0.50
Silver	0.10	U	0.10	0.20
Thallium	0.10	J	0.10	0.20
Tin	0.40	U	0.40	1.0
Vanadium	1.4	U	1.4	5.0
Zinc	20		2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-153963		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1747			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GW-SLMW-10-11-09**

Lab Sample ID: 680-52658-2

Client Matrix: Water

Date Sampled: 11/13/2009 1330

Date Received: 11/14/2009 0935

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-153749		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153528		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/17/2009 1352			Final Weight/Volume:	50 mL
Date Prepared:	11/16/2009 0930				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	3.6		0.40	1.0
Barium	130		0.15	1.0
Beryllium	0.070	U	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.27	J B	0.16	1.0
Cobalt	2.8		0.078	0.20
Copper	0.37	J	0.21	1.0
Lead	0.080	U	0.080	0.30
Nickel	0.20	U	0.20	0.50
Selenium	0.25	J	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	1.5	J	1.4	5.0
Zinc	3.1	J	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-153963		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1750			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **DUP-1**

Lab Sample ID: 680-52658-3

Client Matrix: Water

Date Sampled: 11/13/2009 1100

Date Received: 11/14/2009 0935

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-153749		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153528		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/17/2009 1359			Final Weight/Volume:	50 mL
Date Prepared:	11/16/2009 0930				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	4.2		0.40	1.0
Barium	130		0.15	1.0
Beryllium	0.070	U	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.24	J B	0.16	1.0
Cobalt	3.3		0.078	0.20
Copper	0.33	J	0.21	1.0
Lead	0.080	U	0.080	0.30
Nickel	0.40	J	0.20	0.50
Selenium	0.23	J	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	1.5	J	1.4	5.0
Zinc	2.6	U	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-153963		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1759			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **GL-SLMW-11R-11-09**

Lab Sample ID: 680-52658-4

Client Matrix: Water

Date Sampled: 11/13/2009 1550

Date Received: 11/14/2009 0935

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-153749		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153528		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/17/2009 1406			Final Weight/Volume:	50 mL
Date Prepared:	11/16/2009 0930				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	0.40	U	0.40	1.0
Barium	7.2		0.15	1.0
Beryllium	0.070	U	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.22	J B	0.16	1.0
Cobalt	0.15	J	0.078	0.20
Copper	0.73	J	0.21	1.0
Lead	0.080	U	0.080	0.30
Nickel	0.58		0.20	0.50
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	3.9	J	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-153963		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1802			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Client Sample ID: **SLMW-7-11-09**

Lab Sample ID: 680-52658-6

Client Matrix: Water

Date Sampled: 11/13/2009 1025

Date Received: 11/14/2009 0935

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-153749		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153528		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/17/2009 1426			Final Weight/Volume:	50 mL
Date Prepared:	11/16/2009 0930				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	2.6		0.40	1.0
Barium	42		0.15	1.0
Beryllium	0.070	U	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.67	J B	0.16	1.0
Cobalt	0.41		0.078	0.20
Copper	1.4		0.21	1.0
Lead	0.16	J	0.080	0.30
Nickel	1.5		0.20	0.50
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	56		2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-153963		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1817			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

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

General Chemistry

Client Sample ID: **GW-SLMW-12BR-11-09**

Lab Sample ID: 680-52658-1

Client Matrix: Water

Date Sampled: 11/13/2009 1205

Date Received: 11/14/2009 0935

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U H M	mg/L	0.36	1.1	5.0	300.0
Run Type: RA	Analysis Batch: 680-153812	Date Analyzed: 11/17/2009 1623					
Nitrate as NO3	0.36	U M Q	mg/L	0.36	1.1	5.0	300.0
	Analysis Batch: 680-153866	Date Analyzed: 11/14/2009 2343					
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
	Analysis Batch: 680-154047	Date Analyzed: 11/19/2009 1537					
	Prep Batch: 680-154009	Date Prepared: 11/19/2009 1151					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
	Analysis Batch: 680-153633	Date Analyzed: 11/16/2009 1648					
	Prep Batch: 680-153533	Date Prepared: 11/16/2009 1025					

General Chemistry

Client Sample ID: **GW-SLMW-10-11-09**

Lab Sample ID: 680-52658-2

Client Matrix: Water

Date Sampled: 11/13/2009 1330

Date Received: 11/14/2009 0935

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U H	mg/L	0.36	1.1	5.0	300.0
Run Type: RA	Analysis Batch: 680-153812	Date Analyzed: 11/17/2009 1635					
Nitrate as NO3	0.36	U M Q	mg/L	0.36	1.1	5.0	300.0
	Analysis Batch: 680-153866	Date Analyzed: 11/14/2009 2355					
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
	Analysis Batch: 680-154047	Date Analyzed: 11/19/2009 1537					
	Prep Batch: 680-154009	Date Prepared: 11/19/2009 1151					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
	Analysis Batch: 680-153633	Date Analyzed: 11/16/2009 1648					
	Prep Batch: 680-153533	Date Prepared: 11/16/2009 1025					

General Chemistry

Client Sample ID: **DUP-1**

Lab Sample ID: 680-52658-3

Client Matrix: Water

Date Sampled: 11/13/2009 1100

Date Received: 11/14/2009 0935

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U H	mg/L	0.36	1.1	5.0	300.0
Run Type: RA	Analysis Batch: 680-153812	Date Analyzed: 11/17/2009 1713					
Nitrate as NO3	0.36	U Q	mg/L	0.36	1.1	5.0	300.0
	Analysis Batch: 680-153866	Date Analyzed: 11/15/2009 0007					
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
	Analysis Batch: 680-154047	Date Analyzed: 11/19/2009 1537					
	Prep Batch: 680-154009	Date Prepared: 11/19/2009 1151					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
	Analysis Batch: 680-153633	Date Analyzed: 11/16/2009 1648					
	Prep Batch: 680-153533	Date Prepared: 11/16/2009 1025					

General Chemistry

Client Sample ID: **GL-SLMW-11R-11-09**

Lab Sample ID: 680-52658-4

Client Matrix: Water

Date Sampled: 11/13/2009 1550

Date Received: 11/14/2009 0935

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U H M	mg/L	0.36	1.1	5.0	300.0
Run Type: RA	Analysis Batch: 680-153812	Date Analyzed: 11/17/2009 1725					
Nitrate as NO3	0.36	U M Q	mg/L	0.36	1.1	5.0	300.0
	Analysis Batch: 680-153866	Date Analyzed: 11/15/2009 0020					
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
	Analysis Batch: 680-154047	Date Analyzed: 11/19/2009 1537					
	Prep Batch: 680-154009	Date Prepared: 11/19/2009 1151					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
	Analysis Batch: 680-153633	Date Analyzed: 11/16/2009 1648					
	Prep Batch: 680-153533	Date Prepared: 11/16/2009 1213					

General Chemistry

Client Sample ID: **SLMW-7-11-09**

Lab Sample ID: 680-52658-6

Client Matrix: Water

Date Sampled: 11/13/2009 1025

Date Received: 11/14/2009 0935

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.36	U H M	mg/L	0.36	1.1	5.0	300.0
Run Type: RA	Analysis Batch: 680-153812	Date Analyzed: 11/17/2009 1737					
Nitrate as NO3	0.36	U M Q	mg/L	0.36	1.1	5.0	300.0
	Analysis Batch: 680-153866	Date Analyzed: 11/15/2009 0032					
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
	Analysis Batch: 680-154047	Date Analyzed: 11/19/2009 1537					
	Prep Batch: 680-154009	Date Prepared: 11/19/2009 1151					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
	Analysis Batch: 680-153633	Date Analyzed: 11/16/2009 1648					
	Prep Batch: 680-153533	Date Prepared: 11/16/2009 1213					

DATA REPORTING QUALIFIERS

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

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
	M	Manual integrated compound.
	Q	One or more quality control criteria failed.
	U	Undetected at the Limit of Detection.
Metals		
	B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	U	Undetected at the Limit of Detection.

DATA REPORTING QUALIFIERS

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Section	Qualifier	Description
General Chemistry		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	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.

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-153862

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-153862/10
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/18/2009 1055
Date Prepared: 11/18/2009 1055

Analysis Batch: 680-153862
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq306.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-153862

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-153862/10
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/18/2009 1055
Date Prepared: 11/18/2009 1055

Analysis Batch: 680-153862
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq306.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
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
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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	Acceptance Limits
4-Bromofluorobenzene	95	75 - 120
Dibromofluoromethane	100	75 - 121
Toluene-d8 (Surr)	95	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153862

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-153862/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/18/2009 0858
Date Prepared: 11/18/2009 0858

Analysis Batch: 680-153862
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq298.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-153862/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/18/2009 0927
Date Prepared: 11/18/2009 0927

Analysis Batch: 680-153862
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq300.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	96	103	17 - 175	7	50		
Benzene	99	101	77 - 119	2	30		
Bromoform	92	92	62 - 133	0	30		
Bromomethane	108	129	12 - 184	18	50		
2-Butanone (MEK)	103	103	33 - 157	0	30		
Carbon disulfide	96	110	55 - 131	14	30		
Carbon tetrachloride	82	87	71 - 135	6	30		
Chlorobenzene	99	101	85 - 116	1	30		
Chlorodibromomethane	94	92	75 - 133	2	30		
Chloroethane	95	104	40 - 165	8	50		
Chloroform	99	106	82 - 120	7	30		
Chloromethane	94	108	48 - 142	14	50		
cis-1,3-Dichloropropene	105	105	76 - 126	0	30		
1,2-Dibromo-3-Chloropropane	102	110	49 - 140	8	30		
Dibromomethane	97	99	78 - 119	2	30		
Dichlorobromomethane	96	98	78 - 127	2	30		
Dichlorodifluoromethane	93	107	34 - 154	13	30		
1,1-Dichloroethane	101	108	74 - 127	7	30		
1,2-Dichloroethane	95	95	66 - 132	0	30		
1,1-Dichloroethene	101	108	62 - 141	7	30		
1,2-Dichloropropane	99	100	73 - 124	0	30		
Ethylbenzene	100	102	86 - 116	2	30		
Ethylene Dibromide	100	102	80 - 121	2	30		
2-Hexanone	105	102	34 - 161	3	30		
Methylene Chloride	95	107	70 - 125	11	30		
4-Methyl-2-pentanone (MIBK)	101	100	40 - 151	1	30		
Styrene	102	106	82 - 122	3	30		
1,1,1,2-Tetrachloroethane	85	81	81 - 128	4	30		
1,1,2,2-Tetrachloroethane	101	100	69 - 129	1	30		
Tetrachloroethene	100	99	76 - 126	1	30		
Toluene	98	105	81 - 117	6	30		
trans-1,2-Dichloroethene	102	107	72 - 131	4	30		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153862

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-153862/7	Analysis Batch:	680-153862	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq298.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 0858			Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 0858				

LCSD Lab Sample ID:	LCSD 680-153862/8	Analysis Batch:	680-153862	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq300.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 0927			Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 0927				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
trans-1,3-Dichloropropene	104	102	73 - 128	2	30		
1,1,1-Trichloroethane	100	104	76 - 127	4	30		
1,1,2-Trichloroethane	98	97	75 - 121	1	30		
Trichloroethene	97	98	84 - 115	1	30		
Trichlorofluoromethane	94	103	58 - 149	10	50		
1,2,3-Trichloropropane	104	101	70 - 130	3	30		
Vinyl acetate	121	116	10 - 217	4	30		
Vinyl chloride	98	111	59 - 144	12	50		
Xylenes, Total	102	105	84 - 118	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	99	102	75 - 120
Dibromofluoromethane	99	108	75 - 121
Toluene-d8 (Surr)	99	106	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-153862

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	680-52658-2	Analysis Batch:	680-153862	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	o3032.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1844			Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1844				

MSD Lab Sample ID:	680-52658-2	Analysis Batch:	680-153862	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	o3034.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1913			Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1913				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acetone	67	78	17 - 175	11	50		
Benzene	96	98	77 - 119	2	30		
Bromoform	85	94	62 - 133	10	30		
Bromomethane	72	100	12 - 184	32	50		
2-Butanone (MEK)	98	102	33 - 157	4	30		
Carbon disulfide	80	87	55 - 131	8	30		
Carbon tetrachloride	75	82	71 - 135	9	30		
Chlorobenzene	94	97	85 - 116	3	30		
Chlorodibromomethane	94	98	75 - 133	4	30		
Chloroethane	70	77	40 - 165	11	50		
Chloroform	96	101	82 - 120	5	30		
Chloromethane	65	70	48 - 142	7	50		
cis-1,3-Dichloropropene	99	103	76 - 126	4	30		
1,2-Dibromo-3-Chloropropane	82	93	49 - 140	12	30		
Dibromomethane	90	93	78 - 119	3	30		
Dichlorobromomethane	90	96	78 - 127	6	30		
Dichlorodifluoromethane	63	67	34 - 154	7	30		
1,1-Dichloroethane	97	100	74 - 127	3	30		
1,2-Dichloroethane	91	93	66 - 132	2	30		
1,1-Dichloroethene	95	101	62 - 141	6	30		
1,2-Dichloropropane	96	100	73 - 124	4	30		
Ethylbenzene	95	98	86 - 116	3	30		
Ethylene Dibromide	92	96	80 - 121	5	30		
2-Hexanone	101	101	34 - 161	0	30		
Methylene Chloride	78	86	70 - 125	10	30		
4-Methyl-2-pentanone (MIBK)	95	97	40 - 151	2	30		
Styrene	93	98	82 - 122	6	30		
1,1,1,2-Tetrachloroethane	84	87	81 - 128	3	30		
1,1,2,2-Tetrachloroethane	96	102	69 - 129	6	30		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-153862

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	680-52658-2	Analysis Batch:	680-153862	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	o3032.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1844			Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1844				

MSD Lab Sample ID:	680-52658-2	Analysis Batch:	680-153862	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	o3034.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	11/18/2009 1913			Final Weight/Volume:	5 mL
Date Prepared:	11/18/2009 1913				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Tetrachloroethene	101	102	76 - 126	2	30		
Toluene	88	92	81 - 117	4	30		
trans-1,2-Dichloroethene	101	106	72 - 131	5	30		
trans-1,3-Dichloropropene	96	99	73 - 128	3	30		
1,1,1-Trichloroethane	93	99	76 - 127	6	30		
1,1,2-Trichloroethane	95	98	75 - 121	3	30		
Trichloroethene	95	98	84 - 115	3	30		
Trichlorofluoromethane	81	89	58 - 149	9	50		
1,2,3-Trichloropropane	99	99	70 - 130	1	30		
Vinyl acetate	125	128	10 - 217	3	30		
Vinyl chloride	69	77	59 - 144	11	50		
Xylenes, Total	94	99	84 - 118	5	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	92	93	75 - 120
Dibromofluoromethane	95	101	75 - 121
Toluene-d8 (Surr)	89	94	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-153993

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-153993/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1053
Date Prepared: 11/19/2009 1053

Analysis Batch: 680-153993
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq320.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-153993

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-153993/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1053
Date Prepared: 11/19/2009 1053

Analysis Batch: 680-153993
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq320.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
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
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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	Acceptance Limits
4-Bromofluorobenzene	97	75 - 120
Dibromofluoromethane	104	75 - 121
Toluene-d8 (Surr)	98	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153993

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-153993/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 0856
Date Prepared: 11/19/2009 0856

Analysis Batch: 680-153993
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq312.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-153993/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 0925
Date Prepared: 11/19/2009 0925

Analysis Batch: 680-153993
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq314.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	93	98	17 - 175	5	50		
Benzene	101	98	77 - 119	3	30		
Bromoform	101	100	62 - 133	1	30		
Bromomethane	86	105	12 - 184	20	50		
2-Butanone (MEK)	105	103	33 - 157	3	30		
Carbon disulfide	83	89	55 - 131	7	30		
Carbon tetrachloride	82	82	71 - 135	1	30		
Chlorobenzene	102	100	85 - 116	1	30		
Chlorodibromomethane	106	102	75 - 133	5	30		
Chloroethane	70	79	40 - 165	12	50		
Chloroform	100	98	82 - 120	2	30		
Chloromethane	78	84	48 - 142	8	50		
cis-1,3-Dichloropropene	110	106	76 - 126	4	30		
1,2-Dibromo-3-Chloropropane	93	98	49 - 140	6	30		
Dibromomethane	97	95	78 - 119	2	30		
Dichlorobromomethane	98	96	78 - 127	2	30		
Dichlorodifluoromethane	80	83	34 - 154	4	30		
1,1-Dichloroethane	99	100	74 - 127	1	30		
1,2-Dichloroethane	95	91	66 - 132	4	30		
1,1-Dichloroethene	97	101	62 - 141	4	30		
1,2-Dichloropropane	103	99	73 - 124	4	30		
Ethylbenzene	101	100	86 - 116	1	30		
Ethylene Dibromide	100	98	80 - 121	2	30		
2-Hexanone	108	106	34 - 161	1	30		
Methylene Chloride	83	89	70 - 125	6	30		
4-Methyl-2-pentanone (MIBK)	98	95	40 - 151	3	30		
Styrene	101	102	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	94	91	81 - 128	3	30		
1,1,2,2-Tetrachloroethane	103	103	69 - 129	0	30		
Tetrachloroethene	109	105	76 - 126	4	30		
Toluene	92	93	81 - 117	1	30		
trans-1,2-Dichloroethene	106	103	72 - 131	2	30		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153993

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-153993/4	Analysis Batch:	680-153993	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq312.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/19/2009 0856			Final Weight/Volume:	5 mL
Date Prepared:	11/19/2009 0856				

LCSD Lab Sample ID:	LCSD 680-153993/5	Analysis Batch:	680-153993	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq314.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/19/2009 0925			Final Weight/Volume:	5 mL
Date Prepared:	11/19/2009 0925				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
trans-1,3-Dichloropropene	105	102	73 - 128	3	30		
1,1,1-Trichloroethane	98	97	76 - 127	1	30		
1,1,2-Trichloroethane	102	99	75 - 121	3	30		
Trichloroethene	102	100	84 - 115	2	30		
Trichlorofluoromethane	84	86	58 - 149	3	50		
1,2,3-Trichloropropane	108	106	70 - 130	2	30		
Vinyl acetate	128	123	10 - 217	4	30		
Vinyl chloride	80	87	59 - 144	9	50		
Xylenes, Total	100	101	84 - 118	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	97	96	75 - 120
Dibromofluoromethane	100	102	75 - 121
Toluene-d8 (Surr)	93	94	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-154149

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 680-154149/16-A	Analysis Batch:	680-155086	Instrument ID:	GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch:	680-154149	Lab File ID:	t1274.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	12/02/2009 1034			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Pyridine	10	U	10	50
1,1'-Biphenyl	0.50	U	0.50	10
1,2,4-Trichlorobenzene	0.71	U	0.71	10
1,2-Dichlorobenzene	0.50	U	0.50	10
1,3-Dichlorobenzene	0.50	U	0.50	10
1,4-Dichlorobenzene	0.50	U	0.50	10
1,4-Dioxane	2.6	U	2.6	10
2,4,5-Trichlorophenol	0.80	U	0.80	10
2,4,6-Trichlorophenol	0.50	U	0.50	10
2,4-Dichlorophenol	1.0	U	1.0	10
2,4-Dimethylphenol	1.1	U	1.1	10
2,4-Dinitrophenol	10	U	10	50
2,4-Dinitrotoluene	0.50	U	0.50	10
2,6-Dinitrotoluene	0.50	U	0.50	10
2-Chlorophenol	1.0	U	1.0	10
2-Chloronaphthalene	0.50	U	0.50	10
2-Methylnaphthalene	0.50	U	0.50	10
2-Methylphenol	0.64	U	0.64	10
2-Nitroaniline	5.0	U	5.0	50
2-Nitrophenol	5.0	U	5.0	10
3 & 4 Methylphenol	1.0	U	1.0	10
3,3'-Dichlorobenzidine	3.2	U	3.2	20
3-Nitroaniline	2.8	U	2.8	50
4,6-Dinitro-2-methylphenol	5.0	U	5.0	50
4-Bromophenyl phenyl ether	0.50	U	0.50	10
4-Chloro-3-methylphenol	0.52	U	0.52	10
4-Chloroaniline	4.8	U	4.8	20
4-Chlorophenyl phenyl ether	1.0	U	1.0	10
4-Nitroaniline	2.0	U	2.0	50
4-Nitrophenol	10	U	10	50
Acenaphthene	0.50	U	0.50	10
Acenaphthylene	0.50	U	0.50	10
Acetophenone	0.50	U	0.50	10
Aniline	8.6	U	8.6	20
Anthracene	0.50	U	0.50	10
Benzo[a]anthracene	0.50	U	0.50	10
Benzo[a]pyrene	0.50	U	0.50	10
Benzo[b]fluoranthene	0.67	U	0.67	10
Benzo[g,h,i]perylene	0.67	U	0.67	10
Benzo[k]fluoranthene	0.50	U	0.50	10
Benzyl alcohol	0.80	U	0.80	10

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-154149

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 680-154149/16-A	Analysis Batch:	680-155086	Instrument ID:	GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch:	680-154149	Lab File ID:	t1274.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	12/02/2009 1034			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Bis(2-chloroethoxy)methane	0.50	U	0.50	10
Bis(2-chloroethyl)ether	0.59	U	0.59	10
Bis(2-ethylhexyl) phthalate	0.94	U	0.94	10
Chrysene	0.50	U	0.50	10
Dibenz(a,h)anthracene	0.50	U	0.50	10
Dibenzofuran	0.50	U	0.50	10
Di-n-butyl phthalate	0.50	U	0.50	10
Diethyl phthalate	0.50	U	0.50	10
Dimethyl phthalate	5.0	U	5.0	10
Dinoseb	5.0	U	5.0	10
Di-n-octyl phthalate	0.76	U	0.76	10
Fluoranthene	0.50	U	0.50	10
Fluorene	0.50	U	0.50	10
Hexachlorobenzene	0.50	U	0.50	10
Hexachlorobutadiene	5.0	U	5.0	10
Hexachlorocyclopentadiene	5.0	U	5.0	10
Hexachloroethane	0.50	U	0.50	10
Indeno[1,2,3-cd]pyrene	0.86	U	0.86	10
Isophorone	0.50	U	0.50	10
Naphthalene	0.50	U	0.50	10
Nitrobenzene	0.50	U	0.50	10
N-Nitrosodimethylamine	1.2	U	1.2	10
N-Nitrosodiphenylamine	0.73	U	0.73	10
N-Nitrosodi-n-propylamine	0.50	U	0.50	10
Pentachlorophenol	5.0	U	5.0	50
Phenanthrene	0.50	U	0.50	10
Phenol	0.50	U	0.50	10
Pyrene	0.50	U	0.50	10
Butyl benzyl phthalate	0.74	U	0.74	10
bis(chloroisopropyl) ether	0.50	U	0.50	10

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	105	40 - 139
2-Fluorobiphenyl	103	50 - 113
2-Fluorophenol	80	36 - 110
Terphenyl-d14	106	10 - 121
Phenol-d5	72	38 - 116
Nitrobenzene-d5	91	45 - 112

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Control Sample - Batch: 680-154149

Method: 8270C
Preparation: 3520C

Lab Sample ID: LCS 680-154149/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/08/2009 1207
Date Prepared: 11/20/2009 1528

Analysis Batch: 680-155524
Prep Batch: 680-154149
Units: ug/L

Instrument ID: GC/MS SemiVolatiles - N
Lab File ID: n5269.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Pyridine	100	37.2	37	10 - 110	J
1,2,4-Trichlorobenzene	100	75.8	76	41 - 110	
1,2-Dichlorobenzene	100	56.2	56	39 - 110	
1,3-Dichlorobenzene	100	53.0	53	36 - 110	
1,4-Dichlorobenzene	100	55.5	55	38 - 110	
1,4-Dioxane	100	35.2	35	11 - 110	
2,4,5-Trichlorophenol	100	89.4	89	47 - 122	
2,4,6-Trichlorophenol	100	86.2	86	46 - 120	
2,4-Dichlorophenol	100	78.5	79	46 - 115	
2,4-Dimethylphenol	200	148	74	36 - 110	
2,4-Dinitrophenol	100	114	114	10 - 189	
2,4-Dinitrotoluene	100	101	101	49 - 128	
2,6-Dinitrotoluene	100	95.4	95	45 - 131	
2-Chlorophenol	100	63.4	63	47 - 110	
2-Chloronaphthalene	100	84.1	84	47 - 110	
2-Methylnaphthalene	100	80.0	80	46 - 110	
2-Methylphenol	100	61.5	61	46 - 110	
2-Nitroaniline	100	58.9	59	45 - 122	
2-Nitrophenol	100	73.6	74	42 - 120	
3 & 4 Methylphenol	100	62.4	62	43 - 110	
3,3'-Dichlorobenzidine	100	106	106	10 - 113	
3-Nitroaniline	100	86.6	87	30 - 116	
4,6-Dinitro-2-methylphenol	100	98.3	98	29 - 167	
4-Bromophenyl phenyl ether	100	96.1	96	42 - 110	
4-Chloro-3-methylphenol	100	72.0	72	46 - 118	
4-Chloroaniline	100	72.2	72	10 - 110	
4-Chlorophenyl phenyl ether	100	93.0	93	46 - 114	
4-Nitroaniline	100	87.5	87	36 - 125	
4-Nitrophenol	100	52.9	53	30 - 122	
Acenaphthene	100	79.4	79	45 - 117	
Acenaphthylene	100	77.9	78	51 - 112	
Aniline	100	43.4	43	10 - 114	
Anthracene	100	83.5	83	52 - 116	
Benzo[a]anthracene	100	94.1	94	49 - 124	
Benzo[a]pyrene	100	94.4	94	48 - 120	
Benzo[b]fluoranthene	100	96.2	96	46 - 126	
Benzo[g,h,i]perylene	100	89.4	89	51 - 117	
Benzo[k]fluoranthene	100	92.1	92	47 - 126	
Benzyl alcohol	100	68.2	68	34 - 113	
Bis(2-chloroethoxy)methane	100	92.0	92	50 - 112	
Bis(2-chloroethyl)ether	100	53.2	53	43 - 110	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Control Sample - Batch: 680-154149

Method: 8270C
Preparation: 3520C

Lab Sample ID: LCS 680-154149/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/08/2009 1207
Date Prepared: 11/20/2009 1528

Analysis Batch: 680-155524
Prep Batch: 680-154149
Units: ug/L

Instrument ID: GC/MS SemiVolatiles - N
Lab File ID: n5269.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Bis(2-ethylhexyl) phthalate	100	87.7	88	47 - 134	
Chrysene	100	94.9	95	51 - 123	
Dibenz(a,h)anthracene	100	90.9	91	46 - 124	
Dibenzofuran	100	83.3	83	50 - 112	
Di-n-butyl phthalate	100	84.0	84	49 - 123	
Diethyl phthalate	100	89.4	89	51 - 119	
Dimethyl phthalate	100	91.4	91	50 - 116	
Di-n-octyl phthalate	100	95.0	95	44 - 134	
Fluoranthene	100	90.0	90	50 - 120	
Fluorene	100	85.2	85	50 - 115	
Hexachlorobenzene	100	93.0	93	48 - 119	
Hexachlorobutadiene	100	80.5	81	40 - 110	
Hexachlorocyclopentadiene	100	10.7	11	10 - 110	
Hexachloroethane	100	46.5	47	33 - 110	
Indeno[1,2,3-cd]pyrene	100	95.3	95	40 - 126	
Isophorone	100	61.0	61	50 - 111	
Naphthalene	100	71.9	72	41 - 110	
Nitrobenzene	100	56.4	56	46 - 110	
N-Nitrosodimethylamine	100	41.2	41	33 - 110	
N-Nitrosodiphenylamine	100	92.5	93	47 - 119	
N-Nitrosodi-n-propylamine	100	58.0	58	45 - 112	
Pentachlorophenol	100	112	112	37 - 132	
Phenanthrene	100	85.8	86	52 - 117	
Phenol	100	54.8	55	39 - 110	
Pyrene	100	88.5	88	52 - 125	
Butyl benzyl phthalate	100	88.6	89	52 - 135	
bis(chloroisopropyl) ether	100	49.2	49	42 - 110	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	112	40 - 139
2-Fluorobiphenyl	78	50 - 113
2-Fluorophenol	53	36 - 110
Terphenyl-d14	92	10 - 121
Phenol-d5	51	38 - 116
Nitrobenzene-d5	57	45 - 112

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154149

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	680-52658-2	Analysis Batch:	680-155086	Instrument ID:	GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch:	680-154149	Lab File ID:	t1291.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1843			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

MSD Lab Sample ID:	680-52658-2	Analysis Batch:	680-155086	Instrument ID:	GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch:	680-154149	Lab File ID:	t1292.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1910			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Pyridine	62	57	10 - 110	8	40		
1,2,4-Trichlorobenzene	90	87	41 - 110	3	40		
1,2-Dichlorobenzene	74	73	39 - 110	2	40		
1,3-Dichlorobenzene	67	65	36 - 110	2	40		
1,4-Dichlorobenzene	70	68	38 - 110	2	40		
1,4-Dioxane	67	65	11 - 110	3	40	M	M
2,4,5-Trichlorophenol	55	68	47 - 122	21	40	M	M
2,4,6-Trichlorophenol	20	19	46 - 120	4	40	M J	J
2,4-Dichlorophenol	74	74	46 - 115	1	40		
2,4-Dimethylphenol	40	43	36 - 110	7	40		M
2,4-Dinitrophenol	172	161	10 - 189	7	40		
2,4-Dinitrotoluene	108	106	49 - 128	2	40		
2,6-Dinitrotoluene	104	102	45 - 131	2	40		
2-Chlorophenol	85	83	47 - 110	2	40		
2-Chloronaphthalene	86	85	47 - 110	1	40		
2-Methylnaphthalene	93	93	46 - 110	0	40		
2-Methylphenol	85	83	46 - 110	3	40		
2-Nitroaniline	100	99	45 - 122	2	40		
2-Nitrophenol	100	97	42 - 120	2	40		
3 & 4 Methylphenol	79	78	43 - 110	1	40		
3,3'-Dichlorobenzidine	81	87	10 - 113	7	40		
3-Nitroaniline	93	90	30 - 116	4	40		
4,6-Dinitro-2-methylphenol	168	164	29 - 167	2	40	J	
4-Bromophenyl phenyl ether	99	97	42 - 110	2	40		
4-Chloro-3-methylphenol	72	69	46 - 118	4	40		
4-Chloroaniline	81	79	10 - 110	3	40		
4-Chlorophenyl phenyl ether	89	89	46 - 114	0	40		
4-Nitroaniline	105	104	36 - 125	1	40		
4-Nitrophenol	77	82	30 - 122	6	40		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154149

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	680-52658-2	Analysis Batch:	680-155086	Instrument ID:	GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch:	680-154149	Lab File ID:	t1291.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1843			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

MSD Lab Sample ID:	680-52658-2	Analysis Batch:	680-155086	Instrument ID:	GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch:	680-154149	Lab File ID:	t1292.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1910			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	87	86	45 - 117	1	40		
Acenaphthylene	88	87	51 - 112	1	40		
Aniline	55	43	10 - 114	25	40		
Anthracene	99	100	52 - 116	1	40		
Benzo[a]anthracene	91	89	49 - 124	2	40		
Benzo[a]pyrene	92	89	48 - 120	3	40		
Benzo[b]fluoranthene	89	91	46 - 126	3	40		
Benzo[g,h,i]perylene	98	95	51 - 117	2	40		
Benzo[k]fluoranthene	82	73	47 - 126	11	40		
Benzyl alcohol	64	68	34 - 113	6	40		
Bis(2-chloroethoxy)methane	121	120	50 - 112	1	40	J	J
Bis(2-chloroethyl)ether	98	97	43 - 110	1	40		
Bis(2-ethylhexyl) phthalate	96	92	47 - 134	4	40		
Chrysene	89	88	51 - 123	1	40		
Dibenz(a,h)anthracene	97	95	46 - 124	2	40		
Dibenzofuran	90	91	50 - 112	1	40		
Di-n-butyl phthalate	96	97	49 - 123	1	40		
Diethyl phthalate	91	91	51 - 119	1	40		
Dimethyl phthalate	92	91	50 - 116	2	40		
Di-n-octyl phthalate	99	98	44 - 134	1	40		
Fluoranthene	92	97	50 - 120	5	40		
Fluorene	92	93	50 - 115	1	40		
Hexachlorobenzene	95	92	48 - 119	3	40		
Hexachlorobutadiene	90	87	40 - 110	3	40		
Hexachlorocyclopentadiene	42	43	10 - 110	2	40		
Hexachloroethane	67	66	33 - 110	2	40		
Indeno[1,2,3-cd]pyrene	105	105	40 - 126	0	40		
Isophorone	85	85	50 - 111	1	40		
Naphthalene	86	86	41 - 110	1	40		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154149

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	680-52658-2	Analysis Batch:	680-155086	Instrument ID:	GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch:	680-154149	Lab File ID:	t1291.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1843			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

MSD Lab Sample ID:	680-52658-2	Analysis Batch:	680-155086	Instrument ID:	GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch:	680-154149	Lab File ID:	t1292.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/02/2009 1910			Final Weight/Volume:	1 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrobenzene	92	89	46 - 110	3	40		
N-Nitrosodimethylamine	91	85	33 - 110	7	40		
N-Nitrosodiphenylamine	98	97	47 - 119	2	40		
N-Nitrosodi-n-propylamine	86	86	45 - 112	0	40		
Pentachlorophenol	70	64	37 - 132	8	40		
Phenanthrene	97	97	52 - 117	0	40		
Phenol	79	74	39 - 110	7	40		
Pyrene	85	84	52 - 125	1	40		
Butyl benzyl phthalate	102	100	52 - 135	1	40		
bis(chloroisopropyl) ether	92	92	42 - 110	0	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	57	62	40 - 139
2-Fluorobiphenyl	95	91	50 - 113
2-Fluorophenol	85	81	36 - 110
Terphenyl-d14	66	51	10 - 121
Phenol-d5	76	70	38 - 116
Nitrobenzene-d5	94	91	45 - 112

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-154155

Method: 8081A_8082
Preparation: 3520C

Lab Sample ID: MB 680-154155/6-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/26/2009 0532
Date Prepared: 11/20/2009 1528

Analysis Batch: 680-154733
Prep Batch: 680-154155
Units: ug/L

Instrument ID: GC SemiVolatiles - J
Lab File ID: jk24105.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Aldrin	0.0070	U	0.0070	0.050
Isodrin	0.050	U	0.050	0.050
Chlordane (technical)	0.10	U	0.10	0.50
Chlorobenzilate	0.50	U	0.50	0.50
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
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
Heptachlor	0.0070	U	0.0070	0.050
Heptachlor epoxide	0.0060	U	0.0060	0.050
alpha-BHC	0.0057	U	0.0057	0.050
beta-BHC	0.0067	U	0.0067	0.050
gamma-BHC (Lindane)	0.0059	U	0.0059	0.050
delta-BHC	0.0048	U	0.0048	0.050
Methoxychlor	0.013	U	0.013	0.10
Toxaphene	0.50	U	0.50	5.0
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

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	74	35 - 120
DCB Decachlorobiphenyl	73	14 - 115

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	69	35 - 120
DCB Decachlorobiphenyl	64	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Control Sample - Batch: 680-154155

Method: 8081A_8082
Preparation: 3520C

Lab Sample ID: LCS 680-154155/7-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/26/2009 0555
Date Prepared: 11/20/2009 1528

Analysis Batch: 680-154733
Prep Batch: 680-154155
Units: ug/L

Instrument ID: GC SemiVolatiles - J
Lab File ID: jk24106.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
Aldrin	0.100	0.0778	78	32 - 114	
4,4'-DDD	0.200	0.134	67	37 - 179	
4,4'-DDE	0.200	0.134	67	33 - 142	
4,4'-DDT	0.200	0.189	94	27 - 141	
Dieldrin	0.200	0.169	84	45 - 137	
Endosulfan I	0.100	0.0780	78	31 - 134	
Endosulfan II	0.200	0.145	73	24 - 144	
Endosulfan sulfate	0.200	0.154	77	44 - 128	
Endrin	0.200	0.169	85	38 - 144	
Endrin aldehyde	0.200	0.202	101	37 - 135	
Heptachlor	0.100	0.104	104	30 - 133	
Heptachlor epoxide	0.100	0.0861	86	34 - 126	
alpha-BHC	0.100	0.0830	83	29 - 112	
beta-BHC	0.100	0.121	121	15 - 204	
gamma-BHC (Lindane)	0.100	0.0827	83	31 - 118	
delta-BHC	0.100	0.0807	81	25 - 123	
Methoxychlor	0.200	0.164	82	10 - 243	

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	83	35 - 120
DCB Decachlorobiphenyl	79	14 - 115

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	81	35 - 120
DCB Decachlorobiphenyl	76	14 - 115

Lab Control Sample - Batch: 680-154155

Method: 8081A_8082
Preparation: 3520C

Lab Sample ID: LCS 680-154155/10-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/26/2009 0618
Date Prepared: 11/20/2009 1528

Analysis Batch: 680-154733
Prep Batch: 680-154155
Units: ug/L

Instrument ID: GC SemiVolatiles - J
Lab File ID: jk24107.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	10.6	106	57 - 124	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Control Sample - Batch: 680-154155

Method: 8081A_8082
Preparation: 3520C

Lab Sample ID: LCS 680-154155/10-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/26/2009 0618
Date Prepared: 11/20/2009 1528

Analysis Batch: 680-154733
Prep Batch: 680-154155
Units: ug/L

Instrument ID: GC SemiVolatiles - J
Lab File ID: jk24107.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-1260	10.0	9.94	99	58 - 124	

Surrogate	% Rec		Acceptance Limits
Tetrachloro-m-xylene	76	J	35 - 120
DCB Decachlorobiphenyl	84		14 - 115

Surrogate	% Rec		Acceptance Limits
Tetrachloro-m-xylene	130	J	35 - 120
DCB Decachlorobiphenyl	82		14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154155

Method: 8081A_8082
Preparation: 3520C

MS Lab Sample ID:	680-52658-2	Analysis Batch:	680-154733	Instrument ID:	GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch:	680-154155	Lab File ID:	jk24113.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	11/26/2009 0837			Final Weight/Volume:	10 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	2 uL
				Column ID:	PRIMARY

MSD Lab Sample ID:	680-52658-2	Analysis Batch:	680-154733	Instrument ID:	GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch:	680-154155	Lab File ID:	jk24114.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	11/26/2009 0900			Final Weight/Volume:	10 mL
Date Prepared:	11/20/2009 1528			Injection Volume:	2 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aldrin	59	71	32 - 114	17	40		
4,4'-DDD	64	60	37 - 179	7	40	M	
4,4'-DDE	58	59	33 - 142	2	40		
4,4'-DDT	88	81	27 - 141	8	40		
Dieldrin	73	72	45 - 137	0	40	M	
Endosulfan I	59	61	31 - 134	4	40		
Endosulfan II	64	59	24 - 144	9	40		
Endosulfan sulfate	70	63	44 - 128	10	40		
Endrin	76	75	38 - 144	1	40		
Endrin aldehyde	73	69	37 - 135	6	40		
Heptachlor	64	78	30 - 133	19	40	J	J
Heptachlor epoxide	68	72	34 - 126	5	40		
alpha-BHC	53	66	29 - 112	22	40		
beta-BHC	78	108	15 - 204	32	40	J	
gamma-BHC (Lindane)	60	66	31 - 118	10	40		
delta-BHC	69	67	25 - 123	3	40	J	J
Methoxychlor	82	74	10 - 243	10	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	50	61	35 - 120
DCB Decachlorobiphenyl	59	49	14 - 115

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	45	56	35 - 120
DCB Decachlorobiphenyl	54	44	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154155

Method: 8081A_8082
Preparation: 3520C

MS Lab Sample ID:	680-52658-2	Analysis Batch: 680-154733	Instrument ID: GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch: 680-154155	Lab File ID: jk24115.d
Dilution:	1.0		Initial Weight/Volume: 1060 mL
Date Analyzed:	11/26/2009 0923		Final Weight/Volume: 10 mL
Date Prepared:	11/20/2009 1528		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-52658-2	Analysis Batch: 680-154733	Instrument ID: GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch: 680-154155	Lab File ID: jk24116.d
Dilution:	1.0		Initial Weight/Volume: 1060 mL
Date Analyzed:	11/26/2009 0946		Final Weight/Volume: 10 mL
Date Prepared:	11/20/2009 1528		Injection Volume: 2 uL
			Column ID: PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
PCB-1016	72	105	57 - 124	37	40		
PCB-1260	81	98	58 - 124	24	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	56	64	35 - 120
DCB Decachlorobiphenyl	19	22	14 - 115

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	51	60	35 - 120
DCB Decachlorobiphenyl	18	21	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-154155

Method: 8141A
Preparation: 3520C

Lab Sample ID: MB 680-154155/6-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/24/2009 0202
Date Prepared: 11/20/2009 1528

Analysis Batch: 680-154486
Prep Batch: 680-154155
Units: ug/L

Instrument ID: GC SemiVolatiles - O
Lab File ID: ok23019.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
Merphos	0.75	U	0.75	1.5
Methyl parathion	0.25	U	0.25	0.50
Mevinphos	1.0	U	1.0	2.0
Ethoprop	0.25	U	0.25	0.50
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

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	97	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Control Sample - Batch: 680-154155

Method: 8141A
Preparation: 3520C

Lab Sample ID: LCS 680-154155/13-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/24/2009 0227
Date Prepared: 11/20/2009 1528

Analysis Batch: 680-154486
Prep Batch: 680-154155
Units: ug/L

Instrument ID: GC SemiVolatiles - O
Lab File ID: ok23020.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	4.24	106	53 - 138	
Methyl parathion	4.00	2.57	64	31 - 130	
Ronnel	4.00	4.09	102	46 - 142	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	97	26 - 134

Lab Control Sample - Batch: 680-154155

Method: 8141A
Preparation: 3520C

Lab Sample ID: LCS 680-154155/16-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/24/2009 0251
Date Prepared: 11/20/2009 1528

Analysis Batch: 680-154486
Prep Batch: 680-154155
Units: ug/L

Instrument ID: GC SemiVolatiles - O
Lab File ID: ok23021.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	3.74	94	45 - 132	
Thionazin	4.00	2.30	58	37 - 134	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	100	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154155

Method: 8141A
Preparation: 3520C

MS Lab Sample ID:	680-52658-2	Analysis Batch: 680-154486	Instrument ID: GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch: 680-154155	Lab File ID: ok23027.d
Dilution:	1.0		Initial Weight/Volume: 1060 mL
Date Analyzed:	11/24/2009 0520		Final Weight/Volume: 10 mL
Date Prepared:	11/20/2009 1528		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-52658-2	Analysis Batch: 680-154486	Instrument ID: GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch: 680-154155	Lab File ID: ok23028.d
Dilution:	1.0		Initial Weight/Volume: 1060 mL
Date Analyzed:	11/24/2009 0545		Final Weight/Volume: 10 mL
Date Prepared:	11/20/2009 1528		Injection Volume: 2 uL
			Column ID: PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Diazinon	99	78	53 - 138	23	40		
Methyl parathion	74	59	31 - 130	23	40		
Ronnel	95	78	46 - 142	20	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Triphenylphosphate	101	89	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154155

Method: 8141A
Preparation: 3520C

MS Lab Sample ID:	680-52658-2	Analysis Batch: 680-154486	Instrument ID: GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch: 680-154155	Lab File ID: ok23029.d
Dilution:	1.0		Initial Weight/Volume: 1060 mL
Date Analyzed:	11/24/2009 0610		Final Weight/Volume: 10 mL
Date Prepared:	11/20/2009 1528		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-52658-2	Analysis Batch: 680-154486	Instrument ID: GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch: 680-154155	Lab File ID: ok23030.d
Dilution:	1.0		Initial Weight/Volume: 1060 mL
Date Analyzed:	11/24/2009 0635		Final Weight/Volume: 10 mL
Date Prepared:	11/20/2009 1528		Injection Volume: 2 uL
			Column ID: PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ethyl Parathion	76	80	45 - 132	5	40		
Thionazin	63	65	37 - 134	3	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Triphenylphosphate	95	105	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-153528

Method: 6020
Preparation: 3030C

Lab Sample ID: MB 680-153528/6-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/17/2009 1305
Date Prepared: 11/16/2009 0930

Analysis Batch: 680-153749
Prep Batch: 680-153528
Units: ug/L

Instrument ID: ICP MS - A
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

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	0.218	J	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	0.20	U	0.20	0.50
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

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Lab Control Sample - Batch: 680-153528

Method: 6020
Preparation: 3030C

Lab Sample ID: LCS 680-153528/7-A
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 11/17/2009 1312
Date Prepared: 11/16/2009 0930

Analysis Batch: 680-153749
Prep Batch: 680-153528
Units: ug/L

Instrument ID: ICP MS - A
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	50.0	51.2	102	75 - 125	
Arsenic	100	110	110	75 - 125	
Barium	100	104	104	75 - 125	
Beryllium	50.0	52.3	105	75 - 125	
Cadmium	50.0	52.9	106	75 - 125	
Chromium	100	107	107	75 - 125	
Cobalt	50.0	50.2	100	75 - 125	
Copper	100	112	112	75 - 125	
Lead	50.0	50.6	101	75 - 125	
Nickel	100	111	111	75 - 125	
Selenium	100	106	106	75 - 125	
Silver	50.0	48.9	98	75 - 125	
Thallium	40.0	40.0	100	75 - 125	
Tin	100	95.3	95	75 - 125	
Vanadium	100	108	108	75 - 125	
Zinc	100	112	112	75 - 125	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-153528

Method: 6020
Preparation: 3030C

MS Lab Sample ID:	680-52658-1	Analysis Batch:	680-153749	Instrument ID:	ICP MS - A
Client Matrix:	Water	Prep Batch:	680-153528	Lab File ID:	N/A
Dilution:	5.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/17/2009 1339			Final Weight/Volume:	50 mL
Date Prepared:	11/16/2009 0930				

MSD Lab Sample ID:	680-52658-1	Analysis Batch:	680-153749	Instrument ID:	ICP MS - A
Client Matrix:	Water	Prep Batch:	680-153528	Lab File ID:	N/A
Dilution:	5.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/17/2009 1345			Final Weight/Volume:	50 mL
Date Prepared:	11/16/2009 0930				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	94	91	75 - 125	3	20		
Arsenic	95	95	75 - 125	1	20		
Barium	90	90	75 - 125	0	20		
Beryllium	91	92	75 - 125	2	20		
Cadmium	95	94	75 - 125	1	20		
Chromium	88	88	75 - 125	0	20		
Cobalt	86	86	75 - 125	0	20		
Copper	94	93	75 - 125	0	20		
Lead	92	91	75 - 125	1	20		
Nickel	93	92	75 - 125	1	20		
Selenium	95	94	75 - 125	1	20		
Silver	87	86	75 - 125	1	20		
Thallium	91	90	75 - 125	1	20		
Tin	87	86	75 - 125	1	20		
Vanadium	89	89	75 - 125	0	20		
Zinc	93	95	75 - 125	2	20		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-153963

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 680-153963/21-A	Analysis Batch:	680-154464	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-153963	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1651			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

Analyte	Result	Qual	MDL	RL
Mercury	0.091	U	0.091	0.20

Lab Control Sample - Batch: 680-153963

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 680-153963/22-A	Analysis Batch:	680-154464	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-153963	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1700			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.49	100	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-153963

Method: 7470A
Preparation: 7470A

MS Lab Sample ID:	680-52658-2	Analysis Batch:	680-154464	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-153963	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1753			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

MSD Lab Sample ID:	680-52658-2	Analysis Batch:	680-154464	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-153963	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1756			Final Weight/Volume:	50 mL
Date Prepared:	11/19/2009 1006				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	100	94	80 - 120	7	20		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-153812

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 680-153812/2	Analysis Batch:	680-153812	Instrument ID:	ICCS200 - G
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	0005.d
Dilution:	5.0	Units:	mg/L	Initial Weight/Volume:	1 mL
Date Analyzed:	11/17/2009 1233			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

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

Lab Control Sample - Batch: 680-153812

Method: 300.0
Preparation: N/A

Lab Sample ID:	LCS 680-153812/3	Analysis Batch:	680-153812	Instrument ID:	ICCS200 - G
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	0006.d
Dilution:	5.0	Units:	mg/L	Initial Weight/Volume:	1 mL
Date Analyzed:	11/17/2009 1246			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as NO3	11.0	9.99	90	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-153812

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	680-52658-2RA	Analysis Batch:	680-153812	Instrument ID:	ICCS200 - G
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	0022.d
Dilution:	5.0	Run Type:	RA	Initial Weight/Volume:	1 mL
Date Analyzed:	11/17/2009 1648			Final Weight/Volume:	5 mL
Date Prepared:	N/A				1 uL

MSD Lab Sample ID:	680-52658-2RA	Analysis Batch:	680-153812	Instrument ID:	ICCS200 - G
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	0023.d
Dilution:	5.0	Run Type:	RA	Initial Weight/Volume:	1 mL
Date Analyzed:	11/17/2009 1700			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	97	99	90 - 110	2	30	H	H

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-153866

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 680-153866/2
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 11/14/2009 2318
Date Prepared: N/A

Analysis Batch: 680-153866
Prep Batch: N/A
Units: mg/L

Instrument ID: ICCS200 - G
Lab File ID: 0057.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: 680-153866

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 680-153866/3
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 11/14/2009 2330
Date Prepared: N/A

Analysis Batch: 680-153866
Prep Batch: N/A
Units: mg/L

Instrument ID: ICCS200 - G
Lab File ID: 0058.d
Initial Weight/Volume: 1 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as NO3	11.0	9.48	86	90 - 110	Q

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-153866

Method: 300.0
Preparation: N/A

MS Lab Sample ID: 680-52658-2
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 11/15/2009 0057
Date Prepared: N/A

Analysis Batch: 680-153866
Prep Batch: N/A

Instrument ID: ICCS200 - G
Lab File ID: 0065.d
Initial Weight/Volume: 1 mL
Final Weight/Volume: 5 mL
1 uL

MSD Lab Sample ID: 680-52658-2
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 11/15/2009 0122
Date Prepared: N/A

Analysis Batch: 680-153866
Prep Batch: N/A

Instrument ID: ICCS200 - G
Lab File ID: 0067.d
Initial Weight/Volume: 1 mL
Final Weight/Volume: 5 mL
1 uL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate as NO3	93	94	90 - 110	2	30		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-154009

Method: 335.4
Preparation: Distill/CN

Lab Sample ID: MB 680-154009/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1537
Date Prepared: 11/19/2009 1151

Analysis Batch: 680-154047
Prep Batch: 680-154009
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

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

Lab Control Sample - Batch: 680-154009

Method: 335.4
Preparation: Distill/CN

Lab Sample ID: LCS 680-154009/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1537
Date Prepared: 11/19/2009 1151

Analysis Batch: 680-154047
Prep Batch: 680-154009
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0301	0.0319	106	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154009

Method: 335.4
Preparation: Distill/CN

MS Lab Sample ID: 680-52658-2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1537
Date Prepared: 11/19/2009 1151

Analysis Batch: 680-154047
Prep Batch: 680-154009

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 680-52658-2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1537
Date Prepared: 11/19/2009 1151

Analysis Batch: 680-154047
Prep Batch: 680-154009

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Total	89	104	90 - 110	15	20	J	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52658-1

Method Blank - Batch: 680-153533

Method: 9034
Preparation: 9030B

Lab Sample ID: MB 680-153533/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/16/2009 1648
Date Prepared: 11/16/2009 1025

Analysis Batch: 680-153633
Prep Batch: 680-153533
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 250 mL

Analyte	Result	Qual	RL	RL
Sulfide	1.0	U	1.0	1.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153533

Method: 9034
Preparation: 9030B

LCS Lab Sample ID: LCS 680-153533/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/16/2009 1648
Date Prepared: 11/16/2009 1025

Analysis Batch: 680-153633
Prep Batch: 680-153533
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 250 mL

LCSD Lab Sample ID: LCSD 680-153533/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/16/2009 1648
Date Prepared: 11/16/2009 1025

Analysis Batch: 680-153633
Prep Batch: 680-153533
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 250 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Sulfide	82	80	50 - 150	2	50		

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

Serial Number 020951

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: Long Street (Ft Bragg)	PROJECT NO.	PROJECT LOCATION (STATE)
TAL (LAB) PROJECT MANAGER: Terry Horansky	P.O. NUMBER: 440-80	CONTRACT NO.
CLIENT (SITE) PM: Kevin Haborak	CLIENT PHONE: 912-652-6083	CLIENT FAX
CLIENT NAME: USACE	CLIENT E-MAIL	
CLIENT ADDRESS: 100 W Oglethorpe Ave Savannah Georgia		
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:

PRESERVATIVES: Ice, Ice, Ice, Ice, None, None, Ice, Ice, Ice

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	8260 VOC	8270 SVOC	PCB	Organochlorine Pesticide	Sulfide	Cyanide	Chromium Hexavalent	Nitrate	PPP II Metals	REMARKS
11/13/2009	1110	GW-SLMW-8-11-09															well dry
11/13/2009	1205	GW-SLMW-12BR-11-09	G	A				3	2	1	2	1	1	1	1	1	
11/13/2009	1330	GW-SLMW-10-11-09	G	A				3	2	1	2	1	1	1	1	1	
11/13/2009	1100	Dup 1	G	A				3	2	1	2	1	1	1	1	1	
11/13/09	1400	MS	G	A				3	2	1	2	1	1	1	1	1	
11/13/09	1500	MSD	G	A				3	2	1	2	1	1	1	1	1	
11/13/09	1550	GW-SLMW-11R-11-09	G	A				3	2	1	2	1	1	1	1	1	
		Trip Blank						2									

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	11/13/09	1755						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	11/14/09	0935	YES ◯ NO ◯		680-52658	2.8 | 3.1 | 2.7 | 3.0 | 3.1

TAL8240-680 (1207)

ANALYTICAL REPORT

Job Number: 680-52691-1

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
12/11/2009 11:37 AM

Designee for
Terry Hornsby
Project Manager I
terry.hornsby@testamericainc.com
12/11/2009

cc: Mr. Judson Smith

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

Job Narrative
680-52691-1

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
Method(s) 8270C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 154232 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8270C: The surrogates are outside control limits in the matrix spike/matrix spike duplicate (MS/MSD). The original (unspiked) sample met acceptance criteria. The data has been reported.

No other analytical or quality issues were noted.

GC Semi VOA
Method(s) 8081A_8082: Surrogate recovery for the following sample(s) was outside control limits: GW-LSMW-DUP2 (680-52691-3). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results. Both sets of data were reported.

No other 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: 680-52691-1

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 Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	TAL SAV	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides & PCBs (GC)	TAL SAV	SW846 8081A_8082	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organophosphorous Pesticides (GC)	TAL SAV	SW846 8141A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Inductively Coupled Plasma - Mass Spectrometry	TAL SAV	SW846 6020	
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: 680-52691-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8270C	Haynes, Carion	CRH
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8141A	Kellar, Joshua	JK
SW846 6020	Boyuk, Brian	BB
SW846 7470A	Walton, Ernie	EW
MCAWW 300.0	Brazell, Connie	CB
MCAWW 335.4	Johnson, Brad	BJ
SW846 9034	Vasquez, Juana	JV

SAMPLE SUMMARY

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-52691-1	GW-LSMW-13-11-09	Water	11/16/2009 0800	11/17/2009 0956
680-52691-2	GW-LSMW-09-11-09	Water	11/16/2009 0930	11/17/2009 0956
680-52691-3	GW-LSMW-DUP2	Water	11/16/2009 1115	11/17/2009 0956
680-52691-4	GW-Blank-11-09	Water	11/16/2009 1730	11/17/2009 0956
680-52691-5TB	Trip Blank	Water	11/16/2009 0000	11/17/2009 0956
680-52691-6	SLMW-6-11-09	Water	11/16/2009 1315	11/17/2009 0956

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-13-11-09**

Lab Sample ID: 680-52691-1

Client Matrix: Water

Date Sampled: 11/16/2009 0800

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-154378	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o3143.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/21/2009 2047		Final Weight/Volume:	5 mL
Date Prepared:	11/21/2009 2047			

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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-13-11-09**

Lab Sample ID: 680-52691-1

Client Matrix: Water

Date Sampled: 11/16/2009 0800

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-154378	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o3143.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/21/2009 2047		Final Weight/Volume:	5 mL
Date Prepared:	11/21/2009 2047			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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
4-Bromofluorobenzene	103		75 - 120
Dibromofluoromethane	100		75 - 121
Toluene-d8 (Surr)	102		75 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-09-11-09**

Lab Sample ID: 680-52691-2

Client Matrix: Water

Date Sampled: 11/16/2009 0930

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-154378	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o3145.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/21/2009 2116		Final Weight/Volume:	5 mL
Date Prepared:	11/21/2009 2116			

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	1.4		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	0.80	J	0.25	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-1,3-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
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	4.8		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	0.33	J	0.13	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
Pentachloroethane	1.2	U	1.2	5.0
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
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.58	J	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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-09-11-09**

Lab Sample ID: 680-52691-2

Client Matrix: Water

Date Sampled: 11/16/2009 0930

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 1.0

Date Analyzed: 11/21/2009 2116

Date Prepared: 11/21/2009 2116

Analysis Batch: 680-154378

Instrument ID: MSO

Lab File ID: o3145.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
Trichloroethene	0.73	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	1.2		0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		75 - 120
Dibromofluoromethane	100		75 - 121
Toluene-d8 (Surr)	99		75 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3

Client Matrix: Water

Date Sampled: 11/16/2009 1115

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 1.0

Date Analyzed: 11/21/2009 2145

Date Prepared: 11/21/2009 2145

Analysis Batch: 680-154378

Instrument ID: MSO

Lab File ID: o3147.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

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	1.2		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	0.83	J	0.25	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-1,3-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
Dichlorobromomethane	0.25	U	0.25	1.0
Dichlorodifluoromethane	0.25	U	0.25	1.0
1,1-Dichloroethane	5.1		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
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
Pentachloroethane	1.2	U	1.2	5.0
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
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0
Tetrachloroethene	0.60	J	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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3

Client Matrix: Water

Date Sampled: 11/16/2009 1115

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-154378	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o3147.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/21/2009 2145		Final Weight/Volume:	5 mL
Date Prepared:	11/21/2009 2145			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	1.0
Trichloroethene	0.88	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	1.4		0.18	1.0
Xylenes, Total	0.20	U	0.20	2.0

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-Blank-11-09**

Lab Sample ID: 680-52691-4

Client Matrix: Water

Date Sampled: 11/16/2009 1730

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-154378	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o3149.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/21/2009 2214		Final Weight/Volume:	5 mL
Date Prepared:	11/21/2009 2214			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	15	J	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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-Blank-11-09**

Lab Sample ID: 680-52691-4

Client Matrix: Water

Date Sampled: 11/16/2009 1730

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-154378	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o3149.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/21/2009 2214		Final Weight/Volume:	5 mL
Date Prepared:	11/21/2009 2214			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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
4-Bromofluorobenzene	101		75 - 120
Dibromofluoromethane	102		75 - 121
Toluene-d8 (Surr)	101		75 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 680-52691-5TB

Client Matrix: Water

Date Sampled: 11/16/2009 0000

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-154378	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o3151.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/21/2009 2243		Final Weight/Volume:	5 mL
Date Prepared:	11/21/2009 2243			

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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 680-52691-5TB

Client Matrix: Water

Date Sampled: 11/16/2009 0000

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-154378	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o3151.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/21/2009 2243		Final Weight/Volume:	5 mL
Date Prepared:	11/21/2009 2243			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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
4-Bromofluorobenzene	102		75 - 120
Dibromofluoromethane	100		75 - 121
Toluene-d8 (Surr)	101		75 - 120

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **SLMW-6-11-09**

Lab Sample ID: 680-52691-6

Client Matrix: Water

Date Sampled: 11/16/2009 1315

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-154381	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3212.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/23/2009 1737		Final Weight/Volume:	5 mL
Date Prepared:	11/23/2009 1737			

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
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	0.37	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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
Propionitrile	4.6	U	4.6	20
Styrene	0.11	U	0.11	1.0
1,1,1,2-Tetrachloroethane	0.33	U Q	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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **SLMW-6-11-09**

Lab Sample ID: 680-52691-6

Client Matrix: Water

Date Sampled: 11/16/2009 1315

Date Received: 11/17/2009 0956

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-154381	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o3212.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	11/23/2009 1737		Final Weight/Volume:	5 mL
Date Prepared:	11/23/2009 1737			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	103		75 - 121
Toluene-d8 (Surr)	96		75 - 120

Client: U.S. Army Corps of Engineers | Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-13-11-09**

Lab Sample ID: 680-52691-1 | Date Sampled: 11/16/2009 0800
Client Matrix: Water | Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5258.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0100			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Thionazin	0.86	U	0.86	9.4
Sulfotepp	0.50	U	0.50	9.4
Pyridine	2.2	U	2.2	47
1,1'-Biphenyl	0.55	U	0.55	9.4
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.4
1,2,4-Trichlorobenzene	0.53	U	0.53	9.4
1,2-Dichlorobenzene	0.50	U	0.50	9.4
1,3,5-Trinitrobenzene	1.9	U	1.9	9.4
1,3-Dichlorobenzene	0.56	U	0.56	9.4
1,3-Dinitrobenzene	0.57	U	0.57	9.4
1,4-Dichlorobenzene	0.51	U	0.51	9.4
1,4-Dioxane	3.2	U	3.2	9.4
1,4-Naphthoquinone	0.58	U	0.58	9.4
1-Naphthylamine	1.0	U	1.0	9.4
2,3,4,6-Tetrachlorophenol	0.68	U	0.68	9.4
2,4,5-Trichlorophenol	1.1	U	1.1	9.4
2,4,6-Trichlorophenol	0.80	U	0.80	9.4
2,4-Dichlorophenol	1.0	U	1.0	9.4
2,4-Dimethylphenol	3.8	U	3.8	9.4
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	1.1	U	1.1	9.4
2,6-Dichlorophenol	0.69	U	0.69	9.4
2,6-Dinitrotoluene	1.0	U	1.0	9.4
2-Acetylaminofluorene	1.5	U	1.5	9.4
2-Chlorophenol	0.82	U	0.82	9.4
2-Chloronaphthalene	0.75	U	0.75	9.4
2-Methylnaphthalene	0.74	U	0.74	9.4
2-Methylphenol	0.84	U	0.84	9.4
2-Naphthylamine	1.4	U	1.4	9.4
2-Nitroaniline	1.2	U	1.2	47
2-Nitrophenol	0.72	U	0.72	9.4
2-Picoline	1.3	U	1.3	9.4
2-Toluidine	1.3	U	1.3	9.4
3 & 4 Methylphenol	1.2	U	1.2	9.4
3,3'-Dichlorobenzidine	28	U	28	57
3,3'-Dimethylbenzidine	9.4	U	9.4	19
3-Methylcholanthrene	1.3	U	1.3	9.4
3-Nitroaniline	4.7	U	4.7	47
4,6-Dinitro-2-methylphenol	9.4	U	9.4	47
4-Aminobiphenyl	1.1	U	1.1	9.4
4-Bromophenyl phenyl ether	0.73	U	0.73	9.4
4-Chloro-3-methylphenol	0.94	U	0.94	9.4
4-Chloroaniline	2.1	U	2.1	19
4-Chlorophenyl phenyl ether	0.79	U	0.79	9.4
4-Nitroaniline	4.7	U	4.7	47
4-Nitrophenol	1.8	U	1.8	47

Client: U.S. Army Corps of Engineers | Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-13-11-09**

Lab Sample ID: 680-52691-1 | Date Sampled: 11/16/2009 0800
Client Matrix: Water | Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5258.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0100			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
4-Nitroquinoline-1-oxide	9.4	U	9.4	19
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.4
Acenaphthene	0.72	U	0.72	9.4
Acenaphthylene	0.80	U	0.80	9.4
Acetophenone	0.54	U	0.54	9.4
alpha,alpha-Dimethyl phenethylamine	33	U	33	1900
Aniline	2.0	U	2.0	19
Anthracene	0.65	U	0.65	9.4
Aramite, Total	0.86	U	0.86	9.4
Benzo[a]anthracene	0.52	U	0.52	9.4
Benzo[a]pyrene	0.67	U	0.67	9.4
Benzo[b]fluoranthene	2.5	U	2.5	9.4
Benzo[g,h,i]perylene	0.82	U	0.82	9.4
Benzo[k]fluoranthene	1.1	U	1.1	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
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
Diethyl phthalate	0.83	U	0.83	9.4
p-Dimethylamino azobenzene	0.75	U	0.75	9.4
Dimethyl phthalate	0.93	U	0.93	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	1.3	U	1.3	9.4
Ethyl methanesulfonate	0.91	U	0.91	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
Hexachlorophene	25	U	25	4700
Hexachloropropene	1.3	U	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
Methyl methanesulfonate	0.57	U	0.57	9.4
Naphthalene	0.66	U	0.66	9.4
Nitrobenzene	0.69	U	0.69	9.4
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.4
N-Nitrosodiethylamine	0.88	U	0.88	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-13-11-09**

Lab Sample ID: 680-52691-1

Client Matrix: Water

Date Sampled: 11/16/2009 0800

Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5258.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0100			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	2.6	U	2.6	9.4
N-Nitrosodiphenylamine	0.87	U	0.87	9.4
N-Nitrosodi-n-propylamine	0.68	U	0.68	9.4
N-Nitrosomethylethylamine	3.1	U	3.1	9.4
N-Nitrosomorpholine	0.79	U	0.79	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
Pronamide	0.84	U	0.84	9.4
Pyrene	0.59	U	0.59	9.4
Safrole, Total	0.75	U	0.75	9.4
o,o',o"-Triethylphosphorothioate	0.94	U	0.94	9.4
Disulfoton	0.75	U	0.75	9.4
Ethyl Parathion	1.2	U	1.2	9.4
Methyl parathion	0.83	U	0.83	9.4
Phorate	0.82	U	0.82	9.4
Famphur	1.0	U	1.0	9.4
Dimethoate	0.71	U	0.71	9.4
Butyl benzyl phthalate	1.1	U	1.1	9.4
bis(chloroisopropyl) ether	0.74	U	0.74	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	85		40 - 139
2-Fluorobiphenyl	71		50 - 113
2-Fluorophenol	62		36 - 110
Terphenyl-d14	80		10 - 121
Phenol-d5	64		38 - 116
Nitrobenzene-d5	61		45 - 112

Client: U.S. Army Corps of Engineers | Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-09-11-09**

Lab Sample ID: 680-52691-2 | Date Sampled: 11/16/2009 0930
Client Matrix: Water | Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155524		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5266.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 1059			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Thionazin	0.86	U	0.86	9.4
Sulfotepp	0.50	U	0.50	9.4
Pyridine	2.2	U	2.2	47
1,1'-Biphenyl	0.55	U	0.55	9.4
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.4
1,2,4-Trichlorobenzene	0.53	U	0.53	9.4
1,2-Dichlorobenzene	0.50	U	0.50	9.4
1,3,5-Trinitrobenzene	1.9	U	1.9	9.4
1,3-Dichlorobenzene	0.56	U	0.56	9.4
1,3-Dinitrobenzene	0.57	U	0.57	9.4
1,4-Dichlorobenzene	0.51	U	0.51	9.4
1,4-Dioxane	3.2	U	3.2	9.4
1,4-Naphthoquinone	0.58	U	0.58	9.4
1-Naphthylamine	1.0	U	1.0	9.4
2,3,4,6-Tetrachlorophenol	0.68	U	0.68	9.4
2,4,5-Trichlorophenol	1.1	U	1.1	9.4
2,4,6-Trichlorophenol	0.80	U	0.80	9.4
2,4-Dichlorophenol	1.0	U	1.0	9.4
2,4-Dimethylphenol	3.8	U	3.8	9.4
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	1.1	U	1.1	9.4
2,6-Dichlorophenol	0.69	U	0.69	9.4
2,6-Dinitrotoluene	1.0	U	1.0	9.4
2-Acetylaminofluorene	1.5	U	1.5	9.4
2-Chlorophenol	0.82	U	0.82	9.4
2-Chloronaphthalene	0.75	U	0.75	9.4
2-Methylnaphthalene	0.74	U	0.74	9.4
2-Methylphenol	0.84	U	0.84	9.4
2-Naphthylamine	1.4	U	1.4	9.4
2-Nitroaniline	1.2	U	1.2	47
2-Nitrophenol	0.72	U	0.72	9.4
2-Picoline	1.3	U	1.3	9.4
2-Toluidine	1.3	U	1.3	9.4
3 & 4 Methylphenol	1.2	U	1.2	9.4
3,3'-Dichlorobenzidine	28	U	28	57
3,3'-Dimethylbenzidine	9.4	U	9.4	19
3-Methylcholanthrene	1.3	U	1.3	9.4
3-Nitroaniline	4.7	U	4.7	47
4,6-Dinitro-2-methylphenol	9.4	U	9.4	47
4-Aminobiphenyl	1.1	U	1.1	9.4
4-Bromophenyl phenyl ether	0.73	U	0.73	9.4
4-Chloro-3-methylphenol	0.94	U	0.94	9.4
4-Chloroaniline	2.1	U	2.1	19
4-Chlorophenyl phenyl ether	0.79	U	0.79	9.4
4-Nitroaniline	4.7	U	4.7	47
4-Nitrophenol	1.8	U	1.8	47

Client: U.S. Army Corps of Engineers | Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-09-11-09**

Lab Sample ID: 680-52691-2 | Date Sampled: 11/16/2009 0930
Client Matrix: Water | Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155524		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5266.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 1059			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
4-Nitroquinoline-1-oxide	9.4	U	9.4	19
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.4
Acenaphthene	0.72	U	0.72	9.4
Acenaphthylene	0.80	U	0.80	9.4
Acetophenone	0.54	U	0.54	9.4
alpha,alpha-Dimethyl phenethylamine	33	U	33	1900
Aniline	2.0	U	2.0	19
Anthracene	0.65	U	0.65	9.4
Aramite, Total	0.86	U	0.86	9.4
Benzo[a]anthracene	0.52	U	0.52	9.4
Benzo[a]pyrene	0.67	U	0.67	9.4
Benzo[b]fluoranthene	2.5	U	2.5	9.4
Benzo[g,h,i]perylene	0.82	U	0.82	9.4
Benzo[k]fluoranthene	1.1	U	1.1	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
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	3.0	J	0.78	9.4
Diethyl phthalate	0.83	U	0.83	9.4
p-Dimethylamino azobenzene	0.75	U	0.75	9.4
Dimethyl phthalate	0.93	U	0.93	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	1.3	U	1.3	9.4
Ethyl methanesulfonate	0.91	U	0.91	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
Hexachlorophene	25	U	25	4700
Hexachloropropene	1.3	U	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
Methyl methanesulfonate	0.57	U	0.57	9.4
Naphthalene	0.66	U	0.66	9.4
Nitrobenzene	0.69	U	0.69	9.4
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.4
N-Nitrosodiethylamine	0.88	U	0.88	9.4

Client: U.S. Army Corps of Engineers | Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-09-11-09**

Lab Sample ID: 680-52691-2 | Date Sampled: 11/16/2009 0930
Client Matrix: Water | Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155524		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5266.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 1059			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	2.6	U	2.6	9.4
N-Nitrosodiphenylamine	0.87	U	0.87	9.4
N-Nitrosodi-n-propylamine	0.68	U	0.68	9.4
N-Nitrosomethylethylamine	3.1	U	3.1	9.4
N-Nitrosomorpholine	0.79	U	0.79	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
Pronamide	0.84	U	0.84	9.4
Pyrene	0.59	U	0.59	9.4
Safrole, Total	0.75	U	0.75	9.4
o,o',o"-Triethylphosphorothioate	0.94	U	0.94	9.4
Disulfoton	0.75	U	0.75	9.4
Ethyl Parathion	1.2	U	1.2	9.4
Methyl parathion	0.83	U	0.83	9.4
Phorate	0.82	U	0.82	9.4
Famphur	1.0	U	1.0	9.4
Dimethoate	0.71	U	0.71	9.4
Butyl benzyl phthalate	1.1	U	1.1	9.4
bis(chloroisopropyl) ether	0.74	U	0.74	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	100		40 - 139
2-Fluorobiphenyl	76		50 - 113
2-Fluorophenol	61		36 - 110
Terphenyl-d14	77		10 - 121
Phenol-d5	63		38 - 116
Nitrobenzene-d5	57		45 - 112

Client: U.S. Army Corps of Engineers | Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3 | Date Sampled: 11/16/2009 1115
Client Matrix: Water | Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5260.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0146			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Thionazin	0.86	U	0.86	9.4
Sulfotepp	0.50	U	0.50	9.4
Pyridine	2.2	U	2.2	47
1,1'-Biphenyl	0.55	U	0.55	9.4
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.4
1,2,4-Trichlorobenzene	0.53	U	0.53	9.4
1,2-Dichlorobenzene	0.50	U	0.50	9.4
1,3,5-Trinitrobenzene	1.9	U	1.9	9.4
1,3-Dichlorobenzene	0.56	U	0.56	9.4
1,3-Dinitrobenzene	0.57	U	0.57	9.4
1,4-Dichlorobenzene	0.51	U	0.51	9.4
1,4-Dioxane	8.9	J	3.2	9.4
1,4-Naphthoquinone	0.58	U	0.58	9.4
1-Naphthylamine	1.0	U	1.0	9.4
2,3,4,6-Tetrachlorophenol	0.68	U	0.68	9.4
2,4,5-Trichlorophenol	1.1	U	1.1	9.4
2,4,6-Trichlorophenol	0.80	U	0.80	9.4
2,4-Dichlorophenol	1.0	U	1.0	9.4
2,4-Dimethylphenol	3.8	U	3.8	9.4
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	1.1	U	1.1	9.4
2,6-Dichlorophenol	0.69	U	0.69	9.4
2,6-Dinitrotoluene	1.0	U	1.0	9.4
2-Acetylaminofluorene	1.5	U	1.5	9.4
2-Chlorophenol	0.82	U	0.82	9.4
2-Chloronaphthalene	0.75	U	0.75	9.4
2-Methylnaphthalene	0.74	U	0.74	9.4
2-Methylphenol	0.84	U	0.84	9.4
2-Naphthylamine	1.4	U	1.4	9.4
2-Nitroaniline	1.2	U	1.2	47
2-Nitrophenol	0.72	U	0.72	9.4
2-Picoline	1.3	U	1.3	9.4
2-Toluidine	1.3	U	1.3	9.4
3 & 4 Methylphenol	1.2	U	1.2	9.4
3,3'-Dichlorobenzidine	28	U	28	57
3,3'-Dimethylbenzidine	9.4	U	9.4	19
3-Methylcholanthrene	1.3	U	1.3	9.4
3-Nitroaniline	4.7	U	4.7	47
4,6-Dinitro-2-methylphenol	9.4	U	9.4	47
4-Aminobiphenyl	1.1	U	1.1	9.4
4-Bromophenyl phenyl ether	0.73	U	0.73	9.4
4-Chloro-3-methylphenol	0.94	U	0.94	9.4
4-Chloroaniline	2.1	U	2.1	19
4-Chlorophenyl phenyl ether	0.79	U	0.79	9.4
4-Nitroaniline	4.7	U	4.7	47
4-Nitrophenol	1.8	U	1.8	47

Client: U.S. Army Corps of Engineers | Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3 | Date Sampled: 11/16/2009 1115
Client Matrix: Water | Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5260.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0146			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
4-Nitroquinoline-1-oxide	9.4	U	9.4	19
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.4
Acenaphthene	0.72	U	0.72	9.4
Acenaphthylene	0.80	U	0.80	9.4
Acetophenone	0.54	U	0.54	9.4
alpha,alpha-Dimethyl phenethylamine	33	U	33	1900
Aniline	2.0	U	2.0	19
Anthracene	0.65	U	0.65	9.4
Aramite, Total	0.86	U	0.86	9.4
Benzo[a]anthracene	0.52	U	0.52	9.4
Benzo[a]pyrene	0.67	U	0.67	9.4
Benzo[b]fluoranthene	2.5	U	2.5	9.4
Benzo[g,h,i]perylene	0.82	U	0.82	9.4
Benzo[k]fluoranthene	1.1	U	1.1	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
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
Diethyl phthalate	0.83	U	0.83	9.4
p-Dimethylamino azobenzene	0.75	U	0.75	9.4
Dimethyl phthalate	0.93	U	0.93	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	1.3	U	1.3	9.4
Ethyl methanesulfonate	0.91	U	0.91	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
Hexachlorophene	25	U	25	4700
Hexachloropropene	1.3	U	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
Methyl methanesulfonate	0.57	U	0.57	9.4
Naphthalene	0.66	U	0.66	9.4
Nitrobenzene	0.69	U	0.69	9.4
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.4
N-Nitrosodiethylamine	0.88	U	0.88	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3

Client Matrix: Water

Date Sampled: 11/16/2009 1115

Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5260.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0146			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	2.6	U	2.6	9.4
N-Nitrosodiphenylamine	0.87	U	0.87	9.4
N-Nitrosodi-n-propylamine	0.68	U	0.68	9.4
N-Nitrosomethylethylamine	3.1	U	3.1	9.4
N-Nitrosomorpholine	0.79	U	0.79	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
Pronamide	0.84	U	0.84	9.4
Pyrene	0.59	U	0.59	9.4
Safrole, Total	0.75	U	0.75	9.4
o,o',o"-Triethylphosphorothioate	0.94	U	0.94	9.4
Disulfoton	0.75	U	0.75	9.4
Ethyl Parathion	1.2	U	1.2	9.4
Methyl parathion	0.83	U	0.83	9.4
Phorate	0.82	U	0.82	9.4
Famphur	1.0	U	1.0	9.4
Dimethoate	0.71	U	0.71	9.4
Butyl benzyl phthalate	1.1	U	1.1	9.4
bis(chloroisopropyl) ether	0.74	U	0.74	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	91		40 - 139
2-Fluorobiphenyl	60		50 - 113
2-Fluorophenol	54		36 - 110
Terphenyl-d14	78		10 - 121
Phenol-d5	56		38 - 116
Nitrobenzene-d5	51		45 - 112

Client: U.S. Army Corps of Engineers | Job Number: 680-52691-1

Client Sample ID: **GW-Blank-11-09**

Lab Sample ID: 680-52691-4 | Date Sampled: 11/16/2009 1730
Client Matrix: Water | Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5261.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0209			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Thionazin	0.86	U	0.86	9.4
Sulfotepp	0.50	U	0.50	9.4
Pyridine	2.2	U	2.2	47
1,1'-Biphenyl	0.55	U	0.55	9.4
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.4
1,2,4-Trichlorobenzene	0.53	U	0.53	9.4
1,2-Dichlorobenzene	0.50	U	0.50	9.4
1,3,5-Trinitrobenzene	1.9	U	1.9	9.4
1,3-Dichlorobenzene	0.56	U	0.56	9.4
1,3-Dinitrobenzene	0.57	U	0.57	9.4
1,4-Dichlorobenzene	0.51	U	0.51	9.4
1,4-Dioxane	3.2	U	3.2	9.4
1,4-Naphthoquinone	0.58	U	0.58	9.4
1-Naphthylamine	1.0	U	1.0	9.4
2,3,4,6-Tetrachlorophenol	0.68	U	0.68	9.4
2,4,5-Trichlorophenol	1.1	U	1.1	9.4
2,4,6-Trichlorophenol	0.80	U	0.80	9.4
2,4-Dichlorophenol	1.0	U	1.0	9.4
2,4-Dimethylphenol	3.8	U	3.8	9.4
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	1.1	U	1.1	9.4
2,6-Dichlorophenol	0.69	U	0.69	9.4
2,6-Dinitrotoluene	1.0	U	1.0	9.4
2-Acetylaminofluorene	1.5	U	1.5	9.4
2-Chlorophenol	0.82	U	0.82	9.4
2-Chloronaphthalene	0.75	U	0.75	9.4
2-Methylnaphthalene	0.74	U	0.74	9.4
2-Methylphenol	0.84	U	0.84	9.4
2-Naphthylamine	1.4	U	1.4	9.4
2-Nitroaniline	1.2	U	1.2	47
2-Nitrophenol	0.72	U	0.72	9.4
2-Picoline	1.3	U	1.3	9.4
2-Toluidine	1.3	U	1.3	9.4
3 & 4 Methylphenol	1.2	U	1.2	9.4
3,3'-Dichlorobenzidine	28	U	28	57
3,3'-Dimethylbenzidine	9.4	U	9.4	19
3-Methylcholanthrene	1.3	U	1.3	9.4
3-Nitroaniline	4.7	U	4.7	47
4,6-Dinitro-2-methylphenol	9.4	U	9.4	47
4-Aminobiphenyl	1.1	U	1.1	9.4
4-Bromophenyl phenyl ether	0.73	U	0.73	9.4
4-Chloro-3-methylphenol	0.94	U	0.94	9.4
4-Chloroaniline	2.1	U	2.1	19
4-Chlorophenyl phenyl ether	0.79	U	0.79	9.4
4-Nitroaniline	4.7	U	4.7	47
4-Nitrophenol	1.8	U	1.8	47

Client: U.S. Army Corps of Engineers | Job Number: 680-52691-1

Client Sample ID: **GW-Blank-11-09**

Lab Sample ID: 680-52691-4 | Date Sampled: 11/16/2009 1730
Client Matrix: Water | Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5261.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0209			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
4-Nitroquinoline-1-oxide	9.4	U	9.4	19
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.4
Acenaphthene	0.72	U	0.72	9.4
Acenaphthylene	0.80	U	0.80	9.4
Acetophenone	0.54	U	0.54	9.4
alpha,alpha-Dimethyl phenethylamine	33	U	33	1900
Aniline	2.0	U	2.0	19
Anthracene	0.65	U	0.65	9.4
Aramite, Total	0.86	U	0.86	9.4
Benzo[a]anthracene	0.52	U	0.52	9.4
Benzo[a]pyrene	0.67	U	0.67	9.4
Benzo[b]fluoranthene	2.5	U	2.5	9.4
Benzo[g,h,i]perylene	0.82	U	0.82	9.4
Benzo[k]fluoranthene	1.1	U	1.1	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
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
Diethyl phthalate	0.83	U	0.83	9.4
p-Dimethylamino azobenzene	0.75	U	0.75	9.4
Dimethyl phthalate	0.93	U	0.93	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	1.3	U	1.3	9.4
Ethyl methanesulfonate	0.91	U	0.91	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
Hexachlorophene	25	U	25	4700
Hexachloropropene	1.3	U	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
Methyl methanesulfonate	0.57	U	0.57	9.4
Naphthalene	0.66	U	0.66	9.4
Nitrobenzene	0.69	U	0.69	9.4
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.4
N-Nitrosodiethylamine	0.88	U	0.88	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-Blank-11-09**

Lab Sample ID: 680-52691-4

Client Matrix: Water

Date Sampled: 11/16/2009 1730

Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5261.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0209			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	2.6	U	2.6	9.4
N-Nitrosodiphenylamine	0.87	U	0.87	9.4
N-Nitrosodi-n-propylamine	0.68	U	0.68	9.4
N-Nitrosomethylethylamine	3.1	U	3.1	9.4
N-Nitrosomorpholine	0.79	U	0.79	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
Pronamide	0.84	U	0.84	9.4
Pyrene	0.59	U	0.59	9.4
Safrole, Total	0.75	U	0.75	9.4
o,o',o"-Triethylphosphorothioate	0.94	U	0.94	9.4
Disulfoton	0.75	U	0.75	9.4
Ethyl Parathion	1.2	U	1.2	9.4
Methyl parathion	0.83	U	0.83	9.4
Phorate	0.82	U	0.82	9.4
Famphur	1.0	U	1.0	9.4
Dimethoate	0.71	U	0.71	9.4
Butyl benzyl phthalate	1.1	U	1.1	9.4
bis(chloroisopropyl) ether	0.74	U	0.74	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	95		40 - 139
2-Fluorobiphenyl	76		50 - 113
2-Fluorophenol	66		36 - 110
Terphenyl-d14	86		10 - 121
Phenol-d5	66		38 - 116
Nitrobenzene-d5	64		45 - 112

Client: U.S. Army Corps of Engineers | Job Number: 680-52691-1

Client Sample ID: **SLMW-6-11-09**

Lab Sample ID: 680-52691-6 | Date Sampled: 11/16/2009 1315
Client Matrix: Water | Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5262.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0232			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Thionazin	0.86	U	0.86	9.4
Sulfotepp	0.50	U	0.50	9.4
Pyridine	2.2	U	2.2	47
1,1'-Biphenyl	0.55	U	0.55	9.4
1,2,4,5-Tetrachlorobenzene	0.72	U	0.72	9.4
1,2,4-Trichlorobenzene	0.53	U	0.53	9.4
1,2-Dichlorobenzene	0.50	U	0.50	9.4
1,3,5-Trinitrobenzene	1.9	U	1.9	9.4
1,3-Dichlorobenzene	0.56	U	0.56	9.4
1,3-Dinitrobenzene	0.57	U	0.57	9.4
1,4-Dichlorobenzene	0.51	U	0.51	9.4
1,4-Dioxane	3.2	U	3.2	9.4
1,4-Naphthoquinone	0.58	U	0.58	9.4
1-Naphthylamine	1.0	U	1.0	9.4
2,3,4,6-Tetrachlorophenol	0.68	U	0.68	9.4
2,4,5-Trichlorophenol	1.1	U	1.1	9.4
2,4,6-Trichlorophenol	0.80	U	0.80	9.4
2,4-Dichlorophenol	1.0	U	1.0	9.4
2,4-Dimethylphenol	3.8	U	3.8	9.4
2,4-Dinitrophenol	9.4	U	9.4	47
2,4-Dinitrotoluene	1.1	U	1.1	9.4
2,6-Dichlorophenol	0.69	U	0.69	9.4
2,6-Dinitrotoluene	1.0	U	1.0	9.4
2-Acetylaminofluorene	1.5	U	1.5	9.4
2-Chlorophenol	0.82	U	0.82	9.4
2-Chloronaphthalene	0.75	U	0.75	9.4
2-Methylnaphthalene	0.74	U	0.74	9.4
2-Methylphenol	0.84	U	0.84	9.4
2-Naphthylamine	1.4	U	1.4	9.4
2-Nitroaniline	1.2	U	1.2	47
2-Nitrophenol	0.72	U	0.72	9.4
2-Picoline	1.3	U	1.3	9.4
2-Toluidine	1.3	U	1.3	9.4
3 & 4 Methylphenol	1.2	U	1.2	9.4
3,3'-Dichlorobenzidine	28	U	28	57
3,3'-Dimethylbenzidine	9.4	U	9.4	19
3-Methylcholanthrene	1.3	U	1.3	9.4
3-Nitroaniline	4.7	U	4.7	47
4,6-Dinitro-2-methylphenol	9.4	U	9.4	47
4-Aminobiphenyl	1.1	U	1.1	9.4
4-Bromophenyl phenyl ether	0.73	U	0.73	9.4
4-Chloro-3-methylphenol	0.94	U	0.94	9.4
4-Chloroaniline	2.1	U	2.1	19
4-Chlorophenyl phenyl ether	0.79	U	0.79	9.4
4-Nitroaniline	4.7	U	4.7	47
4-Nitrophenol	1.8	U	1.8	47

Client: U.S. Army Corps of Engineers | Job Number: 680-52691-1

Client Sample ID: **SLMW-6-11-09**

Lab Sample ID: 680-52691-6 | Date Sampled: 11/16/2009 1315
Client Matrix: Water | Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5262.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0232			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
4-Nitroquinoline-1-oxide	9.4	U	9.4	19
7,12-Dimethylbenz(a)anthracene	1.1	U	1.1	9.4
Acenaphthene	0.72	U	0.72	9.4
Acenaphthylene	0.80	U	0.80	9.4
Acetophenone	0.54	U	0.54	9.4
alpha,alpha-Dimethyl phenethylamine	33	U	33	1900
Aniline	2.0	U	2.0	19
Anthracene	0.65	U	0.65	9.4
Aramite, Total	0.86	U	0.86	9.4
Benzo[a]anthracene	0.52	U	0.52	9.4
Benzo[a]pyrene	0.67	U	0.67	9.4
Benzo[b]fluoranthene	2.5	U	2.5	9.4
Benzo[g,h,i]perylene	0.82	U	0.82	9.4
Benzo[k]fluoranthene	1.1	U	1.1	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
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
Diethyl phthalate	0.83	U	0.83	9.4
p-Dimethylamino azobenzene	0.75	U	0.75	9.4
Dimethyl phthalate	0.93	U	0.93	9.4
Dinoseb	4.7	U	4.7	9.4
Di-n-octyl phthalate	1.3	U	1.3	9.4
Ethyl methanesulfonate	0.91	U	0.91	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
Hexachlorophene	25	U	25	4700
Hexachloropropene	1.3	U	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
Methyl methanesulfonate	0.57	U	0.57	9.4
Naphthalene	0.66	U	0.66	9.4
Nitrobenzene	0.69	U	0.69	9.4
N-Nitrosodi-n-butylamine	0.91	U	0.91	9.4
N-Nitrosodiethylamine	0.88	U	0.88	9.4

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **SLMW-6-11-09**

Lab Sample ID: 680-52691-6

Client Matrix: Water

Date Sampled: 11/16/2009 1315

Date Received: 11/17/2009 0956

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 680-155504		Instrument ID:	MSN
Preparation:	3520C	Prep Batch: 680-154232		Lab File ID:	n5262.d
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/08/2009 0232			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	2.6	U	2.6	9.4
N-Nitrosodiphenylamine	0.87	U	0.87	9.4
N-Nitrosodi-n-propylamine	0.68	U	0.68	9.4
N-Nitrosomethylethylamine	3.1	U	3.1	9.4
N-Nitrosomorpholine	0.79	U	0.79	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
Pronamide	0.84	U	0.84	9.4
Pyrene	0.59	U	0.59	9.4
Safrole, Total	0.75	U	0.75	9.4
o,o',o"-Triethylphosphorothioate	0.94	U	0.94	9.4
Disulfoton	0.75	U	0.75	9.4
Ethyl Parathion	1.2	U	1.2	9.4
Methyl parathion	0.83	U	0.83	9.4
Phorate	0.82	U	0.82	9.4
Famphur	1.0	U	1.0	9.4
Dimethoate	0.71	U	0.71	9.4
Butyl benzyl phthalate	1.1	U	1.1	9.4
bis(chloroisopropyl) ether	0.74	U	0.74	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	90		40 - 139
2-Fluorobiphenyl	71		50 - 113
2-Fluorophenol	59		36 - 110
Terphenyl-d14	80		10 - 121
Phenol-d5	61		38 - 116
Nitrobenzene-d5	58		45 - 112

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-13-11-09**

Lab Sample ID: 680-52691-1

Client Matrix: Water

Date Sampled: 11/16/2009 0800

Date Received: 11/17/2009 0956

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154668		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-154309		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 1940			Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aldrin	0.0066	U	0.0066	0.047
Isodrin	0.047	U	0.047	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
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
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
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
delta-BHC	0.0045	U	0.0045	0.047
Methoxychlor	0.012	U	0.012	0.094
Toxaphene	0.47	U	0.47	4.7
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

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	70		35 - 120
DCB Decachlorobiphenyl	79		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-13-11-09**

Lab Sample ID: 680-52691-1

Client Matrix: Water

Date Sampled: 11/16/2009 0800

Date Received: 11/17/2009 0956

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154668		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-154309		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 1940			Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620			Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	56		35 - 120
DCB Decachlorobiphenyl	76		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-09-11-09**

Lab Sample ID: 680-52691-2

Client Matrix: Water

Date Sampled: 11/16/2009 0930

Date Received: 11/17/2009 0956

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154668		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-154309		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 2000			Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aldrin	0.0066	U	0.0066	0.047
Isodrin	0.047	U	0.047	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
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
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
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
delta-BHC	0.0045	U	0.0045	0.047
Methoxychlor	0.012	U	0.012	0.094
Toxaphene	0.47	U	0.47	4.7
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

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	63		35 - 120
DCB Decachlorobiphenyl	23		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-09-11-09**

Lab Sample ID: 680-52691-2

Client Matrix: Water

Date Sampled: 11/16/2009 0930

Date Received: 11/17/2009 0956

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154668	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-154309	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 2000		Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	44		35 - 120
DCB Decachlorobiphenyl	20		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3

Client Matrix: Water

Date Sampled: 11/16/2009 1115

Date Received: 11/17/2009 0956

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154668		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-154309		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 2019			Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aldrin	0.0066	U	0.0066	0.047
Isodrin	0.047	U	0.047	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
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
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
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
delta-BHC	0.0045	U	0.0045	0.047
Methoxychlor	0.012	U	0.012	0.094
Toxaphene	0.47	U	0.47	4.7
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

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	5	J	35 - 120
DCB Decachlorobiphenyl	5	J	14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3

Client Matrix: Water

Date Sampled: 11/16/2009 1115

Date Received: 11/17/2009 0956

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154668	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-154309	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 2019		Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	8	J	35 - 120
DCB Decachlorobiphenyl	25	J	14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3

Client Matrix: Water

Date Sampled: 11/16/2009 1115

Date Received: 11/17/2009 0956

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154950		Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-154741		Initial Weight/Volume:	1020 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	12/01/2009 0332	Run Type:	RE	Injection Volume:	2 uL
Date Prepared:	11/27/2009 1214			Result Type:	SECONDARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aldrin	0.0069	U H	0.0069	0.049
Isodrin	0.049	U H	0.049	0.049
Chlordane (technical)	0.098	U H	0.098	0.49
Chlorobenzilate	0.49	U H	0.49	0.49
4,4'-DDD	0.0064	U H	0.0064	0.098
4,4'-DDE	0.0075	U H	0.0075	0.098
4,4'-DDT	0.0095	U H	0.0095	0.098
Dieldrin	0.0089	U H	0.0089	0.098
Endosulfan I	0.0041	U H	0.0041	0.049
Endosulfan II	0.0096	U H	0.0096	0.098
Endosulfan sulfate	0.0067	U H	0.0067	0.098
Endrin	0.0095	U H	0.0095	0.098
Endrin aldehyde	0.016	U H	0.016	0.098
Heptachlor	0.0069	U H	0.0069	0.049
Heptachlor epoxide	0.0059	U H	0.0059	0.049
alpha-BHC	0.0056	U H	0.0056	0.049
beta-BHC	0.0066	U H	0.0066	0.049
gamma-BHC (Lindane)	0.0058	U H	0.0058	0.049
delta-BHC	0.0047	U H	0.0047	0.049
Methoxychlor	0.013	U H	0.013	0.098
Toxaphene	0.49	U H	0.49	4.9
PCB-1016	0.070	U H	0.070	0.98
PCB-1221	0.27	U H	0.27	2.0
PCB-1232	0.11	U H	0.11	0.98
PCB-1242	0.18	U H	0.18	0.98
PCB-1248	0.35	U H	0.35	0.98
PCB-1254	0.25	U H	0.25	0.98
PCB-1260	0.20	U H	0.20	0.98
PCB-1262	0.24	U H	0.24	0.98

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	67		35 - 120
Tetrachloro-m-xylene	69		35 - 120
DCB Decachlorobiphenyl	14		14 - 115
DCB Decachlorobiphenyl	14		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-Blank-11-09**

Lab Sample ID: 680-52691-4

Client Matrix: Water

Date Sampled: 11/16/2009 1730

Date Received: 11/17/2009 0956

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154668	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-154309	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 2038		Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aldrin	0.0066	U	0.0066	0.047
Isodrin	0.047	U	0.047	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
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
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
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
delta-BHC	0.0045	U	0.0045	0.047
Methoxychlor	0.012	U	0.012	0.094
Toxaphene	0.47	U	0.47	4.7
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

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	34	J	35 - 120
DCB Decachlorobiphenyl	66		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-Blank-11-09**

Lab Sample ID: 680-52691-4

Client Matrix: Water

Date Sampled: 11/16/2009 1730

Date Received: 11/17/2009 0956

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154668	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-154309	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 2038		Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	62	J	35 - 120
DCB Decachlorobiphenyl	54		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **SLMW-6-11-09**

Lab Sample ID: 680-52691-6

Client Matrix: Water

Date Sampled: 11/16/2009 1315

Date Received: 11/17/2009 0956

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154668		Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-154309		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 2058			Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aldrin	0.0066	U	0.0066	0.047
Isodrin	0.047	U	0.047	0.047
Chlordane (technical)	0.094	U	0.094	0.47
Chlorobenzilate	0.47	U	0.47	0.47
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
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
Heptachlor	0.0066	U	0.0066	0.047
Heptachlor epoxide	0.0057	U	0.0057	0.047
alpha-BHC	0.0054	U	0.0054	0.047
beta-BHC	0.0063	U	0.0063	0.047
gamma-BHC (Lindane)	0.0056	U	0.0056	0.047
delta-BHC	0.0045	U	0.0045	0.047
Methoxychlor	0.012	U	0.012	0.094
Toxaphene	0.47	U	0.47	4.7
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

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	65		35 - 120
DCB Decachlorobiphenyl	48		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **SLMW-6-11-09**

Lab Sample ID: 680-52691-6

Client Matrix: Water

Date Sampled: 11/16/2009 1315

Date Received: 11/17/2009 0956

8081A_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-154668	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-154309	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	11/24/2009 2058		Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	55		35 - 120
DCB Decachlorobiphenyl	48		14 - 115

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-13-11-09**

Lab Sample ID: 680-52691-1

Client Matrix: Water

Date Sampled: 11/16/2009 0800

Date Received: 11/17/2009 0956

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154767		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154309		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0208			Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620			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
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	112		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-09-11-09**

Lab Sample ID: 680-52691-2

Client Matrix: Water

Date Sampled: 11/16/2009 0930

Date Received: 11/17/2009 0956

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154767		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154309		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0233			Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620			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
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	109		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3

Client Matrix: Water

Date Sampled: 11/16/2009 1115

Date Received: 11/17/2009 0956

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154767		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154309		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0258			Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620			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
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	4	J	26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3

Client Matrix: Water

Date Sampled: 11/16/2009 1115

Date Received: 11/17/2009 0956

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154919		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154741		Initial Weight/Volume:	1020 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/30/2009 2230	Run Type:	RE	Injection Volume:	2 uL
Date Prepared:	11/27/2009 1214			Result Type:	SECONDARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Azinphos-methyl	0.49	U H	0.49	0.98
Bolstar	0.49	U H	0.49	0.98
Chlorpyrifos	0.49	U H	0.49	0.98
Coumaphos	0.49	U H	0.49	0.98
Demeton-O	1.3	U H Q	1.3	2.5
Demeton-S	1.3	U H	1.3	2.5
Diazinon	0.49	U H	0.49	0.98
Dichlorvos	0.98	U H	0.98	2.0
Dimethoate	0.98	U H	0.98	2.0
Disulfoton	0.98	U H	0.98	2.0
EPN	0.49	U H	0.49	0.98
Famphur	0.98	U H	0.98	2.0
Fensulfothion	2.5	U H	2.5	4.9
Fenthion	0.49	U H	0.49	0.98
Malathion	0.49	U H	0.49	0.98
Merphos	0.74	U H	0.74	1.5
Methyl parathion	0.25	U H	0.25	0.49
Mevinphos	0.98	U H	0.98	2.0
Ethoprop	0.25	U H	0.25	0.49
Monochrotophos	4.9	U H	4.9	9.8
Naled	2.5	U H	2.5	4.9
Ethyl Parathion	0.49	U H	0.49	0.98
Phorate	0.49	U H	0.49	0.98
Ronnel	0.49	U H	0.49	0.98
Stirophos	0.49	U H Q	0.49	0.98
Sulfotepp	0.25	U H	0.25	0.49
Thionazin	0.49	U H	0.49	0.98
Tokuthion	0.49	U H	0.49	0.98
Trichloronate	0.49	U H	0.49	0.98

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	102		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-Blank-11-09**

Lab Sample ID: 680-52691-4

Client Matrix: Water

Date Sampled: 11/16/2009 1730

Date Received: 11/17/2009 0956

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154767		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154309		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0322			Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620			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
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	105		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **SLMW-6-11-09**

Lab Sample ID: 680-52691-6

Client Matrix: Water

Date Sampled: 11/16/2009 1315

Date Received: 11/17/2009 0956

8141A Organophosphorous Pesticides (GC)

Method:	8141A	Analysis Batch: 680-154767		Instrument ID:	SGO
Preparation:	3520C	Prep Batch: 680-154309		Initial Weight/Volume:	1060 mL
Dilution:	1.0			Final Weight/Volume:	10 mL
Date Analyzed:	11/26/2009 0347			Injection Volume:	2 uL
Date Prepared:	11/23/2009 1620			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
Merphos	0.71	U	0.71	1.4
Methyl parathion	0.24	U	0.24	0.47
Mevinphos	0.94	U	0.94	1.9
Ethoprop	0.24	U	0.24	0.47
Monochrotophos	4.7	U	4.7	9.4
Naled	2.4	U	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

Surrogate	%Rec	Qualifier	Acceptance Limits
Triphenylphosphate	78		26 - 134

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-13-11-09**

Lab Sample ID: 680-52691-1

Client Matrix: Water

Date Sampled: 11/16/2009 0800

Date Received: 11/17/2009 0956

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-154028		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153719		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/19/2009 0428			Final Weight/Volume:	50 mL
Date Prepared:	11/17/2009 1250				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	0.40	U	0.40	1.0
Barium	6.9		0.15	1.0
Beryllium	0.070	U	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.19	J	0.16	1.0
Cobalt	0.083	J	0.078	0.20
Copper	0.30	J	0.21	1.0
Lead	0.080	U	0.080	0.30
Nickel	0.42	J	0.20	2.0
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	3.4	J	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-154099		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1515			Final Weight/Volume:	50 mL
Date Prepared:	11/20/2009 0958				

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-09-11-09**

Lab Sample ID: 680-52691-2

Client Matrix: Water

Date Sampled: 11/16/2009 0930

Date Received: 11/17/2009 0956

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-154028		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153719		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/19/2009 0502			Final Weight/Volume:	50 mL
Date Prepared:	11/17/2009 1250				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	8.7		0.40	1.0
Barium	41		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	0.93		0.078	0.20
Copper	0.33	J	0.21	1.0
Lead	0.080	U	0.080	0.30
Nickel	0.69	J	0.20	2.0
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	70		2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-154099		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1517			Final Weight/Volume:	50 mL
Date Prepared:	11/20/2009 0958				

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3

Client Matrix: Water

Date Sampled: 11/16/2009 1115

Date Received: 11/17/2009 0956

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-154028		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153719		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/19/2009 0509			Final Weight/Volume:	50 mL
Date Prepared:	11/17/2009 1250				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	8.6		0.40	1.0
Barium	41		0.15	1.0
Beryllium	0.070	U	0.070	0.20
Cadmium	0.20	U	0.20	0.50
Chromium	0.20	J	0.16	1.0
Cobalt	0.99		0.078	0.20
Copper	0.40	J	0.21	1.0
Lead	0.080	U	0.080	0.30
Nickel	0.44	J	0.20	2.0
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	18		2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-154099		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1520			Final Weight/Volume:	50 mL
Date Prepared:	11/20/2009 0958				

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **GW-Blank-11-09**

Lab Sample ID: 680-52691-4

Client Matrix: Water

Date Sampled: 11/16/2009 1730

Date Received: 11/17/2009 0956

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-154028		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153719		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/19/2009 0516			Final Weight/Volume:	50 mL
Date Prepared:	11/17/2009 1250				

Analyte	Result (ug/L)	Qualifier	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	0.44	J	0.21	1.0
Lead	0.080	U	0.080	0.30
Nickel	0.20	U	0.20	2.0
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	0.43	J	0.40	1.0
Vanadium	1.4	U	1.4	5.0
Zinc	3.2	J	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-154099		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1523			Final Weight/Volume:	50 mL
Date Prepared:	11/20/2009 0958				

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Client Sample ID: **SLMW-6-11-09**

Lab Sample ID: 680-52691-6

Client Matrix: Water

Date Sampled: 11/16/2009 1315

Date Received: 11/17/2009 0956

6020 Inductively Coupled Plasma - Mass Spectrometry

Method:	6020	Analysis Batch: 680-154028		Instrument ID:	ICPMSA
Preparation:	3030C	Prep Batch: 680-153719		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/19/2009 0536			Final Weight/Volume:	50 mL
Date Prepared:	11/17/2009 1250				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.99	U	0.99	2.0
Arsenic	0.40	U	0.40	1.0
Barium	6.9		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	0.13	J	0.078	0.20
Copper	1.3		0.21	1.0
Lead	0.085	J	0.080	0.30
Nickel	0.32	J	0.20	2.0
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	7.6	J	2.6	10

7470A Mercury (CVAA)

Method:	7470A	Analysis Batch: 680-154464		Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-154099		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1526			Final Weight/Volume:	50 mL
Date Prepared:	11/20/2009 0958				

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

General Chemistry

Client Sample ID: **GW-LSMW-13-11-09**

Lab Sample ID: 680-52691-1

Client Matrix: Water

Date Sampled: 11/16/2009 0800

Date Received: 11/17/2009 0956

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: 680-153812	Date Analyzed: 11/17/2009 1355						
Cyanide, Total	0.0026	J	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-154463	Date Analyzed: 11/24/2009 1054						
Prep Batch: 680-154329	Date Prepared: 11/23/2009 1250						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
Analysis Batch: 680-154071	Date Analyzed: 11/19/2009 1735						
Prep Batch: 680-153977	Date Prepared: 11/19/2009 1035						

General Chemistry

Client Sample ID: **GW-LSMW-09-11-09**

Lab Sample ID: 680-52691-2

Client Matrix: Water

Date Sampled: 11/16/2009 0930

Date Received: 11/17/2009 0956

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: 680-153812	Date Analyzed: 11/17/2009 1408						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-154463	Date Analyzed: 11/24/2009 1054						
Prep Batch: 680-154329	Date Prepared: 11/23/2009 1250						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
Analysis Batch: 680-154071	Date Analyzed: 11/19/2009 1735						
Prep Batch: 680-153977	Date Prepared: 11/19/2009 1035						

General Chemistry

Client Sample ID: **GW-LSMW-DUP2**

Lab Sample ID: 680-52691-3

Client Matrix: Water

Date Sampled: 11/16/2009 1115

Date Received: 11/17/2009 0956

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as NO3	0.86	J	mg/L	0.36	1.1	5.0	300.0
Analysis Batch: 680-153812	Date Analyzed: 11/17/2009 1420						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-154463	Date Analyzed: 11/24/2009 1054						
Prep Batch: 680-154329	Date Prepared: 11/23/2009 1254						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
Analysis Batch: 680-154071	Date Analyzed: 11/19/2009 1735						
Prep Batch: 680-153977	Date Prepared: 11/19/2009 1035						

General Chemistry

Client Sample ID: **GW-Blank-11-09**

Lab Sample ID: 680-52691-4

Client Matrix: Water

Date Sampled: 11/16/2009 1730

Date Received: 11/17/2009 0956

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: 680-153812	Date Analyzed: 11/17/2009 1432						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-154463	Date Analyzed: 11/24/2009 1054						
Prep Batch: 680-154329	Date Prepared: 11/23/2009 1254						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
Analysis Batch: 680-154071	Date Analyzed: 11/19/2009 1735						
Prep Batch: 680-153977	Date Prepared: 11/19/2009 1035						

General Chemistry

Client Sample ID: **SLMW-6-11-09**

Lab Sample ID: 680-52691-6

Client Matrix: Water

Date Sampled: 11/16/2009 1315

Date Received: 11/17/2009 0956

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: 680-153812	Date Analyzed: 11/17/2009 1445						
Cyanide, Total	0.0025	U	mg/L	0.0025	0.010	1.0	335.4
Analysis Batch: 680-154463	Date Analyzed: 11/24/2009 1054						
Prep Batch: 680-154329	Date Prepared: 11/23/2009 1254						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfide	1.0	U	mg/L	1.0	1.0	1.0	9034
Analysis Batch: 680-154071	Date Analyzed: 11/19/2009 1735						
Prep Batch: 680-153977	Date Prepared: 11/19/2009 1035						

DATA REPORTING QUALIFIERS

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

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
	U	Undetected at the Limit of Detection.
GC 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.
	H	Sample was prepped or analyzed beyond the specified holding time
	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		
	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: 680-52691-1

Method Blank - Batch: 680-154378

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-154378/7	Analysis Batch:	680-154378	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq375.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/21/2009 1625			Final Weight/Volume:	5 mL
Date Prepared:	11/21/2009 1625				

Analyte	Result	Qual	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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154378

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-154378/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/21/2009 1625
Date Prepared: 11/21/2009 1625

Analysis Batch: 680-154378
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq375.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
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
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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	Acceptance Limits
4-Bromofluorobenzene	102	75 - 120
Dibromofluoromethane	104	75 - 121
Toluene-d8 (Surr)	101	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154378

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-154378/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/21/2009 1428
Date Prepared: 11/21/2009 1428

Analysis Batch: 680-154378
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq367.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-154378/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/21/2009 1457
Date Prepared: 11/21/2009 1457

Analysis Batch: 680-154378
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq369.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	100	104	17 - 175	3	50		
Benzene	100	99	77 - 119	2	30		
Bromoform	110	107	62 - 133	3	30		
Bromomethane	78	90	12 - 184	15	50		
2-Butanone (MEK)	103	99	33 - 157	4	30		
Carbon disulfide	105	106	55 - 131	0	30		
Carbon tetrachloride	110	106	71 - 135	4	30		
Chlorobenzene	103	99	85 - 116	4	30		
Chlorodibromomethane	115	111	75 - 133	3	30		
Chloroethane	93	93	40 - 165	0	50		
Chloroform	108	106	82 - 120	2	30		
Chloromethane	85	93	48 - 142	9	50		
cis-1,3-Dichloropropene	107	105	76 - 126	1	30		
1,2-Dibromo-3-Chloropropane	109	109	49 - 140	1	30		
Dibromomethane	100	97	78 - 119	3	30		
Dichlorobromomethane	104	103	78 - 127	1	30		
Dichlorodifluoromethane	84	93	34 - 154	9	30		
1,1-Dichloroethane	105	105	74 - 127	0	30		
1,2-Dichloroethane	95	92	66 - 132	3	30		
1,1-Dichloroethene	106	106	62 - 141	0	30		
1,2-Dichloropropane	99	98	73 - 124	2	30		
Ethylbenzene	105	101	86 - 116	4	30		
Ethylene Dibromide	102	102	80 - 121	0	30		
2-Hexanone	103	100	34 - 161	4	30		
Methylene Chloride	108	108	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	103	100	40 - 151	3	30		
Styrene	108	105	82 - 122	3	30		
1,1,1,2-Tetrachloroethane	111	108	81 - 128	3	30		
1,1,2,2-Tetrachloroethane	104	101	69 - 129	4	30		
Tetrachloroethene	102	99	76 - 126	3	30		
Toluene	103	101	81 - 117	2	30		
trans-1,2-Dichloroethene	108	106	72 - 131	2	30		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154378

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-154378/4	Analysis Batch:	680-154378	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq367.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/21/2009 1428			Final Weight/Volume:	5 mL
Date Prepared:	11/21/2009 1428				

LCSD Lab Sample ID:	LCSD 680-154378/5	Analysis Batch:	680-154378	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq369.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/21/2009 1457			Final Weight/Volume:	5 mL
Date Prepared:	11/21/2009 1457				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
trans-1,3-Dichloropropene	107	104	73 - 128	3	30		
1,1,1-Trichloroethane	104	99	76 - 127	5	30		
1,1,2-Trichloroethane	99	97	75 - 121	2	30		
Trichloroethene	102	99	84 - 115	3	30		
Trichlorofluoromethane	96	99	58 - 149	3	50		
1,2,3-Trichloropropane	102	100	70 - 130	1	30		
Vinyl acetate	131	125	10 - 217	5	30		
Vinyl chloride	83	87	59 - 144	5	50		
Xylenes, Total	106	102	84 - 118	5	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	105	101	75 - 120
Dibromofluoromethane	111	108	75 - 121
Toluene-d8 (Surr)	105	101	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154381

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-154381/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/23/2009 1155
Date Prepared: 11/23/2009 1155

Analysis Batch: 680-154381
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq406.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	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
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-1,3-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
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
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
Pentachloroethane	1.2	U	1.2	5.0
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
1,1,2,2-Tetrachloroethane	0.18	U	0.18	1.0

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154381

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-154381/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/23/2009 1155
Date Prepared: 11/23/2009 1155

Analysis Batch: 680-154381
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq406.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
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
1,1,1-Trichloroethane	0.50	U	0.50	1.0
1,1,2-Trichloroethane	0.13	U	0.13	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	Acceptance Limits
4-Bromofluorobenzene	97	75 - 120
Dibromofluoromethane	102	75 - 121
Toluene-d8 (Surr)	97	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154381

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-154381/5	Analysis Batch:	680-154381	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq398.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/23/2009 0958			Final Weight/Volume:	5 mL
Date Prepared:	11/23/2009 0958				

LCSD Lab Sample ID:	LCSD 680-154381/6	Analysis Batch:	680-154381	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch: N/A		Lab File ID:	oq400.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/23/2009 1028			Final Weight/Volume:	5 mL
Date Prepared:	11/23/2009 1028				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acetone	105	112	17 - 175	6	50		
Benzene	101	104	77 - 119	3	30		
Bromoform	91	89	62 - 133	2	30		
Bromomethane	81	103	12 - 184	24	50		
2-Butanone (MEK)	106	114	33 - 157	8	30		
Carbon disulfide	95	118	55 - 131	22	30		
Carbon tetrachloride	78	80	71 - 135	3	30		
Chlorobenzene	99	101	85 - 116	2	30		
Chlorodibromomethane	94	86	75 - 133	9	30		
Chloroethane	82	105	40 - 165	24	50		
Chloroform	98	106	82 - 120	8	30		
Chloromethane	85	110	48 - 142	25	50		
cis-1,3-Dichloropropene	105	102	76 - 126	3	30		
1,2-Dibromo-3-Chloropropane	98	110	49 - 140	12	30		
Dibromomethane	98	98	78 - 119	1	30		
Dichlorobromomethane	96	99	78 - 127	2	30		
Dichlorodifluoromethane	77	96	34 - 154	22	30		
1,1-Dichloroethane	100	109	74 - 127	9	30		
1,2-Dichloroethane	93	93	66 - 132	0	30		
1,1-Dichloroethene	96	104	62 - 141	8	30		
1,2-Dichloropropane	101	103	73 - 124	2	30		
Ethylbenzene	101	105	86 - 116	4	30		
Ethylene Dibromide	102	103	80 - 121	1	30		
2-Hexanone	104	103	34 - 161	1	30		
Methylene Chloride	99	121	70 - 125	20	30		
4-Methyl-2-pentanone (MIBK)	104	104	40 - 151	0	30		
Styrene	102	110	82 - 122	7	30		
1,1,1,2-Tetrachloroethane	81	77	81 - 128	5	30		Q
1,1,2,2-Tetrachloroethane	100	101	69 - 129	1	30		
Tetrachloroethene	97	95	76 - 126	2	30		
Toluene	99	110	81 - 117	11	30		
trans-1,2-Dichloroethene	101	105	72 - 131	5	30		

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154381

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-154381/5	Analysis Batch:	680-154381	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq398.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/23/2009 0958			Final Weight/Volume:	5 mL
Date Prepared:	11/23/2009 0958				

LCSD Lab Sample ID:	LCSD 680-154381/6	Analysis Batch:	680-154381	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq400.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/23/2009 1028			Final Weight/Volume:	5 mL
Date Prepared:	11/23/2009 1028				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
trans-1,3-Dichloropropene	101	101	73 - 128	0	30		
1,1,1-Trichloroethane	96	99	76 - 127	3	30		
1,1,2-Trichloroethane	102	100	75 - 121	2	30		
Trichloroethene	98	96	84 - 115	2	30		
Trichlorofluoromethane	85	95	58 - 149	11	50		
1,2,3-Trichloropropane	101	102	70 - 130	1	30		
Vinyl acetate	172	167	10 - 217	3	30		
Vinyl chloride	90	112	59 - 144	22	50		
Xylenes, Total	101	108	84 - 118	6	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	98	105	75 - 120
Dibromofluoromethane	102	113	75 - 121
Toluene-d8 (Surr)	101	111	75 - 120

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154232

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 680-154232/15-A	Analysis Batch:	680-155504	Instrument ID:	GC/MS SemiVolatiles - N
Client Matrix:	Water	Prep Batch:	680-154232	Lab File ID:	n5256.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	12/08/2009 0015			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
Thionazin	0.91	U	0.91	10
Sulfotepp	0.53	U	0.53	10
Pyridine	2.3	U	2.3	50
1,1'-Biphenyl	0.58	U	0.58	10
1,2,4,5-Tetrachlorobenzene	0.76	U	0.76	10
1,2,4-Trichlorobenzene	0.56	U	0.56	10
1,2-Dichlorobenzene	0.53	U	0.53	10
1,3,5-Trinitrobenzene	2.0	U	2.0	10
1,3-Dichlorobenzene	0.59	U	0.59	10
1,3-Dinitrobenzene	0.60	U	0.60	10
1,4-Dichlorobenzene	0.54	U	0.54	10
1,4-Dioxane	3.4	U	3.4	10
1,4-Naphthoquinone	0.62	U	0.62	10
1-Naphthylamine	1.1	U	1.1	10
2,3,4,6-Tetrachlorophenol	0.72	U	0.72	10
2,4,5-Trichlorophenol	1.2	U	1.2	10
2,4,6-Trichlorophenol	0.85	U	0.85	10
2,4-Dichlorophenol	1.1	U	1.1	10
2,4-Dimethylphenol	4.0	U	4.0	10
2,4-Dinitrophenol	10	U	10	50
2,4-Dinitrotoluene	1.2	U	1.2	10
2,6-Dichlorophenol	0.73	U	0.73	10
2,6-Dinitrotoluene	1.1	U	1.1	10
2-Acetylaminofluorene	1.6	U	1.6	10
2-Chlorophenol	0.87	U	0.87	10
2-Chloronaphthalene	0.80	U	0.80	10
2-Methylnaphthalene	0.78	U	0.78	10
2-Methylphenol	0.89	U	0.89	10
2-Naphthylamine	1.5	U	1.5	10
2-Nitroaniline	1.3	U	1.3	50
2-Nitrophenol	0.76	U	0.76	10
2-Picoline	1.4	U	1.4	10
2-Toluidine	1.4	U	1.4	10
3 & 4 Methylphenol	1.3	U	1.3	10
3,3'-Dichlorobenzidine	30	U	30	60
3,3'-Dimethylbenzidine	10	U	10	20
3-Methylcholanthrene	1.4	U	1.4	10
3-Nitroaniline	5.0	U	5.0	50
4,6-Dinitro-2-methylphenol	10	U	10	50
4-Aminobiphenyl	1.2	U	1.2	10
4-Bromophenyl phenyl ether	0.77	U	0.77	10

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154232

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 680-154232/15-A	Analysis Batch:	680-155504	Instrument ID:	GC/MS SemiVolatiles - N
Client Matrix:	Water	Prep Batch:	680-154232	Lab File ID:	n5256.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	12/08/2009 0015			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
4-Chloro-3-methylphenol	1.0	U	1.0	10
4-Chloroaniline	2.2	U	2.2	20
4-Chlorophenyl phenyl ether	0.84	U	0.84	10
4-Nitroaniline	5.0	U	5.0	50
4-Nitrophenol	1.9	U	1.9	50
4-Nitroquinoline-1-oxide	10	U	10	20
7,12-Dimethylbenz(a)anthracene	1.2	U	1.2	10
Acenaphthene	0.76	U	0.76	10
Acenaphthylene	0.85	U	0.85	10
Acetophenone	0.57	U	0.57	10
alpha,alpha-Dimethyl phenethylamine	35	U	35	2000
Aniline	2.1	U	2.1	20
Anthracene	0.69	U	0.69	10
Aramite, Total	0.91	U	0.91	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(2-ethylhexyl) phthalate	1.6	U	1.6	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
Diethyl phthalate	0.88	U	0.88	10
p-Dimethylamino azobenzene	0.79	U	0.79	10
Dimethyl phthalate	0.99	U	0.99	10
Dinoseb	5.0	U	5.0	10
Di-n-octyl phthalate	1.4	U	1.4	10
Ethyl methanesulfonate	0.96	U	0.96	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
Hexachlorophene	27	U	27	5000

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154232

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 680-154232/15-A	Analysis Batch:	680-155504	Instrument ID:	GC/MS SemiVolatiles - N
Client Matrix:	Water	Prep Batch:	680-154232	Lab File ID:	n5256.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	12/08/2009 0015			Final Weight/Volume:	1 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
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
Methyl methanesulfonate	0.60	U	0.60	10
Naphthalene	0.70	U	0.70	10
Nitrobenzene	0.73	U	0.73	10
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-Nitrosodiphenylamine	0.92	U	0.92	10
N-Nitrosodi-n-propylamine	0.72	U	0.72	10
N-Nitrosomethylethylamine	3.3	U	3.3	10
N-Nitrosomorpholine	0.84	U	0.84	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
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
Pronamide	0.89	U	0.89	10
Pyrene	0.63	U	0.63	10
Safrole, Total	0.80	U	0.80	10
o,o',o"-Triethylphosphorothioate	1.0	U	1.0	10
Disulfoton	0.79	U	0.79	10
Ethyl Parathion	1.3	U	1.3	10
Methyl parathion	0.88	U	0.88	10
Phorate	0.87	U	0.87	10
Famphur	1.1	U	1.1	10
Dimethoate	0.75	U	0.75	10
Butyl benzyl phthalate	1.2	U	1.2	10
bis(chloroisopropyl) ether	0.78	U	0.78	10

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	99	40 - 139
2-Fluorobiphenyl	79	50 - 113

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Surrogate	% Rec	Acceptance Limits
2-Fluorophenol	67	36 - 110
Terphenyl-d14	90	10 - 121
Phenol-d5	70	38 - 116
Nitrobenzene-d5	66	45 - 112

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample - Batch: 680-154232

Method: 8270C
Preparation: 3520C

Lab Sample ID: LCS 680-154232/16-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/08/2009 1036
Date Prepared: 11/21/2009 1522

Analysis Batch: 680-155524
Prep Batch: 680-154232
Units: ug/L

Instrument ID: GC/MS SemiVolatiles - N
Lab File ID: n5265.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Pyridine	100	40.4	40	10 - 110	J
1,2,4-Trichlorobenzene	100	77.1	77	41 - 110	
1,2-Dichlorobenzene	100	64.5	65	39 - 110	
1,3-Dichlorobenzene	100	63.4	63	36 - 110	
1,4-Dichlorobenzene	100	62.3	62	38 - 110	
1,4-Dioxane	100	38.9	39	11 - 110	
2,4,5-Trichlorophenol	100	88.8	89	47 - 122	
2,4,6-Trichlorophenol	100	90.6	91	46 - 120	
2,4-Dichlorophenol	100	86.7	87	46 - 115	
2,4-Dimethylphenol	100	66.6	67	36 - 110	
2,4-Dinitrophenol	100	100	100	10 - 189	
2,4-Dinitrotoluene	100	89.4	89	49 - 128	
2,6-Dinitrotoluene	100	87.8	88	45 - 131	
2-Chlorophenol	100	74.1	74	47 - 110	
2-Chloronaphthalene	100	81.8	82	47 - 110	
2-Methylnaphthalene	100	83.6	84	46 - 110	
2-Methylphenol	100	73.9	74	46 - 110	
2-Nitroaniline	100	57.8	58	45 - 122	
2-Nitrophenol	100	75.8	76	42 - 120	
3 & 4 Methylphenol	100	78.4	78	43 - 110	
3,3'-Dichlorobenzidine	100	77.9	78	10 - 113	
3-Nitroaniline	100	77.8	78	30 - 116	
4,6-Dinitro-2-methylphenol	100	93.5	94	29 - 167	
4-Bromophenyl phenyl ether	100	103	103	42 - 110	
4-Chloro-3-methylphenol	100	77.0	77	46 - 118	
4-Chloroaniline	100	72.1	72	10 - 110	
4-Chlorophenyl phenyl ether	100	95.9	96	46 - 114	
4-Nitroaniline	100	78.4	78	36 - 125	
4-Nitrophenol	100	54.2	54	30 - 122	
Acenaphthene	100	82.7	83	45 - 117	
Acenaphthylene	100	79.9	80	51 - 112	
Aniline	100	48.0	48	10 - 114	
Anthracene	100	85.9	86	52 - 116	
Benzo[a]anthracene	100	90.0	90	49 - 124	
Benzo[a]pyrene	100	91.7	92	48 - 120	
Benzo[b]fluoranthene	100	81.8	82	46 - 126	
Benzo[g,h,i]perylene	100	91.5	91	51 - 117	
Benzo[k]fluoranthene	100	92.0	92	47 - 126	
Benzyl alcohol	100	79.7	80	34 - 113	
Bis(2-chloroethoxy)methane	100	80.6	81	50 - 112	
Bis(2-chloroethyl)ether	100	58.7	59	43 - 110	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample - Batch: 680-154232

Method: 8270C
Preparation: 3520C

Lab Sample ID: LCS 680-154232/16-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/08/2009 1036
Date Prepared: 11/21/2009 1522

Analysis Batch: 680-155524
Prep Batch: 680-154232
Units: ug/L

Instrument ID: GC/MS SemiVolatiles - N
Lab File ID: n5265.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Bis(2-ethylhexyl) phthalate	100	84.0	84	47 - 134	
Chrysene	100	90.2	90	51 - 123	
Dibenz(a,h)anthracene	100	92.1	92	46 - 124	
Dibenzofuran	100	85.4	85	50 - 112	
Di-n-butyl phthalate	100	84.5	84	49 - 123	
Diethyl phthalate	100	87.5	88	51 - 119	
Dimethyl phthalate	100	93.1	93	50 - 116	
Di-n-octyl phthalate	100	88.9	89	44 - 134	
Fluoranthene	100	87.3	87	50 - 120	
Fluorene	100	85.5	85	50 - 115	
Hexachlorobenzene	100	99.5	100	48 - 119	
Hexachlorobutadiene	100	79.4	79	40 - 110	
Hexachlorocyclopentadiene	100	61.8	62	10 - 110	
Hexachloroethane	100	53.8	54	33 - 110	
Indeno[1,2,3-cd]pyrene	100	97.9	98	40 - 126	
Isophorone	100	66.5	66	50 - 111	
Naphthalene	100	72.7	73	41 - 110	
Nitrobenzene	100	57.4	57	46 - 110	
N-Nitrosodimethylamine	100	39.5	39	33 - 110	
N-Nitrosodiphenylamine	100	96.5	96	47 - 119	
N-Nitrosodi-n-propylamine	100	70.6	71	45 - 112	
Pentachlorophenol	100	99.1	99	37 - 132	
Phenanthrene	100	86.5	87	52 - 117	
Phenol	100	69.6	70	39 - 110	
Pyrene	100	89.8	90	52 - 125	
Butyl benzyl phthalate	100	86.6	87	52 - 135	
bis(chloroisopropyl) ether	100	56.4	56	42 - 110	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	96	40 - 139
2-Fluorobiphenyl	76	50 - 113
2-Fluorophenol	58	36 - 110
Terphenyl-d14	85	10 - 121
Phenol-d5	62	38 - 116
Nitrobenzene-d5	54	45 - 112

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154232

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	680-52691-1	Analysis Batch:	680-155504	Instrument ID:	GC/MS SemiVolatiles - N
Client Matrix:	Water	Prep Batch:	680-154232	Lab File ID:	n5263.d
Dilution:	1.0			Initial Weight/Volume:	500 mL
Date Analyzed:	12/08/2009 0255			Final Weight/Volume:	0.5 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

MSD Lab Sample ID:	680-52691-1	Analysis Batch:	680-155504	Instrument ID:	GC/MS SemiVolatiles - N
Client Matrix:	Water	Prep Batch:	680-154232	Lab File ID:	n5264.d
Dilution:	1.0			Initial Weight/Volume:	500 mL
Date Analyzed:	12/08/2009 0318			Final Weight/Volume:	0.5 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Pyridine	0	0	10 - 110	NC	40	U J	U J
1,2,4-Trichlorobenzene	5	0	41 - 110	NC	40	J J	U J
1,2-Dichlorobenzene	2	0	39 - 110	NC	40	J J	U J
1,3-Dichlorobenzene	1	0	36 - 110	NC	40	J J	U J
1,4-Dichlorobenzene	1	0	38 - 110	NC	40	J J	U J
1,4-Dioxane	0	0	11 - 110	NC	40	U J	U J
2,4,5-Trichlorophenol	29	34	47 - 122	18	40	J	J
2,4,6-Trichlorophenol	25	26	46 - 120	6	40	J	J
2,4-Dichlorophenol	14	6	46 - 115	73	40	J	J J
2,4-Dimethylphenol	12	6	36 - 110	70	40	J	J J
2,4-Dinitrophenol	68	98	10 - 189	35	40		
2,4-Dinitrotoluene	65	86	49 - 128	28	40		
2,6-Dinitrotoluene	43	58	45 - 131	31	40	J	
2-Chlorophenol	5	0	47 - 110	NC	40	J J	U J
2-Chloronaphthalene	16	12	47 - 110	26	40	J	J
2-Methylnaphthalene	13	6	46 - 110	78	40	J	J J
2-Methylphenol	13	3	46 - 110	123	40	J	J J
2-Nitroaniline	25	32	45 - 122	26	40	J J	J J
2-Nitrophenol	8	0	42 - 120	NC	40	J J	U J
3 & 4 Methylphenol	18	15	43 - 110	22	40	J	J
3,3'-Dichlorobenzidine	54	54	10 - 113	0	40	J	J
3-Nitroaniline	46	60	30 - 116	27	40	J	
4,6-Dinitro-2-methylphenol	78	96	29 - 167	20	40		
4-Bromophenyl phenyl ether	44	59	42 - 110	30	40		
4-Chloro-3-methylphenol	25	35	46 - 118	32	40	J	J
4-Chloroaniline	16	12	10 - 110	30	40	J	J
4-Chlorophenyl phenyl ether	34	43	46 - 114	24	40	J	J
4-Nitroaniline	64	77	36 - 125	19	40		
4-Nitrophenol	44	54	30 - 122	19	40	J	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154232

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	680-52691-1	Analysis Batch:	680-155504	Instrument ID:	GC/MS SemiVolatiles - N
Client Matrix:	Water	Prep Batch:	680-154232	Lab File ID:	n5263.d
Dilution:	1.0			Initial Weight/Volume:	500 mL
Date Analyzed:	12/08/2009 0255			Final Weight/Volume:	0.5 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

MSD Lab Sample ID:	680-52691-1	Analysis Batch:	680-155504	Instrument ID:	GC/MS SemiVolatiles - N
Client Matrix:	Water	Prep Batch:	680-154232	Lab File ID:	n5264.d
Dilution:	1.0			Initial Weight/Volume:	500 mL
Date Analyzed:	12/08/2009 0318			Final Weight/Volume:	0.5 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	22	24	45 - 117	9	40	J	J
Acenaphthylene	21	22	51 - 112	5	40	J	J
Aniline	7	4	10 - 114	39	40	J J	J J
Anthracene	51	67	52 - 116	27	40	J	
Benzo[a]anthracene	75	89	49 - 124	18	40		
Benzo[a]pyrene	74	89	48 - 120	18	40		
Benzo[b]fluoranthene	70	92	46 - 126	28	40		
Benzo[g,h,i]perylene	68	81	51 - 117	18	40		
Benzo[k]fluoranthene	73	78	47 - 126	8	40		
Benzyl alcohol	14	5	34 - 113	94	40	J	J J
Bis(2-chloroethoxy)methane	10	2	50 - 112	134	40	J	J J
Bis(2-chloroethyl)ether	4	0	43 - 110	NC	40	J J	U J
Bis(2-ethylhexyl) phthalate	67	81	47 - 134	19	40		
Chrysene	75	88	51 - 123	16	40		
Dibenz(a,h)anthracene	70	83	46 - 124	18	40		
Dibenzofuran	26	31	50 - 112	17	40	J	J
Di-n-butyl phthalate	65	80	49 - 123	20	40		
Diethyl phthalate	49	67	51 - 119	32	40	J	
Dimethyl phthalate	39	52	50 - 116	30	40	J	
Di-n-octyl phthalate	71	86	44 - 134	19	40		
Fluoranthene	72	87	50 - 120	19	40		
Fluorene	32	41	50 - 115	24	40	J	J
Hexachlorobenzene	54	71	48 - 119	28	40		
Hexachlorobutadiene	4	0	40 - 110	NC	40	J J	U J
Hexachlorocyclopentadiene	4	0	10 - 110	NC	40	J J	U J
Hexachloroethane	1	0	33 - 110	NC	40	J J	U J
Indeno[1,2,3-cd]pyrene	72	86	40 - 126	18	40		
Isophorone	12	8	50 - 111	38	40	J	J J
Naphthalene	6	0	41 - 110	NC	40	J J	U J

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154232

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	680-52691-1	Analysis Batch:	680-155504	Instrument ID:	GC/MS SemiVolatiles - N
Client Matrix:	Water	Prep Batch:	680-154232	Lab File ID:	n5263.d
Dilution:	1.0			Initial Weight/Volume:	500 mL
Date Analyzed:	12/08/2009 0255			Final Weight/Volume:	0.5 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

MSD Lab Sample ID:	680-52691-1	Analysis Batch:	680-155504	Instrument ID:	GC/MS SemiVolatiles - N
Client Matrix:	Water	Prep Batch:	680-154232	Lab File ID:	n5264.d
Dilution:	1.0			Initial Weight/Volume:	500 mL
Date Analyzed:	12/08/2009 0318			Final Weight/Volume:	0.5 mL
Date Prepared:	11/21/2009 1522			Injection Volume:	1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrobenzene	5	0	46 - 110	NC	40	J J	U J
N-Nitrosodimethylamine	0	0	33 - 110	NC	40	U J	U J
N-Nitrosodiphenylamine	44	61	47 - 119	32	40	J	
N-Nitrosodi-n-propylamine	15	13	45 - 112	15	40	J	J
Pentachlorophenol	77	96	37 - 132	22	40		
Phenanthrene	52	68	52 - 117	26	40		
Phenol	9	0	39 - 110	NC	40	J J	U J
Pyrene	70	82	52 - 125	16	40		
Butyl benzyl phthalate	69	82	52 - 135	18	40		
bis(chloroisopropyl) ether	5	0	42 - 110	NC	40	J J	U J

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
2,4,6-Tribromophenol	56		76		40 - 139
2-Fluorobiphenyl	14	J	10	J	50 - 113
2-Fluorophenol	2	J	0	J	36 - 110
Terphenyl-d14	67		81		10 - 121
Phenol-d5	8	J	0	J	38 - 116
Nitrobenzene-d5	5	J	0	J	45 - 112

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154309

Method: 8081A_8082
Preparation: 3520C

Lab Sample ID: MB 680-154309/21-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/24/2009 1748
Date Prepared: 11/23/2009 1620

Analysis Batch: 680-154668
Prep Batch: 680-154309
Units: ug/L

Instrument ID: GC SemiVolatiles - M
Lab File ID: mk24012.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Aldrin	0.0070	U	0.0070	0.050
Isodrin	0.050	U	0.050	0.050
Chlordane (technical)	0.10	U	0.10	0.50
Chlorobenzilate	0.50	U	0.50	0.50
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
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
Heptachlor	0.0070	U	0.0070	0.050
Heptachlor epoxide	0.0060	U	0.0060	0.050
alpha-BHC	0.0057	U	0.0057	0.050
beta-BHC	0.0067	U	0.0067	0.050
gamma-BHC (Lindane)	0.0059	U	0.0059	0.050
delta-BHC	0.0048	U	0.0048	0.050
Methoxychlor	0.013	U	0.013	0.10
Toxaphene	0.50	U	0.50	5.0
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

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	59	35 - 120
DCB Decachlorobiphenyl	66	14 - 115

Surrogate	% Rec		Acceptance Limits
Tetrachloro-m-xylene	53		35 - 120
DCB Decachlorobiphenyl	61	M	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154309

Method: 8081A_8082
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154309/22-A	Analysis Batch:	680-154668	Instrument ID:	GC SemiVolatiles - M
Client Matrix:	Water	Prep Batch:	680-154309	Lab File ID:	mk24013.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/24/2009 1820			Final Weight/Volume:	10 mL
Date Prepared:	11/23/2009 1620			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154309/23-A	Analysis Batch:	680-154668	Instrument ID:	GC SemiVolatiles - M
Client Matrix:	Water	Prep Batch:	680-154309	Lab File ID:	mk24014.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/24/2009 1840			Final Weight/Volume:	10 mL
Date Prepared:	11/23/2009 1620			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aldrin	79	86	32 - 114	8	40		
4,4'-DDD	69	70	37 - 179	1	40		
4,4'-DDE	69	72	33 - 142	5	40		
4,4'-DDT	91	91	27 - 141	0	40		
Dieldrin	85	89	45 - 137	4	40		
Endosulfan I	79	79	31 - 134	1	40		
Endosulfan II	78	78	24 - 144	1	40		
Endosulfan sulfate	100	99	44 - 128	1	40		
Endrin	80	84	38 - 144	4	40		
Endrin aldehyde	86	87	37 - 135	0	40		
Heptachlor	79	86	30 - 133	8	40		
Heptachlor epoxide	86	90	34 - 126	5	40		
alpha-BHC	74	82	29 - 112	10	40		
beta-BHC	75	81	15 - 204	8	40		
gamma-BHC (Lindane)	80	87	31 - 118	8	40		
delta-BHC	74	79	25 - 123	6	40		
Methoxychlor	85	81	10 - 243	5	40		

Surrogate	LCS % Rec		LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	73		80	35 - 120
DCB Decachlorobiphenyl	68	M	62	14 - 115

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	58	67	35 - 120
DCB Decachlorobiphenyl	65	59	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154309

Method: 8081A_8082
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154309/24-A	Analysis Batch:	680-154668	Instrument ID:	GC SemiVolatiles - M
Client Matrix:	Water	Prep Batch:	680-154309	Lab File ID:	mk24015.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/24/2009 1901			Final Weight/Volume:	10 mL
Date Prepared:	11/23/2009 1620			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154309/25-A	Analysis Batch:	680-154668	Instrument ID:	GC SemiVolatiles - M
Client Matrix:	Water	Prep Batch:	680-154309	Lab File ID:	mk24016.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/24/2009 1921			Final Weight/Volume:	10 mL
Date Prepared:	11/23/2009 1620			Injection Volume:	2 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	100	97	57 - 124	4	40		
PCB-1260	99	91	58 - 124	9	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	78	79	35 - 120
DCB Decachlorobiphenyl	63	64	14 - 115

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	62	64	35 - 120
DCB Decachlorobiphenyl	60	61	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154741

Method: 8081A_8082
Preparation: 3520C

Lab Sample ID: MB 680-154741/21-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/30/2009 1842
Date Prepared: 11/27/2009 1214

Analysis Batch: 680-154950
Prep Batch: 680-154741
Units: ug/L

Instrument ID: GC SemiVolatiles - J
Lab File ID: jk30014.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Aldrin	0.0070	U	0.0070	0.050
Isodrin	0.050	U	0.050	0.050
Chlordane (technical)	0.10	U	0.10	0.50
Chlorobenzilate	0.50	U	0.50	0.50
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
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
Heptachlor	0.0070	U	0.0070	0.050
Heptachlor epoxide	0.0060	U	0.0060	0.050
alpha-BHC	0.0057	U	0.0057	0.050
beta-BHC	0.0067	U	0.0067	0.050
gamma-BHC (Lindane)	0.0059	U	0.0059	0.050
delta-BHC	0.0048	U	0.0048	0.050
Methoxychlor	0.013	U	0.013	0.10
Toxaphene	0.50	U	0.50	5.0
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

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

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	67	35 - 120
DCB Decachlorobiphenyl	58	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154741

Method: 8081A_8082
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154741/22-A	Analysis Batch:	680-154950	Instrument ID:	GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch:	680-154741	Lab File ID:	jk30015.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/30/2009 1905			Final Weight/Volume:	10 mL
Date Prepared:	11/27/2009 1214			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154741/23-A	Analysis Batch:	680-154950	Instrument ID:	GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch:	680-154741	Lab File ID:	jk30016.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/30/2009 1928			Final Weight/Volume:	10 mL
Date Prepared:	11/27/2009 1214			Injection Volume:	2 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aldrin	73	70	32 - 114	5	40		
4,4'-DDD	61	59	37 - 179	3	40		
4,4'-DDE	62	61	33 - 142	2	40		
4,4'-DDT	87	82	27 - 141	6	40		
Dieldrin	78	75	45 - 137	4	40		
Endosulfan I	76	72	31 - 134	5	40		
Endosulfan II	67	64	24 - 144	5	40		
Endosulfan sulfate	71	69	44 - 128	2	40		
Endrin	77	76	38 - 144	1	40	M	M
Endrin aldehyde	92	88	37 - 135	4	40		
Heptachlor	95	89	30 - 133	6	40		
Heptachlor epoxide	80	77	34 - 126	3	40		
alpha-BHC	80	76	29 - 112	5	40		
beta-BHC	72	70	15 - 204	2	40	J	J
gamma-BHC (Lindane)	80	75	31 - 118	6	40		
delta-BHC	73	70	25 - 123	4	40		
Methoxychlor	80	77	10 - 243	4	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	81	77	35 - 120
DCB Decachlorobiphenyl	62	62	14 - 115

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	75	72	35 - 120
DCB Decachlorobiphenyl	57	55	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154741

Method: 8081A_8082
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154741/24-A	Analysis Batch:	680-154950	Instrument ID:	GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch:	680-154741	Lab File ID:	jk30017.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/30/2009 1951			Final Weight/Volume:	10 mL
Date Prepared:	11/27/2009 1214			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154741/25-A	Analysis Batch:	680-154950	Instrument ID:	GC SemiVolatiles - J
Client Matrix:	Water	Prep Batch:	680-154741	Lab File ID:	jk30018.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/30/2009 2014			Final Weight/Volume:	10 mL
Date Prepared:	11/27/2009 1214			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	96	88	57 - 124	9	40		
PCB-1260	93	84	58 - 124	10	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	77	75	35 - 120
DCB Decachlorobiphenyl	77	60	14 - 115

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	70	66	35 - 120
DCB Decachlorobiphenyl	66	52	14 - 115

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154309

Method: 8141A
Preparation: 3520C

Lab Sample ID: MB 680-154309/21-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/26/2009 0004
Date Prepared: 11/23/2009 1620

Analysis Batch: 680-154767
Prep Batch: 680-154309
Units: ug/L

Instrument ID: GC SemiVolatiles - O
Lab File ID: ok25028.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
Merphos	0.75	U	0.75	1.5
Methyl parathion	0.25	U	0.25	0.50
Mevinphos	1.0	U	1.0	2.0
Ethoprop	0.25	U	0.25	0.50
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

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	95	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154309

Method: 8141A
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154309/26-A	Analysis Batch:	680-154767	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154309	Lab File ID:	ok25029.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/26/2009 0029			Final Weight/Volume:	10 mL
Date Prepared:	11/23/2009 1620			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154309/27-A	Analysis Batch:	680-154767	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154309	Lab File ID:	ok25030.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/26/2009 0053			Final Weight/Volume:	10 mL
Date Prepared:	11/23/2009 1620			Injection Volume:	2 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diazinon	86	103	53 - 138	18	40		
Methyl parathion	81	91	31 - 130	11	40		
Ronnel	103	102	46 - 142	1	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Triphenylphosphate	98	114	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154309

Method: 8141A
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154309/28-A	Analysis Batch:	680-154767	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154309	Lab File ID:	ok25031.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/26/2009 0118			Final Weight/Volume:	10 mL
Date Prepared:	11/23/2009 1620			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154309/29-A	Analysis Batch:	680-154767	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154309	Lab File ID:	ok25032.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/26/2009 0143			Final Weight/Volume:	10 mL
Date Prepared:	11/23/2009 1620			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ethyl Parathion	99	105	45 - 132	5	40		
Thionazin	100	97	37 - 134	3	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Triphenylphosphate	117	100	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154741

Method: 8141A
Preparation: 3520C

Lab Sample ID: MB 680-154741/21-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/30/2009 2026
Date Prepared: 11/27/2009 1214

Analysis Batch: 680-154919
Prep Batch: 680-154741
Units: ug/L

Instrument ID: GC SemiVolatiles - O
Lab File ID: ok30009.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
Merphos	0.75	U	0.75	1.5
Methyl parathion	0.25	U	0.25	0.50
Mevinphos	1.0	U	1.0	2.0
Ethoprop	0.25	U	0.25	0.50
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

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	93	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154741

Method: 8141A
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154741/28-A	Analysis Batch:	680-154919	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154741	Lab File ID:	ok30010.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/30/2009 2051			Final Weight/Volume:	10 mL
Date Prepared:	11/27/2009 1214			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154741/29-A	Analysis Batch:	680-154919	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154741	Lab File ID:	ok30011.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/30/2009 2116			Final Weight/Volume:	10 mL
Date Prepared:	11/27/2009 1214			Injection Volume:	2 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diazinon	76	90	53 - 138	17	40		
Methyl parathion	49	70	31 - 130	36	40		
Ronnel	79	102	46 - 142	25	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Triphenylphosphate	76	106	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-154741

Method: 8141A
Preparation: 3520C

LCS Lab Sample ID:	LCS 680-154741/30-A	Analysis Batch:	680-154919	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154741	Lab File ID:	ok30012.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/30/2009 2141			Final Weight/Volume:	10 mL
Date Prepared:	11/27/2009 1214			Injection Volume:	2 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-154741/31-A	Analysis Batch:	680-154919	Instrument ID:	GC SemiVolatiles - O
Client Matrix:	Water	Prep Batch:	680-154741	Lab File ID:	ok30013.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	11/30/2009 2206			Final Weight/Volume:	10 mL
Date Prepared:	11/27/2009 1214			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ethyl Parathion	96	77	45 - 132	21	40		
Thionazin	82	69	37 - 134	17	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Triphenylphosphate	94	80	26 - 134

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-153719

Method: 6020
Preparation: 3030C

Lab Sample ID: MB 680-153719/11-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 0415
Date Prepared: 11/17/2009 1250

Analysis Batch: 680-154028
Prep Batch: 680-153719
Units: ug/L

Instrument ID: ICP MS - A
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

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	0.20	U	0.20	2.0
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

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Lab Control Sample - Batch: 680-153719

Method: 6020
Preparation: 3030C

Lab Sample ID: LCS 680-153719/12-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 0422
Date Prepared: 11/17/2009 1250

Analysis Batch: 680-154028
Prep Batch: 680-153719
Units: ug/L

Instrument ID: ICP MS - A
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	10.0	9.97	100	75 - 125	
Arsenic	20.0	20.3	102	75 - 125	
Barium	20.0	19.3	96	75 - 125	
Beryllium	10.0	9.92	99	75 - 125	
Cadmium	10.0	10.2	102	75 - 125	
Chromium	20.0	19.0	95	75 - 125	
Cobalt	10.0	9.15	92	75 - 125	
Copper	20.0	19.6	98	75 - 125	
Lead	10.0	9.84	98	75 - 125	
Nickel	20.0	20.0	100	75 - 125	
Selenium	20.0	21.5	108	75 - 125	
Silver	10.0	9.60	96	75 - 125	
Thallium	8.00	7.70	96	75 - 125	
Tin	20.0	18.1	90	75 - 125	
Vanadium	20.0	19.5	98	75 - 125	
Zinc	20.0	23.8	119	75 - 125	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-153719

Method: 6020
Preparation: 3030C

MS Lab Sample ID:	680-52691-1	Analysis Batch:	680-154028	Instrument ID:	ICP MS - A
Client Matrix:	Water	Prep Batch:	680-153719	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/19/2009 0449			Final Weight/Volume:	50 mL
Date Prepared:	11/17/2009 1250				

MSD Lab Sample ID:	680-52691-1	Analysis Batch:	680-154028	Instrument ID:	ICP MS - A
Client Matrix:	Water	Prep Batch:	680-153719	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	11/19/2009 0455			Final Weight/Volume:	50 mL
Date Prepared:	11/17/2009 1250				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	99	97	75 - 125	3	20		
Arsenic	99	96	75 - 125	3	20		
Barium	97	95	75 - 125	2	20		
Beryllium	99	97	75 - 125	2	20		
Cadmium	102	100	75 - 125	2	20		
Chromium	92	90	75 - 125	2	20		
Cobalt	89	87	75 - 125	2	20		
Copper	94	92	75 - 125	2	20		
Lead	97	96	75 - 125	1	20		
Nickel	93	93	75 - 125	0	20		
Selenium	100	102	75 - 125	2	20		
Silver	95	93	75 - 125	3	20		
Thallium	95	95	75 - 125	0	20		
Tin	90	89	75 - 125	0	20		
Vanadium	95	93	75 - 125	2	20		
Zinc	102	126	75 - 125	18	20		J

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154099

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 680-154099/21-A	Analysis Batch:	680-154464	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-154099	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1508			Final Weight/Volume:	50 mL
Date Prepared:	11/20/2009 0958				

Analyte	Result	Qual	MDL	RL
Mercury	0.091	U	0.091	0.20

Lab Control Sample - Batch: 680-154099

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 680-154099/22-A	Analysis Batch:	680-154464	Instrument ID:	LEEMAN1
Client Matrix:	Water	Prep Batch:	680-154099	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	11/23/2009 1511			Final Weight/Volume:	50 mL
Date Prepared:	11/20/2009 0958				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.46	98	80 - 120	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-153812

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 680-153812/2
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 11/17/2009 1233
Date Prepared: N/A

Analysis Batch: 680-153812
Prep Batch: N/A
Units: mg/L

Instrument ID: ICCS200 - G
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: 680-153812

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 680-153812/3
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 11/17/2009 1246
Date Prepared: N/A

Analysis Batch: 680-153812
Prep Batch: N/A
Units: mg/L

Instrument ID: ICCS200 - G
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	9.99	90	90 - 110	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-154329

Method: 335.4
Preparation: Distill/CN

Lab Sample ID: MB 680-154329/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/24/2009 1054
Date Prepared: 11/23/2009 1250

Analysis Batch: 680-154463
Prep Batch: 680-154329
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

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

Lab Control Sample - Batch: 680-154329

Method: 335.4
Preparation: Distill/CN

Lab Sample ID: LCS 680-154329/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/24/2009 1054
Date Prepared: 11/23/2009 1250

Analysis Batch: 680-154463
Prep Batch: 680-154329
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.0301	0.0285	95	90 - 110	

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

Client: U.S. Army Corps of Engineers

Job Number: 680-52691-1

Method Blank - Batch: 680-153977

Method: 9034
Preparation: 9030B

Lab Sample ID: MB 680-153977/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1735
Date Prepared: 11/19/2009 1035

Analysis Batch: 680-154071
Prep Batch: 680-153977
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 250 mL

Analyte	Result	Qual	RL	RL
Sulfide	1.0	U	1.0	1.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-153977

Method: 9034
Preparation: 9030B

LCS Lab Sample ID: LCS 680-153977/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1735
Date Prepared: 11/19/2009 1035

Analysis Batch: 680-154071
Prep Batch: 680-153977
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 250 mL

LCSD Lab Sample ID: LCSD 680-153977/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/19/2009 1735
Date Prepared: 11/19/2009 1035

Analysis Batch: 680-154071
Prep Batch: 680-153977
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 250 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Sulfide	85	82	50 - 150	4	50		

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

Serial Number 020635

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
Fort Bragg Longstreet		
TAL (LAB) PROJECT MANAGER: Terry Horsby	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Kevin Hobonk	CLIENT PHONE: 912 652 6083	CLIENT FAX
CLIENT NAME: USACE	CLIENT E-MAIL	
CLIENT ADDRESS: 100 W. Oglethorpe Avenue Savannah GA 31402		
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	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	8260 VOC (Ice)	Pest/Herbs (Ice)	PCB (Ice)	8141 (Ice)	SVOC 8270 (Ice)	Cyanides (NaOH)	Phenols (H2SO4)	Sulfide (NaOH/Zn Acetate)	Nitrate (Ice)	REMARKS
11/16/2009	0800	GW-LSMW-13-11-09	G	A				3	1	1	2	2	1	1	1	1	
11/16/2009	0930	GW-LSMW-09-11-09	G	A				3	1	1	2	2	1	1	1	1	Oil Sheen on H2O yellow
11/16/2009	1115	GW-LSMW-DUP2	G	A				3	1	1	2	2	1	1	1	1	
11/16/2009	1730	GW-Blank-11-09	G	A				3	1	1	2	2	1	1	1	1	
		Trip Blank		A				2									

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	11/16/09	1815	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]	11/17/09	0956	YES ◯ NO ◯		680-52641	3.6/2.0/3.4/3.8

TAL8240-680 (1207)

APPENDIX D

STATISTICAL REPORTS
(Electronic Only)

Statistical Analysis of Ground-Water Data
Longstreet Road MSW Landfill
Fort Bragg, North Carolina
Rounds N1 through N26

EXECUTIVE SUMMARY

Fort Bragg authorized the U.S. Army Corps of Engineers, Savannah District to perform required sampling of the Longstreet Road Municipal Solid Waste (MSW) Landfill. Sampling activities for the twenty-sixth round of sampling (N=26) were conducted November, 2009. 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.

The samples collected at the Longstreet Road Municipal Solid Waste Landfill did not exhibit any evidence of SSIs in the analytical results.

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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Attachment A: ..... Statistical Calculations

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=26) were conducted November, 2009. 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-11	**Active - Compliance Monitoring Well**
MW-12A	**Active - Compliance Monitoring Well**
MW-12B	**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.

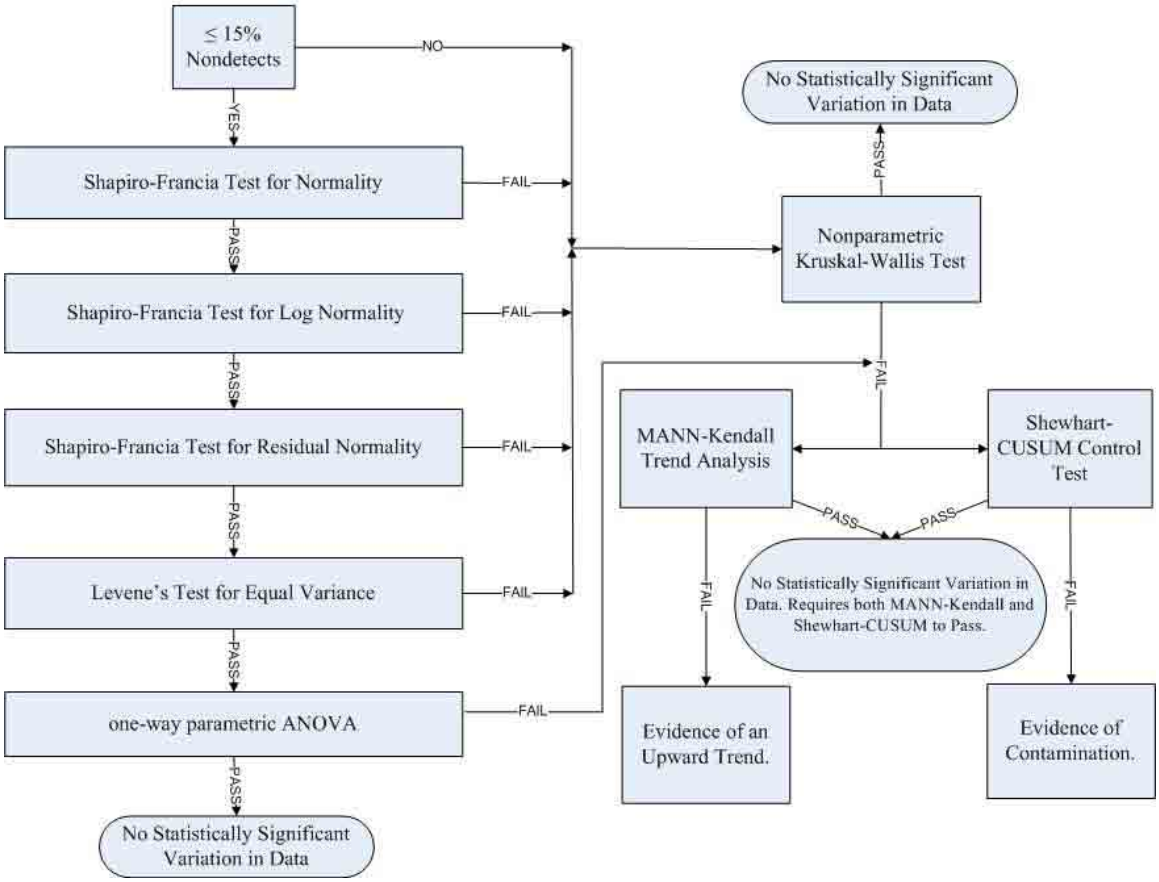
In this case, the Kruskal-Wallis Test performs post-hoc comparisons between background and compliance well data to determine which wells, if any, show evidence of contamination. If the difference between the average ranks and the mean background rank of any individual well exceeds the critical difference 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, 2009. 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 either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The data for MW-8, MW-9, MW-10, MW-11R, and MW-12AR are not considered to be SSIs.

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 benzene data using the Kruskal-Wallis test indicated a possible SSI in monitoring wells MW-8, MW-9 and MW-11R. The possible SSIs were not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The data for MW-8, MW-9, and MW-11R are not considered to be 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 dichlorodifluoromethane data using the Kruskal-Wallis test indicated a possible SSI in monitoring well MW-11R. The possible SSI was not confirmed by either the Mann-Kendall Trend Analysis or the Shewhart-CUSUM Control Chart. The fluctuations in the dichlorodifluoromethane data in monitoring well MW-11R 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 trans-1,2,-dichloroethene 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 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.

Analysis of the vanadium 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 vinyl chloride 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 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.

6.0 CONCLUSIONS

The samples collected at the Longstreet Road Municipal Solid Waste Landfill did not exhibit any evidence of SSIs in the analytical results.

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: 198
Total Non-Detect: 106
Percent Non-Detects: 53.5354%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-9	25	11 (44%)	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

MW-6	25	25 (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	
MW-11R	26	7 (26.9231%)	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	
			11/15/2009	0.42 J	0.42 J	
MW-8	25	6 (24%)	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	
MW-10	26	8 (30.7692%)	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	
			11/15/2009	1.1	1.1	
MW-12AR	16	5 (31.25%)	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	
			11/15/2009	0.35 J	0.35 J	

MW-12BR		15	12 (80%)	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	
MW-7	25	17 (68%)	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	

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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.125	-2.5758	36.63492	-0.321979
2	0.125	-2.3263	41.2.0468	-0.612772
3	0.125	-2.1700	91.6.7561	-0.884033
4	0.125	-2.0537	52.0.974	-1.14075
5	0.125	-1.9599	62.4.8154	-1.38575
6	0.35	-1.8807	92.8.3528	-2.04402
7	0.42	-1.8119	13.1.6358	-2.80503
8	0.47	-1.7506	93.4.7007	-3.62785
9	0.56	-1.6954	37.5751	-4.57727
10	0.62	-1.6448	54.0.2806	-5.59708
11	0.8	-1.5981	94.2.8348	-6.87563
12	0.83	-1.5547	74.5.2522	-8.1661
13	0.84	-1.5141	47.5447	-9.43794
14	0.84	-1.4757	94.9.7226	-10.6776
15	0.92	-1.4395	35.1.7949	-12.002
16	0.97	-1.4050	75.3.7691	-13.3649
17	1	-1.3722	55.6521	-14.7371
18	1	-1.3407	55.7.4497	-16.0779
19	1	-1.3105	85.9.1673	-17.3884
20	1	-1.2815	56.0.8097	-18.67
21	1	-1.2535	76.2.3811	-19.9236
22	1	-1.2265	36.3.8855	-21.1501
23	1	-1.2003	66.5.3263	-22.3504
24	1	-1.1749	96.6.7069	-23.5254
25	1	-1.1503	56.8.0302	-24.6758
26	1	-1.1263	96.9.299	-25.8022
27	1	-1.1030	67.0.5157	-26.9052
28	1	-1.0803	27.1.6828	-27.9856
29	1	-1.0581	27.2.8025	-29.0437
30	1	-1.0364	37.3.8766	-30.0801
31	1	-1.0152	27.4.9073	-31.0953
32	1	-0.994457	75.8963	-32.0898
33	1	-0.974114	76.8452	-33.0639
34	1	-0.954165	77.7556	-34.0181
35	1	-0.934	597	8.6291 -34.9527
36	1	-0.915365	79.4669	-35.868
37	1	-0.896473	80.2706	-36.7645
38	1	-0.877897	81.0413	-37.6424
39	1	-0.859618	81.7803	-38.502
40	1	-0.838054	82.4826	-39.3401
41	1	-0.820379	83.1556	-40.1604
42	1	-0.802956	83.8004	-40.9634
43	1	-0.785774	84.4178	-41.7492
44	1	-0.768821	85.0089	-42.518
45	1	-0.752084	85.5745	-43.2701
46	1	-0.735557	86.1156	-44.0056
47	1	-0.719228	86.6328	-44.7249
48	1	-0.703089	87.1272	-45.428
49	1	-0.687131	87.5993	-46.1151

50	1	-0.671346	88.05	-46.7864
51	1	-0.655726	88.48	-47.4422
52	1	-0.640266	88.89	-48.0824
53	1	-0.624956	89.2805	-48.7074
54	1	-0.609791	89.6524	-49.3172
55	1	-0.594766	90.0061	-49.9119
56	1	-0.579873	90.3424	-50.4918
57	1	-0.565108	90.6617	-51.0569
58	1	-0.550465	90.9647	-51.6074
59	1	-0.5359491.252	-52.1433	
60	1	-0.521527	91.5239	-52.6648
61	1	-0.507221	91.7812	-53.1721
62	1	-0.493018	92.0243	-53.6651
63	1	-0.478914	92.2536	-54.144
64	1	-0.464904	92.4698	-54.6089
65	1	-0.450985	92.6732	-55.0599
66	1	-0.437153	92.8643	-55.497
67	1	-0.423405	93.0435	-55.9204
68	1	-0.409735	93.2114	-56.3302
69	1	-0.396142	93.3684	-56.7263
70	1	-0.382622	93.5148	-57.1089
71	1	-0.369171	93.651	-57.4781
72	1	-0.355788	93.7776	-57.8339
73	1	-0.342466	93.8949	-58.1764
74	1	-0.329206	94.0033	-58.5056
75	1	-0.316004	94.1031	-58.8216
76	1	-0.302855	94.1949	-59.1244
77	1	-0.2897694.2788	-59.4142	
78	1	-0.276714	94.3554	-59.6909
79	1	-0.263715	94.4249	-59.9546
80	1	-0.248174	94.4865	-60.2028
81	1	-0.235269	94.5419	-60.4381
82	1	-0.222403	94.5913	-60.6605
83	1	-0.209575	94.6353	-60.87
84	1	-0.196779	94.674	-61.0668
85	1	-0.184017	94.7079	-61.2508
86	1	-0.171285	94.7372	-61.4221
87	1	-0.158579	94.7623	-61.5807
88	1	-0.1459 94.7836	-61.7266	
89	1	-0.133244	94.8014	-61.8599
90	1	-0.1206194.8159	-61.9805	
91	1	-0.107995	94.8276	-62.0885
92	1	-0.0953969	94.8367	-62.1839
93	1	-0.0828129	94.8435	-62.2667
94	1	-0.0702426	94.8485	-62.3369
95	1	-0.0576847	94.8518	-62.3946
96	1	-0.0451348	94.8538	-62.4397
97	1	-0.0325917	94.8549	-62.4723
98	1	-0.0200544	94.8553	-62.4924
99	1	-0.00751925	94.8554	-62.4999
100	1	0.00751925	94.8554	-62.4924
101	1	0.0200544	94.8558	-62.4723
102	1	0.0325917	94.8569	-62.4397
103	1	0.0451348	94.8589	-62.3946
104	1	0.0576847	94.8623	-62.3369
105	1	0.0702426	94.8672	-62.2667
106	1	0.0828129	94.874	-62.1839
107	1	0.0953969	94.8831	-62.0885
108	1	0.107995	94.8948	-61.9805
109	1	0.12061 94.9094	-61.8599	
110	1	0.133244	94.9271	-61.7266
111	1	0.1459 94.9484	-61.5807	

112	1	0.158579	94.9735	-61.4221
113	1	0.171285	95.0029	-61.2508
114	1	0.184017	95.0367	-61.0668
115	1	0.196779	95.0755	-60.87
116	1	0.209575	95.1194	-60.6605
117	1	0.222403	95.1689	-60.4381
118	1	0.235269	95.2242	-60.2028
119	1	0.248174	95.2858	-59.9546
120	1.1	0.263715	95.3553	-59.6645
121	1.1	0.276714	95.4319	-59.3602
122	1.12	0.28976	95.5159	-59.0356
123	1.15	0.302855	95.6076	-58.6873
124	1.21	0.316004	95.7075	-58.305
125	1.25	0.329206	95.8158	-57.8935
126	1.25	0.342466	95.9331	-57.4654
127	1.26	0.355788	96.0597	-57.0171
128	1.35	0.369171	96.196	-56.5187
129	1.38	0.382622	96.3424	-55.9907
130	1.39	0.396142	96.4993	-55.4401
131	1.6	0.409735	96.6672	-54.7845
132	1.6	0.423405	96.8465	-54.107
133	1.68	0.437153	97.0376	-53.3726
134	1.91	0.450985	97.241	-52.5112
135	1.91	0.464904	97.4571	-51.6233
136	2	0.478914	97.6865	-50.6654
137	2	0.493018	97.9295	-49.6794
138	2.04	0.507221	98.1868	-48.6447
139	2.07	0.521527	98.4588	-47.5651
140	2.11	0.53594	98.746	-46.4343
141	2.18	0.550465	99.049	-45.2343
142	2.6	0.565108	99.3684	-43.765
143	2.86	0.579873	99.7046	-42.1065
144	2.9	0.594766	100.058	-40.3817
145	2.99	0.609791	100.43	-38.5584
146	3	0.624956	100.821	-36.6836
147	3.08	0.640266	101.231	-34.7116
148	3.11	0.655726	101.661	-32.6722
149	3.17	0.671346	102.111	-30.5441
150	3.24	0.687131	102.584	-28.3178
151	3.43	0.703089	103.078	-25.9062
152	3.5	0.719228	103.595	-23.3889
153	3.5	0.735557	104.136	-20.8144
154	3.6	0.752084	104.702	-18.1069
155	3.86	0.768821	105.293	-15.1393
156	4.05	0.785774	105.91	-11.9569
157	4.11	0.802956	106.555	-8.65675
158	4.25	0.820379	107.228	-5.17014
159	4.43	0.838054	107.93	-1.45756
160	4.7	0.859618	108.669	2.58265
161	5	0.877897	109.44	6.97213
162	5.1	0.896473	110.244	11.5441
163	5.2	0.915365	111.082	16.304
164	5.3	0.93459	111.955	21.2574
165	5.5	0.954165	112.866	26.5053
166	5.7	0.974114	113.814	32.0577
167	5.8	0.994457	114.803	37.8256
168	5.9	1.01522	115.834	43.8154
169	6	1.03643	116.908	50.034
170	6.1	1.05812	118.028	56.4885
171	6.3	1.08032	119.195	63.2945
172	6.9	1.10306	120.412	70.9057
173	7	1.12639	121.68	78.7904

174	7.2	1.15035	123.004	87.0729
175	7.3	1.17499	124.384	95.6503
176	7.6	1.20036	125.825	104.773
177	8.4	1.22653	127.33	115.076
178	8.5	1.25357	128.901	125.731
179	9	1.28155	130.543	137.265
180	9.9	1.31058	132.261	150.24
181	10.8	1.34075	134.059	164.72
182	11	1.3722	135.942	179.814
183	12	1.40507	137.916	196.675
184	12	1.43953	139.988	213.95
185	12	1.47579	142.166	231.659
186	13	1.5141	144.459	251.342
187	14	1.55477	146.876	273.109
188	16	1.59819	149.43	298.68
189	16.2	1.64485	152.136	325.327
190	16.3	1.6954	155.01	352.962
191	18	1.75069	158.075	384.474
192	19	1.81191	161.358	418.901
193	19	1.88079	164.895	454.636
194	19	1.95996	168.737	491.875
195	21	2.05375	172.955	535.004
196	22	2.17009	177.664	582.746
197	22	2.32634	183.076	633.925
198	28	2.57583	189.711	706.048

Data Set Standard Deviation = 4.85265
Numerator = 498504
Denominator = 880069
W Statistic = 0.566438 = 498504 / 880069

5% Critical value of 0.976 exceeds 0.566438
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.566438
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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.07944	-2.57583	6.63492	5.3563
2	-2.07944	-2.32634	12.0468	10.1938
3	-2.07944	-2.17009	16.7561	14.7064
4	-2.07944	-2.05375	20.974	18.977
5	-2.07944	-1.95996	24.8154	23.0526
6	-1.04982	-1.88079	28.3528	25.0271
7	-0.867501	-1.81191	31.6358	26.599
8	-0.755023	-1.75069	34.7007	27.9208
9	-0.579818	-1.6954	37.5751	28.9038
10	-0.478036	-1.64485	40.2806	29.6901
11	-0.223144	-1.59819	42.8348	30.0467
12	-0.18633	-1.55477	45.2522	30.3364
13	-0.174353	-1.5141	47.5447	30.6004
14	-0.174353	-1.47579	49.7226	30.8577
15	-0.0833816	-1.43953	51.7949	30.9778
16	-0.0304592	-1.40507	53.7691	31.0206
17	0	-1.3722	55.6521	31.0206
18	0	-1.34075	57.4497	31.0206
19	0	-1.31058	59.1673	31.0206
20	0	-1.28155	60.8097	31.0206
21	0	-1.25357	62.3811	31.0206
22	0	-1.22653	63.8855	31.0206
23	0	-1.20036	65.3263	31.0206
24	0	-1.17499	66.7069	31.0206
25	0	-1.15035	68.0302	31.0206
26	0	-1.12639	69.299	31.0206
27	0	-1.10306	70.5157	31.0206
28	0	-1.08032	71.6828	31.0206
29	0	-1.05812	72.8025	31.0206
30	0	-1.03643	73.8766	31.0206
31	0	-1.01522	74.9073	31.0206
32	0	-0.994457	75.8963	31.0206
33	0	-0.974114	76.8452	31.0206
34	0	-0.954165	77.7556	31.0206
35	0	-0.93459	78.6291	31.0206
36	0	-0.915365	79.4669	31.0206
37	0	-0.896473	80.2706	31.0206
38	0	-0.877897	81.0413	31.0206
39	0	-0.859618	81.7803	31.0206
40	0	-0.838054	82.4826	31.0206
41	0	-0.820379	83.1556	31.0206
42	0	-0.802956	83.8004	31.0206
43	0	-0.785774	84.4178	31.0206
44	0	-0.768821	85.0089	31.0206
45	0	-0.752084	85.5745	31.0206
46	0	-0.735557	86.1156	31.0206
47	0	-0.719228	86.6328	31.0206
48	0	-0.703089	87.1272	31.0206
49	0	-0.687131	87.5993	31.0206

50	0	-0.671346	88.05	31.0206
51	0	-0.655726	88.48	31.0206
52	0	-0.640266	88.89	31.0206
53	0	-0.624956	89.2805	31.0206
54	0	-0.609791	89.6524	31.0206
55	0	-0.594766	90.0061	31.0206
56	0	-0.579873	90.3424	31.0206
57	0	-0.565108	90.6617	31.0206
58	0	-0.550465	90.9647	31.0206
59	0	-0.5359491.252	31.0206	
60	0	-0.521527	91.5239	31.0206
61	0	-0.507221	91.7812	31.0206
62	0	-0.493018	92.0243	31.0206
63	0	-0.478914	92.2536	31.0206
64	0	-0.464904	92.4698	31.0206
65	0	-0.450985	92.6732	31.0206
66	0	-0.437153	92.8643	31.0206
67	0	-0.423405	93.0435	31.0206
68	0	-0.409735	93.2114	31.0206
69	0	-0.396142	93.3684	31.0206
70	0	-0.382622	93.5148	31.0206
71	0	-0.369171	93.651	31.0206
72	0	-0.355788	93.7776	31.0206
73	0	-0.342466	93.8949	31.0206
74	0	-0.329206	94.0033	31.0206
75	0	-0.316004	94.1031	31.0206
76	0	-0.302855	94.1949	31.0206
77	0	-0.2897694.2788	31.0206	
78	0	-0.276714	94.3554	31.0206
79	0	-0.263715	94.4249	31.0206
80	0	-0.248174	94.4865	31.0206
81	0	-0.235269	94.5419	31.0206
82	0	-0.222403	94.5913	31.0206
83	0	-0.209575	94.6353	31.0206
84	0	-0.196779	94.674	31.0206
85	0	-0.184017	94.7079	31.0206
86	0	-0.171285	94.7372	31.0206
87	0	-0.158579	94.7623	31.0206
88	0	-0.1459 94.7836	31.0206	
89	0	-0.133244	94.8014	31.0206
90	0	-0.1206194.8159	31.0206	
91	0	-0.107995	94.8276	31.0206
92	0	-0.0953969	94.8367	31.0206
93	0	-0.0828129	94.8435	31.0206
94	0	-0.0702426	94.8485	31.0206
95	0	-0.0576847	94.8518	31.0206
96	0	-0.0451348	94.8538	31.0206
97	0	-0.0325917	94.8549	31.0206
98	0	-0.0200544	94.8553	31.0206
99	0	-0.00751925	94.8554	31.0206
100	0	0.00751925	94.8554	31.0206
101	0	0.0200544	94.8558	31.0206
102	0	0.0325917	94.8569	31.0206
103	0	0.0451348	94.8589	31.0206
104	0	0.0576847	94.8623	31.0206
105	0	0.0702426	94.8672	31.0206
106	0	0.0828129	94.874	31.0206
107	0	0.0953969	94.8831	31.0206
108	0	0.107995	94.8948	31.0206
109	0	0.12061 94.9094	31.0206	
110	0	0.133244	94.9271	31.0206
111	0	0.1459 94.9484	31.0206	

112	0	0.158579		94.9735	31.0206
113	0	0.171285		95.0029	31.0206
114	0	0.184017		95.0367	31.0206
115	0	0.196779		95.0755	31.0206
116	0	0.209575		95.1194	31.0206
117	0	0.222403		95.1689	31.0206
118	0	0.235269		95.2242	31.0206
119	0	0.248174		95.2858	31.0206
120	0.0953102		0.263715	95.3553	31.0457
121	0.0953102		0.276714	95.4319	31.0721
122	0.113329		0.28976	95.5159	31.1049
123	0.139762		0.302855	95.6076	31.1472
124	0.19062	0.316004		95.7075	31.2075
125	0.223144		0.329206	95.8158	31.2809
126	0.223144		0.342466	95.9331	31.3573
127	0.231112		0.355788	96.0597	31.4396
128	0.300105		0.369171	96.196	31.5504
129	0.322083		0.382622	96.3424	31.6736
130	0.329304		0.396142	96.4993	31.804
131	0.470004		0.409735	96.6672	31.9966
132	0.470004		0.423405	96.8465	32.1956
133	0.518794		0.437153	97.0376	32.4224
134	0.647103		0.450985	97.241	32.7143
135	0.647103		0.464904	97.4571	33.0151
136	0.693147		0.478914	97.6865	33.3471
137	0.693147		0.493018	97.9295	33.6888
138	0.71295	0.507221		98.1868	34.0504
139	0.727549		0.521527	98.4588	34.4298
140	0.746688		0.53594	98.746	34.83
141	0.779325		0.550465	99.049	35.259
142	0.955511		0.565108	99.3684	35.799
143	1.05082	0.579873		99.7046	36.4083
144	1.06471	0.594766		100.058	37.0416
145	1.09527	0.609791		100.43	37.7095
146	1.09861	0.624956		100.821	38.3961
147	1.12493	0.640266		101.231	39.1163
148	1.13462	0.655726		101.661	39.8603
149	1.15373	0.671346		102.111	40.6349
150	1.17557	0.687131		102.584	41.4426
151	1.23256	0.703089		103.078	42.3092
152	1.25276	0.719228		103.595	43.2103
153	1.25276	0.735557		104.136	44.1317
154	1.28093	0.752084		104.702	45.0951
155	1.35067	0.768821		105.293	46.1335
156	1.39872	0.785774		105.91	47.2326
157	1.41342	0.802956		106.555	48.3675
158	1.44692	0.820379		107.228	49.5545
159	1.4884	0.838054		107.93	50.8019
160	1.54756	0.859618		108.669	52.1322
161	1.60944	0.877897		109.44	53.5451
162	1.62924	0.896473		110.244	55.0057
163	1.64866	0.915365		111.082	56.5148
164	1.66771	0.93459	111.955	58.0734	
165	1.70475	0.954165		112.866	59.7001
166	1.74047	0.974114		113.814	61.3955
167	1.75786	0.994457		114.803	63.1436
168	1.77495	1.01522	115.834	64.9456	
169	1.79176	1.03643	116.908	66.8026	
170	1.80829	1.05812	118.028	68.716	
171	1.84055	1.08032	119.195	70.7044	
172	1.93152	1.10306	120.412	72.835	
173	1.94591	1.12639	121.68	75.0268	

174	1.97408	1.15035	123.004	77.2977
175	1.98787	1.17499	124.384	79.6334
176	2.02815	1.20036	125.825	82.0679
177	2.12823	1.22653	127.33	84.6783
178	2.14007	1.25357	128.901	87.361
179	2.19722	1.28155	130.543	90.1768
180	2.29253	1.31058	132.261	93.1814
181	2.37955	1.34075	134.059	96.3718
182	2.3979	1.3722	135.942	99.6622
183	2.48491	1.40507	137.916	103.154
184	2.48491	1.43953	139.988	106.731
185	2.48491	1.47579	142.166	110.398
186	2.56495	1.5141	144.459	114.282
187	2.63906	1.55477	146.876	118.385
188	2.77259	1.59819	149.43	122.816
189	2.78501	1.64485	152.136	127.397
190	2.79117	1.6954	155.01	132.129
191	2.89037	1.75069	158.075	137.189
192	2.94444	1.81191	161.358	142.524
193	2.94444	1.88079	164.895	148.062
194	2.94444	1.95996	168.737	153.833
195	3.04452	2.05375	172.955	160.086
196	3.09104	2.17009	177.664	166.793
197	3.09104	2.32634	183.076	173.984
198	3.3322	2.57583	189.711	182.568

Data Set Standard Deviation = 1.04558
Numerator = 33330.9
Denominator = 40857.8
W Statistic = 0.815778 = 33330.9 / 40857.8

5% Critical value of 0.976 exceeds 0.815778
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.815778
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	53.5
	9/23/1999	ND<0	53.5
	3/15/2000	ND<0	53.5
	9/24/2003	ND<0	53.5
	3/11/2004	ND<0	53.5
	10/12/2004	ND<0	53.5
	4/1/2005	ND<0	53.5
	10/25/2005	ND<0	53.5
	4/29/2006	ND<0	53.5
	11/18/2006	ND<0	53.5
	5/23/2007	ND<0	53.5
	11/28/2007	ND<0	53.5
	6/5/2008	ND<0	53.5
	11/20/2008	ND<0	53.5
	6/11/2009	ND<-2.07944	53.5

Rank Sum = 802.5
Rank Mean = 53.5

Background Rank Sum = 802.5
Background Rank Mean = 53.5

Compliance Wells

Well ID	Date	Result	Rank
MW-9	7/20/1995	-0.174353 J	114
	8/24/1995	-0.174353 J	115
	9/28/1995	0.693147	136
	10/26/1995	1.09861	146
	11/19/1996	ND<0	53.5
	12/19/1996	ND<0	53.5
	3/24/1997	ND<0	53.5
	9/24/1997	ND<0	53.5
	4/7/1998	ND<0	53.5
	9/23/1998	1.66771	164
	3/16/1999	1.28093	154
	9/23/1999	1.25276	152
	3/15/2000	ND<0	53.5
	9/24/2003	ND<0	53.5
	3/11/2004	ND<0	53.5
	10/12/2004	ND<0	53.5
	4/1/2005	1.09527	145
	10/25/2005	0.71295	138
	4/29/2006	0.322083 J	129
	11/18/2006	ND<0	53.5
	5/23/2007	ND<0	53.5
	11/28/2007	1.15373	149
	6/5/2008	1.17557	150

	11/20/2008	1.13462		148
	6/11/2009	2.02815		176

Rank Sum = 2604.5
Rank Mean = 104.18

MW-6	7/20/1995	ND<0	53.5	
	8/24/1995	ND<0	53.5	
	9/28/1995	ND<0	53.5	
	10/26/1995	ND<0	53.5	
	11/19/1996	ND<0	53.5	
	12/19/1996	ND<0	53.5	
	3/24/1997	ND<0	53.5	
	9/24/1997	ND<0	53.5	
	4/7/1998	ND<0	53.5	
	9/23/1998	ND<0	53.5	
	3/16/1999	ND<0	53.5	
	9/23/1999	ND<0	53.5	
	3/15/2000	ND<0	53.5	
	9/24/2003	ND<0	53.5	
	3/11/2004	ND<0	53.5	
	10/12/2004	ND<0	53.5	
	4/1/2005	ND<0	53.5	
	10/25/2005	ND<0	53.5	
	4/29/2006	ND<0	53.5	
	11/18/2006	ND<0	53.5	
	5/23/2007	ND<0	53.5	
	11/28/2007	ND<0	53.5	
	6/5/2008	ND<0	53.5	
	11/20/2008	ND<0	53.5	
	6/11/2009	ND<-2.07944		53.5

Rank Sum = 1337.5
Rank Mean = 53.5

MW-11R	7/20/1995	2.14007		178
	8/24/1995	3.04452		195
	9/28/1995	2.94444		192
	10/26/1995	3.09104		196
	11/19/1996	ND<0	53.5	
	12/19/1996	2.94444		193
	3/24/1997	ND<0	53.5	
	9/24/1997	1.62924		162
	4/7/1998	2.12823	177	
	9/23/1998	2.56495		186
	3/16/1999	2.37955		181
	9/23/1999	1.70475		165
	3/15/2000	2.29253		180
	9/24/2003	ND<0	53.5	
	3/11/2004	ND<0	53.5	
	10/12/2004	ND<0	53.5	
	4/1/2005	1.35067	155	
	10/25/2005	0.779325		141
	4/29/2006	0.518794 J		133
	11/18/2006	0.727549		139
	5/23/2007	ND<0	53.5	
	11/28/2007	1.39872		156
	6/5/2008	ND<0	53.5	
	11/20/2008	-0.579818 J		110
	6/11/2009	1.06471		144
	11/15/2009	-0.867501 J		108

Rank Sum = 3465.5
Rank Mean = 133.288

MW-8	7/20/1995	-0.755023	J	109
	8/24/1995	2.48491		183
	9/28/1995	2.3979	182	
	10/26/1995	0	J	118
	11/19/1996	ND<0	53.5	
	12/19/1996	2.94444		194
	3/24/1997	2.89037		191
	9/24/1997	3.09104		197
	4/7/1998	2.77259	188	
	9/23/1998	3.3322	198	
	3/16/1999	2.79117		190
	9/23/1999	2.78501		189
	3/15/2000	ND<0	53.5	
	9/24/2003	ND<0	53.5	
	3/11/2004	ND<0	53.5	
	10/12/2004	ND<0	53.5	
	4/1/2005	0.647103	J	134
	10/25/2005	1.23256		151
	4/29/2006	0.746688		140
	11/18/2006	1.05082		143
	5/23/2007	ND<0	53.5	
	11/28/2007	1.41342		157
	6/5/2008	1.4884	159	
	11/20/2008	1.12493		147
	6/11/2009	1.64866		163

Rank Sum = 3454
Rank Mean = 138.16

MW-10	7/20/1995	-0.223144	J	112
	8/24/1995	1.25276		153
	9/28/1995	1.94591		173
	10/26/1995	1.79176		169
	11/19/1996	ND<0	53.5	
	12/19/1996	1.60944		161
	3/24/1997	2.63906		187
	9/24/1997	1.75786		167
	4/7/1998	ND<0	53.5	
	9/23/1998	ND<0	53.5	
	3/16/1999	1.54756		160
	9/23/1999	0.955511		142
	3/15/2000	ND<0	53.5	
	9/24/2003	ND<0	53.5	
	3/11/2004	ND<0	53.5	
	10/12/2004	ND<0	53.5	
	4/1/2005	0.223144	J	125
	10/25/2005	0.470004	J	131
	4/29/2006	0.647103	J	135
	11/18/2006	0.113329	J	122
	5/23/2007	ND<0	53.5	
	11/28/2007	0.300105		128
	6/5/2008	0.231112	J	127
	11/20/2008	-0.0833816	J	116
	6/11/2009	-0.0304592	J	117
	11/15/2009	0.0953102		120

Rank Sum = 2973
Rank Mean = 114.346

MW-12AR	3/16/1999	ND<0	53.5	
	9/23/1999	ND<0	53.5	
	3/15/2000	1.97408		174
	9/24/2003	1.93152		172
	3/11/2004	1.80829		170

	10/12/2004	1.84055		171
	4/1/2005	ND<0	53.5	
	10/25/2005	0.19062	J	124
	4/29/2006	0.329304	J	130
	11/18/2006	-0.18633	J	113
	5/23/2007	ND<0	53.5	
	11/28/2007	0.139762	J	123
	6/5/2008	0.223144	J	126
	11/20/2008	-0.478036	J	111
	6/11/2009	ND<-2.07944		53.5
	11/15/2009	-1.04982	J	107

Rank Sum = 1788.5
Rank Mean = 111.781

MW-12BR	3/16/1999	1.98787		175
	9/23/1999	1.74047		166
	3/15/2000	ND<0	53.5	
	9/24/2003	ND<0	53.5	
	3/11/2004	ND<0	53.5	
	10/12/2004	ND<0	53.5	
	4/1/2005	1.44692		158
	10/25/2005	ND<0	53.5	
	4/29/2006	ND<0	53.5	
	11/18/2006	ND<0	53.5	
	5/23/2007	ND<0	53.5	
	11/28/2007	ND<0	53.5	
	6/5/2008	ND<0	53.5	
	11/20/2008	ND<0	53.5	
	6/11/2009	ND<-2.07944		53.5

Rank Sum = 1141
Rank Mean = 76.0667

MW-7	7/20/1995	0.470004	J	132
	8/24/1995	0.0953102	J	121
	9/28/1995	0	J	119
	10/26/1995	0.693147		137
	11/19/1996	ND<0	53.5	
	12/19/1996	2.19722		179
	3/24/1997	ND<0	53.5	
	9/24/1997	ND<0	53.5	
	4/7/1998	2.48491		184
	9/23/1998	2.48491		185
	3/16/1999	ND<0	53.5	
	9/23/1999	1.77495		168
	3/15/2000	ND<0	53.5	
	9/24/2003	ND<0	53.5	
	3/11/2004	ND<0	53.5	
	10/12/2004	ND<0	53.5	
	4/1/2005	ND<0	53.5	
	10/25/2005	ND<0	53.5	
	4/29/2006	ND<0	53.5	
	11/18/2006	ND<0	53.5	
	5/23/2007	ND<0	53.5	
	11/28/2007	ND<0	53.5	
	6/5/2008	ND<0	53.5	
	11/20/2008	ND<0	53.5	
	6/11/2009	ND<-2.07944		53.5

Rank Sum = 2134.5
Rank Mean = 85.38

Calculation Results:

Kruskal-Wallis H Statistic = 52.8706
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 62.4523
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
52.8706 > 15.5073 indicating a significant group difference at 5% significance level
62.4523 > 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 53.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-9	104.18	50.68	43.5368	
MW-6	53.5	0	43.5368	
MW-11R	133.288	79.7885	43.2217	
MW-8	138.16	84.66	43.5368	
MW-10	114.346	60.8462	43.2217	
MW-12AR		111.781	58.2813	47.909
MW-12BR		76.0667	22.5667	48.6756
MW-7	85.38	31.88	43.5368	

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 53.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-9	104.18	50.68	47.0138	
MW-6	53.5	0	47.0138	
MW-11R	133.288	79.7885	46.6736	
MW-8	138.16	84.66	47.0138	
MW-10	114.346	60.8462	46.6736	
MW-12AR		111.781	58.2813	51.7352
MW-12BR		76.0667	22.5667	52.5631
MW-7	85.38	31.88	47.0138	

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	
0.693147		-0.174353 J	0.867501		24	0
1.09861		-0.174353 J	1.27297	25	0	
ND<0	-0.174353 J	0.174353		26	0	
ND<0	-0.174353 J	0.174353		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	
1.66771		-0.174353 J	1.84206	31	0	
1.28093		-0.174353 J	1.45529	32	0	
1.25276		-0.174353 J	1.42712	33	0	
ND<0	-0.174353 J	0.174353		34	0	
ND<0	-0.174353 J	0.174353		35	0	
ND<0	-0.174353 J	0.174353		36	0	
ND<0	-0.174353 J	0.174353		37	0	
1.09527		-0.174353 J	1.26963	38	0	
0.71295		-0.174353 J	0.887303		39	0
0.322083 J		-0.174353 J	0.496437		40	0
ND<0	-0.174353 J	0.174353		41	0	
ND<0	-0.174353 J	0.174353		42	0	
1.15373		-0.174353 J	1.32808	43	0	
1.17557		-0.174353 J	1.34993	44	0	
1.13462		-0.174353 J	1.30898	45	0	
2.02815		-0.174353 J	2.2025	46	0	

1.09861	0.693147	0.405465	47	0	
ND<0	0.693147	-0.693147	47	1	
ND<0	0.693147	-0.693147	47	2	
ND<0	0.693147	-0.693147	47	3	
ND<0	0.693147	-0.693147	47	4	
ND<0	0.693147	-0.693147	47	5	
1.66771	0.693147	0.97456	48	5	
1.28093	0.693147	0.587787	49	5	
1.25276	0.693147	0.559616	50	5	
ND<0	0.693147	-0.693147	50	6	
ND<0	0.693147	-0.693147	50	7	
ND<0	0.693147	-0.693147	50	8	
ND<0	0.693147	-0.693147	50	9	
1.09527	0.693147	0.402126	51	9	
0.71295	0.693147	0.0198026	52	9	
0.322083 J	0.693147	-0.371064	52	10	
ND<0	0.693147	-0.693147	52	11	
ND<0	0.693147	-0.693147	52	12	
1.15373	0.693147	0.460584	53	12	
1.17557	0.693147	0.482426	54	12	
1.13462	0.693147	0.441476	55	12	
2.02815	0.693147	1.335	56	12	

ND<0	1.09861	-1.0986156	13	
ND<0	1.09861	-1.0986156	14	
ND<0	1.09861	-1.0986156	15	
ND<0	1.09861	-1.0986156	16	
ND<0	1.09861	-1.0986156	17	
1.66771	1.09861	0.569095	57	17
1.28093	1.09861	0.182322	58	17
1.25276	1.09861	0.154151	59	17
ND<0	1.09861	-1.0986159	18	
ND<0	1.09861	-1.0986159	19	
ND<0	1.09861	-1.0986159	20	
ND<0	1.09861	-1.0986159	21	
1.09527	1.09861	-0.0033389	59	22
0.71295	1.09861	-0.385662	59	23
0.322083 J	1.09861	-0.776529	59	24
ND<0	1.09861	-1.0986159	25	
ND<0	1.09861	-1.0986159	26	
1.15373	1.09861	0.0551193	60	26
1.17557	1.09861	0.076961	61	26
1.13462	1.09861	0.0360104	62	26
2.02815	1.09861	0.929536	63	26

ND<0	ND<0	0	63	26	
ND<0	ND<0	0	63	26	
ND<0	ND<0	0	63	26	
ND<0	ND<0	0	63	26	
1.66771	ND<0	1.66771	64	26	
1.28093	ND<0	1.28093	65	26	
1.25276	ND<0	1.25276	66	26	
ND<0	ND<0	0	66	26	
ND<0	ND<0	0	66	26	
ND<0	ND<0	0	66	26	
ND<0	ND<0	0	66	26	
1.09527	ND<0	1.09527	67	26	
0.71295	ND<0	0.71295	68	26	
0.322083 J	ND<0	0.322083	69	26	
ND<0	ND<0	0	69	26	
ND<0	ND<0	0	69	26	

1.15373		ND<0	1.15373	70	26	
1.17557		ND<0	1.17557	71	26	
1.13462		ND<0	1.13462	72	26	
2.02815		ND<0	2.02815	73	26	
ND<0	ND<0	0	73	26		
ND<0	ND<0	0	73	26		
ND<0	ND<0	0	73	26		
1.66771		ND<0	1.66771	74	26	
1.28093		ND<0	1.28093	75	26	
1.25276		ND<0	1.25276	76	26	
ND<0	ND<0	0	76	26		
ND<0	ND<0	0	76	26		
ND<0	ND<0	0	76	26		
ND<0	ND<0	0	76	26		
1.09527		ND<0	1.09527	77	26	
0.71295		ND<0	0.71295	78	26	
0.322083	J	ND<0	0.322083		79	26
ND<0	ND<0	0	79	26		
ND<0	ND<0	0	79	26		
1.15373		ND<0	1.15373	80	26	
1.17557		ND<0	1.17557	81	26	
1.13462		ND<0	1.13462	82	26	
2.02815		ND<0	2.02815	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	
ND<0	ND<0	0	93	26		
1.66771		ND<0	1.66771	94	26	
1.28093		ND<0	1.28093	95	26	
1.25276		ND<0	1.25276	96	26	
ND<0	ND<0	0	96	26		
ND<0	ND<0	0	96	26		
ND<0	ND<0	0	96	26		
ND<0	ND<0	0	96	26		
1.09527		ND<0	1.09527	97	26	
0.71295		ND<0	0.71295	98	26	
0.322083	J	ND<0	0.322083		99	26
ND<0	ND<0	0	99	26		
ND<0	ND<0	0	99	26		
1.15373		ND<0	1.15373	100	26	
1.17557		ND<0	1.17557	101	26	
1.13462		ND<0	1.13462	102	26	
2.02815		ND<0	2.02815	103	26	

1.66771		ND<0	1.66771	104	26	
1.28093		ND<0	1.28093	105	26	
1.25276		ND<0	1.25276	106	26	
ND<0	ND<0	0	106	26		
ND<0	ND<0	0	106	26		
ND<0	ND<0	0	106	26		
ND<0	ND<0	0	106	26		
1.09527		ND<0	1.09527	107	26	
0.71295		ND<0	0.71295	108	26	
0.322083	J	ND<0	0.322083	109	26	
ND<0	ND<0	0	109	26		
ND<0	ND<0	0	109	26		
1.15373		ND<0	1.15373	110	26	
1.17557		ND<0	1.17557	111	26	
1.13462		ND<0	1.13462	112	26	
2.02815		ND<0	2.02815	113	26	

1.28093		1.66771	-0.386773	113	27
1.25276		1.66771	-0.414944	113	28
ND<0	1.66771	-1.66771	113	29	
ND<0	1.66771	-1.66771	113	30	
ND<0	1.66771	-1.66771	113	31	
ND<0	1.66771	-1.66771	113	32	
1.09527		1.66771	-0.572433	113	33
0.71295		1.66771	-0.954757	113	34
0.322083	J	1.66771	-1.34562	113	35
ND<0	1.66771	-1.66771	113	36	
ND<0	1.66771	-1.66771	113	37	
1.15373		1.66771	-0.513975	113	38
1.17557		1.66771	-0.492133	113	39
1.13462		1.66771	-0.533084	113	40
2.02815		1.66771	0.360441	114	40

1.25276		1.28093	-0.0281709	114	41
ND<0	1.28093	-1.28093	114	42	
ND<0	1.28093	-1.28093	114	43	
ND<0	1.28093	-1.28093	114	44	
ND<0	1.28093	-1.28093	114	45	
1.09527		1.28093	-0.18566	114	46
0.71295		1.28093	-0.567984	114	47
0.322083	J	1.28093	-0.95885	114	48
ND<0	1.28093	-1.28093	114	49	
ND<0	1.28093	-1.28093	114	50	
1.15373		1.28093	-0.127202	114	51
1.17557		1.28093	-0.105361	114	52
1.13462		1.28093	-0.146311	114	53
2.02815		1.28093	0.747214	115	53

ND<0	1.25276	-1.25276	115	54	
ND<0	1.25276	-1.25276	115	55	
ND<0	1.25276	-1.25276	115	56	
ND<0	1.25276	-1.25276	115	57	
1.09527		1.25276	-0.15749	115	58
0.71295		1.25276	-0.539813	115	59
0.322083	J	1.25276	-0.930679	115	60
ND<0	1.25276	-1.25276	115	61	
ND<0	1.25276	-1.25276	115	62	
1.15373		1.25276	-0.0990314	115	63
1.17557		1.25276	-0.0771896	115	64
1.13462		1.25276	-0.11814	115	65
2.02815		1.25276	0.775385	116	65

ND<0	ND<0	0	116	65		
ND<0	ND<0	0	116	65		
ND<0	ND<0	0	116	65		
1.09527		ND<0	1.09527	117	65	
0.71295		ND<0	0.71295	118	65	
0.322083 J		ND<0	0.322083		119	65
ND<0	ND<0	0	119	65		
ND<0	ND<0	0	119	65		
1.15373		ND<0	1.15373	120	65	
1.17557		ND<0	1.17557	121	65	
1.13462		ND<0	1.13462	122	65	
2.02815		ND<0	2.02815	123	65	
ND<0	ND<0	0	123	65		
ND<0	ND<0	0	123	65		
1.09527		ND<0	1.09527	124	65	
0.71295		ND<0	0.71295	125	65	
0.322083 J		ND<0	0.322083		126	65
ND<0	ND<0	0	126	65		
ND<0	ND<0	0	126	65		
1.15373		ND<0	1.15373	127	65	
1.17557		ND<0	1.17557	128	65	
1.13462		ND<0	1.13462	129	65	
2.02815		ND<0	2.02815	130	65	
ND<0	ND<0	0	130	65		
1.09527		ND<0	1.09527	131	65	
0.71295		ND<0	0.71295	132	65	
0.322083 J		ND<0	0.322083		133	65
ND<0	ND<0	0	133	65		
ND<0	ND<0	0	133	65		
1.15373		ND<0	1.15373	134	65	
1.17557		ND<0	1.17557	135	65	
1.13462		ND<0	1.13462	136	65	
2.02815		ND<0	2.02815	137	65	
1.09527		ND<0	1.09527	138	65	
0.71295		ND<0	0.71295	139	65	
0.322083 J		ND<0	0.322083		140	65
ND<0	ND<0	0	140	65		
ND<0	ND<0	0	140	65		
1.15373		ND<0	1.15373	141	65	
1.17557		ND<0	1.17557	142	65	
1.13462		ND<0	1.13462	143	65	
2.02815		ND<0	2.02815	144	65	
0.71295		1.09527		-0.382324	144	66
0.322083 J		1.09527		-0.77319	144	67
ND<0	1.09527		-1.09527	144	68	
ND<0	1.09527		-1.09527	144	69	
1.15373		1.09527		0.0584582	145	69
1.17557		1.09527		0.0802999	146	69
1.13462		1.09527		0.0393493	147	69
2.02815		1.09527		0.932875	148	69
0.322083 J		0.71295		-0.390866	148	70
ND<0	0.71295		-0.71295	148	71	
ND<0	0.71295		-0.71295	148	72	
1.15373		0.71295		0.440782	149	72
1.17557		0.71295		0.462624	150	72
1.13462		0.71295		0.421673	151	72
2.02815		0.71295		1.3152	152	72

ND<0	0.322083	J	-0.322083	152	73	
ND<0	0.322083	J	-0.322083	152	74	
1.15373	0.322083	J	0.831648	153	74	
1.17557	0.322083	J	0.85349	154	74	
1.13462	0.322083	J	0.812539	155	74	
2.02815	0.322083	J	1.70606	156	74	

ND<0	ND<0	0	156	74	
1.15373	ND<0	1.15373	157	74	
1.17557	ND<0	1.17557	158	74	
1.13462	ND<0	1.13462	159	74	
2.02815	ND<0	2.02815	160	74	
1.15373	ND<0	1.15373	161	74	
1.17557	ND<0	1.17557	162	74	
1.13462	ND<0	1.13462	163	74	
2.02815	ND<0	2.02815	164	74	

1.17557	1.15373	0.0218417	165	74
1.13462	1.15373	-0.0191089	165	75
2.02815	1.15373	0.874417	166	75
1.13462	1.17557	-0.0409506	166	76
2.02815	1.17557	0.852575	167	76
2.02815	1.13462	0.893526	168	76

S Statistic = 168 - 76 = 92

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

There are 0 time periods with multiple data

A = 2988
B = 0
C = 990
D = 0
E = 112
F = 0
a = 33000
b = 124200
c = 1200
Group Variance = 1667.33
Z-Score = 2.22859
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|2.22859| > 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	
2.94444	3.04452	-0.100083	7	19
3.09104	3.04452	0.04652	8	19
ND<0	3.04452	-3.044528	20	
2.94444	3.04452	-0.100083	8	21
ND<0	3.04452	-3.044528	22	
1.62924	3.04452	-1.415288	23	
2.12823	3.04452	-0.916291	8	24
2.56495	3.04452	-0.479573	8	25
2.37955	3.04452	-0.664976	8	26
1.70475	3.04452	-1.339778	27	
2.29253	3.04452	-0.751988	8	28
ND<0	3.04452	-3.044528	29	
ND<0	3.04452	-3.044528	30	
ND<0	3.04452	-3.044528	31	
1.35067	3.04452	-1.693868	32	
0.779325	3.04452	-2.2652	8	33
0.518794 J	3.04452	-2.525738	34	
0.727549	3.04452	-2.316978	35	
ND<0	3.04452	-3.044528	36	
1.39872	3.04452	-1.645818	37	
ND<0	3.04452	-3.044528	38	
-0.579818 J	3.04452	-3.624348	39	

1.06471	3.04452	-1.979818	40		
-0.867501 J	3.04452	-3.912028	41		
3.09104	2.94444	0.146603	9	41	
ND<0	2.94444	-2.944449	42		
2.94444	2.94444	0	9	42	
ND<0	2.94444	-2.944449	43		
1.62924	2.94444	-1.3152	9	44	
2.12823	2.94444	-0.816207	9	45	
2.56495	2.94444	-0.379499	46		
2.37955	2.94444	-0.564893	9	47	
1.70475	2.94444	-1.239699	48		
2.29253	2.94444	-0.651904	9	49	
ND<0	2.94444	-2.944449	50		
ND<0	2.94444	-2.944449	51		
ND<0	2.94444	-2.944449	52		
1.35067	2.94444	-1.593779	53		
0.779325	2.94444	-2.165119	54		
0.518794 J	2.94444	-2.425659	55		
0.727549	2.94444	-2.216899	56		
ND<0	2.94444	-2.944449	57		
1.39872	2.94444	-1.545729	58		
ND<0	2.94444	-2.944449	59		
-0.579818 J	2.94444	-3.524269	60		
1.06471	2.94444	-1.879739	61		
-0.867501 J	2.94444	-3.811949	62		
ND<0	3.09104	-3.091049	63		
2.94444	3.09104	-0.146603	9	64	
ND<0	3.09104	-3.091049	65		
1.62924	3.09104	-1.4618	9	66	
2.12823	3.09104	-0.962811	9	67	
2.56495	3.09104	-0.526093	9	68	
2.37955	3.09104	-0.711496	9	69	
1.70475	3.09104	-1.386299	70		
2.29253	3.09104	-0.798508	9	71	
ND<0	3.09104	-3.091049	72		
ND<0	3.09104	-3.091049	73		
ND<0	3.09104	-3.091049	74		
1.35067	3.09104	-1.740389	75		
0.779325	3.09104	-2.311729	76		
0.518794 J	3.09104	-2.572259	77		
0.727549	3.09104	-2.363499	78		
ND<0	3.09104	-3.091049	79		
1.39872	3.09104	-1.692339	80		
ND<0	3.09104	-3.091049	81		
-0.579818 J	3.09104	-3.670869	82		
1.06471	3.09104	-2.026339	83		
-0.867501 J	3.09104	-3.958549	84		
2.94444	ND<0	2.94444	10	84	
ND<0	ND<0	0	10	84	
1.62924	ND<0	1.62924	11	84	
2.12823	ND<0	2.12823	12	84	
2.56495	ND<0	2.56495	13	84	
2.37955	ND<0	2.37955	14	84	
1.70475	ND<0	1.70475	15	84	
2.29253	ND<0	2.29253	16	84	
ND<0	ND<0	0	16	84	
ND<0	ND<0	0	16	84	
ND<0	ND<0	0	16	84	
1.35067	ND<0	1.35067	17	84	

0.779325		ND<0	0.779325		18	84
0.518794 J		ND<0	0.518794		19	84
0.727549		ND<0	0.727549		20	84
ND<0	ND<0	0	20	84		
1.39872		ND<0	1.39872	21	84	
ND<0	ND<0	0	21	84		
-0.579818 J		ND<0	-0.579818		21	85
1.06471		ND<0	1.06471	22	85	
-0.867501 J		ND<0	-0.867501		22	86
ND<0	2.94444		-2.9444	22	87	
1.62924		2.94444		-1.3152	22	88
2.12823		2.94444		-0.816207	22	89
2.56495		2.94444		-0.379422	90	
2.37955		2.94444		-0.564893	22	91
1.70475		2.94444		-1.239622	92	
2.29253		2.94444		-0.651904	22	93
ND<0	2.94444		-2.9444	22	94	
ND<0	2.94444		-2.9444	22	95	
ND<0	2.94444		-2.9444	22	96	
1.35067		2.94444		-1.593722	97	
0.779325		2.94444		-2.165122	98	
0.518794 J		2.94444		-2.425622	99	
0.727549		2.94444		-2.216822	100	
ND<0	2.94444		-2.9444	22	101	
1.39872		2.94444		-1.545722	102	
ND<0	2.94444		-2.9444	22	103	
-0.579818 J		2.94444		-3.524222	104	
1.06471		2.94444		-1.879722	105	
-0.867501 J		2.94444		-3.811922	106	
1.62924		ND<0	1.62924	23	106	
2.12823		ND<0	2.12823	24	106	
2.56495		ND<0	2.56495	25	106	
2.37955		ND<0	2.37955	26	106	
1.70475		ND<0	1.70475	27	106	
2.29253		ND<0	2.29253	28	106	
ND<0	ND<0	0	28	106		
ND<0	ND<0	0	28	106		
ND<0	ND<0	0	28	106		
1.35067		ND<0	1.35067	29	106	
0.779325		ND<0	0.779325		30	106
0.518794 J		ND<0	0.518794		31	106
0.727549		ND<0	0.727549		32	106
ND<0	ND<0	0	32	106		
1.39872		ND<0	1.39872	33	106	
ND<0	ND<0	0	33	106		
-0.579818 J		ND<0	-0.579818		33	107
1.06471		ND<0	1.06471	34	107	
-0.867501 J		ND<0	-0.867501		34	108
2.12823		1.62924		0.498991	35	108
2.56495		1.62924		0.935709	36	108
2.37955		1.62924		0.750306	37	108
1.70475		1.62924		0.0755076	38	108
2.29253		1.62924		0.663294	39	108
ND<0	1.62924		-1.6292	39	109	
ND<0	1.62924		-1.6292	39	110	
ND<0	1.62924		-1.6292	39	111	
1.35067		1.62924		-0.278573	39	112
0.779325		1.62924		-0.849916	39	113
0.518794 J		1.62924		-1.110453	9	114

0.727549	1.62924	-0.901692	39	115
ND<0	1.62924	-1.6292439	116	
1.39872	1.62924	-0.230524	39	117
ND<0	1.62924	-1.6292439	118	
-0.579818 J	1.62924	-2.2090639	119	
1.06471	1.62924	-0.5645339	120	
-0.867501 J	1.62924	-2.4967439	121	
2.56495	2.12823	0.436718	40	121
2.37955	2.12823	0.251314	41	121
1.70475	2.12823	-0.423484	41	122
2.29253	2.12823	0.164303	42	122
ND<0	2.12823	-2.1282342	123	
ND<0	2.12823	-2.1282342	124	
ND<0	2.12823	-2.1282342	125	
1.35067	2.12823	-0.777565	42	126
0.779325	2.12823	-1.3489142	127	
0.518794 J	2.12823	-1.6094442	128	
0.727549	2.12823	-1.4006842	129	
ND<0	2.12823	-2.1282342	130	
1.39872	2.12823	-0.729515	42	131
ND<0	2.12823	-2.1282342	132	
-0.579818 J	2.12823	-2.7080542	133	
1.06471	2.12823	-1.0635242	134	
-0.867501 J	2.12823	-2.9957342	135	
2.37955	2.56495	-0.185403	42	136
1.70475	2.56495	-0.860201	42	137
2.29253	2.56495	-0.272415	42	138
ND<0	2.56495	-2.5649542	139	
ND<0	2.56495	-2.5649542	140	
ND<0	2.56495	-2.5649542	141	
1.35067	2.56495	-1.2142842	142	
0.779325	2.56495	-1.7856242	143	
0.518794 J	2.56495	-2.0461642	144	
0.727549	2.56495	-1.8374 42	145	
ND<0	2.56495	-2.5649542	146	
1.39872	2.56495	-1.1662342	147	
ND<0	2.56495	-2.5649542	148	
-0.579818 J	2.56495	-3.1447742	149	
1.06471	2.56495	-1.5002442	150	
-0.867501 J	2.56495	-3.4324542	151	
1.70475	2.37955	-0.674798	42	152
2.29253	2.37955	-0.0870114	42	153
ND<0	2.37955	-2.3795542	154	
ND<0	2.37955	-2.3795542	155	
ND<0	2.37955	-2.3795542	156	
1.35067	2.37955	-1.0288842	157	
0.779325	2.37955	-1.6002242	158	
0.518794 J	2.37955	-1.8607542	159	
0.727549	2.37955	-1.652 42	160	
ND<0	2.37955	-2.3795542	161	
1.39872	2.37955	-0.980829	42	162
ND<0	2.37955	-2.3795542	163	
-0.579818 J	2.37955	-2.9593642	164	
1.06471	2.37955	-1.3148442	165	
-0.867501 J	2.37955	-3.2470542	166	
2.29253	1.70475	0.587787	43	166
ND<0	1.70475	-1.7047543	167	
ND<0	1.70475	-1.7047543	168	

ND<0	1.70475	-1.7047543	169		
1.35067	1.70475	-0.354081	43	170	
0.779325	1.70475	-0.925423	43	171	
0.518794 J	1.70475	-1.1859543	172		
0.727549	1.70475	-0.977199	43	173	
ND<0	1.70475	-1.7047543	174		
1.39872	1.70475	-0.306031	43	175	
ND<0	1.70475	-1.7047543	176		
-0.579818 J	1.70475	-2.2845743	177		
1.06471	1.70475	-0.640037	43	178	
-0.867501 J	1.70475	-2.5722543	179		
ND<0	2.29253	-2.2925343	180		
ND<0	2.29253	-2.2925343	181		
ND<0	2.29253	-2.2925343	182		
1.35067	2.29253	-0.941868	43	183	
0.779325	2.29253	-1.5132143	184		
0.518794 J	2.29253	-1.7737443	185		
0.727549	2.29253	-1.5649943	186		
ND<0	2.29253	-2.2925343	187		
1.39872	2.29253	-0.893818	43	188	
ND<0	2.29253	-2.2925343	189		
-0.579818 J	2.29253	-2.8723543	190		
1.06471	2.29253	-1.2278243	191		
-0.867501 J	2.29253	-3.1600443	192		
ND<0	ND<0	0	43	192	
ND<0	ND<0	0	43	192	
1.35067	ND<0	1.35067	44	192	
0.779325	ND<0	0.779325	45	192	
0.518794 J	ND<0	0.518794	46	192	
0.727549	ND<0	0.727549	47	192	
ND<0	ND<0	0	47	192	
1.39872	ND<0	1.39872	48	192	
ND<0	ND<0	0	48	192	
-0.579818 J	ND<0	-0.579818	48	193	
1.06471	ND<0	1.06471	49	193	
-0.867501 J	ND<0	-0.867501	49	194	
ND<0	ND<0	0	49	194	
1.35067	ND<0	1.35067	50	194	
0.779325	ND<0	0.779325	51	194	
0.518794 J	ND<0	0.518794	52	194	
0.727549	ND<0	0.727549	53	194	
ND<0	ND<0	0	53	194	
1.39872	ND<0	1.39872	54	194	
ND<0	ND<0	0	54	194	
-0.579818 J	ND<0	-0.579818	54	195	
1.06471	ND<0	1.06471	55	195	
-0.867501 J	ND<0	-0.867501	55	196	
1.35067	ND<0	1.35067	56	196	
0.779325	ND<0	0.779325	57	196	
0.518794 J	ND<0	0.518794	58	196	
0.727549	ND<0	0.727549	59	196	
ND<0	ND<0	0	59	196	
1.39872	ND<0	1.39872	60	196	
ND<0	ND<0	0	60	196	
-0.579818 J	ND<0	-0.579818	60	197	
1.06471	ND<0	1.06471	61	197	
-0.867501 J	ND<0	-0.867501	61	198	

0.779325	1.35067	-0.571342	61	199
0.518794 J	1.35067	-0.831873	61	200
0.727549	1.35067	-0.623119	61	201
ND<0	1.35067	-1.3506761	202	
1.39872	1.35067	0.0480497	62	202
ND<0	1.35067	-1.3506762	203	
-0.579818 J	1.35067	-1.9304962	204	
1.06471	1.35067	-0.285956	62	205
-0.867501 J	1.35067	-2.2181762	206	
0.518794 J	0.779325	-0.260531	62	207
0.727549	0.779325	-0.0517763	62	208
ND<0	0.779325	-0.779325	62	209
1.39872	0.779325	0.619392	63	209
ND<0	0.779325	-0.779325	63	210
-0.579818 J	0.779325	-1.3591463	211	
1.06471	0.779325	0.285386	64	211
-0.867501 J	0.779325	-1.6468364	212	
0.727549	0.518794 J	0.208755	65	212
ND<0	0.518794 J	-0.518794	65	213
1.39872	0.518794 J	0.879923	66	213
ND<0	0.518794 J	-0.518794	66	214
-0.579818 J	0.518794 J	-1.0986166	215	
1.06471	0.518794 J	0.545917	67	215
-0.867501 J	0.518794 J	-1.3862967	216	
ND<0	0.727549	-0.727549	67	217
1.39872	0.727549	0.671168	68	217
ND<0	0.727549	-0.727549	68	218
-0.579818 J	0.727549	-1.3073768	219	
1.06471	0.727549	0.337162	69	219
-0.867501 J	0.727549	-1.5950569	220	
1.39872	ND<0	1.39872 70	220	
ND<0	ND<0	0 70	220	
-0.579818 J	ND<0	-0.579818	70	221
1.06471	ND<0	1.06471 71	221	
-0.867501 J	ND<0	-0.867501	71	222
ND<0	1.39872	-1.3987271	223	
-0.579818 J	1.39872	-1.9785471	224	
1.06471	1.39872	-0.334006	71	225
-0.867501 J	1.39872	-2.2662271	226	
-0.579818 J	ND<0	-0.579818	71	227
1.06471	ND<0	1.06471 72	227	
-0.867501 J	ND<0	-0.867501	72	228
1.06471	-0.579818 J	1.64453 73	228	
-0.867501 J	-0.579818 J	-0.287682	73	229
-0.867501 J	1.06471	-1.9322173	230	

S Statistic = 73 - 230 = -157

Tied Group Value Members

1	2.94444	2
2	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
11/15/2009	1

There are 0 time periods with multiple data

A = 816
B = 0
C = 210
D = 0
E = 44
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 2013
Z-Score = -3.47698
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.47698| > 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

2.3979	2.48491	-0.087011	4	24	1
0 J	2.48491	-2.484912	4	2	
ND<0	2.48491	-2.484912	4	3	
2.94444	2.48491	0.459532		25	3
2.89037	2.48491	0.405465		26	3
3.09104	2.48491	0.606136		27	3
2.77259	2.48491	0.287682		28	3
3.3322	2.48491	0.847298		29	3
2.79117	2.48491	0.306258		30	3
2.78501	2.48491	0.300105		31	3
ND<0	2.48491	-2.484913	1	4	
ND<0	2.48491	-2.484913	1	5	
ND<0	2.48491	-2.484913	1	6	
ND<0	2.48491	-2.484913	1	7	
0.647103 J	2.48491	-1.8378	31	8	
1.23256	2.48491	-1.252353	1	9	
0.746688	2.48491	-1.738223	1	10	
1.05082	2.48491	-1.434093	1	11	
ND<0	2.48491	-2.484913	1	12	
1.41342	2.48491	-1.071483	1	13	
1.4884	2.48491	-0.996507		31	14
1.12493	2.48491	-1.359983	1	15	
1.64866	2.48491	-0.836248		31	16

0 J	2.3979	-2.3979	31	17		
ND<0	2.3979	-2.3979	31	18		
2.94444		2.3979	0.546544		32	18
2.89037		2.3979	0.492476		33	18
3.09104		2.3979	0.693147		34	18
2.77259		2.3979	0.374693		35	18
3.3322	2.3979	0.934309		36	18	
2.79117		2.3979	0.39327	37	18	
2.78501		2.3979	0.387116		38	18
ND<0	2.3979	-2.3979	38	19		
ND<0	2.3979	-2.3979	38	20		
ND<0	2.3979	-2.3979	38	21		
ND<0	2.3979	-2.3979	38	22		
0.647103 J		2.3979	-1.750793	8	23	
1.23256		2.3979	-1.165343	8	24	
0.746688		2.3979	-1.651213	8	25	
1.05082		2.3979	-1.347073	8	26	
ND<0	2.3979	-2.3979	38	27		
1.41342		2.3979	-0.984472		38	28
1.4884	2.3979	-0.909496		38	29	
1.12493		2.3979	-1.272973	8	30	
1.64866		2.3979	-0.749237		38	31
ND<0	0 J	0	38	31		
2.94444		0 J	2.94444	39	31	
2.89037		0 J	2.89037	40	31	
3.09104		0 J	3.09104	41	31	
2.77259		0 J	2.77259	42	31	
3.3322	0 J	3.3322	43	31		
2.79117		0 J	2.79117	44	31	
2.78501		0 J	2.78501	45	31	
ND<0	0 J	0	45	31		
ND<0	0 J	0	45	31		
ND<0	0 J	0	45	31		
ND<0	0 J	0	45	31		
0.647103 J		0 J	0.647103		46	31
1.23256		0 J	1.23256	47	31	
0.746688		0 J	0.746688		48	31
1.05082		0 J	1.05082	49	31	
ND<0	0 J	0	49	31		
1.41342		0 J	1.41342	50	31	
1.4884	0 J	1.4884	51	31		
1.12493		0 J	1.12493	52	31	
1.64866		0 J	1.64866	53	31	
2.94444		ND<0	2.94444	54	31	
2.89037		ND<0	2.89037	55	31	
3.09104		ND<0	3.09104	56	31	
2.77259		ND<0	2.77259	57	31	
3.3322	ND<0	3.3322	58	31		
2.79117		ND<0	2.79117	59	31	
2.78501		ND<0	2.78501	60	31	
ND<0	ND<0	0	60	31		
ND<0	ND<0	0	60	31		
ND<0	ND<0	0	60	31		
ND<0	ND<0	0	60	31		
0.647103 J		ND<0	0.647103		61	31
1.23256		ND<0	1.23256	62	31	
0.746688		ND<0	0.746688		63	31
1.05082		ND<0	1.05082	64	31	
ND<0	ND<0	0	64	31		

1.41342		ND<0	1.41342	65	31	
1.4884	ND<0	1.4884	66	31		
1.12493		ND<0	1.12493	67	31	
1.64866		ND<0	1.64866	68	31	
2.89037		2.94444	-0.0540672	68	32	
3.09104		2.94444	0.146603	69	32	
2.77259		2.94444	-0.1718569	33		
3.3322	2.94444	0.387766	70	33		
2.79117		2.94444	-0.153274	70	34	
2.78501		2.94444	-0.159428	70	35	
ND<0	2.94444	-2.9444470	36			
ND<0	2.94444	-2.9444470	37			
ND<0	2.94444	-2.9444470	38			
ND<0	2.94444	-2.9444470	39			
0.647103 J		2.94444	-2.2973470	40		
1.23256		2.94444	-1.7118870	41		
0.746688		2.94444	-2.1977570	42		
1.05082		2.94444	-1.8936270	43		
ND<0	2.94444	-2.9444470	44			
1.41342		2.94444	-1.5310270	45		
1.4884	2.94444	-1.4560470	46			
1.12493		2.94444	-1.8195170	47		
1.64866		2.94444	-1.2957870	48		
3.09104		2.89037	0.200671	71	48	
2.77259		2.89037	-0.117783	71	49	
3.3322	2.89037	0.441833	72	49		
2.79117		2.89037	-0.0992067	72	50	
2.78501		2.89037	-0.105361	72	51	
ND<0	2.89037	-2.8903772	52			
ND<0	2.89037	-2.8903772	53			
ND<0	2.89037	-2.8903772	54			
ND<0	2.89037	-2.8903772	55			
0.647103 J		2.89037	-2.2432772	56		
1.23256		2.89037	-1.6578172	57		
0.746688		2.89037	-2.1436872	58		
1.05082		2.89037	-1.8395572	59		
ND<0	2.89037	-2.8903772	60			
1.41342		2.89037	-1.4769572	61		
1.4884	2.89037	-1.4019772	62			
1.12493		2.89037	-1.7654472	63		
1.64866		2.89037	-1.2417172	64		
2.77259		3.09104	-0.318454	72	65	
3.3322	3.09104	0.241162	73	65		
2.79117		3.09104	-0.299877	73	66	
2.78501		3.09104	-0.306031	73	67	
ND<0	3.09104	-3.0910473	68			
ND<0	3.09104	-3.0910473	69			
ND<0	3.09104	-3.0910473	70			
ND<0	3.09104	-3.0910473	71			
0.647103 J		3.09104	-2.4439473	72		
1.23256		3.09104	-1.8584873	73		
0.746688		3.09104	-2.3443573	74		
1.05082		3.09104	-2.0402273	75		
ND<0	3.09104	-3.0910473	76			
1.41342		3.09104	-1.6776273	77		
1.4884	3.09104	-1.6026473	78			
1.12493		3.09104	-1.9661173	79		
1.64866		3.09104	-1.4423873	80		

3.3322	2.77259	0.559616	74	80		
2.79117	2.77259	0.0185764	75	80		
2.78501	2.77259	0.0124225	76	80		
ND<0	2.77259	-2.7725976	81			
ND<0	2.77259	-2.7725976	82			
ND<0	2.77259	-2.7725976	83			
ND<0	2.77259	-2.7725976	84			
0.647103 J	2.77259	-2.1254976	85			
1.23256	2.77259	-1.5400376	86			
0.746688	2.77259	-2.0259 76	87			
1.05082	2.77259	-1.7217776	88			
ND<0	2.77259	-2.7725976	89			
1.41342	2.77259	-1.3591776	90			
1.4884	2.77259	-1.2841976	91			
1.12493	2.77259	-1.6476676	92			
1.64866	2.77259	-1.1239376	93			
2.79117	3.3322	-0.541039	76	94		
2.78501	3.3322	-0.547193	76	95		
ND<0	3.3322	-3.3322 76	96			
ND<0	3.3322	-3.3322 76	97			
ND<0	3.3322	-3.3322 76	98			
ND<0	3.3322	-3.3322 76	99			
0.647103 J	3.3322	-2.6851 76	100			
1.23256	3.3322	-2.0996476	101			
0.746688	3.3322	-2.5855276	102			
1.05082	3.3322	-2.2813876	103			
ND<0	3.3322	-3.3322 76	104			
1.41342	3.3322	-1.9187876	105			
1.4884	3.3322	-1.8438 76	106			
1.12493	3.3322	-2.2072776	107			
1.64866	3.3322	-1.6835576	108			
2.78501	2.79117	-0.00615387	76	109		
ND<0	2.79117	-2.7911776	110			
ND<0	2.79117	-2.7911776	111			
ND<0	2.79117	-2.7911776	112			
ND<0	2.79117	-2.7911776	113			
0.647103 J	2.79117	-2.1440676	114			
1.23256	2.79117	-1.5586 76	115			
0.746688	2.79117	-2.0444876	116			
1.05082	2.79117	-1.7403476	117			
ND<0	2.79117	-2.7911776	118			
1.41342	2.79117	-1.3777476	119			
1.4884	2.79117	-1.3027776	120			
1.12493	2.79117	-1.6662476	121			
1.64866	2.79117	-1.1425176	122			
ND<0	2.78501	-2.7850176	123			
ND<0	2.78501	-2.7850176	124			
ND<0	2.78501	-2.7850176	125			
ND<0	2.78501	-2.7850176	126			
0.647103 J	2.78501	-2.1379176	127			
1.23256	2.78501	-1.5524576	128			
0.746688	2.78501	-2.0383276	129			
1.05082	2.78501	-1.7341976	130			
ND<0	2.78501	-2.7850176	131			
1.41342	2.78501	-1.3715976	132			
1.4884	2.78501	-1.2966176	133			
1.12493	2.78501	-1.6600876	134			
1.64866	2.78501	-1.1363576	135			

ND<0	ND<0	0	76	135		
ND<0	ND<0	0	76	135		
ND<0	ND<0	0	76	135		
0.647103 J		ND<0	0.647103		77	135
1.23256		ND<0	1.23256	78	135	
0.746688		ND<0	0.746688		79	135
1.05082		ND<0	1.05082	80	135	
ND<0	ND<0	0	80	135		
1.41342		ND<0	1.41342	81	135	
1.4884	ND<0	1.4884	82	135		
1.12493		ND<0	1.12493	83	135	
1.64866		ND<0	1.64866	84	135	
ND<0	ND<0	0	84	135		
ND<0	ND<0	0	84	135		
0.647103 J		ND<0	0.647103		85	135
1.23256		ND<0	1.23256	86	135	
0.746688		ND<0	0.746688		87	135
1.05082		ND<0	1.05082	88	135	
ND<0	ND<0	0	88	135		
1.41342		ND<0	1.41342	89	135	
1.4884	ND<0	1.4884	90	135		
1.12493		ND<0	1.12493	91	135	
1.64866		ND<0	1.64866	92	135	
ND<0	ND<0	0	92	135		
0.647103 J		ND<0	0.647103		93	135
1.23256		ND<0	1.23256	94	135	
0.746688		ND<0	0.746688		95	135
1.05082		ND<0	1.05082	96	135	
ND<0	ND<0	0	96	135		
1.41342		ND<0	1.41342	97	135	
1.4884	ND<0	1.4884	98	135		
1.12493		ND<0	1.12493	99	135	
1.64866		ND<0	1.64866	100	135	
0.647103 J		ND<0	0.647103		101	135
1.23256		ND<0	1.23256	102	135	
0.746688		ND<0	0.746688		103	135
1.05082		ND<0	1.05082	104	135	
ND<0	ND<0	0	104	135		
1.41342		ND<0	1.41342	105	135	
1.4884	ND<0	1.4884	106	135		
1.12493		ND<0	1.12493	107	135	
1.64866		ND<0	1.64866	108	135	
1.23256		0.647103 J	0.585457		109	135
0.746688		0.647103 J	0.0995847		110	135
1.05082		0.647103 J	0.403718		111	135
ND<0	0.647103 J		-0.647103		111	136
1.41342		0.647103 J	0.76632	112	136	
1.4884	0.647103 J		0.841296		113	136
1.12493		0.647103 J	0.477826		114	136
1.64866		0.647103 J	1.00156	115	136	
0.746688		1.23256	-0.485872		115	137
1.05082		1.23256	-0.181739		115	138
ND<0	1.23256		-1.23256	115	139	
1.41342		1.23256	0.180863		116	139
1.4884	1.23256		0.255839		117	139
1.12493		1.23256	-0.107631		117	140
1.64866		1.23256	0.416098		118	140

1.05082		0.746688		0.304134	119	140
ND<0	0.746688		-0.746688		119	141
1.41342		0.746688		0.666735	120	141
1.4884	0.746688		0.741712		121	141
1.12493		0.746688		0.378242	122	141
1.64866		0.746688		0.901971	123	141
ND<0	1.05082		-1.05082		123	142
1.41342		1.05082		0.362601	124	142
1.4884	1.05082		0.437578		125	142
1.12493		1.05082		0.074108	126	142
1.64866		1.05082		0.597837	127	142
1.41342		ND<0	1.41342	128	142	
1.4884	ND<0	1.4884	129	142		
1.12493		ND<0	1.12493	130	142	
1.64866		ND<0	1.64866	131	142	
1.4884	1.41342		0.0749766		132	142
1.12493		1.41342		-0.288493	132	143
1.64866		1.41342		0.235236	133	143
1.12493		1.4884	-0.36347	133	144	
1.64866		1.4884	0.160259		134	144
1.64866		1.12493		0.523729	135	144

S Statistic = 135 - 144 = -9

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

There are 0 time periods with multiple data

A = 798
B = 0
C = 210
D = 0
E = 42
F = 0
a = 33000
b = 124200
c = 1200
Group Variance = 1789
Z-Score = -0.189141
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.189141| <= 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
1.94591		1.25276	0.693147		26	0
1.79176		1.25276	0.538997		27	0
ND<0	1.25276	-1.2527627		1		
1.60944		1.25276	0.356675		28	1
2.63906		1.25276	1.38629	29	1	
1.75786		1.25276	0.505095		30	1
ND<0	1.25276	-1.2527630		2		
ND<0	1.25276	-1.2527630		3		
1.54756		1.25276	0.2948	31	3	
0.955511		1.25276	-0.297252		31	4
ND<0	1.25276	-1.2527631		5		
ND<0	1.25276	-1.2527631		6		
ND<0	1.25276	-1.2527631		7		
ND<0	1.25276	-1.2527631		8		
0.223144 J		1.25276	-1.0296231		9	
0.470004 J		1.25276	-0.782759		31	10
0.647103 J		1.25276	-0.6056631		11	
0.113329 J		1.25276	-1.1394331		12	
ND<0	1.25276	-1.2527631		13		
0.300105		1.25276	-0.952658		31	14
0.231112 J		1.25276	-1.0216531		15	
-0.0833816 J		1.25276	-1.3361431		16	

-0.0304592 J	1.25276	-1.2832231	17	
0.0953102	1.25276	-1.1574531	18	
1.79176	1.94591	-0.154151	31	19
ND<0	1.94591	-1.9459131	20	
1.60944	1.94591	-0.336472	31	21
2.63906	1.94591	0.693147	32	21
1.75786	1.94591	-0.188052	32	22
ND<0	1.94591	-1.9459132	23	
ND<0	1.94591	-1.9459132	24	
1.54756	1.94591	-0.398348	32	25
0.955511	1.94591	-0.990399	32	26
ND<0	1.94591	-1.9459132	27	
ND<0	1.94591	-1.9459132	28	
ND<0	1.94591	-1.9459132	29	
ND<0	1.94591	-1.9459132	30	
0.223144 J	1.94591	-1.7227732	31	
0.470004 J	1.94591	-1.4759132	32	
0.647103 J	1.94591	-1.2988132	33	
0.113329 J	1.94591	-1.8325832	34	
ND<0	1.94591	-1.9459132	35	
0.300105	1.94591	-1.6458132	36	
0.231112 J	1.94591	-1.7148 32	37	
-0.0833816 J	1.94591	-2.0292932	38	
-0.0304592 J	1.94591	-1.9763732	39	
0.0953102	1.94591	-1.8506 32	40	
ND<0	1.79176	-1.7917632	41	
1.60944	1.79176	-0.182322	32	42
2.63906	1.79176	0.847298	33	42
1.75786	1.79176	-0.0339016	33	43
ND<0	1.79176	-1.7917633	44	
ND<0	1.79176	-1.7917633	45	
1.54756	1.79176	-0.244197	33	46
0.955511	1.79176	-0.836248	33	47
ND<0	1.79176	-1.7917633	48	
ND<0	1.79176	-1.7917633	49	
ND<0	1.79176	-1.7917633	50	
ND<0	1.79176	-1.7917633	51	
0.223144 J	1.79176	-1.5686233	52	
0.470004 J	1.79176	-1.3217633	53	
0.647103 J	1.79176	-1.1446633	54	
0.113329 J	1.79176	-1.6784333	55	
ND<0	1.79176	-1.7917633	56	
0.300105	1.79176	-1.4916533	57	
0.231112 J	1.79176	-1.5606533	58	
-0.0833816 J	1.79176	-1.8751433	59	
-0.0304592 J	1.79176	-1.8222233	60	
0.0953102	1.79176	-1.6964533	61	
1.60944	ND<0	1.60944 34	61	
2.63906	ND<0	2.63906 35	61	
1.75786	ND<0	1.75786 36	61	
ND<0	ND<0	0 36	61	
ND<0	ND<0	0 36	61	
1.54756	ND<0	1.54756 37	61	
0.955511	ND<0	0.955511	38	61
ND<0	ND<0	0 38	61	
ND<0	ND<0	0 38	61	
ND<0	ND<0	0 38	61	
ND<0	ND<0	0 38	61	
0.223144 J	ND<0	0.223144	39	61

0.470004 J	ND<0	0.470004	40	61	
0.647103 J	ND<0	0.647103	41	61	
0.113329 J	ND<0	0.113329	42	61	
ND<0	ND<0	0	42	61	
0.300105	ND<0	0.300105	43	61	
0.231112 J	ND<0	0.231112	44	61	
-0.0833816 J	ND<0	-0.0833816	44	62	
-0.0304592 J	ND<0	-0.0304592	44	63	
0.0953102	ND<0	0.0953102	45	63	
2.63906	1.60944	1.02962	46	63	
1.75786	1.60944	0.14842	47	63	
ND<0	1.60944	-1.6094447	64		
ND<0	1.60944	-1.6094447	65		
1.54756	1.60944	-0.0618754	47	66	
0.955511	1.60944	-0.653926	47	67	
ND<0	1.60944	-1.6094447	68		
ND<0	1.60944	-1.6094447	69		
ND<0	1.60944	-1.6094447	70		
ND<0	1.60944	-1.6094447	71		
0.223144 J	1.60944	-1.3862947	72		
0.470004 J	1.60944	-1.1394347	73		
0.647103 J	1.60944	-0.962335	47	74	
0.113329 J	1.60944	-1.4961147	75		
ND<0	1.60944	-1.6094447	76		
0.300105	1.60944	-1.3093347	77		
0.231112 J	1.60944	-1.3783347	78		
-0.0833816 J	1.60944	-1.6928247	79		
-0.0304592 J	1.60944	-1.6399 47	80		
0.0953102	1.60944	-1.5141347	81		
1.75786	2.63906	-0.881199	47	82	
ND<0	2.63906	-2.6390647	83		
ND<0	2.63906	-2.6390647	84		
1.54756	2.63906	-1.0914947	85		
0.955511	2.63906	-1.6835547	86		
ND<0	2.63906	-2.6390647	87		
ND<0	2.63906	-2.6390647	88		
ND<0	2.63906	-2.6390647	89		
ND<0	2.63906	-2.6390647	90		
0.223144 J	2.63906	-2.4159147	91		
0.470004 J	2.63906	-2.1690547	92		
0.647103 J	2.63906	-1.9919547	93		
0.113329 J	2.63906	-2.5257347	94		
ND<0	2.63906	-2.6390647	95		
0.300105	2.63906	-2.3389547	96		
0.231112 J	2.63906	-2.4079547	97		
-0.0833816 J	2.63906	-2.7224447	98		
-0.0304592 J	2.63906	-2.6695247	99		
0.0953102	2.63906	-2.5437547	100		
ND<0	1.75786	-1.7578647	101		
ND<0	1.75786	-1.7578647	102		
1.54756	1.75786	-0.210295	47	103	
0.955511	1.75786	-0.802346	47	104	
ND<0	1.75786	-1.7578647	105		
ND<0	1.75786	-1.7578647	106		
ND<0	1.75786	-1.7578647	107		
ND<0	1.75786	-1.7578647	108		
0.223144 J	1.75786	-1.5347147	109		
0.470004 J	1.75786	-1.2878547	110		
0.647103 J	1.75786	-1.1107547	111		

0.113329 J	1.75786	-1.6445347	112			
ND<0	1.75786	-1.7578647	113			
0.300105	1.75786	-1.4577547	114			
0.231112 J	1.75786	-1.5267547	115			
-0.0833816 J	1.75786	-1.8412447	116			
-0.0304592 J	1.75786	-1.7883247	117			
0.0953102	1.75786	-1.6625547	118			
ND<0	ND<0	0	47	118		
1.54756	ND<0	1.54756	48	118		
0.955511	ND<0	0.955511	49	118		
ND<0	ND<0	0	49	118		
ND<0	ND<0	0	49	118		
ND<0	ND<0	0	49	118		
ND<0	ND<0	0	49	118		
0.223144 J	ND<0	0.223144	50	118		
0.470004 J	ND<0	0.470004	51	118		
0.647103 J	ND<0	0.647103	52	118		
0.113329 J	ND<0	0.113329	53	118		
ND<0	ND<0	0	53	118		
0.300105	ND<0	0.300105	54	118		
0.231112 J	ND<0	0.231112	55	118		
-0.0833816 J	ND<0	-0.0833816	55	119		
-0.0304592 J	ND<0	-0.0304592	55	120		
0.0953102	ND<0	0.0953102	56	120		
1.54756	ND<0	1.54756	57	120		
0.955511	ND<0	0.955511	58	120		
ND<0	ND<0	0	58	120		
ND<0	ND<0	0	58	120		
ND<0	ND<0	0	58	120		
ND<0	ND<0	0	58	120		
0.223144 J	ND<0	0.223144	59	120		
0.470004 J	ND<0	0.470004	60	120		
0.647103 J	ND<0	0.647103	61	120		
0.113329 J	ND<0	0.113329	62	120		
ND<0	ND<0	0	62	120		
0.300105	ND<0	0.300105	63	120		
0.231112 J	ND<0	0.231112	64	120		
-0.0833816 J	ND<0	-0.0833816	64	121		
-0.0304592 J	ND<0	-0.0304592	64	122		
0.0953102	ND<0	0.0953102	65	122		
0.955511	1.54756	-0.592051	65	123		
ND<0	1.54756	-1.5475665	124			
ND<0	1.54756	-1.5475665	125			
ND<0	1.54756	-1.5475665	126			
ND<0	1.54756	-1.5475665	127			
0.223144 J	1.54756	-1.3244265	128			
0.470004 J	1.54756	-1.0775665	129			
0.647103 J	1.54756	-0.900459	65	130		
0.113329 J	1.54756	-1.4342365	131			
ND<0	1.54756	-1.5475665	132			
0.300105	1.54756	-1.2474665	133			
0.231112 J	1.54756	-1.3164565	134			
-0.0833816 J	1.54756	-1.6309465	135			
-0.0304592 J	1.54756	-1.5780265	136			
0.0953102	1.54756	-1.4522565	137			
ND<0	0.955511	-0.955511	65	138		
ND<0	0.955511	-0.955511	65	139		
ND<0	0.955511	-0.955511	65	140		

ND<0	0.955511	-0.955511	65	141
0.223144 J	0.955511	-0.732368	65	142
0.470004 J	0.955511	-0.485508	65	143
0.647103 J	0.955511	-0.308408	65	144
0.113329 J	0.955511	-0.842183	65	145
ND<0	0.955511	-0.955511	65	146
0.300105	0.955511	-0.655407	65	147
0.231112 J	0.955511	-0.7244	65	148
-0.0833816 J	0.955511	-1.0388965	65	149
-0.0304592 J	0.955511	-0.985971	65	150
0.0953102	0.955511	-0.860201	65	151

ND<0	ND<0	0	65	151
ND<0	ND<0	0	65	151
ND<0	ND<0	0	65	151
0.223144 J	ND<0	0.223144	66	151
0.470004 J	ND<0	0.470004	67	151
0.647103 J	ND<0	0.647103	68	151
0.113329 J	ND<0	0.113329	69	151
ND<0	ND<0	0	69	151
0.300105	ND<0	0.300105	70	151
0.231112 J	ND<0	0.231112	71	151
-0.0833816 J	ND<0	-0.0833816	71	152
-0.0304592 J	ND<0	-0.0304592	71	153
0.0953102	ND<0	0.0953102	72	153

ND<0	ND<0	0	72	153
ND<0	ND<0	0	72	153
0.223144 J	ND<0	0.223144	73	153
0.470004 J	ND<0	0.470004	74	153
0.647103 J	ND<0	0.647103	75	153
0.113329 J	ND<0	0.113329	76	153
ND<0	ND<0	0	76	153
0.300105	ND<0	0.300105	77	153
0.231112 J	ND<0	0.231112	78	153
-0.0833816 J	ND<0	-0.0833816	78	154
-0.0304592 J	ND<0	-0.0304592	78	155
0.0953102	ND<0	0.0953102	79	155

ND<0	ND<0	0	79	155
0.223144 J	ND<0	0.223144	80	155
0.470004 J	ND<0	0.470004	81	155
0.647103 J	ND<0	0.647103	82	155
0.113329 J	ND<0	0.113329	83	155
ND<0	ND<0	0	83	155
0.300105	ND<0	0.300105	84	155
0.231112 J	ND<0	0.231112	85	155
-0.0833816 J	ND<0	-0.0833816	85	156
-0.0304592 J	ND<0	-0.0304592	85	157
0.0953102	ND<0	0.0953102	86	157

0.223144 J	ND<0	0.223144	87	157
0.470004 J	ND<0	0.470004	88	157
0.647103 J	ND<0	0.647103	89	157
0.113329 J	ND<0	0.113329	90	157
ND<0	ND<0	0	90	157
0.300105	ND<0	0.300105	91	157
0.231112 J	ND<0	0.231112	92	157
-0.0833816 J	ND<0	-0.0833816	92	158
-0.0304592 J	ND<0	-0.0304592	92	159
0.0953102	ND<0	0.0953102	93	159

0.470004 J	0.223144 J	0.24686	94	159
0.647103 J	0.223144 J	0.42396	95	159
0.113329 J	0.223144 J	-0.109815	95	160
ND<0	0.223144 J	-0.223144	95	161
0.300105	0.223144 J	0.076961	96	161
0.231112 J	0.223144 J	0.00796817	97	161
-0.0833816 J	0.223144 J	-0.306525	97	162
-0.0304592 J	0.223144 J	-0.253603	97	163
0.0953102	0.223144 J	-0.127833	97	164
0.647103 J	0.470004 J	0.1771	98	164
0.113329 J	0.470004 J	-0.356675	98	165
ND<0	0.470004 J	-0.470004	98	166
0.300105	0.470004 J	-0.169899	98	167
0.231112 J	0.470004 J	-0.238892	98	168
-0.0833816 J	0.470004 J	-0.553385	98	169
-0.0304592 J	0.470004 J	-0.500463	98	170
0.0953102	0.470004 J	-0.374693	98	171
0.113329 J	0.647103 J	-0.533775	98	172
ND<0	0.647103 J	-0.647103	98	173
0.300105	0.647103 J	-0.346999	98	174
0.231112 J	0.647103 J	-0.415992	98	175
-0.0833816 J	0.647103 J	-0.730485	98	176
-0.0304592 J	0.647103 J	-0.677562	98	177
0.0953102	0.647103 J	-0.551793	98	178
ND<0	0.113329 J	-0.113329	98	179
0.300105	0.113329 J	0.186776	99	179
0.231112 J	0.113329 J	0.117783	100	179
-0.0833816 J	0.113329 J	-0.19671	100	180
-0.0304592 J	0.113329 J	-0.143788	100	181
0.0953102	0.113329 J	-0.0180185	100	182
0.300105	ND<0	0.300105	101	182
0.231112 J	ND<0	0.231112	102	182
-0.0833816 J	ND<0	-0.0833816	102	183
-0.0304592 J	ND<0	-0.0304592	102	184
0.0953102	ND<0	0.0953102	103	184
0.231112 J	0.300105	-0.0689929	103	185
-0.0833816 J	0.300105	-0.383486	103	186
-0.0304592 J	0.300105	-0.330564	103	187
0.0953102	0.300105	-0.204794	103	188
-0.0833816 J	0.231112 J	-0.314493	103	189
-0.0304592 J	0.231112 J	-0.261571	103	190
0.0953102	0.231112 J	-0.135802	103	191
-0.0304592 J	-0.0833816 J	0.0529224	104	191
0.0953102	-0.0833816 J	0.178692	105	191
0.0953102	-0.0304592 J	0.125769	106	191

S Statistic = 106 - 191 = -85

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
11/15/2009	1

There are 0 time periods with multiple data

A = 1176
B = 0
C = 336
D = 0
E = 56
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1993
Z-Score = -1.88159
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-1.88159| <= 1.97737 indicating no evidence of a trend

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		
1.97408		ND<0	1.97408	9	4	
1.93152		ND<0	1.93152	10	4	
1.80829		ND<0	1.80829	11	4	
1.84055		ND<0	1.84055	12	4	
ND<0	ND<0	0	12	4		
0.19062 J		ND<0	0.19062	13	4	
0.329304 J		ND<0	0.329304	14	4	
-0.18633 J		ND<0	-0.186314	5		
ND<0	ND<0	0	14	5		
0.139762 J		ND<0	0.139762	15	5	
0.223144 J		ND<0	0.223144	16	5	
-0.478036 J		ND<0	-0.478036	16	6	
ND<-2.07944		ND<0	-2.079416	7		
-1.04982 J		ND<0	-1.049816	8		
1.93152		1.97408	-0.0425596	16	9	
1.80829		1.97408	-0.165792	16	10	
1.84055		1.97408	-0.133531	16	11	
ND<0	1.97408	-1.97408	16	12		
0.19062 J		1.97408	-1.78346	16	13	
0.329304 J		1.97408	-1.64478	16	14	
-0.18633 J		1.97408	-2.16041	16	15	
ND<0	1.97408	-1.97408	16	16		
0.139762 J		1.97408	-1.83432	16	17	
0.223144 J		1.97408	-1.75094	16	18	
-0.478036 J		1.97408	-2.45212	16	19	
ND<-2.07944		1.97408	-4.05352	16	20	
-1.04982 J		1.97408	-3.0239	16	21	
1.80829		1.93152	-0.123233	16	22	
1.84055		1.93152	-0.090971	8	16	23
ND<0	1.93152	-1.93152	16	24		

0.19062 J	1.93152	-1.7409 16	25	
0.329304 J	1.93152	-1.6022216	26	
-0.18633 J	1.93152	-2.1178516	27	
ND<0 1.93152	-1.9315216	28		
0.139762 J	1.93152	-1.7917616	29	
0.223144 J	1.93152	-1.7083816	30	
-0.478036 J	1.93152	-2.4095616	31	
ND<-2.07944	1.93152	-4.0109616	32	
-1.04982 J	1.93152	-2.9813416	33	
1.84055	1.80829	0.0322609	17	33
ND<0 1.80829	-1.8082917	34		
0.19062 J	1.80829	-1.6176717	35	
0.329304 J	1.80829	-1.4789917	36	
-0.18633 J	1.80829	-1.9946217	37	
ND<0 1.80829	-1.8082917	38		
0.139762 J	1.80829	-1.6685317	39	
0.223144 J	1.80829	-1.5851517	40	
-0.478036 J	1.80829	-2.2863217	41	
ND<-2.07944	1.80829	-3.8877317	42	
-1.04982 J	1.80829	-2.8581117	43	
ND<0 1.84055	-1.8405517	44		
0.19062 J	1.84055	-1.6499317	45	
0.329304 J	1.84055	-1.5112517	46	
-0.18633 J	1.84055	-2.0268817	47	
ND<0 1.84055	-1.8405517	48		
0.139762 J	1.84055	-1.7007917	49	
0.223144 J	1.84055	-1.6174117	50	
-0.478036 J	1.84055	-2.3185917	51	
ND<-2.07944	1.84055	-3.9199917	52	
-1.04982 J	1.84055	-2.8903717	53	
0.19062 J	ND<0	0.19062 18	53	
0.329304 J	ND<0	0.329304	19	53
-0.18633 J	ND<0	-0.1863319	54	
ND<0 ND<0	0	19 54		
0.139762 J	ND<0	0.139762	20	54
0.223144 J	ND<0	0.223144	21	54
-0.478036 J	ND<0	-0.478036	21	55
ND<-2.07944	ND<0	-2.0794421	56	
-1.04982 J	ND<0	-1.0498221	57	
0.329304 J	0.19062 J	0.138683	22	57
-0.18633 J	0.19062 J	-0.3769522	58	
ND<0 0.19062 J	-0.1906222	59		
0.139762 J	0.19062 J	-0.0508584	22	60
0.223144 J	0.19062 J	0.0325232	23	60
-0.478036 J	0.19062 J	-0.668656	23	61
ND<-2.07944	0.19062 J	-2.2700623	62	
-1.04982 J	0.19062 J	-1.2404423	63	
-0.18633 J	0.329304 J	-0.515633	23	64
ND<0 0.329304 J	-0.329304	23	65	
0.139762 J	0.329304 J	-0.189542	23	66
0.223144 J	0.329304 J	-0.1061623	67	
-0.478036 J	0.329304 J	-0.8073423	68	
ND<-2.07944	0.329304 J	-2.4087523	69	
-1.04982 J	0.329304 J	-1.3791323	70	
ND<0 -0.18633 J	0.18633 24	70		

0.139762 J	-0.18633 J	0.326092	25	70
0.223144 J	-0.18633 J	0.409473	26	70
-0.478036 J	-0.18633 J	-0.291706	26	71
ND<-2.07944	-0.18633 J	-1.8931126	72	
-1.04982 J	-0.18633 J	-0.863493	26	73

0.139762 J	ND<0	0.139762	27	73
0.223144 J	ND<0	0.223144	28	73
-0.478036 J	ND<0	-0.478036	28	74
ND<-2.07944	ND<0	-2.0794428	75	
-1.04982 J	ND<0	-1.0498228	76	

0.223144 J	0.139762 J	0.0833816	29	76
-0.478036 J	0.139762 J	-0.617798	29	77
ND<-2.07944	0.139762 J	-2.2192 29	78	
-1.04982 J	0.139762 J	-1.1895829	79	

-0.478036 J	0.223144 J	-0.701179	29	80
ND<-2.07944	0.223144 J	-2.3025929	81	
-1.04982 J	0.223144 J	-1.2729729	82	

ND<-2.07944	-0.478036 J	-1.6014129	83	
-1.04982 J	-0.478036 J	-0.571786	29	84

-1.04982 J	ND<-2.07944	1.02962 30	84	

S Statistic = 30 - 84 = -54

Tied Group	Value	Members
1	0	4

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
11/15/2009		1

There are 0 time periods with multiple data

A = 156
B = 0
C = 24
D = 0
E = 12
F = 0
a = 8880
b = 30240
c = 480

Group Variance = 484.667
Z-Score = -2.40743
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.40743| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: 1,2-Dichlorobenzene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 196
Total Non-Detect: 194
Percent Non-Detects: 98.9796%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-7	25	25 (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

MW-9	25	25 (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	
MW-12AR	15	15 (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	
MW-11R	25	25 (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
MW-10	26	24 (92.3077%)	7/20/1995		ND<2	ND<2
			8/24/1995	ND<2	ND<2	
			9/28/1995	ND<2	ND<2	
			10/26/1995	0.5 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<0.21		ND<0.21
			11/15/2009	0.51 J	0.51 J	
MW-6	25	25 (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
MW-12BR		15	15 (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
MW-8	25	25 (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

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: 1,2-Dichlorobenzene

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.105	-2.575836	3.63492	-0.270463
2	0.105	-2.326341	2.0468	-0.514729
3	0.105	-2.170091	6.7561	-0.742588
4	0.105	-2.053752	0.974	-0.958232
5	0.105	-1.959962	4.8154	-1.16403
6	0.105	-1.880792	8.3528	-1.36151
7	0.105	-1.811913	1.6358	-1.55176
8	0.105	-1.750693	4.7007	-1.73558
9	0.105	-1.6954	37.5751	-1.9136
10	0.5	-1.644854	0.2806	-2.73603
11	0.51	-1.598194	2.8348	-3.5511
12	1	-1.554774	5.2522	-5.10588
13	1	-1.5141	47.5447	-6.61998
14	1	-1.468384	9.7008	-8.08836
15	1	-1.4325	51.7529	-9.52087
16	1	-1.398385	3.7083	-10.9192
17	1	-1.365815	5.5738	-12.2851
18	1	-1.334625	7.355	-13.6197
19	1	-1.304695	9.0572	-14.9244
20	1	-1.275886	0.6851	-16.2002
21	1	-1.248096	2.2428	-17.4483
22	1	-1.221236	3.7342	-18.6696
23	1	-1.195226	5.1627	-19.8648
24	1	-1.17	66.5316	-21.0348
25	1	-1.1455	67.8438	-22.1803
26	1	-1.121686	9.102	-23.302
27	1	-1.0939	70.2986	-24.3959
28	1	-1.071387	1.4464	-25.4672
29	1	-1.049397	2.5476	-26.5166
30	1	-1.027897	3.6042	-27.5445
31	1	-1.006877	4.618	-28.5514
32	1	-0.986272	75.5907	-29.5376
33	1	-0.966088	76.524	-30.5037
34	1	-0.946291	77.4195	-31.45
35	1	-0.926859	78.2786	-32.3769
36	1	-0.907769	79.1026	-33.2847
37	1	-0.889006	79.893	-34.1737
38	1	-0.870558	0.6508	-35.0442
39	1	-0.852385	81.3774	-35.8966
40	1	-0.830953	82.0679	-36.7275
41	1	-0.813379	82.7294	-37.5409
42	1	-0.796056	83.3632	-38.337
43	1	-0.778966	83.9699	-39.1159
44	1	-0.7621	84.5507	-39.878
45	1	-0.745449	85.1064	-40.6235
46	1	-0.729003	85.6379	-41.3525
47	1	-0.712751	86.1459	-42.0653
48	1	-0.696684	86.6313	-42.7619
49	1	-0.680797	87.0947	-43.4427

50	1	-0.665079	87.5371	-44.1078
51	1	-0.649522	87.959	-44.7573
52	1	-0.634124	88.3611	-45.3915
53	1	-0.615839	88.7403	-46.0073
54	1	-0.6007689.1012	-46.6081	
55	1	-0.585815	89.4444	-47.1939
56	1	-0.570999	89.7705	-47.7649
57	1	-0.556308	90.0799	-48.3212
58	1	-0.541736	90.3734	-48.8629
59	1	-0.5272890.6514	-49.3902	
60	1	-0.5129390.9145	-49.9031	
61	1	-0.498687	91.1632	-50.4018
62	1	-0.484544	91.398	-50.8864
63	1	-0.470498	91.6194	-51.3569
64	1	-0.456542	91.8278	-51.8134
65	1	-0.442676	92.0238	-52.2561
66	1	-0.426148	92.2054	-52.6822
67	1	-0.412463	92.3755	-53.0947
68	1	-0.398855	92.5346	-53.4935
69	1	-0.385321	92.683	-53.8789
70	1	-0.371856	92.8213	-54.2507
71	1	-0.358459	92.9498	-54.6092
72	1	-0.345126	93.0689	-54.9543
73	1	-0.331854	93.1791	-55.2862
74	1	-0.318639	93.2806	-55.6048
75	1	-0.305481	93.3739	-55.9103
76	1	-0.292375	93.4594	-56.2026
77	1	-0.279319	93.5374	-56.482
78	1	-0.266311	93.6083	-56.7483
79	1	-0.250759	93.6712	-56.999
80	1	-0.237847	93.7278	-57.2369
81	1	-0.224974	93.7784	-57.4619
82	1	-0.212137	93.8234	-57.674
83	1	-0.199336	93.8631	-57.8733
84	1	-0.186567	93.8979	-58.0599
85	1	-0.173829	93.9282	-58.2337
86	1	-0.161119	93.9541	-58.3948
87	1	-0.148434	93.9762	-58.5433
88	1	-0.135774	93.9946	-58.6791
89	1	-0.123135	94.0097	-58.8022
90	1	-0.110516	94.022	-58.9127
91	1	-0.0979139	94.0315	-59.0106
92	1	-0.0828129	94.0384	-59.0934
93	1	-0.0702426	94.0433	-59.1637
94	1	-0.0576847	94.0467	-59.2214
95	1	-0.0451348	94.0487	-59.2665
96	1	-0.0325917	94.0498	-59.2991
97	1	-0.0200544	94.0502	-59.3191
98	1	-0.00751925	94.0502	-59.3267
99	1	0.00751925	94.0503	-59.3191
100	1	0.0200544	94.0507	-59.2991
101	1	0.0325917	94.0517	-59.2665
102	1	0.0451348	94.0538	-59.2214
103	1	0.0576847	94.0571	-59.1637
104	1	0.0702426	94.062	-59.0934
105	1	0.0828129	94.0689	-59.0106
106	1	0.0979139	94.0785	-58.9127
107	1	0.110516	94.0907	-58.8022
108	1	0.123135	94.1059	-58.6791
109	1	0.135774	94.1243	-58.5433
110	1	0.148434	94.1463	-58.3948
111	1	0.161119	94.1723	-58.2337

112	1	0.173829		94.2025	-58.0599
113	1	0.186567		94.2373	-57.8733
114	1	0.199336		94.2771	-57.674
115	1	0.212137		94.3221	-57.4619
116	1	0.224974		94.3727	-57.2369
117	1	0.237847		94.4292	-56.999
118	1	0.250759		94.4921	-56.7483
119	1	0.266311		94.563	-56.482
120	1	0.279319		94.6411	-56.2026
121	1	0.292375		94.7265	-55.9103
122	1	0.305481		94.8199	-55.6048
123	1	0.318639		94.9214	-55.2862
124	1	0.331854		95.0315	-54.9543
125	1	0.345126		95.1506	-54.6092
126	1	0.358459		95.2791	-54.2507
127	1	0.371856		95.4174	-53.8789
128	1	0.385321		95.5659	-53.4935
129	1	0.398855		95.725	-53.0947
130	1	0.412463		95.8951	-52.6822
131	1	0.426148		96.0767	-52.2561
132	1	0.442676		96.2726	-51.8134
133	1	0.456542		96.4811	-51.3569
134	1	0.470498		96.7024	-50.8864
135	1	0.484544		96.9372	-50.4018
136	1	0.498687		97.1859	-49.9031
137	1	0.51293	97.449	-49.3902	
138	1	0.52728	97.727	-48.8629	
139	1	0.541736		98.0205	-48.3212
140	1	0.556308		98.33	-47.7649
141	1	0.570999		98.656	-47.1939
142	1	0.585815		98.9992	-46.6081
143	1	0.60076	99.3601	-46.0073	
144	1	0.615839		99.7394	-45.3915
145	1	0.634124		100.141	-44.7573
146	1	0.649522		100.563	-44.1078
147	1	0.665079		101.006	-43.4427
148	1	0.680797		101.469	-42.7619
149	1	0.696684		101.955	-42.0653
150	1	0.712751		102.463	-41.3525
151	1	0.729003		102.994	-40.6235
152	1	0.745449		103.55	-39.878
153	1	0.7621	104.131	-39.1159	
154	1	0.778966		104.737	-38.337
155	1	0.796056		105.371	-37.5409
156	1	0.813379		106.033	-36.7275
157	1	0.830953		106.723	-35.8966
158	1	0.852385		107.45	-35.0442
159	1	0.87055	108.207	-34.1737	
160	1	0.889006		108.998	-33.2847
161	1	0.907769		109.822	-32.3769
162	1	0.926859		110.681	-31.45
163	1	0.946291		111.576	-30.5037
164	1	0.966088		112.51	-29.5376
165	1	0.986272		113.482	-28.5514
166	1	1.00687	114.496	-27.5445	
167	1	1.02789	115.553	-26.5166	
168	1	1.04939	116.654	-25.4672	
169	1	1.07138	117.802	-24.3959	
170	1	1.0939	118.998	-23.302	
171	1	1.12168	120.257	-22.1803	
172	1	1.1455	121.569	-21.0348	
173	1	1.17	122.938	-19.8648	

174	1	1.19522	124.366	-18.6696
175	1	1.22123	125.858	-17.4483
176	1	1.24809	127.415	-16.2002
177	1	1.27588	129.043	-14.9244
178	1	1.30469	130.745	-13.6197
179	1	1.33462	132.527	-12.2851
180	1	1.36581	134.392	-10.9192
181	1	1.39838	136.348	-9.52087
182	1	1.4325	138.4	-8.08836
183	1	1.46838	140.556	-6.61998
184	1	1.5141	142.848	-5.10588
185	1	1.55477	145.266	-3.5511
186	1	1.59819	147.82	-1.95291
187	1	1.64485	150.525	-0.30806
188	1	1.6954	153.4	1.38734
189	1	1.75069	156.465	3.13802
190	1	1.81191	159.748	4.94994
191	1	1.88079	163.285	6.83073
192	1	1.95996	167.126	8.79069
193	1	2.05375	171.344	10.8444
194	1	2.17009	176.054	13.0145
195	1	2.32634	181.466	15.3409
196	1	2.57583	188.1	17.9167

Data Set Standard Deviation = 0.193244
Numerator = 321.008
Denominator = 1369.73
W Statistic = 0.234358 = 321.008 / 1369.73

5% Critical value of 0.976 exceeds 0.234358
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.234358
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: 1,2-Dichlorobenzene

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.25379	-2.57583	6.63492	5.8054
2	-2.25379	-2.32634	12.0468	11.0485
3	-2.25379	-2.17009	16.7561	15.9394
4	-2.25379	-2.05375	20.974	20.5682
5	-2.25379	-1.95996	24.8154	24.9855
6	-2.25379	-1.88079	28.3528	29.2244
7	-2.25379	-1.81191	31.6358	33.3081
8	-2.25379	-1.75069	34.7007	37.2538
9	-2.25379	-1.6954	37.5751	41.0749
10	-0.693147		-1.64485	40.2806	42.215
11	-0.673345		-1.59819	42.8348	43.2911
12	0	-1.55477	45.2522	43.2911
13	0	-1.5141	47.5447	43.2911
14	0	-1.46838	49.7008	43.2911
15	0	-1.4325	51.7529	43.2911
16	0	-1.39838	53.7083	43.2911
17	0	-1.36581	55.5738	43.2911
18	0	-1.33462	57.355	43.2911
19	0	-1.30469	59.0572	43.2911
20	0	-1.27588	60.6851	43.2911
21	0	-1.24809	62.2428	43.2911
22	0	-1.22123	63.7342	43.2911
23	0	-1.19522	65.1627	43.2911
24	0	-1.17	66.5316	43.2911
25	0	-1.1455	67.8438	43.2911
26	0	-1.12168	69.102	43.2911
27	0	-1.0939	70.2986	43.2911
28	0	-1.07138	71.4464	43.2911
29	0	-1.04939	72.5476	43.2911
30	0	-1.02789	73.6042	43.2911
31	0	-1.00687	74.618	43.2911
32	0	-0.986272	75.5907	43.2911
33	0	-0.966088	76.524	43.2911
34	0	-0.946291	77.4195	43.2911
35	0	-0.926859	78.2786	43.2911
36	0	-0.907769	79.1026	43.2911
37	0	-0.889006	79.893	43.2911
38	0	-0.87055	80.6508	43.2911
39	0	-0.852385	81.3774	43.2911
40	0	-0.830953	82.0679	43.2911
41	0	-0.813379	82.7294	43.2911
42	0	-0.796056	83.3632	43.2911
43	0	-0.778966	83.9699	43.2911
44	0	-0.7621	84.5507	43.2911
45	0	-0.745449	85.1064	43.2911
46	0	-0.729003	85.6379	43.2911
47	0	-0.712751	86.1459	43.2911
48	0	-0.696684	86.6313	43.2911
49	0	-0.680797	87.0947	43.2911

50	0	-0.665079	87.5371	43.2911
51	0	-0.649522	87.959	43.2911
52	0	-0.634124	88.3611	43.2911
53	0	-0.615839	88.7403	43.2911
54	0	-0.6007689.1012	43.2911	
55	0	-0.585815	89.4444	43.2911
56	0	-0.570999	89.7705	43.2911
57	0	-0.556308	90.0799	43.2911
58	0	-0.541736	90.3734	43.2911
59	0	-0.5272890.6514	43.2911	
60	0	-0.5129390.9145	43.2911	
61	0	-0.498687	91.1632	43.2911
62	0	-0.484544	91.398	43.2911
63	0	-0.470498	91.6194	43.2911
64	0	-0.456542	91.8278	43.2911
65	0	-0.442676	92.0238	43.2911
66	0	-0.426148	92.2054	43.2911
67	0	-0.412463	92.3755	43.2911
68	0	-0.398855	92.5346	43.2911
69	0	-0.385321	92.683	43.2911
70	0	-0.371856	92.8213	43.2911
71	0	-0.358459	92.9498	43.2911
72	0	-0.345126	93.0689	43.2911
73	0	-0.331854	93.1791	43.2911
74	0	-0.318639	93.2806	43.2911
75	0	-0.305481	93.3739	43.2911
76	0	-0.292375	93.4594	43.2911
77	0	-0.279319	93.5374	43.2911
78	0	-0.266311	93.6083	43.2911
79	0	-0.250759	93.6712	43.2911
80	0	-0.237847	93.7278	43.2911
81	0	-0.224974	93.7784	43.2911
82	0	-0.212137	93.8234	43.2911
83	0	-0.199336	93.8631	43.2911
84	0	-0.186567	93.8979	43.2911
85	0	-0.173829	93.9282	43.2911
86	0	-0.161119	93.9541	43.2911
87	0	-0.148434	93.9762	43.2911
88	0	-0.135774	93.9946	43.2911
89	0	-0.123135	94.0097	43.2911
90	0	-0.110516	94.022	43.2911
91	0	-0.0979139	94.0315	43.2911
92	0	-0.0828129	94.0384	43.2911
93	0	-0.0702426	94.0433	43.2911
94	0	-0.0576847	94.0467	43.2911
95	0	-0.0451348	94.0487	43.2911
96	0	-0.0325917	94.0498	43.2911
97	0	-0.0200544	94.0502	43.2911
98	0	-0.00751925	94.0502	43.2911
99	0	0.00751925	94.0503	43.2911
100	0	0.0200544	94.0507	43.2911
101	0	0.0325917	94.0517	43.2911
102	0	0.0451348	94.0538	43.2911
103	0	0.0576847	94.0571	43.2911
104	0	0.0702426	94.062	43.2911
105	0	0.0828129	94.0689	43.2911
106	0	0.0979139	94.0785	43.2911
107	0	0.110516	94.0907	43.2911
108	0	0.123135	94.1059	43.2911
109	0	0.135774	94.1243	43.2911
110	0	0.148434	94.1463	43.2911
111	0	0.161119	94.1723	43.2911

112	0	0.173829		94.2025	43.2911
113	0	0.186567		94.2373	43.2911
114	0	0.199336		94.2771	43.2911
115	0	0.212137		94.3221	43.2911
116	0	0.224974		94.3727	43.2911
117	0	0.237847		94.4292	43.2911
118	0	0.250759		94.4921	43.2911
119	0	0.266311		94.563	43.2911
120	0	0.279319		94.6411	43.2911
121	0	0.292375		94.7265	43.2911
122	0	0.305481		94.8199	43.2911
123	0	0.318639		94.9214	43.2911
124	0	0.331854		95.0315	43.2911
125	0	0.345126		95.1506	43.2911
126	0	0.358459		95.2791	43.2911
127	0	0.371856		95.4174	43.2911
128	0	0.385321		95.5659	43.2911
129	0	0.398855		95.725	43.2911
130	0	0.412463		95.8951	43.2911
131	0	0.426148		96.0767	43.2911
132	0	0.442676		96.2726	43.2911
133	0	0.456542		96.4811	43.2911
134	0	0.470498		96.7024	43.2911
135	0	0.484544		96.9372	43.2911
136	0	0.498687		97.1859	43.2911
137	0	0.51293	97.449	43.2911	
138	0	0.52728	97.727	43.2911	
139	0	0.541736		98.0205	43.2911
140	0	0.556308		98.33	43.2911
141	0	0.570999		98.656	43.2911
142	0	0.585815		98.9992	43.2911
143	0	0.60076	99.3601	43.2911	
144	0	0.615839		99.7394	43.2911
145	0	0.634124		100.141	43.2911
146	0	0.649522		100.563	43.2911
147	0	0.665079		101.006	43.2911
148	0	0.680797		101.469	43.2911
149	0	0.696684		101.955	43.2911
150	0	0.712751		102.463	43.2911
151	0	0.729003		102.994	43.2911
152	0	0.745449		103.55	43.2911
153	0	0.7621	104.131	43.2911	
154	0	0.778966		104.737	43.2911
155	0	0.796056		105.371	43.2911
156	0	0.813379		106.033	43.2911
157	0	0.830953		106.723	43.2911
158	0	0.852385		107.45	43.2911
159	0	0.87055	108.207	43.2911	
160	0	0.889006		108.998	43.2911
161	0	0.907769		109.822	43.2911
162	0	0.926859		110.681	43.2911
163	0	0.946291		111.576	43.2911
164	0	0.966088		112.51	43.2911
165	0	0.986272		113.482	43.2911
166	0	1.00687	114.496	43.2911	
167	0	1.02789	115.553	43.2911	
168	0	1.04939	116.654	43.2911	
169	0	1.07138	117.802	43.2911	
170	0	1.0939	118.998	43.2911	
171	0	1.12168	120.257	43.2911	
172	0	1.1455	121.569	43.2911	
173	0	1.17	122.938	43.2911	

174	0	1.19522	124.366	43.2911
175	0	1.22123	125.858	43.2911
176	0	1.24809	127.415	43.2911
177	0	1.27588	129.043	43.2911
178	0	1.30469	130.745	43.2911
179	0	1.33462	132.527	43.2911
180	0	1.36581	134.392	43.2911
181	0	1.39838	136.348	43.2911
182	0	1.4325	138.4	43.2911
183	0	1.46838	140.556	43.2911
184	0	1.5141	142.848	43.2911
185	0	1.55477	145.266	43.2911
186	0	1.59819	147.82	43.2911
187	0	1.64485	150.525	43.2911
188	0	1.6954	153.4	43.2911
189	0	1.75069	156.465	43.2911
190	0	1.81191	159.748	43.2911
191	0	1.88079	163.285	43.2911
192	0	1.95996	167.126	43.2911
193	0	2.05375	171.344	43.2911
194	0	2.17009	176.054	43.2911
195	0	2.32634	181.466	43.2911
196	0	2.57583	188.1	43.2911

Data Set Standard Deviation = 0.476411
Numerator = 1874.12
Denominator = 8325.06
W Statistic = 0.225118 = 1874.12 / 8325.06

5% Critical value of 0.976 exceeds 0.225118
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.225118
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: 1,2-Dichlorobenzene

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

Total Percent Non-Detects = 98.9796%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 15
Maximum Background Concentration = 0
Confidence Level = 65.2%
False Positive Rate = 34.8%

Location	Date	Samples	Mean	Significant
MW-7	6/11/2009	1	-2.25379	FALSE
MW-9	6/11/2009	1	-2.25379	FALSE
MW-12AR	6/11/2009	1	-2.25379	FALSE
MW-11R	6/11/2009	1	-2.25379	FALSE
MW-10	11/15/2009	1	-0.673345	FALSE
MW-6	6/11/2009	1	-2.25379	FALSE
MW-12BR	6/11/2009	1	-2.25379	FALSE
MW-8	6/11/2009	1	-2.25379	FALSE

Concentrations (ug/L)

Parameter: 1,2-Dichloroethane

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 196
Total Non-Detect: 191
Percent Non-Detects: 97.449%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-10	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	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
			11/15/2009	0.45 J	0.45 J

MW-6	25	25 (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	
MW-12BR	15	15 (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	
MW-12AR	15	15 (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	
MW-11R	25	25 (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	
MW-9	25	24 (96%)	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	
MW-7	25	25 (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	
MW-8	25	25 (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	

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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.05	-2.57583	6.63492	-0.128792
2	0.05	-2.32634	12.0468	-0.245109
3	0.05	-2.17009	16.7561	-0.353613
4	0.05	-2.05375	20.974	-0.456301
5	0.05	-1.95996	24.8154	-0.554299
6	0.05	-1.88079	28.3528	-0.648338
7	0.05	-1.81191	31.6358	-0.738934
8	0.05	-1.75069	34.7007	-0.826468
9	0.05	-1.6954	37.5751	-0.911238
10	0.42	-1.64485	40.2806	-1.60208
11	0.45	-1.59819	42.8348	-2.32126
12	0.58	-1.55477	45.2522	-3.22303
13	0.67	-1.5141	47.5447	-4.23748
14	1	-1.46838	49.7008	-5.70586
15	1	-1.4325	51.7529	-7.13837
16	1	-1.39838	53.7083	-8.53674
17	1	-1.36581	55.5738	-9.90255
18	1	-1.33462	57.355	-11.2372
19	1	-1.30469	59.0572	-12.5419
20	1	-1.27588	60.6851	-13.8177
21	1	-1.24809	62.2428	-15.0658
22	1	-1.22123	63.7342	-16.2871
23	1	-1.19522	65.1627	-17.4823
24	1	-1.17	66.5316	-18.6523
25	1	-1.1455	67.8438	-19.7978
26	1	-1.12168	69.102	-20.9195
27	1	-1.0939	70.2986	-22.0134
28	1	-1.07138	71.4464	-23.0847
29	1	-1.04939	72.5476	-24.1341
30	1	-1.02789	73.6042	-25.162
31	1	-1.00687	74.618	-26.1689
32	1	-0.986272	75.5907	-27.1551
33	1	-0.966088	76.524	-28.1212
34	1	-0.946291	77.4195	-29.0675
35	1	-0.926859	78.2786	-29.9944
36	1	-0.907769	79.1026	-30.9022
37	1	-0.889006	79.893	-31.7912
38	1	-0.87055	80.6508	-32.6617
39	1	-0.852385	81.3774	-33.5141
40	1	-0.830953	82.0679	-34.345
41	1	-0.813379	82.7294	-35.1584
42	1	-0.796056	83.3632	-35.9545
43	1	-0.778966	83.9699	-36.7334
44	1	-0.7621	84.5507	-37.4955
45	1	-0.745449	85.1064	-38.241
46	1	-0.729003	85.6379	-38.97
47	1	-0.712751	86.1459	-39.6828
48	1	-0.696684	86.6313	-40.3794
49	1	-0.680797	87.0947	-41.0602

50	1	-0.665079	87.5371	-41.7253
51	1	-0.649522	87.959	-42.3748
52	1	-0.634124	88.3611	-43.009
53	1	-0.615839	88.7403	-43.6248
54	1	-0.6007689.1012	-44.2256	
55	1	-0.585815	89.4444	-44.8114
56	1	-0.570999	89.7705	-45.3824
57	1	-0.556308	90.0799	-45.9387
58	1	-0.541736	90.3734	-46.4804
59	1	-0.5272890.6514	-47.0077	
60	1	-0.5129390.9145	-47.5206	
61	1	-0.498687	91.1632	-48.0193
62	1	-0.484544	91.398	-48.5039
63	1	-0.470498	91.6194	-48.9744
64	1	-0.456542	91.8278	-49.4309
65	1	-0.442676	92.0238	-49.8736
66	1	-0.426148	92.2054	-50.2997
67	1	-0.412463	92.3755	-50.7122
68	1	-0.398855	92.5346	-51.111
69	1	-0.385321	92.683	-51.4964
70	1	-0.371856	92.8213	-51.8682
71	1	-0.358459	92.9498	-52.2267
72	1	-0.345126	93.0689	-52.5718
73	1	-0.331854	93.1791	-52.9037
74	1	-0.318639	93.2806	-53.2223
75	1	-0.305481	93.3739	-53.5278
76	1	-0.292375	93.4594	-53.8201
77	1	-0.279319	93.5374	-54.0995
78	1	-0.266311	93.6083	-54.3658
79	1	-0.250759	93.6712	-54.6165
80	1	-0.237847	93.7278	-54.8544
81	1	-0.224974	93.7784	-55.0794
82	1	-0.212137	93.8234	-55.2915
83	1	-0.199336	93.8631	-55.4908
84	1	-0.186567	93.8979	-55.6774
85	1	-0.173829	93.9282	-55.8512
86	1	-0.161119	93.9541	-56.0123
87	1	-0.148434	93.9762	-56.1608
88	1	-0.135774	93.9946	-56.2966
89	1	-0.123135	94.0097	-56.4197
90	1	-0.110516	94.022	-56.5302
91	1	-0.0979139	94.0315	-56.6281
92	1	-0.0828129	94.0384	-56.7109
93	1	-0.0702426	94.0433	-56.7812
94	1	-0.0576847	94.0467	-56.8389
95	1	-0.0451348	94.0487	-56.884
96	1	-0.0325917	94.0498	-56.9166
97	1	-0.0200544	94.0502	-56.9366
98	1	-0.00751925	94.0502	-56.9442
99	1	0.00751925	94.0503	-56.9366
100	1	0.0200544	94.0507	-56.9166
101	1	0.0325917	94.0517	-56.884
102	1	0.0451348	94.0538	-56.8389
103	1	0.0576847	94.0571	-56.7812
104	1	0.0702426	94.062	-56.7109
105	1	0.0828129	94.0689	-56.6281
106	1	0.0979139	94.0785	-56.5302
107	1	0.110516	94.0907	-56.4197
108	1	0.123135	94.1059	-56.2966
109	1	0.135774	94.1243	-56.1608
110	1	0.148434	94.1463	-56.0123
111	1	0.161119	94.1723	-55.8512

112	1	0.173829		94.2025	-55.6774
113	1	0.186567		94.2373	-55.4908
114	1	0.199336		94.2771	-55.2915
115	1	0.212137		94.3221	-55.0794
116	1	0.224974		94.3727	-54.8544
117	1	0.237847		94.4292	-54.6165
118	1	0.250759		94.4921	-54.3658
119	1	0.266311		94.563	-54.0995
120	1	0.279319		94.6411	-53.8201
121	1	0.292375		94.7265	-53.5278
122	1	0.305481		94.8199	-53.2223
123	1	0.318639		94.9214	-52.9037
124	1	0.331854		95.0315	-52.5718
125	1	0.345126		95.1506	-52.2267
126	1	0.358459		95.2791	-51.8682
127	1	0.371856		95.4174	-51.4964
128	1	0.385321		95.5659	-51.111
129	1	0.398855		95.725	-50.7122
130	1	0.412463		95.8951	-50.2997
131	1	0.426148		96.0767	-49.8736
132	1	0.442676		96.2726	-49.4309
133	1	0.456542		96.4811	-48.9744
134	1	0.470498		96.7024	-48.5039
135	1	0.484544		96.9372	-48.0193
136	1	0.498687		97.1859	-47.5206
137	1	0.51293	97.449	-47.0077	
138	1	0.52728	97.727	-46.4804	
139	1	0.541736		98.0205	-45.9387
140	1	0.556308		98.33	-45.3824
141	1	0.570999		98.656	-44.8114
142	1	0.585815		98.9992	-44.2256
143	1	0.60076	99.3601	-43.6248	
144	1	0.615839		99.7394	-43.009
145	1	0.634124		100.141	-42.3748
146	1	0.649522		100.563	-41.7253
147	1	0.665079		101.006	-41.0602
148	1	0.680797		101.469	-40.3794
149	1	0.696684		101.955	-39.6828
150	1	0.712751		102.463	-38.97
151	1	0.729003		102.994	-38.241
152	1	0.745449		103.55	-37.4955
153	1	0.7621	104.131	-36.7334	
154	1	0.778966		104.737	-35.9545
155	1	0.796056		105.371	-35.1584
156	1	0.813379		106.033	-34.345
157	1	0.830953		106.723	-33.5141
158	1	0.852385		107.45	-32.6617
159	1	0.87055	108.207	-31.7912	
160	1	0.889006		108.998	-30.9022
161	1	0.907769		109.822	-29.9944
162	1	0.926859		110.681	-29.0675
163	1	0.946291		111.576	-28.1212
164	1	0.966088		112.51	-27.1551
165	1	0.986272		113.482	-26.1689
166	1	1.00687	114.496	-25.162	
167	1	1.02789	115.553	-24.1341	
168	1	1.04939	116.654	-23.0847	
169	1	1.07138	117.802	-22.0134	
170	1	1.0939	118.998	-20.9195	
171	1	1.12168	120.257	-19.7978	
172	1	1.1455	121.569	-18.6523	
173	1	1.17	122.938	-17.4823	

174	1	1.19522	124.366	-16.2871
175	1	1.22123	125.858	-15.0658
176	1	1.24809	127.415	-13.8177
177	1	1.27588	129.043	-12.5419
178	1	1.30469	130.745	-11.2372
179	1	1.33462	132.527	-9.90255
180	1	1.36581	134.392	-8.53674
181	1	1.39838	136.348	-7.13837
182	1	1.4325	138.4	-5.70586
183	1	1.46838	140.556	-4.23748
184	1	1.5141	142.848	-2.72338
185	1	1.55477	145.266	-1.1686
186	1	1.59819	147.82	0.429587
187	1	1.64485	150.525	2.07444
188	1	1.6954	153.4	3.76984
189	1	1.75069	156.465	5.52052
190	1	1.81191	159.748	7.33244
191	1	1.88079	163.285	9.21323
192	1	1.95996	167.126	11.1732
193	1	2.05375	171.344	13.2269
194	1	2.17009	176.054	15.397
195	1	2.32634	181.466	17.7234
196	1.39	2.57583	188.1	21.3038

Data Set Standard Deviation = 0.211035
Numerator = 453.851
Denominator = 1633.56
W Statistic = 0.27783 = 453.851 / 1633.56

5% Critical value of 0.976 exceeds 0.27783
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.27783
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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.99573	-2.57583	6.63492	7.71651
2	-2.99573	-2.32634	12.0468	14.6856
3	-2.99573	-2.17009	16.7561	21.1866
4	-2.99573	-2.05375	20.974	27.3391
5	-2.99573	-1.95996	24.8154	33.2106
6	-2.99573	-1.88079	28.3528	38.845
7	-2.99573	-1.81191	31.6358	44.273
8	-2.99573	-1.75069	34.7007	49.5176
9	-2.99573	-1.6954	37.5751	54.5965
10	-0.867501	-1.64485	40.2806	56.0234
11	-0.798508	-1.59819	42.8348	57.2996
12	-0.544727	-1.55477	45.2522	58.1465
13	-0.400478	-1.5141	47.5447	58.7529
14	0	-1.46838	49.7008	58.7529
15	0	-1.4325	51.7529	58.7529
16	0	-1.39838	53.7083	58.7529
17	0	-1.36581	55.5738	58.7529
18	0	-1.33462	57.355	58.7529
19	0	-1.30469	59.0572	58.7529
20	0	-1.27588	60.6851	58.7529
21	0	-1.24809	62.2428	58.7529
22	0	-1.22123	63.7342	58.7529
23	0	-1.19522	65.1627	58.7529
24	0	-1.17	66.5316	58.7529
25	0	-1.1455	67.8438	58.7529
26	0	-1.12168	69.102	58.7529
27	0	-1.0939	70.2986	58.7529
28	0	-1.07138	71.4464	58.7529
29	0	-1.04939	72.5476	58.7529
30	0	-1.02789	73.6042	58.7529
31	0	-1.00687	74.618	58.7529
32	0	-0.986272	75.5907	58.7529
33	0	-0.966088	76.524	58.7529
34	0	-0.946291	77.4195	58.7529
35	0	-0.926859	78.2786	58.7529
36	0	-0.907769	79.1026	58.7529
37	0	-0.889006	79.893	58.7529
38	0	-0.870558	80.6508	58.7529
39	0	-0.852385	81.3774	58.7529
40	0	-0.830953	82.0679	58.7529
41	0	-0.813379	82.7294	58.7529
42	0	-0.796056	83.3632	58.7529
43	0	-0.778966	83.9699	58.7529
44	0	-0.7621	84.5507	58.7529
45	0	-0.745449	85.1064	58.7529
46	0	-0.729003	85.6379	58.7529
47	0	-0.712751	86.1459	58.7529
48	0	-0.696684	86.6313	58.7529
49	0	-0.680797	87.0947	58.7529

50	0	-0.665079	87.5371	58.7529
51	0	-0.649522	87.959	58.7529
52	0	-0.634124	88.3611	58.7529
53	0	-0.615839	88.7403	58.7529
54	0	-0.6007689.1012	58.7529	
55	0	-0.585815	89.4444	58.7529
56	0	-0.570999	89.7705	58.7529
57	0	-0.556308	90.0799	58.7529
58	0	-0.541736	90.3734	58.7529
59	0	-0.5272890.6514	58.7529	
60	0	-0.5129390.9145	58.7529	
61	0	-0.498687	91.1632	58.7529
62	0	-0.484544	91.398	58.7529
63	0	-0.470498	91.6194	58.7529
64	0	-0.456542	91.8278	58.7529
65	0	-0.442676	92.0238	58.7529
66	0	-0.426148	92.2054	58.7529
67	0	-0.412463	92.3755	58.7529
68	0	-0.398855	92.5346	58.7529
69	0	-0.385321	92.683	58.7529
70	0	-0.371856	92.8213	58.7529
71	0	-0.358459	92.9498	58.7529
72	0	-0.345126	93.0689	58.7529
73	0	-0.331854	93.1791	58.7529
74	0	-0.318639	93.2806	58.7529
75	0	-0.305481	93.3739	58.7529
76	0	-0.292375	93.4594	58.7529
77	0	-0.279319	93.5374	58.7529
78	0	-0.266311	93.6083	58.7529
79	0	-0.250759	93.6712	58.7529
80	0	-0.237847	93.7278	58.7529
81	0	-0.224974	93.7784	58.7529
82	0	-0.212137	93.8234	58.7529
83	0	-0.199336	93.8631	58.7529
84	0	-0.186567	93.8979	58.7529
85	0	-0.173829	93.9282	58.7529
86	0	-0.161119	93.9541	58.7529
87	0	-0.148434	93.9762	58.7529
88	0	-0.135774	93.9946	58.7529
89	0	-0.123135	94.0097	58.7529
90	0	-0.110516	94.022	58.7529
91	0	-0.0979139	94.0315	58.7529
92	0	-0.0828129	94.0384	58.7529
93	0	-0.0702426	94.0433	58.7529
94	0	-0.0576847	94.0467	58.7529
95	0	-0.0451348	94.0487	58.7529
96	0	-0.0325917	94.0498	58.7529
97	0	-0.0200544	94.0502	58.7529
98	0	-0.00751925	94.0502	58.7529
99	0	0.00751925	94.0503	58.7529
100	0	0.0200544	94.0507	58.7529
101	0	0.0325917	94.0517	58.7529
102	0	0.0451348	94.0538	58.7529
103	0	0.0576847	94.0571	58.7529
104	0	0.0702426	94.062	58.7529
105	0	0.0828129	94.0689	58.7529
106	0	0.0979139	94.0785	58.7529
107	0	0.110516	94.0907	58.7529
108	0	0.123135	94.1059	58.7529
109	0	0.135774	94.1243	58.7529
110	0	0.148434	94.1463	58.7529
111	0	0.161119	94.1723	58.7529

112	0	0.173829		94.2025	58.7529
113	0	0.186567		94.2373	58.7529
114	0	0.199336		94.2771	58.7529
115	0	0.212137		94.3221	58.7529
116	0	0.224974		94.3727	58.7529
117	0	0.237847		94.4292	58.7529
118	0	0.250759		94.4921	58.7529
119	0	0.266311		94.563	58.7529
120	0	0.279319		94.6411	58.7529
121	0	0.292375		94.7265	58.7529
122	0	0.305481		94.8199	58.7529
123	0	0.318639		94.9214	58.7529
124	0	0.331854		95.0315	58.7529
125	0	0.345126		95.1506	58.7529
126	0	0.358459		95.2791	58.7529
127	0	0.371856		95.4174	58.7529
128	0	0.385321		95.5659	58.7529
129	0	0.398855		95.725	58.7529
130	0	0.412463		95.8951	58.7529
131	0	0.426148		96.0767	58.7529
132	0	0.442676		96.2726	58.7529
133	0	0.456542		96.4811	58.7529
134	0	0.470498		96.7024	58.7529
135	0	0.484544		96.9372	58.7529
136	0	0.498687		97.1859	58.7529
137	0	0.51293	97.449	58.7529	
138	0	0.52728	97.727	58.7529	
139	0	0.541736		98.0205	58.7529
140	0	0.556308		98.33	58.7529
141	0	0.570999		98.656	58.7529
142	0	0.585815		98.9992	58.7529
143	0	0.60076	99.3601	58.7529	
144	0	0.615839		99.7394	58.7529
145	0	0.634124		100.141	58.7529
146	0	0.649522		100.563	58.7529
147	0	0.665079		101.006	58.7529
148	0	0.680797		101.469	58.7529
149	0	0.696684		101.955	58.7529
150	0	0.712751		102.463	58.7529
151	0	0.729003		102.994	58.7529
152	0	0.745449		103.55	58.7529
153	0	0.7621	104.131	58.7529	
154	0	0.778966		104.737	58.7529
155	0	0.796056		105.371	58.7529
156	0	0.813379		106.033	58.7529
157	0	0.830953		106.723	58.7529
158	0	0.852385		107.45	58.7529
159	0	0.87055	108.207	58.7529	
160	0	0.889006		108.998	58.7529
161	0	0.907769		109.822	58.7529
162	0	0.926859		110.681	58.7529
163	0	0.946291		111.576	58.7529
164	0	0.966088		112.51	58.7529
165	0	0.986272		113.482	58.7529
166	0	1.00687	114.496	58.7529	
167	0	1.02789	115.553	58.7529	
168	0	1.04939	116.654	58.7529	
169	0	1.07138	117.802	58.7529	
170	0	1.0939	118.998	58.7529	
171	0	1.12168	120.257	58.7529	
172	0	1.1455	121.569	58.7529	
173	0	1.17	122.938	58.7529	

174	0	1.19522	124.366	58.7529	
175	0	1.22123	125.858	58.7529	
176	0	1.24809	127.415	58.7529	
177	0	1.27588	129.043	58.7529	
178	0	1.30469	130.745	58.7529	
179	0	1.33462	132.527	58.7529	
180	0	1.36581	134.392	58.7529	
181	0	1.39838	136.348	58.7529	
182	0	1.4325	138.4	58.7529	
183	0	1.46838	140.556	58.7529	
184	0	1.5141	142.848	58.7529	
185	0	1.55477	145.266	58.7529	
186	0	1.59819	147.82	58.7529	
187	0	1.64485	150.525	58.7529	
188	0	1.6954	153.4	58.7529	
189	0	1.75069	156.465	58.7529	
190	0	1.81191	159.748	58.7529	
191	0	1.88079	163.285	58.7529	
192	0	1.95996	167.126	58.7529	
193	0	2.05375	171.344	58.7529	
194	0	2.17009	176.054	58.7529	
195	0	2.32634	181.466	58.7529	
196	0.329304		2.57583	188.1	59.6011

Data Set Standard Deviation = 0.633922
Numerator = 3552.29
Denominator = 14740
W Statistic = 0.240997 = 3552.29 / 14740

5% Critical value of 0.976 exceeds 0.240997
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.240997
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 = 97.449%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 15
Maximum Background Concentration = 0
Confidence Level = 65.2%
False Positive Rate = 34.8%

Location	Date	Samples	Mean	Significant
MW-10	11/15/2009	1	-0.798508	FALSE
MW-6	6/11/2009	1	-2.99573	FALSE
MW-12BR	6/11/2009	1	-2.99573	FALSE
MW-12AR	6/11/2009	1	-2.99573	FALSE
MW-11R	6/11/2009	1	-2.99573	FALSE
MW-9	6/11/2009	1	-2.99573	FALSE
MW-7	6/11/2009	1	-2.99573	FALSE
MW-8	6/11/2009	1	-2.99573	FALSE

Concentrations (ug/L)

Parameter: 1,2-Dichloropropane

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 197
Total Non-Detect: 169
Percent Non-Detects: 85.7868%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-10	26	9 (34.6154%)	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
			11/15/2009	2.8	2.8

MW-9	26	23 (88.4615%)	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
			11/15/2009	0.33 J	0.33 J	
MW-11R	25	17 (68%)	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
MW-12AR	15	15 (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
MW-12BR		15	15 (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
MW-7	25	25 (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
MW-6	25	25 (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
MW-8	25	25 (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

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 = 197

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.065	-2.575836	3.63492	-0.167429
2	0.065	-2.326341	2.0468	-0.318641
3	0.065	-2.170091	6.7561	-0.459697
4	0.065	-2.053752	0.974	-0.593191
5	0.065	-1.959962	4.8154	-0.720588
6	0.065	-1.880792	8.3528	-0.84284
7	0.065	-1.811913	1.6358	-0.960614
8	0.065	-1.750693	4.7007	-1.07441
9	0.23	-1.6954	37.5751	-1.46435
10	0.24	-1.644854	0.2806	-1.85912
11	0.33	-1.598194	2.8348	-2.38652
12	0.42	-1.554774	5.2522	-3.03952
13	0.5	-1.5141	47.5447	-3.79657
14	0.6	-1.475794	9.7226	-4.68205
15	0.95	-1.439535	1.7949	-6.0496
16	1	-1.405075	3.7691	-7.45468
17	1	-1.3722	55.6521	-8.82688
18	1	-1.340755	7.4497	-10.1676
19	1	-1.310585	9.1673	-11.4782
20	1	-1.275886	0.7952	-12.7541
21	1	-1.248096	2.3529	-14.0022
22	1	-1.221236	3.8443	-15.2234
23	1	-1.195226	5.2728	-16.4186
24	1	-1.17	66.6417	-17.5886
25	1	-1.1455	67.9539	-18.7341
26	1	-1.121686	9.2121	-19.8558
27	1	-1.098477	0.4187	-20.9543
28	1	-1.075847	1.5761	-22.0301
29	1	-1.053757	2.6865	-23.0839
30	1	-1.032157	3.7519	-24.116
31	1	-1.011047	4.774	-25.1271
32	1	-0.990356	75.7549	-26.1174
33	1	-0.970094	76.6959	-27.0875
34	1	-0.950222	77.5989	-28.0377
35	1	-0.930718	78.4651	-28.9684
36	1	-0.911562	79.296	-29.88
37	1	-0.892733	80.093	-30.7727
38	1	-0.874218	80.8573	-31.647
39	1	-0.855996	81.59	-32.5029
40	1	-0.834498	82.2864	-33.3374
41	1	-0.816874	82.9537	-34.1543
42	1	-0.7995	83.5929	-34.9538
43	1	-0.782366	84.205	-35.7362
44	1	-0.765456	84.7909	-36.5016
45	1	-0.748762	85.3515	-37.2504
46	1	-0.732275	85.8878	-37.9827
47	1	-0.715986	86.4004	-38.6987
48	1	-0.699883	86.8902	-39.3985
49	1	-0.683968	7.358	-40.0825

50	1	-0.668209	87.8045	-40.7507
51	1	-0.652622	88.2304	-41.4033
52	1	-0.637192	88.6365	-42.0405
53	1	-0.621911	89.0232	-42.6624
54	1	-0.606775	89.3914	-43.2692
55	1	-0.591776	89.7416	-43.861
56	1	-0.576911	90.0744	-44.4379
57	1	-0.562179	0.3905	-45.0001
58	1	-0.547551	90.6903	-45.5476
59	1	-0.533048	90.9744	-46.0807
60	1	-0.515791	91.2405	-46.5965
61	1	-0.501527	91.492	-47.098
62	1	-0.487364	91.7295	-47.5854
63	1	-0.473299	91.9535	-48.0587
64	1	-0.459327	92.1645	-48.518
65	1	-0.445443	92.3629	-48.9634
66	1	-0.431644	92.5492	-49.3951
67	1	-0.417928	92.7239	-49.813
68	1	-0.404299	2.8874	-50.2173
69	1	-0.390726	93.04	-50.608
70	1	-0.377233	93.1823	-50.9852
71	1	-0.363809	93.3147	-51.3491
72	1	-0.350451	93.4375	-51.6995
73	1	-0.337155	93.5512	-52.0367
74	1	-0.323919	93.6561	-52.3606
75	1	-0.310738	93.7527	-52.6713
76	1	-0.297612	93.8412	-52.9689
77	1	-0.284535	93.9222	-53.2535
78	1	-0.271509	93.9959	-53.525
79	1	-0.258527	94.0627	-53.7835
80	1	-0.243007	94.1218	-54.0265
81	1	-0.230118	94.1748	-54.2566
82	1	-0.217267	94.222	-54.4739
83	1	-0.204452	94.2638	-54.6783
84	1	-0.191671	94.3005	-54.87
85	1	-0.178929	4.3325	-55.0489
86	1	-0.166199	94.3601	-55.2151
87	1	-0.153505	94.3837	-55.3686
88	1	-0.140835	94.4035	-55.5095
89	1	-0.128189	94.42	-55.6377
90	1	-0.115562	94.4333	-55.7532
91	1	-0.102953	94.4439	-55.8562
92	1	-0.0903606	94.4521	-55.9465
93	1	-0.0777834	94.4581	-56.0243
94	1	-0.0652187	94.4624	-56.0895
95	1	-0.0526632	94.4652	-56.1422
96	1	-0.0401167	94.4668	-56.1823
97	1	-0.0275759	94.4675	-56.2099
98	1	-0.0150408	94.4678	-56.2249
99	1	0	94.4678	-56.2249
100	1	0.0150408	94.468	-56.2099
101	1	0.0275759	94.4687	-56.1823
102	1	0.0401167	94.4703	-56.1422
103	1	0.0526632	94.4731	-56.0895
104	1	0.0652187	94.4774	-56.0243
105	1	0.0777834	94.4834	-55.9465
106	1	0.0903606	94.4916	-55.8562
107	1	0.102953	94.5022	-55.7532
108	1	0.115562	94.5155	-55.6377
109	1	0.128189	94.532	-55.5095
110	1	0.140835	94.5518	-55.3686
111	1	0.153505	94.5754	-55.2151

112	1	0.166199	94.603	-55.0489
113	1	0.17892	94.635	-54.87
114	1	0.191671	94.6717	-54.6783
115	1	0.204452	94.7135	-54.4739
116	1	0.217267	94.7608	-54.2566
117	1	0.230118	94.8137	-54.0265
118	1	0.243007	94.8728	-53.7835
119	1	0.258527	94.9396	-53.525
120	1	0.271509	95.0133	-53.2535
121	1	0.284535	95.0943	-52.9689
122	1	0.297612	95.1828	-52.6713
123	1	0.310738	95.2794	-52.3606
124	1	0.323919	95.3843	-52.0367
125	1	0.337155	95.498	-51.6995
126	1	0.350451	95.6208	-51.3491
127	1	0.363809	95.7532	-50.9852
128	1	0.377233	95.8955	-50.608
129	1	0.390726	96.0481	-50.2173
130	1	0.40429	96.2116	-49.813
131	1	0.417928	96.3863	-49.3951
132	1	0.431644	96.5726	-48.9634
133	1	0.445443	96.771	-48.518
134	1	0.459327	96.982	-48.0587
135	1	0.473299	97.206	-47.5854
136	1	0.487364	97.4435	-47.098
137	1	0.501527	97.695	-46.5965
138	1	0.515791	97.9611	-46.0807
139	1	0.533048	98.2452	-45.5476
140	1	0.547551	98.545	-45.0001
141	1	0.56217	98.8611	-44.4379
142	1	0.576911	99.1939	-43.861
143	1	0.591776	99.5441	-43.2692
144	1	0.606775	99.9123	-42.6624
145	1	0.621911	100.299	-42.0405
146	1	0.637192	100.705	-41.4033
147	1	0.652622	101.131	-40.7507
148	1	0.668209	101.577	-40.0825
149	1	0.68396	102.045	-39.3985
150	1	0.699883	102.535	-38.6987
151	1	0.715986	103.048	-37.9827
152	1	0.732275	103.584	-37.2504
153	1	0.748762	104.145	-36.5016
154	1	0.765456	104.731	-35.7362
155	1	0.782366	105.343	-34.9538
156	1	0.7995	105.982	-34.1543
157	1	0.816874	106.649	-33.3374
158	1	0.834498	107.346	-32.5029
159	1	0.855996	108.078	-31.647
160	1	0.874218	108.842	-30.7727
161	1	0.892733	109.639	-29.88
162	1	0.911562	110.47	-28.9684
163	1	0.930718	111.337	-28.0377
164	1	0.950222	112.24	-27.0875
165	1	0.970094	113.181	-26.1174
166	1	0.990356	114.161	-25.1271
167	1	1.01104	115.184	-24.116
168	1	1.03215	116.249	-23.0839
169	1	1.05375	117.359	-22.0301
170	1	1.07584	118.517	-20.9543
171	1	1.09847	119.723	-19.8558
172	1	1.12168	120.982	-18.7341
173	1	1.1455	122.294	-17.5886

174	1	1.17	123.663	-16.4186
175	1	1.19522	125.091	-15.2234
176	1	1.22123	126.583	-14.0022
177	1.2	1.24809	128.14	-12.5045
178	1.3	1.27588	129.768	-10.8458
179	2.12	1.31058	131.486	-8.06741
180	2.2	1.34075	133.283	-5.11775
181	2.8	1.3722	135.166	-1.27557
182	2.93	1.40507	137.141	2.84129
183	3	1.43953	139.213	7.15988
184	3	1.47579	141.391	11.5873
185	3.1	1.5141	143.683	16.281
186	3.32	1.55477	146.101	21.4428
187	3.51	1.59819	148.655	27.0525
188	3.78	1.64485	151.36	33.27
189	3.97	1.6954	154.235	40.0007
190	4	1.75069	157.3	47.0035
191	4.3	1.81191	160.583	54.7947
192	5	1.88079	164.12	64.1987
193	5.6	1.95996	167.962	75.1745
194	5.6	2.05375	172.179	86.6754
195	6	2.17009	176.889	99.696
196	7.7	2.32634	182.301	117.609
197	9.1	2.57583	188.936	141.049

Data Set Standard Deviation = 1.15205
Numerator = 19894.8
Denominator = 49148.5
W Statistic = 0.404789 = 19894.8 / 49148.5

5% Critical value of 0.976 exceeds 0.404789
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.404789
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 = 197

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.73337	-2.57583	6.63492	7.0407
2	-2.73337	-2.32634	12.0468	13.3995
3	-2.73337	-2.17009	16.7561	19.3311
4	-2.73337	-2.05375	20.974	24.9448
5	-2.73337	-1.95996	24.8154	30.3021
6	-2.73337	-1.88079	28.3528	35.4429
7	-2.73337	-1.81191	31.6358	40.3956
8	-2.73337	-1.75069	34.7007	45.1808
9	-1.46968	-1.6954	37.5751	47.6725
10	-1.42712	-1.64485	40.2806	50.0199
11	-1.10866	-1.59819	42.8348	51.7918
12	-0.867501	-1.55477	45.2522	53.1405
13	-0.693147	-1.5141	47.5447	54.19
14	-0.510826	-1.47579	49.7226	54.9439
15	-0.0512933	-1.43953	51.7949	55.0178
16	0	-1.40507	53.7691	55.0178
17	0	-1.3722	55.6521	55.0178
18	0	-1.34075	57.4497	55.0178
19	0	-1.31058	59.1673	55.0178
20	0	-1.27588	60.7952	55.0178
21	0	-1.24809	62.3529	55.0178
22	0	-1.22123	63.8443	55.0178
23	0	-1.19522	65.2728	55.0178
24	0	-1.17	66.6417	55.0178
25	0	-1.1455	67.9539	55.0178
26	0	-1.12168	69.2121	55.0178
27	0	-1.09847	70.4187	55.0178
28	0	-1.07584	71.5761	55.0178
29	0	-1.05375	72.6865	55.0178
30	0	-1.03215	73.7519	55.0178
31	0	-1.01104	74.774	55.0178
32	0	-0.990356	75.7549	55.0178
33	0	-0.970094	76.6959	55.0178
34	0	-0.950222	77.5989	55.0178
35	0	-0.930718	78.4651	55.0178
36	0	-0.911562	79.296	55.0178
37	0	-0.892733	80.093	55.0178
38	0	-0.874218	80.8573	55.0178
39	0	-0.855996	81.59	55.0178
40	0	-0.834498	82.2864	55.0178
41	0	-0.816874	82.9537	55.0178
42	0	-0.7995	83.5929	55.0178
43	0	-0.782366	84.205	55.0178
44	0	-0.765456	84.7909	55.0178
45	0	-0.748762	85.3515	55.0178
46	0	-0.732275	85.8878	55.0178
47	0	-0.715986	86.4004	55.0178
48	0	-0.699883	86.8902	55.0178
49	0	-0.683968	7.358	55.0178

50	0	-0.668209	87.8045	55.0178
51	0	-0.652622	88.2304	55.0178
52	0	-0.637192	88.6365	55.0178
53	0	-0.621911	89.0232	55.0178
54	0	-0.606775	89.3914	55.0178
55	0	-0.591776	89.7416	55.0178
56	0	-0.576911	90.0744	55.0178
57	0	-0.562179	0.3905	55.0178
58	0	-0.547551	90.6903	55.0178
59	0	-0.533048	90.9744	55.0178
60	0	-0.515791	91.2405	55.0178
61	0	-0.501527	91.492	55.0178
62	0	-0.487364	91.7295	55.0178
63	0	-0.473299	91.9535	55.0178
64	0	-0.459327	92.1645	55.0178
65	0	-0.445443	92.3629	55.0178
66	0	-0.431644	92.5492	55.0178
67	0	-0.417928	92.7239	55.0178
68	0	-0.404299	2.8874	55.0178
69	0	-0.390726	93.04	55.0178
70	0	-0.377233	93.1823	55.0178
71	0	-0.363809	93.3147	55.0178
72	0	-0.350451	93.4375	55.0178
73	0	-0.337155	93.5512	55.0178
74	0	-0.323919	93.6561	55.0178
75	0	-0.310738	93.7527	55.0178
76	0	-0.297612	93.8412	55.0178
77	0	-0.284535	93.9222	55.0178
78	0	-0.271509	93.9959	55.0178
79	0	-0.258527	94.0627	55.0178
80	0	-0.243007	94.1218	55.0178
81	0	-0.230118	94.1748	55.0178
82	0	-0.217267	94.222	55.0178
83	0	-0.204452	94.2638	55.0178
84	0	-0.191671	94.3005	55.0178
85	0	-0.178929	4.3325	55.0178
86	0	-0.166199	94.3601	55.0178
87	0	-0.153505	94.3837	55.0178
88	0	-0.140835	94.4035	55.0178
89	0	-0.128189	94.42	55.0178
90	0	-0.115562	94.4333	55.0178
91	0	-0.102953	94.4439	55.0178
92	0	-0.0903606	94.4521	55.0178
93	0	-0.0777834	94.4581	55.0178
94	0	-0.0652187	94.4624	55.0178
95	0	-0.0526632	94.4652	55.0178
96	0	-0.0401167	94.4668	55.0178
97	0	-0.0275759	94.4675	55.0178
98	0	-0.0150408	94.4678	55.0178
99	0	0	94.4678	55.0178
100	0	0.0150408	94.468	55.0178
101	0	0.0275759	94.4687	55.0178
102	0	0.0401167	94.4703	55.0178
103	0	0.0526632	94.4731	55.0178
104	0	0.0652187	94.4774	55.0178
105	0	0.0777834	94.4834	55.0178
106	0	0.0903606	94.4916	55.0178
107	0	0.102953	94.5022	55.0178
108	0	0.115562	94.5155	55.0178
109	0	0.128189	94.532	55.0178
110	0	0.140835	94.5518	55.0178
111	0	0.153505	94.5754	55.0178

112	0	0.166199	94.603	55.0178
113	0	0.17892	94.635	55.0178
114	0	0.191671	94.6717	55.0178
115	0	0.204452	94.7135	55.0178
116	0	0.217267	94.7608	55.0178
117	0	0.230118	94.8137	55.0178
118	0	0.243007	94.8728	55.0178
119	0	0.258527	94.9396	55.0178
120	0	0.271509	95.0133	55.0178
121	0	0.284535	95.0943	55.0178
122	0	0.297612	95.1828	55.0178
123	0	0.310738	95.2794	55.0178
124	0	0.323919	95.3843	55.0178
125	0	0.337155	95.498	55.0178
126	0	0.350451	95.6208	55.0178
127	0	0.363809	95.7532	55.0178
128	0	0.377233	95.8955	55.0178
129	0	0.390726	96.0481	55.0178
130	0	0.40429	96.2116	55.0178
131	0	0.417928	96.3863	55.0178
132	0	0.431644	96.5726	55.0178
133	0	0.445443	96.771	55.0178
134	0	0.459327	96.982	55.0178
135	0	0.473299	97.206	55.0178
136	0	0.487364	97.4435	55.0178
137	0	0.501527	97.695	55.0178
138	0	0.515791	97.9611	55.0178
139	0	0.533048	98.2452	55.0178
140	0	0.547551	98.545	55.0178
141	0	0.56217	98.8611	55.0178
142	0	0.576911	99.1939	55.0178
143	0	0.591776	99.5441	55.0178
144	0	0.606775	99.9123	55.0178
145	0	0.621911	100.299	55.0178
146	0	0.637192	100.705	55.0178
147	0	0.652622	101.131	55.0178
148	0	0.668209	101.577	55.0178
149	0	0.68396	102.045	55.0178
150	0	0.699883	102.535	55.0178
151	0	0.715986	103.048	55.0178
152	0	0.732275	103.584	55.0178
153	0	0.748762	104.145	55.0178
154	0	0.765456	104.731	55.0178
155	0	0.782366	105.343	55.0178
156	0	0.7995	105.982	55.0178
157	0	0.816874	106.649	55.0178
158	0	0.834498	107.346	55.0178
159	0	0.855996	108.078	55.0178
160	0	0.874218	108.842	55.0178
161	0	0.892733	109.639	55.0178
162	0	0.911562	110.47	55.0178
163	0	0.930718	111.337	55.0178
164	0	0.950222	112.24	55.0178
165	0	0.970094	113.181	55.0178
166	0	0.990356	114.161	55.0178
167	0	1.01104	115.184	55.0178
168	0	1.03215	116.249	55.0178
169	0	1.05375	117.359	55.0178
170	0	1.07584	118.517	55.0178
171	0	1.09847	119.723	55.0178
172	0	1.12168	120.982	55.0178
173	0	1.1455	122.294	55.0178

174	0	1.17	123.663	55.0178	
175	0	1.19522	125.091	55.0178	
176	0	1.22123	126.583	55.0178	
177	0.182322		1.24809	128.14	55.2453
178	0.262364		1.27588	129.768	55.58
179	0.751416		1.31058	131.486	56.5648
180	0.788457		1.34075	133.283	57.622
181	1.02962	1.3722	135.166	59.0348	
182	1.075	1.40507	137.141	60.5453	
183	1.09861	1.43953	139.213	62.1268	
184	1.09861	1.47579	141.391	63.7481	
185	1.1314	1.5141	143.683	65.4611	
186	1.19996	1.55477	146.101	67.3268	
187	1.25562	1.59819	148.655	69.3335	
188	1.32972	1.64485	151.36	71.5207	
189	1.37877	1.6954	154.235	73.8583	
190	1.38629	1.75069	157.3	76.2853	
191	1.45862	1.81191	160.583	78.9281	
192	1.60944	1.88079	164.12	81.9552	
193	1.72277	1.95996	167.962	85.3317	
194	1.72277	2.05375	172.179	88.8698	
195	1.79176	2.17009	176.889	92.7581	
196	2.04122	2.32634	182.301	97.5067	
197	2.20827	2.57583	188.936	103.195	

Data Set Standard Deviation = 0.733298
Numerator = 10649.2
Denominator = 19912.7
W Statistic = 0.534792 = 10649.2 / 19912.7

5% Critical value of 0.976 exceeds 0.534792
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.534792
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	85
	9/23/1999	ND<0	85
	3/15/2000	ND<0	85
	9/24/2003	ND<0	85
	3/11/2004	ND<0	85
	10/12/2004	ND<0	85
	4/1/2005	ND<0	85
	10/25/2005	ND<0	85
	4/29/2006	ND<0	85
	11/18/2006	ND<0	85
	5/23/2007	ND<0	85
	11/28/2007	ND<0	85
	6/5/2008	ND<0	85
	11/20/2008	ND<0	85
	6/11/2009	ND<-2.73337	85

Rank Sum = 1275
Rank Mean = 85

Background Rank Sum = 1275
Background Rank Mean = 85

Compliance Wells

Well ID	Date	Result	Rank
MW-10	7/20/1995	-0.867501 J	173
	8/24/1995	1.1314	185
	9/28/1995	1.60944	192
	10/26/1995	1.09861	183
	11/19/1996	ND<0	85
	12/19/1996	ND<0	85
	3/24/1997	1.79176	195
	9/24/1997	2.04122	196
	4/7/1998	ND<0	85
	9/23/1998	1.72277	193
	3/16/1999	2.20827	197
	9/23/1999	1.72277	194
	3/15/2000	ND<0	85
	9/24/2003	ND<0	85
	3/11/2004	ND<0	85
	10/12/2004	ND<0	85
	4/1/2005	0.751416	179
	10/25/2005	1.19996	186
	4/29/2006	1.37877	189
	11/18/2006	1.075	182
	5/23/2007	ND<0	85
	11/28/2007	1.32972	188
	6/5/2008	1.25562	187

	11/20/2008	ND<0	85	
	6/11/2009	0.788457		180
	11/15/2009	1.02962		181

Rank Sum = 3945
Rank Mean = 151.731

MW-9	7/20/1995	ND<0	85	
	8/24/1995	ND<0	85	
	9/28/1995	ND<0	85	
	10/26/1995	ND<0	85	
	11/19/1996	ND<0	85	
	12/19/1996	ND<0	85	
	3/24/1997	ND<0	85	
	9/24/1997	ND<0	85	
	4/7/1998	ND<0	85	
	9/23/1998	ND<0	85	
	3/16/1999	ND<0	85	
	9/23/1999	ND<0	85	
	3/15/2000	ND<0	85	
	9/24/2003	ND<0	85	
	3/11/2004	ND<0	85	
	10/12/2004	ND<0	85	
	4/1/2005	ND<0	85	
	10/25/2005	ND<0	85	
	4/29/2006	ND<0	85	
	11/18/2006	ND<0	85	
	5/23/2007	ND<0	85	
	11/28/2007	-1.46968	J	170
	6/5/2008	ND<0	85	
	11/20/2008	-1.42712	J	171
	6/11/2009	ND<-2.73337		85
	11/15/2009	-1.10866	J	172

Rank Sum = 2468
Rank Mean = 94.9231

MW-11R	7/20/1995	0.182322	J	177
	8/24/1995	1.45862		191
	9/28/1995	1.09861		184
	10/26/1995	1.38629		190
	11/19/1996	ND<0	85	
	12/19/1996	ND<0	85	
	3/24/1997	ND<0	85	
	9/24/1997	ND<0	85	
	4/7/1998	ND<0	85	
	9/23/1998	ND<0	85	
	3/16/1999	ND<0	85	
	9/23/1999	ND<0	85	
	3/15/2000	ND<0	85	
	9/24/2003	ND<0	85	
	3/11/2004	ND<0	85	
	10/12/2004	ND<0	85	
	4/1/2005	0.262364	J	178
	10/25/2005	ND<0	85	
	4/29/2006	-0.693147	J	174
	11/18/2006	-0.510826	J	175
	5/23/2007	ND<0	85	
	11/28/2007	-0.0512933	J	176
	6/5/2008	ND<0	85	
	11/20/2008	ND<0	85	
	6/11/2009	ND<-2.73337		85

Rank Sum = 2890
Rank Mean = 115.6

MW-12AR	3/16/1999	ND<0	85
	9/23/1999	ND<0	85
	3/15/2000	ND<0	85
	9/24/2003	ND<0	85
	3/11/2004	ND<0	85
	10/12/2004	ND<0	85
	4/1/2005	ND<0	85
	10/25/2005	ND<0	85
	4/29/2006	ND<0	85
	11/18/2006	ND<0	85
	5/23/2007	ND<0	85
	11/28/2007	ND<0	85
	6/5/2008	ND<0	85
	11/20/2008	ND<0	85
	6/11/2009	ND<-2.73337	85

Rank Sum = 1275
Rank Mean = 85

MW-12BR	3/16/1999	ND<0	85
	9/23/1999	ND<0	85
	3/15/2000	ND<0	85
	9/24/2003	ND<0	85
	3/11/2004	ND<0	85
	10/12/2004	ND<0	85
	4/1/2005	ND<0	85
	10/25/2005	ND<0	85
	4/29/2006	ND<0	85
	11/18/2006	ND<0	85
	5/23/2007	ND<0	85
	11/28/2007	ND<0	85
	6/5/2008	ND<0	85
	11/20/2008	ND<0	85
	6/11/2009	ND<-2.73337	85

Rank Sum = 1275
Rank Mean = 85

MW-7	7/20/1995	ND<0	85
	8/24/1995	ND<0	85
	9/28/1995	ND<0	85
	10/26/1995	ND<0	85
	11/19/1996	ND<0	85
	12/19/1996	ND<0	85
	3/24/1997	ND<0	85
	9/24/1997	ND<0	85
	4/7/1998	ND<0	85
	9/23/1998	ND<0	85
	3/16/1999	ND<0	85
	9/23/1999	ND<0	85
	3/15/2000	ND<0	85
	9/24/2003	ND<0	85
	3/11/2004	ND<0	85
	10/12/2004	ND<0	85
	4/1/2005	ND<0	85
	10/25/2005	ND<0	85
	4/29/2006	ND<0	85
	11/18/2006	ND<0	85
	5/23/2007	ND<0	85
	11/28/2007	ND<0	85
	6/5/2008	ND<0	85
	11/20/2008	ND<0	85
	6/11/2009	ND<-2.73337	85

Rank Sum = 2125
Rank Mean = 85

MW-6	7/20/1995	ND<0	85
	8/24/1995	ND<0	85
	9/28/1995	ND<0	85
	10/26/1995	ND<0	85
	11/19/1996	ND<0	85
	12/19/1996	ND<0	85
	3/24/1997	ND<0	85
	9/24/1997	ND<0	85
	4/7/1998	ND<0	85
	9/23/1998	ND<0	85
	3/16/1999	ND<0	85
	9/23/1999	ND<0	85
	3/15/2000	ND<0	85
	9/24/2003	ND<0	85
	3/11/2004	ND<0	85
	10/12/2004	ND<0	85
	4/1/2005	ND<0	85
	10/25/2005	ND<0	85
	4/29/2006	ND<0	85
	11/18/2006	ND<0	85
	5/23/2007	ND<0	85
	11/28/2007	ND<0	85
	6/5/2008	ND<0	85
	11/20/2008	ND<0	85
	6/11/2009	ND<-2.73337	85

Rank Sum = 2125
Rank Mean = 85

MW-8	7/20/1995	ND<0	85
	8/24/1995	ND<0	85
	9/28/1995	ND<0	85
	10/26/1995	ND<0	85
	11/19/1996	ND<0	85
	12/19/1996	ND<0	85
	3/24/1997	ND<0	85
	9/24/1997	ND<0	85
	4/7/1998	ND<0	85
	9/23/1998	ND<0	85
	3/16/1999	ND<0	85
	9/23/1999	ND<0	85
	3/15/2000	ND<0	85
	9/24/2003	ND<0	85
	3/11/2004	ND<0	85
	10/12/2004	ND<0	85
	4/1/2005	ND<0	85
	10/25/2005	ND<0	85
	4/29/2006	ND<0	85
	11/18/2006	ND<0	85
	5/23/2007	ND<0	85
	11/28/2007	ND<0	85
	6/5/2008	ND<0	85
	11/20/2008	ND<0	85
	6/11/2009	ND<-2.73337	85

Rank Sum = 2125
Rank Mean = 85

Calculation Results:

Kruskal-Wallis H Statistic = 31.729
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 86.0637
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
31.729 > 15.5073 indicating a significant group difference at 5% significance level
86.0637 > 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 85

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	151.731	66.7308	43.0039	
MW-9	94.9231	9.92308	43.0039	
MW-11R	115.6	30.6	43.3175	
MW-12AR		85	0	48.4304
MW-12BR		85	0	48.4304
MW-7	85	0	43.3175	
MW-6	85	0	43.3175	
MW-8	85	0	43.3175	

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 85

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	151.731	66.7308	46.4384	
MW-9	94.9231	9.92308	46.4384	
MW-11R	115.6	30.6	46.777	
MW-12AR		85	0	52.2983
MW-12BR		85	0	52.2983
MW-7	85	0	46.777	
MW-6	85	0	46.777	
MW-8	85	0	46.777	

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
1.60944	1.1314	0.478036		26	0
1.09861	1.1314	-0.0327898		26	1
ND<0	1.1314	-1.1314	26	2	
ND<0	1.1314	-1.1314	26	3	
1.79176	1.1314	0.660357		27	3
2.04122	1.1314	0.909818		28	3
ND<0	1.1314	-1.1314	28	4	
1.72277	1.1314	0.591364		29	4
2.20827	1.1314	1.07687	30	4	
1.72277	1.1314	0.591364		31	4
ND<0	1.1314	-1.1314	31	5	
ND<0	1.1314	-1.1314	31	6	
ND<0	1.1314	-1.1314	31	7	
ND<0	1.1314	-1.1314	31	8	
0.751416	1.1314	-0.379986		31	9
1.19996	1.1314	0.0685627		32	9
1.37877	1.1314	0.247364		33	9
1.075	1.1314	-0.0563997		33	10
ND<0	1.1314	-1.1314	33	11	
1.32972	1.1314	0.198322		34	11
1.25562	1.1314	0.124214		35	11
ND<0	1.1314	-1.1314	35	12	

0.788457	1.1314	-0.342945	35	13	
1.02962	1.1314	-0.101783	35	14	
1.09861	1.60944	-0.510826	35	15	
ND<0	1.60944	-1.6094435	16		
ND<0	1.60944	-1.6094435	17		
1.79176	1.60944	0.182322	36	17	
2.04122	1.60944	0.431782	37	17	
ND<0	1.60944	-1.6094437	18		
1.72277	1.60944	0.113329	38	18	
2.20827	1.60944	0.598837	39	18	
1.72277	1.60944	0.113329	40	18	
ND<0	1.60944	-1.6094440	19		
ND<0	1.60944	-1.6094440	20		
ND<0	1.60944	-1.6094440	21		
ND<0	1.60944	-1.6094440	22		
0.751416	1.60944	-0.858022	40	23	
1.19996	1.60944	-0.409473	40	24	
1.37877	1.60944	-0.230672	40	25	
1.075	1.60944	-0.534435	40	26	
ND<0	1.60944	-1.6094440	27		
1.32972	1.60944	-0.279714	40	28	
1.25562	1.60944	-0.353822	40	29	
ND<0	1.60944	-1.6094440	30		
0.788457	1.60944	-0.820981	40	31	
1.02962	1.60944	-0.579818	40	32	
ND<0	1.09861	-1.0986140	33		
ND<0	1.09861	-1.0986140	34		
1.79176	1.09861	0.693147	41	34	
2.04122	1.09861	0.942608	42	34	
ND<0	1.09861	-1.0986142	35		
1.72277	1.09861	0.624154	43	35	
2.20827	1.09861	1.10966	44	35	
1.72277	1.09861	0.624154	45	35	
ND<0	1.09861	-1.0986145	36		
ND<0	1.09861	-1.0986145	37		
ND<0	1.09861	-1.0986145	38		
ND<0	1.09861	-1.0986145	39		
0.751416	1.09861	-0.347196	45	40	
1.19996	1.09861	0.101352	46	40	
1.37877	1.09861	0.280154	47	40	
1.075	1.09861	-0.0236099	47	41	
ND<0	1.09861	-1.0986147	42		
1.32972	1.09861	0.231112	48	42	
1.25562	1.09861	0.157004	49	42	
ND<0	1.09861	-1.0986149	43		
0.788457	1.09861	-0.310155	49	44	
1.02962	1.09861	-0.0689929	49	45	
ND<0	ND<0	0	49	45	
1.79176	ND<0	1.79176	50	45	
2.04122	ND<0	2.04122	51	45	
ND<0	ND<0	0	51	45	
1.72277	ND<0	1.72277	52	45	
2.20827	ND<0	2.20827	53	45	
1.72277	ND<0	1.72277	54	45	
ND<0	ND<0	0	54	45	
ND<0	ND<0	0	54	45	
ND<0	ND<0	0	54	45	
ND<0	ND<0	0	54	45	
0.751416	ND<0	0.751416	55	45	

1.19996		ND<0	1.19996	56	45		
1.37877		ND<0	1.37877	57	45		
1.075	ND<0	1.075	58	45			
ND<0	ND<0	0	58	45			
1.32972		ND<0	1.32972	59	45		
1.25562		ND<0	1.25562	60	45		
ND<0	ND<0	0	60	45			
0.788457		ND<0	0.788457		61	45	
1.02962		ND<0	1.02962	62	45		
1.79176		ND<0	1.79176	63	45		
2.04122		ND<0	2.04122	64	45		
ND<0	ND<0	0	64	45			
1.72277		ND<0	1.72277	65	45		
2.20827		ND<0	2.20827	66	45		
1.72277		ND<0	1.72277	67	45		
ND<0	ND<0	0	67	45			
ND<0	ND<0	0	67	45			
ND<0	ND<0	0	67	45			
ND<0	ND<0	0	67	45			
0.751416		ND<0	0.751416		68	45	
1.19996		ND<0	1.19996	69	45		
1.37877		ND<0	1.37877	70	45		
1.075	ND<0	1.075	71	45			
ND<0	ND<0	0	71	45			
1.32972		ND<0	1.32972	72	45		
1.25562		ND<0	1.25562	73	45		
ND<0	ND<0	0	73	45			
0.788457		ND<0	0.788457		74	45	
1.02962		ND<0	1.02962	75	45		
2.04122		1.79176		0.249461		76	45
ND<0	1.79176		-1.7917	676	46		
1.72277		1.79176		-0.0689929		76	47
2.20827		1.79176		0.416515		77	47
1.72277		1.79176		-0.0689929		77	48
ND<0	1.79176		-1.7917	677	49		
ND<0	1.79176		-1.7917	677	50		
ND<0	1.79176		-1.7917	677	51		
ND<0	1.79176		-1.7917	677	52		
0.751416		1.79176		-1.0403	477	53	
1.19996		1.79176		-0.591795		77	54
1.37877		1.79176		-0.412993		77	55
1.075	1.79176		-0.716757		77	56	
ND<0	1.79176		-1.7917	677	57		
1.32972		1.79176		-0.462035		77	58
1.25562		1.79176		-0.536143		77	59
ND<0	1.79176		-1.7917	677	60		
0.788457		1.79176		-1.0033	77	61	
1.02962		1.79176		-0.7621	477	62	
ND<0	2.04122		-2.0412	277	63		
1.72277		2.04122		-0.318454		77	64
2.20827		2.04122		0.167054		78	64
1.72277		2.04122		-0.318454		78	65
ND<0	2.04122		-2.0412	278	66		
ND<0	2.04122		-2.0412	278	67		
ND<0	2.04122		-2.0412	278	68		
ND<0	2.04122		-2.0412	278	69		
0.751416		2.04122		-1.2898	78	70	
1.19996		2.04122		-0.841256		78	71
1.37877		2.04122		-0.662454		78	72

1.075	2.04122	-0.966218	78	73		
ND<0	2.04122	-2.0412278	74			
1.32972	2.04122	-0.711496	78	75		
1.25562	2.04122	-0.785604	78	76		
ND<0	2.04122	-2.0412278	77			
0.788457	2.04122	-1.2527678	78			
1.02962	2.04122	-1.0116	78	79		
1.72277	ND<0	1.72277	79	79		
2.20827	ND<0	2.20827	80	79		
1.72277	ND<0	1.72277	81	79		
ND<0	ND<0	0	81	79		
ND<0	ND<0	0	81	79		
ND<0	ND<0	0	81	79		
ND<0	ND<0	0	81	79		
0.751416	ND<0	0.751416	82	79		
1.19996	ND<0	1.19996	83	79		
1.37877	ND<0	1.37877	84	79		
1.075	ND<0	1.075	85	79		
ND<0	ND<0	0	85	79		
1.32972	ND<0	1.32972	86	79		
1.25562	ND<0	1.25562	87	79		
ND<0	ND<0	0	87	79		
0.788457	ND<0	0.788457	88	79		
1.02962	ND<0	1.02962	89	79		
2.20827	1.72277	0.485508	90	79		
1.72277	1.72277	0	90	79		
ND<0	1.72277	-1.7227790	80			
ND<0	1.72277	-1.7227790	81			
ND<0	1.72277	-1.7227790	82			
ND<0	1.72277	-1.7227790	83			
0.751416	1.72277	-0.971351	90	84		
1.19996	1.72277	-0.522802	90	85		
1.37877	1.72277	-0.344001	90	86		
1.075	1.72277	-0.647764	90	87		
ND<0	1.72277	-1.7227790	88			
1.32972	1.72277	-0.393043	90	89		
1.25562	1.72277	-0.467151	90	90		
ND<0	1.72277	-1.7227790	91			
0.788457	1.72277	-0.934309	90	92		
1.02962	1.72277	-0.693147	90	93		
1.72277	2.20827	-0.485508	90	94		
ND<0	2.20827	-2.2082790	95			
ND<0	2.20827	-2.2082790	96			
ND<0	2.20827	-2.2082790	97			
ND<0	2.20827	-2.2082790	98			
0.751416	2.20827	-1.4568690	99			
1.19996	2.20827	-1.0083190	100			
1.37877	2.20827	-0.829508	90	101		
1.075	2.20827	-1.1332790	102			
ND<0	2.20827	-2.2082790	103			
1.32972	2.20827	-0.8785590	104			
1.25562	2.20827	-0.952658	90	105		
ND<0	2.20827	-2.2082790	106			
0.788457	2.20827	-1.4198290	107			
1.02962	2.20827	-1.1786590	108			
ND<0	1.72277	-1.7227790	109			
ND<0	1.72277	-1.7227790	110			
ND<0	1.72277	-1.7227790	111			

ND<0	1.72277	-1.722779	0	112	
0.751416	1.72277	-0.971351	90	113	
1.19996	1.72277	-0.522802	90	114	
1.37877	1.72277	-0.344001	90	115	
1.075	1.72277	-0.647764	90	116	
ND<0	1.72277	-1.722779	0	117	
1.32972	1.72277	-0.393043	90	118	
1.25562	1.72277	-0.467151	90	119	
ND<0	1.72277	-1.722779	0	120	
0.788457	1.72277	-0.934309	90	121	
1.02962	1.72277	-0.693147	90	122	

ND<0	ND<0	0	90	122		
ND<0	ND<0	0	90	122		
ND<0	ND<0	0	90	122		
0.751416		ND<0	0.751416		91	122
1.19996		ND<0	1.19996	92	122	
1.37877		ND<0	1.37877	93	122	
1.075	ND<0	1.075	94	122		
ND<0	ND<0	0	94	122		
1.32972		ND<0	1.32972	95	122	
1.25562		ND<0	1.25562	96	122	
ND<0	ND<0	0	96	122		
0.788457		ND<0	0.788457		97	122
1.02962		ND<0	1.02962	98	122	

ND<0	ND<0	0	98	122		
ND<0	ND<0	0	98	122		
0.751416		ND<0	0.751416		99	122
1.19996		ND<0	1.19996	100	122	
1.37877		ND<0	1.37877	101	122	
1.075	ND<0	1.075	102	122		
ND<0	ND<0	0	102	122		
1.32972		ND<0	1.32972	103	122	
1.25562		ND<0	1.25562	104	122	
ND<0	ND<0	0	104	122		
0.788457		ND<0	0.788457		105	122
1.02962		ND<0	1.02962	106	122	

ND<0	ND<0	0	106	122		
0.751416		ND<0	0.751416		107	122
1.19996		ND<0	1.19996	108	122	
1.37877		ND<0	1.37877	109	122	
1.075	ND<0	1.075	110	122		
ND<0	ND<0	0	110	122		
1.32972		ND<0	1.32972	111	122	
1.25562		ND<0	1.25562	112	122	
ND<0	ND<0	0	112	122		
0.788457		ND<0	0.788457		113	122
1.02962		ND<0	1.02962	114	122	

0.751416		ND<0	0.751416		115	122
1.19996		ND<0	1.19996	116	122	
1.37877		ND<0	1.37877	117	122	
1.075	ND<0	1.075	118	122		
ND<0	ND<0	0	118	122		
1.32972		ND<0	1.32972	119	122	
1.25562		ND<0	1.25562	120	122	
ND<0	ND<0	0	120	122		
0.788457		ND<0	0.788457		121	122
1.02962		ND<0	1.02962	122	122	

1.19996	0.751416	0.448549	123	122
1.37877	0.751416	0.62735	124	122
1.075	0.751416	0.323586	125	122
ND<0	0.751416	-0.751416	125	123
1.32972	0.751416	0.578308	126	123
1.25562	0.751416	0.5042	127	123
ND<0	0.751416	-0.751416	127	124
0.788457	0.751416	0.0370413	128	124
1.02962	0.751416	0.278203	129	124
1.37877	1.19996	0.178801	130	124
1.075	1.19996	-0.124962	130	125
ND<0	1.19996	-1.19996	130	126
1.32972	1.19996	0.129759	131	126
1.25562	1.19996	0.0556513	132	126
ND<0	1.19996	-1.19996	132	127
0.788457	1.19996	-0.411507	132	128
1.02962	1.19996	-0.170345	132	129
1.075	1.37877	-0.303764	132	130
ND<0	1.37877	-1.37877	132	131
1.32972	1.37877	-0.0490421	132	132
1.25562	1.37877	-0.12315	132	133
ND<0	1.37877	-1.37877	132	134
0.788457	1.37877	-0.590309	132	135
1.02962	1.37877	-0.349147	132	136
ND<0	1.075	-1.075	132	137
1.32972	1.075	0.254722	133	137
1.25562	1.075	0.180614	134	137
ND<0	1.075	-1.075	134	138
0.788457	1.075	-0.286545	134	139
1.02962	1.075	-0.045383	134	140
1.32972	ND<0	1.32972	135	140
1.25562	ND<0	1.25562	136	140
ND<0	ND<0	0	136	140
0.788457	ND<0	0.788457	137	140
1.02962	ND<0	1.02962	138	140
1.25562	1.32972	-0.074108	138	141
ND<0	1.32972	-1.32972	138	142
0.788457	1.32972	-0.541267	138	143
1.02962	1.32972	-0.300105	138	144
ND<0	1.25562	-1.25562	138	145
0.788457	1.25562	-0.467159	138	146
1.02962	1.25562	-0.225997	138	147
0.788457	ND<0	0.788457	139	147
1.02962	ND<0	1.02962	140	147
1.02962	0.788457	0.241162	141	147

S Statistic = 141 - 147 = -6

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
11/15/2009	1

There are 0 time periods with multiple data

A = 1674
B = 0
C = 504
D = 0
E = 74
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1965.33
Z-Score = -0.112785
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.112785| <= 1.97737 indicating no evidence of a trend

Concentrations (ug/L)

Parameter: 1,4-Dichlorobenzene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 196
Total Non-Detect: 154
Percent Non-Detects: 78.5714%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-10	26	13 (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
			11/15/2009	6.9 J	6.9 J

MW-11R	25	20 (80%)	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	
MW-6	25	25 (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
MW-7	25	25 (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
MW-9	25	15 (60%)	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	
MW-12BR		15	13 (86.6667%)	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	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
MW-8	25	19 (76%)	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	
MW-12AR	15	9 (60%)	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	

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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.14	-2.575836	3.63492	-0.360617
2	0.14	-2.326341	2.0468	-0.686305
3	0.14	-2.170091	6.7561	-0.990117
4	0.14	-2.053752	0.974	-1.27764
5	0.14	-1.959962	4.8154	-1.55204
6	0.28	-1.880792	8.3528	-2.07866
7	0.28	-1.811913	1.6358	-2.58599
8	0.3	-1.750693	4.7007	-3.1112
9	0.32	-1.6954	37.5751	-3.65373
10	0.36	-1.644854	0.2806	-4.24587
11	0.4	-1.598194	2.8348	-4.88515
12	0.43	-1.554774	5.2522	-5.5537
13	0.43	-1.5141	47.5447	-6.20477
14	0.44	-1.468384	9.7008	-6.85086
15	0.47	-1.4325	51.7529	-7.52413
16	0.48	-1.398385	3.7083	-8.19535
17	0.49	-1.365815	5.5738	-8.8646
18	0.51	-1.334625	7.355	-9.54526
19	0.54	-1.304695	9.0572	-10.2498
20	0.54	-1.275886	0.6851	-10.9388
21	0.6	-1.248096	2.2428	-11.6876
22	0.62	-1.221236	3.7342	-12.4448
23	0.66	-1.195226	5.1627	-13.2336
24	0.78	-1.17	66.5316	-14.1462
25	0.84	-1.1455	67.8438	-15.1084
26	0.91	-1.121686	9.102	-16.1292
27	0.97	-1.0939	70.2986	-17.1903
28	1	-1.071387	1.4464	-18.2616
29	1	-1.049397	2.5476	-19.311
30	1	-1.027897	3.6042	-20.3389
31	1	-1.006877	4.618	-21.3458
32	1	-0.986272	75.5907	-22.332
33	1	-0.966088	76.524	-23.2981
34	1	-0.946291	77.4195	-24.2444
35	1	-0.926859	78.2786	-25.1713
36	1	-0.907769	79.1026	-26.0791
37	1	-0.889006	79.893	-26.9681
38	1	-0.870558	0.6508	-27.8386
39	1	-0.852385	81.3774	-28.691
40	1	-0.830953	82.0679	-29.5219
41	1	-0.813379	82.7294	-30.3353
42	1	-0.796056	83.3632	-31.1314
43	1	-0.778966	83.9699	-31.9103
44	1	-0.7621	84.5507	-32.6724
45	1	-0.745449	85.1064	-33.4179
46	1	-0.729003	85.6379	-34.1469
47	1	-0.712751	86.1459	-34.8596
48	1	-0.696684	86.6313	-35.5563
49	1	-0.680797	87.0947	-36.2371

50	1	-0.665079	87.5371	-36.9022
51	1	-0.649522	87.959	-37.5517
52	1	-0.634124	88.3611	-38.1859
53	1	-0.615839	88.7403	-38.8017
54	1	-0.6007689.1012	-39.4025	
55	1	-0.585815	89.4444	-39.9883
56	1	-0.570999	89.7705	-40.5593
57	1	-0.556308	90.0799	-41.1156
58	1	-0.541736	90.3734	-41.6573
59	1	-0.5272890.6514	-42.1846	
60	1	-0.5129390.9145	-42.6975	
61	1	-0.498687	91.1632	-43.1962
62	1	-0.484544	91.398	-43.6808
63	1	-0.470498	91.6194	-44.1513
64	1	-0.456542	91.8278	-44.6078
65	1	-0.442676	92.0238	-45.0505
66	1	-0.426148	92.2054	-45.4766
67	1	-0.412463	92.3755	-45.8891
68	1	-0.398855	92.5346	-46.2879
69	1	-0.385321	92.683	-46.6733
70	1	-0.371856	92.8213	-47.0451
71	1	-0.358459	92.9498	-47.4036
72	1	-0.345126	93.0689	-47.7487
73	1	-0.331854	93.1791	-48.0806
74	1	-0.318639	93.2806	-48.3992
75	1	-0.305481	93.3739	-48.7047
76	1	-0.292375	93.4594	-48.997
77	1	-0.279319	93.5374	-49.2764
78	1	-0.266311	93.6083	-49.5427
79	1	-0.250759	93.6712	-49.7934
80	1	-0.237847	93.7278	-50.0313
81	1	-0.224974	93.7784	-50.2563
82	1	-0.212137	93.8234	-50.4684
83	1	-0.199336	93.8631	-50.6677
84	1	-0.186567	93.8979	-50.8543
85	1	-0.173829	93.9282	-51.0281
86	1	-0.161119	93.9541	-51.1892
87	1	-0.148434	93.9762	-51.3377
88	1	-0.135774	93.9946	-51.4735
89	1	-0.123135	94.0097	-51.5966
90	1	-0.110516	94.022	-51.7071
91	1	-0.0979139	94.0315	-51.805
92	1	-0.0828129	94.0384	-51.8878
93	1	-0.0702426	94.0433	-51.9581
94	1	-0.0576847	94.0467	-52.0158
95	1	-0.0451348	94.0487	-52.0609
96	1	-0.0325917	94.0498	-52.0935
97	1	-0.0200544	94.0502	-52.1135
98	1	-0.00751925	94.0502	-52.1211
99	1	0.00751925	94.0503	-52.1135
100	1	0.0200544	94.0507	-52.0935
101	1	0.0325917	94.0517	-52.0609
102	1	0.0451348	94.0538	-52.0158
103	1	0.0576847	94.0571	-51.9581
104	1	0.0702426	94.062	-51.8878
105	1	0.0828129	94.0689	-51.805
106	1	0.0979139	94.0785	-51.7071
107	1	0.110516	94.0907	-51.5966
108	1	0.123135	94.1059	-51.4735
109	1	0.135774	94.1243	-51.3377
110	1	0.148434	94.1463	-51.1892
111	1	0.161119	94.1723	-51.0281

112	1	0.173829		94.2025	-50.8543
113	1	0.186567		94.2373	-50.6677
114	1	0.199336		94.2771	-50.4684
115	1	0.212137		94.3221	-50.2563
116	1	0.224974		94.3727	-50.0313
117	1	0.237847		94.4292	-49.7934
118	1	0.250759		94.4921	-49.5427
119	1	0.266311		94.563	-49.2764
120	1	0.279319		94.6411	-48.997
121	1	0.292375		94.7265	-48.7047
122	1	0.305481		94.8199	-48.3992
123	1	0.318639		94.9214	-48.0806
124	1	0.331854		95.0315	-47.7487
125	1	0.345126		95.1506	-47.4036
126	1	0.358459		95.2791	-47.0451
127	1	0.371856		95.4174	-46.6733
128	1	0.385321		95.5659	-46.2879
129	1	0.398855		95.725	-45.8891
130	1	0.412463		95.8951	-45.4766
131	1	0.426148		96.0767	-45.0505
132	1	0.442676		96.2726	-44.6078
133	1	0.456542		96.4811	-44.1513
134	1	0.470498		96.7024	-43.6808
135	1	0.484544		96.9372	-43.1962
136	1	0.498687		97.1859	-42.6975
137	1	0.51293	97.449	-42.1846	
138	1	0.52728	97.727	-41.6573	
139	1	0.541736		98.0205	-41.1156
140	1	0.556308		98.33	-40.5593
141	1	0.570999		98.656	-39.9883
142	1	0.585815		98.9992	-39.4025
143	1	0.60076	99.3601	-38.8017	
144	1	0.615839		99.7394	-38.1859
145	1	0.634124		100.141	-37.5517
146	1	0.649522		100.563	-36.9022
147	1	0.665079		101.006	-36.2371
148	1	0.680797		101.469	-35.5563
149	1	0.696684		101.955	-34.8596
150	1	0.712751		102.463	-34.1469
151	1	0.729003		102.994	-33.4179
152	1	0.745449		103.55	-32.6724
153	1	0.7621	104.131	-31.9103	
154	1	0.778966		104.737	-31.1314
155	1	0.796056		105.371	-30.3353
156	1	0.813379		106.033	-29.5219
157	1	0.830953		106.723	-28.691
158	1	0.852385		107.45	-27.8386
159	1	0.87055	108.207	-26.9681	
160	1	0.889006		108.998	-26.0791
161	1	0.907769		109.822	-25.1713
162	1	0.926859		110.681	-24.2444
163	1	0.946291		111.576	-23.2981
164	1	0.966088		112.51	-22.332
165	1	0.986272		113.482	-21.3458
166	1	1.00687	114.496	-20.3389	
167	1	1.02789	115.553	-19.311	
168	1	1.04939	116.654	-18.2616	
169	1	1.07138	117.802	-17.1903	
170	1	1.0939	118.998	-16.0964	
171	1	1.12168	120.257	-14.9747	
172	1	1.1455	121.569	-13.8292	
173	1	1.17	122.938	-12.6592	

174	1	1.19522	124.366	-11.4639
175	1	1.22123	125.858	-10.2427
176	1	1.24809	127.415	-8.99463
177	1.05	1.27588	129.043	-7.65497
178	1.11	1.30469	130.745	-6.20676
179	1.14	1.33462	132.527	-4.68529
180	1.5	1.36581	134.392	-2.63658
181	1.98	1.39838	136.348	0.132201
182	2	1.4325	138.4	2.99721
183	2	1.46838	140.556	5.93398
184	2.2	1.5141	142.848	9.26501
185	2.75	1.55477	145.266	13.5406
186	3.4	1.59819	147.82	18.9745
187	3.9	1.64485	150.525	25.3894
188	3.99	1.6954	153.4	32.154
189	4	1.75069	156.465	39.1568
190	4.1	1.81191	159.748	46.5856
191	5.4	1.88079	163.285	56.7419
192	5.6	1.95996	167.126	67.7177
193	5.99	2.05375	171.344	80.0196
194	6.45	2.17009	176.054	94.0167
195	6.9	2.32634	181.466	110.068
196	8.8	2.57583	188.1	132.736

Data Set Standard Deviation = 1.11317
Numerator = 17618.8
Denominator = 45451.2
W Statistic = 0.387642 = 17618.8 / 45451.2

5% Critical value of 0.976 exceeds 0.387642
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.387642
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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.96611	-2.57583	6.63492	5.06438
2	-1.96611	-2.32634	12.0468	9.63823
3	-1.96611	-2.17009	16.7561	13.9049
4	-1.96611	-2.05375	20.974	17.9428
5	-1.96611	-1.95996	24.8154	21.7963
6	-1.27297	-1.88079	28.3528	24.1905
7	-1.27297	-1.81191	31.6358	26.497
8	-1.20397	-1.75069	34.7007	28.6047
9	-1.13943	-1.6954	37.5751	30.5365
10	-1.02165	-1.64485	40.2806	32.217
11	-0.916291	-1.59819	42.8348	33.6814
12	-0.84397	-1.55477	45.2522	34.9936
13	-0.84397	-1.5141	47.5447	36.2715
14	-0.820981	-1.46838	49.7008	37.477
15	-0.755023	-1.4325	51.7529	38.5585
16	-0.733969	-1.39838	53.7083	39.5849
17	-0.71335	-1.36581	55.5738	40.5592
18	-0.673345	-1.33462	57.355	41.4579
19	-0.616186	-1.30469	59.0572	42.2618
20	-0.616186	-1.27588	60.6851	43.048
21	-0.510826	-1.24809	62.2428	43.6855
22	-0.478036	-1.22123	63.7342	44.2693
23	-0.415515	-1.19522	65.1627	44.7659
24	-0.248461	-1.17	66.5316	45.0566
25	-0.174353	-1.1455	67.8438	45.2564
26	-0.0943107	-1.12168	69.102	45.3622
27	-0.0304592	-1.0939	70.2986	45.3955
28	0	-1.07138	71.4464	45.3955
29	0	-1.04939	72.5476	45.3955
30	0	-1.02789	73.6042	45.3955
31	0	-1.00687	74.618	45.3955
32	0	-0.986272	75.5907	45.3955
33	0	-0.966088	76.524	45.3955
34	0	-0.946291	77.4195	45.3955
35	0	-0.926859	78.2786	45.3955
36	0	-0.907769	79.1026	45.3955
37	0	-0.889006	79.893	45.3955
38	0	-0.87055	80.6508	45.3955
39	0	-0.852385	81.3774	45.3955
40	0	-0.830953	82.0679	45.3955
41	0	-0.813379	82.7294	45.3955
42	0	-0.796056	83.3632	45.3955
43	0	-0.778966	83.9699	45.3955
44	0	-0.7621	84.5507	45.3955
45	0	-0.745449	85.1064	45.3955
46	0	-0.729003	85.6379	45.3955
47	0	-0.712751	86.1459	45.3955
48	0	-0.696684	86.6313	45.3955
49	0	-0.680797	87.0947	45.3955

50	0	-0.665079	87.5371	45.3955
51	0	-0.649522	87.959	45.3955
52	0	-0.634124	88.3611	45.3955
53	0	-0.615839	88.7403	45.3955
54	0	-0.6007689.1012	45.3955	
55	0	-0.585815	89.4444	45.3955
56	0	-0.570999	89.7705	45.3955
57	0	-0.556308	90.0799	45.3955
58	0	-0.541736	90.3734	45.3955
59	0	-0.5272890.6514	45.3955	
60	0	-0.5129390.9145	45.3955	
61	0	-0.498687	91.1632	45.3955
62	0	-0.484544	91.398	45.3955
63	0	-0.470498	91.6194	45.3955
64	0	-0.456542	91.8278	45.3955
65	0	-0.442676	92.0238	45.3955
66	0	-0.426148	92.2054	45.3955
67	0	-0.412463	92.3755	45.3955
68	0	-0.398855	92.5346	45.3955
69	0	-0.385321	92.683	45.3955
70	0	-0.371856	92.8213	45.3955
71	0	-0.358459	92.9498	45.3955
72	0	-0.345126	93.0689	45.3955
73	0	-0.331854	93.1791	45.3955
74	0	-0.318639	93.2806	45.3955
75	0	-0.305481	93.3739	45.3955
76	0	-0.292375	93.4594	45.3955
77	0	-0.279319	93.5374	45.3955
78	0	-0.266311	93.6083	45.3955
79	0	-0.250759	93.6712	45.3955
80	0	-0.237847	93.7278	45.3955
81	0	-0.224974	93.7784	45.3955
82	0	-0.212137	93.8234	45.3955
83	0	-0.199336	93.8631	45.3955
84	0	-0.186567	93.8979	45.3955
85	0	-0.173829	93.9282	45.3955
86	0	-0.161119	93.9541	45.3955
87	0	-0.148434	93.9762	45.3955
88	0	-0.135774	93.9946	45.3955
89	0	-0.123135	94.0097	45.3955
90	0	-0.110516	94.022	45.3955
91	0	-0.0979139	94.0315	45.3955
92	0	-0.0828129	94.0384	45.3955
93	0	-0.0702426	94.0433	45.3955
94	0	-0.0576847	94.0467	45.3955
95	0	-0.0451348	94.0487	45.3955
96	0	-0.0325917	94.0498	45.3955
97	0	-0.0200544	94.0502	45.3955
98	0	-0.00751925	94.0502	45.3955
99	0	0.00751925	94.0503	45.3955
100	0	0.0200544	94.0507	45.3955
101	0	0.0325917	94.0517	45.3955
102	0	0.0451348	94.0538	45.3955
103	0	0.0576847	94.0571	45.3955
104	0	0.0702426	94.062	45.3955
105	0	0.0828129	94.0689	45.3955
106	0	0.0979139	94.0785	45.3955
107	0	0.110516	94.0907	45.3955
108	0	0.123135	94.1059	45.3955
109	0	0.135774	94.1243	45.3955
110	0	0.148434	94.1463	45.3955
111	0	0.161119	94.1723	45.3955

112	0	0.173829		94.2025	45.3955
113	0	0.186567		94.2373	45.3955
114	0	0.199336		94.2771	45.3955
115	0	0.212137		94.3221	45.3955
116	0	0.224974		94.3727	45.3955
117	0	0.237847		94.4292	45.3955
118	0	0.250759		94.4921	45.3955
119	0	0.266311		94.563	45.3955
120	0	0.279319		94.6411	45.3955
121	0	0.292375		94.7265	45.3955
122	0	0.305481		94.8199	45.3955
123	0	0.318639		94.9214	45.3955
124	0	0.331854		95.0315	45.3955
125	0	0.345126		95.1506	45.3955
126	0	0.358459		95.2791	45.3955
127	0	0.371856		95.4174	45.3955
128	0	0.385321		95.5659	45.3955
129	0	0.398855		95.725	45.3955
130	0	0.412463		95.8951	45.3955
131	0	0.426148		96.0767	45.3955
132	0	0.442676		96.2726	45.3955
133	0	0.456542		96.4811	45.3955
134	0	0.470498		96.7024	45.3955
135	0	0.484544		96.9372	45.3955
136	0	0.498687		97.1859	45.3955
137	0	0.51293	97.449	45.3955	
138	0	0.52728	97.727	45.3955	
139	0	0.541736		98.0205	45.3955
140	0	0.556308		98.33	45.3955
141	0	0.570999		98.656	45.3955
142	0	0.585815		98.9992	45.3955
143	0	0.60076	99.3601	45.3955	
144	0	0.615839		99.7394	45.3955
145	0	0.634124		100.141	45.3955
146	0	0.649522		100.563	45.3955
147	0	0.665079		101.006	45.3955
148	0	0.680797		101.469	45.3955
149	0	0.696684		101.955	45.3955
150	0	0.712751		102.463	45.3955
151	0	0.729003		102.994	45.3955
152	0	0.745449		103.55	45.3955
153	0	0.7621	104.131	45.3955	
154	0	0.778966		104.737	45.3955
155	0	0.796056		105.371	45.3955
156	0	0.813379		106.033	45.3955
157	0	0.830953		106.723	45.3955
158	0	0.852385		107.45	45.3955
159	0	0.87055	108.207	45.3955	
160	0	0.889006		108.998	45.3955
161	0	0.907769		109.822	45.3955
162	0	0.926859		110.681	45.3955
163	0	0.946291		111.576	45.3955
164	0	0.966088		112.51	45.3955
165	0	0.986272		113.482	45.3955
166	0	1.00687	114.496	45.3955	
167	0	1.02789	115.553	45.3955	
168	0	1.04939	116.654	45.3955	
169	0	1.07138	117.802	45.3955	
170	0	1.0939	118.998	45.3955	
171	0	1.12168	120.257	45.3955	
172	0	1.1455	121.569	45.3955	
173	0	1.17	122.938	45.3955	

174	0	1.19522	124.366	45.3955	
175	0	1.22123	125.858	45.3955	
176	0	1.24809	127.415	45.3955	
177	0.0487902		1.27588	129.043	45.4577
178	0.10436	1.30469	130.745	45.5939	
179	0.131028		1.33462	132.527	45.7688
180	0.405465		1.36581	134.392	46.3225
181	0.683097		1.39838	136.348	47.2778
182	0.693147		1.4325	138.4	48.2707
183	0.693147		1.46838	140.556	49.2885
184	0.788457		1.5141	142.848	50.4823
185	1.0116	1.55477	145.266	52.0551	
186	1.22378	1.59819	147.82	54.011	
187	1.36098	1.64485	150.525	56.2496	
188	1.38379	1.6954	153.4	58.5956	
189	1.38629	1.75069	156.465	61.0226	
190	1.41099	1.81191	159.748	63.5792	
191	1.6864	1.88079	163.285	66.751	
192	1.72277	1.95996	167.126	70.1275	
193	1.79009	2.05375	171.344	73.8039	
194	1.86408	2.17009	176.054	77.8491	
195	1.93152	2.32634	181.466	82.3425	
196	2.17475	2.57583	188.1	87.9443	

Data Set Standard Deviation = 0.582881
Numerator = 7734.2
Denominator = 12461.9
W Statistic = 0.620628 = 7734.2 / 12461.9

5% Critical value of 0.976 exceeds 0.620628
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.620628
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	77.5
	9/23/1999	ND<0	77.5
	3/15/2000	ND<0	77.5
	9/24/2003	ND<0	77.5
	3/11/2004	ND<0	77.5
	10/12/2004	ND<0	77.5
	4/1/2005	ND<0	77.5
	10/25/2005	ND<0	77.5
	4/29/2006	ND<0	77.5
	11/18/2006	ND<0	77.5
	5/23/2007	ND<0	77.5
	11/28/2007	ND<0	77.5
	6/5/2008	ND<0	77.5
	11/20/2008	ND<0	77.5
	6/11/2009	ND<-1.96611	77.5

Rank Sum = 1162.5
Rank Mean = 77.5

Background Rank Sum = 1162.5
Background Rank Mean = 77.5

Compliance Wells

Well ID	Date	Result	Rank
MW-10	7/20/1995	ND<0	77.5
	8/24/1995	0.405465 J	180
	9/28/1995	1.38629	189
	10/26/1995	0.693147	182
	11/19/1996	ND<0	77.5
	12/19/1996	ND<0	77.5
	3/24/1997	ND<0	77.5
	9/24/1997	ND<0	77.5
	4/7/1998	ND<0	77.5
	9/23/1998	ND<0	77.5
	3/16/1999	2.17475	196
	9/23/1999	ND<0	77.5
	3/15/2000	ND<0	77.5
	9/24/2003	ND<0	77.5
	3/11/2004	ND<0	77.5
	10/12/2004	ND<0	77.5
	4/1/2005	1.0116	185
	10/25/2005	1.38379	188
	4/29/2006	1.72277	192
	11/18/2006	1.36098	187
	5/23/2007	1.41099	190
	11/28/2007	1.79009	193
	6/5/2008	1.86408	194

	11/20/2008	ND<0	77.5	
	6/11/2009	1.22378		186
	11/15/2009	1.93152 J		195

Rank Sum = 3464.5
Rank Mean = 133.25

MW-11R	7/20/1995	ND<0	77.5	
	8/24/1995	0.788457		184
	9/28/1995	0.693147		183
	10/26/1995	ND<0	77.5	
	11/19/1996	ND<0	77.5	
	12/19/1996	ND<0	77.5	
	3/24/1997	ND<0	77.5	
	9/24/1997	ND<0	77.5	
	4/7/1998	ND<0	77.5	
	9/23/1998	ND<0	77.5	
	3/16/1999	ND<0	77.5	
	9/23/1999	ND<0	77.5	
	3/15/2000	ND<0	77.5	
	9/24/2003	1.6864	191	
	3/11/2004	ND<0	77.5	
	10/12/2004	ND<0	77.5	
	4/1/2005	ND<0	77.5	
	10/25/2005	ND<0	77.5	
	4/29/2006	ND<0	77.5	
	11/18/2006	ND<0	77.5	
	5/23/2007	ND<0	77.5	
	11/28/2007	-1.20397 J		157
	6/5/2008	ND<0	77.5	
	11/20/2008	ND<0	77.5	
	6/11/2009	-0.733969 J		165

Rank Sum = 2430
Rank Mean = 97.2

MW-6	7/20/1995	ND<0	77.5	
	8/24/1995	ND<0	77.5	
	9/28/1995	ND<0	77.5	
	10/26/1995	ND<0	77.5	
	11/19/1996	ND<0	77.5	
	12/19/1996	ND<0	77.5	
	3/24/1997	ND<0	77.5	
	9/24/1997	ND<0	77.5	
	4/7/1998	ND<0	77.5	
	9/23/1998	ND<0	77.5	
	3/16/1999	ND<0	77.5	
	9/23/1999	ND<0	77.5	
	3/15/2000	ND<0	77.5	
	9/24/2003	ND<0	77.5	
	3/11/2004	ND<0	77.5	
	10/12/2004	ND<0	77.5	
	4/1/2005	ND<0	77.5	
	10/25/2005	ND<0	77.5	
	4/29/2006	ND<0	77.5	
	11/18/2006	ND<0	77.5	
	5/23/2007	ND<0	77.5	
	11/28/2007	ND<0	77.5	
	6/5/2008	ND<0	77.5	
	11/20/2008	ND<0	77.5	
	6/11/2009	ND<-1.96611		77.5

Rank Sum = 1937.5
Rank Mean = 77.5

MW-7	7/20/1995	ND<0	77.5	
	8/24/1995	ND<0	77.5	
	9/28/1995	ND<0	77.5	
	10/26/1995	ND<0	77.5	
	11/19/1996	ND<0	77.5	
	12/19/1996	ND<0	77.5	
	3/24/1997	ND<0	77.5	
	9/24/1997	ND<0	77.5	
	4/7/1998	ND<0	77.5	
	9/23/1998	ND<0	77.5	
	3/16/1999	ND<0	77.5	
	9/23/1999	ND<0	77.5	
	3/15/2000	ND<0	77.5	
	9/24/2003	ND<0	77.5	
	3/11/2004	ND<0	77.5	
	10/12/2004	ND<0	77.5	
	4/1/2005	ND<0	77.5	
	10/25/2005	ND<0	77.5	
	4/29/2006	ND<0	77.5	
	11/18/2006	ND<0	77.5	
	5/23/2007	ND<0	77.5	
	11/28/2007	ND<0	77.5	
	6/5/2008	ND<0	77.5	
	11/20/2008	ND<0	77.5	
	6/11/2009	ND<-1.96611		77.5

Rank Sum = 1937.5
Rank Mean = 77.5

MW-9	7/20/1995	ND<0	77.5	
	8/24/1995	-0.673345 J		167
	9/28/1995	-0.510826 J		170
	10/26/1995	ND<0	77.5	
	11/19/1996	ND<0	77.5	
	12/19/1996	ND<0	77.5	
	3/24/1997	ND<0	77.5	
	9/24/1997	ND<0	77.5	
	4/7/1998	ND<0	77.5	
	9/23/1998	ND<0	77.5	
	3/16/1999	ND<0	77.5	
	9/23/1999	ND<0	77.5	
	3/15/2000	ND<0	77.5	
	9/24/2003	ND<0	77.5	
	3/11/2004	ND<0	77.5	
	10/12/2004	ND<0	77.5	
	4/1/2005	-0.0943107 J	175	
	10/25/2005	-0.616186 J		168
	4/29/2006	-0.84397 J		161
	11/18/2006	-0.916291 J		160
	5/23/2007	ND<0	77.5	
	11/28/2007	-0.415515 J		172
	6/5/2008	-0.755023 J	164	
	11/20/2008	-0.616186 J		169
	6/11/2009	-0.820981 J		163

Rank Sum = 2831.5
Rank Mean = 113.26

MW-12BR	3/16/1999	ND<0	77.5
	9/23/1999	ND<0	77.5
	3/15/2000	ND<0	77.5
	9/24/2003	ND<0	77.5
	3/11/2004	ND<0	77.5
	10/12/2004	ND<0	77.5

	4/1/2005	0.10436 J	178	
	10/25/2005	ND<0	77.5	
	4/29/2006	0.683097 J	181	
	11/18/2006	ND<0	77.5	
	5/23/2007	ND<0	77.5	
	11/28/2007	ND<0	77.5	
	6/5/2008	ND<0	77.5	
	11/20/2008	ND<0	77.5	
	6/11/2009	ND<-1.96611	77.5	

Rank Sum = 1366.5
Rank Mean = 91.1

MW-8	7/20/1995	ND<0	77.5	
	8/24/1995	ND<0	77.5	
	9/28/1995	ND<0	77.5	
	10/26/1995	ND<0	77.5	
	11/19/1996	ND<0	77.5	
	12/19/1996	ND<0	77.5	
	3/24/1997	ND<0	77.5	
	9/24/1997	ND<0	77.5	
	4/7/1998	ND<0	77.5	
	9/23/1998	ND<0	77.5	
	3/16/1999	ND<0	77.5	
	9/23/1999	ND<0	77.5	
	3/15/2000	ND<0	77.5	
	9/24/2003	ND<0	77.5	
	3/11/2004	ND<0	77.5	
	10/12/2004	ND<0	77.5	
	4/1/2005	ND<0	77.5	
	10/25/2005	-1.27297 J	155	
	4/29/2006	-1.02165 J	159	
	11/18/2006	-0.84397 J	162	
	5/23/2007	ND<0	77.5	
	11/28/2007	-1.27297 J	156	
	6/5/2008	-1.13943 J	158	
	11/20/2008	ND<0	77.5	
	6/11/2009	-0.478036 J	171	

Rank Sum = 2433.5
Rank Mean = 97.34

MW-12AR	3/16/1999	ND<0	77.5	
	9/23/1999	ND<0	77.5	
	3/15/2000	ND<0	77.5	
	9/24/2003	ND<0	77.5	
	3/11/2004	ND<0	77.5	
	10/12/2004	ND<0	77.5	
	4/1/2005	ND<0	77.5	
	10/25/2005	0.0487902 J	177	
	4/29/2006	0.131028 J	179	
	11/18/2006	-0.174353 J	174	
	5/23/2007	ND<0	77.5	
	11/28/2007	-0.248461 J	173	
	6/5/2008	-0.0304592 J	176	
	11/20/2008	-0.71335 J	166	
	6/11/2009	ND<-1.96611	77.5	

Rank Sum = 1742.5
Rank Mean = 116.167

Calculation Results:

Kruskal-Wallis H Statistic = 22.0927

Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 42.9027
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
22.0927 > 15.5073 indicating a significant group difference at 5% significance level
42.9027 > 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 77.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	133.25	55.75	42.7862	
MW-11R	97.2	19.7	43.0981	
MW-6	77.5	0	43.0981	
MW-7	77.5	0	43.0981	
MW-9	113.26	35.76	43.0981	
MW-12BR	91.1	13.6	48.1852	
MW-8	97.34	19.84	43.0981	
MW-12AR	116.167	38.6667	48.1852	

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 77.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	133.25	55.75	46.2033	
MW-11R	97.2	19.7	46.5401	
MW-6	77.5	0	46.5401	
MW-7	77.5	0	46.5401	
MW-9	113.26	35.76	46.5401	
MW-12BR	91.1	13.6	52.0334	
MW-8	97.34	19.84	46.5401	
MW-12AR	116.167	38.6667	52.0334	

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
1.38629	0.405465 J	0.980829	14	0
0.693147	0.405465 J	0.287682	15	0
ND<0	0.405465 J	-0.405465	15	1
ND<0	0.405465 J	-0.405465	15	2
ND<0	0.405465 J	-0.405465	15	3
ND<0	0.405465 J	-0.405465	15	4
ND<0	0.405465 J	-0.405465	15	5
ND<0	0.405465 J	-0.405465	15	6
2.17475	0.405465 J	1.76929	16	6
ND<0	0.405465 J	-0.405465	16	7
ND<0	0.405465 J	-0.405465	16	8
ND<0	0.405465 J	-0.405465	16	9
ND<0	0.405465 J	-0.405465	16	10
ND<0	0.405465 J	-0.405465	16	11
1.0116	0.405465 J	0.606136	17	11
1.38379	0.405465 J	0.978326	18	11
1.72277	0.405465 J	1.3173	19	11
1.36098	0.405465 J	0.955511	20	11
1.41099	0.405465 J	1.00552	21	11
1.79009	0.405465 J	1.38463	22	11
1.86408	0.405465 J	1.45862	23	11
ND<0	0.405465 J	-0.405465	23	12

1.22378	0.405465 J	0.81831	24	12	
1.93152 J	0.405465 J	1.52606	25	12	
0.693147	1.38629	-0.693147	25	13	
ND<0	1.38629	-1.3862925	14		
ND<0	1.38629	-1.3862925	15		
ND<0	1.38629	-1.3862925	16		
ND<0	1.38629	-1.3862925	17		
ND<0	1.38629	-1.3862925	18		
ND<0	1.38629	-1.3862925	19		
2.17475	1.38629	0.788457	26	19	
ND<0	1.38629	-1.3862926	20		
ND<0	1.38629	-1.3862926	21		
ND<0	1.38629	-1.3862926	22		
ND<0	1.38629	-1.3862926	23		
ND<0	1.38629	-1.3862926	24		
1.0116	1.38629	-0.374693	26	25	
1.38379	1.38629	-0.00250313	26	26	
1.72277	1.38629	0.336472	27	26	
1.36098	1.38629	-0.0253178	27	27	
1.41099	1.38629	0.0246926	28	27	
1.79009	1.38629	0.403797	29	27	
1.86408	1.38629	0.477786	30	27	
ND<0	1.38629	-1.3862930	28		
1.22378	1.38629	-0.162519	30	29	
1.93152 J	1.38629	0.545227	31	29	
ND<0	0.693147	-0.693147	31	30	
ND<0	0.693147	-0.693147	31	31	
ND<0	0.693147	-0.693147	31	32	
ND<0	0.693147	-0.693147	31	33	
ND<0	0.693147	-0.693147	31	34	
ND<0	0.693147	-0.693147	31	35	
2.17475	0.693147	1.4816	32	35	
ND<0	0.693147	-0.693147	32	36	
ND<0	0.693147	-0.693147	32	37	
ND<0	0.693147	-0.693147	32	38	
ND<0	0.693147	-0.693147	32	39	
ND<0	0.693147	-0.693147	32	40	
1.0116	0.693147	0.318454	33	40	
1.38379	0.693147	0.690644	34	40	
1.72277	0.693147	1.02962	35	40	
1.36098	0.693147	0.667829	36	40	
1.41099	0.693147	0.71784	37	40	
1.79009	0.693147	1.09694	38	40	
1.86408	0.693147	1.17093	39	40	
ND<0	0.693147	-0.693147	39	41	
1.22378	0.693147	0.530628	40	41	
1.93152 J	0.693147	1.23837	41	41	
ND<0	ND<0	0	41	41	
ND<0	ND<0	0	41	41	
ND<0	ND<0	0	41	41	
ND<0	ND<0	0	41	41	
ND<0	ND<0	0	41	41	
2.17475	ND<0	2.17475	42	41	
ND<0	ND<0	0	42	41	
ND<0	ND<0	0	42	41	
ND<0	ND<0	0	42	41	
ND<0	ND<0	0	42	41	
ND<0	ND<0	0	42	41	
1.0116	ND<0	1.0116	43	41	

1.38379		ND<0	1.38379	44	41
1.72277		ND<0	1.72277	45	41
1.36098		ND<0	1.36098	46	41
1.41099		ND<0	1.41099	47	41
1.79009		ND<0	1.79009	48	41
1.86408		ND<0	1.86408	49	41
ND<0	ND<0	0	49	41	
1.22378		ND<0	1.22378	50	41
1.93152	J	ND<0	1.93152	51	41
ND<0	ND<0	0	51	41	
ND<0	ND<0	0	51	41	
ND<0	ND<0	0	51	41	
ND<0	ND<0	0	51	41	
2.17475		ND<0	2.17475	52	41
ND<0	ND<0	0	52	41	
ND<0	ND<0	0	52	41	
ND<0	ND<0	0	52	41	
ND<0	ND<0	0	52	41	
ND<0	ND<0	0	52	41	
1.0116	ND<0	1.0116	53	41	
1.38379		ND<0	1.38379	54	41
1.72277		ND<0	1.72277	55	41
1.36098		ND<0	1.36098	56	41
1.41099		ND<0	1.41099	57	41
1.79009		ND<0	1.79009	58	41
1.86408		ND<0	1.86408	59	41
ND<0	ND<0	0	59	41	
1.22378		ND<0	1.22378	60	41
1.93152	J	ND<0	1.93152	61	41
ND<0	ND<0	0	61	41	
ND<0	ND<0	0	61	41	
ND<0	ND<0	0	61	41	
2.17475		ND<0	2.17475	62	41
ND<0	ND<0	0	62	41	
ND<0	ND<0	0	62	41	
ND<0	ND<0	0	62	41	
ND<0	ND<0	0	62	41	
ND<0	ND<0	0	62	41	
1.0116	ND<0	1.0116	63	41	
1.38379		ND<0	1.38379	64	41
1.72277		ND<0	1.72277	65	41
1.36098		ND<0	1.36098	66	41
1.41099		ND<0	1.41099	67	41
1.79009		ND<0	1.79009	68	41
1.86408		ND<0	1.86408	69	41
ND<0	ND<0	0	69	41	
1.22378		ND<0	1.22378	70	41
1.93152	J	ND<0	1.93152	71	41
ND<0	ND<0	0	71	41	
ND<0	ND<0	0	71	41	
2.17475		ND<0	2.17475	72	41
ND<0	ND<0	0	72	41	
ND<0	ND<0	0	72	41	
ND<0	ND<0	0	72	41	
ND<0	ND<0	0	72	41	
ND<0	ND<0	0	72	41	
1.0116	ND<0	1.0116	73	41	
1.38379		ND<0	1.38379	74	41
1.72277		ND<0	1.72277	75	41

1.36098		ND<0	1.36098	76	41
1.41099		ND<0	1.41099	77	41
1.79009		ND<0	1.79009	78	41
1.86408		ND<0	1.86408	79	41
ND<0	ND<0	0	79	41	
1.22378		ND<0	1.22378	80	41
1.93152 J		ND<0	1.93152	81	41
ND<0	ND<0	0	81	41	
2.17475		ND<0	2.17475	82	41
ND<0	ND<0	0	82	41	
ND<0	ND<0	0	82	41	
ND<0	ND<0	0	82	41	
ND<0	ND<0	0	82	41	
ND<0	ND<0	0	82	41	
1.0116	ND<0	1.0116	83	41	
1.38379		ND<0	1.38379	84	41
1.72277		ND<0	1.72277	85	41
1.36098		ND<0	1.36098	86	41
1.41099		ND<0	1.41099	87	41
1.79009		ND<0	1.79009	88	41
1.86408		ND<0	1.86408	89	41
ND<0	ND<0	0	89	41	
1.22378		ND<0	1.22378	90	41
1.93152 J		ND<0	1.93152	91	41
2.17475		ND<0	2.17475	92	41
ND<0	ND<0	0	92	41	
ND<0	ND<0	0	92	41	
ND<0	ND<0	0	92	41	
ND<0	ND<0	0	92	41	
ND<0	ND<0	0	92	41	
1.0116	ND<0	1.0116	93	41	
1.38379		ND<0	1.38379	94	41
1.72277		ND<0	1.72277	95	41
1.36098		ND<0	1.36098	96	41
1.41099		ND<0	1.41099	97	41
1.79009		ND<0	1.79009	98	41
1.86408		ND<0	1.86408	99	41
ND<0	ND<0	0	99	41	
1.22378		ND<0	1.22378	100	41
1.93152 J		ND<0	1.93152	101	41
ND<0	2.17475		-2.17475	101	42
ND<0	2.17475		-2.17475	101	43
ND<0	2.17475		-2.17475	101	44
ND<0	2.17475		-2.17475	101	45
ND<0	2.17475		-2.17475	101	46
1.0116	2.17475		-1.16315	101	47
1.38379		2.17475		-0.79096	101	48
1.72277		2.17475		-0.451985	101	49
1.36098		2.17475		-0.813775	101	50
1.41099		2.17475		-0.763765	101	51
1.79009		2.17475		-0.38466	101	52
1.86408		2.17475		-0.310672	101	53
ND<0	2.17475		-2.17475	101	54
1.22378		2.17475		-0.950976	101	55
1.93152 J		2.17475		-0.24323	101	56
ND<0	ND<0	0	101	56	
ND<0	ND<0	0	101	56	
ND<0	ND<0	0	101	56	

ND<0	ND<0	0	101	56	
1.0116	ND<0	1.0116	102	56	
1.38379		ND<0	1.38379	103	56
1.72277		ND<0	1.72277	104	56
1.36098		ND<0	1.36098	105	56
1.41099		ND<0	1.41099	106	56
1.79009		ND<0	1.79009	107	56
1.86408		ND<0	1.86408	108	56
ND<0	ND<0	0	108	56	
1.22378		ND<0	1.22378	109	56
1.93152	J	ND<0	1.93152	110	56
ND<0	ND<0	0	110	56	
ND<0	ND<0	0	110	56	
ND<0	ND<0	0	110	56	
1.0116	ND<0	1.0116	111	56	
1.38379		ND<0	1.38379	112	56
1.72277		ND<0	1.72277	113	56
1.36098		ND<0	1.36098	114	56
1.41099		ND<0	1.41099	115	56
1.79009		ND<0	1.79009	116	56
1.86408		ND<0	1.86408	117	56
ND<0	ND<0	0	117	56	
1.22378		ND<0	1.22378	118	56
1.93152	J	ND<0	1.93152	119	56
ND<0	ND<0	0	119	56	
ND<0	ND<0	0	119	56	
1.0116	ND<0	1.0116	120	56	
1.38379		ND<0	1.38379	121	56
1.72277		ND<0	1.72277	122	56
1.36098		ND<0	1.36098	123	56
1.41099		ND<0	1.41099	124	56
1.79009		ND<0	1.79009	125	56
1.86408		ND<0	1.86408	126	56
ND<0	ND<0	0	126	56	
1.22378		ND<0	1.22378	127	56
1.93152	J	ND<0	1.93152	128	56
ND<0	ND<0	0	128	56	
1.0116	ND<0	1.0116	129	56	
1.38379		ND<0	1.38379	130	56
1.72277		ND<0	1.72277	131	56
1.36098		ND<0	1.36098	132	56
1.41099		ND<0	1.41099	133	56
1.79009		ND<0	1.79009	134	56
1.86408		ND<0	1.86408	135	56
ND<0	ND<0	0	135	56	
1.22378		ND<0	1.22378	136	56
1.93152	J	ND<0	1.93152	137	56
1.0116	ND<0	1.0116	138	56	
1.38379		ND<0	1.38379	139	56
1.72277		ND<0	1.72277	140	56
1.36098		ND<0	1.36098	141	56
1.41099		ND<0	1.41099	142	56
1.79009		ND<0	1.79009	143	56
1.86408		ND<0	1.86408	144	56
ND<0	ND<0	0	144	56	
1.22378		ND<0	1.22378	145	56
1.93152	J	ND<0	1.93152	146	56

1.38379		1.0116	0.37219	147	56		
1.72277		1.0116	0.711166		148	56	
1.36098		1.0116	0.349376		149	56	
1.41099		1.0116	0.399386		150	56	
1.79009		1.0116	0.778491		151	56	
1.86408		1.0116	0.852479		152	56	
ND<0	1.0116	-1.0116	152	57			
1.22378		1.0116	0.212175		153	57	
1.93152 J		1.0116	0.91992	154	57		
1.72277		1.38379	0.338975		155	57	
1.36098		1.38379	-0.0228147		155	58	
1.41099		1.38379	0.0271957		156	58	
1.79009		1.38379	0.4063	157	58		
1.86408		1.38379	0.480289		158	58	
ND<0	1.38379	-1.38379	158	59			
1.22378		1.38379	-0.160016		158	60	
1.93152 J		1.38379	0.54773	159	60		
1.36098		1.72277	-0.36179	159	61		
1.41099		1.72277	-0.31178	159	62		
1.79009		1.72277	0.0673248		160	62	
1.86408		1.72277	0.141314		161	62	
ND<0	1.72277	-1.72277	161	63			
1.22378		1.72277	-0.498991		161	64	
1.93152 J		1.72277	0.208755		162	64	
1.41099		1.36098	0.0500104		163	64	
1.79009		1.36098	0.429115		164	64	
1.86408		1.36098	0.503104		165	64	
ND<0	1.36098	-1.36098	165	65			
1.22378		1.36098	-0.137201		165	66	
1.93152 J		1.36098	0.570545		166	66	
1.79009		1.41099	0.379104		167	66	
1.86408		1.41099	0.453093		168	66	
ND<0	1.41099	-1.41099	168	67			
1.22378		1.41099	-0.187212		168	68	
1.93152 J		1.41099	0.520534		169	68	
1.86408		1.79009	0.0739887		170	68	
ND<0	1.79009	-1.79009	170	69			
1.22378		1.79009	-0.566316		170	70	
1.93152 J		1.79009	0.14143	171	70		
ND<0	1.86408	-1.86408	171	71			
1.22378		1.86408	-0.640305		171	72	
1.93152 J		1.86408	0.0674413		172	72	
1.22378		ND<0	1.22378	173	72		
1.93152 J		ND<0	1.93152	174	72		
1.93152 J		1.22378	0.707746		175	72	

S Statistic = 175 - 72 = 103

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
11/15/2009	1

There are 0 time periods with multiple data

A = 4836
B = 0
C = 1716
D = 0
E = 156
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1789.67
Z-Score = 2.41109
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|2.41109| > 1.97737 indicating a trend

Concentrations (ug/L)

Parameter: Acetone

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 197
Total Non-Detect: 162
Percent Non-Detects: 82.2335%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-10	26	24 (92.3077%)	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
			11/15/2009	26	26

MW-7	26	14 (53.8462%)	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	
			11/15/2009	6 J	6 J	
MW-11R	25	17 (68%)	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	
MW-12BR	15	15 (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	
MW-6	25	22 (88%)	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	
MW-8	25	19 (76%)	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	
MW-12AR	15	15 (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	
MW-9	25	21 (84%)	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	

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 = 197

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1.27	-2.575836	3.63492	-3.27131
2	1.34	-2.326341	2.0468	-6.38861
3	2	-2.170091	6.7561	-10.7288
4	2	-2.053752	0.974	-14.8363
5	2	-1.959962	4.8154	-18.7562
6	2	-1.880792	8.3528	-22.5178
7	2	-1.811913	1.6358	-26.1416
8	2	-1.750693	4.7007	-29.643
9	2	-1.6954	37.5751	-33.0338
10	2	-1.644854	0.2806	-36.3235
11	2	-1.598194	2.8348	-39.5199
12	2	-1.554774	5.2522	-42.6294
13	2	-1.5141	47.5447	-45.6576
14	2	-1.475794	9.7226	-48.6092
15	2	-1.439535	1.7949	-51.4883
16	2	-1.405075	3.7691	-54.2984
17	2	-1.3722	55.6521	-57.0428
18	2	-1.340755	7.4497	-59.7243
19	2	-1.310585	9.1673	-62.3455
20	2	-1.275886	0.7952	-64.8972
21	2	-1.248096	2.3529	-67.3934
22	2	-1.221236	3.8443	-69.8359
23	2	-1.195226	5.2728	-72.2263
24	2	-1.17	66.6417	-74.5663
25	2	-1.1455	67.9539	-76.8573
26	2	-1.121686	9.2121	-79.1007
27	2	-1.098477	0.4187	-81.2976
28	2	-1.075847	1.5761	-83.4493
29	2	-1.053757	2.6865	-85.5568
30	2	-1.032157	3.7519	-87.6211
31	2	-1.011047	4.774	-89.6432
32	2	-0.990356	75.7549	-91.6239
33	2	-0.970094	76.6959	-93.5641
34	2	-0.950222	77.5989	-95.4645
35	2	-0.930718	78.4651	-97.3259
36	2	-0.911562	79.296	-99.1491
37	2	-0.892733	80.093	-100.935
38	2	-0.874218	80.8573	-102.683
39	2	-0.855996	81.59	-104.395
40	2	-0.834498	82.2864	-106.064
41	2	-0.816874	82.9537	-107.698
42	2	-0.7995	83.5929	-109.297
43	2	-0.782366	84.205	-110.861
44	2	-0.765456	84.7909	-112.392
45	2	-0.748762	85.3515	-113.89
46	2	-0.732275	85.8878	-115.354
47	2	-0.715986	86.4004	-116.786
48	2	-0.699883	86.8902	-118.186
49	2	-0.683968	7.358	-119.554

50	2	-0.668209	87.8045	-120.89
51	2	-0.652622	88.2304	-122.196
52	2	-0.637192	88.6365	-123.47
53	2	-0.621911	89.0232	-124.714
54	2	-0.606775	89.3914	-125.927
55	2	-0.591776	89.7416	-127.111
56	2	-0.576911	90.0744	-128.265
57	2	-0.562179	0.3905	-129.389
58	2	-0.547551	90.6903	-130.484
59	2	-0.533048	90.9744	-131.55
60	2	-0.515791	91.2405	-132.582
61	2	-0.501527	91.492	-133.585
62	2	-0.487364	91.7295	-134.56
63	2	-0.473299	91.9535	-135.506
64	2	-0.459327	92.1645	-136.425
65	2	-0.445443	92.3629	-137.316
66	2	-0.431644	92.5492	-138.179
67	2	-0.417928	92.7239	-139.015
68	2	-0.404299	2.8874	-139.824
69	2	-0.390726	93.04	-140.605
70	2	-0.377233	93.1823	-141.36
71	2	-0.363809	93.3147	-142.087
72	2	-0.350451	93.4375	-142.788
73	2	-0.337155	93.5512	-143.462
74	2	-0.323919	93.6561	-144.11
75	2	-0.310738	93.7527	-144.732
76	2	-0.297612	93.8412	-145.327
77	2	-0.284535	93.9222	-145.896
78	2	-0.271509	93.9959	-146.439
79	2	-0.258527	94.0627	-146.956
80	2	-0.243007	94.1218	-147.442
81	2	-0.230118	94.1748	-147.902
82	2	-0.217267	94.222	-148.337
83	2	-0.204452	94.2638	-148.746
84	2	-0.191671	94.3005	-149.129
85	2	-0.178929	4.3325	-149.487
86	2	-0.166199	94.3601	-149.819
87	2	-0.153505	94.3837	-150.126
88	2	-0.140835	94.4035	-150.408
89	2	-0.128189	94.42	-150.664
90	2	-0.115562	94.4333	-150.896
91	2	-0.102953	94.4439	-151.101
92	2	-0.0903606	94.4521	-151.282
93	2	-0.0777834	94.4581	-151.438
94	2	-0.0652187	94.4624	-151.568
95	2	-0.0526632	94.4652	-151.673
96	2	-0.0401167	94.4668	-151.754
97	2	-0.0275759	94.4675	-151.809
98	2	-0.0150408	94.4678	-151.839
99	2	0	94.4678	-151.839
100	2	0.0150408	94.468	-151.809
101	2	0.0275759	94.4687	-151.754
102	2	0.0401167	94.4703	-151.673
103	2	0.0526632	94.4731	-151.568
104	2	0.0652187	94.4774	-151.438
105	2	0.0777834	94.4834	-151.282
106	2	0.0903606	94.4916	-151.101
107	2	0.102953	94.5022	-150.896
108	2	0.115562	94.5155	-150.664
109	2	0.128189	94.532	-150.408
110	2	0.140835	94.5518	-150.126
111	2	0.153505	94.5754	-149.819

112	2	0.166199	94.603	-149.487
113	2	0.17892	94.635	-149.129
114	2	0.191671	94.6717	-148.746
115	2	0.204452	94.7135	-148.337
116	2	0.217267	94.7608	-147.902
117	2	0.230118	94.8137	-147.442
118	2	0.243007	94.8728	-146.956
119	2	0.258527	94.9396	-146.439
120	2	0.271509	95.0133	-145.896
121	2	0.284535	95.0943	-145.327
122	2	0.297612	95.1828	-144.732
123	2	0.310738	95.2794	-144.11
124	2	0.323919	95.3843	-143.462
125	2	0.337155	95.498	-142.788
126	2	0.350451	95.6208	-142.087
127	2	0.363809	95.7532	-141.36
128	2	0.377233	95.8955	-140.605
129	2	0.390726	96.0481	-139.824
130	2	0.40429	96.2116	-139.015
131	2	0.417928	96.3863	-138.179
132	2	0.431644	96.5726	-137.316
133	2	0.445443	96.771	-136.425
134	2	0.459327	96.982	-135.506
135	2	0.473299	97.206	-134.56
136	2	0.487364	97.4435	-133.585
137	2	0.501527	97.695	-132.582
138	2	0.515791	97.9611	-131.55
139	2	0.533048	98.2452	-130.484
140	2	0.547551	98.545	-129.389
141	2	0.56217	98.8611	-128.265
142	2	0.576911	99.1939	-127.111
143	2	0.591776	99.5441	-125.927
144	2	0.606775	99.9123	-124.714
145	2	0.621911	100.299	-123.47
146	2	0.637192	100.705	-122.196
147	2	0.652622	101.131	-120.89
148	2	0.668209	101.577	-119.554
149	2	0.68396	102.045	-118.186
150	2	0.699883	102.535	-116.786
151	2	0.715986	103.048	-115.354
152	2	0.732275	103.584	-113.89
153	2	0.748762	104.145	-112.392
154	2	0.765456	104.731	-110.861
155	2	0.782366	105.343	-109.297
156	2	0.7995	105.982	-107.698
157	2	0.816874	106.649	-106.064
158	2	0.834498	107.346	-104.395
159	2.2	0.855996	108.078	-102.512
160	2.5	0.874218	108.842	-100.326
161	2.5	0.892733	109.639	-98.0944
162	2.5	0.911562	110.47	-95.8155
163	2.5	0.930718	111.337	-93.4887
164	2.5	0.950222	112.24	-91.1131
165	2.5	0.970094	113.181	-88.6879
166	2.74	0.990356	114.161	-85.9743
167	3.9	1.01104	115.184	-82.0313
168	6	1.03215	116.249	-75.8384
169	6.72	1.05375	117.359	-68.7572
170	6.97	1.07584	118.517	-61.2586
171	7.6	1.09847	119.723	-52.9102
172	9.72	1.12168	120.982	-42.0075
173	9.8	1.1455	122.294	-30.7816

174	10	1.17	123.663	-19.0816
175	11.6	1.19522	125.091	-5.21702
176	13.9	1.22123	126.583	11.7581
177	16	1.24809	128.14	31.7274
178	24	1.27588	129.768	62.3484
179	26	1.31058	131.486	96.4235
180	35.2	1.34075	133.283	143.618
181	38.3	1.3722	135.166	196.174
182	52	1.40507	137.141	269.237
183	67.2	1.43953	139.213	365.974
184	95.4	1.47579	141.391	506.764
185	100	1.5141	143.683	658.175
186	120	1.55477	146.101	844.747
187	130	1.59819	148.655	1052.51
188	136	1.64485	151.36	1276.21
189	160	1.6954	154.235	1547.48
190	200	1.75069	157.3	1897.61
191	260	1.81191	160.583	2368.71
192	320	1.88079	164.12	2970.56
193	350	1.95996	167.962	3656.55
194	400	2.05375	172.179	4478.05
195	932	2.17009	176.889	6500.57
196	2400	2.32634	182.301	12083.8
197	4260	2.57583	188.936	23056.8

Data Set Standard Deviation = 355.797
Numerator = 5.31618e+008
Denominator = 4.68785e+009
W Statistic = 0.113403 = 5.31618e+008 / 4.68785e+009

5% Critical value of 0.976 exceeds 0.113403
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.113403
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 = 197

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.239017	-2.575836.63492	-0.615668	
2	0.29267	-2.3263412.0468	-1.29652	
3	0.693147	-2.1700916.7561	-2.80071	
4	0.693147	-2.0537520.974	-4.22426	
5	0.693147	-1.9599624.8154	-5.5828	
6	0.693147	-1.8807928.3528	-6.88647	
7	0.693147	-1.8119131.6358	-8.14239	
8	0.693147	-1.7506934.7007	-9.35587	
9	0.693147	-1.6954 37.5751	-10.531	
10	0.693147	-1.6448540.2806	-11.6712	
11	0.693147	-1.5981942.8348	-12.7789	
12	0.693147	-1.5547745.2522	-13.8566	
13	0.693147	-1.5141 47.5447	-14.9061	
14	0.693147	-1.4757949.7226	-15.9291	
15	0.693147	-1.4395351.7949	-16.9269	
16	0.693147	-1.4050753.7691	-17.9008	
17	0.693147	-1.3722 55.6521	-18.8519	
18	0.693147	-1.3407557.4497	-19.7813	
19	0.693147	-1.3105859.1673	-20.6897	
20	0.693147	-1.2758860.7952	-21.5741	
21	0.693147	-1.2480962.3529	-22.4392	
22	0.693147	-1.2212363.8443	-23.2857	
23	0.693147	-1.1952265.2728	-24.1141	
24	0.693147	-1.17 66.6417	-24.9251	
25	0.693147	-1.1455 67.9539	-25.7191	
26	0.693147	-1.1216869.2121	-26.4966	
27	0.693147	-1.0984770.4187	-27.258	
28	0.693147	-1.0758471.5761	-28.0037	
29	0.693147	-1.0537572.6865	-28.7341	
30	0.693147	-1.0321573.7519	-29.4496	
31	0.693147	-1.0110474.774	-30.1503	
32	0.693147	-0.990356	75.7549	-30.8368
33	0.693147	-0.970094	76.6959	-31.5092
34	0.693147	-0.950222	77.5989	-32.1679
35	0.693147	-0.930718	78.4651	-32.813
36	0.693147	-0.911562	79.296	-33.4448
37	0.693147	-0.892733	80.093	-34.0636
38	0.693147	-0.874218	80.8573	-34.6696
39	0.693147	-0.855996	81.59	-35.2629
40	0.693147	-0.834498	82.2864	-35.8414
41	0.693147	-0.816874	82.9537	-36.4076
42	0.693147	-0.7995 83.5929	-36.9617	
43	0.693147	-0.782366	84.205	-37.504
44	0.693147	-0.765456	84.7909	-38.0346
45	0.693147	-0.748762	85.3515	-38.5536
46	0.693147	-0.732275	85.8878	-39.0612
47	0.693147	-0.715986	86.4004	-39.5575
48	0.693147	-0.699883	86.8902	-40.0426
49	0.693147	-0.6839687.358	-40.5167	

50	0.693147	-0.668209	87.8045	-40.9798
51	0.693147	-0.652622	88.2304	-41.4322
52	0.693147	-0.637192	88.6365	-41.8739
53	0.693147	-0.621911	89.0232	-42.305
54	0.693147	-0.606775	89.3914	-42.7255
55	0.693147	-0.591776	89.7416	-43.1357
56	0.693147	-0.576911	90.0744	-43.5356
57	0.693147	-0.562179	0.3905	-43.9253
58	0.693147	-0.547551	90.6903	-44.3048
59	0.693147	-0.533048	90.9744	-44.6743
60	0.693147	-0.515791	91.2405	-45.0318
61	0.693147	-0.501527	91.492	-45.3794
62	0.693147	-0.487364	91.7295	-45.7173
63	0.693147	-0.473299	91.9535	-46.0453
64	0.693147	-0.459327	92.1645	-46.3637
65	0.693147	-0.445443	92.3629	-46.6725
66	0.693147	-0.431644	92.5492	-46.9717
67	0.693147	-0.417928	92.7239	-47.2613
68	0.693147	-0.404299	2.8874	-47.5416
69	0.693147	-0.390726	93.04	-47.8124
70	0.693147	-0.377233	93.1823	-48.0739
71	0.693147	-0.363809	93.3147	-48.3261
72	0.693147	-0.350451	93.4375	-48.569
73	0.693147	-0.337155	93.5512	-48.8027
74	0.693147	-0.323919	93.6561	-49.0272
75	0.693147	-0.310738	93.7527	-49.2426
76	0.693147	-0.297612	93.8412	-49.4489
77	0.693147	-0.284535	93.9222	-49.6461
78	0.693147	-0.271509	93.9959	-49.8343
79	0.693147	-0.258527	94.0627	-50.0135
80	0.693147	-0.243007	94.1218	-50.1819
81	0.693147	-0.230118	94.1748	-50.3414
82	0.693147	-0.217267	94.222	-50.492
83	0.693147	-0.204452	94.2638	-50.6337
84	0.693147	-0.191671	94.3005	-50.7666
85	0.693147	-0.178929	4.3325	-50.8906
86	0.693147	-0.166199	94.3601	-51.0058
87	0.693147	-0.153505	94.3837	-51.1122
88	0.693147	-0.140835	94.4035	-51.2098
89	0.693147	-0.128189	94.42	-51.2987
90	0.693147	-0.115562	94.4333	-51.3788
91	0.693147	-0.102953	94.4439	-51.4502
92	0.693147	-0.0903606	94.4521	-51.5128
93	0.693147	-0.0777834	94.4581	-51.5667
94	0.693147	-0.0652187	94.4624	-51.6119
95	0.693147	-0.0526632	94.4652	-51.6484
96	0.693147	-0.0401167	94.4668	-51.6762
97	0.693147	-0.0275759	94.4675	-51.6953
98	0.693147	-0.0150408	94.4678	-51.7058
99	0.693147	0	94.4678	-51.7058
100	0.693147	0.0150408	94.468	-51.6953
101	0.693147	0.0275759	94.4687	-51.6762
102	0.693147	0.0401167	94.4703	-51.6484
103	0.693147	0.0526632	94.4731	-51.6119
104	0.693147	0.0652187	94.4774	-51.5667
105	0.693147	0.0777834	94.4834	-51.5128
106	0.693147	0.0903606	94.4916	-51.4502
107	0.693147	0.102953	94.5022	-51.3788
108	0.693147	0.115562	94.5155	-51.2987
109	0.693147	0.128189	94.532	-51.2098
110	0.693147	0.140835	94.5518	-51.1122
111	0.693147	0.153505	94.5754	-51.0058

112	0.693147	0.166199	94.603	-50.8906
113	0.693147	0.17892	94.635	-50.7666
114	0.693147	0.191671	94.6717	-50.6337
115	0.693147	0.204452	94.7135	-50.492
116	0.693147	0.217267	94.7608	-50.3414
117	0.693147	0.230118	94.8137	-50.1819
118	0.693147	0.243007	94.8728	-50.0135
119	0.693147	0.258527	94.9396	-49.8343
120	0.693147	0.271509	95.0133	-49.6461
121	0.693147	0.284535	95.0943	-49.4489
122	0.693147	0.297612	95.1828	-49.2426
123	0.693147	0.310738	95.2794	-49.0272
124	0.693147	0.323919	95.3843	-48.8027
125	0.693147	0.337155	95.498	-48.569
126	0.693147	0.350451	95.6208	-48.3261
127	0.693147	0.363809	95.7532	-48.0739
128	0.693147	0.377233	95.8955	-47.8124
129	0.693147	0.390726	96.0481	-47.5416
130	0.693147	0.40429	96.2116	-47.2613
131	0.693147	0.417928	96.3863	-46.9717
132	0.693147	0.431644	96.5726	-46.6725
133	0.693147	0.445443	96.771	-46.3637
134	0.693147	0.459327	96.982	-46.0453
135	0.693147	0.473299	97.206	-45.7173
136	0.693147	0.487364	97.4435	-45.3794
137	0.693147	0.501527	97.695	-45.0318
138	0.693147	0.515791	97.9611	-44.6743
139	0.693147	0.533048	98.2452	-44.3048
140	0.693147	0.547551	98.545	-43.9253
141	0.693147	0.56217	98.8611	-43.5356
142	0.693147	0.576911	99.1939	-43.1357
143	0.693147	0.591776	99.5441	-42.7255
144	0.693147	0.606775	99.9123	-42.305
145	0.693147	0.621911	100.299	-41.8739
146	0.693147	0.637192	100.705	-41.4322
147	0.693147	0.652622	101.131	-40.9798
148	0.693147	0.668209	101.577	-40.5167
149	0.693147	0.68396	102.045	-40.0426
150	0.693147	0.699883	102.535	-39.5575
151	0.693147	0.715986	103.048	-39.0612
152	0.693147	0.732275	103.584	-38.5536
153	0.693147	0.748762	104.145	-38.0346
154	0.693147	0.765456	104.731	-37.504
155	0.693147	0.782366	105.343	-36.9617
156	0.693147	0.7995	105.982	-36.4076
157	0.693147	0.816874	106.649	-35.8414
158	0.693147	0.834498	107.346	-35.2629
159	0.788457	0.855996	108.078	-34.588
160	0.916291	0.874218	108.842	-33.787
161	0.916291	0.892733	109.639	-32.969
162	0.916291	0.911562	110.47	-32.1337
163	0.916291	0.930718	111.337	-31.2809
164	0.916291	0.950222	112.24	-30.4102
165	0.916291	0.970094	113.181	-29.5213
166	1.00796	0.990356	114.161	-28.5231
167	1.36098	1.01104	115.184	-27.1471
168	1.79176	1.03215	116.249	-25.2977
169	1.90509	1.05375	117.359	-23.2903
170	1.94162	1.07584	118.517	-21.2014
171	2.02815	1.09847	119.723	-18.9735
172	2.27419	1.12168	120.982	-16.4226
173	2.28238	1.1455	122.294	-13.8082

174	2.30259	1.17	123.663	-11.1141
175	2.45101	1.19522	125.091	-8.18464
176	2.63189	1.22123	126.583	-4.9705
177	2.77259	1.24809	128.14	-1.51007
178	3.17805	1.27588	129.768	2.54473
179	3.2581	1.31058	131.486	6.81472
180	3.56105	1.34075	133.283	11.5892
181	3.64545	1.3722	135.166	16.5915
182	3.95124	1.40507	137.141	22.1433
183	4.20767	1.43953	139.213	28.2004
184	4.55808	1.47579	141.391	34.9272
185	4.60517	1.5141	143.683	41.8999
186	4.78749	1.55477	146.101	49.3433
187	4.86753	1.59819	148.655	57.1226
188	4.91265	1.64485	151.36	65.2032
189	5.07517	1.6954	154.235	73.8076
190	5.29832	1.75069	157.3	83.0833
191	5.56068	1.81191	160.583	93.1588
192	5.76832	1.88079	164.12	104.008
193	5.85793	1.95996	167.962	115.489
194	5.99146	2.05375	172.179	127.794
195	6.83733	2.17009	176.889	142.632
196	7.78322	2.32634	182.301	160.738
197	8.35702	2.57583	188.936	182.264

Data Set Standard Deviation = 1.42158
Numerator = 33220.3
Denominator = 74836.3
W Statistic = 0.443907 = 33220.3 / 74836.3

5% Critical value of 0.976 exceeds 0.443907
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.443907
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	81.5
	9/23/1999	ND<0.693147	81.5
	3/15/2000	ND<0.693147	81.5
	9/24/2003	ND<0.693147	81.5
	3/11/2004	ND<0.693147	81.5
	10/12/2004	ND<0.693147	81.5
	4/1/2005	ND<0.693147	81.5
	10/25/2005	ND<0.693147	81.5
	4/29/2006	ND<0.693147	81.5
	11/18/2006	ND<0.693147	81.5
	5/23/2007	ND<0.693147	81.5
	11/28/2007	ND<0.693147	81.5
	6/5/2008	ND<0.693147	81.5
	11/20/2008	ND<0.693147	81.5
	6/11/2009	ND<0.916291	81.5

Rank Sum = 1222.5
Rank Mean = 81.5

Background Rank Sum = 1222.5
Background Rank Mean = 81.5

Compliance Wells

Well ID	Date	Result	Rank
MW-10	7/20/1995	ND<0.693147	81.5
	8/24/1995	ND<0.693147	81.5
	9/28/1995	ND<0.693147	81.5
	10/26/1995	ND<0.693147	81.5
	11/19/1996	ND<0.693147	81.5
	12/19/1996	ND<0.693147	81.5
	3/24/1997	ND<0.693147	81.5
	9/24/1997	ND<0.693147	81.5
	4/7/1998	ND<0.693147	81.5
	9/23/1998	ND<0.693147	81.5
	3/16/1999	4.20767	183
	9/23/1999	ND<0.693147	81.5
	3/15/2000	ND<0.693147	81.5
	9/24/2003	ND<0.693147	81.5
	3/11/2004	ND<0.693147	81.5
	10/12/2004	ND<0.693147	81.5
	4/1/2005	ND<0.693147	81.5
	10/25/2005	ND<0.693147	81.5
	4/29/2006	ND<0.693147	81.5
	11/18/2006	ND<0.693147	81.5
	5/23/2007	ND<0.693147	81.5
	11/28/2007	ND<0.693147	81.5
	6/5/2008	ND<0.693147	81.5

	11/20/2008	ND<0.693147	81.5
	6/11/2009	ND<0.916291	81.5
	11/15/2009	3.2581	179

Rank Sum = 2318
Rank Mean = 89.1538

MW-7	7/20/1995	ND<0.693147	81.5
	8/24/1995	ND<0.693147	81.5
	9/28/1995	ND<0.693147	81.5
	10/26/1995	ND<0.693147	81.5
	11/19/1996	ND<0.693147	81.5
	12/19/1996	ND<0.693147	81.5
	3/24/1997	5.56068	191
	9/24/1997	ND<0.693147	81.5
	4/7/1998	ND<0.693147	81.5
	9/23/1998	ND<0.693147	81.5
	3/16/1999	8.35702	197
	9/23/1999	4.55808	184
	3/15/2000	4.86753	187
	9/24/2003	ND<0.693147	81.5
	3/11/2004	ND<0.693147	81.5
	10/12/2004	5.29832	190
	4/1/2005	ND<0.693147	81.5
	10/25/2005	1.94162	170
	4/29/2006	ND<0.693147	81.5
	11/18/2006	0.29267 J	164
	5/23/2007	ND<0.693147	81.5
	11/28/2007	2.45101	175
	6/5/2008	6.83733	195
	11/20/2008	3.17805	178
	6/11/2009	3.95124	182
	11/15/2009	1.79176 J	168

Rank Sum = 3322
Rank Mean = 127.769

MW-11R	7/20/1995	ND<0.693147	81.5
	8/24/1995	ND<0.693147	81.5
	9/28/1995	2.77259	177
	10/26/1995	ND<0.693147	81.5
	11/19/1996	ND<0.693147	81.5
	12/19/1996	ND<0.693147	81.5
	3/24/1997	ND<0.693147	81.5
	9/24/1997	ND<0.693147	81.5
	4/7/1998	ND<0.693147	81.5
	9/23/1998	ND<0.693147	81.5
	3/16/1999	5.85793	193
	9/23/1999	ND<0.693147	81.5
	3/15/2000	ND<0.693147	81.5
	9/24/2003	5.76832	192
	3/11/2004	5.99146	194
	10/12/2004	7.78322	196
	4/1/2005	ND<0.693147	81.5
	10/25/2005	ND<0.693147	81.5
	4/29/2006	ND<0.693147	81.5
	11/18/2006	2.63189	176
	5/23/2007	4.60517	185
	11/28/2007	1.90509	169
	6/5/2008	ND<0.693147	81.5
	11/20/2008	ND<0.693147	81.5
	6/11/2009	ND<0.916291	81.5

Rank Sum = 2867.5
Rank Mean = 114.7

MW-12BR	3/16/1999	ND<0.693147	81.5
	9/23/1999	ND<0.693147	81.5
	3/15/2000	ND<0.693147	81.5
	9/24/2003	ND<0.693147	81.5
	3/11/2004	ND<0.693147	81.5
	10/12/2004	ND<0.693147	81.5
	4/1/2005	ND<0.693147	81.5
	10/25/2005	ND<0.693147	81.5
	4/29/2006	ND<0.693147	81.5
	11/18/2006	ND<0.693147	81.5
	5/23/2007	ND<0.693147	81.5
	11/28/2007	ND<0.693147	81.5
	6/5/2008	ND<0.693147	81.5
	11/20/2008	ND<0.693147	81.5
	6/11/2009	ND<0.916291	81.5

Rank Sum = 1222.5
Rank Mean = 81.5

MW-6	7/20/1995	ND<0.693147	81.5
	8/24/1995	1.36098 J	167
	9/28/1995	ND<0.693147	81.5
	10/26/1995	ND<0.693147	81.5
	11/19/1996	ND<0.693147	81.5
	12/19/1996	ND<0.693147	81.5
	3/24/1997	ND<0.693147	81.5
	9/24/1997	ND<0.693147	81.5
	4/7/1998	ND<0.693147	81.5
	9/23/1998	ND<0.693147	81.5
	3/16/1999	ND<0.693147	81.5
	9/23/1999	ND<0.693147	81.5
	3/15/2000	ND<0.693147	81.5
	9/24/2003	ND<0.693147	81.5
	3/11/2004	ND<0.693147	81.5
	10/12/2004	ND<0.693147	81.5
	4/1/2005	ND<0.693147	81.5
	10/25/2005	0.788457 J	165
	4/29/2006	ND<0.693147	81.5
	11/18/2006	ND<0.693147	81.5
	5/23/2007	ND<0.693147	81.5
	11/28/2007	ND<0.693147	81.5
	6/5/2008	ND<0.693147	81.5
	11/20/2008	ND<0.693147	81.5
	6/11/2009	2.02815 J	171

Rank Sum = 2296
Rank Mean = 91.84

MW-8	7/20/1995	ND<0.693147	81.5
	8/24/1995	ND<0.693147	81.5
	9/28/1995	ND<0.693147	81.5
	10/26/1995	ND<0.693147	81.5
	11/19/1996	ND<0.693147	81.5
	12/19/1996	ND<0.693147	81.5
	3/24/1997	ND<0.693147	81.5
	9/24/1997	ND<0.693147	81.5
	4/7/1998	ND<0.693147	81.5
	9/23/1998	ND<0.693147	81.5
	3/16/1999	3.56105	180
	9/23/1999	4.91265	188
	3/15/2000	ND<0.693147	81.5
	9/24/2003	ND<0.693147	81.5
	3/11/2004	ND<0.693147	81.5

	10/12/2004	5.07517	189
	4/1/2005	ND<0.693147	81.5
	10/25/2005	0.239017 J	163
	4/29/2006	ND<0.693147	81.5
	11/18/2006	ND<0.693147	81.5
	5/23/2007	ND<0.693147	81.5
	11/28/2007	ND<0.693147	81.5
	6/5/2008	ND<0.693147	81.5
	11/20/2008	2.27419	172
	6/11/2009	2.28238 J	173

Rank Sum = 2613.5
Rank Mean = 104.54

MW-12AR	3/16/1999	ND<0.693147	81.5
	9/23/1999	ND<0.693147	81.5
	3/15/2000	ND<0.693147	81.5
	9/24/2003	ND<0.693147	81.5
	3/11/2004	ND<0.693147	81.5
	10/12/2004	ND<0.693147	81.5
	4/1/2005	ND<0.693147	81.5
	10/25/2005	ND<0.693147	81.5
	4/29/2006	ND<0.693147	81.5
	11/18/2006	ND<0.693147	81.5
	5/23/2007	ND<0.693147	81.5
	11/28/2007	ND<0.693147	81.5
	6/5/2008	ND<0.693147	81.5
	11/20/2008	ND<0.693147	81.5
	6/11/2009	ND<0.916291	81.5

Rank Sum = 1222.5
Rank Mean = 81.5

MW-9	7/20/1995	ND<0.693147	81.5
	8/24/1995	2.30259	174
	9/28/1995	ND<0.693147	81.5
	10/26/1995	ND<0.693147	81.5
	11/19/1996	ND<0.693147	81.5
	12/19/1996	ND<0.693147	81.5
	3/24/1997	ND<0.693147	81.5
	9/24/1997	ND<0.693147	81.5
	4/7/1998	4.78749	186
	9/23/1998	ND<0.693147	81.5
	3/16/1999	3.64545	181
	9/23/1999	ND<0.693147	81.5
	3/15/2000	ND<0.693147	81.5
	9/24/2003	ND<0.693147	81.5
	3/11/2004	ND<0.693147	81.5
	10/12/2004	ND<0.693147	81.5
	4/1/2005	ND<0.693147	81.5
	10/25/2005	ND<0.693147	81.5
	4/29/2006	ND<0.693147	81.5
	11/18/2006	ND<0.693147	81.5
	5/23/2007	ND<0.693147	81.5
	11/28/2007	1.00796 J	166
	6/5/2008	ND<0.693147	81.5
	11/20/2008	ND<0.693147	81.5
	6/11/2009	ND<0.916291	81.5

Rank Sum = 2418.5
Rank Mean = 96.74

Calculation Results:

Kruskal-Wallis H Statistic = 14.2009
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 31.9902
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
14.2009 < 15.5073 indicating no significant group difference at 5% significance level
31.9902 > 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 81.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	89.1538	7.65385	43.0039	
MW-7	127.769	46.2692	43.0039	
MW-11R	114.7	33.2	43.3175	
MW-12BR		81.5	0	48.4304
MW-6	91.84	10.34	43.3175	
MW-8	104.54	23.04	43.3175	
MW-12AR		81.5	0	48.4304
MW-9	96.74	15.24	43.3175	

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 81.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	89.1538	7.65385	46.4384	
MW-7	127.769	46.2692	46.4384	
MW-11R	114.7	33.2	46.777	
MW-12BR		81.5	0	52.2983
MW-6	91.84	10.34	46.777	
MW-8	104.54	23.04	46.777	
MW-12AR		81.5	0	52.2983
MW-9	96.74	15.24	46.777	

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<0.693147		ND<0.693147	0	11	1	
ND<0.693147		ND<0.693147	0	11	1	
ND<0.693147		ND<0.693147	0	11	1	
ND<0.693147		ND<0.693147	0	11	1	
5.56068		ND<0.693147	4.86753	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	
8.35702		ND<0.693147	7.66388	13	1	
4.55808		ND<0.693147	3.86493	14	1	
4.86753		ND<0.693147	4.17439	15	1	
ND<0.693147		ND<0.693147	0	15	1	
ND<0.693147		ND<0.693147	0	15	1	
5.29832		ND<0.693147	4.60517	16	1	
ND<0.693147		ND<0.693147	0	16	1	
1.94162		ND<0.693147	1.24847	17	1	
ND<0.693147		ND<0.693147	0	17	1	
0.29267 J		ND<0.693147	-0.400478		17	2
ND<0.693147		ND<0.693147	0	17	2	
2.45101		ND<0.693147	1.75786	18	2	
6.83733		ND<0.693147	6.14419	19	2	
3.17805		ND<0.693147	2.48491	20	2	

3.95124	ND<0.693147	3.2581	21	2	
1.79176 J	ND<0.693147	1.09861	22	2	
ND<0.693147	ND<0.693147	0	22	2	
ND<0.693147	ND<0.693147	0	22	2	
ND<0.693147	ND<0.693147	0	22	2	
5.56068	ND<0.693147	4.86753	23	2	
ND<0.693147	ND<0.693147	0	23	2	
ND<0.693147	ND<0.693147	0	23	2	
ND<0.693147	ND<0.693147	0	23	2	
8.35702	ND<0.693147	7.66388	24	2	
4.55808	ND<0.693147	3.86493	25	2	
4.86753	ND<0.693147	4.17439	26	2	
ND<0.693147	ND<0.693147	0	26	2	
ND<0.693147	ND<0.693147	0	26	2	
5.29832	ND<0.693147	4.60517	27	2	
ND<0.693147	ND<0.693147	0	27	2	
1.94162	ND<0.693147	1.24847	28	2	
ND<0.693147	ND<0.693147	0	28	2	
0.29267 J	ND<0.693147	-0.400478		28	3
ND<0.693147	ND<0.693147	0	28	3	
2.45101	ND<0.693147	1.75786	29	3	
6.83733	ND<0.693147	6.14419	30	3	
3.17805	ND<0.693147	2.48491	31	3	
3.95124	ND<0.693147	3.2581	32	3	
1.79176 J	ND<0.693147	1.09861	33	3	
ND<0.693147	ND<0.693147	0	33	3	
ND<0.693147	ND<0.693147	0	33	3	
5.56068	ND<0.693147	4.86753	34	3	
ND<0.693147	ND<0.693147	0	34	3	
ND<0.693147	ND<0.693147	0	34	3	
ND<0.693147	ND<0.693147	0	34	3	
8.35702	ND<0.693147	7.66388	35	3	
4.55808	ND<0.693147	3.86493	36	3	
4.86753	ND<0.693147	4.17439	37	3	
ND<0.693147	ND<0.693147	0	37	3	
ND<0.693147	ND<0.693147	0	37	3	
5.29832	ND<0.693147	4.60517	38	3	
ND<0.693147	ND<0.693147	0	38	3	
1.94162	ND<0.693147	1.24847	39	3	
ND<0.693147	ND<0.693147	0	39	3	
0.29267 J	ND<0.693147	-0.400478		39	4
ND<0.693147	ND<0.693147	0	39	4	
2.45101	ND<0.693147	1.75786	40	4	
6.83733	ND<0.693147	6.14419	41	4	
3.17805	ND<0.693147	2.48491	42	4	
3.95124	ND<0.693147	3.2581	43	4	
1.79176 J	ND<0.693147	1.09861	44	4	
ND<0.693147	ND<0.693147	0	44	4	
5.56068	ND<0.693147	4.86753	45	4	
ND<0.693147	ND<0.693147	0	45	4	
ND<0.693147	ND<0.693147	0	45	4	
ND<0.693147	ND<0.693147	0	45	4	
8.35702	ND<0.693147	7.66388	46	4	
4.55808	ND<0.693147	3.86493	47	4	
4.86753	ND<0.693147	4.17439	48	4	
ND<0.693147	ND<0.693147	0	48	4	
ND<0.693147	ND<0.693147	0	48	4	
5.29832	ND<0.693147	4.60517	49	4	
ND<0.693147	ND<0.693147	0	49	4	

1.94162	ND<0.693147	1.24847	50	4	
ND<0.693147	ND<0.693147	0	50	4	
0.29267 J	ND<0.693147	-0.400478		50	5
ND<0.693147	ND<0.693147	0	50	5	
2.45101	ND<0.693147	1.75786	51	5	
6.83733	ND<0.693147	6.14419	52	5	
3.17805	ND<0.693147	2.48491	53	5	
3.95124	ND<0.693147	3.2581	54	5	
1.79176 J	ND<0.693147	1.09861	55	5	
5.56068	ND<0.693147	4.86753	56	5	
ND<0.693147	ND<0.693147	0	56	5	
ND<0.693147	ND<0.693147	0	56	5	
ND<0.693147	ND<0.693147	0	56	5	
8.35702	ND<0.693147	7.66388	57	5	
4.55808	ND<0.693147	3.86493	58	5	
4.86753	ND<0.693147	4.17439	59	5	
ND<0.693147	ND<0.693147	0	59	5	
ND<0.693147	ND<0.693147	0	59	5	
5.29832	ND<0.693147	4.60517	60	5	
ND<0.693147	ND<0.693147	0	60	5	
1.94162	ND<0.693147	1.24847	61	5	
ND<0.693147	ND<0.693147	0	61	5	
0.29267 J	ND<0.693147	-0.400478		61	6
ND<0.693147	ND<0.693147	0	61	6	
2.45101	ND<0.693147	1.75786	62	6	
6.83733	ND<0.693147	6.14419	63	6	
3.17805	ND<0.693147	2.48491	64	6	
3.95124	ND<0.693147	3.2581	65	6	
1.79176 J	ND<0.693147	1.09861	66	6	
ND<0.693147	5.56068	-4.867536	6	7	
ND<0.693147	5.56068	-4.867536	6	8	
ND<0.693147	5.56068	-4.867536	6	9	
8.35702	5.56068	2.79634	67	9	
4.55808	5.56068	-1.0026	67	10	
4.86753	5.56068	-0.693147		67	11
ND<0.693147	5.56068	-4.867536	7	12	
ND<0.693147	5.56068	-4.867536	7	13	
5.29832	5.56068	-0.262364		67	14
ND<0.693147	5.56068	-4.867536	7	15	
1.94162	5.56068	-3.619076	7	16	
ND<0.693147	5.56068	-4.867536	7	17	
0.29267 J	5.56068	-5.268016	7	18	
ND<0.693147	5.56068	-4.867536	7	19	
2.45101	5.56068	-3.109686	7	20	
6.83733	5.56068	1.27665	68	20	
3.17805	5.56068	-2.382636	8	21	
3.95124	5.56068	-1.609446	8	22	
1.79176 J	5.56068	-3.768926	8	23	
ND<0.693147	ND<0.693147	0	68	23	
ND<0.693147	ND<0.693147	0	68	23	
8.35702	ND<0.693147	7.66388	69	23	
4.55808	ND<0.693147	3.86493	70	23	
4.86753	ND<0.693147	4.17439	71	23	
ND<0.693147	ND<0.693147	0	71	23	
ND<0.693147	ND<0.693147	0	71	23	
5.29832	ND<0.693147	4.60517	72	23	
ND<0.693147	ND<0.693147	0	72	23	
1.94162	ND<0.693147	1.24847	73	23	
ND<0.693147	ND<0.693147	0	73	23	

0.29267 J	ND<0.693147	-0.400478	73	24
ND<0.693147	ND<0.693147	0	73	24
2.45101	ND<0.693147	1.75786	74	24
6.83733	ND<0.693147	6.14419	75	24
3.17805	ND<0.693147	2.48491	76	24
3.95124	ND<0.693147	3.2581	77	24
1.79176 J	ND<0.693147	1.09861	78	24
ND<0.693147	ND<0.693147	0	78	24
8.35702	ND<0.693147	7.66388	79	24
4.55808	ND<0.693147	3.86493	80	24
4.86753	ND<0.693147	4.17439	81	24
ND<0.693147	ND<0.693147	0	81	24
ND<0.693147	ND<0.693147	0	81	24
5.29832	ND<0.693147	4.60517	82	24
ND<0.693147	ND<0.693147	0	82	24
1.94162	ND<0.693147	1.24847	83	24
ND<0.693147	ND<0.693147	0	83	24
0.29267 J	ND<0.693147	-0.400478	83	25
ND<0.693147	ND<0.693147	0	83	25
2.45101	ND<0.693147	1.75786	84	25
6.83733	ND<0.693147	6.14419	85	25
3.17805	ND<0.693147	2.48491	86	25
3.95124	ND<0.693147	3.2581	87	25
1.79176 J	ND<0.693147	1.09861	88	25
8.35702	ND<0.693147	7.66388	89	25
4.55808	ND<0.693147	3.86493	90	25
4.86753	ND<0.693147	4.17439	91	25
ND<0.693147	ND<0.693147	0	91	25
ND<0.693147	ND<0.693147	0	91	25
5.29832	ND<0.693147	4.60517	92	25
ND<0.693147	ND<0.693147	0	92	25
1.94162	ND<0.693147	1.24847	93	25
ND<0.693147	ND<0.693147	0	93	25
0.29267 J	ND<0.693147	-0.400478	93	26
ND<0.693147	ND<0.693147	0	93	26
2.45101	ND<0.693147	1.75786	94	26
6.83733	ND<0.693147	6.14419	95	26
3.17805	ND<0.693147	2.48491	96	26
3.95124	ND<0.693147	3.2581	97	26
1.79176 J	ND<0.693147	1.09861	98	26
4.55808	8.35702	-3.798959	98	27
4.86753	8.35702	-3.489499	98	28
ND<0.693147	8.35702	-7.663889	98	29
ND<0.693147	8.35702	-7.663889	98	30
5.29832	8.35702	-3.058719	98	31
ND<0.693147	8.35702	-7.663889	98	32
1.94162	8.35702	-6.415419	98	33
ND<0.693147	8.35702	-7.663889	98	34
0.29267 J	8.35702	-8.064359	98	35
ND<0.693147	8.35702	-7.663889	98	36
2.45101	8.35702	-5.906029	98	37
6.83733	8.35702	-1.519699	98	38
3.17805	8.35702	-5.178979	98	39
3.95124	8.35702	-4.405789	98	40
1.79176 J	8.35702	-6.565269	98	41
4.86753	4.55808	0.309456	99	41
ND<0.693147	4.55808	-3.864939	99	42
ND<0.693147	4.55808	-3.864939	99	43

5.29832	4.55808	0.740239	100	43
ND<0.693147	4.55808	-3.86493	100	44
1.94162	4.55808	-2.61646	100	45
ND<0.693147	4.55808	-3.86493	100	46
0.29267 J	4.55808	-4.26541	100	47
ND<0.693147	4.55808	-3.86493	100	48
2.45101	4.55808	-2.10707	100	49
6.83733	4.55808	2.27925	101	49
3.17805	4.55808	-1.38002	101	50
3.95124	4.55808	-0.606835	101	51
1.79176 J	4.55808	-2.76632	101	52
ND<0.693147	4.86753	-4.17439	101	53
ND<0.693147	4.86753	-4.17439	101	54
5.29832	4.86753	0.430783	102	54
ND<0.693147	4.86753	-4.17439	102	55
1.94162	4.86753	-2.92592	102	56
ND<0.693147	4.86753	-4.17439	102	57
0.29267 J	4.86753	-4.57486	102	58
ND<0.693147	4.86753	-4.17439	102	59
2.45101	4.86753	-2.41653	102	60
6.83733	4.86753	1.9698	103	60
3.17805	4.86753	-1.68948	103	61
3.95124	4.86753	-0.916291	103	62
1.79176 J	4.86753	-3.07577	103	63
ND<0.693147	ND<0.693147	0	103	63
5.29832	ND<0.693147	4.60517	104	63
ND<0.693147	ND<0.693147	0	104	63
1.94162	ND<0.693147	1.24847	105	63
ND<0.693147	ND<0.693147	0	105	63
0.29267 J	ND<0.693147	-0.400478	105	64
ND<0.693147	ND<0.693147	0	105	64
2.45101	ND<0.693147	1.75786	106	64
6.83733	ND<0.693147	6.14419	107	64
3.17805	ND<0.693147	2.48491	108	64
3.95124	ND<0.693147	3.2581	109	64
1.79176 J	ND<0.693147	1.09861	110	64
5.29832	ND<0.693147	4.60517	111	64
ND<0.693147	ND<0.693147	0	111	64
1.94162	ND<0.693147	1.24847	112	64
ND<0.693147	ND<0.693147	0	112	64
0.29267 J	ND<0.693147	-0.400478	112	65
ND<0.693147	ND<0.693147	0	112	65
2.45101	ND<0.693147	1.75786	113	65
6.83733	ND<0.693147	6.14419	114	65
3.17805	ND<0.693147	2.48491	115	65
3.95124	ND<0.693147	3.2581	116	65
1.79176 J	ND<0.693147	1.09861	117	65
ND<0.693147	5.29832	-4.60517	117	66
1.94162	5.29832	-3.3567	117	67
ND<0.693147	5.29832	-4.60517	117	68
0.29267 J	5.29832	-5.00565	117	69
ND<0.693147	5.29832	-4.60517	117	70
2.45101	5.29832	-2.84731	117	71
6.83733	5.29832	1.53902	118	71
3.17805	5.29832	-2.12026	118	72
3.95124	5.29832	-1.34707	118	73
1.79176 J	5.29832	-3.50656	118	74

1.94162	ND<0.693147	1.24847	119	74	
ND<0.693147	ND<0.693147	0	119	74	
0.29267 J	ND<0.693147	-0.400478		119	75
ND<0.693147	ND<0.693147	0	119	75	
2.45101	ND<0.693147	1.75786	120	75	
6.83733	ND<0.693147	6.14419	121	75	
3.17805	ND<0.693147	2.48491	122	75	
3.95124	ND<0.693147	3.2581	123	75	
1.79176 J	ND<0.693147	1.09861	124	75	
ND<0.693147	1.94162	-1.24847	124	76	
0.29267 J	1.94162	-1.64895	124	77	
ND<0.693147	1.94162	-1.24847	124	78	
2.45101	1.94162	0.50939	125	78	
6.83733	1.94162	4.89572	126	78	
3.17805	1.94162	1.23644	127	78	
3.95124	1.94162	2.00963	128	78	
1.79176 J	1.94162	-0.149856		128	79
0.29267 J	ND<0.693147	-0.400478		128	80
ND<0.693147	ND<0.693147	0	128	80	
2.45101	ND<0.693147	1.75786	129	80	
6.83733	ND<0.693147	6.14419	130	80	
3.17805	ND<0.693147	2.48491	131	80	
3.95124	ND<0.693147	3.2581	132	80	
1.79176 J	ND<0.693147	1.09861	133	80	
ND<0.693147	0.29267 J	0.400478		134	80
2.45101	0.29267 J	2.15834	135	80	
6.83733	0.29267 J	6.54466	136	80	
3.17805	0.29267 J	2.88538	137	80	
3.95124	0.29267 J	3.65857	138	80	
1.79176 J	0.29267 J	1.49909	139	80	
2.45101	ND<0.693147	1.75786	140	80	
6.83733	ND<0.693147	6.14419	141	80	
3.17805	ND<0.693147	2.48491	142	80	
3.95124	ND<0.693147	3.2581	143	80	
1.79176 J	ND<0.693147	1.09861	144	80	
6.83733	2.45101	4.38633	145	80	
3.17805	2.45101	0.727049		146	80
3.95124	2.45101	1.50024	147	80	
1.79176 J	2.45101	-0.659246		147	81
3.17805	6.83733	-3.65928	147	82	
3.95124	6.83733	-2.88609	147	83	
1.79176 J	6.83733	-5.04557	147	84	
3.95124	3.17805	0.77319	148	84	
1.79176 J	3.17805	-1.38629	148	85	
1.79176 J	3.95124	-2.15948	148	86	

S Statistic = 148 - 86 = 62

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
11/15/2009	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 = 1.46885
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|1.46885| <= 1.97737 indicating no evidence of a trend

Concentrations (ug/L)

Parameter: Arsenic

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 198
Total Non-Detect: 123
Percent Non-Detects: 62.1212%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	12 (80%)	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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12AR	16	8 (50%)	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
			11/15/2009	0.5 J	0.5 J
MW-10	26	16 (61.5385%)	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	
			11/15/2009	3.6	3.6	
MW-9	26	10 (38.4615%)	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	
			11/15/2009	8.7	8.7	
MW-7	25	13 (52%)	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	
MW-8	25	13 (52%)	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	
MW-11R	25	17 (68%)	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	
MW-6	25	21 (84%)	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		
MW-12BR	15	13 (86.6667%)	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	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		

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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.2	-2.575836	3.63492	-0.515167
2	0.2	-2.326341	2.0468	-0.980435
3	0.2	-2.170091	6.7561	-1.41445
4	0.2	-2.053752	0.974	-1.8252
5	0.42	-1.959962	4.8154	-2.64839
6	0.5	-1.880792	8.3528	-3.58878
7	1	-1.811913	1.6358	-5.4007
8	1	-1.750693	4.7007	-7.15138
9	1	-1.6954	37.5751	-8.84678
10	1	-1.644854	0.2806	-10.4916
11	1	-1.598194	2.8348	-12.0898
12	1	-1.554774	5.2522	-13.6446
13	1	-1.5141	47.5447	-15.1587
14	1	-1.475794	9.7226	-16.6345
15	1	-1.439535	1.7949	-18.074
16	1	-1.405075	3.7691	-19.4791
17	1	-1.3722	55.6521	-20.8513
18	1	-1.340755	7.4497	-22.1921
19	1	-1.310585	9.1673	-23.5026
20	1	-1.281556	0.8097	-24.7842
21	1	-1.253576	2.3811	-26.0378
22	1	-1.226536	3.8855	-27.2643
23	1	-1.200366	5.3263	-28.4646
24	1	-1.174996	6.7069	-29.6396
25	1	-1.150356	8.0302	-30.79
26	1	-1.126396	9.299	-31.9164
27	1	-1.103067	0.5157	-33.0194
28	1	-1.080327	1.6828	-34.0998
29	1	-1.058127	2.8025	-35.1579
30	1	-1.036437	3.8766	-36.1943
31	1	-1.015227	4.9073	-37.2095
32	1	-0.994457	75.8963	-38.204
33	1	-0.974114	76.8452	-39.1781
34	1	-0.954165	77.7556	-40.1323
35	1	-0.934597	8.6291	-41.0669
36	1	-0.915365	79.4669	-41.9822
37	1	-0.896473	80.2706	-42.8787
38	1	-0.877897	81.0413	-43.7566
39	1	-0.859618	81.7803	-44.6162
40	1	-0.838054	82.4826	-45.4543
41	1	-0.820379	83.1556	-46.2746
42	1	-0.802956	83.8004	-47.0776
43	1	-0.785774	84.4178	-47.8634
44	1	-0.768821	85.0089	-48.6322
45	1	-0.752084	85.5745	-49.3843
46	1	-0.735557	86.1156	-50.1198
47	1	-0.719228	86.6328	-50.8391
48	1	-0.703089	87.1272	-51.5421
49	1	-0.687131	87.5993	-52.2293

50	1	-0.671346	88.05	-52.9006
51	1	-0.655726	88.48	-53.5564
52	1	-0.640266	88.89	-54.1966
53	1	-0.624956	89.2805	-54.8216
54	1	-0.609791	89.6524	-55.4314
55	1	-0.594766	90.0061	-56.0261
56	1	-0.579873	90.3424	-56.606
57	1	-0.565108	90.6617	-57.1711
58	1	-0.550465	90.9647	-57.7216
59	1	-0.5359491.252	-58.2575	
60	1	-0.521527	91.5239	-58.779
61	1	-0.507221	91.7812	-59.2863
62	1	-0.493018	92.0243	-59.7793
63	1	-0.478914	92.2536	-60.2582
64	1	-0.464904	92.4698	-60.7231
65	1	-0.450985	92.6732	-61.1741
66	1	-0.437153	92.8643	-61.6112
67	1	-0.423405	93.0435	-62.0346
68	1	-0.409735	93.2114	-62.4444
69	1	-0.396142	93.3684	-62.8405
70	1	-0.382622	93.5148	-63.2231
71	1	-0.369171	93.651	-63.5923
72	1	-0.355788	93.7776	-63.9481
73	1	-0.342466	93.8949	-64.2906
74	1	-0.329206	94.0033	-64.6198
75	1	-0.316004	94.1031	-64.9358
76	1	-0.302855	94.1949	-65.2386
77	1	-0.2897694.2788	-65.5284	
78	1	-0.276714	94.3554	-65.8051
79	1	-0.263715	94.4249	-66.0688
80	1	-0.248174	94.4865	-66.317
81	1	-0.235269	94.5419	-66.5523
82	1	-0.222403	94.5913	-66.7747
83	1	-0.209575	94.6353	-66.9842
84	1	-0.196779	94.674	-67.181
85	1	-0.184017	94.7079	-67.365
86	1	-0.171285	94.7372	-67.5363
87	1	-0.158579	94.7623	-67.6949
88	1	-0.1459 94.7836	-67.8408	
89	1	-0.133244	94.8014	-67.974
90	1	-0.1206194.8159	-68.0947	
91	1	-0.107995	94.8276	-68.2027
92	1	-0.0953969	94.8367	-68.2981
93	1	-0.0828129	94.8435	-68.3809
94	1	-0.0702426	94.8485	-68.4511
95	1	-0.0576847	94.8518	-68.5088
96	1	-0.0451348	94.8538	-68.5539
97	1	-0.0325917	94.8549	-68.5865
98	1	-0.0200544	94.8553	-68.6066
99	1	-0.00751925	94.8554	-68.6141
100	1	0.00751925	94.8554	-68.6066
101	1	0.0200544	94.8558	-68.5865
102	1	0.0325917	94.8569	-68.5539
103	1	0.0451348	94.8589	-68.5088
104	1	0.0576847	94.8623	-68.4511
105	1	0.0702426	94.8672	-68.3809
106	1	0.0828129	94.874	-68.2981
107	1	0.0953969	94.8831	-68.2027
108	1	0.107995	94.8948	-68.0947
109	1	0.12061 94.9094	-67.974	
110	1	0.133244	94.9271	-67.8408
111	1	0.1459 94.9484	-67.6949	

112	1	0.158579	94.9735	-67.5363
113	1	0.171285	95.0029	-67.365
114	1	0.184017	95.0367	-67.181
115	1	0.196779	95.0755	-66.9842
116	1	0.209575	95.1194	-66.7747
117	1	0.222403	95.1689	-66.5523
118	1	0.235269	95.2242	-66.317
119	1	0.248174	95.2858	-66.0688
120	1	0.263715	95.3553	-65.8051
121	1	0.276714	95.4319	-65.5284
122	1	0.28976	95.5159	-65.2386
123	1	0.302855	95.6076	-64.9358
124	1	0.316004	95.7075	-64.6198
125	1	0.329206	95.8158	-64.2906
126	1.05	0.342466	95.9331	-63.931
127	1.05	0.355788	96.0597	-63.5574
128	1.05	0.369171	96.196	-63.1698
129	1.09	0.382622	96.3424	-62.7527
130	1.11	0.396142	96.4993	-62.313
131	1.13	0.409735	96.6672	-61.85
132	1.31	0.423405	96.8465	-61.2953
133	1.45	0.437153	97.0376	-60.6615
134	1.48	0.450985	97.241	-59.994
135	1.88	0.464904	97.4571	-59.12
136	1.92	0.478914	97.6865	-58.2005
137	1.95	0.493018	97.9295	-57.2391
138	2	0.507221	98.1868	-56.2246
139	2	0.521527	98.4588	-55.1816
140	2.02	0.53594	98.746	-54.099
141	2.11	0.550465	99.049	-52.9375
142	2.23	0.565108	99.3684	-51.6773
143	2.23	0.579873	99.7046	-50.3842
144	2.65	0.594766	100.058	-48.8081
145	3.1	0.609791	100.43	-46.9177
146	3.32	0.624956	100.821	-44.8429
147	3.6	0.640266	101.231	-42.5379
148	3.6	0.655726	101.661	-40.1773
149	3.62	0.671346	102.111	-37.747
150	3.91	0.687131	102.584	-35.0603
151	4	0.703089	103.078	-32.248
152	4.63	0.719228	103.595	-28.918
153	4.82	0.735557	104.136	-25.3726
154	4.84	0.752084	104.702	-21.7325
155	4.87	0.768821	105.293	-17.9883
156	5	0.785774	105.91	-14.0595
157	5	0.802956	106.555	-10.0447
158	5	0.820379	107.228	-5.94278
159	5	0.838054	107.93	-1.75251
160	5	0.859618	108.669	2.54558
161	5.17	0.877897	109.44	7.08431
162	5.2	0.896473	110.244	11.746
163	5.73	0.915365	111.082	16.991
164	5.75	0.93459	111.955	22.3649
165	5.76	0.954165	112.866	27.8609
166	5.85	0.974114	113.814	33.5595
167	5.92	0.994457	114.803	39.4466
168	6.28	1.01522	115.834	45.8222
169	6.67	1.03643	116.908	52.7352
170	7.5	1.05812	118.028	60.6712
171	7.92	1.08032	119.195	69.2273
172	8.44	1.10306	120.412	78.5371
173	8.48	1.12639	121.68	88.0889

174	8.6	1.15035	123.004	97.9819
175	8.7	1.17499	124.384	108.204
176	8.8	1.20036	125.825	118.768
177	8.98	1.22653	127.33	129.782
178	9.41	1.25357	128.901	141.578
179	9.45	1.28155	130.543	153.688
180	10.4	1.31058	132.261	167.318
181	10.8	1.34075	134.059	181.799
182	11	1.3722	135.942	196.893
183	11.4	1.40507	137.916	212.911
184	11.7	1.43953	139.988	229.753
185	12.2	1.47579	142.166	247.758
186	12.3	1.5141	144.459	266.381
187	12.7	1.55477	146.876	286.127
188	13	1.59819	149.43	306.903
189	13.8	1.64485	152.136	329.602
190	15	1.6954	155.01	355.033
191	16	1.75069	158.075	383.044
192	17	1.81191	161.358	413.847
193	17	1.88079	164.895	445.82
194	17	1.95996	168.737	479.14
195	17	2.05375	172.955	514.053
196	25.5	2.17009	177.664	569.391
197	37	2.32634	183.076	655.465
198	40	2.57583	189.711	758.499

Data Set Standard Deviation = 5.46568
Numerator = 575320
Denominator = 1.11647e+006
W Statistic = 0.515303 = 575320 / 1.11647e+006

5% Critical value of 0.976 exceeds 0.515303
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.515303
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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.60944	-2.57583	6.63492	4.14565
2	-1.60944	-2.32634	12.0468	7.88975
3	-1.60944	-2.17009	16.7561	11.3824
4	-1.60944	-2.05375	20.974	14.6878
5	-0.867501	-1.95996	24.8154	16.388
6	-0.693147	-1.88079	28.3528	17.6917
7	0	-1.81191	31.6358	17.6917
8	0	-1.75069	34.7007	17.6917
9	0	-1.6954	37.5751	17.6917
10	0	-1.64485	40.2806	17.6917
11	0	-1.59819	42.8348	17.6917
12	0	-1.55477	45.2522	17.6917
13	0	-1.5141	47.5447	17.6917
14	0	-1.47579	49.7226	17.6917
15	0	-1.43953	51.7949	17.6917
16	0	-1.40507	53.7691	17.6917
17	0	-1.3722	55.6521	17.6917
18	0	-1.34075	57.4497	17.6917
19	0	-1.31058	59.1673	17.6917
20	0	-1.28155	60.8097	17.6917
21	0	-1.25357	62.3811	17.6917
22	0	-1.22653	63.8855	17.6917
23	0	-1.20036	65.3263	17.6917
24	0	-1.17499	66.7069	17.6917
25	0	-1.15035	68.0302	17.6917
26	0	-1.12639	69.299	17.6917
27	0	-1.10306	70.5157	17.6917
28	0	-1.08032	71.6828	17.6917
29	0	-1.05812	72.8025	17.6917
30	0	-1.03643	73.8766	17.6917
31	0	-1.01522	74.9073	17.6917
32	0	-0.994457	75.8963	17.6917
33	0	-0.974114	76.8452	17.6917
34	0	-0.954165	77.7556	17.6917
35	0	-0.93459	78.6291	17.6917
36	0	-0.915365	79.4669	17.6917
37	0	-0.896473	80.2706	17.6917
38	0	-0.877897	81.0413	17.6917
39	0	-0.859618	81.7803	17.6917
40	0	-0.838054	82.4826	17.6917
41	0	-0.820379	83.1556	17.6917
42	0	-0.802956	83.8004	17.6917
43	0	-0.785774	84.4178	17.6917
44	0	-0.768821	85.0089	17.6917
45	0	-0.752084	85.5745	17.6917
46	0	-0.735557	86.1156	17.6917
47	0	-0.719228	86.6328	17.6917
48	0	-0.703089	87.1272	17.6917
49	0	-0.687131	87.5993	17.6917

50	0	-0.671346	88.05	17.6917
51	0	-0.655726	88.48	17.6917
52	0	-0.640266	88.89	17.6917
53	0	-0.624956	89.2805	17.6917
54	0	-0.609791	89.6524	17.6917
55	0	-0.594766	90.0061	17.6917
56	0	-0.579873	90.3424	17.6917
57	0	-0.565108	90.6617	17.6917
58	0	-0.550465	90.9647	17.6917
59	0	-0.5359491.252	17.6917	
60	0	-0.521527	91.5239	17.6917
61	0	-0.507221	91.7812	17.6917
62	0	-0.493018	92.0243	17.6917
63	0	-0.478914	92.2536	17.6917
64	0	-0.464904	92.4698	17.6917
65	0	-0.450985	92.6732	17.6917
66	0	-0.437153	92.8643	17.6917
67	0	-0.423405	93.0435	17.6917
68	0	-0.409735	93.2114	17.6917
69	0	-0.396142	93.3684	17.6917
70	0	-0.382622	93.5148	17.6917
71	0	-0.369171	93.651	17.6917
72	0	-0.355788	93.7776	17.6917
73	0	-0.342466	93.8949	17.6917
74	0	-0.329206	94.0033	17.6917
75	0	-0.316004	94.1031	17.6917
76	0	-0.302855	94.1949	17.6917
77	0	-0.2897694.2788	17.6917	
78	0	-0.276714	94.3554	17.6917
79	0	-0.263715	94.4249	17.6917
80	0	-0.248174	94.4865	17.6917
81	0	-0.235269	94.5419	17.6917
82	0	-0.222403	94.5913	17.6917
83	0	-0.209575	94.6353	17.6917
84	0	-0.196779	94.674	17.6917
85	0	-0.184017	94.7079	17.6917
86	0	-0.171285	94.7372	17.6917
87	0	-0.158579	94.7623	17.6917
88	0	-0.1459 94.7836	17.6917	
89	0	-0.133244	94.8014	17.6917
90	0	-0.1206194.8159	17.6917	
91	0	-0.107995	94.8276	17.6917
92	0	-0.0953969	94.8367	17.6917
93	0	-0.0828129	94.8435	17.6917
94	0	-0.0702426	94.8485	17.6917
95	0	-0.0576847	94.8518	17.6917
96	0	-0.0451348	94.8538	17.6917
97	0	-0.0325917	94.8549	17.6917
98	0	-0.0200544	94.8553	17.6917
99	0	-0.00751925	94.8554	17.6917
100	0	0.00751925	94.8554	17.6917
101	0	0.0200544	94.8558	17.6917
102	0	0.0325917	94.8569	17.6917
103	0	0.0451348	94.8589	17.6917
104	0	0.0576847	94.8623	17.6917
105	0	0.0702426	94.8672	17.6917
106	0	0.0828129	94.874	17.6917
107	0	0.0953969	94.8831	17.6917
108	0	0.107995	94.8948	17.6917
109	0	0.12061 94.9094	17.6917	
110	0	0.133244	94.9271	17.6917
111	0	0.1459 94.9484	17.6917	

112	0	0.158579	94.9735	17.6917	
113	0	0.171285	95.0029	17.6917	
114	0	0.184017	95.0367	17.6917	
115	0	0.196779	95.0755	17.6917	
116	0	0.209575	95.1194	17.6917	
117	0	0.222403	95.1689	17.6917	
118	0	0.235269	95.2242	17.6917	
119	0	0.248174	95.2858	17.6917	
120	0	0.263715	95.3553	17.6917	
121	0	0.276714	95.4319	17.6917	
122	0	0.28976	95.5159	17.6917	
123	0	0.302855	95.6076	17.6917	
124	0	0.316004	95.7075	17.6917	
125	0	0.329206	95.8158	17.6917	
126	0.0487902	0.342466	95.9331	17.7084	
127	0.0487902	0.355788	96.0597	17.7258	
128	0.0487902	0.369171	96.196	17.7438	
129	0.0861777	0.382622	96.3424	17.7767	
130	0.10436	0.396142	96.4993	17.8181	
131	0.122218	0.409735	96.6672	17.8682	
132	0.270027	0.423405	96.8465	17.9825	
133	0.371564	0.437153	97.0376	18.1449	
134	0.392042	0.450985	97.241	18.3217	
135	0.631272	0.464904	97.4571	18.6152	
136	0.652325	0.478914	97.6865	18.9276	
137	0.667829	0.493018	97.9295	19.2569	
138	0.693147	0.507221	98.1868	19.6084	
139	0.693147	0.521527	98.4588	19.9699	
140	0.703098	0.53594	98.746	20.3468	
141	0.746688	0.550465	99.049	20.7578	
142	0.802002	0.565108	99.3684	21.211	
143	0.802002	0.579873	99.7046	21.6761	
144	0.97456	0.594766	100.058	22.2557	
145	1.1314	0.609791	100.43	22.9456	
146	1.19996	0.624956	100.821	23.6955	
147	1.28093	0.640266	101.231	24.5157	
148	1.28093	0.655726	101.661	25.3556	
149	1.28647	0.671346	102.111	26.2193	
150	1.36354	0.687131	102.584	27.1562	
151	1.38629	0.703089	103.078	28.1309	
152	1.53256	0.719228	103.595	29.2332	
153	1.57277	0.735557	104.136	30.39	
154	1.57691	0.752084	104.702	31.576	
155	1.58309	0.768821	105.293	32.7931	
156	1.60944	0.785774	105.91	34.0578	
157	1.60944	0.802956	106.555	35.3501	
158	1.60944	0.820379	107.228	36.6704	
159	1.60944	0.838054	107.93	38.0192	
160	1.60944	0.859618	108.669	39.4027	
161	1.64287	0.877897	109.44	40.845	
162	1.64866	0.896473	110.244	42.323	
163	1.74572	0.915365	111.082	43.9209	
164	1.7492	0.93459	111.955	45.5557	
165	1.75094	0.954165	112.866	47.2264	
166	1.76644	0.974114	113.814	48.9471	
167	1.77834	0.994457	114.803	50.7156	
168	1.83737	1.01522	115.834	52.5809	
169	1.89762	1.03643	116.908	54.5477	
170	2.0149	1.05812	118.028	56.6797	
171	2.06939	1.08032	119.195	58.9153	
172	2.13298	1.10306	120.412	61.2681	
173	2.13771	1.12639	121.68	63.676	

174	2.15176	1.15035	123.004	66.1513
175	2.16332	1.17499	124.384	68.6932
176	2.17475	1.20036	125.825	71.3037
177	2.195	1.22653	127.33	73.9959
178	2.24177	1.25357	128.901	76.8061
179	2.24601	1.28155	130.543	79.6845
180	2.34181	1.31058	132.261	82.7536
181	2.37955	1.34075	134.059	85.944
182	2.3979	1.3722	135.942	89.2344
183	2.43361	1.40507	137.916	92.6538
184	2.45959	1.43953	139.988	96.1945
185	2.50144	1.47579	142.166	99.8861
186	2.5096	1.5141	144.459	103.686
187	2.5416	1.55477	146.876	107.637
188	2.56495	1.59819	149.43	111.737
189	2.62467	1.64485	152.136	116.054
190	2.70805	1.6954	155.01	120.645
191	2.77259	1.75069	158.075	125.499
192	2.83321	1.81191	161.358	130.633
193	2.83321	1.88079	164.895	135.961
194	2.83321	1.95996	168.737	141.514
195	2.83321	2.05375	172.955	147.333
196	3.23868	2.17009	177.664	154.361
197	3.61092	2.32634	183.076	162.761
198	3.68888	2.57583	189.711	172.263

Data Set Standard Deviation = 1.02371
Numerator = 29674.7
Denominator = 39166.5
W Statistic = 0.757654 = 29674.7 / 39166.5

5% Critical value of 0.976 exceeds 0.757654
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.757654
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	62
	9/23/1999	ND<0	62
	3/15/2000	3.61092	197
	9/24/2003	ND<0	62
	3/11/2004	ND<0	62
	10/12/2004	ND<0	62
	4/1/2005	ND<0	62
	10/25/2005	ND<0	62
	4/29/2006	ND<0	62
	11/18/2006	ND<0	62
	5/23/2007	0.10436 J	130
	11/28/2007	ND<0	62
	6/5/2008	0.371564 J	133
	11/20/2008	ND<0	62
	6/11/2009	ND<-1.60944	62

Rank Sum = 1204
Rank Mean = 80.2667

Background Rank Sum = 1204
Background Rank Mean = 80.2667

Compliance Wells

Well ID	Date	Result	Rank
MW-12AR	3/16/1999	ND<0	62
	9/23/1999	1.60944	156
	3/15/2000	2.77259	191
	9/24/2003	ND<0	62
	3/11/2004	ND<0	62
	10/12/2004	ND<0	62
	4/1/2005	ND<0	62
	10/25/2005	0.703098	140
	4/29/2006	0.392042 J	134
	11/18/2006	0.0487902 J	126
	5/23/2007	0.0487902 J	127
	11/28/2007	ND<0	62
	6/5/2008	ND<0	62
	11/20/2008	ND<0	62
	6/11/2009	-0.867501 J	124
	11/15/2009	-0.693147 J	125

Rank Sum = 1619
Rank Mean = 101.188

MW-10	7/20/1995	ND<0	62
	8/24/1995	ND<0	62
	9/28/1995	ND<0	62

	10/26/1995	ND<0	62	
	11/19/1996	ND<0	62	
	12/19/1996	ND<0	62	
	3/24/1997	ND<0	62	
	9/24/1997	ND<0	62	
	4/7/1998	ND<0	62	
	9/23/1998	ND<0	62	
	3/16/1999	1.38629		151
	9/23/1999	ND<0	62	
	3/15/2000	ND<0	62	
	9/24/2003	ND<0	62	
	3/11/2004	ND<0	62	
	10/12/2004	ND<0	62	
	4/1/2005	0.122218 J	131	
	10/25/2005	ND<0	62	
	4/29/2006	0.270027 J		132
	11/18/2006	0.631272 J		135
	5/23/2007	1.28647		149
	11/28/2007	1.57277		153
	6/5/2008	0.802002	142	
	11/20/2008	0.746688		141
	6/11/2009	1.1314	145	
	11/15/2009	1.28093		147

Rank Sum = 2418
Rank Mean = 93

MW-9	7/20/1995	ND<0	62	
	8/24/1995	ND<0	62	
	9/28/1995	ND<0	62	
	10/26/1995	ND<0	62	
	11/19/1996	ND<0	62	
	12/19/1996	ND<0	62	
	3/24/1997	2.83321		192
	9/24/1997	ND<0	62	
	4/7/1998	ND<0	62	
	9/23/1998	2.83321		193
	3/16/1999	1.60944		157
	9/23/1999	1.60944		158
	3/15/2000	2.83321		194
	9/24/2003	2.56495		188
	3/11/2004	ND<0	62	
	10/12/2004	ND<0	62	
	4/1/2005	1.36354	150	
	10/25/2005	1.83737		168
	4/29/2006	2.3979	182	
	11/18/2006	2.43361		183
	5/23/2007	2.37955		181
	11/28/2007	2.195	177	
	6/5/2008	2.13771	173	
	11/20/2008	2.62467		189
	6/11/2009	2.15176		174
	11/15/2009	2.16332		175

Rank Sum = 3454
Rank Mean = 132.846

MW-7	7/20/1995	ND<0	62	
	8/24/1995	ND<0	62	
	9/28/1995	2.5416	187	
	10/26/1995	ND<0	62	
	11/19/1996	ND<0	62	
	12/19/1996	2.45959		184
	3/24/1997	ND<0	62	

	9/24/1997	ND<0	62	
	4/7/1998	ND<0	62	
	9/23/1998	ND<0	62	
	3/16/1999	1.60944		159
	9/23/1999	ND<0	62	
	3/15/2000	ND<0	62	
	9/24/2003	ND<0	62	
	3/11/2004	ND<0	62	
	10/12/2004	ND<0	62	
	4/1/2005	1.75094	165	
	10/25/2005	2.13298		172
	4/29/2006	2.24177		178
	11/18/2006	1.57691		154
	5/23/2007	2.24601		179
	11/28/2007	2.5096	186	
	6/5/2008	2.17475	176	
	11/20/2008	1.74572		163
	6/11/2009	1.64866		162

Rank Sum = 2871
Rank Mean = 114.84

MW-8	7/20/1995	ND<0	62	
	8/24/1995	ND<0	62	
	9/28/1995	2.50144		185
	10/26/1995	ND<0	62	
	11/19/1996	ND<0	62	
	12/19/1996	ND<0	62	
	3/24/1997	ND<0	62	
	9/24/1997	ND<0	62	
	4/7/1998	ND<0	62	
	9/23/1998	ND<0	62	
	3/16/1999	0.693147		138
	9/23/1999	3.68888		198
	3/15/2000	ND<0	62	
	9/24/2003	ND<0	62	
	3/11/2004	ND<0	62	
	10/12/2004	ND<0	62	
	4/1/2005	1.64287	161	
	10/25/2005	1.89762		169
	4/29/2006	1.53256		152
	11/18/2006	1.19996		146
	5/23/2007	1.77834		167
	11/28/2007	1.76644		166
	6/5/2008	0.802002	143	
	11/20/2008	0.0487902 J		128
	6/11/2009	1.28093		148

Rank Sum = 2707
Rank Mean = 108.28

MW-11R	7/20/1995	ND<0	62	
	8/24/1995	ND<0	62	
	9/28/1995	ND<0	62	
	10/26/1995	ND<0	62	
	11/19/1996	ND<0	62	
	12/19/1996	ND<0	62	
	3/24/1997	ND<0	62	
	9/24/1997	ND<0	62	
	4/7/1998	ND<0	62	
	9/23/1998	ND<0	62	
	3/16/1999	ND<0	62	
	9/23/1999	ND<0	62	
	3/15/2000	ND<0	62	

	9/24/2003	2.83321	195
	3/11/2004	ND<0	62
	10/12/2004	2.70805	190
	4/1/2005	2.34181	180
	10/25/2005	2.0149	170
	4/29/2006	2.06939	171
	11/18/2006	0.97456	144
	5/23/2007	3.23868	196
	11/28/2007	1.58309	155
	6/5/2008	ND<0	62
	11/20/2008	ND<0	62
	6/11/2009	ND<-1.60944	62

Rank Sum = 2455
Rank Mean = 98.2

MW-6	7/20/1995	ND<0	62
	8/24/1995	ND<0	62
	9/28/1995	ND<0	62
	10/26/1995	ND<0	62
	11/19/1996	ND<0	62
	12/19/1996	ND<0	62
	3/24/1997	ND<0	62
	9/24/1997	ND<0	62
	4/7/1998	ND<0	62
	9/23/1998	ND<0	62
	3/16/1999	1.60944	160
	9/23/1999	0.693147	139
	3/15/2000	ND<0	62
	9/24/2003	ND<0	62
	3/11/2004	ND<0	62
	10/12/2004	ND<0	62
	4/1/2005	ND<0	62
	10/25/2005	ND<0	62
	4/29/2006	ND<0	62
	11/18/2006	ND<0	62
	5/23/2007	ND<0	62
	11/28/2007	ND<0	62
	6/5/2008	0.0861777 J	129
	11/20/2008	1.7492	164
	6/11/2009	ND<-1.60944	62

Rank Sum = 1894
Rank Mean = 75.76

MW-12BR	3/16/1999	ND<0	62
	9/23/1999	ND<0	62
	3/15/2000	ND<0	62
	9/24/2003	ND<0	62
	3/11/2004	ND<0	62
	10/12/2004	ND<0	62
	4/1/2005	0.667829 J	137
	10/25/2005	ND<0	62
	4/29/2006	ND<0	62
	11/18/2006	ND<0	62
	5/23/2007	ND<0	62
	11/28/2007	ND<0	62
	6/5/2008	0.652325 J	136
	11/20/2008	ND<0	62
	6/11/2009	ND<-1.60944	62

Rank Sum = 1079
Rank Mean = 71.9333

Calculation Results:

Kruskal-Wallis H Statistic = 20.9974
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 27.6179
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
20.9974 > 15.5073 indicating a significant group difference at 5% significance level
27.6179 > 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 80.2667

Well	Mean Rank	Dif from Bkg	Critical Value
MW-12AR	101.188	20.9208	47.909
MW-10	93	12.7333	43.2217
MW-9	132.846	52.5795	43.2217
MW-7	114.84	34.5733	43.5368
MW-8	108.28	28.0133	43.5368
MW-11R	98.2	17.9333	43.5368
MW-6	75.76	-4.50667	43.5368
MW-12BR	71.9333	-8.33333	48.6756

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 80.2667

Well	Mean Rank	Dif from Bkg	Critical Value
MW-12AR	101.188	20.9208	51.7352
MW-10	93	12.7333	46.6736
MW-9	132.846	52.5795	46.6736
MW-7	114.84	34.5733	47.0138
MW-8	108.28	28.0133	47.0138
MW-11R	98.2	17.9333	47.0138
MW-6	75.76	-4.50667	47.0138
MW-12BR	71.9333	-8.33333	52.5631

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
ND<0	ND<0	0	16	0	
ND<0	ND<0	0	16	0	
ND<0	ND<0	0	16	0	
ND<0	ND<0	0	16	0	
2.83321		ND<0	2.83321	17	0
ND<0	ND<0	0	17	0	
ND<0	ND<0	0	17	0	
2.83321		ND<0	2.83321	18	0
1.60944		ND<0	1.60944	19	0
1.60944		ND<0	1.60944	20	0
2.83321		ND<0	2.83321	21	0
2.56495		ND<0	2.56495	22	0
ND<0	ND<0	0	22	0	
ND<0	ND<0	0	22	0	
1.36354		ND<0	1.36354	23	0
1.83737		ND<0	1.83737	24	0
2.3979	ND<0	2.3979	25	0	
2.43361		ND<0	2.43361	26	0
2.37955		ND<0	2.37955	27	0
2.195	ND<0	2.195	28	0	
2.13771		ND<0	2.13771	29	0
2.62467		ND<0	2.62467	30	0

2.15176		ND<0	2.15176	31	0
2.16332		ND<0	2.16332	32	0
ND<0	ND<0	0	32	0	
ND<0	ND<0	0	32	0	
ND<0	ND<0	0	32	0	
2.83321		ND<0	2.83321	33	0
ND<0	ND<0	0	33	0	
ND<0	ND<0	0	33	0	
2.83321		ND<0	2.83321	34	0
1.60944		ND<0	1.60944	35	0
1.60944		ND<0	1.60944	36	0
2.83321		ND<0	2.83321	37	0
2.56495		ND<0	2.56495	38	0
ND<0	ND<0	0	38	0	
ND<0	ND<0	0	38	0	
1.36354		ND<0	1.36354	39	0
1.83737		ND<0	1.83737	40	0
2.3979	ND<0	2.3979	41	0	
2.43361		ND<0	2.43361	42	0
2.37955		ND<0	2.37955	43	0
2.195	ND<0	2.195	44	0	
2.13771		ND<0	2.13771	45	0
2.62467		ND<0	2.62467	46	0
2.15176		ND<0	2.15176	47	0
2.16332		ND<0	2.16332	48	0
ND<0	ND<0	0	48	0	
ND<0	ND<0	0	48	0	
2.83321		ND<0	2.83321	49	0
ND<0	ND<0	0	49	0	
ND<0	ND<0	0	49	0	
2.83321		ND<0	2.83321	50	0
1.60944		ND<0	1.60944	51	0
1.60944		ND<0	1.60944	52	0
2.83321		ND<0	2.83321	53	0
2.56495		ND<0	2.56495	54	0
ND<0	ND<0	0	54	0	
ND<0	ND<0	0	54	0	
1.36354		ND<0	1.36354	55	0
1.83737		ND<0	1.83737	56	0
2.3979	ND<0	2.3979	57	0	
2.43361		ND<0	2.43361	58	0
2.37955		ND<0	2.37955	59	0
2.195	ND<0	2.195	60	0	
2.13771		ND<0	2.13771	61	0
2.62467		ND<0	2.62467	62	0
2.15176		ND<0	2.15176	63	0
2.16332		ND<0	2.16332	64	0
ND<0	ND<0	0	64	0	
2.83321		ND<0	2.83321	65	0
ND<0	ND<0	0	65	0	
ND<0	ND<0	0	65	0	
2.83321		ND<0	2.83321	66	0
1.60944		ND<0	1.60944	67	0
1.60944		ND<0	1.60944	68	0
2.83321		ND<0	2.83321	69	0
2.56495		ND<0	2.56495	70	0
ND<0	ND<0	0	70	0	
ND<0	ND<0	0	70	0	
1.36354		ND<0	1.36354	71	0

1.83737		ND<0	1.83737	72	0		
2.3979	ND<0	2.3979	73	0			
2.43361		ND<0	2.43361	74	0		
2.37955		ND<0	2.37955	75	0		
2.195	ND<0	2.195	76	0			
2.13771		ND<0	2.13771	77	0		
2.62467		ND<0	2.62467	78	0		
2.15176		ND<0	2.15176	79	0		
2.16332		ND<0	2.16332	80	0		
2.83321		ND<0	2.83321	81	0		
ND<0	ND<0	0	81	0			
ND<0	ND<0	0	81	0			
2.83321		ND<0	2.83321	82	0		
1.60944		ND<0	1.60944	83	0		
1.60944		ND<0	1.60944	84	0		
2.83321		ND<0	2.83321	85	0		
2.56495		ND<0	2.56495	86	0		
ND<0	ND<0	0	86	0			
ND<0	ND<0	0	86	0			
1.36354		ND<0	1.36354	87	0		
1.83737		ND<0	1.83737	88	0		
2.3979	ND<0	2.3979	89	0			
2.43361		ND<0	2.43361	90	0		
2.37955		ND<0	2.37955	91	0		
2.195	ND<0	2.195	92	0			
2.13771		ND<0	2.13771	93	0		
2.62467		ND<0	2.62467	94	0		
2.15176		ND<0	2.15176	95	0		
2.16332		ND<0	2.16332	96	0		
ND<0	2.83321		-2.8332	196	1		
ND<0	2.83321		-2.8332	196	2		
2.83321		2.83321		0	96	2	
1.60944		2.83321		-1.2237	896	3	
1.60944		2.83321		-1.2237	896	4	
2.83321		2.83321		0	96	4	
2.56495		2.83321		-0.268	264	96	5
ND<0	2.83321		-2.8332	196	6		
ND<0	2.83321		-2.8332	196	7		
1.36354		2.83321		-1.4696	896	8	
1.83737		2.83321		-0.995	843	96	9
2.3979	2.83321		-0.435	318	96	10	
2.43361		2.83321		-0.3996	96	11	
2.37955		2.83321		-0.453	667	96	12
2.195	2.83321		-0.638	213	96	13	
2.13771		2.83321		-0.695	503	96	14
2.62467		2.83321		-0.208	545	96	15
2.15176		2.83321		-0.681	451	96	16
2.16332		2.83321		-0.669	896	17	
ND<0	ND<0	0	96	17			
2.83321		ND<0	2.83321	97	17		
1.60944		ND<0	1.60944	98	17		
1.60944		ND<0	1.60944	99	17		
2.83321		ND<0	2.83321	100	17		
2.56495		ND<0	2.56495	101	17		
ND<0	ND<0	0	101	17			
ND<0	ND<0	0	101	17			
1.36354		ND<0	1.36354	102	17		
1.83737		ND<0	1.83737	103	17		
2.3979	ND<0	2.3979	104	17			

2.43361		ND<0	2.43361	105	17		
2.37955		ND<0	2.37955	106	17		
2.195	ND<0	2.195	107	17			
2.13771		ND<0	2.13771	108	17		
2.62467		ND<0	2.62467	109	17		
2.15176		ND<0	2.15176	110	17		
2.16332		ND<0	2.16332	111	17		
2.83321		ND<0	2.83321	112	17		
1.60944		ND<0	1.60944	113	17		
1.60944		ND<0	1.60944	114	17		
2.83321		ND<0	2.83321	115	17		
2.56495		ND<0	2.56495	116	17		
ND<0	ND<0	0	116	17			
ND<0	ND<0	0	116	17			
1.36354		ND<0	1.36354	117	17		
1.83737		ND<0	1.83737	118	17		
2.3979	ND<0	2.3979	119	17			
2.43361		ND<0	2.43361	120	17		
2.37955		ND<0	2.37955	121	17		
2.195	ND<0	2.195	122	17			
2.13771		ND<0	2.13771	123	17		
2.62467		ND<0	2.62467	124	17		
2.15176		ND<0	2.15176	125	17		
2.16332		ND<0	2.16332	126	17		
1.60944		2.83321		-1.22378	126	18	
1.60944		2.83321		-1.22378	126	19	
2.83321		2.83321		0	126	19	
2.56495		2.83321		-0.268264		126	20
ND<0	2.83321		-2.83321	126	21		
ND<0	2.83321		-2.83321	126	22		
1.36354		2.83321		-1.46968	126	23	
1.83737		2.83321		-0.995843		126	24
2.3979	2.83321		-0.435318		126	25	
2.43361		2.83321		-0.3996	126	26	
2.37955		2.83321		-0.453667		126	27
2.195	2.83321		-0.638213		126	28	
2.13771		2.83321		-0.695503		126	29
2.62467		2.83321		-0.208545		126	30
2.15176		2.83321		-0.681451		126	31
2.16332		2.83321		-0.66989	126	32	
1.60944		1.60944		0	126	32	
2.83321		1.60944		1.22378	127	32	
2.56495		1.60944		0.955511		128	32
ND<0	1.60944		-1.60944	128	33		
ND<0	1.60944		-1.60944	128	34		
1.36354		1.60944		-0.245901		128	35
1.83737		1.60944		0.227932		129	35
2.3979	1.60944		0.788457		130	35	
2.43361		1.60944		0.824175		131	35
2.37955		1.60944		0.770108		132	35
2.195	1.60944		0.585562		133	35	
2.13771		1.60944		0.528273		134	35
2.62467		1.60944		1.01523	135	35	
2.15176		1.60944		0.542324		136	35
2.16332		1.60944		0.553885		137	35
2.83321		1.60944		1.22378	138	35	
2.56495		1.60944		0.955511		139	35
ND<0	1.60944		-1.60944	139	36		

ND<0	1.60944	-1.60944	139	37	
1.36354	1.60944	-0.245901	139	38	
1.83737	1.60944	0.227932	140	38	
2.3979	1.60944	0.788457	141	38	
2.43361	1.60944	0.824175	142	38	
2.37955	1.60944	0.770108	143	38	
2.195	1.60944	0.585562	144	38	
2.13771	1.60944	0.528273	145	38	
2.62467	1.60944	1.01523	146	38	
2.15176	1.60944	0.542324	147	38	
2.16332	1.60944	0.553885	148	38	
2.56495	2.83321	-0.268264	148	39	
ND<0	2.83321	-2.83321	148	40	
ND<0	2.83321	-2.83321	148	41	
1.36354	2.83321	-1.46968	148	42	
1.83737	2.83321	-0.995843	148	43	
2.3979	2.83321	-0.435318	148	44	
2.43361	2.83321	-0.3996	148	45	
2.37955	2.83321	-0.453667	148	46	
2.195	2.83321	-0.638213	148	47	
2.13771	2.83321	-0.695503	148	48	
2.62467	2.83321	-0.208545	148	49	
2.15176	2.83321	-0.681451	148	50	
2.16332	2.83321	-0.66989	148	51	
ND<0	2.56495	-2.56495	148	52	
ND<0	2.56495	-2.56495	148	53	
1.36354	2.56495	-1.20141	148	54	
1.83737	2.56495	-0.727579	148	55	
2.3979	2.56495	-0.167054	148	56	
2.43361	2.56495	-0.131336	148	57	
2.37955	2.56495	-0.185403	148	58	
2.195	2.56495	-0.369949	148	59	
2.13771	2.56495	-0.427239	148	60	
2.62467	2.56495	0.0597192	149	60	
2.15176	2.56495	-0.413187	149	61	
2.16332	2.56495	-0.401626	149	62	
ND<0	ND<0	0	149	62	
1.36354	ND<0	1.36354	150	62	
1.83737	ND<0	1.83737	151	62	
2.3979	ND<0	2.3979	152	62	
2.43361	ND<0	2.43361	153	62	
2.37955	ND<0	2.37955	154	62	
2.195	ND<0	2.195	155	62	
2.13771	ND<0	2.13771	156	62	
2.62467	ND<0	2.62467	157	62	
2.15176	ND<0	2.15176	158	62	
2.16332	ND<0	2.16332	159	62	
1.36354	ND<0	1.36354	160	62	
1.83737	ND<0	1.83737	161	62	
2.3979	ND<0	2.3979	162	62	
2.43361	ND<0	2.43361	163	62	
2.37955	ND<0	2.37955	164	62	
2.195	ND<0	2.195	165	62	
2.13771	ND<0	2.13771	166	62	
2.62467	ND<0	2.62467	167	62	
2.15176	ND<0	2.15176	168	62	
2.16332	ND<0	2.16332	169	62	

1.83737	1.36354	0.473833	170	62
2.3979	1.36354	1.03436	171	62
2.43361	1.36354	1.07008	172	62
2.37955	1.36354	1.01601	173	62
2.195	1.36354	0.831463	174	62
2.13771	1.36354	0.774173	175	62
2.62467	1.36354	1.26113	176	62
2.15176	1.36354	0.788225	177	62
2.16332	1.36354	0.799786	178	62
2.3979	1.83737	0.560525	179	62
2.43361	1.83737	0.596243	180	62
2.37955	1.83737	0.542176	181	62
2.195	1.83737	0.35763	182	62
2.13771	1.83737	0.30034	183	62
2.62467	1.83737	0.787299	184	62
2.15176	1.83737	0.314392	185	62
2.16332	1.83737	0.325953	186	62
2.43361	2.3979	0.0357181	187	62
2.37955	2.3979	-0.0183491	187	63
2.195	2.3979	-0.202895	187	64
2.13771	2.3979	-0.260185	187	65
2.62467	2.3979	0.226773	188	65
2.15176	2.3979	-0.246133	188	66
2.16332	2.3979	-0.234572	188	67
2.37955	2.43361	-0.0540672	188	68
2.195	2.43361	-0.238613	188	69
2.13771	2.43361	-0.295903	188	70
2.62467	2.43361	0.191055	189	70
2.15176	2.43361	-0.281851	189	71
2.16332	2.43361	-0.27029189	72	
2.195	2.37955	-0.184546	189	73
2.13771	2.37955	-0.241836	189	74
2.62467	2.37955	0.245122	190	74
2.15176	2.37955	-0.227784	190	75
2.16332	2.37955	-0.216223	190	76
2.13771	2.195	-0.0572894	190	77
2.62467	2.195	0.429669	191	77
2.15176	2.195	-0.0432377	191	78
2.16332	2.195	-0.0316769	191	79
2.62467	2.13771	0.486958	192	79
2.15176	2.13771	0.0140518	193	79
2.16332	2.13771	0.0256126	194	79
2.15176	2.62467	-0.472906	194	80
2.16332	2.62467	-0.461346	194	81
2.16332	2.15176	0.0115608	195	81

S Statistic = 195 - 81 = 114

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
11/15/2009	1

There are 0 time periods with multiple data

A = 2334
B = 0
C = 726
D = 0
E = 98
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1928.67
Z-Score = 2.57306
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|2.57306| > 1.97737 indicating a trend

Concentrations (ug/L)

Parameter: Barium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 201
Total Non-Detect: 99
Percent Non-Detects: 49.2537%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	5 (33.3333%)	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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-9	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	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
			11/15/2009	41	41

MW-6	26	15 (57.6923%)	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	
			11/15/2009	6.9	6.9	
MW-12AR	16	4 (25%)	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	
			11/15/2009	41	41	
MW-12BR	16	4 (25%)	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	
			11/15/2009	37	37	

MW-11R	26	15 (57.6923%)	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	
			11/15/2009	7.2	7.2	
MW-10	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	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	
			11/15/2009	130	130	
MW-8	25	14 (56%)	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
MW-7	25	14 (56%)	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

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 = 201

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	5	-2.65209	7.03356	-13.2604
2	5	-2.36561	12.6297	-25.0885
3	5	-2.19728	17.4578	-36.0749
4	5	-2.07485	21.7627	-46.4492
5	5	-1.97737	25.6727	-56.336
6	5	-1.8957	29.2664	-65.8145
7	5	-1.82501	32.597	-74.9395
8	5	-1.76241	35.7031	-83.7516
9	5	-1.70604	38.6137	-92.2818
10	5	-1.65463	41.3515	-100.555
11	5	-1.60725	43.9348	-108.591
12	5	-1.56322	46.3784	-116.407
13	5	-1.52203	48.695	-124.017
14	5	-1.48328	50.8951	-131.434
15	5	-1.44663	52.9879	-138.667
16	5	-1.41183	54.9811	-145.726
17	5	-1.37866	56.8818	-152.619
18	5	-1.34694	58.6961	-159.354
19	5	-1.31652	60.4293	-165.937
20	5	-1.28727	62.0864	-172.373
21	5	-1.26464	63.6857	-178.696
22	5	-1.23724	65.2165	-184.883
23	5	-1.21073	66.6823	-190.936
24	5	-1.18504	68.0866	-196.861
25	5	-1.16012	69.4325	-202.662
26	5	-1.1359	70.7228	-208.341
27	5	-1.11232	71.96	-213.903
28	5	-1.08935	73.1467	-219.35
29	5	-1.06694	74.2851	-224.684
30	5	-1.04505	75.3772	-229.91
31	5	-1.02365	76.4251	-235.028
32	5	-1.00271	77.4305	-240.042
33	5	-0.982202	78.3952	-244.953
34	5	-0.9621	79.3209	-249.763
35	5	-0.942375	80.2089	-254.475
36	5	-0.923014	81.0609	-259.09
37	5	-0.903992	81.8781	-263.61
38	5	-0.885291	82.6618	-268.036
39	5	-0.866894	83.4133	-272.371
40	5	-0.848786	84.1338	-276.615
41	5	-0.834498	84.8302	-280.787
42	5	-0.816874	85.4974	-284.872
43	5	-0.7995	86.1366	-288.869
44	5	-0.782366	86.7487	-292.781
45	5	-0.765456	87.3347	-296.608
46	5	-0.748762	87.8953	-300.352
47	5	-0.732275	88.4315	-304.013
48	5	-0.715986	88.9442	-307.593
49	5	-0.699883	89.434	-311.093

50	5	-0.6839689.9018	-314.513	
51	5	-0.668209	90.3483	-317.854
52	5	-0.652622	90.7742	-321.117
53	5	-0.637192	91.1802	-324.303
54	5	-0.621911	91.567	-327.412
55	5	-0.606775	91.9352	-330.446
56	5	-0.591776	92.2854	-333.405
57	5	-0.576911	92.6182	-336.29
58	5	-0.5621792.9342	-339.1	
59	5	-0.547551	93.2341	-341.838
60	5	-0.533048	93.5182	-344.503
61	5	-0.521527	93.7902	-347.111
62	5	-0.507221	94.0475	-349.647
63	5	-0.493018	94.2905	-352.112
64	5	-0.478914	94.5199	-354.507
65	5	-0.464904	94.736	-356.831
66	5	-0.450985	94.9394	-359.086
67	5	-0.437153	95.1305	-361.272
68	5	-0.423405	95.3098	-363.389
69	5	-0.409735	95.4777	-365.438
70	5	-0.396142	95.6346	-367.418
71	5	-0.382622	95.781	-369.332
72	5	-0.369171	95.9173	-371.177
73	5	-0.355788	96.0439	-372.956
74	5	-0.342466	96.1611	-374.669
75	5	-0.329206	96.2695	-376.315
76	5	-0.316004	96.3694	-377.895
77	5	-0.302855	96.4611	-379.409
78	5	-0.2897696.5451	-380.858	
79	5	-0.276714	96.6216	-382.241
80	5	-0.263715	96.6912	-383.56
81	5	-0.253347	96.7554	-384.827
82	5	-0.240426	96.8132	-386.029
83	5	-0.227545	96.8649	-387.167
84	5	-0.214702	96.911	-388.24
85	5	-0.201894	96.9518	-389.25
86	5	-0.189118	96.9876	-390.195
87	5	-0.176374	97.0187	-391.077
88	5	-0.163659	97.0455	-391.895
89	5	-0.150969	97.0683	-392.65
90	5	-0.138305	97.0874	-393.342
91	5	-0.125661	97.1032	-393.97
92	5	-0.113039	97.116	-394.535
93	5	-0.100433	97.126	-395.037
94	5	-0.0878447	97.1338	-395.477
95	5	-0.0752698	97.1394	-395.853
96	5	-0.0627062	97.1434	-396.166
97	5	-0.0501541	97.1459	-396.417
98	5	-0.0376076	97.1473	-396.605
99	5	-0.0250691	97.1479	-396.731
100	5	-0.0125328	97.1481	-396.793
101	5.43	0 97.1481	-396.793	
102	5.5	0.0125328	97.1482	-396.724
103	5.7	0.0250691	97.1489	-396.581
104	5.97	0.0376076	97.1503	-396.357
105	6.07	0.0501541	97.1528	-396.052
106	6.22	0.0627062	97.1567	-395.662
107	6.44	0.0752698	97.1624	-395.178
108	6.9	0.0878447	97.1701	-394.572
109	7	0.100433	97.1802	-393.869
110	7	0.113039	97.193	-393.077
111	7	0.125661	97.2088	-392.198

112	7.2	0.138305		97.2279	-391.202
113	7.22	0.150969		97.2507	-390.112
114	8	0.163659		97.2775	-388.803
115	8	0.176374		97.3086	-387.392
116	8.3	0.189118		97.3443	-385.822
117	8.7	0.201894		97.3851	-384.065
118	9	0.214702		97.4312	-382.133
119	10	0.227545		97.483	-379.858
120	10.9	0.240426		97.5408	-377.237
121	11	0.253347		97.605	-374.45
122	11	0.263715		97.6745	-371.549
123	19.1	0.276714		97.7511	-366.264
124	20	0.28976	97.835	-360.469	
125	20	0.302855		97.9268	-354.412
126	21	0.316004		98.0266	-347.776
127	27.7	0.329206		98.135	-338.657
128	28	0.342466		98.2523	-329.068
129	28.8	0.355788		98.3789	-318.821
130	30	0.369171		98.5151	-307.746
131	30	0.382622		98.6615	-296.267
132	30	0.396142		98.8185	-284.383
133	30	0.409735		98.9864	-272.091
134	33	0.423405		99.1656	-258.119
135	33.2	0.437153		99.3567	-243.605
136	34	0.450985		99.5601	-228.272
137	34.1	0.464904		99.7763	-212.418
138	34.5	0.478914		100.006	-195.896
139	34.8	0.493018		100.249	-178.739
140	35	0.507221		100.506	-160.986
141	36	0.521527		100.778	-142.211
142	36.8	0.533048		101.062	-122.595
143	37	0.547551		101.362	-102.336
144	37.7	0.56217	101.678	-81.1417	
145	38	0.576911		102.011	-59.2191
146	39	0.591776		102.361	-36.1398
147	40	0.606775		102.729	-11.8688
148	40	0.621911		103.116	13.0076
149	40	0.637192		103.522	38.4953
150	40	0.652622		103.948	64.6002
151	40	0.668209		104.394	91.3286
152	40.1	0.68396	104.862	118.755	
153	40.7	0.699883		105.352	147.241
154	41	0.715986		105.865	176.596
155	41	0.732275		106.401	206.619
156	41	0.748762		106.961	237.319
157	41.5	0.765456		107.547	269.085
158	42	0.782366		108.16	301.944
159	42	0.7995	108.799	335.523	
160	43	0.816874		109.466	370.649
161	43.8	0.834498		110.162	407.2
162	44.8	0.848786		110.883	445.226
163	45	0.866894		111.634	484.236
164	46	0.885291		112.418	524.959
165	46.8	0.903992		113.235	567.266
166	47	0.923014		114.087	610.648
167	47	0.942375		114.975	654.939
168	47.5	0.9621	115.901	700.639	
169	49	0.982202		116.866	748.767
170	49.3	1.00271	117.871	798.201	
171	50	1.02365	118.919	849.383	
172	50	1.04505	120.011	901.636	
173	50	1.06694	121.149	954.983	

174	52	1.08935	122.336	1011.63
175	55	1.11232	123.573	1072.81
176	60	1.1359	124.864	1140.96
177	60	1.16012	126.209	1210.57
178	60	1.18504	127.614	1281.67
179	63.2	1.21073	129.08	1358.19
180	64	1.23724	130.61	1437.37
181	65.2	1.26464	132.21	1519.83
182	70	1.28727	133.867	1609.93
183	70.4	1.31652	135.6	1702.62
184	72	1.34694	137.414	1799.6
185	74	1.37866	139.315	1901.62
186	76.3	1.41183	141.308	2009.34
187	76.8	1.44663	143.401	2120.44
188	77.9	1.48328	145.601	2235.99
189	85.5	1.52203	147.918	2366.12
190	88.4	1.56322	150.361	2504.31
191	90	1.60725	152.945	2648.97
192	95.7	1.65463	155.682	2807.31
193	100	1.70604	158.593	2977.92
194	116	1.76241	161.699	3182.36
195	118	1.82501	165.03	3397.71
196	123	1.8957	168.623	3630.88
197	130	1.97737	172.533	3887.94
198	139	2.07485	176.838	4176.34
199	150	2.19728	181.666	4505.93
200	150	2.36561	187.263	4860.77
201	170	2.65209	194.296	5311.63

Data Set Standard Deviation = 32.4441
Numerator = 2.82134e+007
Denominator = 4.0904e+007
W Statistic = 0.689746 = 2.82134e+007 / 4.0904e+007

5% Critical value of 0.976 exceeds 0.689746
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.689746
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 = 201

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	-2.07485	21.7627	-14.9514
5	1.60944	-1.97737	25.6727	-18.1339
6	1.60944	-1.8957	29.2664	-21.1849
7	1.60944	-1.82501	32.597	-24.1221
8	1.60944	-1.76241	35.7031	-26.9586
9	1.60944	-1.70604	38.6137	-29.7044
10	1.60944	-1.65463	41.3515	-32.3674
11	1.60944	-1.60725	43.9348	-34.9541
12	1.60944	-1.56322	46.3784	-37.4701
13	1.60944	-1.52203	48.695	-39.9197
14	1.60944	-1.48328	50.8951	-42.3069
15	1.60944	-1.44663	52.9879	-44.6352
16	1.60944	-1.41183	54.9811	-46.9074
17	1.60944	-1.37866	56.8818	-49.1263
18	1.60944	-1.34694	58.6961	-51.2941
19	1.60944	-1.31652	60.4293	-53.413
20	1.60944	-1.28727	62.0864	-55.4848
21	1.60944	-1.26464	63.6857	-57.5201
22	1.60944	-1.23724	65.2165	-59.5114
23	1.60944	-1.21073	66.6823	-61.46
24	1.60944	-1.18504	68.0866	-63.3672
25	1.60944	-1.16012	69.4325	-65.2344
26	1.60944	-1.1359	70.7228	-67.0625
27	1.60944	-1.11232	71.96	-68.8527
28	1.60944	-1.08935	73.1467	-70.606
29	1.60944	-1.06694	74.2851	-72.3231
30	1.60944	-1.04505	75.3772	-74.0051
31	1.60944	-1.02365	76.4251	-75.6526
32	1.60944	-1.00271	77.4305	-77.2664
33	1.60944	-0.982202	78.3952	-78.8472
34	1.60944	-0.9621	79.3209	-80.3956
35	1.60944	-0.942375	80.2089	-81.9123
36	1.60944	-0.923014	81.0609	-83.3979
37	1.60944	-0.903992	81.8781	-84.8528
38	1.60944	-0.885291	82.6618	-86.2776
39	1.60944	-0.866894	83.4133	-87.6728
40	1.60944	-0.848786	84.1338	-89.0389
41	1.60944	-0.834498	84.8302	-90.3819
42	1.60944	-0.816874	85.4974	-91.6967
43	1.60944	-0.7995	86.1366	-92.9834
44	1.60944	-0.782366	86.7487	-94.2426
45	1.60944	-0.765456	87.3347	-95.4745
46	1.60944	-0.748762	87.8953	-96.6796
47	1.60944	-0.732275	88.4315	-97.8582
48	1.60944	-0.715986	88.9442	-99.0105
49	1.60944	-0.699883	89.434	-100.137

50	1.60944	-0.6839689.9018	-101.238	
51	1.60944	-0.668209	90.3483	-102.313
52	1.60944	-0.652622	90.7742	-103.364
53	1.60944	-0.637192	91.1802	-104.389
54	1.60944	-0.621911	91.567	-105.39
55	1.60944	-0.606775	91.9352	-106.367
56	1.60944	-0.591776	92.2854	-107.319
57	1.60944	-0.576911	92.6182	-108.247
58	1.60944	-0.5621792.9342	-109.152	
59	1.60944	-0.547551	93.2341	-110.033
60	1.60944	-0.533048	93.5182	-110.891
61	1.60944	-0.521527	93.7902	-111.731
62	1.60944	-0.507221	94.0475	-112.547
63	1.60944	-0.493018	94.2905	-113.341
64	1.60944	-0.478914	94.5199	-114.111
65	1.60944	-0.464904	94.736	-114.86
66	1.60944	-0.450985	94.9394	-115.585
67	1.60944	-0.437153	95.1305	-116.289
68	1.60944	-0.423405	95.3098	-116.97
69	1.60944	-0.409735	95.4777	-117.63
70	1.60944	-0.396142	95.6346	-118.267
71	1.60944	-0.382622	95.781	-118.883
72	1.60944	-0.369171	95.9173	-119.477
73	1.60944	-0.355788	96.0439	-120.05
74	1.60944	-0.342466	96.1611	-120.601
75	1.60944	-0.329206	96.2695	-121.131
76	1.60944	-0.316004	96.3694	-121.64
77	1.60944	-0.302855	96.4611	-122.127
78	1.60944	-0.2897696.5451	-122.593	
79	1.60944	-0.276714	96.6216	-123.039
80	1.60944	-0.263715	96.6912	-123.463
81	1.60944	-0.253347	96.7554	-123.871
82	1.60944	-0.240426	96.8132	-124.258
83	1.60944	-0.227545	96.8649	-124.624
84	1.60944	-0.214702	96.911	-124.97
85	1.60944	-0.201894	96.9518	-125.295
86	1.60944	-0.189118	96.9876	-125.599
87	1.60944	-0.176374	97.0187	-125.883
88	1.60944	-0.163659	97.0455	-126.146
89	1.60944	-0.150969	97.0683	-126.389
90	1.60944	-0.138305	97.0874	-126.612
91	1.60944	-0.125661	97.1032	-126.814
92	1.60944	-0.113039	97.116	-126.996
93	1.60944	-0.100433	97.126	-127.158
94	1.60944	-0.0878447	97.1338	-127.299
95	1.60944	-0.0752698	97.1394	-127.42
96	1.60944	-0.0627062	97.1434	-127.521
97	1.60944	-0.0501541	97.1459	-127.602
98	1.60944	-0.0376076	97.1473	-127.662
99	1.60944	-0.0250691	97.1479	-127.703
100	1.60944	-0.0125328	97.1481	-127.723
101	1.69194	0	97.1481	-127.723
102	1.70475	0.0125328	97.1482	-127.701
103	1.74047	0.0250691	97.1489	-127.658
104	1.78675	0.0376076	97.1503	-127.591
105	1.80336	0.0501541	97.1528	-127.5
106	1.82777	0.0627062	97.1567	-127.386
107	1.86253	0.0752698	97.1624	-127.245
108	1.93152	0.0878447	97.1701	-127.076
109	1.94591	0.100433	97.1802	-126.88
110	1.94591	0.113039	97.193	-126.66
111	1.94591	0.125661	97.2088	-126.416

112	1.97408	0.138305		97.2279	-126.143
113	1.97685	0.150969		97.2507	-125.844
114	2.07944	0.163659		97.2775	-125.504
115	2.07944	0.176374		97.3086	-125.137
116	2.11626	0.189118		97.3443	-124.737
117	2.16332	0.201894		97.3851	-124.3
118	2.19722	0.214702		97.4312	-123.829
119	2.30259	0.227545		97.483	-123.305
120	2.38876	0.240426		97.5408	-122.73
121	2.3979	0.253347		97.605	-122.123
122	2.3979	0.263715		97.6745	-121.49
123	2.94969	0.276714		97.7511	-120.674
124	2.99573	0.28976	97.835	-119.806	
125	2.99573	0.302855		97.9268	-118.899
126	3.04452	0.316004		98.0266	-117.937
127	3.32143	0.329206		98.135	-116.843
128	3.3322	0.342466		98.2523	-115.702
129	3.36038	0.355788		98.3789	-114.507
130	3.4012	0.369171		98.5151	-113.251
131	3.4012	0.382622		98.6615	-111.95
132	3.4012	0.396142		98.8185	-110.602
133	3.4012	0.409735		98.9864	-109.209
134	3.49651	0.423405		99.1656	-107.728
135	3.50255	0.437153		99.3567	-106.197
136	3.52636	0.450985		99.5601	-104.607
137	3.5293	0.464904		99.7763	-102.966
138	3.54096	0.478914		100.006	-101.27
139	3.54962	0.493018		100.249	-99.5201
140	3.55535	0.507221		100.506	-97.7167
141	3.58352	0.521527		100.778	-95.8478
142	3.6055	0.533048		101.062	-93.9259
143	3.61092	0.547551		101.362	-91.9488
144	3.62966	0.56217	101.678	-89.9083	
145	3.63759	0.576911		102.011	-87.8097
146	3.66356	0.591776		102.361	-85.6417
147	3.68888	0.606775		102.729	-83.4034
148	3.68888	0.621911		103.116	-81.1092
149	3.68888	0.637192		103.522	-78.7587
150	3.68888	0.652622		103.948	-76.3513
151	3.68888	0.668209		104.394	-73.8863
152	3.69138	0.68396	104.862	-71.3616	
153	3.70623	0.699883		105.352	-68.7676
154	3.71357	0.715986		105.865	-66.1088
155	3.71357	0.732275		106.401	-63.3894
156	3.71357	0.748762		106.961	-60.6088
157	3.72569	0.765456		107.547	-57.757
158	3.73767	0.782366		108.16	-54.8328
159	3.73767	0.7995	108.799	-51.8445	
160	3.7612	0.816874		109.466	-48.7721
161	3.77963	0.834498		110.162	-45.618
162	3.80221	0.848786		110.883	-42.3907
163	3.80666	0.866894		111.634	-39.0907
164	3.82864	0.885291		112.418	-35.7013
165	3.84588	0.903992		113.235	-32.2246
166	3.85015	0.923014		114.087	-28.6709
167	3.85015	0.942375		114.975	-25.0426
168	3.86073	0.9621	115.901	-21.3282	
169	3.89182	0.982202		116.866	-17.5056
170	3.89792	1.00271	117.871	-13.5972	
171	3.91202	1.02365	118.919	-9.5926	
172	3.91202	1.04505	120.011	-5.50434	
173	3.91202	1.06694	121.149	-1.33046	

174	3.95124	1.08935	122.336	2.97383
175	4.00733	1.11232	123.573	7.43127
176	4.09434	1.1359	124.864	12.082
177	4.09434	1.16012	126.209	16.8319
178	4.09434	1.18504	127.614	21.6839
179	4.1463	1.21073	129.08	26.704
180	4.15888	1.23724	130.61	31.8495
181	4.17746	1.26464	132.21	37.1325
182	4.2485	1.28727	133.867	42.6014
183	4.25419	1.31652	135.6	48.2022
184	4.27667	1.34694	137.414	53.9626
185	4.30407	1.37866	139.315	59.8964
186	4.33467	1.41183	141.308	66.0162
187	4.3412	1.44663	143.401	72.2964
188	4.35543	1.48328	145.601	78.7567
189	4.44852	1.52203	147.918	85.5275
190	4.48187	1.56322	150.361	92.5337
191	4.49981	1.60725	152.945	99.766
192	4.56122	1.65463	155.682	107.313
193	4.60517	1.70604	158.593	115.17
194	4.75359	1.76241	161.699	123.547
195	4.77068	1.82501	165.03	132.254
196	4.81218	1.8957	168.623	141.376
197	4.86753	1.97737	172.533	151.001
198	4.93447	2.07485	176.838	161.24
199	5.01064	2.19728	181.666	172.249
200	5.01064	2.36561	187.263	184.103
201	5.1358	2.65209	194.296	197.723

Data Set Standard Deviation = 1.14202
Numerator = 39094.5
Denominator = 50680.5
W Statistic = 0.77139 = 39094.5 / 50680.5

5% Critical value of 0.976 exceeds 0.77139
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.77139
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	171
	9/23/1999	3.3322	128
	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	117
	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	120
	11/28/2007	1.94591 J	109
	6/5/2008	1.78675 J	104
	11/20/2008	2.07944 J	114
	6/11/2009	2.19722	118

Rank Sum = 1432
Rank Mean = 95.4667

Background Rank Sum = 1432
Background Rank Mean = 95.4667

Compliance Wells

Well ID	Date	Result	Rank
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	124
	9/23/1999	3.95124	174
	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	153
	10/25/2005	3.66356	146
	4/29/2006	3.68888	147
	11/18/2006	3.89792	170
	5/23/2007	4.25419	183
	11/28/2007	3.85015	166
	6/5/2008	3.80221	162

	11/20/2008	3.89182	169
	6/11/2009	3.82864	164
	11/15/2009	3.71357	154

Rank Sum = 2612
Rank Mean = 100.462

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	125
	9/23/1999	1.94591 J	110
	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	113
	11/28/2007	1.82777 J	106
	6/5/2008	1.86253 J	107
	11/20/2008	2.07944 J	115
	6/11/2009	1.94591	111
	11/15/2009	1.93152	108

Rank Sum = 1955
Rank Mean = 75.1923

MW-12AR	3/16/1999	3.68888	148
	9/23/1999	3.68888	149
	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	141
	10/25/2005	3.32143	127
	4/29/2006	3.4012	130
	11/18/2006	3.50255	135
	5/23/2007	3.5293	137
	11/28/2007	3.73767	158
	6/5/2008	3.54962	139
	11/20/2008	3.80666	163
	6/11/2009	3.63759	145
	11/15/2009	3.71357	155

Rank Sum = 1927
Rank Mean = 120.438

MW-12BR	3/16/1999	3.4012	131
	9/23/1999	3.49651	134
	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	152
	10/25/2005	3.55535	140

	4/29/2006	3.4012	132
	11/18/2006	3.54096	138
	5/23/2007	3.72569	157
	11/28/2007	3.68888	150
	6/5/2008	3.6055	142
	11/20/2008	3.7612	160
	6/11/2009	3.73767	159
	11/15/2009	3.61092	143

Rank Sum = 1938
Rank Mean = 121.125

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	151
	9/23/1999	3.04452	126
	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	129
	10/25/2005	2.94969	123
	4/29/2006	3.4012	133
	11/18/2006	4.75359	194
	5/23/2007	3.91202	172
	11/28/2007	3.52636	136
	6/5/2008	ND<1.60944	50
	11/20/2008	2.30259	119
	6/11/2009	2.3979	121
	11/15/2009	1.97408	112

Rank Sum = 2266
Rank Mean = 87.1538

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	191
	9/23/1999	4.27667	184
	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	188
	10/25/2005	4.3412	187
	4/29/2006	2.3979	122
	11/18/2006	4.81218	196
	5/23/2007	4.93447	198
	11/28/2007	4.77068	195

	6/5/2008	5.01064		199
	11/20/2008	5.01064		200
	6/11/2009	5.1358		201
	11/15/2009	4.86753		197

Rank Sum = 2958
Rank Mean = 113.769

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		176
	9/23/1999	3.71357		156
	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		192
	10/25/2005	4.17746		181
	4/29/2006	4.2485		182
	11/18/2006	4.44852		189
	5/23/2007	4.33467		186
	11/28/2007	4.60517		193
	6/5/2008	4.48187		190
	11/20/2008	4.15888		180
	6/11/2009	4.00733		175

Rank Sum = 2700
Rank Mean = 108

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		177
	9/23/1999	4.30407		185
	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		165
	10/25/2005	3.86073		168
	4/29/2006	3.91202		173
	11/18/2006	3.62966		144
	5/23/2007	4.1463		179
	11/28/2007	2.11626	J	116
	6/5/2008	3.77963		161
	11/20/2008	4.09434		178
	6/11/2009	3.85015		167

Rank Sum = 2513
Rank Mean = 100.52

Calculation Results:

Kruskal-Wallis H Statistic = 12.0478
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 13.6826
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
12.0478 < 15.5073 indicating no significant group difference at 5% significance level
13.6826 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ug/L)

Parameter: Benzene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 198
Total Non-Detect: 129
Percent Non-Detects: 65.1515%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-10	26	14 (53.8462%)	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
			11/15/2009	1.3	1.3

MW-9	26	12 (46.1538%)	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	
			11/15/2009	1.4	1.4	
MW-12AR		16	10 (62.5%)	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	
			11/15/2009	0.26 J	0.26 J	
MW-6	25	24 (96%)	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
MW-11R	25	11 (44%)	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	
MW-12BR	15	13 (86.6667%)	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
MW-8	25	12 (48%)	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	
MW-7	25	18 (72%)	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	

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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.125	-2.5758	36.63492	-0.321979
2	0.125	-2.3263	41.2.0468	-0.612772
3	0.125	-2.1700	91.6.7561	-0.884033
4	0.125	-2.0537	52.0.974	-1.14075
5	0.26	-1.9599	62.4.8154	-1.65034
6	0.36	-1.8807	92.8.3528	-2.32743
7	0.5	-1.8119	13.1.6358	-3.23338
8	0.51	-1.7506	93.4.7007	-4.12623
9	0.53	-1.6954	37.5751	-5.02479
10	0.59	-1.6448	54.0.2806	-5.99526
11	0.68	-1.5981	94.2.8348	-7.08203
12	0.71	-1.5547	74.5.2522	-8.18592
13	0.73	-1.5141	47.5447	-9.29121
14	0.76	-1.4757	94.9.7226	-10.4128
15	0.8	-1.4395	35.1.7949	-11.5644
16	0.83	-1.4050	75.3.7691	-12.7306
17	0.84	-1.3722	55.6521	-13.8833
18	0.93	-1.3407	55.7.4497	-15.1302
19	0.96	-1.3105	85.9.1673	-16.3884
20	1	-1.2815	56.0.8097	-17.6699
21	1	-1.2535	76.2.3811	-18.9235
22	1	-1.2265	36.3.8855	-20.15
23	1	-1.2003	66.5.3263	-21.3504
24	1	-1.1749	96.6.7069	-22.5254
25	1	-1.1503	56.8.0302	-23.6757
26	1	-1.1263	96.9.299	-24.8021
27	1	-1.1030	67.0.5157	-25.9052
28	1	-1.0803	27.1.6828	-26.9855
29	1	-1.0581	27.2.8025	-28.0436
30	1	-1.0364	37.3.8766	-29.08
31	1	-1.0152	27.4.9073	-30.0953
32	1	-0.994457	75.8963	-31.0897
33	1	-0.974114	76.8452	-32.0638
34	1	-0.954165	77.7556	-33.018
35	1	-0.934597	8.6291	-33.9526
36	1	-0.915365	79.4669	-34.8679
37	1	-0.896473	80.2706	-35.7644
38	1	-0.877897	81.0413	-36.6423
39	1	-0.859618	81.7803	-37.5019
40	1	-0.838054	82.4826	-38.34
41	1	-0.820379	83.1556	-39.1604
42	1	-0.802956	83.8004	-39.9633
43	1	-0.785774	84.4178	-40.7491
44	1	-0.768821	85.0089	-41.5179
45	1	-0.752084	85.5745	-42.27
46	1	-0.735557	86.1156	-43.0056
47	1	-0.719228	86.6328	-43.7248
48	1	-0.703089	87.1272	-44.4279
49	1	-0.687131	87.5993	-45.115

50	1	-0.671346	88.05	-45.7863
51	1	-0.655726	88.48	-46.4421
52	1	-0.640266	88.89	-47.0823
53	1	-0.624956	89.2805	-47.7073
54	1	-0.609791	89.6524	-48.3171
55	1	-0.594766	90.0061	-48.9119
56	1	-0.579873	90.3424	-49.4917
57	1	-0.565108	90.6617	-50.0568
58	1	-0.550465	90.9647	-50.6073
59	1	-0.5359491.252	-51.1432	
60	1	-0.521527	91.5239	-51.6648
61	1	-0.507221	91.7812	-52.172
62	1	-0.493018	92.0243	-52.665
63	1	-0.478914	92.2536	-53.1439
64	1	-0.464904	92.4698	-53.6088
65	1	-0.450985	92.6732	-54.0598
66	1	-0.437153	92.8643	-54.497
67	1	-0.423405	93.0435	-54.9204
68	1	-0.409735	93.2114	-55.3301
69	1	-0.396142	93.3684	-55.7262
70	1	-0.382622	93.5148	-56.1089
71	1	-0.369171	93.651	-56.478
72	1	-0.355788	93.7776	-56.8338
73	1	-0.342466	93.8949	-57.1763
74	1	-0.329206	94.0033	-57.5055
75	1	-0.316004	94.1031	-57.8215
76	1	-0.302855	94.1949	-58.1244
77	1	-0.2897694.2788	-58.4141	
78	1	-0.276714	94.3554	-58.6908
79	1	-0.263715	94.4249	-58.9545
80	1	-0.248174	94.4865	-59.2027
81	1	-0.235269	94.5419	-59.438
82	1	-0.222403	94.5913	-59.6604
83	1	-0.209575	94.6353	-59.87
84	1	-0.196779	94.674	-60.0667
85	1	-0.184017	94.7079	-60.2508
86	1	-0.171285	94.7372	-60.422
87	1	-0.158579	94.7623	-60.5806
88	1	-0.1459 94.7836	-60.7265	
89	1	-0.133244	94.8014	-60.8598
90	1	-0.1206194.8159	-60.9804	
91	1	-0.107995	94.8276	-61.0884
92	1	-0.0953969	94.8367	-61.1838
93	1	-0.0828129	94.8435	-61.2666
94	1	-0.0702426	94.8485	-61.3368
95	1	-0.0576847	94.8518	-61.3945
96	1	-0.0451348	94.8538	-61.4396
97	1	-0.0325917	94.8549	-61.4722
98	1	-0.0200544	94.8553	-61.4923
99	1	-0.00751925	94.8554	-61.4998
100	1	0.00751925	94.8554	-61.4923
101	1	0.0200544	94.8558	-61.4722
102	1	0.0325917	94.8569	-61.4396
103	1	0.0451348	94.8589	-61.3945
104	1	0.0576847	94.8623	-61.3368
105	1	0.0702426	94.8672	-61.2666
106	1	0.0828129	94.874	-61.1838
107	1	0.0953969	94.8831	-61.0884
108	1	0.107995	94.8948	-60.9804
109	1	0.12061 94.9094	-60.8598	
110	1	0.133244	94.9271	-60.7265
111	1	0.1459 94.9484	-60.5806	

112	1	0.158579	94.9735	-60.422
113	1	0.171285	95.0029	-60.2508
114	1	0.184017	95.0367	-60.0667
115	1	0.196779	95.0755	-59.87
116	1	0.209575	95.1194	-59.6604
117	1	0.222403	95.1689	-59.438
118	1	0.235269	95.2242	-59.2027
119	1	0.248174	95.2858	-58.9545
120	1	0.263715	95.3553	-58.6908
121	1	0.276714	95.4319	-58.4141
122	1	0.28976	95.5159	-58.1244
123	1	0.302855	95.6076	-57.8215
124	1	0.316004	95.7075	-57.5055
125	1	0.329206	95.8158	-57.1763
126	1	0.342466	95.9331	-56.8338
127	1	0.355788	96.0597	-56.478
128	1	0.369171	96.196	-56.1089
129	1	0.382622	96.3424	-55.7262
130	1	0.396142	96.4993	-55.3301
131	1	0.409735	96.6672	-54.9204
132	1	0.423405	96.8465	-54.497
133	1	0.437153	97.0376	-54.0598
134	1	0.450985	97.241	-53.6088
135	1	0.464904	97.4571	-53.1439
136	1	0.478914	97.6865	-52.665
137	1	0.493018	97.9295	-52.172
138	1	0.507221	98.1868	-51.6648
139	1	0.521527	98.4588	-51.1432
140	1	0.53594	98.746	-50.6073
141	1	0.550465	99.049	-50.0568
142	1	0.565108	99.3684	-49.4917
143	1	0.579873	99.7046	-48.9119
144	1	0.594766	100.058	-48.3171
145	1	0.609791	100.43	-47.7073
146	1	0.624956	100.821	-47.0823
147	1.02	0.640266	101.231	-46.4293
148	1.03	0.655726	101.661	-45.7539
149	1.04	0.671346	102.111	-45.0557
150	1.09	0.687131	102.584	-44.3067
151	1.2	0.703089	103.078	-43.463
152	1.2	0.719228	103.595	-42.5999
153	1.2	0.735557	104.136	-41.7173
154	1.3	0.752084	104.702	-40.7395
155	1.3	0.768821	105.293	-39.7401
156	1.31	0.785774	105.91	-38.7107
157	1.32	0.802956	106.555	-37.6508
158	1.35	0.820379	107.228	-36.5433
159	1.38	0.838054	107.93	-35.3868
160	1.4	0.859618	108.669	-34.1833
161	1.54	0.877897	109.44	-32.8314
162	1.54	0.896473	110.244	-31.4508
163	1.8	0.915365	111.082	-29.8031
164	1.9	0.93459	111.955	-28.0274
165	1.92	0.954165	112.866	-26.1954
166	2	0.974114	113.814	-24.2472
167	2	0.994457	114.803	-22.2583
168	2.1	1.01522	115.834	-20.1263
169	2.1	1.03643	116.908	-17.9498
170	2.2	1.05812	118.028	-15.6219
171	2.2	1.08032	119.195	-13.2452
172	2.2	1.10306	120.412	-10.8185
173	2.5	1.12639	121.68	-8.00251

174	2.54	1.15035	123.004	-5.08062
175	2.6	1.17499	124.384	-2.02565
176	2.72	1.20036	125.825	1.23933
177	3	1.22653	127.33	4.91891
178	3	1.25357	128.901	8.67961
179	3	1.28155	130.543	12.5243
180	3.2	1.31058	132.261	16.7181
181	3.22	1.34075	134.059	21.0353
182	3.5	1.3722	135.942	25.8381
183	3.6	1.40507	137.916	30.8963
184	3.6	1.43953	139.988	36.0786
185	3.8	1.47579	142.166	41.6866
186	4.03	1.5141	144.459	47.7885
187	4.07	1.55477	146.876	54.1164
188	4.5	1.59819	149.43	61.3083
189	4.58	1.64485	152.136	68.8417
190	4.99	1.6954	155.01	77.3017
191	5	1.75069	158.075	86.0552
192	5	1.81191	161.358	95.1147
193	5.4	1.88079	164.895	105.271
194	5.6	1.95996	168.737	116.247
195	6	2.05375	172.955	128.569
196	6.3	2.17009	177.664	142.241
197	8	2.32634	183.076	160.852
198	9	2.57583	189.711	184.034

Data Set Standard Deviation = 1.29823
Numerator = 33868.5
Denominator = 62988.6
W Statistic = 0.537693 = 33868.5 / 62988.6

5% Critical value of 0.976 exceeds 0.537693
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.537693
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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.07944	-2.57583	6.63492	5.3563
2	-2.07944	-2.32634	12.0468	10.1938
3	-2.07944	-2.17009	16.7561	14.7064
4	-2.07944	-2.05375	20.974	18.977
5	-1.34707	-1.95996	24.8154	21.6172
6	-1.02165	-1.88079	28.3528	23.5387
7	-0.693147	-1.81191	31.6358	24.7947
8	-0.673345	-1.75069	34.7007	25.9735
9	-0.634878	-1.6954	37.5751	27.0498
10	-0.527633	-1.64485	40.2806	27.9177
11	-0.385662	-1.59819	42.8348	28.5341
12	-0.34249	-1.55477	45.2522	29.0666
13	-0.314711	-1.5141	47.5447	29.5431
14	-0.274437	-1.47579	49.7226	29.9481
15	-0.223144	-1.43953	51.7949	30.2693
16	-0.18633	-1.40507	53.7691	30.5311
17	-0.174353	-1.3722	55.6521	30.7704
18	-0.0725707	-1.34075	57.4497	30.8677
19	-0.040822	-1.31058	59.1673	30.9212
20	0	-1.28155	60.8097	30.9212
21	0	-1.25357	62.3811	30.9212
22	0	-1.22653	63.8855	30.9212
23	0	-1.20036	65.3263	30.9212
24	0	-1.17499	66.7069	30.9212
25	0	-1.15035	68.0302	30.9212
26	0	-1.12639	69.299	30.9212
27	0	-1.10306	70.5157	30.9212
28	0	-1.08032	71.6828	30.9212
29	0	-1.05812	72.8025	30.9212
30	0	-1.03643	73.8766	30.9212
31	0	-1.01522	74.9073	30.9212
32	0	-0.994457	75.8963	30.9212
33	0	-0.974114	76.8452	30.9212
34	0	-0.954165	77.7556	30.9212
35	0	-0.93459	78.6291	30.9212
36	0	-0.915365	79.4669	30.9212
37	0	-0.896473	80.2706	30.9212
38	0	-0.877897	81.0413	30.9212
39	0	-0.859618	81.7803	30.9212
40	0	-0.838054	82.4826	30.9212
41	0	-0.820379	83.1556	30.9212
42	0	-0.802956	83.8004	30.9212
43	0	-0.785774	84.4178	30.9212
44	0	-0.768821	85.0089	30.9212
45	0	-0.752084	85.5745	30.9212
46	0	-0.735557	86.1156	30.9212
47	0	-0.719228	86.6328	30.9212
48	0	-0.703089	87.1272	30.9212
49	0	-0.687131	87.5993	30.9212

50	0	-0.671346	88.05	30.9212
51	0	-0.655726	88.48	30.9212
52	0	-0.640266	88.89	30.9212
53	0	-0.624956	89.2805	30.9212
54	0	-0.609791	89.6524	30.9212
55	0	-0.594766	90.0061	30.9212
56	0	-0.579873	90.3424	30.9212
57	0	-0.565108	90.6617	30.9212
58	0	-0.550465	90.9647	30.9212
59	0	-0.5359491.252	30.9212	
60	0	-0.521527	91.5239	30.9212
61	0	-0.507221	91.7812	30.9212
62	0	-0.493018	92.0243	30.9212
63	0	-0.478914	92.2536	30.9212
64	0	-0.464904	92.4698	30.9212
65	0	-0.450985	92.6732	30.9212
66	0	-0.437153	92.8643	30.9212
67	0	-0.423405	93.0435	30.9212
68	0	-0.409735	93.2114	30.9212
69	0	-0.396142	93.3684	30.9212
70	0	-0.382622	93.5148	30.9212
71	0	-0.369171	93.651	30.9212
72	0	-0.355788	93.7776	30.9212
73	0	-0.342466	93.8949	30.9212
74	0	-0.329206	94.0033	30.9212
75	0	-0.316004	94.1031	30.9212
76	0	-0.302855	94.1949	30.9212
77	0	-0.2897694.2788	30.9212	
78	0	-0.276714	94.3554	30.9212
79	0	-0.263715	94.4249	30.9212
80	0	-0.248174	94.4865	30.9212
81	0	-0.235269	94.5419	30.9212
82	0	-0.222403	94.5913	30.9212
83	0	-0.209575	94.6353	30.9212
84	0	-0.196779	94.674	30.9212
85	0	-0.184017	94.7079	30.9212
86	0	-0.171285	94.7372	30.9212
87	0	-0.158579	94.7623	30.9212
88	0	-0.1459 94.7836	30.9212	
89	0	-0.133244	94.8014	30.9212
90	0	-0.1206194.8159	30.9212	
91	0	-0.107995	94.8276	30.9212
92	0	-0.0953969	94.8367	30.9212
93	0	-0.0828129	94.8435	30.9212
94	0	-0.0702426	94.8485	30.9212
95	0	-0.0576847	94.8518	30.9212
96	0	-0.0451348	94.8538	30.9212
97	0	-0.0325917	94.8549	30.9212
98	0	-0.0200544	94.8553	30.9212
99	0	-0.00751925	94.8554	30.9212
100	0	0.00751925	94.8554	30.9212
101	0	0.0200544	94.8558	30.9212
102	0	0.0325917	94.8569	30.9212
103	0	0.0451348	94.8589	30.9212
104	0	0.0576847	94.8623	30.9212
105	0	0.0702426	94.8672	30.9212
106	0	0.0828129	94.874	30.9212
107	0	0.0953969	94.8831	30.9212
108	0	0.107995	94.8948	30.9212
109	0	0.12061 94.9094	30.9212	
110	0	0.133244	94.9271	30.9212
111	0	0.1459 94.9484	30.9212	

112	0	0.158579	94.9735	30.9212	
113	0	0.171285	95.0029	30.9212	
114	0	0.184017	95.0367	30.9212	
115	0	0.196779	95.0755	30.9212	
116	0	0.209575	95.1194	30.9212	
117	0	0.222403	95.1689	30.9212	
118	0	0.235269	95.2242	30.9212	
119	0	0.248174	95.2858	30.9212	
120	0	0.263715	95.3553	30.9212	
121	0	0.276714	95.4319	30.9212	
122	0	0.28976	95.5159	30.9212	
123	0	0.302855	95.6076	30.9212	
124	0	0.316004	95.7075	30.9212	
125	0	0.329206	95.8158	30.9212	
126	0	0.342466	95.9331	30.9212	
127	0	0.355788	96.0597	30.9212	
128	0	0.369171	96.196	30.9212	
129	0	0.382622	96.3424	30.9212	
130	0	0.396142	96.4993	30.9212	
131	0	0.409735	96.6672	30.9212	
132	0	0.423405	96.8465	30.9212	
133	0	0.437153	97.0376	30.9212	
134	0	0.450985	97.241	30.9212	
135	0	0.464904	97.4571	30.9212	
136	0	0.478914	97.6865	30.9212	
137	0	0.493018	97.9295	30.9212	
138	0	0.507221	98.1868	30.9212	
139	0	0.521527	98.4588	30.9212	
140	0	0.53594	98.746	30.9212	
141	0	0.550465	99.049	30.9212	
142	0	0.565108	99.3684	30.9212	
143	0	0.579873	99.7046	30.9212	
144	0	0.594766	100.058	30.9212	
145	0	0.609791	100.43	30.9212	
146	0	0.624956	100.821	30.9212	
147	0.0198026	0.640266	101.231	30.9339	
148	0.0295588	0.655726	101.661	30.9532	
149	0.0392207	0.671346	102.111	30.9796	
150	0.0861777	0.687131	102.584	31.0388	
151	0.182322	0.703089	103.078	31.167	
152	0.182322	0.719228	103.595	31.2981	
153	0.182322	0.735557	104.136	31.4322	
154	0.262364	0.752084	104.702	31.6295	
155	0.262364	0.768821	105.293	31.8312	
156	0.270027	0.785774	105.91	32.0434	
157	0.277632	0.802956	106.555	32.2663	
158	0.300105	0.820379	107.228	32.5125	
159	0.322083	0.838054	107.93	32.7825	
160	0.336472	0.859618	108.669	33.0717	
161	0.431782	0.877897	109.44	33.4508	
162	0.431782	0.896473	110.244	33.8379	
163	0.587787	0.915365	111.082	34.3759	
164	0.641854	0.93459	111.955	34.9758	
165	0.652325	0.954165	112.866	35.5982	
166	0.693147	0.974114	113.814	36.2734	
167	0.693147	0.994457	114.803	36.9627	
168	0.741937	1.01522	115.834	37.7159	
169	0.741937	1.03643	116.908	38.4849	
170	0.788457	1.05812	118.028	39.3192	
171	0.788457	1.08032	119.195	40.171	
172	0.788457	1.10306	120.412	41.0407	
173	0.916291	1.12639	121.68	42.0728	

174	0.932164		1.15035	123.004	43.1451
175	0.955511		1.17499	124.384	44.2678
176	1.00063	1.20036	125.825	45.4689	
177	1.09861	1.22653	127.33	46.8164	
178	1.09861	1.25357	128.901	48.1936	
179	1.09861	1.28155	130.543	49.6015	
180	1.16315	1.31058	132.261	51.1259	
181	1.16938	1.34075	134.059	52.6938	
182	1.25276	1.3722	135.942	54.4128	
183	1.28093	1.40507	137.916	56.2126	
184	1.28093	1.43953	139.988	58.0566	
185	1.335	1.47579	142.166	60.0268	
186	1.39377	1.5141	144.459	62.1371	
187	1.40364	1.55477	146.876	64.3194	
188	1.50408	1.59819	149.43	66.7232	
189	1.5217	1.64485	152.136	69.2262	
190	1.60744	1.6954	155.01	71.9514	
191	1.60944	1.75069	158.075	74.769	
192	1.60944	1.81191	161.358	77.6852	
193	1.6864	1.88079	164.895	80.857	
194	1.72277	1.95996	168.737	84.2335	
195	1.79176	2.05375	172.955	87.9134	
196	1.84055	2.17009	177.664	91.9075	
197	2.07944	2.32634	183.076	96.745	
198	2.19722	2.57583	189.711	102.405	

Data Set Standard Deviation = 0.628205
Numerator = 10486.7
Denominator = 14749
W Statistic = 0.711015 = 10486.7 / 14749

5% Critical value of 0.976 exceeds 0.711015
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.711015
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	65
	9/23/1999	ND<0	65
	3/15/2000	ND<0	65
	9/24/2003	ND<0	65
	3/11/2004	ND<0	65
	10/12/2004	ND<0	65
	4/1/2005	ND<0	65
	10/25/2005	ND<0	65
	4/29/2006	ND<0	65
	11/18/2006	ND<0	65
	5/23/2007	ND<0	65
	11/28/2007	ND<0	65
	6/5/2008	ND<0	65
	11/20/2008	ND<0	65
	6/11/2009	ND<-2.07944	65

Rank Sum = 975
Rank Mean = 65

Background Rank Sum = 975
Background Rank Mean = 65

Compliance Wells

Well ID	Date	Result	Rank
MW-10	7/20/1995	ND<0	65
	8/24/1995	0.182322 J	151
	9/28/1995	0.693147	166
	10/26/1995	0.693147	167
	11/19/1996	ND<0	65
	12/19/1996	ND<0	65
	3/24/1997	ND<0	65
	9/24/1997	ND<0	65
	4/7/1998	ND<0	65
	9/23/1998	ND<0	65
	3/16/1999	0.788457	170
	9/23/1999	ND<0	65
	3/15/2000	ND<0	65
	9/24/2003	ND<0	65
	3/11/2004	ND<0	65
	10/12/2004	ND<0	65
	4/1/2005	0.587787 J	163
	10/25/2005	0.277632 J	157
	4/29/2006	0.270027 J	156
	11/18/2006	-0.040822 J	144
	5/23/2007	ND<0	65
	11/28/2007	0.322083	159
	6/5/2008	ND<0	65

	11/20/2008	0 J	145
	6/11/2009	0	146
	11/15/2009	0.262364	154

Rank Sum = 2788
Rank Mean = 107.231

MW-9	7/20/1995	0.916291	173
	8/24/1995	0.955511	175
	9/28/1995	1.09861	177
	10/26/1995	1.09861	178
	11/19/1996	ND<0	65
	12/19/1996	ND<0	65
	3/24/1997	ND<0	65
	9/24/1997	ND<0	65
	4/7/1998	ND<0	65
	9/23/1998	ND<0	65
	3/16/1999	0.788457	171
	9/23/1999	ND<0	65
	3/15/2000	ND<0	65
	9/24/2003	ND<0	65
	3/11/2004	ND<0	65
	10/12/2004	ND<0	65
	4/1/2005	0.652325 J	165
	10/25/2005	0.0861777 J	150
	4/29/2006	-0.34249 J	137
	11/18/2006	-0.223144 J	140
	5/23/2007	0.788457	172
	11/28/2007	0.431782 J	161
	6/5/2008	ND<0	65
	11/20/2008	0.300105 J	158
	6/11/2009	0.641854	164
	11/15/2009	0.336472	160

Rank Sum = 3061
Rank Mean = 117.731

MW-12AR	3/16/1999	ND<0	65
	9/23/1999	ND<0	65
	3/15/2000	ND<0	65
	9/24/2003	ND<0	65
	3/11/2004	ND<0	65
	10/12/2004	ND<0	65
	4/1/2005	ND<0	65
	10/25/2005	0.0295588 J	148
	4/29/2006	0.0392207 J	149
	11/18/2006	-0.274437 J	139
	5/23/2007	ND<0	65
	11/28/2007	-0.174353 J	142
	6/5/2008	ND<0	65
	11/20/2008	-0.634878 J	134
	6/11/2009	ND<-2.07944	65
	11/15/2009	-1.34707 J	130

Rank Sum = 1492
Rank Mean = 93.25

MW-6	7/20/1995	ND<0	65
	8/24/1995	ND<0	65
	9/28/1995	ND<0	65
	10/26/1995	ND<0	65
	11/19/1996	ND<0	65
	12/19/1996	ND<0	65
	3/24/1997	ND<0	65
	9/24/1997	ND<0	65

	4/7/1998	ND<0	65
	9/23/1998	ND<0	65
	3/16/1999	ND<0	65
	9/23/1999	ND<0	65
	3/15/2000	ND<0	65
	9/24/2003	ND<0	65
	3/11/2004	ND<0	65
	10/12/2004	ND<0	65
	4/1/2005	ND<0	65
	10/25/2005	ND<0	65
	4/29/2006	ND<0	65
	11/18/2006	ND<0	65
	5/23/2007	0.182322	152
	11/28/2007	ND<0	65
	6/5/2008	ND<0	65
	11/20/2008	ND<0	65
	6/11/2009	ND<-2.07944	65

Rank Sum = 1712
Rank Mean = 68.48

MW-11R	7/20/1995	0.741937	168
	8/24/1995	1.84055	196
	9/28/1995	1.79176	195
	10/26/1995	2.07944	197
	11/19/1996	ND<0	65
	12/19/1996	2.19722	198
	3/24/1997	ND<0	65
	9/24/1997	ND<0	65
	4/7/1998	ND<0	65
	9/23/1998	1.60944	191
	3/16/1999	1.60944	192
	9/23/1999	ND<0	65
	3/15/2000	ND<0	65
	9/24/2003	ND<0	65
	3/11/2004	ND<0	65
	10/12/2004	ND<0	65
	4/1/2005	1.5217	189
	10/25/2005	0.431782 J	162
	4/29/2006	-0.18633 J	141
	11/18/2006	-0.0725707 J	143
	5/23/2007	0.741937	169
	11/28/2007	0.262364 J	155
	6/5/2008	ND<0	65
	11/20/2008	ND<0	65
	6/11/2009	-0.527633 J	135

Rank Sum = 3146
Rank Mean = 125.84

MW-12BR	3/16/1999	1.335	185
	9/23/1999	1.09861	179
	3/15/2000	ND<0	65
	9/24/2003	ND<0	65
	3/11/2004	ND<0	65
	10/12/2004	ND<0	65
	4/1/2005	ND<0	65
	10/25/2005	ND<0	65
	4/29/2006	ND<0	65
	11/18/2006	ND<0	65
	5/23/2007	ND<0	65
	11/28/2007	ND<0	65
	6/5/2008	ND<0	65
	11/20/2008	ND<0	65

	6/11/2009	ND<-2.07944	65

Rank Sum = 1209
Rank Mean = 80.6

MW-8	7/20/1995	ND<0	65
	8/24/1995	ND<0	65
	9/28/1995	ND<0	65
	10/26/1995	ND<0	65
	11/19/1996	ND<0	65
	12/19/1996	ND<0	65
	3/24/1997	ND<0	65
	9/24/1997	1.6864	193
	4/7/1998	ND<0	65
	9/23/1998	1.72277	194
	3/16/1999	1.25276	182
	9/23/1999	1.28093	183
	3/15/2000	ND<0	65
	9/24/2003	ND<0	65
	3/11/2004	ND<0	65
	10/12/2004	ND<0	65
	4/1/2005	1.16938	181
	10/25/2005	1.60744	190
	4/29/2006	0.932164	174
	11/18/2006	1.39377	186
	5/23/2007	1.16315	180
	11/28/2007	1.50408	188
	6/5/2008	1.40364	187
	11/20/2008	1.00063	176
	6/11/2009	1.28093	184

Rank Sum = 3178
Rank Mean = 127.12

MW-7	7/20/1995	ND<0	65
	8/24/1995	ND<0	65
	9/28/1995	ND<0	65
	10/26/1995	ND<0	65
	11/19/1996	ND<0	65
	12/19/1996	ND<0	65
	3/24/1997	ND<0	65
	9/24/1997	ND<0	65
	4/7/1998	ND<0	65
	9/23/1998	ND<0	65
	3/16/1999	ND<0	65
	9/23/1999	ND<0	65
	3/15/2000	ND<0	65
	9/24/2003	ND<0	65
	3/11/2004	ND<0	65
	10/12/2004	ND<0	65
	4/1/2005	ND<0	65
	10/25/2005	-0.673345 J	133
	4/29/2006	-0.385662 J	136
	11/18/2006	-1.02165 J	131
	5/23/2007	0.182322	153
	11/28/2007	-0.693147 J	132
	6/5/2008	ND<0	65
	11/20/2008	0.0198026 J	147
	6/11/2009	-0.314711 J	138

Rank Sum = 2140
Rank Mean = 85.6

Calculation Results:

Kruskal-Wallis H Statistic = 30.2528
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 41.8168
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
30.2528 > 15.5073 indicating a significant group difference at 5% significance level
41.8168 > 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

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	107.231	42.2308	43.2217	
MW-9	117.731	52.7308	43.2217	
MW-12AR		93.25	28.25	47.909
MW-6	68.48	3.48	43.5368	
MW-11R	125.84	60.84	43.5368	
MW-12BR		80.6	15.6	48.6756
MW-8	127.12	62.12	43.5368	
MW-7	85.6	20.6	43.5368	

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

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	107.231	42.2308	46.6736	
MW-9	117.731	52.7308	46.6736	
MW-12AR		93.25	28.25	51.7352
MW-6	68.48	3.48	47.0138	
MW-11R	125.84	60.84	47.0138	
MW-12BR		80.6	15.6	52.5631
MW-8	127.12	62.12	47.0138	
MW-7	85.6	20.6	47.0138	

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
1.09861	0.955511	0.143101	4	22
1.09861	0.955511	0.143101	5	22
ND<0	0.955511	-0.955511	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
0.788457	0.955511	-0.167054	5	29
ND<0	0.955511	-0.955511	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
0.652325 J	0.955511	-0.303186	5	35
0.0861777 J	0.955511	-0.869334	5	36
-0.34249 J	0.955511	-1.298 5	37	
-0.223144 J	0.955511	-1.178655	38	
0.788457	0.955511	-0.167054	5	39
0.431782 J	0.955511	-0.523729	5	40
ND<0	0.955511	-0.955511	5	41
0.300105 J	0.955511	-0.655407	5	42

0.641854	0.955511	-0.313658	5	43
0.336472	0.955511	-0.619039	5	44

1.09861	1.09861	0	5	44
ND<0	1.09861	-1.098615	45	
ND<0	1.09861	-1.098615	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	
0.788457	1.09861	-0.310155	5	51
ND<0	1.09861	-1.098615	52	
ND<0	1.09861	-1.098615	53	
ND<0	1.09861	-1.098615	54	
ND<0	1.09861	-1.098615	55	
ND<0	1.09861	-1.098615	56	
0.652325 J	1.09861	-0.446287	5	57
0.0861777 J	1.09861	-1.012435	58	
-0.34249 J	1.09861	-1.4411 5	59	
-0.223144 J	1.09861	-1.321765	60	
0.788457	1.09861	-0.310155	5	61
0.431782 J	1.09861	-0.666835	62	
ND<0	1.09861	-1.098615	63	
0.300105 J	1.09861	-0.798508	5	64
0.641854	1.09861	-0.456758	5	65
0.336472	1.09861	-0.762145	66	

ND<0	1.09861	-1.098615	67	
ND<0	1.09861	-1.098615	68	
ND<0	1.09861	-1.098615	69	
ND<0	1.09861	-1.098615	70	
ND<0	1.09861	-1.098615	71	
ND<0	1.09861	-1.098615	72	
0.788457	1.09861	-0.310155	5	73
ND<0	1.09861	-1.098615	74	
ND<0	1.09861	-1.098615	75	
ND<0	1.09861	-1.098615	76	
ND<0	1.09861	-1.098615	77	
ND<0	1.09861	-1.098615	78	
0.652325 J	1.09861	-0.446287	5	79
0.0861777 J	1.09861	-1.012435	80	
-0.34249 J	1.09861	-1.4411 5	81	
-0.223144 J	1.09861	-1.321765	82	
0.788457	1.09861	-0.310155	5	83
0.431782 J	1.09861	-0.666835	84	
ND<0	1.09861	-1.098615	85	
0.300105 J	1.09861	-0.798508	5	86
0.641854	1.09861	-0.456758	5	87
0.336472	1.09861	-0.762145	88	

ND<0	ND<0	0	5	88
ND<0	ND<0	0	5	88
ND<0	ND<0	0	5	88
ND<0	ND<0	0	5	88
ND<0	ND<0	0	5	88
0.788457	ND<0	0.788457	6	88
ND<0	ND<0	0	6	88
ND<0	ND<0	0	6	88
ND<0	ND<0	0	6	88
ND<0	ND<0	0	6	88
ND<0	ND<0	0	6	88
0.652325 J	ND<0	0.652325	7	88

0.0861777 J	ND<0	0.0861777	8	88
-0.34249 J	ND<0	-0.342498	89	
-0.223144 J	ND<0	-0.223144	8	90
0.788457	ND<0	0.788457	9	90
0.431782 J	ND<0	0.431782	10	90
ND<0 ND<0	0	10	90	
0.300105 J	ND<0	0.300105	11	90
0.641854	ND<0	0.641854	12	90
0.336472	ND<0	0.336472	13	90
ND<0 ND<0	0	13	90	
ND<0 ND<0	0	13	90	
ND<0 ND<0	0	13	90	
ND<0 ND<0	0	13	90	
0.788457	ND<0	0.788457	14	90
ND<0 ND<0	0	14	90	
ND<0 ND<0	0	14	90	
ND<0 ND<0	0	14	90	
ND<0 ND<0	0	14	90	
ND<0 ND<0	0	14	90	
0.652325 J	ND<0	0.652325	15	90
0.0861777 J	ND<0	0.0861777	16	90
-0.34249 J	ND<0	-0.342491 6	91	
-0.223144 J	ND<0	-0.223144	16	92
0.788457	ND<0	0.788457	17	92
0.431782 J	ND<0	0.431782	18	92
ND<0 ND<0	0	18	92	
0.300105 J	ND<0	0.300105	19	92
0.641854	ND<0	0.641854	20	92
0.336472	ND<0	0.336472	21	92
ND<0 ND<0	0	21	92	
ND<0 ND<0	0	21	92	
ND<0 ND<0	0	21	92	
0.788457	ND<0	0.788457	22	92
ND<0 ND<0	0	22	92	
ND<0 ND<0	0	22	92	
ND<0 ND<0	0	22	92	
ND<0 ND<0	0	22	92	
ND<0 ND<0	0	22	92	
0.652325 J	ND<0	0.652325	23	92
0.0861777 J	ND<0	0.0861777	24	92
-0.34249 J	ND<0	-0.342492 4	93	
-0.223144 J	ND<0	-0.223144	24	94
0.788457	ND<0	0.788457	25	94
0.431782 J	ND<0	0.431782	26	94
ND<0 ND<0	0	26	94	
0.300105 J	ND<0	0.300105	27	94
0.641854	ND<0	0.641854	28	94
0.336472	ND<0	0.336472	29	94
ND<0 ND<0	0	29	94	
ND<0 ND<0	0	29	94	
0.788457	ND<0	0.788457	30	94
ND<0 ND<0	0	30	94	
ND<0 ND<0	0	30	94	
ND<0 ND<0	0	30	94	
ND<0 ND<0	0	30	94	
ND<0 ND<0	0	30	94	
0.652325 J	ND<0	0.652325	31	94
0.0861777 J	ND<0	0.0861777	32	94
-0.34249 J	ND<0	-0.342493 2	95	

-0.223144 J	ND<0	-0.223144	32	96	
0.788457	ND<0	0.788457	33	96	
0.431782 J	ND<0	0.431782	34	96	
ND<0	ND<0	0	34	96	
0.300105 J	ND<0	0.300105	35	96	
0.641854	ND<0	0.641854	36	96	
0.336472	ND<0	0.336472	37	96	
ND<0	ND<0	0	37	96	
0.788457	ND<0	0.788457	38	96	
ND<0	ND<0	0	38	96	
ND<0	ND<0	0	38	96	
ND<0	ND<0	0	38	96	
ND<0	ND<0	0	38	96	
ND<0	ND<0	0	38	96	
0.652325 J	ND<0	0.652325	39	96	
0.0861777 J	ND<0	0.0861777	40	96	
-0.34249 J	ND<0	-0.342494	0	97	
-0.223144 J	ND<0	-0.223144	40	98	
0.788457	ND<0	0.788457	41	98	
0.431782 J	ND<0	0.431782	42	98	
ND<0	ND<0	0	42	98	
0.300105 J	ND<0	0.300105	43	98	
0.641854	ND<0	0.641854	44	98	
0.336472	ND<0	0.336472	45	98	
0.788457	ND<0	0.788457	46	98	
ND<0	ND<0	0	46	98	
ND<0	ND<0	0	46	98	
ND<0	ND<0	0	46	98	
ND<0	ND<0	0	46	98	
ND<0	ND<0	0	46	98	
0.652325 J	ND<0	0.652325	47	98	
0.0861777 J	ND<0	0.0861777	48	98	
-0.34249 J	ND<0	-0.342494	8	99	
-0.223144 J	ND<0	-0.223144	48	100	
0.788457	ND<0	0.788457	49	100	
0.431782 J	ND<0	0.431782	50	100	
ND<0	ND<0	0	50	100	
0.300105 J	ND<0	0.300105	51	100	
0.641854	ND<0	0.641854	52	100	
0.336472	ND<0	0.336472	53	100	
ND<0	0.788457	-0.788457	53	101	
ND<0	0.788457	-0.788457	53	102	
ND<0	0.788457	-0.788457	53	103	
ND<0	0.788457	-0.788457	53	104	
ND<0	0.788457	-0.788457	53	105	
0.652325 J	0.788457	-0.136132	53	106	
0.0861777 J	0.788457	-0.702285	3	107	
-0.34249 J	0.788457	-1.130955	3	108	
-0.223144 J	0.788457	-1.0116	53	109	
0.788457	0.788457	0	53	109	
0.431782 J	0.788457	-0.356675	53	110	
ND<0	0.788457	-0.788457	53	111	
0.300105 J	0.788457	-0.488353	53	112	
0.641854	0.788457	-0.146603	53	113	
0.336472	0.788457	-0.451985	53	114	
ND<0	ND<0	0	53	114	
ND<0	ND<0	0	53	114	
ND<0	ND<0	0	53	114	

ND<0	ND<0	0	53	114		
0.652325 J		ND<0	0.652325		54	114
0.0861777 J		ND<0	0.0861777		55	114
-0.34249 J		ND<0	-0.3424955		115	
-0.223144 J		ND<0	-0.223144		55	116
0.788457		ND<0	0.788457		56	116
0.431782 J		ND<0	0.431782		57	116
ND<0	ND<0	0	57	116		
0.300105 J		ND<0	0.300105		58	116
0.641854		ND<0	0.641854		59	116
0.336472		ND<0	0.336472		60	116
ND<0	ND<0	0	60	116		
ND<0	ND<0	0	60	116		
ND<0	ND<0	0	60	116		
0.652325 J		ND<0	0.652325		61	116
0.0861777 J		ND<0	0.0861777		62	116
-0.34249 J		ND<0	-0.3424962		117	
-0.223144 J		ND<0	-0.223144		62	118
0.788457		ND<0	0.788457		63	118
0.431782 J		ND<0	0.431782		64	118
ND<0	ND<0	0	64	118		
0.300105 J		ND<0	0.300105		65	118
0.641854		ND<0	0.641854		66	118
0.336472		ND<0	0.336472		67	118
ND<0	ND<0	0	67	118		
ND<0	ND<0	0	67	118		
0.652325 J		ND<0	0.652325		68	118
0.0861777 J		ND<0	0.0861777		69	118
-0.34249 J		ND<0	-0.3424969		119	
-0.223144 J		ND<0	-0.223144		69	120
0.788457		ND<0	0.788457		70	120
0.431782 J		ND<0	0.431782		71	120
ND<0	ND<0	0	71	120		
0.300105 J		ND<0	0.300105		72	120
0.641854		ND<0	0.641854		73	120
0.336472		ND<0	0.336472		74	120
ND<0	ND<0	0	74	120		
0.652325 J		ND<0	0.652325		75	120
0.0861777 J		ND<0	0.0861777		76	120
-0.34249 J		ND<0	-0.3424976		121	
-0.223144 J		ND<0	-0.223144		76	122
0.788457		ND<0	0.788457		77	122
0.431782 J		ND<0	0.431782		78	122
ND<0	ND<0	0	78	122		
0.300105 J		ND<0	0.300105		79	122
0.641854		ND<0	0.641854		80	122
0.336472		ND<0	0.336472		81	122
0.652325 J		ND<0	0.652325		82	122
0.0861777 J		ND<0	0.0861777		83	122
-0.34249 J		ND<0	-0.3424983		123	
-0.223144 J		ND<0	-0.223144		83	124
0.788457		ND<0	0.788457		84	124
0.431782 J		ND<0	0.431782		85	124
ND<0	ND<0	0	85	124		
0.300105 J		ND<0	0.300105		86	124
0.641854		ND<0	0.641854		87	124
0.336472		ND<0	0.336472		88	124

0.0861777 J	0.652325 J	-0.566147	88	125
-0.34249 J	0.652325 J	-0.994815	88	126
-0.223144 J	0.652325 J	-0.875469	88	127
0.788457	0.652325 J	0.136132	89	127
0.431782 J	0.652325 J	-0.220543	89	128
ND<0	0.652325 J	-0.652325	89	129
0.300105 J	0.652325 J	-0.352221	89	130
0.641854	0.652325 J	-0.0104713	89	131
0.336472	0.652325 J	-0.315853	89	132
-0.34249 J	0.0861777 J	-0.428668	89	133
-0.223144 J	0.0861777 J	-0.309321	89	134
0.788457	0.0861777 J	0.70228	90	134
0.431782 J	0.0861777 J	0.345605	91	134
ND<0	0.0861777 J	-0.0861777	91	135
0.300105 J	0.0861777 J	0.213927	92	135
0.641854	0.0861777 J	0.555676	93	135
0.336472	0.0861777 J	0.250295	94	135
-0.223144 J	-0.34249 J	0.119347	95	135
0.788457	-0.34249 J	1.13095	96	135
0.431782 J	-0.34249 J	0.774273	97	135
ND<0	-0.34249 J	0.34249	98	135
0.300105 J	-0.34249 J	0.642595	99	135
0.641854	-0.34249 J	0.984344	100	135
0.336472	-0.34249 J	0.678963	101	135
0.788457	-0.223144 J	1.0116	102	135
0.431782 J	-0.223144 J	0.654926	103	135
ND<0	-0.223144 J	0.223144	104	135
0.300105 J	-0.223144 J	0.523248	105	135
0.641854	-0.223144 J	0.864997	106	135
0.336472	-0.223144 J	0.559616	107	135
0.431782 J	0.788457	-0.356675	107	136
ND<0	0.788457	-0.788457	107	137
0.300105 J	0.788457	-0.488353	107	138
0.641854	0.788457	-0.146603	107	139
0.336472	0.788457	-0.451985	107	140
ND<0	0.431782 J	-0.431782	107	141
0.300105 J	0.431782 J	-0.131678	107	142
0.641854	0.431782 J	0.210071	108	142
0.336472	0.431782 J	-0.0953102	108	143
0.300105 J	ND<0	0.300105	109	143
0.641854	ND<0	0.641854	110	143
0.336472	ND<0	0.336472	111	143
0.641854	0.300105 J	0.341749	112	143
0.336472	0.300105 J	0.0363676	113	143
0.336472	0.641854	-0.305382	113	144

S Statistic = 113 - 144 = -31

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
11/15/2009	1

There are 0 time periods with multiple data

A = 3864
B = 0
C = 1320
D = 0
E = 136
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1843.67
Z-Score = -0.698683
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.698683| <= 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
1.79176	1.84055	-0.0487902	7	17
2.07944	1.84055	0.238892	8	17
ND<0	1.84055	-1.840558	18	
2.19722	1.84055	0.356675	9	18
ND<0	1.84055	-1.840559	19	
ND<0	1.84055	-1.840559	20	
ND<0	1.84055	-1.840559	21	
1.60944	1.84055	-0.231112	9	22
1.60944	1.84055	-0.231112	9	23
ND<0	1.84055	-1.840559	24	
ND<0	1.84055	-1.840559	25	
ND<0	1.84055	-1.840559	26	
ND<0	1.84055	-1.840559	27	
ND<0	1.84055	-1.840559	28	
1.5217	1.84055	-0.318851	9	29
0.431782 J	1.84055	-1.408779	30	
-0.18633 J	1.84055	-2.026889	31	
-0.0725707 J	1.84055	-1.913129	32	
0.741937	1.84055	-1.098619	33	
0.262364 J	1.84055	-1.578199	34	
ND<0	1.84055	-1.840559	35	
ND<0	1.84055	-1.840559	36	
-0.527633 J	1.84055	-2.368189	37	

2.07944		1.79176		0.287682	10	37
ND<0	1.79176		-1.791761	0	38	
2.19722		1.79176		0.405465	11	38
ND<0	1.79176		-1.791761	1	39	
ND<0	1.79176		-1.791761	1	40	
ND<0	1.79176		-1.791761	1	41	
1.60944		1.79176		-0.182322	11	42
1.60944		1.79176		-0.182322	11	43
ND<0	1.79176		-1.791761	1	44	
ND<0	1.79176		-1.791761	1	45	
ND<0	1.79176		-1.791761	1	46	
ND<0	1.79176		-1.791761	1	47	
ND<0	1.79176		-1.791761	1	48	
1.5217	1.79176		-0.270061	1	49	
0.431782 J		1.79176		-1.359981	1	50
-0.18633 J		1.79176		-1.978091	1	51
-0.0725707 J		1.79176		-1.864331	1	52
0.741937		1.79176		-1.049821	1	53
0.262364 J		1.79176		-1.5294	11	54
ND<0	1.79176		-1.791761	1	55	
ND<0	1.79176		-1.791761	1	56	
-0.527633 J		1.79176		-2.319391	1	57
ND<0	2.07944		-2.079441	1	58	
2.19722		2.07944		0.117783	12	58
ND<0	2.07944		-2.079441	2	59	
ND<0	2.07944		-2.079441	2	60	
ND<0	2.07944		-2.079441	2	61	
1.60944		2.07944		-0.470004	12	62
1.60944		2.07944		-0.470004	12	63
ND<0	2.07944		-2.079441	2	64	
ND<0	2.07944		-2.079441	2	65	
ND<0	2.07944		-2.079441	2	66	
ND<0	2.07944		-2.079441	2	67	
ND<0	2.07944		-2.079441	2	68	
1.5217	2.07944		-0.557743	12	69	
0.431782 J		2.07944		-1.647661	2	70
-0.18633 J		2.07944		-2.265771	2	71
-0.0725707 J		2.07944		-2.152011	2	72
0.741937		2.07944		-1.3375	12	73
0.262364 J		2.07944		-1.817081	2	74
ND<0	2.07944		-2.079441	2	75	
ND<0	2.07944		-2.079441	2	76	
-0.527633 J		2.07944		-2.607071	2	77
2.19722		ND<0	2.19722	13	77	
ND<0	ND<0	0	13	77		
ND<0	ND<0	0	13	77		
ND<0	ND<0	0	13	77		
1.60944		ND<0	1.60944	14	77	
1.60944		ND<0	1.60944	15	77	
ND<0	ND<0	0	15	77		
ND<0	ND<0	0	15	77		
ND<0	ND<0	0	15	77		
ND<0	ND<0	0	15	77		
ND<0	ND<0	0	15	77		
1.5217	ND<0	1.5217	16	77		
0.431782 J		ND<0	0.431782		17	77
-0.18633 J		ND<0	-0.186331	7	78	
-0.0725707 J		ND<0	-0.0725707		17	79
0.741937		ND<0	0.741937		18	79

0.262364 J		ND<0	0.262364		19	79
ND<0	ND<0	0	19	79		
ND<0	ND<0	0	19	79		
-0.527633 J		ND<0	-0.527633		19	80
ND<0	2.19722		-2.197221	9	81	
ND<0	2.19722		-2.197221	9	82	
ND<0	2.19722		-2.197221	9	83	
1.60944		2.19722		-0.587787	19	84
1.60944		2.19722		-0.587787	19	85
ND<0	2.19722		-2.197221	9	86	
ND<0	2.19722		-2.197221	9	87	
ND<0	2.19722		-2.197221	9	88	
ND<0	2.19722		-2.197221	9	89	
ND<0	2.19722		-2.197221	9	90	
1.5217	2.19722		-0.675526		19	91
0.431782 J		2.19722		-1.7654	19	92
-0.18633 J		2.19722		-2.3835	19	93
-0.0725707 J		2.19722		-2.2698	19	94
0.741937		2.19722		-1.4552	19	95
0.262364 J		2.19722		-1.9348	19	96
ND<0	2.19722		-2.197221	9	97	
ND<0	2.19722		-2.197221	9	98	
-0.527633 J		2.19722		-2.7248	19	99
ND<0	ND<0	0	19	99		
ND<0	ND<0	0	19	99		
1.60944		ND<0	1.60944	20	99	
1.60944		ND<0	1.60944	21	99	
ND<0	ND<0	0	21	99		
ND<0	ND<0	0	21	99		
ND<0	ND<0	0	21	99		
ND<0	ND<0	0	21	99		
ND<0	ND<0	0	21	99		
1.5217	ND<0	1.5217	22	99		
0.431782 J		ND<0	0.431782		23	99
-0.18633 J		ND<0	-0.186332	3	100	
-0.0725707 J		ND<0	-0.0725707		23	101
0.741937		ND<0	0.741937		24	101
0.262364 J		ND<0	0.262364		25	101
ND<0	ND<0	0	25	101		
ND<0	ND<0	0	25	101		
-0.527633 J		ND<0	-0.527633		25	102
ND<0	ND<0	0	25	102		
1.60944		ND<0	1.60944	26	102	
1.60944		ND<0	1.60944	27	102	
ND<0	ND<0	0	27	102		
ND<0	ND<0	0	27	102		
ND<0	ND<0	0	27	102		
ND<0	ND<0	0	27	102		
ND<0	ND<0	0	27	102		
1.5217	ND<0	1.5217	28	102		
0.431782 J		ND<0	0.431782		29	102
-0.18633 J		ND<0	-0.186332	9	103	
-0.0725707 J		ND<0	-0.0725707		29	104
0.741937		ND<0	0.741937		30	104
0.262364 J		ND<0	0.262364		31	104
ND<0	ND<0	0	31	104		
ND<0	ND<0	0	31	104		
-0.527633 J		ND<0	-0.527633		31	105

1.60944		ND<0	1.60944	32	105	
1.60944		ND<0	1.60944	33	105	
ND<0	ND<0	0	33	105		
ND<0	ND<0	0	33	105		
ND<0	ND<0	0	33	105		
ND<0	ND<0	0	33	105		
ND<0	ND<0	0	33	105		
1.5217	ND<0	1.5217	34	105		
0.431782 J		ND<0	0.431782		35	105
-0.18633 J		ND<0	-0.1863335		106	
-0.0725707 J		ND<0	-0.0725707		35	107
0.741937		ND<0	0.741937		36	107
0.262364 J		ND<0	0.262364		37	107
ND<0	ND<0	0	37	107		
ND<0	ND<0	0	37	107		
-0.527633 J		ND<0	-0.527633		37	108
1.60944		1.60944		0	37	108
ND<0	1.60944		-1.6094437		109	
ND<0	1.60944		-1.6094437		110	
ND<0	1.60944		-1.6094437		111	
ND<0	1.60944		-1.6094437		112	
ND<0	1.60944		-1.6094437		113	
1.5217	1.60944		-0.0877389		37	114
0.431782 J		1.60944		-1.1776637		115
-0.18633 J		1.60944		-1.7957737		116
-0.0725707 J		1.60944		-1.6820137		117
0.741937		1.60944		-0.867501	37	118
0.262364 J		1.60944		-1.3470737		119
ND<0	1.60944		-1.6094437		120	
ND<0	1.60944		-1.6094437		121	
-0.527633 J		1.60944		-2.1370737		122
ND<0	1.60944		-1.6094437		123	
ND<0	1.60944		-1.6094437		124	
ND<0	1.60944		-1.6094437		125	
ND<0	1.60944		-1.6094437		126	
ND<0	1.60944		-1.6094437		127	
1.5217	1.60944		-0.0877389		37	128
0.431782 J		1.60944		-1.1776637		129
-0.18633 J		1.60944		-1.7957737		130
-0.0725707 J		1.60944		-1.6820137		131
0.741937		1.60944		-0.867501	37	132
0.262364 J		1.60944		-1.3470737		133
ND<0	1.60944		-1.6094437		134	
ND<0	1.60944		-1.6094437		135	
-0.527633 J		1.60944		-2.1370737		136
ND<0	ND<0	0	37	136		
ND<0	ND<0	0	37	136		
ND<0	ND<0	0	37	136		
ND<0	ND<0	0	37	136		
1.5217	ND<0	1.5217	38	136		
0.431782 J		ND<0	0.431782		39	136
-0.18633 J		ND<0	-0.1863339		137	
-0.0725707 J		ND<0	-0.0725707		39	138
0.741937		ND<0	0.741937		40	138
0.262364 J		ND<0	0.262364		41	138
ND<0	ND<0	0	41	138		
ND<0	ND<0	0	41	138		
-0.527633 J		ND<0	-0.527633		41	139

ND<0	ND<0	0	41	139		
ND<0	ND<0	0	41	139		
ND<0	ND<0	0	41	139		
1.5217	ND<0	1.5217	42	139		
0.431782 J		ND<0	0.431782		43	139
-0.18633 J		ND<0	-0.1863343		140	
-0.0725707 J		ND<0	-0.0725707		43	141
0.741937		ND<0	0.741937		44	141
0.262364 J		ND<0	0.262364		45	141
ND<0	ND<0	0	45	141		
ND<0	ND<0	0	45	141		
-0.527633 J		ND<0	-0.527633		45	142
ND<0	ND<0	0	45	142		
ND<0	ND<0	0	45	142		
1.5217	ND<0	1.5217	46	142		
0.431782 J		ND<0	0.431782		47	142
-0.18633 J		ND<0	-0.1863347		143	
-0.0725707 J		ND<0	-0.0725707		47	144
0.741937		ND<0	0.741937		48	144
0.262364 J		ND<0	0.262364		49	144
ND<0	ND<0	0	49	144		
ND<0	ND<0	0	49	144		
-0.527633 J		ND<0	-0.527633		49	145
ND<0	ND<0	0	49	145		
1.5217	ND<0	1.5217	50	145		
0.431782 J		ND<0	0.431782		51	145
-0.18633 J		ND<0	-0.1863351		146	
-0.0725707 J		ND<0	-0.0725707		51	147
0.741937		ND<0	0.741937		52	147
0.262364 J		ND<0	0.262364		53	147
ND<0	ND<0	0	53	147		
ND<0	ND<0	0	53	147		
-0.527633 J		ND<0	-0.527633		53	148
1.5217	ND<0	1.5217	54	148		
0.431782 J		ND<0	0.431782		55	148
-0.18633 J		ND<0	-0.1863355		149	
-0.0725707 J		ND<0	-0.0725707		55	150
0.741937		ND<0	0.741937		56	150
0.262364 J		ND<0	0.262364		57	150
ND<0	ND<0	0	57	150		
ND<0	ND<0	0	57	150		
-0.527633 J		ND<0	-0.527633		57	151
0.431782 J		1.5217	-1.0899257		152	
-0.18633 J		1.5217	-1.7080357		153	
-0.0725707 J		1.5217	-1.5942757		154	
0.741937		1.5217	-0.779762		57	155
0.262364 J		1.5217	-1.2593357		156	
ND<0	1.5217	-1.5217	57	157		
ND<0	1.5217	-1.5217	57	158		
-0.527633 J		1.5217	-2.0493357		159	
-0.18633 J		0.431782 J		-0.618112	57	160
-0.0725707 J		0.431782 J		-0.504353	57	161
0.741937		0.431782 J		0.310155	58	161
0.262364 J		0.431782 J		-0.169418	58	162
ND<0	0.431782 J		-0.431782		58	163
ND<0	0.431782 J		-0.431782		58	164
-0.527633 J		0.431782 J		-0.959415	58	165

-0.0725707 J	-0.18633 J	0.113759	59	165
0.741937	-0.18633 J	0.928267	60	165
0.262364 J	-0.18633 J	0.448694	61	165
ND<0	-0.18633 J	0.18633	62	165
ND<0	-0.18633 J	0.18633	63	165
-0.527633 J	-0.18633 J	-0.341303	63	166
0.741937	-0.0725707 J	0.814508	64	166
0.262364 J	-0.0725707 J	0.334935	65	166
ND<0	-0.0725707 J	0.0725707	66	166
ND<0	-0.0725707 J	0.0725707	67	166
-0.527633 J	-0.0725707 J	-0.455062	67	167
0.262364 J	0.741937	-0.479573	67	168
ND<0	0.741937	-0.741937	67	169
ND<0	0.741937	-0.741937	67	170
-0.527633 J	0.741937	-1.2695	67	171
ND<0	0.262364 J	-0.262364	67	172
ND<0	0.262364 J	-0.262364	67	173
-0.527633 J	0.262364 J	-0.789997	67	174
ND<0	ND<0	0	67	174
-0.527633 J	ND<0	-0.527633	67	175
-0.527633 J	ND<0	-0.527633	67	176

S Statistic = 67 - 176 = -109

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

There are 0 time periods with multiple data

A = 3006
B = 0
C = 990
D = 0
E = 114
F = 0
a = 33000
b = 124200
c = 1200
Group Variance = 1666.33
Z-Score = -2.64571
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.64571| > 1.97737 indicating a trend

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
ND<0	ND<0	0	13	0	
ND<0	ND<0	0	13	0	
ND<0	ND<0	0	13	0	
ND<0	ND<0	0	13	0	
ND<0	ND<0	0	13	0	
1.6864	ND<0	1.6864	14	0	
ND<0	ND<0	0	14	0	
1.72277		ND<0	1.72277	15	0
1.25276		ND<0	1.25276	16	0
1.28093		ND<0	1.28093	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	
1.16938		ND<0	1.16938	18	0
1.60744		ND<0	1.60744	19	0
0.932164		ND<0	0.932164	20	0
1.39377		ND<0	1.39377	21	0
1.16315		ND<0	1.16315	22	0
1.50408		ND<0	1.50408	23	0
1.40364		ND<0	1.40364	24	0
1.00063		ND<0	1.00063	25	0
1.28093		ND<0	1.28093	26	0

ND<0	ND<0	0	26	0		
ND<0	ND<0	0	26	0		
ND<0	ND<0	0	26	0		
ND<0	ND<0	0	26	0		
1.6864	ND<0	1.6864	27	0		
ND<0	ND<0	0	27	0		
1.72277		ND<0	1.72277	28	0	
1.25276		ND<0	1.25276	29	0	
1.28093		ND<0	1.28093	30	0	
ND<0	ND<0	0	30	0		
ND<0	ND<0	0	30	0		
ND<0	ND<0	0	30	0		
ND<0	ND<0	0	30	0		
1.16938		ND<0	1.16938	31	0	
1.60744		ND<0	1.60744	32	0	
0.932164		ND<0	0.932164		33	0
1.39377		ND<0	1.39377	34	0	
1.16315		ND<0	1.16315	35	0	
1.50408		ND<0	1.50408	36	0	
1.40364		ND<0	1.40364	37	0	
1.00063		ND<0	1.00063	38	0	
1.28093		ND<0	1.28093	39	0	
ND<0	ND<0	0	39	0		
ND<0	ND<0	0	39	0		
ND<0	ND<0	0	39	0		
1.6864	ND<0	1.6864	40	0		
ND<0	ND<0	0	40	0		
1.72277		ND<0	1.72277	41	0	
1.25276		ND<0	1.25276	42	0	
1.28093		ND<0	1.28093	43	0	
ND<0	ND<0	0	43	0		
ND<0	ND<0	0	43	0		
ND<0	ND<0	0	43	0		
ND<0	ND<0	0	43	0		
1.16938		ND<0	1.16938	44	0	
1.60744		ND<0	1.60744	45	0	
0.932164		ND<0	0.932164		46	0
1.39377		ND<0	1.39377	47	0	
1.16315		ND<0	1.16315	48	0	
1.50408		ND<0	1.50408	49	0	
1.40364		ND<0	1.40364	50	0	
1.00063		ND<0	1.00063	51	0	
1.28093		ND<0	1.28093	52	0	
ND<0	ND<0	0	52	0		
ND<0	ND<0	0	52	0		
1.6864	ND<0	1.6864	53	0		
ND<0	ND<0	0	53	0		
1.72277		ND<0	1.72277	54	0	
1.25276		ND<0	1.25276	55	0	
1.28093		ND<0	1.28093	56	0	
ND<0	ND<0	0	56	0		
ND<0	ND<0	0	56	0		
ND<0	ND<0	0	56	0		
ND<0	ND<0	0	56	0		
1.16938		ND<0	1.16938	57	0	
1.60744		ND<0	1.60744	58	0	
0.932164		ND<0	0.932164		59	0
1.39377		ND<0	1.39377	60	0	
1.16315		ND<0	1.16315	61	0	

1.50408		ND<0	1.50408	62	0
1.40364		ND<0	1.40364	63	0
1.00063		ND<0	1.00063	64	0
1.28093		ND<0	1.28093	65	0
ND<0	ND<0	0	65	0	
1.6864	ND<0	1.6864	66	0	
ND<0	ND<0	0	66	0	
1.72277		ND<0	1.72277	67	0
1.25276		ND<0	1.25276	68	0
1.28093		ND<0	1.28093	69	0
ND<0	ND<0	0	69	0	
ND<0	ND<0	0	69	0	
ND<0	ND<0	0	69	0	
ND<0	ND<0	0	69	0	
1.16938		ND<0	1.16938	70	0
1.60744		ND<0	1.60744	71	0
0.932164		ND<0	0.932164	72	0
1.39377		ND<0	1.39377	73	0
1.16315		ND<0	1.16315	74	0
1.50408		ND<0	1.50408	75	0
1.40364		ND<0	1.40364	76	0
1.00063		ND<0	1.00063	77	0
1.28093		ND<0	1.28093	78	0
1.6864	ND<0	1.6864	79	0	
ND<0	ND<0	0	79	0	
1.72277		ND<0	1.72277	80	0
1.25276		ND<0	1.25276	81	0
1.28093		ND<0	1.28093	82	0
ND<0	ND<0	0	82	0	
ND<0	ND<0	0	82	0	
ND<0	ND<0	0	82	0	
ND<0	ND<0	0	82	0	
1.16938		ND<0	1.16938	83	0
1.60744		ND<0	1.60744	84	0
0.932164		ND<0	0.932164	85	0
1.39377		ND<0	1.39377	86	0
1.16315		ND<0	1.16315	87	0
1.50408		ND<0	1.50408	88	0
1.40364		ND<0	1.40364	89	0
1.00063		ND<0	1.00063	90	0
1.28093		ND<0	1.28093	91	0
ND<0	1.6864	-1.6864	91	1	
1.72277		1.6864	0.0363676	92	1
1.25276		1.6864	-0.433636	92	2
1.28093		1.6864	-0.405465	92	3
ND<0	1.6864	-1.6864	92	4	
ND<0	1.6864	-1.6864	92	5	
ND<0	1.6864	-1.6864	92	6	
ND<0	1.6864	-1.6864	92	7	
1.16938		1.6864	-0.517018	92	8
1.60744		1.6864	-0.078963	92	9
0.932164		1.6864	-0.754235	92	10
1.39377		1.6864	-0.292633	92	11
1.16315		1.6864	-0.523248	92	12
1.50408		1.6864	-0.182322	92	13
1.40364		1.6864	-0.282756	92	14
1.00063		1.6864	-0.685767	92	15
1.28093		1.6864	-0.405465	92	16

1.72277		ND<0	1.72277	93	16	
1.25276		ND<0	1.25276	94	16	
1.28093		ND<0	1.28093	95	16	
ND<0	ND<0	0	95	16		
ND<0	ND<0	0	95	16		
ND<0	ND<0	0	95	16		
ND<0	ND<0	0	95	16		
1.16938		ND<0	1.16938	96	16	
1.60744		ND<0	1.60744	97	16	
0.932164		ND<0	0.932164		98	16
1.39377		ND<0	1.39377	99	16	
1.16315		ND<0	1.16315	100	16	
1.50408		ND<0	1.50408	101	16	
1.40364		ND<0	1.40364	102	16	
1.00063		ND<0	1.00063	103	16	
1.28093		ND<0	1.28093	104	16	

1.25276	1.72277	-0.470004	104	17	
1.28093	1.72277	-0.441833	104	18	
ND<0	1.72277	-1.72277	104	19	
ND<0	1.72277	-1.72277	104	20	
ND<0	1.72277	-1.72277	104	21	
ND<0	1.72277	-1.72277	104	22	
1.16938	1.72277	-0.553385	104	23	
1.60744	1.72277	-0.115331	104	24	
0.932164	1.72277	-0.790603	104	25	
1.39377	1.72277	-0.329	104	26	
1.16315	1.72277	-0.559616	104	27	
1.50408	1.72277	-0.218689	104	28	
1.40364	1.72277	-0.319124	104	29	
1.00063	1.72277	-0.722135	104	30	
1.28093	1.72277	-0.441833	104	31	

1.28093	1.25276	0.0281709	105	31	
ND<0	1.25276	-1.25276	105	32	
ND<0	1.25276	-1.25276	105	33	
ND<0	1.25276	-1.25276	105	34	
ND<0	1.25276	-1.25276	105	35	
1.16938	1.25276	-0.0833816	105	36	
1.60744	1.25276	0.354673	106	36	
0.932164	1.25276	-0.320599	106	37	
1.39377	1.25276	0.141003	107	37	
1.16315	1.25276	-0.0896122	107	38	
1.50408	1.25276	0.251314	108	38	
1.40364	1.25276	0.15088	109	38	
1.00063	1.25276	-0.252131	109	39	
1.28093	1.25276	0.0281709	110	39	

ND<0	1.28093	-1.28093	110	40	
ND<0	1.28093	-1.28093	110	41	
ND<0	1.28093	-1.28093	110	42	
ND<0	1.28093	-1.28093	110	43	
1.16938	1.28093	-0.111552	110	44	
1.60744	1.28093	0.326502	111	44	
0.932164	1.28093	-0.34877	111	45	
1.39377	1.28093	0.112833	112	45	
1.16315	1.28093	-0.117783	112	46	
1.50408	1.28093	0.223144	113	46	
1.40364	1.28093	0.122709	114	46	
1.00063	1.28093	-0.280302	114	47	
1.28093	1.28093	0	114	47	

ND<0	ND<0	0	114	47		
ND<0	ND<0	0	114	47		
ND<0	ND<0	0	114	47		
1.16938		ND<0	1.16938	115	47	
1.60744		ND<0	1.60744	116	47	
0.932164		ND<0	0.932164		117	47
1.39377		ND<0	1.39377	118	47	
1.16315		ND<0	1.16315	119	47	
1.50408		ND<0	1.50408	120	47	
1.40364		ND<0	1.40364	121	47	
1.00063		ND<0	1.00063	122	47	
1.28093		ND<0	1.28093	123	47	
ND<0	ND<0	0	123	47		
ND<0	ND<0	0	123	47		
1.16938		ND<0	1.16938	124	47	
1.60744		ND<0	1.60744	125	47	
0.932164		ND<0	0.932164		126	47
1.39377		ND<0	1.39377	127	47	
1.16315		ND<0	1.16315	128	47	
1.50408		ND<0	1.50408	129	47	
1.40364		ND<0	1.40364	130	47	
1.00063		ND<0	1.00063	131	47	
1.28093		ND<0	1.28093	132	47	
ND<0	ND<0	0	132	47		
1.16938		ND<0	1.16938	133	47	
1.60744		ND<0	1.60744	134	47	
0.932164		ND<0	0.932164		135	47
1.39377		ND<0	1.39377	136	47	
1.16315		ND<0	1.16315	137	47	
1.50408		ND<0	1.50408	138	47	
1.40364		ND<0	1.40364	139	47	
1.00063		ND<0	1.00063	140	47	
1.28093		ND<0	1.28093	141	47	
1.16938		ND<0	1.16938	142	47	
1.60744		ND<0	1.60744	143	47	
0.932164		ND<0	0.932164		144	47
1.39377		ND<0	1.39377	145	47	
1.16315		ND<0	1.16315	146	47	
1.50408		ND<0	1.50408	147	47	
1.40364		ND<0	1.40364	148	47	
1.00063		ND<0	1.00063	149	47	
1.28093		ND<0	1.28093	150	47	
1.60744		1.16938		0.438055	151	47
0.932164		1.16938		-0.237217	151	48
1.39377		1.16938		0.224385	152	48
1.16315		1.16938		-0.00623055	152	49
1.50408		1.16938		0.334696	153	49
1.40364		1.16938		0.234262	154	49
1.00063		1.16938		-0.168749	154	50
1.28093		1.16938		0.111552	155	50
0.932164		1.60744		-0.675272	155	51
1.39377		1.60744		-0.21367155	52	
1.16315		1.60744		-0.444285	155	53
1.50408		1.60744		-0.103359	155	54
1.40364		1.60744		-0.203793	155	55
1.00063		1.60744		-0.606804	155	56
1.28093		1.60744		-0.326502	155	57

1.39377	0.932164	0.461602	156	57
1.16315	0.932164	0.230987	157	57
1.50408	0.932164	0.571913	158	57
1.40364	0.932164	0.471479	159	57
1.00063	0.932164	0.0684678	160	57
1.28093	0.932164	0.34877 161	57	
1.16315	1.39377	-0.230616	161	58
1.50408	1.39377	0.110311	162	58
1.40364	1.39377	0.00987662	163	58
1.00063	1.39377	-0.393134	163	59
1.28093	1.39377	-0.112833	163	60
1.50408	1.16315	0.340927	164	60
1.40364	1.16315	0.240492	165	60
1.00063	1.16315	-0.162519	165	61
1.28093	1.16315	0.117783	166	61
1.40364	1.50408	-0.100434	166	62
1.00063	1.50408	-0.503446	166	63
1.28093	1.50408	-0.223144	166	64
1.00063	1.40364	-0.403011	166	65
1.28093	1.40364	-0.122709	166	66
1.28093	1.00063	0.280302	167	66

S Statistic = 167 - 66 = 101

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

There are 0 time periods with multiple data

A = 3846
B = 0
C = 1320
D = 0
E = 134
F = 0
a = 33000
b = 124200
c = 1200
Group Variance = 1619.67
Z-Score = 2.48478
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|2.48478| > 1.97737 indicating a trend

Concentrations (ug/L)

Parameter: Beryllium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 197
Total Non-Detect: 188
Percent Non-Detects: 95.4315%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	14 (93.3333%)	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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12BR	16	14 (87.5%)	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
			11/15/2009	0.33	0.33
MW-12AR	16	14 (87.5%)	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	
			11/15/2009	0.12 J	0.12 J	
MW-6	25	25 (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	
MW-9	25	24 (96%)	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	
MW-7	25	24 (96%)	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
MW-8	25	24 (96%)	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
MW-11R	25	25 (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
MW-10	25	24 (96%)	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

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 = 197

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.035	-2.57583	6.63492	-0.0901542
2	0.035	-2.32634	12.0468	-0.171576
3	0.035	-2.17009	16.7561	-0.247529
4	0.035	-2.05375	20.974	-0.319411
5	0.035	-1.95996	24.8154	-0.388009
6	0.035	-1.88079	28.3528	-0.453837
7	0.035	-1.81191	31.6358	-0.517254
8	0.12	-1.75069	34.7007	-0.727336
9	0.13	-1.6954	37.5751	-0.947738
10	0.33	-1.64485	40.2806	-1.49054
11	0.36	-1.59819	42.8348	-2.06589
12	2	-1.55477	45.2522	-5.17543
13	5	-1.5141	47.5447	-12.746
14	5	-1.47579	49.7226	-20.1249
15	5	-1.43953	51.7949	-27.3226
16	5	-1.40507	53.7691	-34.3479
17	5	-1.3722	55.6521	-41.209
18	5	-1.34075	57.4497	-47.9127
19	5	-1.31058	59.1673	-54.4656
20	5	-1.27588	60.7952	-60.845
21	5	-1.24809	62.3529	-67.0854
22	5	-1.22123	63.8443	-73.1916
23	5	-1.19522	65.2728	-79.1677
24	5	-1.17	66.6417	-85.0177
25	5	-1.1455	67.9539	-90.7452
26	5	-1.12168	69.2121	-96.3536
27	5	-1.09847	70.4187	-101.846
28	5	-1.07584	71.5761	-107.225
29	5	-1.05375	72.6865	-112.494
30	5	-1.03215	73.7519	-117.655
31	5	-1.01104	74.774	-122.71
32	5	-0.990356	75.7549	-127.662
33	5	-0.970094	76.6959	-132.512
34	5	-0.950222	77.5989	-137.263
35	5	-0.930718	78.4651	-141.917
36	5	-0.911562	79.296	-146.475
37	5	-0.892733	80.093	-150.938
38	5	-0.874218	80.8573	-155.309
39	5	-0.855996	81.59	-159.589
40	5	-0.834498	82.2864	-163.762
41	5	-0.816874	82.9537	-167.846
42	5	-0.7995	83.5929	-171.844
43	5	-0.782366	84.205	-175.755
44	5	-0.765456	84.7909	-179.583
45	5	-0.748762	85.3515	-183.327
46	5	-0.732275	85.8878	-186.988
47	5	-0.715986	86.4004	-190.568
48	5	-0.699883	86.8902	-194.067
49	5	-0.68396	87.358	-197.487

50	5	-0.668209	87.8045	-200.828
51	5	-0.652622	88.2304	-204.091
52	5	-0.637192	88.6365	-207.277
53	5	-0.621911	89.0232	-210.387
54	5	-0.606775	89.3914	-213.421
55	5	-0.591776	89.7416	-216.38
56	5	-0.576911	90.0744	-219.264
57	5	-0.562179	90.3905	-222.075
58	5	-0.547551	90.6903	-224.813
59	5	-0.533048	90.9744	-227.478
60	5	-0.515791	91.2405	-230.057
61	5	-0.501527	91.492	-232.565
62	5	-0.487364	91.7295	-235.001
63	5	-0.473299	91.9535	-237.368
64	5	-0.459327	92.1645	-239.664
65	5	-0.445443	92.3629	-241.892
66	5	-0.431644	92.5492	-244.05
67	5	-0.417928	92.7239	-246.14
68	5	-0.404299	92.8874	-248.161
69	5	-0.390726	93.04	-250.115
70	5	-0.377233	93.1823	-252.001
71	5	-0.363809	93.3147	-253.82
72	5	-0.350451	93.4375	-255.572
73	5	-0.337155	93.5512	-257.258
74	5	-0.323919	93.6561	-258.877
75	5	-0.310738	93.7527	-260.431
76	5	-0.297612	93.8412	-261.919
77	5	-0.284535	93.9222	-263.342
78	5	-0.271509	93.9959	-264.699
79	5	-0.258527	94.0627	-265.992
80	5	-0.243007	94.1218	-267.207
81	5	-0.230118	94.1748	-268.358
82	5	-0.217267	94.222	-269.444
83	5	-0.204452	94.2638	-270.466
84	5	-0.191671	94.3005	-271.425
85	5	-0.178929	94.3325	-272.319
86	5	-0.166199	94.3601	-273.15
87	5	-0.153505	94.3837	-273.918
88	5	-0.140835	94.4035	-274.622
89	5	-0.128189	94.42	-275.263
90	5	-0.115562	94.4333	-275.841
91	5	-0.102953	94.4439	-276.355
92	5	-0.0903606	94.4521	-276.807
93	5	-0.0777834	94.4581	-277.196
94	5	-0.0652187	94.4624	-277.522
95	5	-0.0526632	94.4652	-277.786
96	5	-0.0401167	94.4668	-277.986
97	5	-0.0275759	94.4675	-278.124
98	5	-0.0150408	94.4678	-278.199
99	5	0	94.4678	-278.199
100	5	0.0150408	94.468	-278.124
101	5	0.0275759	94.4687	-277.986
102	5	0.0401167	94.4703	-277.786
103	5	0.0526632	94.4731	-277.522
104	5	0.0652187	94.4774	-277.196
105	5	0.0777834	94.4834	-276.807
106	5	0.0903606	94.4916	-276.355
107	5	0.102953	94.5022	-275.841
108	5	0.115562	94.5155	-275.263
109	5	0.128189	94.532	-274.622
110	5	0.140835	94.5518	-273.918
111	5	0.153505	94.5754	-273.15

112	5	0.166199	94.603	-272.319
113	5	0.17892	94.635	-271.425
114	5	0.191671	94.6717	-270.466
115	5	0.204452	94.7135	-269.444
116	5	0.217267	94.7608	-268.358
117	5	0.230118	94.8137	-267.207
118	5	0.243007	94.8728	-265.992
119	5	0.258527	94.9396	-264.699
120	5	0.271509	95.0133	-263.342
121	5	0.284535	95.0943	-261.919
122	5	0.297612	95.1828	-260.431
123	5	0.310738	95.2794	-258.877
124	5	0.323919	95.3843	-257.258
125	5	0.337155	95.498	-255.572
126	5	0.350451	95.6208	-253.82
127	5	0.363809	95.7532	-252.001
128	5	0.377233	95.8955	-250.115
129	5	0.390726	96.0481	-248.161
130	5	0.40429	96.2116	-246.14
131	5	0.417928	96.3863	-244.05
132	5	0.431644	96.5726	-241.892
133	5	0.445443	96.771	-239.664
134	5	0.459327	96.982	-237.368
135	5	0.473299	97.206	-235.001
136	5	0.487364	97.4435	-232.565
137	5	0.501527	97.695	-230.057
138	5	0.515791	97.9611	-227.478
139	5	0.533048	98.2452	-224.813
140	5	0.547551	98.545	-222.075
141	5	0.56217	98.8611	-219.264
142	5	0.576911	99.1939	-216.38
143	5	0.591776	99.5441	-213.421
144	5	0.606775	99.9123	-210.387
145	5	0.621911	100.299	-207.277
146	5	0.637192	100.705	-204.091
147	5	0.652622	101.131	-200.828
148	5	0.668209	101.577	-197.487
149	5	0.68396	102.045	-194.067
150	5	0.699883	102.535	-190.568
151	5	0.715986	103.048	-186.988
152	5	0.732275	103.584	-183.327
153	5	0.748762	104.145	-179.583
154	5	0.765456	104.731	-175.755
155	5	0.782366	105.343	-171.844
156	5	0.7995	105.982	-167.846
157	5	0.816874	106.649	-163.762
158	5	0.834498	107.346	-159.589
159	5	0.855996	108.078	-155.309
160	5	0.874218	108.842	-150.938
161	5	0.892733	109.639	-146.475
162	5	0.911562	110.47	-141.917
163	5	0.930718	111.337	-137.263
164	5	0.950222	112.24	-132.512
165	5	0.970094	113.181	-127.662
166	5	0.990356	114.161	-122.71
167	5	1.01104	115.184	-117.655
168	5	1.03215	116.249	-112.494
169	5	1.05375	117.359	-107.225
170	5	1.07584	118.517	-101.846
171	5	1.09847	119.723	-96.3536
172	5	1.12168	120.982	-90.7452
173	5	1.1455	122.294	-85.0177

174	5	1.17	123.663	-79.1677
175	5	1.19522	125.091	-73.1916
176	5	1.22123	126.583	-67.0854
177	5	1.24809	128.14	-60.845
178	5	1.27588	129.768	-54.4656
179	5	1.31058	131.486	-47.9127
180	5	1.34075	133.283	-41.209
181	5	1.3722	135.166	-34.3479
182	5	1.40507	137.141	-27.3226
183	5	1.43953	139.213	-20.1249
184	5	1.47579	141.391	-12.746
185	5	1.5141	143.683	-5.17543
186	5	1.55477	146.101	2.59843
187	5	1.59819	148.655	10.5894
188	5	1.64485	151.36	18.8136
189	5	1.6954	154.235	27.2906
190	5	1.75069	157.3	36.0441
191	5	1.81191	160.583	45.1036
192	5	1.88079	164.12	54.5076
193	5	1.95996	167.962	64.3074
194	41	2.05375	172.179	148.511
195	44	2.17009	176.889	243.995
196	46	2.32634	182.301	351.007
197	56	2.57583	188.936	495.254

Data Set Standard Deviation = 6.10696
Numerator = 245276
Denominator = 1.38108e+006
W Statistic = 0.177597 = 245276 / 1.38108e+006

5% Critical value of 0.976 exceeds 0.177597
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.177597
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 = 197

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.35241	-2.57583	6.63492	8.63525
2	-3.35241	-2.32634	12.0468	16.4341
3	-3.35241	-2.17009	16.7561	23.7091
4	-3.35241	-2.05375	20.974	30.5941
5	-3.35241	-1.95996	24.8154	37.1647
6	-3.35241	-1.88079	28.3528	43.4699
7	-3.35241	-1.81191	31.6358	49.5442
8	-2.12026	-1.75069	34.7007	53.2561
9	-2.04022	-1.6954	37.5751	56.7151
10	-1.10866	-1.64485	40.2806	58.5386
11	-1.02165	-1.59819	42.8348	60.1714
12	0.693147	-1.55477	45.2522	59.0938
13	1.60944	-1.5141	47.5447	56.6569
14	1.60944	-1.47579	49.7226	54.2817
15	1.60944	-1.43953	51.7949	51.9649
16	1.60944	-1.40507	53.7691	49.7035
17	1.60944	-1.3722	55.6521	47.495
18	1.60944	-1.34075	57.4497	45.3371
19	1.60944	-1.31058	59.1673	43.2279
20	1.60944	-1.27588	60.7952	41.1744
21	1.60944	-1.24809	62.3529	39.1657
22	1.60944	-1.22123	63.8443	37.2002
23	1.60944	-1.19522	65.2728	35.2766
24	1.60944	-1.17	66.6417	33.3935
25	1.60944	-1.1455	67.9539	31.5499
26	1.60944	-1.12168	69.2121	29.7446
27	1.60944	-1.09847	70.4187	27.9767
28	1.60944	-1.07584	71.5761	26.2452
29	1.60944	-1.05375	72.6865	24.5493
30	1.60944	-1.03215	73.7519	22.8881
31	1.60944	-1.01104	74.774	21.2609
32	1.60944	-0.990356	75.7549	19.667
33	1.60944	-0.970094	76.6959	18.1057
34	1.60944	-0.950222	77.5989	16.5764
35	1.60944	-0.930718	78.4651	15.0784
36	1.60944	-0.911562	79.296	13.6113
37	1.60944	-0.892733	80.093	12.1745
38	1.60944	-0.874218	80.8573	10.7675
39	1.60944	-0.855996	81.59	9.38985
40	1.60944	-0.834498	82.2864	8.04678
41	1.60944	-0.816874	82.9537	6.73207
42	1.60944	-0.7995	83.5929	5.44532
43	1.60944	-0.782366	84.205	4.18615
44	1.60944	-0.765456	84.7909	2.9542
45	1.60944	-0.748762	85.3515	1.74911
46	1.60944	-0.732275	85.8878	0.570563
47	1.60944	-0.715986	86.4004	-0.581772
48	1.60944	-0.699883	86.8902	-1.70819
49	1.60944	-0.683968	7.358	-2.80898

50	1.60944	-0.668209	87.8045	-3.88442
51	1.60944	-0.652622	88.2304	-4.93478
52	1.60944	-0.637192	88.6365	-5.9603
53	1.60944	-0.621911	89.0232	-6.96123
54	1.60944	-0.606775	89.3914	-7.93779
55	1.60944	-0.591776	89.7416	-8.89022
56	1.60944	-0.576911	90.0744	-9.81872
57	1.60944	-0.562179	0.3905	-10.7235
58	1.60944	-0.547551	90.6903	-11.6048
59	1.60944	-0.533048	90.9744	-12.4627
60	1.60944	-0.515791	91.2405	-13.2928
61	1.60944	-0.501527	91.492	-14.1
62	1.60944	-0.487364	91.7295	-14.8844
63	1.60944	-0.473299	91.9535	-15.6461
64	1.60944	-0.459327	92.1645	-16.3854
65	1.60944	-0.445443	92.3629	-17.1023
66	1.60944	-0.431644	92.5492	-17.797
67	1.60944	-0.417928	92.7239	-18.4696
68	1.60944	-0.404299	2.8874	-19.1203
69	1.60944	-0.390726	93.04	-19.7491
70	1.60944	-0.377233	93.1823	-20.3563
71	1.60944	-0.363809	93.3147	-20.9418
72	1.60944	-0.350451	93.4375	-21.5058
73	1.60944	-0.337155	93.5512	-22.0484
74	1.60944	-0.323919	93.6561	-22.5698
75	1.60944	-0.310738	93.7527	-23.0699
76	1.60944	-0.297612	93.8412	-23.5489
77	1.60944	-0.284535	93.9222	-24.0068
78	1.60944	-0.271509	93.9959	-24.4438
79	1.60944	-0.258527	94.0627	-24.8599
80	1.60944	-0.243007	94.1218	-25.251
81	1.60944	-0.230118	94.1748	-25.6213
82	1.60944	-0.217267	94.222	-25.971
83	1.60944	-0.204452	94.2638	-26.3001
84	1.60944	-0.191671	94.3005	-26.6086
85	1.60944	-0.178929	4.3325	-26.8965
86	1.60944	-0.166199	94.3601	-27.164
87	1.60944	-0.153505	94.3837	-27.4111
88	1.60944	-0.140835	94.4035	-27.6377
89	1.60944	-0.128189	94.42	-27.844
90	1.60944	-0.115562	94.4333	-28.03
91	1.60944	-0.102953	94.4439	-28.1957
92	1.60944	-0.0903606	94.4521	-28.3412
93	1.60944	-0.0777834	94.4581	-28.4663
94	1.60944	-0.0652187	94.4624	-28.5713
95	1.60944	-0.0526632	94.4652	-28.6561
96	1.60944	-0.0401167	94.4668	-28.7206
97	1.60944	-0.0275759	94.4675	-28.765
98	1.60944	-0.0150408	94.4678	-28.7892
99	1.60944	0	94.4678	-28.7892
100	1.60944	0.0150408	94.468	-28.765
101	1.60944	0.0275759	94.4687	-28.7206
102	1.60944	0.0401167	94.4703	-28.6561
103	1.60944	0.0526632	94.4731	-28.5713
104	1.60944	0.0652187	94.4774	-28.4663
105	1.60944	0.0777834	94.4834	-28.3412
106	1.60944	0.0903606	94.4916	-28.1957
107	1.60944	0.102953	94.5022	-28.03
108	1.60944	0.115562	94.5155	-27.844
109	1.60944	0.128189	94.532	-27.6377
110	1.60944	0.140835	94.5518	-27.4111
111	1.60944	0.153505	94.5754	-27.164

112	1.60944	0.166199		94.603	-26.8965
113	1.60944	0.17892	94.635	-26.6086	
114	1.60944	0.191671		94.6717	-26.3001
115	1.60944	0.204452		94.7135	-25.971
116	1.60944	0.217267		94.7608	-25.6213
117	1.60944	0.230118		94.8137	-25.251
118	1.60944	0.243007		94.8728	-24.8599
119	1.60944	0.258527		94.9396	-24.4438
120	1.60944	0.271509		95.0133	-24.0068
121	1.60944	0.284535		95.0943	-23.5489
122	1.60944	0.297612		95.1828	-23.0699
123	1.60944	0.310738		95.2794	-22.5698
124	1.60944	0.323919		95.3843	-22.0484
125	1.60944	0.337155		95.498	-21.5058
126	1.60944	0.350451		95.6208	-20.9418
127	1.60944	0.363809		95.7532	-20.3563
128	1.60944	0.377233		95.8955	-19.7491
129	1.60944	0.390726		96.0481	-19.1203
130	1.60944	0.40429	96.2116	-18.4696	
131	1.60944	0.417928		96.3863	-17.797
132	1.60944	0.431644		96.5726	-17.1023
133	1.60944	0.445443		96.771	-16.3854
134	1.60944	0.459327		96.982	-15.6461
135	1.60944	0.473299		97.206	-14.8844
136	1.60944	0.487364		97.4435	-14.1
137	1.60944	0.501527		97.695	-13.2928
138	1.60944	0.515791		97.9611	-12.4627
139	1.60944	0.533048		98.2452	-11.6048
140	1.60944	0.547551		98.545	-10.7235
141	1.60944	0.56217	98.8611	-9.81872	
142	1.60944	0.576911		99.1939	-8.89022
143	1.60944	0.591776		99.5441	-7.93779
144	1.60944	0.606775		99.9123	-6.96123
145	1.60944	0.621911		100.299	-5.9603
146	1.60944	0.637192		100.705	-4.93478
147	1.60944	0.652622		101.131	-3.88442
148	1.60944	0.668209		101.577	-2.80898
149	1.60944	0.68396	102.045	-1.70819	
150	1.60944	0.699883		102.535	-0.581772
151	1.60944	0.715986		103.048	0.570563
152	1.60944	0.732275		103.584	1.74911
153	1.60944	0.748762		104.145	2.9542
154	1.60944	0.765456		104.731	4.18615
155	1.60944	0.782366		105.343	5.44532
156	1.60944	0.7995	105.982	6.73207	
157	1.60944	0.816874		106.649	8.04678
158	1.60944	0.834498		107.346	9.38985
159	1.60944	0.855996		108.078	10.7675
160	1.60944	0.874218		108.842	12.1745
161	1.60944	0.892733		109.639	13.6113
162	1.60944	0.911562		110.47	15.0784
163	1.60944	0.930718		111.337	16.5764
164	1.60944	0.950222		112.24	18.1057
165	1.60944	0.970094		113.181	19.667
166	1.60944	0.990356		114.161	21.2609
167	1.60944	1.01104	115.184	22.8881	
168	1.60944	1.03215	116.249	24.5493	
169	1.60944	1.05375	117.359	26.2452	
170	1.60944	1.07584	118.517	27.9767	
171	1.60944	1.09847	119.723	29.7446	
172	1.60944	1.12168	120.982	31.5499	
173	1.60944	1.1455	122.294	33.3935	

174	1.60944	1.17	123.663	35.2766
175	1.60944	1.19522	125.091	37.2002
176	1.60944	1.22123	126.583	39.1657
177	1.60944	1.24809	128.14	41.1744
178	1.60944	1.27588	129.768	43.2279
179	1.60944	1.31058	131.486	45.3371
180	1.60944	1.34075	133.283	47.495
181	1.60944	1.3722	135.166	49.7035
182	1.60944	1.40507	137.141	51.9649
183	1.60944	1.43953	139.213	54.2817
184	1.60944	1.47579	141.391	56.6569
185	1.60944	1.5141	143.683	59.0938
186	1.60944	1.55477	146.101	61.5961
187	1.60944	1.59819	148.655	64.1682
188	1.60944	1.64485	151.36	66.8155
189	1.60944	1.6954	154.235	69.5442
190	1.60944	1.75069	157.3	72.3618
191	1.60944	1.81191	160.583	75.278
192	1.60944	1.88079	164.12	78.305
193	1.60944	1.95996	167.962	81.4594
194	3.71357	2.05375	172.179	89.0862
195	3.78419	2.17009	176.889	97.2982
196	3.82864	2.32634	182.301	106.205
197	4.02535	2.57583	188.936	116.574

Data Set Standard Deviation = 1.07555
Numerator = 13589.4
Denominator = 42838
W Statistic = 0.317228 = 13589.4 / 42838

5% Critical value of 0.976 exceeds 0.317228
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.317228
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 = 95.4315%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 15
Maximum Background Concentration = 1.60944
Confidence Level = 65.2%
False Positive Rate = 34.8%

Location	Date	Samples	Mean	Significant
MW-12BR	11/15/2009	1	-1.10866	FALSE
MW-12AR	11/15/2009	1	-2.12026	FALSE
MW-6	6/11/2009	1	-3.35241	FALSE
MW-9	6/11/2009	1	-3.35241	FALSE
MW-7	6/11/2009	1	-3.35241	FALSE
MW-8	6/11/2009	1	-3.35241	FALSE
MW-11R	6/11/2009	1	-3.35241	FALSE
MW-10	6/11/2009	1	-3.35241	FALSE

Concentrations (ppb)

Parameter: Bis(2-ethylhexyl)phthalate

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 195
Total Non-Detect: 192
Percent Non-Detects: 98.4615%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original	
MW-13	15	15 (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	
			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<0.98	ND<0.98	

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original	
MW-12AR	15	15 (100%)	3/16/1999	ND<10	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<0.96	ND<0.96	
MW-11R	25	24 (96%)	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	4.41 J	4.41 J	
			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<0.94		ND<0.94
MW-9	25	25 (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<0.98		ND<0.98
MW-10	25	24 (96%)	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	5.02 J	5.02 J	
			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<0.98		ND<0.98
MW-12BR	15	15 (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	
			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<0.96		ND<0.96
MW-6	25	24 (96%)	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	3.62 J	3.62 J	
			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<0.98		ND<0.98
MW-8	25	25 (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<0.96		ND<0.96
MW-7	25	25 (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<0.94		ND<0.94

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Bis(2-ethylhexyl)phthalate

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 195

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.47	-2.57583	6.63492	-1.21064
2	0.47	-2.32634	12.0468	-2.30402
3	0.48	-2.17009	16.7561	-3.34567
4	0.48	-2.05375	20.974	-4.33147
5	0.48	-1.95996	24.8154	-5.27225
6	0.49	-1.88079	28.3528	-6.19383
7	0.49	-1.81191	31.6358	-7.08167
8	0.49	-1.75069	34.7007	-7.93951
9	0.49	-1.6954	37.5751	-8.77025
10	3.62	-1.63524	40.2491	-14.6898
11	4.41	-1.58927	42.7749	-21.6985
12	5	-1.54643	45.1663	-29.4306
13	5	-1.50626	47.4351	-36.9619
14	5	-1.46838	49.5913	-44.3039
15	5	-1.4325	51.6434	-51.4664
16	5	-1.39838	53.5988	-58.4583
17	5	-1.36581	55.4642	-65.2873
18	5	-1.33462	57.2455	-71.9604
19	5	-1.30469	58.9477	-78.4838
20	5	-1.27024	60.5612	-84.835
21	5	-1.24264	62.1053	-91.0482
22	5	-1.21596	63.5839	-97.128
23	5	-1.19012	65.0003	-103.079
24	5	-1.16505	66.3576	-108.904
25	5	-1.14069	67.6588	-114.607
26	5	-1.11699	68.9064	-120.192
27	5	-1.0939	70.103	-125.662
28	5	-1.07138	71.2509	-131.019
29	5	-1.04939	72.3521	-136.266
30	5	-1.02365	73.4	-141.384
31	5	-1.00271	74.4054	-146.397
32	5	-0.982202	75.3701	-151.308
33	5	-0.9621	76.2958	-156.119
34	5	-0.942375	77.1838	-160.831
35	5	-0.923014	78.0358	-165.446
36	5	-0.903992	78.853	-169.966
37	5	-0.885291	79.6367	-174.392
38	5	-0.866894	80.3882	-178.727
39	5	-0.848786	81.1087	-182.971
40	5	-0.827417	81.7933	-187.108
41	5	-0.809896	82.4492	-191.157
42	5	-0.792618	83.0775	-195.12
43	5	-0.775574	83.679	-198.998
44	5	-0.758753	84.2547	-202.792
45	5	-0.742143	84.8055	-206.503
46	5	-0.725736	85.3321	-210.131
47	5	-0.709522	85.8356	-213.679
48	5	-0.693493	86.3165	-217.146
49	5	-0.67449	86.7714	-220.519

50	5	-0.658838	87.2055	-223.813
51	5	-0.643345	87.6194	-227.03
52	5	-0.628006	88.0138	-230.17
53	5	-0.612813	88.3893	-233.234
54	5	-0.597761	88.7466	-236.223
55	5	-0.582841	89.0863	-239.137
56	5	-0.568052	89.409	-241.977
57	5	-0.553384	89.7153	-244.744
58	5	-0.538836	90.0056	-247.438
59	5	-0.521527	90.2776	-250.046
60	5	-0.507221	90.5349	-252.582
61	5	-0.493018	90.7779	-255.047
62	5	-0.478914	91.0073	-257.442
63	5	-0.464904	91.2234	-259.766
64	5	-0.450985	91.4268	-262.021
65	5	-0.437153	91.6179	-264.207
66	5	-0.423405	91.7972	-266.324
67	5	-0.409735	91.9651	-268.373
68	5	-0.396142	92.122	-270.353
69	5	-0.379927	92.2664	-272.253
70	5	-0.366499	92.4007	-274.085
71	5	-0.353118	92.5254	-275.851
72	5	-0.339819	92.6408	-277.55
73	5	-0.326561	92.7475	-279.183
74	5	-0.313379	92.8457	-280.75
75	5	-0.300232	92.9358	-282.251
76	5	-0.287147	93.0183	-283.687
77	5	-0.274119	93.0934	-285.057
78	5	-0.261129	93.1616	-286.363
79	5	-0.245599	93.2219	-287.591
80	5	-0.232693	93.276	-288.754
81	5	-0.219834	93.3244	-289.853
82	5	-0.207012	93.3672	-290.888
83	5	-0.194225	93.405	-291.859
84	5	-0.181468	93.4379	-292.767
85	5	-0.168741	93.4664	-293.61
86	5	-0.156042	93.4907	-294.391
87	5	-0.143367	93.5113	-295.108
88	5	-0.130716	93.5283	-295.761
89	5	-0.115562	93.5417	-296.339
90	5	-0.102953	93.5523	-296.854
91	5	-0.0903606	93.5605	-297.305
92	5	-0.0777834	93.5665	-297.694
93	5	-0.0652187	93.5708	-298.02
94	5	-0.0526632	93.5735	-298.284
95	5	-0.0401167	93.5752	-298.484
96	5	-0.0275759	93.5759	-298.622
97	5	-0.0150408	93.5761	-298.697
98	5	0	93.5761	-298.697
99	5	0.0150408	93.5764	-298.622
100	5	0.0275759	93.5771	-298.484
101	5	0.0401167	93.5787	-298.284
102	5	0.0526632	93.5815	-298.02
103	5	0.0652187	93.5858	-297.694
104	5	0.0777834	93.5918	-297.305
105	5	0.0903606	93.6	-296.854
106	5	0.102953	93.6106	-296.339
107	5	0.115562	93.6239	-295.761
108	5	0.130716	93.641	-295.108
109	5	0.143367	93.6616	-294.391
110	5	0.156042	93.6859	-293.61
111	5	0.168741	93.7144	-292.767

112	5	0.181468	93.7473	-291.859
113	5	0.194225	93.785	-290.888
114	5	0.207012	93.8279	-289.853
115	5	0.219834	93.8762	-288.754
116	5	0.232693	93.9304	-287.591
117	5	0.24559	93.9907	-286.363
118	5	0.26112	94.0589	-285.057
119	5	0.27411	94.134	-283.687
120	5	0.287147	94.2165	-282.251
121	5	0.300232	94.3066	-280.75
122	5	0.31337	94.4048	-279.183
123	5	0.326561	94.5114	-277.55
124	5	0.33981	94.6269	-275.851
125	5	0.353118	94.7516	-274.085
126	5	0.36649	94.8859	-272.253
127	5	0.379927	95.0303	-270.353
128	5	0.396142	95.1872	-268.373
129	5	0.409735	95.3551	-266.324
130	5	0.423405	95.5343	-264.207
131	5	0.437153	95.7255	-262.021
132	5	0.450985	95.9288	-259.766
133	5	0.464904	96.145	-257.442
134	5	0.478914	96.3743	-255.047
135	5	0.493018	96.6174	-252.582
136	5	0.507221	96.8747	-250.046
137	5	0.521527	97.1467	-247.438
138	5	0.538836	97.437	-244.744
139	5	0.553384	97.7432	-241.977
140	5	0.568052	98.0659	-239.137
141	5	0.582841	98.4056	-236.223
142	5	0.597761	98.7629	-233.234
143	5	0.612813	99.1385	-230.17
144	5	0.628006	99.5329	-227.03
145	5	0.643345	99.9468	-223.813
146	5	0.658838	100.381	-220.519
147	5	0.67449	100.836	-217.146
148	5	0.693493	101.317	-213.679
149	5	0.709522	101.82	-210.131
150	5	0.725736	102.347	-206.503
151	5	0.742143	102.898	-202.792
152	5	0.758753	103.473	-198.998
153	5	0.775574	104.075	-195.12
154	5	0.792618	104.703	-191.157
155	5	0.809896	105.359	-187.108
156	5	0.827417	106.044	-182.971
157	5	0.848786	106.764	-178.727
158	5	0.866894	107.516	-174.392
159	5	0.885291	108.299	-169.966
160	5	0.903992	109.116	-165.446
161	5	0.923014	109.968	-160.831
162	5	0.942375	110.857	-156.119
163	5	0.9621	111.782	-151.308
164	5	0.982202	112.747	-146.397
165	5	1.00271	113.752	-141.384
166	5	1.02365	114.8	-136.266
167	5	1.04939	115.901	-131.019
168	5	1.07138	117.049	-125.662
169	5	1.0939	118.246	-120.192
170	5	1.11699	119.494	-114.607
171	5	1.14069	120.795	-108.904
172	5	1.16505	122.152	-103.079
173	5	1.19012	123.568	-97.128

174	5	1.21596	125.047	-91.0482
175	5	1.24264	126.591	-84.835
176	5	1.27024	128.205	-78.4838
177	5	1.30469	129.907	-71.9604
178	5	1.33462	131.688	-65.2873
179	5	1.36581	133.553	-58.4583
180	5	1.39838	135.509	-51.4664
181	5	1.4325	137.561	-44.3039
182	5	1.46838	139.717	-36.9619
183	5	1.50626	141.986	-29.4306
184	5	1.54643	144.377	-21.6985
185	5	1.58927	146.903	-13.7521
186	5	1.63524	149.577	-5.57596
187	5	1.6954	152.452	2.90103
188	5	1.75069	155.516	11.6545
189	5	1.81191	158.799	20.714
190	5	1.88079	162.337	30.118
191	5	1.95996	166.178	39.9178
192	5	2.05375	170.396	50.1865
193	5	2.17009	175.105	61.037
194	5	2.32634	180.517	72.6687
195	5.02	2.57583	187.152	85.5994

Data Set Standard Deviation = 0.954197
Numerator = 7327.25
Denominator = 33057.7
W Statistic = 0.22165 = 7327.25 / 33057.7

5% Critical value of 0.976 exceeds 0.22165
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.22165
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Bis(2-ethylhexyl)phthalate

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 195

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-0.755023	-2.57583	6.63492	1.94481
2	-0.755023	-2.32634	12.0468	3.70125
3	-0.733969	-2.17009	16.7561	5.29403
4	-0.733969	-2.05375	20.974	6.80142
5	-0.733969	-1.95996	24.8154	8.23997
6	-0.71335	-1.88079	28.3528	9.58163
7	-0.71335	-1.81191	31.6358	10.8742
8	-0.71335	-1.75069	34.7007	12.123
9	-0.71335	-1.6954	37.5751	13.3324
10	1.28647	-1.63524	40.2491	11.2287
11	1.48387	-1.58927	42.7749	8.87046
12	1.60944	-1.54643	45.1663	6.38158
13	1.60944	-1.50626	47.4351	3.95734
14	1.60944	-1.46838	49.5913	1.59407
15	1.60944	-1.4325	51.6434	-0.711455
16	1.60944	-1.39838	53.5988	-2.96205
17	1.60944	-1.36581	55.4642	-5.16023
18	1.60944	-1.33462	57.2455	-7.30823
19	1.60944	-1.30469	58.9477	-9.40804
20	1.60944	-1.27024	60.5612	-11.4524
21	1.60944	-1.24264	62.1053	-13.4524
22	1.60944	-1.21596	63.5839	-15.4094
23	1.60944	-1.19012	65.0003	-17.3248
24	1.60944	-1.16505	66.3576	-19.1999
25	1.60944	-1.14069	67.6588	-21.0357
26	1.60944	-1.11699	68.9064	-22.8335
27	1.60944	-1.0939	70.103	-24.594
28	1.60944	-1.07138	71.2509	-26.3183
29	1.60944	-1.04939	72.3521	-28.0073
30	1.60944	-1.02365	73.4	-29.6548
31	1.60944	-1.00271	74.4054	-31.2686
32	1.60944	-0.982202	75.3701	-32.8494
33	1.60944	-0.9621	76.2958	-34.3978
34	1.60944	-0.942375	77.1838	-35.9145
35	1.60944	-0.923014	78.0358	-37.4
36	1.60944	-0.903992	78.853	-38.8549
37	1.60944	-0.885291	79.6367	-40.2798
38	1.60944	-0.866894	80.3882	-41.675
39	1.60944	-0.848786	81.1087	-43.041
40	1.60944	-0.827417	81.7933	-44.3727
41	1.60944	-0.809896	82.4492	-45.6762
42	1.60944	-0.792618	83.0775	-46.9519
43	1.60944	-0.775574	83.679	-48.2001
44	1.60944	-0.758753	84.2547	-49.4213
45	1.60944	-0.742143	84.8055	-50.6157
46	1.60944	-0.725736	85.3321	-51.7837
47	1.60944	-0.709522	85.8356	-52.9257
48	1.60944	-0.693493	86.3165	-54.0418
49	1.60944	-0.67449	86.7714	-55.1273

50	1.60944	-0.658838	87.2055	-56.1877
51	1.60944	-0.643345	87.6194	-57.2231
52	1.60944	-0.628006	88.0138	-58.2339
53	1.60944	-0.612813	88.3893	-59.2201
54	1.60944	-0.597761	88.7466	-60.1822
55	1.60944	-0.582841	89.0863	-61.1203
56	1.60944	-0.568052	89.409	-62.0345
57	1.60944	-0.553384	89.7153	-62.9251
58	1.60944	-0.538836	90.0056	-63.7924
59	1.60944	-0.521527	90.2776	-64.6317
60	1.60944	-0.507221	90.5349	-65.4481
61	1.60944	-0.493018	90.7779	-66.2415
62	1.60944	-0.478914	91.0073	-67.0123
63	1.60944	-0.464904	91.2234	-67.7606
64	1.60944	-0.450985	91.4268	-68.4864
65	1.60944	-0.437153	91.6179	-69.19
66	1.60944	-0.423405	91.7972	-69.8714
67	1.60944	-0.409735	91.9651	-70.5309
68	1.60944	-0.396142	92.122	-71.1684
69	1.60944	-0.379927	92.2664	-71.7799
70	1.60944	-0.3664992.4007	-72.3697	
71	1.60944	-0.353118	92.5254	-72.9381
72	1.60944	-0.3398192.6408	-73.485	
73	1.60944	-0.326561	92.7475	-74.0105
74	1.60944	-0.3133792.8457	-74.5149	
75	1.60944	-0.300232	92.9358	-74.9981
76	1.60944	-0.287147	93.0183	-75.4602
77	1.60944	-0.2741193.0934	-75.9014	
78	1.60944	-0.2611293.1616	-76.3217	
79	1.60944	-0.2455993.2219	-76.7169	
80	1.60944	-0.232693	93.276	-77.0914
81	1.60944	-0.219834	93.3244	-77.4452
82	1.60944	-0.207012	93.3672	-77.7784
83	1.60944	-0.194225	93.405	-78.091
84	1.60944	-0.181468	93.4379	-78.3831
85	1.60944	-0.168741	93.4664	-78.6546
86	1.60944	-0.156042	93.4907	-78.9058
87	1.60944	-0.143367	93.5113	-79.1365
88	1.60944	-0.130716	93.5283	-79.3469
89	1.60944	-0.115562	93.5417	-79.5329
90	1.60944	-0.102953	93.5523	-79.6986
91	1.60944	-0.0903606	93.5605	-79.844
92	1.60944	-0.0777834	93.5665	-79.9692
93	1.60944	-0.0652187	93.5708	-80.0742
94	1.60944	-0.0526632	93.5735	-80.1589
95	1.60944	-0.0401167	93.5752	-80.2235
96	1.60944	-0.0275759	93.5759	-80.2679
97	1.60944	-0.0150408	93.5761	-80.2921
98	1.60944	0	93.5761	-80.2921
99	1.60944	0.0150408	93.5764	-80.2679
100	1.60944	0.0275759	93.5771	-80.2235
101	1.60944	0.0401167	93.5787	-80.1589
102	1.60944	0.0526632	93.5815	-80.0742
103	1.60944	0.0652187	93.5858	-79.9692
104	1.60944	0.0777834	93.5918	-79.844
105	1.60944	0.0903606	93.6	-79.6986
106	1.60944	0.102953	93.6106	-79.5329
107	1.60944	0.115562	93.6239	-79.3469
108	1.60944	0.130716	93.641	-79.1365
109	1.60944	0.143367	93.6616	-78.9058
110	1.60944	0.156042	93.6859	-78.6546
111	1.60944	0.168741	93.7144	-78.3831

112	1.60944	0.181468	93.7473	-78.091
113	1.60944	0.194225	93.785	-77.7784
114	1.60944	0.207012	93.8279	-77.4452
115	1.60944	0.219834	93.8762	-77.0914
116	1.60944	0.232693	93.9304	-76.7169
117	1.60944	0.24559	93.9907	-76.3217
118	1.60944	0.26112	94.0589	-75.9014
119	1.60944	0.27411	94.134	-75.4602
120	1.60944	0.287147	94.2165	-74.9981
121	1.60944	0.300232	94.3066	-74.5149
122	1.60944	0.31337	94.4048	-74.0105
123	1.60944	0.326561	94.5114	-73.485
124	1.60944	0.33981	94.6269	-72.9381
125	1.60944	0.353118	94.7516	-72.3697
126	1.60944	0.36649	94.8859	-71.7799
127	1.60944	0.379927	95.0303	-71.1684
128	1.60944	0.396142	95.1872	-70.5309
129	1.60944	0.409735	95.3551	-69.8714
130	1.60944	0.423405	95.5343	-69.19
131	1.60944	0.437153	95.7255	-68.4864
132	1.60944	0.450985	95.9288	-67.7606
133	1.60944	0.464904	96.145	-67.0123
134	1.60944	0.478914	96.3743	-66.2415
135	1.60944	0.493018	96.6174	-65.4481
136	1.60944	0.507221	96.8747	-64.6317
137	1.60944	0.521527	97.1467	-63.7924
138	1.60944	0.538836	97.437	-62.9251
139	1.60944	0.553384	97.7432	-62.0345
140	1.60944	0.568052	98.0659	-61.1203
141	1.60944	0.582841	98.4056	-60.1822
142	1.60944	0.597761	98.7629	-59.2201
143	1.60944	0.612813	99.1385	-58.2339
144	1.60944	0.628006	99.5329	-57.2231
145	1.60944	0.643345	99.9468	-56.1877
146	1.60944	0.658838	100.381	-55.1273
147	1.60944	0.67449	100.836	-54.0418
148	1.60944	0.693493	101.317	-52.9257
149	1.60944	0.709522	101.82	-51.7837
150	1.60944	0.725736	102.347	-50.6157
151	1.60944	0.742143	102.898	-49.4213
152	1.60944	0.758753	103.473	-48.2001
153	1.60944	0.775574	104.075	-46.9519
154	1.60944	0.792618	104.703	-45.6762
155	1.60944	0.809896	105.359	-44.3727
156	1.60944	0.827417	106.044	-43.041
157	1.60944	0.848786	106.764	-41.675
158	1.60944	0.866894	107.516	-40.2798
159	1.60944	0.885291	108.299	-38.8549
160	1.60944	0.903992	109.116	-37.4
161	1.60944	0.923014	109.968	-35.9145
162	1.60944	0.942375	110.857	-34.3978
163	1.60944	0.9621	111.782	-32.8494
164	1.60944	0.982202	112.747	-31.2686
165	1.60944	1.00271	113.752	-29.6548
166	1.60944	1.02365	114.8	-28.0073
167	1.60944	1.04939	115.901	-26.3183
168	1.60944	1.07138	117.049	-24.594
169	1.60944	1.0939	118.246	-22.8335
170	1.60944	1.11699	119.494	-21.0357
171	1.60944	1.14069	120.795	-19.1999
172	1.60944	1.16505	122.152	-17.3248
173	1.60944	1.19012	123.568	-15.4094

174	1.60944	1.21596	125.047	-13.4524
175	1.60944	1.24264	126.591	-11.4524
176	1.60944	1.27024	128.205	-9.40804
177	1.60944	1.30469	129.907	-7.30823
178	1.60944	1.33462	131.688	-5.16023
179	1.60944	1.36581	133.553	-2.96205
180	1.60944	1.39838	135.509	-0.711455
181	1.60944	1.4325	137.561	1.59407
182	1.60944	1.46838	139.717	3.95734
183	1.60944	1.50626	141.986	6.38158
184	1.60944	1.54643	144.377	8.87046
185	1.60944	1.58927	146.903	11.4283
186	1.60944	1.63524	149.577	14.0601
187	1.60944	1.6954	152.452	16.7887
188	1.60944	1.75069	155.516	19.6064
189	1.60944	1.81191	158.799	22.5225
190	1.60944	1.88079	162.337	25.5495
191	1.60944	1.95996	166.178	28.704
192	1.60944	2.05375	170.396	32.0094
193	1.60944	2.17009	175.105	35.502
194	1.60944	2.32634	180.517	39.2461
195	1.61343	2.57583	187.152	43.402

Data Set Standard Deviation = 0.492145
Numerator = 1883.73
Denominator = 8793.93
W Statistic = 0.214208 = 1883.73 / 8793.93

5% Critical value of 0.976 exceeds 0.214208
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.214208
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Bis(2-ethylhexyl)phthalate

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

Total Percent Non-Detects = 98.4615%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 15
Maximum Background Concentration = 1.60944
Confidence Level = 65.2%
False Positive Rate = 34.8%

Location	Date	Samples	Mean	Significant
MW-12AR	6/11/2009	1	-0.733969	FALSE
MW-11R	6/11/2009	1	-0.755023	FALSE
MW-9	6/11/2009	1	-0.71335	FALSE
MW-10	6/11/2009	1	-0.71335	FALSE
MW-12BR	6/11/2009	1	-0.733969	FALSE
MW-6	6/11/2009	1	-0.71335	FALSE
MW-8	6/11/2009	1	-0.733969	FALSE
MW-7	6/11/2009	1	-0.755023	FALSE

Concentrations (ug/L)

Parameter: Chlorobenzene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 197
Total Non-Detect: 161
Percent Non-Detects: 81.7259%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-10	26	17 (65.3846%)	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
			11/15/2009	0.63 J	0.63 J

MW-9	26	14 (53.8462%)	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	
			11/15/2009	0.8 J	0.8 J	
MW-11R	25	25 (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
MW-6	25	25 (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
MW-8	25	18 (72%)	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
MW-7	25	24 (96%)	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	
MW-12BR	15	14 (93.3333%)	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	
MW-12AR	15	9 (60%)	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	

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 = 197

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.125	-2.575836	3.63492	-0.321979
2	0.125	-2.326341	2.0468	-0.612772
3	0.125	-2.170091	6.7561	-0.884033
4	0.125	-2.053752	0.974	-1.14075
5	0.125	-1.959962	4.8154	-1.38575
6	0.125	-1.880792	8.3528	-1.62085
7	0.25	-1.811913	1.6358	-2.07382
8	0.28	-1.750693	4.7007	-2.56402
9	0.29	-1.6954	37.5751	-3.05568
10	0.3	-1.644854	0.2806	-3.54914
11	0.3	-1.598194	2.8348	-4.0286
12	0.33	-1.554774	5.2522	-4.54167
13	0.34	-1.5141	47.5447	-5.05647
14	0.4	-1.475794	9.7226	-5.64678
15	0.4	-1.439535	1.7949	-6.22259
16	0.43	-1.405075	3.7691	-6.82678
17	0.45	-1.3722	55.6521	-7.44427
18	0.52	-1.340755	7.4497	-8.14146
19	0.53	-1.310585	9.1673	-8.83607
20	0.56	-1.275886	0.7952	-9.55056
21	0.56	-1.248096	2.3529	-10.2495
22	0.57	-1.221236	3.8443	-10.9456
23	0.59	-1.195226	5.2728	-11.6508
24	0.59	-1.17	66.6417	-12.3411
25	0.6	-1.1455	67.9539	-13.0284
26	0.62	-1.121686	9.2121	-13.7238
27	0.62	-1.098477	0.4187	-14.4049
28	0.63	-1.075847	1.5761	-15.0826
29	0.65	-1.053757	2.6865	-15.7676
30	0.65	-1.032157	3.7519	-16.4385
31	0.74	-1.011047	4.774	-17.1866
32	0.8	-0.990356	75.7549	-17.9789
33	0.81	-0.970094	76.6959	-18.7647
34	1	-0.950222	77.5989	-19.7149
35	1	-0.930718	78.4651	-20.6456
36	1	-0.911562	79.296	-21.5572
37	1	-0.892733	80.093	-22.4499
38	1	-0.874218	80.8573	-23.3242
39	1	-0.855996	81.59	-24.1801
40	1	-0.834498	82.2864	-25.0146
41	1	-0.816874	82.9537	-25.8315
42	1	-0.7995	83.5929	-26.631
43	1	-0.782366	84.205	-27.4134
44	1	-0.765456	84.7909	-28.1788
45	1	-0.748762	85.3515	-28.9276
46	1	-0.732275	85.8878	-29.6599
47	1	-0.715986	86.4004	-30.3759
48	1	-0.699883	86.8902	-31.0757
49	1	-0.683968	7.358	-31.7597

50	1	-0.668209	87.8045	-32.4279
51	1	-0.652622	88.2304	-33.0805
52	1	-0.637192	88.6365	-33.7177
53	1	-0.621911	89.0232	-34.3396
54	1	-0.606775	89.3914	-34.9464
55	1	-0.591776	89.7416	-35.5382
56	1	-0.576911	90.0744	-36.1151
57	1	-0.562179	0.3905	-36.6773
58	1	-0.547551	90.6903	-37.2248
59	1	-0.533048	90.9744	-37.7579
60	1	-0.515791	91.2405	-38.2737
61	1	-0.501527	91.492	-38.7752
62	1	-0.487364	91.7295	-39.2626
63	1	-0.473299	91.9535	-39.7359
64	1	-0.459327	92.1645	-40.1952
65	1	-0.445443	92.3629	-40.6406
66	1	-0.431644	92.5492	-41.0723
67	1	-0.417928	92.7239	-41.4902
68	1	-0.404299	2.8874	-41.8945
69	1	-0.390726	93.04	-42.2852
70	1	-0.377233	93.1823	-42.6624
71	1	-0.363809	93.3147	-43.0263
72	1	-0.350451	93.4375	-43.3767
73	1	-0.337155	93.5512	-43.7139
74	1	-0.323919	93.6561	-44.0378
75	1	-0.310738	93.7527	-44.3485
76	1	-0.297612	93.8412	-44.6461
77	1	-0.284535	93.9222	-44.9307
78	1	-0.271509	93.9959	-45.2022
79	1	-0.258527	94.0627	-45.4607
80	1	-0.243007	94.1218	-45.7037
81	1	-0.230118	94.1748	-45.9338
82	1	-0.217267	94.222	-46.1511
83	1	-0.204452	94.2638	-46.3555
84	1	-0.191671	94.3005	-46.5472
85	1	-0.178929	4.3325	-46.7261
86	1	-0.166199	94.3601	-46.8923
87	1	-0.153505	94.3837	-47.0458
88	1	-0.140835	94.4035	-47.1867
89	1	-0.128189	94.42	-47.3149
90	1	-0.115562	94.4333	-47.4304
91	1	-0.102953	94.4439	-47.5334
92	1	-0.0903606	94.4521	-47.6237
93	1	-0.0777834	94.4581	-47.7015
94	1	-0.0652187	94.4624	-47.7667
95	1	-0.0526632	94.4652	-47.8194
96	1	-0.0401167	94.4668	-47.8595
97	1	-0.0275759	94.4675	-47.8871
98	1	-0.0150408	94.4678	-47.9021
99	1	0	94.4678	-47.9021
100	1	0.0150408	94.468	-47.8871
101	1	0.0275759	94.4687	-47.8595
102	1	0.0401167	94.4703	-47.8194
103	1	0.0526632	94.4731	-47.7667
104	1	0.0652187	94.4774	-47.7015
105	1	0.0777834	94.4834	-47.6237
106	1	0.0903606	94.4916	-47.5334
107	1	0.102953	94.5022	-47.4304
108	1	0.115562	94.5155	-47.3149
109	1	0.128189	94.532	-47.1867
110	1	0.140835	94.5518	-47.0458
111	1	0.153505	94.5754	-46.8923

112	1	0.166199	94.603	-46.7261
113	1	0.17892	94.635	-46.5472
114	1	0.191671	94.6717	-46.3555
115	1	0.204452	94.7135	-46.1511
116	1	0.217267	94.7608	-45.9338
117	1	0.230118	94.8137	-45.7037
118	1	0.243007	94.8728	-45.4607
119	1	0.258527	94.9396	-45.2022
120	1	0.271509	95.0133	-44.9307
121	1	0.284535	95.0943	-44.6461
122	1	0.297612	95.1828	-44.3485
123	1	0.310738	95.2794	-44.0378
124	1	0.323919	95.3843	-43.7139
125	1	0.337155	95.498	-43.3767
126	1	0.350451	95.6208	-43.0263
127	1	0.363809	95.7532	-42.6624
128	1	0.377233	95.8955	-42.2852
129	1	0.390726	96.0481	-41.8945
130	1	0.40429	96.2116	-41.4902
131	1	0.417928	96.3863	-41.0723
132	1	0.431644	96.5726	-40.6406
133	1	0.445443	96.771	-40.1952
134	1	0.459327	96.982	-39.7359
135	1	0.473299	97.206	-39.2626
136	1	0.487364	97.4435	-38.7752
137	1	0.501527	97.695	-38.2737
138	1	0.515791	97.9611	-37.7579
139	1	0.533048	98.2452	-37.2248
140	1	0.547551	98.545	-36.6773
141	1	0.56217	98.8611	-36.1151
142	1	0.576911	99.1939	-35.5382
143	1	0.591776	99.5441	-34.9464
144	1	0.606775	99.9123	-34.3396
145	1	0.621911	100.299	-33.7177
146	1	0.637192	100.705	-33.0805
147	1	0.652622	101.131	-32.4279
148	1	0.668209	101.577	-31.7597
149	1	0.68396	102.045	-31.0757
150	1	0.699883	102.535	-30.3759
151	1	0.715986	103.048	-29.6599
152	1	0.732275	103.584	-28.9276
153	1	0.748762	104.145	-28.1788
154	1	0.765456	104.731	-27.4134
155	1	0.782366	105.343	-26.631
156	1	0.7995	105.982	-25.8315
157	1	0.816874	106.649	-25.0146
158	1	0.834498	107.346	-24.1801
159	1	0.855996	108.078	-23.3242
160	1	0.874218	108.842	-22.4499
161	1	0.892733	109.639	-21.5572
162	1	0.911562	110.47	-20.6456
163	1	0.930718	111.337	-19.7149
164	1	0.950222	112.24	-18.7647
165	1	0.970094	113.181	-17.7946
166	1	0.990356	114.161	-16.8042
167	1	1.01104	115.184	-15.7932
168	1	1.03215	116.249	-14.7611
169	1	1.05375	117.359	-13.7073
170	1	1.07584	118.517	-12.6315
171	1	1.09847	119.723	-11.533
172	1	1.12168	120.982	-10.4113
173	1	1.1455	122.294	-9.26583

174	1	1.17	123.663	-8.09583
175	1	1.19522	125.091	-6.9006
176	1	1.22123	126.583	-5.67938
177	1	1.24809	128.14	-4.43129
178	1	1.27588	129.768	-3.15541
179	1	1.31058	131.486	-1.84484
180	1	1.34075	133.283	-0.504081
181	1	1.3722	135.166	0.868124
182	1	1.40507	137.141	2.2732
183	1	1.43953	139.213	3.71273
184	1	1.47579	141.391	5.18852
185	1	1.5141	143.683	6.70262
186	1	1.55477	146.101	8.2574
187	1	1.59819	148.655	9.85559
188	1	1.64485	151.36	11.5004
189	1.01	1.6954	154.235	13.2128
190	1.1	1.75069	157.3	15.1385
191	1.69	1.81191	160.583	18.2007
192	2.18	1.88079	164.12	22.3008
193	2.2	1.95996	167.962	26.6127
194	2.75	2.05375	172.179	32.2605
195	3.36	2.17009	176.889	39.552
196	3.46	2.32634	182.301	47.6012
197	4.8	2.57583	188.936	59.9652

Data Set Standard Deviation = 0.474049
Numerator = 3595.82
Denominator = 8321.77
W Statistic = 0.432098 = 3595.82 / 8321.77

5% Critical value of 0.976 exceeds 0.432098
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.432098
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 = 197

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.07944	-2.57583	6.63492	5.3563
2	-2.07944	-2.32634	12.0468	10.1938
3	-2.07944	-2.17009	16.7561	14.7064
4	-2.07944	-2.05375	20.974	18.977
5	-2.07944	-1.95996	24.8154	23.0526
6	-2.07944	-1.88079	28.3528	26.9636
7	-1.38629	-1.81191	31.6358	29.4755
8	-1.27297	-1.75069	34.7007	31.704
9	-1.23787	-1.6954	37.5751	33.8027
10	-1.20397	-1.64485	40.2806	35.7831
11	-1.20397	-1.59819	42.8348	37.7073
12	-1.10866	-1.55477	45.2522	39.431
13	-1.07881	-1.5141	47.5447	41.0644
14	-0.916291	-1.47579	49.7226	42.4167
15	-0.916291	-1.43953	51.7949	43.7357
16	-0.84397	-1.40507	53.7691	44.9215
17	-0.798508	-1.3722	55.6521	46.0173
18	-0.653926	-1.34075	57.4497	46.894
19	-0.634878	-1.31058	59.1673	47.7261
20	-0.579818	-1.27588	60.7952	48.4658
21	-0.579818	-1.24809	62.3529	49.1895
22	-0.562119	-1.22123	63.8443	49.876
23	-0.527633	-1.19522	65.2728	50.5066
24	-0.527633	-1.17	66.6417	51.124
25	-0.510826	-1.1455	67.9539	51.7091
26	-0.478036	-1.12168	69.2121	52.2453
27	-0.478036	-1.09847	70.4187	52.7704
28	-0.462035	-1.07584	71.5761	53.2675
29	-0.430783	-1.05375	72.6865	53.7214
30	-0.430783	-1.03215	73.7519	54.1661
31	-0.301105	-1.01104	74.774	54.4705
32	-0.223144	-0.990356	75.7549	54.6915
33	-0.210721	-0.970094	76.6959	54.8959
34	0	-0.950222	77.5989	54.8959
35	0	-0.930718	78.4651	54.8959
36	0	-0.911562	79.296	54.8959
37	0	-0.892733	80.093	54.8959
38	0	-0.874218	80.8573	54.8959
39	0	-0.855996	81.59	54.8959
40	0	-0.834498	82.2864	54.8959
41	0	-0.816874	82.9537	54.8959
42	0	-0.7995	83.5929	54.8959
43	0	-0.782366	84.205	54.8959
44	0	-0.765456	84.7909	54.8959
45	0	-0.748762	85.3515	54.8959
46	0	-0.732275	85.8878	54.8959
47	0	-0.715986	86.4004	54.8959
48	0	-0.699883	86.8902	54.8959
49	0	-0.683968	7.358	54.8959

50	0	-0.668209	87.8045	54.8959
51	0	-0.652622	88.2304	54.8959
52	0	-0.637192	88.6365	54.8959
53	0	-0.621911	89.0232	54.8959
54	0	-0.606775	89.3914	54.8959
55	0	-0.591776	89.7416	54.8959
56	0	-0.576911	90.0744	54.8959
57	0	-0.562179	90.3905	54.8959
58	0	-0.547551	90.6903	54.8959
59	0	-0.533048	90.9744	54.8959
60	0	-0.515791	91.2405	54.8959
61	0	-0.501527	91.492	54.8959
62	0	-0.487364	91.7295	54.8959
63	0	-0.473299	91.9535	54.8959
64	0	-0.459327	92.1645	54.8959
65	0	-0.445443	92.3629	54.8959
66	0	-0.431644	92.5492	54.8959
67	0	-0.417928	92.7239	54.8959
68	0	-0.404299	92.8874	54.8959
69	0	-0.390726	93.04	54.8959
70	0	-0.377233	93.1823	54.8959
71	0	-0.363809	93.3147	54.8959
72	0	-0.350451	93.4375	54.8959
73	0	-0.337155	93.5512	54.8959
74	0	-0.323919	93.6561	54.8959
75	0	-0.310738	93.7527	54.8959
76	0	-0.297612	93.8412	54.8959
77	0	-0.284535	93.9222	54.8959
78	0	-0.271509	93.9959	54.8959
79	0	-0.258527	94.0627	54.8959
80	0	-0.243007	94.1218	54.8959
81	0	-0.230118	94.1748	54.8959
82	0	-0.217267	94.222	54.8959
83	0	-0.204452	94.2638	54.8959
84	0	-0.191671	94.3005	54.8959
85	0	-0.178929	94.3325	54.8959
86	0	-0.166199	94.3601	54.8959
87	0	-0.153505	94.3837	54.8959
88	0	-0.140835	94.4035	54.8959
89	0	-0.128189	94.42	54.8959
90	0	-0.115562	94.4333	54.8959
91	0	-0.102953	94.4439	54.8959
92	0	-0.0903606	94.4521	54.8959
93	0	-0.0777834	94.4581	54.8959
94	0	-0.0652187	94.4624	54.8959
95	0	-0.0526632	94.4652	54.8959
96	0	-0.0401167	94.4668	54.8959
97	0	-0.0275759	94.4675	54.8959
98	0	-0.0150408	94.4678	54.8959
99	0	0	94.4678	54.8959
100	0	0.0150408	94.468	54.8959
101	0	0.0275759	94.4687	54.8959
102	0	0.0401167	94.4703	54.8959
103	0	0.0526632	94.4731	54.8959
104	0	0.0652187	94.4774	54.8959
105	0	0.0777834	94.4834	54.8959
106	0	0.0903606	94.4916	54.8959
107	0	0.102953	94.5022	54.8959
108	0	0.115562	94.5155	54.8959
109	0	0.128189	94.532	54.8959
110	0	0.140835	94.5518	54.8959
111	0	0.153505	94.5754	54.8959

112	0	0.166199	94.603	54.8959
113	0	0.17892	94.635	54.8959
114	0	0.191671	94.6717	54.8959
115	0	0.204452	94.7135	54.8959
116	0	0.217267	94.7608	54.8959
117	0	0.230118	94.8137	54.8959
118	0	0.243007	94.8728	54.8959
119	0	0.258527	94.9396	54.8959
120	0	0.271509	95.0133	54.8959
121	0	0.284535	95.0943	54.8959
122	0	0.297612	95.1828	54.8959
123	0	0.310738	95.2794	54.8959
124	0	0.323919	95.3843	54.8959
125	0	0.337155	95.498	54.8959
126	0	0.350451	95.6208	54.8959
127	0	0.363809	95.7532	54.8959
128	0	0.377233	95.8955	54.8959
129	0	0.390726	96.0481	54.8959
130	0	0.40429	96.2116	54.8959
131	0	0.417928	96.3863	54.8959
132	0	0.431644	96.5726	54.8959
133	0	0.445443	96.771	54.8959
134	0	0.459327	96.982	54.8959
135	0	0.473299	97.206	54.8959
136	0	0.487364	97.4435	54.8959
137	0	0.501527	97.695	54.8959
138	0	0.515791	97.9611	54.8959
139	0	0.533048	98.2452	54.8959
140	0	0.547551	98.545	54.8959
141	0	0.56217	98.8611	54.8959
142	0	0.576911	99.1939	54.8959
143	0	0.591776	99.5441	54.8959
144	0	0.606775	99.9123	54.8959
145	0	0.621911	100.299	54.8959
146	0	0.637192	100.705	54.8959
147	0	0.652622	101.131	54.8959
148	0	0.668209	101.577	54.8959
149	0	0.68396	102.045	54.8959
150	0	0.699883	102.535	54.8959
151	0	0.715986	103.048	54.8959
152	0	0.732275	103.584	54.8959
153	0	0.748762	104.145	54.8959
154	0	0.765456	104.731	54.8959
155	0	0.782366	105.343	54.8959
156	0	0.7995	105.982	54.8959
157	0	0.816874	106.649	54.8959
158	0	0.834498	107.346	54.8959
159	0	0.855996	108.078	54.8959
160	0	0.874218	108.842	54.8959
161	0	0.892733	109.639	54.8959
162	0	0.911562	110.47	54.8959
163	0	0.930718	111.337	54.8959
164	0	0.950222	112.24	54.8959
165	0	0.970094	113.181	54.8959
166	0	0.990356	114.161	54.8959
167	0	1.01104	115.184	54.8959
168	0	1.03215	116.249	54.8959
169	0	1.05375	117.359	54.8959
170	0	1.07584	118.517	54.8959
171	0	1.09847	119.723	54.8959
172	0	1.12168	120.982	54.8959
173	0	1.1455	122.294	54.8959

174	0	1.17	123.663	54.8959	
175	0	1.19522	125.091	54.8959	
176	0	1.22123	126.583	54.8959	
177	0	1.24809	128.14	54.8959	
178	0	1.27588	129.768	54.8959	
179	0	1.31058	131.486	54.8959	
180	0	1.34075	133.283	54.8959	
181	0	1.3722	135.166	54.8959	
182	0	1.40507	137.141	54.8959	
183	0	1.43953	139.213	54.8959	
184	0	1.47579	141.391	54.8959	
185	0	1.5141	143.683	54.8959	
186	0	1.55477	146.101	54.8959	
187	0	1.59819	148.655	54.8959	
188	0	1.64485	151.36	54.8959	
189	0.00995033		1.6954	154.235	54.9128
190	0.0953102		1.75069	157.3	55.0796
191	0.524729		1.81191	160.583	56.0304
192	0.779325		1.88079	164.12	57.4961
193	0.788457		1.95996	167.962	59.0415
194	1.0116	2.05375	172.179	61.1191	
195	1.21194	2.17009	176.889	63.7491	
196	1.24127	2.32634	182.301	66.6367	
197	1.56862	2.57583	188.936	70.6772	

Data Set Standard Deviation = 0.495322
Numerator = 4995.26
Denominator = 9085.41
W Statistic = 0.549812 = 4995.26 / 9085.41

5% Critical value of 0.976 exceeds 0.549812
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.549812
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	81
	9/23/1999	ND<0	81
	3/15/2000	ND<0	81
	9/24/2003	ND<0	81
	3/11/2004	ND<0	81
	10/12/2004	ND<0	81
	4/1/2005	ND<0	81
	10/25/2005	ND<0	81
	4/29/2006	ND<0	81
	11/18/2006	ND<0	81
	5/23/2007	ND<0	81
	11/28/2007	ND<0	81
	6/5/2008	ND<0	81
	11/20/2008	ND<0	81
	6/11/2009	ND<-2.07944	81

Rank Sum = 1215
Rank Mean = 81

Background Rank Sum = 1215
Background Rank Mean = 81

Compliance Wells

Well ID	Date	Result	Rank
MW-10	7/20/1995	ND<0	81
	8/24/1995	ND<0	81
	9/28/1995	ND<0	81
	10/26/1995	ND<0	81
	11/19/1996	ND<0	81
	12/19/1996	ND<0	81
	3/24/1997	ND<0	81
	9/24/1997	ND<0	81
	4/7/1998	ND<0	81
	9/23/1998	ND<0	81
	3/16/1999	ND<0	81
	9/23/1999	ND<0	81
	3/15/2000	ND<0	81
	9/24/2003	ND<0	81
	3/11/2004	ND<0	81
	10/12/2004	ND<0	81
	4/1/2005	-1.10866 J	167
	10/25/2005	-0.84397 J	171
	4/29/2006	-0.527633 J	178
	11/18/2006	-0.916291 J	169
	5/23/2007	ND<0	81
	11/28/2007	-0.527633 J	179
	6/5/2008	-0.510826 J	180

	11/20/2008	-0.478036	J	181
	6/11/2009	-0.798508	J	172
	11/15/2009	-0.462035	J	183

Rank Sum = 2957
Rank Mean = 113.731

MW-9	7/20/1995	ND<0	81	
	8/24/1995	-1.20397	J	165
	9/28/1995	ND<0	81	
	10/26/1995	-1.20397	J	166
	11/19/1996	ND<0	81	
	12/19/1996	ND<0	81	
	3/24/1997	ND<0	81	
	9/24/1997	ND<0	81	
	4/7/1998	ND<0	81	
	9/23/1998	ND<0	81	
	3/16/1999	ND<0	81	
	9/23/1999	ND<0	81	
	3/15/2000	ND<0	81	
	9/24/2003	ND<0	81	
	3/11/2004	ND<0	81	
	10/12/2004	ND<0	81	
	4/1/2005	-0.653926	J	173
	10/25/2005	-1.07881	J	168
	4/29/2006	-1.38629	J	162
	11/18/2006	-1.27297	J	163
	5/23/2007	0.0953102		190
	11/28/2007	-0.301105	J	186
	6/5/2008	-0.579818	J	175
	11/20/2008	-0.430783	J	184
	6/11/2009	-0.210721	J	188
	11/15/2009	-0.223144	J	187

Rank Sum = 3241
Rank Mean = 124.654

MW-11R	7/20/1995	ND<0	81	
	8/24/1995	ND<0	81	
	9/28/1995	ND<0	81	
	10/26/1995	ND<0	81	
	11/19/1996	ND<0	81	
	12/19/1996	ND<0	81	
	3/24/1997	ND<0	81	
	9/24/1997	ND<0	81	
	4/7/1998	ND<0	81	
	9/23/1998	ND<0	81	
	3/16/1999	ND<0	81	
	9/23/1999	ND<0	81	
	3/15/2000	ND<0	81	
	9/24/2003	ND<0	81	
	3/11/2004	ND<0	81	
	10/12/2004	ND<0	81	
	4/1/2005	ND<0	81	
	10/25/2005	ND<0	81	
	4/29/2006	ND<0	81	
	11/18/2006	ND<0	81	
	5/23/2007	ND<0	81	
	11/28/2007	ND<0	81	
	6/5/2008	ND<0	81	
	11/20/2008	ND<0	81	
	6/11/2009	ND<-2.07944		81

Rank Sum = 2025
Rank Mean = 81

MW-6	7/20/1995	ND<0	81	
	8/24/1995	ND<0	81	
	9/28/1995	ND<0	81	
	10/26/1995	ND<0	81	
	11/19/1996	ND<0	81	
	12/19/1996	ND<0	81	
	3/24/1997	ND<0	81	
	9/24/1997	ND<0	81	
	4/7/1998	ND<0	81	
	9/23/1998	ND<0	81	
	3/16/1999	ND<0	81	
	9/23/1999	ND<0	81	
	3/15/2000	ND<0	81	
	9/24/2003	ND<0	81	
	3/11/2004	ND<0	81	
	10/12/2004	ND<0	81	
	4/1/2005	ND<0	81	
	10/25/2005	ND<0	81	
	4/29/2006	ND<0	81	
	11/18/2006	ND<0	81	
	5/23/2007	ND<0	81	
	11/28/2007	ND<0	81	
	6/5/2008	ND<0	81	
	11/20/2008	ND<0	81	
	6/11/2009	ND<-2.07944		81

Rank Sum = 2025
Rank Mean = 81

MW-8	7/20/1995	ND<0	81	
	8/24/1995	ND<0	81	
	9/28/1995	ND<0	81	
	10/26/1995	ND<0	81	
	11/19/1996	ND<0	81	
	12/19/1996	ND<0	81	
	3/24/1997	ND<0	81	
	9/24/1997	ND<0	81	
	4/7/1998	ND<0	81	
	9/23/1998	ND<0	81	
	3/16/1999	ND<0	81	
	9/23/1999	ND<0	81	
	3/15/2000	ND<0	81	
	9/24/2003	ND<0	81	
	3/11/2004	ND<0	81	
	10/12/2004	ND<0	81	
	4/1/2005	ND<0	81	
	10/25/2005	1.0116	194	
	4/29/2006	0.524729 J		191
	11/18/2006	1.24127		196
	5/23/2007	0.788457		193
	11/28/2007	1.21194		195
	6/5/2008	ND<0	81	
	11/20/2008	0.779325		192
	6/11/2009	1.56862		197

Rank Sum = 2816
Rank Mean = 112.64

MW-7	7/20/1995	ND<0	81
	8/24/1995	ND<0	81
	9/28/1995	ND<0	81
	10/26/1995	ND<0	81
	11/19/1996	ND<0	81

	12/19/1996	ND<0	81
	3/24/1997	ND<0	81
	9/24/1997	ND<0	81
	4/7/1998	ND<0	81
	9/23/1998	ND<0	81
	3/16/1999	ND<0	81
	9/23/1999	ND<0	81
	3/15/2000	ND<0	81
	9/24/2003	ND<0	81
	3/11/2004	ND<0	81
	10/12/2004	ND<0	81
	4/1/2005	ND<0	81
	10/25/2005	ND<0	81
	4/29/2006	ND<0	81
	11/18/2006	ND<0	81
	5/23/2007	ND<0	81
	11/28/2007	ND<0	81
	6/5/2008	ND<0	81
	11/20/2008	-1.23787 J	164
	6/11/2009	ND<-2.07944	81

Rank Sum = 2108
Rank Mean = 84.32

MW-12BR	3/16/1999	ND<0	81
	9/23/1999	ND<0	81
	3/15/2000	ND<0	81
	9/24/2003	ND<0	81
	3/11/2004	ND<0	81
	10/12/2004	ND<0	81
	4/1/2005	0.00995033 J	189
	10/25/2005	ND<0	81
	4/29/2006	ND<0	81
	11/18/2006	ND<0	81
	5/23/2007	ND<0	81
	11/28/2007	ND<0	81
	6/5/2008	ND<0	81
	11/20/2008	ND<0	81
	6/11/2009	ND<-2.07944	81

Rank Sum = 1323
Rank Mean = 88.2

MW-12AR	3/16/1999	ND<0	81
	9/23/1999	ND<0	81
	3/15/2000	ND<0	81
	9/24/2003	ND<0	81
	3/11/2004	ND<0	81
	10/12/2004	ND<0	81
	4/1/2005	ND<0	81
	10/25/2005	-0.562119 J	177
	4/29/2006	-0.478036 J	182
	11/18/2006	-0.634878 J	174
	5/23/2007	ND<0	81
	11/28/2007	-0.579818 J	176
	6/5/2008	-0.430783 J	185
	11/20/2008	-0.916291 J	170
	6/11/2009	ND<-2.07944	81

Rank Sum = 1793
Rank Mean = 119.533

Calculation Results:

Kruskal-Wallis H Statistic = 19.0511
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 41.949
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
19.0511 > 15.5073 indicating a significant group difference at 5% significance level
41.949 > 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 81

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	113.731	32.7308	43.0039	
MW-9	124.654	43.6538	43.0039	
MW-11R	81	0	43.3175	
MW-6	81	0	43.3175	
MW-8	112.64	31.64	43.3175	
MW-7	84.32	3.32	43.3175	
MW-12BR		88.2	7.2	48.4304
MW-12AR		119.533	38.5333	48.4304

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 81

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	113.731	32.7308	46.4384	
MW-9	124.654	43.6538	46.4384	
MW-11R	81	0	46.777	
MW-6	81	0	46.777	
MW-8	112.64	31.64	46.777	
MW-7	84.32	3.32	46.777	
MW-12BR		88.2	7.2	52.2983
MW-12AR		119.533	38.5333	52.2983

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
-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
ND<0	-1.20397 J	1.20397	2	11
-1.20397 J	-1.20397 J	0	2	11
ND<0	-1.20397 J	1.20397	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
-0.653926 J	-1.20397 J	0.550046	15	11
-1.07881 J	-1.20397 J	0.125163	16	11
-1.38629 J	-1.20397 J	-0.182322	16	12
-1.27297 J	-1.20397 J	-0.0689929	16	13
0.0953102	-1.20397 J	1.29928	17	13
-0.301105 J	-1.20397 J	0.902868	18	13
-0.579818 J	-1.20397 J	0.624154	19	13
-0.430783 J	-1.20397 J	0.77319	20	13

-0.210721 J	-1.20397 J	0.993252	21	13
-0.223144 J	-1.20397 J	0.980829	22	13

-1.20397 J	ND<0	-1.2039722	14	
ND<0	ND<0	0	22	14
ND<0	ND<0	0	22	14
ND<0	ND<0	0	22	14
ND<0	ND<0	0	22	14
ND<0	ND<0	0	22	14
ND<0	ND<0	0	22	14
ND<0	ND<0	0	22	14
ND<0	ND<0	0	22	14
ND<0	ND<0	0	22	14
ND<0	ND<0	0	22	14
ND<0	ND<0	0	22	14
ND<0	ND<0	0	22	14
-0.653926 J	ND<0	-0.653926	22	15
-1.07881 J	ND<0	-1.0788122	16	
-1.38629 J	ND<0	-1.3862922	17	
-1.27297 J	ND<0	-1.2729722	18	
0.0953102	ND<0	0.0953102	23	18
-0.301105 J	ND<0	-0.301105	23	19
-0.579818 J	ND<0	-0.579818	23	20
-0.430783 J	ND<0	-0.430783	23	21
-0.210721 J	ND<0	-0.210721	23	22
-0.223144 J	ND<0	-0.223144	23	23

ND<0	-1.20397 J	1.20397 24	23	
ND<0	-1.20397 J	1.20397 25	23	
ND<0	-1.20397 J	1.20397 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	
-0.653926 J	-1.20397 J	0.550046	36	23
-1.07881 J	-1.20397 J	0.125163	37	23
-1.38629 J	-1.20397 J	-0.182322	37	24
-1.27297 J	-1.20397 J	-0.0689929	37	25
0.0953102	-1.20397 J	1.29928 38	25	
-0.301105 J	-1.20397 J	0.902868	39	25
-0.579818 J	-1.20397 J	0.624154	40	25
-0.430783 J	-1.20397 J	0.77319 41	25	
-0.210721 J	-1.20397 J	0.993252	42	25
-0.223144 J	-1.20397 J	0.980829	43	25

ND<0	ND<0	0	43	25
ND<0	ND<0	0	43	25
ND<0	ND<0	0	43	25
ND<0	ND<0	0	43	25
ND<0	ND<0	0	43	25
ND<0	ND<0	0	43	25
ND<0	ND<0	0	43	25
ND<0	ND<0	0	43	25
ND<0	ND<0	0	43	25
ND<0	ND<0	0	43	25
ND<0	ND<0	0	43	25
-0.653926 J	ND<0	-0.653926	43	26

-1.07881 J	ND<0	-1.0788143	27	
-1.38629 J	ND<0	-1.3862943	28	
-1.27297 J	ND<0	-1.2729743	29	
0.0953102	ND<0	0.0953102	44	29
-0.301105 J	ND<0	-0.301105	44	30
-0.579818 J	ND<0	-0.579818	44	31
-0.430783 J	ND<0	-0.430783	44	32
-0.210721 J	ND<0	-0.210721	44	33
-0.223144 J	ND<0	-0.223144	44	34

ND<0	ND<0	0	44	34
ND<0	ND<0	0	44	34
ND<0	ND<0	0	44	34
ND<0	ND<0	0	44	34
ND<0	ND<0	0	44	34
ND<0	ND<0	0	44	34
ND<0	ND<0	0	44	34
ND<0	ND<0	0	44	34
ND<0	ND<0	0	44	34
ND<0	ND<0	0	44	34
-0.653926 J	ND<0	-0.653926	44	35
-1.07881 J	ND<0	-1.0788144	36	
-1.38629 J	ND<0	-1.3862944	37	
-1.27297 J	ND<0	-1.2729744	38	
0.0953102	ND<0	0.0953102	45	38
-0.301105 J	ND<0	-0.301105	45	39
-0.579818 J	ND<0	-0.579818	45	40
-0.430783 J	ND<0	-0.430783	45	41
-0.210721 J	ND<0	-0.210721	45	42
-0.223144 J	ND<0	-0.223144	45	43

ND<0	ND<0	0	45	43
ND<0	ND<0	0	45	43
ND<0	ND<0	0	45	43
ND<0	ND<0	0	45	43
ND<0	ND<0	0	45	43
ND<0	ND<0	0	45	43
ND<0	ND<0	0	45	43
ND<0	ND<0	0	45	43
ND<0	ND<0	0	45	43
-0.653926 J	ND<0	-0.653926	45	44
-1.07881 J	ND<0	-1.0788145	45	
-1.38629 J	ND<0	-1.3862945	46	
-1.27297 J	ND<0	-1.2729745	47	
0.0953102	ND<0	0.0953102	46	47
-0.301105 J	ND<0	-0.301105	46	48
-0.579818 J	ND<0	-0.579818	46	49
-0.430783 J	ND<0	-0.430783	46	50
-0.210721 J	ND<0	-0.210721	46	51
-0.223144 J	ND<0	-0.223144	46	52

ND<0	ND<0	0	46	52
ND<0	ND<0	0	46	52
ND<0	ND<0	0	46	52
ND<0	ND<0	0	46	52
ND<0	ND<0	0	46	52
ND<0	ND<0	0	46	52
ND<0	ND<0	0	46	52
ND<0	ND<0	0	46	52
-0.653926 J	ND<0	-0.653926	46	53
-1.07881 J	ND<0	-1.0788146	54	
-1.38629 J	ND<0	-1.3862946	55	

-1.27297 J		ND<0	-1.2729746	56	
0.0953102		ND<0	0.0953102	47	56
-0.301105 J		ND<0	-0.301105	47	57
-0.579818 J		ND<0	-0.579818	47	58
-0.430783 J		ND<0	-0.430783	47	59
-0.210721 J		ND<0	-0.210721	47	60
-0.223144 J		ND<0	-0.223144	47	61
ND<0	ND<0	0	47	61	
ND<0	ND<0	0	47	61	
ND<0	ND<0	0	47	61	
ND<0	ND<0	0	47	61	
ND<0	ND<0	0	47	61	
ND<0	ND<0	0	47	61	
ND<0	ND<0	0	47	61	
-0.653926 J		ND<0	-0.653926	47	62
-1.07881 J		ND<0	-1.0788147	63	
-1.38629 J		ND<0	-1.3862947	64	
-1.27297 J		ND<0	-1.2729747	65	
0.0953102		ND<0	0.0953102	48	65
-0.301105 J		ND<0	-0.301105	48	66
-0.579818 J		ND<0	-0.579818	48	67
-0.430783 J		ND<0	-0.430783	48	68
-0.210721 J		ND<0	-0.210721	48	69
-0.223144 J		ND<0	-0.223144	48	70
ND<0	ND<0	0	48	70	
ND<0	ND<0	0	48	70	
ND<0	ND<0	0	48	70	
ND<0	ND<0	0	48	70	
ND<0	ND<0	0	48	70	
ND<0	ND<0	0	48	70	
-0.653926 J		ND<0	-0.653926	48	71
-1.07881 J		ND<0	-1.0788148	72	
-1.38629 J		ND<0	-1.3862948	73	
-1.27297 J		ND<0	-1.2729748	74	
0.0953102		ND<0	0.0953102	49	74
-0.301105 J		ND<0	-0.301105	49	75
-0.579818 J		ND<0	-0.579818	49	76
-0.430783 J		ND<0	-0.430783	49	77
-0.210721 J		ND<0	-0.210721	49	78
-0.223144 J		ND<0	-0.223144	49	79
ND<0	ND<0	0	49	79	
ND<0	ND<0	0	49	79	
ND<0	ND<0	0	49	79	
ND<0	ND<0	0	49	79	
ND<0	ND<0	0	49	79	
-0.653926 J		ND<0	-0.653926	49	80
-1.07881 J		ND<0	-1.0788149	81	
-1.38629 J		ND<0	-1.3862949	82	
-1.27297 J		ND<0	-1.2729749	83	
0.0953102		ND<0	0.0953102	50	83
-0.301105 J		ND<0	-0.301105	50	84
-0.579818 J		ND<0	-0.579818	50	85
-0.430783 J		ND<0	-0.430783	50	86
-0.210721 J		ND<0	-0.210721	50	87
-0.223144 J		ND<0	-0.223144	50	88
ND<0	ND<0	0	50	88	
ND<0	ND<0	0	50	88	
ND<0	ND<0	0	50	88	

ND<0	ND<0	0	50	88		
-0.653926 J		ND<0	-0.653926		50	89
-1.07881 J		ND<0	-1.0788150		90	
-1.38629 J		ND<0	-1.3862950		91	
-1.27297 J		ND<0	-1.2729750		92	
0.0953102		ND<0	0.0953102		51	92
-0.301105 J		ND<0	-0.301105		51	93
-0.579818 J		ND<0	-0.579818		51	94
-0.430783 J		ND<0	-0.430783		51	95
-0.210721 J		ND<0	-0.210721		51	96
-0.223144 J		ND<0	-0.223144		51	97
ND<0	ND<0	0	51	97		
ND<0	ND<0	0	51	97		
ND<0	ND<0	0	51	97		
-0.653926 J		ND<0	-0.653926		51	98
-1.07881 J		ND<0	-1.0788151		99	
-1.38629 J		ND<0	-1.3862951		100	
-1.27297 J		ND<0	-1.2729751		101	
0.0953102		ND<0	0.0953102		52	101
-0.301105 J		ND<0	-0.301105		52	102
-0.579818 J		ND<0	-0.579818		52	103
-0.430783 J		ND<0	-0.430783		52	104
-0.210721 J		ND<0	-0.210721		52	105
-0.223144 J		ND<0	-0.223144		52	106
ND<0	ND<0	0	52	106		
ND<0	ND<0	0	52	106		
-0.653926 J		ND<0	-0.653926		52	107
-1.07881 J		ND<0	-1.0788152		108	
-1.38629 J		ND<0	-1.3862952		109	
-1.27297 J		ND<0	-1.2729752		110	
0.0953102		ND<0	0.0953102		53	110
-0.301105 J		ND<0	-0.301105		53	111
-0.579818 J		ND<0	-0.579818		53	112
-0.430783 J		ND<0	-0.430783		53	113
-0.210721 J		ND<0	-0.210721		53	114
-0.223144 J		ND<0	-0.223144		53	115
ND<0	ND<0	0	53	115		
-0.653926 J		ND<0	-0.653926		53	116
-1.07881 J		ND<0	-1.0788153		117	
-1.38629 J		ND<0	-1.3862953		118	
-1.27297 J		ND<0	-1.2729753		119	
0.0953102		ND<0	0.0953102		54	119
-0.301105 J		ND<0	-0.301105		54	120
-0.579818 J		ND<0	-0.579818		54	121
-0.430783 J		ND<0	-0.430783		54	122
-0.210721 J		ND<0	-0.210721		54	123
-0.223144 J		ND<0	-0.223144		54	124
-0.653926 J		ND<0	-0.653926		54	125
-1.07881 J		ND<0	-1.0788154		126	
-1.38629 J		ND<0	-1.3862954		127	
-1.27297 J		ND<0	-1.2729754		128	
0.0953102		ND<0	0.0953102		55	128
-0.301105 J		ND<0	-0.301105		55	129
-0.579818 J		ND<0	-0.579818		55	130
-0.430783 J		ND<0	-0.430783		55	131
-0.210721 J		ND<0	-0.210721		55	132
-0.223144 J		ND<0	-0.223144		55	133

-1.07881 J	-0.653926 J	-0.424883	55	134
-1.38629 J	-0.653926 J	-0.732368	55	135
-1.27297 J	-0.653926 J	-0.619039	55	136
0.0953102	-0.653926 J	0.749237	56	136
-0.301105 J	-0.653926 J	0.352821	57	136
-0.579818 J	-0.653926 J	0.074108	58	136
-0.430783 J	-0.653926 J	0.223144	59	136
-0.210721 J	-0.653926 J	0.443205	60	136
-0.223144 J	-0.653926 J	0.430783	61	136
-1.38629 J	-1.07881 J	-0.307485	61	137
-1.27297 J	-1.07881 J	-0.194156	61	138
0.0953102	-1.07881 J	1.17412 62	138	
-0.301105 J	-1.07881 J	0.777705	63	138
-0.579818 J	-1.07881 J	0.498991	64	138
-0.430783 J	-1.07881 J	0.648027	65	138
-0.210721 J	-1.07881 J	0.868089	66	138
-0.223144 J	-1.07881 J	0.855666	67	138
-1.27297 J	-1.38629 J	0.113329	68	138
0.0953102	-1.38629 J	1.4816 69	138	
-0.301105 J	-1.38629 J	1.08519 70	138	
-0.579818 J	-1.38629 J	0.806476	71	138
-0.430783 J	-1.38629 J	0.955511	72	138
-0.210721 J	-1.38629 J	1.17557 73	138	
-0.223144 J	-1.38629 J	1.16315 74	138	
0.0953102	-1.27297 J	1.36828 75	138	
-0.301105 J	-1.27297 J	0.971861	76	138
-0.579818 J	-1.27297 J	0.693147	77	138
-0.430783 J	-1.27297 J	0.842183	78	138
-0.210721 J	-1.27297 J	1.06224 79	138	
-0.223144 J	-1.27297 J	1.04982 80	138	
-0.301105 J	0.0953102	-0.396415	80	139
-0.579818 J	0.0953102	-0.675129	80	140
-0.430783 J	0.0953102	-0.526093	80	141
-0.210721 J	0.0953102	-0.306031	80	142
-0.223144 J	0.0953102	-0.318454	80	143
-0.579818 J	-0.301105 J	-0.278713	80	144
-0.430783 J	-0.301105 J	-0.129678	80	145
-0.210721 J	-0.301105 J	0.0903841	81	145
-0.223144 J	-0.301105 J	0.0779615	82	145
-0.430783 J	-0.579818 J	0.149036	83	145
-0.210721 J	-0.579818 J	0.369097	84	145
-0.223144 J	-0.579818 J	0.356675	85	145
-0.210721 J	-0.430783 J	0.220062	86	145
-0.223144 J	-0.430783 J	0.207639	87	145
-0.223144 J	-0.210721 J	-0.0124225	87	146

S Statistic = 87 - 146 = -59

Tied Group	Value	Members
1	0	14
2	-1.20397	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
11/15/2009	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 = -1.39702
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-1.39702| <= 1.97737 indicating no evidence of a trend

Concentrations (ug/L)

Parameter: Chloroform

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 196
Total Non-Detect: 182
Percent Non-Detects: 92.8571%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-11R	26	21 (80.7692%)	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
			11/15/2009	0.23 J	0.23 J

MW-12AR	15	15 (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	
MW-12BR	15	15 (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	
MW-10	25	25 (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	
MW-9	25	21 (84%)	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
MW-8	25	25 (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
MW-6	25	20 (80%)	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	
MW-7	25	25 (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	

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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.07	-2.575836	3.63492	-0.180308
2	0.07	-2.326341	2.0468	-0.343152
3	0.07	-2.170091	6.7561	-0.495059
4	0.07	-2.053752	0.974	-0.638821
5	0.07	-1.959962	4.8154	-0.776018
6	0.07	-1.880792	8.3528	-0.907674
7	0.07	-1.811913	1.6358	-1.03451
8	0.07	-1.750693	4.7007	-1.15706
9	0.21	-1.6954	37.5751	-1.51309
10	0.21	-1.644854	0.2806	-1.85851
11	0.22	-1.598194	2.8348	-2.21011
12	0.23	-1.554774	5.2522	-2.56771
13	0.24	-1.5141	47.5447	-2.93109
14	0.27	-1.468384	9.7008	-3.32756
15	0.31	-1.4325	51.7529	-3.77163
16	0.38	-1.398385	3.7083	-4.30302
17	0.5	-1.365815	5.5738	-4.98592
18	0.5	-1.334625	7.355	-5.65323
19	0.6	-1.304695	9.0572	-6.43604
20	0.6	-1.275886	0.6851	-7.20157
21	0.9	-1.248096	2.2428	-8.32485
22	0.96	-1.221236	3.7342	-9.49722
23	1	-1.195226	5.1627	-10.6924
24	1	-1.17	66.5316	-11.8624
25	1	-1.1455	67.8438	-13.008
26	1	-1.121686	9.102	-14.1296
27	1	-1.0939	70.2986	-15.2235
28	1	-1.071387	1.4464	-16.2949
29	1	-1.049397	2.5476	-17.3443
30	1	-1.027897	3.6042	-18.3722
31	1	-1.006877	4.618	-19.379
32	1	-0.986272	75.5907	-20.3653
33	1	-0.966088	76.524	-21.3314
34	1	-0.946291	77.4195	-22.2777
35	1	-0.926859	78.2786	-23.2046
36	1	-0.907769	79.1026	-24.1123
37	1	-0.889006	79.893	-25.0013
38	1	-0.870558	0.6508	-25.8719
39	1	-0.852385	81.3774	-26.7243
40	1	-0.830953	82.0679	-27.5552
41	1	-0.813379	82.7294	-28.3686
42	1	-0.796056	83.3632	-29.1647
43	1	-0.778966	83.9699	-29.9436
44	1	-0.7621	84.5507	-30.7057
45	1	-0.745449	85.1064	-31.4512
46	1	-0.729003	85.6379	-32.1802
47	1	-0.712751	86.1459	-32.8929
48	1	-0.696684	86.6313	-33.5896
49	1	-0.680797	87.0947	-34.2704

50	1	-0.665079	87.5371	-34.9355
51	1	-0.649522	87.959	-35.585
52	1	-0.634124	88.3611	-36.2191
53	1	-0.615839	88.7403	-36.835
54	1	-0.6007689.1012	-37.4357	
55	1	-0.585815	89.4444	-38.0215
56	1	-0.570999	89.7705	-38.5925
57	1	-0.556308	90.0799	-39.1489
58	1	-0.541736	90.3734	-39.6906
59	1	-0.5272890.6514	-40.2179	
60	1	-0.5129390.9145	-40.7308	
61	1	-0.498687	91.1632	-41.2295
62	1	-0.484544	91.398	-41.714
63	1	-0.470498	91.6194	-42.1845
64	1	-0.456542	91.8278	-42.6411
65	1	-0.442676	92.0238	-43.0837
66	1	-0.426148	92.2054	-43.5099
67	1	-0.412463	92.3755	-43.9224
68	1	-0.398855	92.5346	-44.3212
69	1	-0.385321	92.683	-44.7065
70	1	-0.371856	92.8213	-45.0784
71	1	-0.358459	92.9498	-45.4368
72	1	-0.345126	93.0689	-45.782
73	1	-0.331854	93.1791	-46.1138
74	1	-0.318639	93.2806	-46.4325
75	1	-0.305481	93.3739	-46.7379
76	1	-0.292375	93.4594	-47.0303
77	1	-0.279319	93.5374	-47.3096
78	1	-0.266311	93.6083	-47.576
79	1	-0.250759	93.6712	-47.8267
80	1	-0.237847	93.7278	-48.0646
81	1	-0.224974	93.7784	-48.2895
82	1	-0.212137	93.8234	-48.5017
83	1	-0.199336	93.8631	-48.701
84	1	-0.186567	93.8979	-48.8876
85	1	-0.173829	93.9282	-49.0614
86	1	-0.161119	93.9541	-49.2225
87	1	-0.148434	93.9762	-49.371
88	1	-0.135774	93.9946	-49.5067
89	1	-0.123135	94.0097	-49.6299
90	1	-0.110516	94.022	-49.7404
91	1	-0.0979139	94.0315	-49.8383
92	1	-0.0828129	94.0384	-49.9211
93	1	-0.0702426	94.0433	-49.9914
94	1	-0.0576847	94.0467	-50.049
95	1	-0.0451348	94.0487	-50.0942
96	1	-0.0325917	94.0498	-50.1268
97	1	-0.0200544	94.0502	-50.1468
98	1	-0.00751925	94.0502	-50.1543
99	1	0.00751925	94.0503	-50.1468
100	1	0.0200544	94.0507	-50.1268
101	1	0.0325917	94.0517	-50.0942
102	1	0.0451348	94.0538	-50.049
103	1	0.0576847	94.0571	-49.9914
104	1	0.0702426	94.062	-49.9211
105	1	0.0828129	94.0689	-49.8383
106	1	0.0979139	94.0785	-49.7404
107	1	0.110516	94.0907	-49.6299
108	1	0.123135	94.1059	-49.5067
109	1	0.135774	94.1243	-49.371
110	1	0.148434	94.1463	-49.2225
111	1	0.161119	94.1723	-49.0614

112	1	0.173829		94.2025	-48.8876
113	1	0.186567		94.2373	-48.701
114	1	0.199336		94.2771	-48.5017
115	1	0.212137		94.3221	-48.2895
116	1	0.224974		94.3727	-48.0646
117	1	0.237847		94.4292	-47.8267
118	1	0.250759		94.4921	-47.576
119	1	0.266311		94.563	-47.3096
120	1	0.279319		94.6411	-47.0303
121	1	0.292375		94.7265	-46.7379
122	1	0.305481		94.8199	-46.4325
123	1	0.318639		94.9214	-46.1138
124	1	0.331854		95.0315	-45.782
125	1	0.345126		95.1506	-45.4368
126	1	0.358459		95.2791	-45.0784
127	1	0.371856		95.4174	-44.7065
128	1	0.385321		95.5659	-44.3212
129	1	0.398855		95.725	-43.9224
130	1	0.412463		95.8951	-43.5099
131	1	0.426148		96.0767	-43.0837
132	1	0.442676		96.2726	-42.6411
133	1	0.456542		96.4811	-42.1845
134	1	0.470498		96.7024	-41.714
135	1	0.484544		96.9372	-41.2295
136	1	0.498687		97.1859	-40.7308
137	1	0.51293	97.449	-40.2179	
138	1	0.52728	97.727	-39.6906	
139	1	0.541736		98.0205	-39.1489
140	1	0.556308		98.33	-38.5925
141	1	0.570999		98.656	-38.0215
142	1	0.585815		98.9992	-37.4357
143	1	0.60076	99.3601	-36.835	
144	1	0.615839		99.7394	-36.2191
145	1	0.634124		100.141	-35.585
146	1	0.649522		100.563	-34.9355
147	1	0.665079		101.006	-34.2704
148	1	0.680797		101.469	-33.5896
149	1	0.696684		101.955	-32.8929
150	1	0.712751		102.463	-32.1802
151	1	0.729003		102.994	-31.4512
152	1	0.745449		103.55	-30.7057
153	1	0.7621	104.131	-29.9436	
154	1	0.778966		104.737	-29.1647
155	1	0.796056		105.371	-28.3686
156	1	0.813379		106.033	-27.5552
157	1	0.830953		106.723	-26.7243
158	1	0.852385		107.45	-25.8719
159	1	0.87055	108.207	-25.0013	
160	1	0.889006		108.998	-24.1123
161	1	0.907769		109.822	-23.2046
162	1	0.926859		110.681	-22.2777
163	1	0.946291		111.576	-21.3314
164	1	0.966088		112.51	-20.3653
165	1	0.986272		113.482	-19.379
166	1	1.00687	114.496	-18.3722	
167	1	1.02789	115.553	-17.3443	
168	1	1.04939	116.654	-16.2949	
169	1	1.07138	117.802	-15.2235	
170	1	1.0939	118.998	-14.1296	
171	1	1.12168	120.257	-13.008	
172	1	1.1455	121.569	-11.8624	
173	1	1.17	122.938	-10.6924	

174	1	1.19522	124.366	-9.49722
175	1	1.22123	125.858	-8.276
176	1	1.24809	127.415	-7.02791
177	1	1.27588	129.043	-5.75203
178	1	1.30469	130.745	-4.44735
179	1	1.33462	132.527	-3.11272
180	1	1.36581	134.392	-1.74692
181	1	1.39838	136.348	-0.348542
182	1	1.4325	138.4	1.08396
183	1	1.46838	140.556	2.55235
184	1	1.5141	142.848	4.06645
185	1	1.55477	145.266	5.62122
186	1	1.59819	147.82	7.21941
187	1	1.64485	150.525	8.86427
188	1	1.6954	153.4	10.5597
189	1	1.75069	156.465	12.3104
190	1	1.81191	159.748	14.1223
191	1	1.88079	163.285	16.0031
192	1	1.95996	167.126	17.963
193	1	2.05375	171.344	20.0168
194	1	2.17009	176.054	22.1869
195	1	2.32634	181.466	24.5132
196	1	2.57583	188.1	27.089

Data Set Standard Deviation = 0.237243
Numerator = 733.816
Denominator = 2064.48
W Statistic = 0.355448 = 733.816 / 2064.48

5% Critical value of 0.976 exceeds 0.355448
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.355448
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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.65926	-2.57583	6.63492	6.84981
2	-2.65926	-2.32634	12.0468	13.0362
3	-2.65926	-2.17009	16.7561	18.807
4	-2.65926	-2.05375	20.974	24.2684
5	-2.65926	-1.95996	24.8154	29.4805
6	-2.65926	-1.88079	28.3528	34.482
7	-2.65926	-1.81191	31.6358	39.3004
8	-2.65926	-1.75069	34.7007	43.9559
9	-1.56065	-1.6954	37.5751	46.6018
10	-1.56065	-1.64485	40.2806	49.1688
11	-1.51413	-1.59819	42.8348	51.5887
12	-1.46968	-1.55477	45.2522	53.8737
13	-1.42712	-1.5141	47.5447	56.0345
14	-1.30933	-1.46838	49.7008	57.9571
15	-1.17118	-1.4325	51.7529	59.6348
16	-0.967584	-1.39838	53.7083	60.9879
17	-0.693147	-1.36581	55.5738	61.9346
18	-0.693147	-1.33462	57.355	62.8597
19	-0.510826	-1.30469	59.0572	63.5262
20	-0.510826	-1.27588	60.6851	64.1779
21	-0.105361	-1.24809	62.2428	64.3094
22	-0.040822	-1.22123	63.7342	64.3593
23	0	-1.19522	65.1627	64.3593
24	0	-1.17	66.5316	64.3593
25	0	-1.1455	67.8438	64.3593
26	0	-1.12168	69.102	64.3593
27	0	-1.0939	70.2986	64.3593
28	0	-1.07138	71.4464	64.3593
29	0	-1.04939	72.5476	64.3593
30	0	-1.02789	73.6042	64.3593
31	0	-1.00687	74.618	64.3593
32	0	-0.986272	75.5907	64.3593
33	0	-0.966088	76.524	64.3593
34	0	-0.946291	77.4195	64.3593
35	0	-0.926859	78.2786	64.3593
36	0	-0.907769	79.1026	64.3593
37	0	-0.889006	79.893	64.3593
38	0	-0.870558	80.6508	64.3593
39	0	-0.852385	81.3774	64.3593
40	0	-0.830953	82.0679	64.3593
41	0	-0.813379	82.7294	64.3593
42	0	-0.796056	83.3632	64.3593
43	0	-0.778966	83.9699	64.3593
44	0	-0.7621	84.5507	64.3593
45	0	-0.745449	85.1064	64.3593
46	0	-0.729003	85.6379	64.3593
47	0	-0.712751	86.1459	64.3593
48	0	-0.696684	86.6313	64.3593
49	0	-0.680797	87.0947	64.3593

50	0	-0.665079	87.5371	64.3593
51	0	-0.649522	87.959	64.3593
52	0	-0.634124	88.3611	64.3593
53	0	-0.615839	88.7403	64.3593
54	0	-0.6007689.1012	64.3593	
55	0	-0.585815	89.4444	64.3593
56	0	-0.570999	89.7705	64.3593
57	0	-0.556308	90.0799	64.3593
58	0	-0.541736	90.3734	64.3593
59	0	-0.5272890.6514	64.3593	
60	0	-0.5129390.9145	64.3593	
61	0	-0.498687	91.1632	64.3593
62	0	-0.484544	91.398	64.3593
63	0	-0.470498	91.6194	64.3593
64	0	-0.456542	91.8278	64.3593
65	0	-0.442676	92.0238	64.3593
66	0	-0.426148	92.2054	64.3593
67	0	-0.412463	92.3755	64.3593
68	0	-0.398855	92.5346	64.3593
69	0	-0.385321	92.683	64.3593
70	0	-0.371856	92.8213	64.3593
71	0	-0.358459	92.9498	64.3593
72	0	-0.345126	93.0689	64.3593
73	0	-0.331854	93.1791	64.3593
74	0	-0.318639	93.2806	64.3593
75	0	-0.305481	93.3739	64.3593
76	0	-0.292375	93.4594	64.3593
77	0	-0.279319	93.5374	64.3593
78	0	-0.266311	93.6083	64.3593
79	0	-0.250759	93.6712	64.3593
80	0	-0.237847	93.7278	64.3593
81	0	-0.224974	93.7784	64.3593
82	0	-0.212137	93.8234	64.3593
83	0	-0.199336	93.8631	64.3593
84	0	-0.186567	93.8979	64.3593
85	0	-0.173829	93.9282	64.3593
86	0	-0.161119	93.9541	64.3593
87	0	-0.148434	93.9762	64.3593
88	0	-0.135774	93.9946	64.3593
89	0	-0.123135	94.0097	64.3593
90	0	-0.110516	94.022	64.3593
91	0	-0.0979139	94.0315	64.3593
92	0	-0.0828129	94.0384	64.3593
93	0	-0.0702426	94.0433	64.3593
94	0	-0.0576847	94.0467	64.3593
95	0	-0.0451348	94.0487	64.3593
96	0	-0.0325917	94.0498	64.3593
97	0	-0.0200544	94.0502	64.3593
98	0	-0.00751925	94.0502	64.3593
99	0	0.00751925	94.0503	64.3593
100	0	0.0200544	94.0507	64.3593
101	0	0.0325917	94.0517	64.3593
102	0	0.0451348	94.0538	64.3593
103	0	0.0576847	94.0571	64.3593
104	0	0.0702426	94.062	64.3593
105	0	0.0828129	94.0689	64.3593
106	0	0.0979139	94.0785	64.3593
107	0	0.110516	94.0907	64.3593
108	0	0.123135	94.1059	64.3593
109	0	0.135774	94.1243	64.3593
110	0	0.148434	94.1463	64.3593
111	0	0.161119	94.1723	64.3593

112	0	0.173829		94.2025	64.3593
113	0	0.186567		94.2373	64.3593
114	0	0.199336		94.2771	64.3593
115	0	0.212137		94.3221	64.3593
116	0	0.224974		94.3727	64.3593
117	0	0.237847		94.4292	64.3593
118	0	0.250759		94.4921	64.3593
119	0	0.266311		94.563	64.3593
120	0	0.279319		94.6411	64.3593
121	0	0.292375		94.7265	64.3593
122	0	0.305481		94.8199	64.3593
123	0	0.318639		94.9214	64.3593
124	0	0.331854		95.0315	64.3593
125	0	0.345126		95.1506	64.3593
126	0	0.358459		95.2791	64.3593
127	0	0.371856		95.4174	64.3593
128	0	0.385321		95.5659	64.3593
129	0	0.398855		95.725	64.3593
130	0	0.412463		95.8951	64.3593
131	0	0.426148		96.0767	64.3593
132	0	0.442676		96.2726	64.3593
133	0	0.456542		96.4811	64.3593
134	0	0.470498		96.7024	64.3593
135	0	0.484544		96.9372	64.3593
136	0	0.498687		97.1859	64.3593
137	0	0.51293	97.449	64.3593	
138	0	0.52728	97.727	64.3593	
139	0	0.541736		98.0205	64.3593
140	0	0.556308		98.33	64.3593
141	0	0.570999		98.656	64.3593
142	0	0.585815		98.9992	64.3593
143	0	0.60076	99.3601	64.3593	
144	0	0.615839		99.7394	64.3593
145	0	0.634124		100.141	64.3593
146	0	0.649522		100.563	64.3593
147	0	0.665079		101.006	64.3593
148	0	0.680797		101.469	64.3593
149	0	0.696684		101.955	64.3593
150	0	0.712751		102.463	64.3593
151	0	0.729003		102.994	64.3593
152	0	0.745449		103.55	64.3593
153	0	0.7621	104.131	64.3593	
154	0	0.778966		104.737	64.3593
155	0	0.796056		105.371	64.3593
156	0	0.813379		106.033	64.3593
157	0	0.830953		106.723	64.3593
158	0	0.852385		107.45	64.3593
159	0	0.87055	108.207	64.3593	
160	0	0.889006		108.998	64.3593
161	0	0.907769		109.822	64.3593
162	0	0.926859		110.681	64.3593
163	0	0.946291		111.576	64.3593
164	0	0.966088		112.51	64.3593
165	0	0.986272		113.482	64.3593
166	0	1.00687	114.496	64.3593	
167	0	1.02789	115.553	64.3593	
168	0	1.04939	116.654	64.3593	
169	0	1.07138	117.802	64.3593	
170	0	1.0939	118.998	64.3593	
171	0	1.12168	120.257	64.3593	
172	0	1.1455	121.569	64.3593	
173	0	1.17	122.938	64.3593	

174	0	1.19522	124.366	64.3593
175	0	1.22123	125.858	64.3593
176	0	1.24809	127.415	64.3593
177	0	1.27588	129.043	64.3593
178	0	1.30469	130.745	64.3593
179	0	1.33462	132.527	64.3593
180	0	1.36581	134.392	64.3593
181	0	1.39838	136.348	64.3593
182	0	1.4325	138.4	64.3593
183	0	1.46838	140.556	64.3593
184	0	1.5141	142.848	64.3593
185	0	1.55477	145.266	64.3593
186	0	1.59819	147.82	64.3593
187	0	1.64485	150.525	64.3593
188	0	1.6954	153.4	64.3593
189	0	1.75069	156.465	64.3593
190	0	1.81191	159.748	64.3593
191	0	1.88079	163.285	64.3593
192	0	1.95996	167.126	64.3593
193	0	2.05375	171.344	64.3593
194	0	2.17009	176.054	64.3593
195	0	2.32634	181.466	64.3593
196	0	2.57583	188.1	64.3593

Data Set Standard Deviation = 0.587344
Numerator = 4142.11
Denominator = 12653.5
W Statistic = 0.32735 = 4142.11 / 12653.5

5% Critical value of 0.976 exceeds 0.32735
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.32735
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 = 92.8571%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 15
Maximum Background Concentration = 0
Confidence Level = 65.2%
False Positive Rate = 34.8%

Location	Date	Samples	Mean	Significant
MW-11R	11/15/2009	1	-1.46968	FALSE
MW-12AR	6/11/2009	1	-2.65926	FALSE
MW-12BR	6/11/2009	1	-2.65926	FALSE
MW-10	6/11/2009	1	-2.65926	FALSE
MW-9	6/11/2009	1	-2.65926	FALSE
MW-8	6/11/2009	1	-2.65926	FALSE
MW-6	6/11/2009	1	-1.17118	FALSE
MW-7	6/11/2009	1	-2.65926	FALSE

Concentrations (ug/L)

Parameter: Chromium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 198
Total Non-Detect: 143
Percent Non-Detects: 72.2222%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	10 (66.6667%)	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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-10	26	20 (76.9231%)	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
			11/15/2009	0.27 J	0.27 J

MW-11R	26	17 (65.3846%)	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		
			11/15/2009	0.22 J	0.22 J		
MW-12AR	16	11 (68.75%)	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		
			11/15/2009	0.74 J	0.74 J		
MW-8	25	19 (76%)	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	
MW-6	25	17 (68%)	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
MW-7	25	15 (60%)	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	
MW-9	25	22 (88%)	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		
MW-12BR	15	12 (80%)	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	

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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.08	-2.575836	3.63492	-0.206067
2	0.08	-2.326341	2.0468	-0.392174
3	0.17	-2.170091	6.7561	-0.76109
4	0.17	-2.053752	0.974	-1.11023
5	0.2	-1.959962	4.8154	-1.50222
6	0.22	-1.880792	8.3528	-1.91599
7	0.22	-1.811913	1.6358	-2.31461
8	0.27	-1.750693	4.7007	-2.7873
9	0.3	-1.6954	37.5751	-3.29592
10	0.62	-1.644854	0.2806	-4.31573
11	0.71	-1.598194	2.8348	-5.45044
12	0.74	-1.554774	5.2522	-6.60097
13	3.11	-1.5141	47.5447	-11.3098
14	4.5	-1.475794	9.7226	-17.9509
15	4.61	-1.439535	1.7949	-24.5871
16	5.12	-1.405075	3.7691	-31.7811
17	5.2	-1.3722	55.6521	-38.9166
18	5.63	-1.340755	7.4497	-46.465
19	5.66	-1.310585	9.1673	-53.8829
20	7	-1.281556	0.8097	-62.8538
21	7.9	-1.253576	2.3811	-72.7569
22	8	-1.226536	3.8855	-82.5692
23	8.11	-1.200366	5.3263	-92.3041
24	10	-1.174996	6.7069	-104.054
25	10	-1.150356	8.0302	-115.557
26	10	-1.126396	9.299	-126.821
27	10	-1.103067	0.5157	-137.852
28	10	-1.080327	1.6828	-148.655
29	10	-1.058127	2.8025	-159.236
30	10	-1.036437	3.8766	-169.601
31	10	-1.015227	4.9073	-179.753
32	10	-0.994457	75.8963	-189.698
33	10	-0.974114	76.8452	-199.439
34	10	-0.954165	77.7556	-208.98
35	10	-0.934597	8.6291	-218.326
36	10	-0.915365	79.4669	-227.48
37	10	-0.896473	80.2706	-236.445
38	10	-0.877897	81.0413	-245.224
39	10	-0.859618	81.7803	-253.82
40	10	-0.838054	82.4826	-262.2
41	10	-0.820379	83.1556	-270.404
42	10	-0.802956	83.8004	-278.434
43	10	-0.785774	84.4178	-286.291
44	10	-0.768821	85.0089	-293.98
45	10	-0.752084	85.5745	-301.5
46	10	-0.735557	86.1156	-308.856
47	10	-0.719228	86.6328	-316.048
48	10	-0.703089	87.1272	-323.079
49	10	-0.687131	87.5993	-329.95

50	10	-0.671346	88.05	-336.664
51	10	-0.655726	88.48	-343.221
52	10	-0.640266	88.89	-349.624
53	10	-0.624956	89.2805	-355.873
54	10	-0.609791	89.6524	-361.971
55	10	-0.594766	90.0061	-367.919
56	10	-0.579873	90.3424	-373.718
57	10	-0.565108	90.6617	-379.369
58	10	-0.550465	90.9647	-384.873
59	10	-0.5359491.252	-390.233	
60	10	-0.521527	91.5239	-395.448
61	10	-0.507221	91.7812	-400.52
62	10	-0.493018	92.0243	-405.451
63	10	-0.478914	92.2536	-410.24
64	10	-0.464904	92.4698	-414.889
65	10	-0.450985	92.6732	-419.399
66	10	-0.437153	92.8643	-423.77
67	10	-0.423405	93.0435	-428.004
68	10	-0.409735	93.2114	-432.101
69	10	-0.396142	93.3684	-436.063
70	10	-0.382622	93.5148	-439.889
71	10	-0.369171	93.651	-443.581
72	10	-0.355788	93.7776	-447.139
73	10	-0.342466	93.8949	-450.563
74	10	-0.329206	94.0033	-453.855
75	10	-0.316004	94.1031	-457.015
76	10	-0.302855	94.1949	-460.044
77	10	-0.2897694.2788	-462.942	
78	10	-0.276714	94.3554	-465.709
79	10	-0.263715	94.4249	-468.346
80	10	-0.248174	94.4865	-470.828
81	10	-0.235269	94.5419	-473.18
82	10	-0.222403	94.5913	-475.404
83	10	-0.209575	94.6353	-477.5
84	10	-0.196779	94.674	-479.468
85	10	-0.184017	94.7079	-481.308
86	10	-0.171285	94.7372	-483.021
87	10	-0.158579	94.7623	-484.607
88	10	-0.1459 94.7836	-486.066	
89	10	-0.133244	94.8014	-487.398
90	10	-0.1206194.8159	-488.604	
91	10	-0.107995	94.8276	-489.684
92	10	-0.0953969	94.8367	-490.638
93	10	-0.0828129	94.8435	-491.466
94	10	-0.0702426	94.8485	-492.169
95	10	-0.0576847	94.8518	-492.746
96	10	-0.0451348	94.8538	-493.197
97	10	-0.0325917	94.8549	-493.523
98	10	-0.0200544	94.8553	-493.723
99	10	-0.00751925	94.8554	-493.799
100	10	0.00751925	94.8554	-493.723
101	10	0.0200544	94.8558	-493.523
102	10	0.0325917	94.8569	-493.197
103	10	0.0451348	94.8589	-492.746
104	10	0.0576847	94.8623	-492.169
105	10	0.0702426	94.8672	-491.466
106	10	0.0828129	94.874	-490.638
107	10	0.0953969	94.8831	-489.684
108	10	0.107995	94.8948	-488.604
109	10	0.12061 94.9094	-487.398	
110	10	0.133244	94.9271	-486.066
111	10	0.1459 94.9484	-484.607	

112	10	0.158579	94.9735	-483.021
113	10	0.171285	95.0029	-481.308
114	10	0.184017	95.0367	-479.468
115	10	0.196779	95.0755	-477.5
116	10	0.209575	95.1194	-475.404
117	10	0.222403	95.1689	-473.18
118	10	0.235269	95.2242	-470.828
119	10	0.248174	95.2858	-468.346
120	10	0.263715	95.3553	-465.709
121	10	0.276714	95.4319	-462.942
122	10	0.28976	95.5159	-460.044
123	10	0.302855	95.6076	-457.015
124	10	0.316004	95.7075	-453.855
125	10	0.329206	95.8158	-450.563
126	10	0.342466	95.9331	-447.139
127	10	0.355788	96.0597	-443.581
128	10	0.369171	96.196	-439.889
129	10	0.382622	96.3424	-436.063
130	10	0.396142	96.4993	-432.101
131	10	0.409735	96.6672	-428.004
132	10	0.423405	96.8465	-423.77
133	10	0.437153	97.0376	-419.399
134	10	0.450985	97.241	-414.889
135	10	0.464904	97.4571	-410.24
136	10	0.478914	97.6865	-405.451
137	10	0.493018	97.9295	-400.52
138	10	0.507221	98.1868	-395.448
139	10	0.521527	98.4588	-390.233
140	10	0.53594	98.746	-384.873
141	10	0.550465	99.049	-379.369
142	10	0.565108	99.3684	-373.718
143	10	0.579873	99.7046	-367.919
144	10	0.594766	100.058	-361.971
145	10	0.609791	100.43	-355.873
146	10	0.624956	100.821	-349.624
147	10	0.640266	101.231	-343.221
148	10	0.655726	101.661	-336.664
149	10	0.671346	102.111	-329.95
150	10	0.687131	102.584	-323.079
151	10	0.703089	103.078	-316.048
152	10	0.719228	103.595	-308.856
153	10	0.735557	104.136	-301.5
154	10	0.752084	104.702	-293.98
155	10	0.768821	105.293	-286.291
156	10	0.785774	105.91	-278.434
157	10	0.802956	106.555	-270.404
158	10	0.820379	107.228	-262.2
159	10	0.838054	107.93	-253.82
160	10	0.859618	108.669	-245.224
161	10	0.877897	109.44	-236.445
162	10	0.896473	110.244	-227.48
163	10	0.915365	111.082	-218.326
164	10	0.93459	111.955	-208.98
165	10	0.954165	112.866	-199.439
166	11	0.974114	113.814	-188.723
167	11	0.994457	114.803	-177.784
168	12	1.01522	115.834	-165.602
169	12	1.03643	116.908	-153.165
170	12	1.05812	118.028	-140.467
171	12.4	1.08032	119.195	-127.071
172	12.8	1.10306	120.412	-112.952
173	13.8	1.12639	121.68	-97.4077

174	14	1.15035	123.004	-81.3028
175	14	1.17499	124.384	-64.853
176	14	1.20036	125.825	-48.0479
177	14	1.22653	127.33	-30.8765
178	14	1.25357	128.901	-13.3266
179	14	1.28155	130.543	4.6151
180	15	1.31058	132.261	24.2738
181	16	1.34075	134.059	45.7259
182	16.1	1.3722	135.942	67.8184
183	18	1.40507	137.916	93.1097
184	23	1.43953	139.988	126.219
185	25.8	1.47579	142.166	164.294
186	28	1.5141	144.459	206.689
187	29	1.55477	146.876	251.778
188	30.1	1.59819	149.43	299.883
189	32	1.64485	152.136	352.518
190	32	1.6954	155.01	406.771
191	36.6	1.75069	158.075	470.846
192	40	1.81191	161.358	543.323
193	40	1.88079	164.895	618.554
194	42	1.95996	168.737	700.873
195	56.2	2.05375	172.955	816.293
196	79.9	2.17009	177.664	989.684
197	82	2.32634	183.076	1180.44
198	150	2.57583	189.711	1566.82

Data Set Standard Deviation = 13.9398
Numerator = 2.45492e+006
Denominator = 7.26224e+006
W Statistic = 0.338039 = 2.45492e+006 / 7.26224e+006

5% Critical value of 0.976 exceeds 0.338039
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.338039
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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.52573	-2.57583	6.63492	6.50586
2	-2.52573	-2.32634	12.0468	12.3816
3	-1.77196	-2.17009	16.7561	16.2269
4	-1.77196	-2.05375	20.974	19.866
5	-1.60944	-1.95996	24.8154	23.0205
6	-1.51413	-1.88079	28.3528	25.8682
7	-1.51413	-1.81191	31.6358	28.6117
8	-1.30933	-1.75069	34.7007	30.9039
9	-1.20397	-1.6954	37.5751	32.9451
10	-0.478036	-1.64485	40.2806	33.7314
11	-0.34249	-1.59819	42.8348	34.2788
12	-0.301105	-1.55477	45.2522	34.7469
13	1.13462	-1.5141	47.5447	33.029
14	1.50408	-1.47579	49.7226	30.8093
15	1.52823	-1.43953	51.7949	28.6094
16	1.63315	-1.40507	53.7691	26.3147
17	1.64866	-1.3722	55.6521	24.0524
18	1.72811	-1.34075	57.4497	21.7354
19	1.73342	-1.31058	59.1673	19.4636
20	1.94591	-1.28155	60.8097	16.9698
21	2.06686	-1.25357	62.3811	14.3789
22	2.07944	-1.22653	63.8855	11.8284
23	2.0931	-1.20036	65.3263	9.31592
24	2.30259	-1.17499	66.7069	6.61041
25	2.30259	-1.15035	68.0302	3.96163
26	2.30259	-1.12639	69.299	1.36802
27	2.30259	-1.10306	70.5157	-1.17187
28	2.30259	-1.08032	71.6828	-3.6594
29	2.30259	-1.05812	72.8025	-6.09582
30	2.30259	-1.03643	73.8766	-8.4823
31	2.30259	-1.01522	74.9073	-10.8199
32	2.30259	-0.994457	75.8963	-13.1098
33	2.30259	-0.974114	76.8452	-15.3527
34	2.30259	-0.954165	77.7556	-17.5498
35	2.30259	-0.93459	78.6291	-19.7018
36	2.30259	-0.915365	79.4669	-21.8095
37	2.30259	-0.896473	80.2706	-23.8737
38	2.30259	-0.877897	81.0413	-25.8951
39	2.30259	-0.859618	81.7803	-27.8744
40	2.30259	-0.838054	82.4826	-29.8041
41	2.30259	-0.820379	83.1556	-31.6931
42	2.30259	-0.802956	83.8004	-33.542
43	2.30259	-0.785774	84.4178	-35.3513
44	2.30259	-0.768821	85.0089	-37.1216
45	2.30259	-0.752084	85.5745	-38.8533
46	2.30259	-0.735557	86.1156	-40.547
47	2.30259	-0.719228	86.6328	-42.2031
48	2.30259	-0.703089	87.1272	-43.822
49	2.30259	-0.687131	87.5993	-45.4042

50	2.30259	-0.671346	88.05	-46.95
51	2.30259	-0.655726	88.48	-48.4599
52	2.30259	-0.640266	88.89	-49.9342
53	2.30259	-0.624956	89.2805	-51.3732
54	2.30259	-0.609791	89.6524	-52.7773
55	2.30259	-0.594766	90.0061	-54.1468
56	2.30259	-0.579873	90.3424	-55.482
57	2.30259	-0.565108	90.6617	-56.7832
58	2.30259	-0.550465	90.9647	-58.0507
59	2.30259	-0.5359491.252	-59.2847	
60	2.30259	-0.521527	91.5239	-60.4856
61	2.30259	-0.507221	91.7812	-61.6535
62	2.30259	-0.493018	92.0243	-62.7887
63	2.30259	-0.478914	92.2536	-63.8915
64	2.30259	-0.464904	92.4698	-64.9619
65	2.30259	-0.450985	92.6732	-66.0004
66	2.30259	-0.437153	92.8643	-67.0069
67	2.30259	-0.423405	93.0435	-67.9819
68	2.30259	-0.409735	93.2114	-68.9253
69	2.30259	-0.396142	93.3684	-69.8375
70	2.30259	-0.382622	93.5148	-70.7185
71	2.30259	-0.369171	93.651	-71.5685
72	2.30259	-0.355788	93.7776	-72.3878
73	2.30259	-0.342466	93.8949	-73.1763
74	2.30259	-0.329206	94.0033	-73.9344
75	2.30259	-0.316004	94.1031	-74.662
76	2.30259	-0.302855	94.1949	-75.3593
77	2.30259	-0.2897694.2788	-76.0265	
78	2.30259	-0.276714	94.3554	-76.6637
79	2.30259	-0.263715	94.4249	-77.2709
80	2.30259	-0.248174	94.4865	-77.8424
81	2.30259	-0.235269	94.5419	-78.3841
82	2.30259	-0.222403	94.5913	-78.8962
83	2.30259	-0.209575	94.6353	-79.3787
84	2.30259	-0.196779	94.674	-79.8318
85	2.30259	-0.184017	94.7079	-80.2556
86	2.30259	-0.171285	94.7372	-80.65
87	2.30259	-0.158579	94.7623	-81.0151
88	2.30259	-0.1459 94.7836	-81.3511	
89	2.30259	-0.133244	94.8014	-81.6579
90	2.30259	-0.1206194.8159	-81.9356	
91	2.30259	-0.107995	94.8276	-82.1842
92	2.30259	-0.0953969	94.8367	-82.4039
93	2.30259	-0.0828129	94.8435	-82.5946
94	2.30259	-0.0702426	94.8485	-82.7563
95	2.30259	-0.0576847	94.8518	-82.8891
96	2.30259	-0.0451348	94.8538	-82.9931
97	2.30259	-0.0325917	94.8549	-83.0681
98	2.30259	-0.0200544	94.8553	-83.1143
99	2.30259	-0.00751925	94.8554	-83.1316
100	2.30259	0.00751925	94.8554	-83.1143
101	2.30259	0.0200544	94.8558	-83.0681
102	2.30259	0.0325917	94.8569	-82.9931
103	2.30259	0.0451348	94.8589	-82.8891
104	2.30259	0.0576847	94.8623	-82.7563
105	2.30259	0.0702426	94.8672	-82.5946
106	2.30259	0.0828129	94.874	-82.4039
107	2.30259	0.0953969	94.8831	-82.1842
108	2.30259	0.107995	94.8948	-81.9356
109	2.30259	0.12061 94.9094	-81.6579	
110	2.30259	0.133244	94.9271	-81.3511
111	2.30259	0.1459 94.9484	-81.0151	

112	2.30259	0.158579		94.9735	-80.65
113	2.30259	0.171285		95.0029	-80.2556
114	2.30259	0.184017		95.0367	-79.8318
115	2.30259	0.196779		95.0755	-79.3787
116	2.30259	0.209575		95.1194	-78.8962
117	2.30259	0.222403		95.1689	-78.3841
118	2.30259	0.235269		95.2242	-77.8424
119	2.30259	0.248174		95.2858	-77.2709
120	2.30259	0.263715		95.3553	-76.6637
121	2.30259	0.276714		95.4319	-76.0265
122	2.30259	0.28976	95.5159	-75.3593	
123	2.30259	0.302855		95.6076	-74.662
124	2.30259	0.316004		95.7075	-73.9344
125	2.30259	0.329206		95.8158	-73.1763
126	2.30259	0.342466		95.9331	-72.3878
127	2.30259	0.355788		96.0597	-71.5685
128	2.30259	0.369171		96.196	-70.7185
129	2.30259	0.382622		96.3424	-69.8375
130	2.30259	0.396142		96.4993	-68.9253
131	2.30259	0.409735		96.6672	-67.9819
132	2.30259	0.423405		96.8465	-67.0069
133	2.30259	0.437153		97.0376	-66.0004
134	2.30259	0.450985		97.241	-64.9619
135	2.30259	0.464904		97.4571	-63.8915
136	2.30259	0.478914		97.6865	-62.7887
137	2.30259	0.493018		97.9295	-61.6535
138	2.30259	0.507221		98.1868	-60.4856
139	2.30259	0.521527		98.4588	-59.2847
140	2.30259	0.53594	98.746	-58.0507	
141	2.30259	0.550465		99.049	-56.7832
142	2.30259	0.565108		99.3684	-55.482
143	2.30259	0.579873		99.7046	-54.1468
144	2.30259	0.594766		100.058	-52.7773
145	2.30259	0.609791		100.43	-51.3732
146	2.30259	0.624956		100.821	-49.9342
147	2.30259	0.640266		101.231	-48.4599
148	2.30259	0.655726		101.661	-46.95
149	2.30259	0.671346		102.111	-45.4042
150	2.30259	0.687131		102.584	-43.822
151	2.30259	0.703089		103.078	-42.2031
152	2.30259	0.719228		103.595	-40.547
153	2.30259	0.735557		104.136	-38.8533
154	2.30259	0.752084		104.702	-37.1216
155	2.30259	0.768821		105.293	-35.3513
156	2.30259	0.785774		105.91	-33.542
157	2.30259	0.802956		106.555	-31.6931
158	2.30259	0.820379		107.228	-29.8041
159	2.30259	0.838054		107.93	-27.8744
160	2.30259	0.859618		108.669	-25.8951
161	2.30259	0.877897		109.44	-23.8737
162	2.30259	0.896473		110.244	-21.8095
163	2.30259	0.915365		111.082	-19.7018
164	2.30259	0.93459	111.955	-17.5498	
165	2.30259	0.954165		112.866	-15.3527
166	2.3979	0.974114		113.814	-13.0169
167	2.3979	0.994457		114.803	-10.6323
168	2.48491	1.01522	115.834	-8.10957	
169	2.48491	1.03643	116.908	-5.53413	
170	2.48491	1.05812	118.028	-2.9048	
171	2.5177	1.08032	119.195	-0.184881	
172	2.54945	1.10306	120.412	2.62732	
173	2.62467	1.12639	121.68	5.58372	

174	2.63906	1.15035	123.004	8.61956
175	2.63906	1.17499	124.384	11.7204
176	2.63906	1.20036	125.825	14.8882
177	2.63906	1.22653	127.33	18.1251
178	2.63906	1.25357	128.901	21.4333
179	2.63906	1.28155	130.543	24.8154
180	2.70805	1.31058	132.261	28.3645
181	2.77259	1.34075	134.059	32.0819
182	2.77882	1.3722	135.942	35.895
183	2.89037	1.40507	137.916	39.9562
184	3.13549	1.43953	139.988	44.4698
185	3.25037	1.47579	142.166	49.2667
186	3.3322	1.5141	144.459	54.312
187	3.3673	1.55477	146.876	59.5474
188	3.40453	1.59819	149.43	64.9885
189	3.46574	1.64485	152.136	70.6891
190	3.46574	1.6954	155.01	76.5649
191	3.60005	1.75069	158.075	82.8675
192	3.68888	1.81191	161.358	89.5514
193	3.68888	1.88079	164.895	96.4894
194	3.73767	1.95996	168.737	103.815
195	4.02892	2.05375	172.955	112.089
196	4.38078	2.17009	177.664	121.596
197	4.40672	2.32634	183.076	131.848
198	5.01064	2.57583	189.711	144.754

Data Set Standard Deviation = 1.02995
Numerator = 20953.8
Denominator = 39644.9
W Statistic = 0.528537 = 20953.8 / 39644.9

5% Critical value of 0.976 exceeds 0.528537
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.528537
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Chromium

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	3.68888	192
	9/23/1999	2.63906 J	174
	3/15/2000	5.01064	198
	9/24/2003	ND<2.30259	72
	3/11/2004	ND<2.30259	72
	10/12/2004	ND<2.30259	72
	4/1/2005	ND<2.30259	72
	10/25/2005	ND<2.30259	72
	4/29/2006	ND<2.30259	72
	11/18/2006	ND<2.30259	72
	5/23/2007	ND<2.30259	72
	11/28/2007	ND<2.30259	72
	6/5/2008	1.72811 J	159
	11/20/2008	ND<2.30259	72
	6/11/2009	-1.77196 J	144

Rank Sum = 1587
Rank Mean = 105.8

Background Rank Sum = 1587
Background Rank Mean = 105.8

Compliance Wells

Well ID	Date	Result	Rank
MW-10	7/20/1995	ND<2.30259	72
	8/24/1995	ND<2.30259	72
	9/28/1995	ND<2.30259	72
	10/26/1995	ND<2.30259	72
	11/19/1996	ND<2.30259	72
	12/19/1996	2.70805 J	180
	3/24/1997	ND<2.30259	72
	9/24/1997	2.63906	175
	4/7/1998	ND<2.30259	72
	9/23/1998	ND<2.30259	72
	3/16/1999	ND<2.30259	72
	9/23/1999	3.3673	187
	3/15/2000	ND<2.30259	72
	9/24/2003	ND<2.30259	72
	3/11/2004	ND<2.30259	72
	10/12/2004	ND<2.30259	72
	4/1/2005	ND<2.30259	72
	10/25/2005	ND<2.30259	72
	4/29/2006	ND<2.30259	72
	11/18/2006	ND<2.30259	72
	5/23/2007	ND<2.30259	72
	11/28/2007	ND<2.30259	72
	6/5/2008	1.13462 J	154

	11/20/2008	ND<2.30259	72
	6/11/2009	-1.51413 J	147
	11/15/2009	-1.30933 J	149

Rank Sum = 2432
Rank Mean = 93.5385

MW-11R	7/20/1995	ND<2.30259	72
	8/24/1995	ND<2.30259	72
	9/28/1995	ND<2.30259	72
	10/26/1995	3.25037	185
	11/19/1996	ND<2.30259	72
	12/19/1996	2.77259 J	181
	3/24/1997	ND<2.30259	72
	9/24/1997	ND<2.30259	72
	4/7/1998	2.63906 J	176
	9/23/1998	ND<2.30259	72
	3/16/1999	1.94591 J	161
	9/23/1999	2.3979 J	166
	3/15/2000	2.48491 J	168
	9/24/2003	ND<2.30259	72
	3/11/2004	ND<2.30259	72
	10/12/2004	ND<2.30259	72
	4/1/2005	ND<2.30259	72
	10/25/2005	ND<2.30259	72
	4/29/2006	ND<2.30259	72
	11/18/2006	ND<2.30259	72
	5/23/2007	1.52823 J	156
	11/28/2007	ND<2.30259	72
	6/5/2008	ND<2.30259	72
	11/20/2008	ND<2.30259	72
	6/11/2009	-1.77196 J	145
	11/15/2009	-1.51413 J	148

Rank Sum = 2710
Rank Mean = 104.231

MW-12AR	3/16/1999	ND<2.30259	72
	9/23/1999	ND<2.30259	72
	3/15/2000	4.40672	197
	9/24/2003	ND<2.30259	72
	3/11/2004	2.48491 J	169
	10/12/2004	ND<2.30259	72
	4/1/2005	ND<2.30259	72
	10/25/2005	ND<2.30259	72
	4/29/2006	ND<2.30259	72
	11/18/2006	ND<2.30259	72
	5/23/2007	ND<2.30259	72
	11/28/2007	ND<2.30259	72
	6/5/2008	1.50408 J	155
	11/20/2008	ND<2.30259	72
	6/11/2009	-1.20397 J	150
	11/15/2009	-0.301105 J	153

Rank Sum = 1616
Rank Mean = 101

MW-8	7/20/1995	ND<2.30259	72
	8/24/1995	ND<2.30259	72
	9/28/1995	4.02892	195
	10/26/1995	ND<2.30259	72
	11/19/1996	ND<2.30259	72
	12/19/1996	3.40453	188
	3/24/1997	ND<2.30259	72
	9/24/1997	ND<2.30259	72

	4/7/1998	ND<2.30259	72
	9/23/1998	2.89037 J	183
	3/16/1999	ND<2.30259	72
	9/23/1999	3.46574	189
	3/15/2000	ND<2.30259	72
	9/24/2003	ND<2.30259	72
	3/11/2004	ND<2.30259	72
	10/12/2004	ND<2.30259	72
	4/1/2005	ND<2.30259	72
	10/25/2005	ND<2.30259	72
	4/29/2006	ND<2.30259	72
	11/18/2006	ND<2.30259	72
	5/23/2007	ND<2.30259	72
	11/28/2007	ND<2.30259	72
	6/5/2008	2.06686 J	162
	11/20/2008	ND<2.30259	72
	6/11/2009	-1.60944 J	146

Rank Sum = 2431
Rank Mean = 97.24

MW-6	7/20/1995	2.5177 J	171
	8/24/1995	ND<2.30259	72
	9/28/1995	ND<2.30259	72
	10/26/1995	2.62467 J	173
	11/19/1996	ND<2.30259	72
	12/19/1996	2.77882 J	182
	3/24/1997	2.63906 J	177
	9/24/1997	ND<2.30259	72
	4/7/1998	3.13549	184
	9/23/1998	2.63906 J	178
	3/16/1999	ND<2.30259	72
	9/23/1999	ND<2.30259	72
	3/15/2000	3.46574	190
	9/24/2003	ND<2.30259	72
	3/11/2004	ND<2.30259	72
	10/12/2004	ND<2.30259	72
	4/1/2005	ND<2.30259	72
	10/25/2005	ND<2.30259	72
	4/29/2006	ND<2.30259	72
	11/18/2006	ND<2.30259	72
	5/23/2007	ND<2.30259	72
	11/28/2007	ND<2.30259	72
	6/5/2008	1.63315	157
	11/20/2008	ND<2.30259	72
	6/11/2009	ND<-2.52573	72

Rank Sum = 2636
Rank Mean = 105.44

MW-7	7/20/1995	ND<2.30259	72
	8/24/1995	2.54945 J	172
	9/28/1995	4.38078	196
	10/26/1995	ND<2.30259	72
	11/19/1996	ND<2.30259	72
	12/19/1996	3.60005	191
	3/24/1997	ND<2.30259	72
	9/24/1997	2.63906 J	179
	4/7/1998	3.3322	186
	9/23/1998	ND<2.30259	72
	3/16/1999	3.68888	193
	9/23/1999	3.73767	194
	3/15/2000	2.30259 J	165
	9/24/2003	ND<2.30259	72

	3/11/2004	ND<2.30259	72
	10/12/2004	ND<2.30259	72
	4/1/2005	ND<2.30259	72
	10/25/2005	ND<2.30259	72
	4/29/2006	ND<2.30259	72
	11/18/2006	ND<2.30259	72
	5/23/2007	ND<2.30259	72
	11/28/2007	ND<2.30259	72
	6/5/2008	2.0931 J	164
	11/20/2008	ND<2.30259	72
	6/11/2009	-0.34249 J	152

Rank Sum = 2872
Rank Mean = 114.88

MW-9	7/20/1995	ND<2.30259	72
	8/24/1995	ND<2.30259	72
	9/28/1995	ND<2.30259	72
	10/26/1995	ND<2.30259	72
	11/19/1996	ND<2.30259	72
	12/19/1996	ND<2.30259	72
	3/24/1997	ND<2.30259	72
	9/24/1997	ND<2.30259	72
	4/7/1998	ND<2.30259	72
	9/23/1998	ND<2.30259	72
	3/16/1999	ND<2.30259	72
	9/23/1999	2.3979 J	167
	3/15/2000	ND<2.30259	72
	9/24/2003	ND<2.30259	72
	3/11/2004	ND<2.30259	72
	10/12/2004	ND<2.30259	72
	4/1/2005	ND<2.30259	72
	10/25/2005	ND<2.30259	72
	4/29/2006	ND<2.30259	72
	11/18/2006	ND<2.30259	72
	5/23/2007	ND<2.30259	72
	11/28/2007	ND<2.30259	72
	6/5/2008	1.64866 J	158
	11/20/2008	ND<2.30259	72
	6/11/2009	-0.478036 J	151

Rank Sum = 2060
Rank Mean = 82.4

MW-12BR	3/16/1999	2.07944 J	163
	9/23/1999	2.48491 J	170
	3/15/2000	ND<2.30259	72
	9/24/2003	ND<2.30259	72
	3/11/2004	ND<2.30259	72
	10/12/2004	ND<2.30259	72
	4/1/2005	ND<2.30259	72
	10/25/2005	ND<2.30259	72
	4/29/2006	ND<2.30259	72
	11/18/2006	ND<2.30259	72
	5/23/2007	ND<2.30259	72
	11/28/2007	ND<2.30259	72
	6/5/2008	1.73342 J	160
	11/20/2008	ND<2.30259	72
	6/11/2009	ND<-2.52573	72

Rank Sum = 1357
Rank Mean = 90.4667

Calculation Results:

Kruskal-Wallis H Statistic = 5.35859
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 8.59721
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
5.35859 < 15.5073 indicating no significant group difference at 5% significance level
8.59721 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ug/L)

Parameter: Cobalt

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 201
Total Non-Detect: 167
Percent Non-Detects: 83.0846%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	14 (93.3333%)	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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-9	26	21 (80.7692%)	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
			11/15/2009	0.93	0.93

MW-10	26	18 (69.2308%)	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	
			11/15/2009	2.8	2.8	
MW-11R	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	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	
			11/15/2009	0.15 J	0.15 J	
MW-6	26	24 (92.3077%)	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	
			11/15/2009	0.13 J	0.13 J	
MW-12BR		16	12 (75%)	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	
			11/15/2009	1	1	
MW-12AR		16	12 (75%)	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	
			11/15/2009	0.8	0.8	
MW-8	25	22 (88%)	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
MW-7	25	22 (88%)	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

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 = 201

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.11	-2.65209	7.03356	-0.29173
2	0.13	-2.36561	12.6297	-0.599259
3	0.13	-2.19728	17.4578	-0.884906
4	0.15	-2.07485	21.7627	-1.19613
5	0.25	-1.97737	25.6727	-1.69048
6	0.4	-1.8957	29.2664	-2.44875
7	0.48	-1.82501	32.597	-3.32476
8	0.58	-1.76241	35.7031	-4.34695
9	0.6	-1.70604	38.6137	-5.37058
10	0.69	-1.65463	41.3515	-6.51227
11	0.69	-1.60725	43.9348	-7.62128
12	0.8	-1.56322	46.3784	-8.87185
13	0.93	-1.52203	48.695	-10.2873
14	0.98	-1.48328	50.8951	-11.741
15	1	-1.44663	52.9879	-13.1876
16	1	-1.41183	54.9811	-14.5994
17	1	-1.37866	56.8818	-15.9781
18	1.02	-1.34694	58.6961	-17.352
19	1.02	-1.31652	60.4293	-18.6948
20	1.1	-1.28727	62.0864	-20.1108
21	1.25	-1.26464	63.6857	-21.6916
22	1.45	-1.23724	65.2165	-23.4856
23	1.46	-1.21073	66.6823	-25.2533
24	1.48	-1.18504	68.0866	-27.0071
25	1.48	-1.16012	69.4325	-28.7241
26	2	-1.1359	70.7228	-30.9959
27	2.13	-1.11232	71.96	-33.3651
28	2.72	-1.08935	73.1467	-36.3282
29	2.8	-1.06694	74.2851	-39.3156
30	3	-1.04505	75.3772	-42.4507
31	3	-1.02365	76.4251	-45.5217
32	5	-1.00271	77.4305	-50.5353
33	6	-0.982202	78.3952	-56.4285
34	10	-0.9621	79.3209	-66.0495
35	10	-0.942375	80.2089	-75.4732
36	10	-0.923014	81.0609	-84.7034
37	10	-0.903992	81.8781	-93.7433
38	10	-0.885291	82.6618	-102.596
39	10	-0.866894	83.4133	-111.265
40	10	-0.848786	84.1338	-119.753
41	10	-0.834498	84.8302	-128.098
42	10	-0.816874	85.4974	-136.267
43	10	-0.7995	86.1366	-144.262
44	10	-0.782366	86.7487	-152.085
45	10	-0.765456	87.3347	-159.74
46	10	-0.748762	87.8953	-167.228
47	10	-0.732275	88.4315	-174.55
48	10	-0.715986	88.9442	-181.71
49	10	-0.699883	89.434	-188.709

50	10	-0.683968	9.9018	-195.549
51	10	-0.668209	90.3483	-202.231
52	10	-0.652622	90.7742	-208.757
53	10	-0.637192	91.1802	-215.129
54	10	-0.621911	91.567	-221.348
55	10	-0.606775	91.9352	-227.416
56	10	-0.591776	92.2854	-233.333
57	10	-0.576911	92.6182	-239.103
58	10	-0.562179	2.9342	-244.724
59	10	-0.547551	93.2341	-250.2
60	10	-0.533048	93.5182	-255.53
61	10	-0.521527	93.7902	-260.746
62	10	-0.507221	94.0475	-265.818
63	10	-0.493018	94.2905	-270.748
64	10	-0.478914	94.5199	-275.537
65	10	-0.464904	94.736	-280.186
66	10	-0.450985	94.9394	-284.696
67	10	-0.437153	95.1305	-289.067
68	10	-0.423405	95.3098	-293.302
69	10	-0.409735	95.4777	-297.399
70	10	-0.396142	95.6346	-301.36
71	10	-0.382622	95.781	-305.187
72	10	-0.369171	95.9173	-308.878
73	10	-0.355788	96.0439	-312.436
74	10	-0.342466	96.1611	-315.861
75	10	-0.329206	96.2695	-319.153
76	10	-0.316004	96.3694	-322.313
77	10	-0.302855	96.4611	-325.341
78	10	-0.289769	6.5451	-328.239
79	10	-0.276714	96.6216	-331.006
80	10	-0.263715	96.6912	-333.643
81	10	-0.253347	96.7554	-336.177
82	10	-0.240426	96.8132	-338.581
83	10	-0.227545	96.8649	-340.856
84	10	-0.214702	96.911	-343.004
85	10	-0.201894	96.9518	-345.022
86	10	-0.189118	96.9876	-346.914
87	10	-0.176374	97.0187	-348.677
88	10	-0.163659	97.0455	-350.314
89	10	-0.150969	97.0683	-351.824
90	10	-0.138305	97.0874	-353.207
91	10	-0.125661	97.1032	-354.463
92	10	-0.113039	97.116	-355.594
93	10	-0.100433	97.126	-356.598
94	10	-0.0878447	97.1338	-357.476
95	10	-0.0752698	97.1394	-358.229
96	10	-0.0627062	97.1434	-358.856
97	10	-0.0501541	97.1459	-359.358
98	10	-0.0376076	97.1473	-359.734
99	10	-0.0250691	97.1479	-359.985
100	10	-0.0125328	97.1481	-360.11
101	10	0	97.1481	-360.11
102	10	0.0125328	97.1482	-359.985
103	10	0.0250691	97.1489	-359.734
104	10	0.0376076	97.1503	-359.358
105	10	0.0501541	97.1528	-358.856
106	10	0.0627062	97.1567	-358.229
107	10	0.0752698	97.1624	-357.476
108	10	0.0878447	97.1701	-356.598
109	10	0.100433	97.1802	-355.594
110	10	0.113039	97.193	-354.463
111	10	0.125661	97.2088	-353.207

112	10	0.138305	97.2279	-351.824
113	10	0.150969	97.2507	-350.314
114	10	0.163659	97.2775	-348.677
115	10	0.176374	97.3086	-346.914
116	10	0.189118	97.3443	-345.022
117	10	0.201894	97.3851	-343.004
118	10	0.214702	97.4312	-340.856
119	10	0.227545	97.483	-338.581
120	10	0.240426	97.5408	-336.177
121	10	0.253347	97.605	-333.643
122	10	0.263715	97.6745	-331.006
123	10	0.276714	97.7511	-328.239
124	10	0.28976	97.835	-325.341
125	10	0.302855	97.9268	-322.313
126	10	0.316004	98.0266	-319.153
127	10	0.329206	98.135	-315.861
128	10	0.342466	98.2523	-312.436
129	10	0.355788	98.3789	-308.878
130	10	0.369171	98.5151	-305.187
131	10	0.382622	98.6615	-301.36
132	10	0.396142	98.8185	-297.399
133	10	0.409735	98.9864	-293.302
134	10	0.423405	99.1656	-289.067
135	10	0.437153	99.3567	-284.696
136	10	0.450985	99.5601	-280.186
137	10	0.464904	99.7763	-275.537
138	10	0.478914	100.006	-270.748
139	10	0.493018	100.249	-265.818
140	10	0.507221	100.506	-260.746
141	10	0.521527	100.778	-255.53
142	10	0.533048	101.062	-250.2
143	10	0.547551	101.362	-244.724
144	10	0.56217	101.678	-239.103
145	10	0.576911	102.011	-233.333
146	10	0.591776	102.361	-227.416
147	10	0.606775	102.729	-221.348
148	10	0.621911	103.116	-215.129
149	10	0.637192	103.522	-208.757
150	10	0.652622	103.948	-202.231
151	10	0.668209	104.394	-195.549
152	10	0.68396	104.862	-188.709
153	10	0.699883	105.352	-181.71
154	10	0.715986	105.865	-174.55
155	10	0.732275	106.401	-167.228
156	10	0.748762	106.961	-159.74
157	10	0.765456	107.547	-152.085
158	10	0.782366	108.16	-144.262
159	10	0.7995	108.799	-136.267
160	10	0.816874	109.466	-128.098
161	10	0.834498	110.162	-119.753
162	10	0.848786	110.883	-111.265
163	10	0.866894	111.634	-102.596
164	10	0.885291	112.418	-93.7433
165	10	0.903992	113.235	-84.7034
166	10	0.923014	114.087	-75.4732
167	10	0.942375	114.975	-66.0495
168	10	0.9621	115.901	-56.4285
169	10	0.982202	116.866	-46.6065
170	10	1.00271	117.871	-36.5793
171	10	1.02365	118.919	-26.3428
172	10	1.04505	120.011	-15.8923
173	10	1.06694	121.149	-5.22294

174	10	1.08935	122.336	5.67055
175	10	1.11232	123.573	16.7938
176	10	1.1359	124.864	28.1527
177	10	1.16012	126.209	39.7539
178	10	1.18504	127.614	51.6044
179	10	1.21073	129.08	63.7116
180	10	1.23724	130.61	76.084
181	10	1.26464	132.21	88.7304
182	10	1.28727	133.867	101.603
183	10	1.31652	135.6	114.768
184	10	1.34694	137.414	128.238
185	10	1.37866	139.315	142.024
186	10	1.41183	141.308	156.143
187	10	1.44663	143.401	170.609
188	10	1.48328	145.601	185.442
189	10	1.52203	147.918	200.662
190	10	1.56322	150.361	216.294
191	10	1.60725	152.945	232.367
192	10	1.65463	155.682	248.913
193	10	1.70604	158.593	265.974
194	10	1.76241	161.699	283.598
195	10	1.82501	165.03	301.848
196	10	1.8957	168.623	320.805
197	10	1.97737	172.533	340.578
198	10	2.07485	176.838	361.327
199	10	2.19728	181.666	383.3
200	10	2.36561	187.263	406.956
201	25	2.65209	194.296	473.258

Data Set Standard Deviation = 3.4311
Numerator = 223973
Denominator = 457469
W Statistic = 0.489592 = 223973 / 457469

5% Critical value of 0.976 exceeds 0.489592
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.489592
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 = 201

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.20727	-2.65209	7.03356	5.85388
2	-2.04022	-2.36561	12.6297	10.6803
3	-2.04022	-2.19728	17.4578	15.1632
4	-1.89712	-2.07485	21.7627	19.0994
5	-1.38629	-1.97737	25.6727	21.8407
6	-0.916291	-1.8957	29.2664	23.5777
7	-0.733969	-1.82501	32.597	24.9172
8	-0.544727	-1.76241	35.7031	25.8772
9	-0.510826	-1.70604	38.6137	26.7487
10	-0.371064	-1.65463	41.3515	27.3627
11	-0.371064	-1.60725	43.9348	27.9591
12	-0.223144	-1.56322	46.3784	28.3079
13	-0.0725707	-1.52203	48.695	28.4183
14	-0.0202027	-1.48328	50.8951	28.4483
15	0	-1.44663	52.9879	28.4483
16	0	-1.41183	54.9811	28.4483
17	0	-1.37866	56.8818	28.4483
18	0.0198026	-1.34694	58.6961	28.4216
19	0.0198026	-1.31652	60.4293	28.3956
20	0.0953102	-1.28727	62.0864	28.2729
21	0.223144	-1.26464	63.6857	27.9907
22	0.371564	-1.23724	65.2165	27.531
23	0.378436	-1.21073	66.6823	27.0728
24	0.392042	-1.18504	68.0866	26.6082
25	0.392042	-1.16012	69.4325	26.1534
26	0.693147	-1.1359	70.7228	25.366
27	0.756122	-1.11232	71.96	24.525
28	1.00063	-1.08935	73.1467	23.4349
29	1.02962	-1.06694	74.2851	22.3364
30	1.09861	-1.04505	75.3772	21.1883
31	1.09861	-1.02365	76.4251	20.0637
32	1.60944	-1.00271	77.4305	18.4499
33	1.79176	-0.982202	78.3952	16.69
34	2.30259	-0.9621	79.3209	14.4747
35	2.30259	-0.942375	80.2089	12.3048
36	2.30259	-0.923014	81.0609	10.1795
37	2.30259	-0.903992	81.8781	8.09797
38	2.30259	-0.885291	82.6618	6.05951
39	2.30259	-0.866894	83.4133	4.06341
40	2.30259	-0.848786	84.1338	2.10901
41	2.30259	-0.834498	84.8302	0.18751
42	2.30259	-0.816874	85.4974	-1.69341
43	2.30259	-0.7995	86.1366	-3.53433
44	2.30259	-0.782366	86.7487	-5.33579
45	2.30259	-0.765456	87.3347	-7.09832
46	2.30259	-0.748762	87.8953	-8.82241
47	2.30259	-0.732275	88.4315	-10.5085
48	2.30259	-0.715986	88.9442	-12.1572
49	2.30259	-0.699883	89.434	-13.7687

50	2.30259	-0.6839689.9018	-15.3436	
51	2.30259	-0.668209	90.3483	-16.8822
52	2.30259	-0.652622	90.7742	-18.3849
53	2.30259	-0.637192	91.1802	-19.8521
54	2.30259	-0.621911	91.567	-21.2841
55	2.30259	-0.606775	91.9352	-22.6812
56	2.30259	-0.591776	92.2854	-24.0439
57	2.30259	-0.576911	92.6182	-25.3722
58	2.30259	-0.5621792.9342	-26.6667	
59	2.30259	-0.547551	93.2341	-27.9275
60	2.30259	-0.533048	93.5182	-29.1549
61	2.30259	-0.521527	93.7902	-30.3557
62	2.30259	-0.507221	94.0475	-31.5236
63	2.30259	-0.493018	94.2905	-32.6589
64	2.30259	-0.478914	94.5199	-33.7616
65	2.30259	-0.464904	94.736	-34.8321
66	2.30259	-0.450985	94.9394	-35.8705
67	2.30259	-0.437153	95.1305	-36.8771
68	2.30259	-0.423405	95.3098	-37.852
69	2.30259	-0.409735	95.4777	-38.7955
70	2.30259	-0.396142	95.6346	-39.7076
71	2.30259	-0.382622	95.781	-40.5886
72	2.30259	-0.369171	95.9173	-41.4387
73	2.30259	-0.355788	96.0439	-42.2579
74	2.30259	-0.342466	96.1611	-43.0465
75	2.30259	-0.329206	96.2695	-43.8045
76	2.30259	-0.316004	96.3694	-44.5321
77	2.30259	-0.302855	96.4611	-45.2295
78	2.30259	-0.2897696.5451	-45.8967	
79	2.30259	-0.276714	96.6216	-46.5338
80	2.30259	-0.263715	96.6912	-47.1411
81	2.30259	-0.253347	96.7554	-47.7244
82	2.30259	-0.240426	96.8132	-48.278
83	2.30259	-0.227545	96.8649	-48.8019
84	2.30259	-0.214702	96.911	-49.2963
85	2.30259	-0.201894	96.9518	-49.7612
86	2.30259	-0.189118	96.9876	-50.1967
87	2.30259	-0.176374	97.0187	-50.6028
88	2.30259	-0.163659	97.0455	-50.9796
89	2.30259	-0.150969	97.0683	-51.3272
90	2.30259	-0.138305	97.0874	-51.6457
91	2.30259	-0.125661	97.1032	-51.935
92	2.30259	-0.113039	97.116	-52.1953
93	2.30259	-0.100433	97.126	-52.4266
94	2.30259	-0.0878447	97.1338	-52.6288
95	2.30259	-0.0752698	97.1394	-52.8022
96	2.30259	-0.0627062	97.1434	-52.9465
97	2.30259	-0.0501541	97.1459	-53.062
98	2.30259	-0.0376076	97.1473	-53.1486
99	2.30259	-0.0250691	97.1479	-53.2063
100	2.30259	-0.0125328	97.1481	-53.2352
101	2.30259	0	97.1481	-53.2352
102	2.30259	0.0125328	97.1482	-53.2063
103	2.30259	0.0250691	97.1489	-53.1486
104	2.30259	0.0376076	97.1503	-53.062
105	2.30259	0.0501541	97.1528	-52.9465
106	2.30259	0.0627062	97.1567	-52.8022
107	2.30259	0.0752698	97.1624	-52.6288
108	2.30259	0.0878447	97.1701	-52.4266
109	2.30259	0.100433	97.1802	-52.1953
110	2.30259	0.113039	97.193	-51.935
111	2.30259	0.125661	97.2088	-51.6457

112	2.30259	0.138305	97.2279	-51.3272
113	2.30259	0.150969	97.2507	-50.9796
114	2.30259	0.163659	97.2775	-50.6028
115	2.30259	0.176374	97.3086	-50.1967
116	2.30259	0.189118	97.3443	-49.7612
117	2.30259	0.201894	97.3851	-49.2963
118	2.30259	0.214702	97.4312	-48.8019
119	2.30259	0.227545	97.483	-48.278
120	2.30259	0.240426	97.5408	-47.7244
121	2.30259	0.253347	97.605	-47.1411
122	2.30259	0.263715	97.6745	-46.5338
123	2.30259	0.276714	97.7511	-45.8967
124	2.30259	0.28976	97.835	-45.2295
125	2.30259	0.302855	97.9268	-44.5321
126	2.30259	0.316004	98.0266	-43.8045
127	2.30259	0.329206	98.135	-43.0465
128	2.30259	0.342466	98.2523	-42.2579
129	2.30259	0.355788	98.3789	-41.4387
130	2.30259	0.369171	98.5151	-40.5886
131	2.30259	0.382622	98.6615	-39.7076
132	2.30259	0.396142	98.8185	-38.7955
133	2.30259	0.409735	98.9864	-37.852
134	2.30259	0.423405	99.1656	-36.8771
135	2.30259	0.437153	99.3567	-35.8705
136	2.30259	0.450985	99.5601	-34.8321
137	2.30259	0.464904	99.7763	-33.7616
138	2.30259	0.478914	100.006	-32.6589
139	2.30259	0.493018	100.249	-31.5236
140	2.30259	0.507221	100.506	-30.3557
141	2.30259	0.521527	100.778	-29.1549
142	2.30259	0.533048	101.062	-27.9275
143	2.30259	0.547551	101.362	-26.6667
144	2.30259	0.56217	101.678	-25.3722
145	2.30259	0.576911	102.011	-24.0439
146	2.30259	0.591776	102.361	-22.6812
147	2.30259	0.606775	102.729	-21.2841
148	2.30259	0.621911	103.116	-19.8521
149	2.30259	0.637192	103.522	-18.3849
150	2.30259	0.652622	103.948	-16.8822
151	2.30259	0.668209	104.394	-15.3436
152	2.30259	0.68396	104.862	-13.7687
153	2.30259	0.699883	105.352	-12.1572
154	2.30259	0.715986	105.865	-10.5085
155	2.30259	0.732275	106.401	-8.82241
156	2.30259	0.748762	106.961	-7.09832
157	2.30259	0.765456	107.547	-5.33579
158	2.30259	0.782366	108.16	-3.53433
159	2.30259	0.7995	108.799	-1.69341
160	2.30259	0.816874	109.466	0.18751
161	2.30259	0.834498	110.162	2.10901
162	2.30259	0.848786	110.883	4.06341
163	2.30259	0.866894	111.634	6.05951
164	2.30259	0.885291	112.418	8.09797
165	2.30259	0.903992	113.235	10.1795
166	2.30259	0.923014	114.087	12.3048
167	2.30259	0.942375	114.975	14.4747
168	2.30259	0.9621	115.901	16.69
169	2.30259	0.982202	116.866	18.9516
170	2.30259	1.00271	117.871	21.2605
171	2.30259	1.02365	118.919	23.6175
172	2.30259	1.04505	120.011	26.0238
173	2.30259	1.06694	121.149	28.4805

174	2.30259	1.08935	122.336	30.9889
175	2.30259	1.11232	123.573	33.5501
176	2.30259	1.1359	124.864	36.1656
177	2.30259	1.16012	126.209	38.8368
178	2.30259	1.18504	127.614	41.5655
179	2.30259	1.21073	129.08	44.3533
180	2.30259	1.23724	130.61	47.2021
181	2.30259	1.26464	132.21	50.1141
182	2.30259	1.28727	133.867	53.0781
183	2.30259	1.31652	135.6	56.1095
184	2.30259	1.34694	137.414	59.211
185	2.30259	1.37866	139.315	62.3855
186	2.30259	1.41183	141.308	65.6363
187	2.30259	1.44663	143.401	68.9673
188	2.30259	1.48328	145.601	72.3827
189	2.30259	1.52203	147.918	75.8873
190	2.30259	1.56322	150.361	79.4868
191	2.30259	1.60725	152.945	83.1876
192	2.30259	1.65463	155.682	86.9975
193	2.30259	1.70604	158.593	90.9258
194	2.30259	1.76241	161.699	94.9839
195	2.30259	1.82501	165.03	99.1862
196	2.30259	1.8957	168.623	103.551
197	2.30259	1.97737	172.533	108.104
198	2.30259	2.07485	176.838	112.882
199	2.30259	2.19728	181.666	117.941
200	2.30259	2.36561	187.263	123.388
201	3.21888	2.65209	194.296	131.925

Data Set Standard Deviation = 0.974226
Numerator = 17404.2
Denominator = 36881.9
W Statistic = 0.471889 = 17404.2 / 36881.9

5% Critical value of 0.976 exceeds 0.471889
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.471889
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	168

Rank Sum = 1344
Rank Mean = 89.6

Background Rank Sum = 1344
Background Rank Mean = 89.6

Compliance Wells

Well ID	Date	Result	Rank
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	188
	5/23/2007	ND<2.30259	84
	11/28/2007	ND<2.30259	84
	6/5/2008	0.0198026 J	185

	11/20/2008	1.09861 J	197
	6/11/2009	0	182
	11/15/2009	-0.0725707	180

Rank Sum = 2696
Rank Mean = 103.692

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	199
	9/23/1999	3.21888	201
	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	189
	5/23/2007	ND<2.30259	84
	11/28/2007	1.09861 J	198
	6/5/2008	1.00063 J	195
	11/20/2008	1.79176 J	200
	6/11/2009	0.693147	193
	11/15/2009	1.02962	196

Rank Sum = 3083
Rank Mean = 118.577

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	194
	5/23/2007	0.0198026 J	186
	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	172
	11/15/2009	-1.89712 J	171

Rank Sum = 2571

Rank Mean = 98.8846

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	169
	11/15/2009	-2.04022 J	170

Rank Sum = 2355
Rank Mean = 90.5769

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	190
	5/23/2007	ND<2.30259	84
	11/28/2007	ND<2.30259	84
	6/5/2008	0.392042 J	191
	11/20/2008	ND<2.30259	84
	6/11/2009	0.0953102	187
	11/15/2009	0	183

Rank Sum = 1759
Rank Mean = 109.938

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	177
	5/23/2007	ND<2.30259	84
	11/28/2007	ND<2.30259	84

	6/5/2008	0.392042 J	192
	11/20/2008	ND<2.30259	84
	6/11/2009	-0.371064	178
	11/15/2009	-0.223144	179

Rank Sum = 1734
Rank Mean = 108.375

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	184
	5/23/2007	ND<2.30259	84
	11/28/2007	ND<2.30259	84
	6/5/2008	-0.510826 J	176
	11/20/2008	ND<2.30259	84
	6/11/2009	-0.916291	173

Rank Sum = 2381
Rank Mean = 95.24

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	175
	5/23/2007	ND<2.30259	84
	11/28/2007	ND<2.30259	84
	6/5/2008	-0.0202027 J	181
	11/20/2008	ND<2.30259	84
	6/11/2009	-0.733969	174

Rank Sum = 2378
Rank Mean = 95.12

Calculation Results:

Kruskal-Wallis H Statistic = 5.01068
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 11.7492
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
5.01068 < 15.5073 indicating no significant group difference at 5% significance level
11.7492 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ug/L)

Parameter: Copper

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 201
Total Non-Detect: 164
Percent Non-Detects: 81.592%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	12 (80%)	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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12AR	16	14 (87.5%)	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
			11/15/2009	0.53 J	0.53 J
MW-11R	26	21 (80.7692%)	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	
			11/15/2009	0.73 J	0.73 J	
MW-6	26	23 (88.4615%)	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	
			11/15/2009	1.3	1.3	
MW-9	26	20 (76.9231%)	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		
			11/15/2009	0.33 J	0.33 J		
MW-12BR		16	13 (81.25%)	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		
			11/15/2009	1.2	1.2		
MW-10	26	23 (88.4615%)	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		
			11/15/2009	0.37 J	0.37 J		
MW-8	25	22 (88%)	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
MW-7	25	16 (64%)	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

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 = 201

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.01	-2.65209	7.03356	-0.0265209
2	0.31	-2.36561	12.6297	-0.759861
3	0.33	-2.19728	17.4578	-1.48497
4	0.37	-2.07485	21.7627	-2.25266
5	0.37	-1.97737	25.6727	-2.98429
6	0.39	-1.8957	29.2664	-3.72361
7	0.5	-1.82501	32.597	-4.63611
8	0.53	-1.76241	35.7031	-5.57019
9	0.59	-1.70604	38.6137	-6.57675
10	0.73	-1.65463	41.3515	-7.78463
11	0.76	-1.60725	43.9348	-9.00614
12	1.2	-1.56322	46.3784	-10.882
13	1.2	-1.52203	48.695	-12.7084
14	1.3	-1.48328	50.8951	-14.6367
15	1.6	-1.44663	52.9879	-16.9513
16	2.3	-1.41183	54.9811	-20.1985
17	5.16	-1.37866	56.8818	-27.3124
18	5.59	-1.34694	58.6961	-34.8418
19	6	-1.31652	60.4293	-42.7409
20	6	-1.28727	62.0864	-50.4646
21	6.64	-1.26464	63.6857	-58.8618
22	7.06	-1.23724	65.2165	-67.5967
23	7.55	-1.21073	66.6823	-76.7377
24	8	-1.18504	68.0866	-86.218
25	9	-1.16012	69.4325	-96.6591
26	10	-1.1359	70.7228	-108.018
27	10	-1.11232	71.96	-119.141
28	10	-1.08935	73.1467	-130.035
29	10	-1.06694	74.2851	-140.704
30	10	-1.04505	75.3772	-151.155
31	10	-1.02365	76.4251	-161.391
32	10	-1.00271	77.4305	-171.418
33	10	-0.982202	78.3952	-181.24
34	10	-0.9621	79.3209	-190.861
35	10	-0.942375	80.2089	-200.285
36	10	-0.923014	81.0609	-209.515
37	10	-0.903992	81.8781	-218.555
38	10	-0.885291	82.6618	-227.408
39	10	-0.866894	83.4133	-236.077
40	10	-0.848786	84.1338	-244.565
41	10	-0.834498	84.8302	-252.91
42	10	-0.816874	85.4974	-261.079
43	10	-0.7995	86.1366	-269.074
44	10	-0.782366	86.7487	-276.897
45	10	-0.765456	87.3347	-284.552
46	10	-0.748762	87.8953	-292.039
47	10	-0.732275	88.4315	-299.362
48	10	-0.715986	88.9442	-306.522
49	10	-0.699883	89.434	-313.521

50	10	-0.6839689.9018	-320.36	
51	10	-0.668209	90.3483	-327.042
52	10	-0.652622	90.7742	-333.569
53	10	-0.637192	91.1802	-339.941
54	10	-0.621911	91.567	-346.16
55	10	-0.606775	91.9352	-352.227
56	10	-0.591776	92.2854	-358.145
57	10	-0.576911	92.6182	-363.914
58	10	-0.5621792.9342	-369.536	
59	10	-0.547551	93.2341	-375.012
60	10	-0.533048	93.5182	-380.342
61	10	-0.521527	93.7902	-385.557
62	10	-0.507221	94.0475	-390.63
63	10	-0.493018	94.2905	-395.56
64	10	-0.478914	94.5199	-400.349
65	10	-0.464904	94.736	-404.998
66	10	-0.450985	94.9394	-409.508
67	10	-0.437153	95.1305	-413.879
68	10	-0.423405	95.3098	-418.113
69	10	-0.409735	95.4777	-422.211
70	10	-0.396142	95.6346	-426.172
71	10	-0.382622	95.781	-429.998
72	10	-0.369171	95.9173	-433.69
73	10	-0.355788	96.0439	-437.248
74	10	-0.342466	96.1611	-440.673
75	10	-0.329206	96.2695	-443.965
76	10	-0.316004	96.3694	-447.125
77	10	-0.302855	96.4611	-450.153
78	10	-0.2897696.5451	-453.051	
79	10	-0.276714	96.6216	-455.818
80	10	-0.263715	96.6912	-458.455
81	10	-0.253347	96.7554	-460.989
82	10	-0.240426	96.8132	-463.393
83	10	-0.227545	96.8649	-465.668
84	10	-0.214702	96.911	-467.815
85	10	-0.201894	96.9518	-469.834
86	10	-0.189118	96.9876	-471.725
87	10	-0.176374	97.0187	-473.489
88	10	-0.163659	97.0455	-475.126
89	10	-0.150969	97.0683	-476.635
90	10	-0.138305	97.0874	-478.018
91	10	-0.125661	97.1032	-479.275
92	10	-0.113039	97.116	-480.405
93	10	-0.100433	97.126	-481.41
94	10	-0.0878447	97.1338	-482.288
95	10	-0.0752698	97.1394	-483.041
96	10	-0.0627062	97.1434	-483.668
97	10	-0.0501541	97.1459	-484.17
98	10	-0.0376076	97.1473	-484.546
99	10	-0.0250691	97.1479	-484.796
100	10	-0.0125328	97.1481	-484.922
101	10	0	97.1481	-484.922
102	10	0.0125328	97.1482	-484.796
103	10	0.0250691	97.1489	-484.546
104	10	0.0376076	97.1503	-484.17
105	10	0.0501541	97.1528	-483.668
106	10	0.0627062	97.1567	-483.041
107	10	0.0752698	97.1624	-482.288
108	10	0.0878447	97.1701	-481.41
109	10	0.100433	97.1802	-480.405
110	10	0.113039	97.193	-479.275
111	10	0.125661	97.2088	-478.018

112	10	0.138305	97.2279	-476.635
113	10	0.150969	97.2507	-475.126
114	10	0.163659	97.2775	-473.489
115	10	0.176374	97.3086	-471.725
116	10	0.189118	97.3443	-469.834
117	10	0.201894	97.3851	-467.815
118	10	0.214702	97.4312	-465.668
119	10	0.227545	97.483	-463.393
120	10	0.240426	97.5408	-460.989
121	10	0.253347	97.605	-458.455
122	10	0.263715	97.6745	-455.818
123	10	0.276714	97.7511	-453.051
124	10	0.28976	97.835	-450.153
125	10	0.302855	97.9268	-447.125
126	10	0.316004	98.0266	-443.965
127	10	0.329206	98.135	-440.673
128	10	0.342466	98.2523	-437.248
129	10	0.355788	98.3789	-433.69
130	10	0.369171	98.5151	-429.998
131	10	0.382622	98.6615	-426.172
132	10	0.396142	98.8185	-422.211
133	10	0.409735	98.9864	-418.113
134	10	0.423405	99.1656	-413.879
135	10	0.437153	99.3567	-409.508
136	10	0.450985	99.5601	-404.998
137	10	0.464904	99.7763	-400.349
138	10	0.478914	100.006	-395.56
139	10	0.493018	100.249	-390.63
140	10	0.507221	100.506	-385.557
141	10	0.521527	100.778	-380.342
142	10	0.533048	101.062	-375.012
143	10	0.547551	101.362	-369.536
144	10	0.56217	101.678	-363.914
145	10	0.576911	102.011	-358.145
146	10	0.591776	102.361	-352.227
147	10	0.606775	102.729	-346.16
148	10	0.621911	103.116	-339.941
149	10	0.637192	103.522	-333.569
150	10	0.652622	103.948	-327.042
151	10	0.668209	104.394	-320.36
152	10	0.68396	104.862	-313.521
153	10	0.699883	105.352	-306.522
154	10	0.715986	105.865	-299.362
155	10	0.732275	106.401	-292.039
156	10	0.748762	106.961	-284.552
157	10	0.765456	107.547	-276.897
158	10	0.782366	108.16	-269.074
159	10	0.7995	108.799	-261.079
160	10	0.816874	109.466	-252.91
161	10	0.834498	110.162	-244.565
162	10	0.848786	110.883	-236.077
163	10	0.866894	111.634	-227.408
164	10	0.885291	112.418	-218.555
165	10	0.903992	113.235	-209.515
166	10	0.923014	114.087	-200.285
167	10	0.942375	114.975	-190.861
168	10	0.9621	115.901	-181.24
169	10	0.982202	116.866	-171.418
170	10	1.00271	117.871	-161.391
171	10	1.02365	118.919	-151.155
172	10	1.04505	120.011	-140.704
173	10	1.06694	121.149	-130.035

174	10	1.08935	122.336	-119.141
175	10	1.11232	123.573	-108.018
176	10	1.1359	124.864	-96.6591
177	10	1.16012	126.209	-85.0579
178	10	1.18504	127.614	-73.2074
179	10	1.21073	129.08	-61.1002
180	10	1.23724	130.61	-48.7278
181	10	1.26464	132.21	-36.0814
182	10	1.28727	133.867	-23.2087
183	10	1.31652	135.6	-10.0435
184	10	1.34694	137.414	3.42592
185	10	1.37866	139.315	17.2125
186	10	1.41183	141.308	31.3308
187	10	1.44663	143.401	45.7971
188	10	1.48328	145.601	60.63
189	10	1.52203	147.918	75.8503
190	10	1.56322	150.361	91.4825
191	10	1.60725	152.945	107.555
192	10	1.65463	155.682	124.101
193	10.8	1.70604	158.593	142.527
194	13.8	1.76241	161.699	166.848
195	20	1.82501	165.03	203.348
196	26.1	1.8957	168.623	252.826
197	30	1.97737	172.533	312.147
198	32	2.07485	176.838	378.542
199	50	2.19728	181.666	488.406
200	51.1	2.36561	187.263	609.289
201	78.2	2.65209	194.296	816.682

Data Set Standard Deviation = 7.30051
Numerator = 666970
Denominator = 2.0711e+006
W Statistic = 0.322037 = 666970 / 2.0711e+006

5% Critical value of 0.976 exceeds 0.322037
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.322037
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 = 201

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-4.60517	-2.65209	7.03356	12.2133
2	-1.17118	-2.36561	12.6297	14.9839
3	-1.10866	-2.19728	17.4578	17.4199
4	-0.994252	-2.07485	21.7627	19.4828
5	-0.994252	-1.97737	25.6727	21.4489
6	-0.941609	-1.8957	29.2664	23.2339
7	-0.693147	-1.82501	32.597	24.4989
8	-0.634878	-1.76241	35.7031	25.6178
9	-0.527633	-1.70604	38.6137	26.5179
10	-0.314711	-1.65463	41.3515	27.0387
11	-0.274437	-1.60725	43.9348	27.4797
12	0.182322	-1.56322	46.3784	27.1947
13	0.182322	-1.52203	48.695	26.9172
14	0.262364	-1.48328	50.8951	26.5281
15	0.470004	-1.44663	52.9879	25.8482
16	0.832909	-1.41183	54.9811	24.6722
17	1.64094	-1.37866	56.8818	22.4099
18	1.72098	-1.34694	58.6961	20.0919
19	1.79176	-1.31652	60.4293	17.733
20	1.79176	-1.28727	62.0864	15.4265
21	1.89311	-1.26464	63.6857	13.0324
22	1.95445	-1.23724	65.2165	10.6143
23	2.02155	-1.21073	66.6823	8.16676
24	2.07944	-1.18504	68.0866	5.70253
25	2.19722	-1.16012	69.4325	3.15348
26	2.30259	-1.1359	70.7228	0.537986
27	2.30259	-1.11232	71.96	-2.02323
28	2.30259	-1.08935	73.1467	-4.53155
29	2.30259	-1.06694	74.2851	-6.98826
30	2.30259	-1.04505	75.3772	-9.39458
31	2.30259	-1.02365	76.4251	-11.7516
32	2.30259	-1.00271	77.4305	-14.0605
33	2.30259	-0.982202	78.3952	-16.3221
34	2.30259	-0.9621	79.3209	-18.5374
35	2.30259	-0.942375	80.2089	-20.7073
36	2.30259	-0.923014	81.0609	-22.8326
37	2.30259	-0.903992	81.8781	-24.9141
38	2.30259	-0.885291	82.6618	-26.9526
39	2.30259	-0.866894	83.4133	-28.9487
40	2.30259	-0.848786	84.1338	-30.9031
41	2.30259	-0.834498	84.8302	-32.8246
42	2.30259	-0.816874	85.4974	-34.7055
43	2.30259	-0.7995	86.1366	-36.5464
44	2.30259	-0.782366	86.7487	-38.3479
45	2.30259	-0.765456	87.3347	-40.1104
46	2.30259	-0.748762	87.8953	-41.8345
47	2.30259	-0.732275	88.4315	-43.5206
48	2.30259	-0.715986	88.9442	-45.1692
49	2.30259	-0.699883	89.434	-46.7808

50	2.30259	-0.6839689.9018	-48.3557	
51	2.30259	-0.668209	90.3483	-49.8943
52	2.30259	-0.652622	90.7742	-51.397
53	2.30259	-0.637192	91.1802	-52.8642
54	2.30259	-0.621911	91.567	-54.2962
55	2.30259	-0.606775	91.9352	-55.6933
56	2.30259	-0.591776	92.2854	-57.0559
57	2.30259	-0.576911	92.6182	-58.3843
58	2.30259	-0.5621792.9342	-59.6788	
59	2.30259	-0.547551	93.2341	-60.9395
60	2.30259	-0.533048	93.5182	-62.1669
61	2.30259	-0.521527	93.7902	-63.3678
62	2.30259	-0.507221	94.0475	-64.5357
63	2.30259	-0.493018	94.2905	-65.6709
64	2.30259	-0.478914	94.5199	-66.7737
65	2.30259	-0.464904	94.736	-67.8442
66	2.30259	-0.450985	94.9394	-68.8826
67	2.30259	-0.437153	95.1305	-69.8892
68	2.30259	-0.423405	95.3098	-70.8641
69	2.30259	-0.409735	95.4777	-71.8075
70	2.30259	-0.396142	95.6346	-72.7197
71	2.30259	-0.382622	95.781	-73.6007
72	2.30259	-0.369171	95.9173	-74.4508
73	2.30259	-0.355788	96.0439	-75.27
74	2.30259	-0.342466	96.1611	-76.0585
75	2.30259	-0.329206	96.2695	-76.8166
76	2.30259	-0.316004	96.3694	-77.5442
77	2.30259	-0.302855	96.4611	-78.2415
78	2.30259	-0.2897696.5451	-78.9087	
79	2.30259	-0.276714	96.6216	-79.5459
80	2.30259	-0.263715	96.6912	-80.1531
81	2.30259	-0.253347	96.7554	-80.7365
82	2.30259	-0.240426	96.8132	-81.2901
83	2.30259	-0.227545	96.8649	-81.814
84	2.30259	-0.214702	96.911	-82.3084
85	2.30259	-0.201894	96.9518	-82.7733
86	2.30259	-0.189118	96.9876	-83.2087
87	2.30259	-0.176374	97.0187	-83.6148
88	2.30259	-0.163659	97.0455	-83.9917
89	2.30259	-0.150969	97.0683	-84.3393
90	2.30259	-0.138305	97.0874	-84.6578
91	2.30259	-0.125661	97.1032	-84.9471
92	2.30259	-0.113039	97.116	-85.2074
93	2.30259	-0.100433	97.126	-85.4387
94	2.30259	-0.0878447	97.1338	-85.6409
95	2.30259	-0.0752698	97.1394	-85.8142
96	2.30259	-0.0627062	97.1434	-85.9586
97	2.30259	-0.0501541	97.1459	-86.0741
98	2.30259	-0.0376076	97.1473	-86.1607
99	2.30259	-0.0250691	97.1479	-86.2184
100	2.30259	-0.0125328	97.1481	-86.2473
101	2.30259	0	97.1481	-86.2473
102	2.30259	0.0125328	97.1482	-86.2184
103	2.30259	0.0250691	97.1489	-86.1607
104	2.30259	0.0376076	97.1503	-86.0741
105	2.30259	0.0501541	97.1528	-85.9586
106	2.30259	0.0627062	97.1567	-85.8142
107	2.30259	0.0752698	97.1624	-85.6409
108	2.30259	0.0878447	97.1701	-85.4387
109	2.30259	0.100433	97.1802	-85.2074
110	2.30259	0.113039	97.193	-84.9471
111	2.30259	0.125661	97.2088	-84.6578

112	2.30259	0.138305	97.2279	-84.3393
113	2.30259	0.150969	97.2507	-83.9917
114	2.30259	0.163659	97.2775	-83.6148
115	2.30259	0.176374	97.3086	-83.2087
116	2.30259	0.189118	97.3443	-82.7733
117	2.30259	0.201894	97.3851	-82.3084
118	2.30259	0.214702	97.4312	-81.814
119	2.30259	0.227545	97.483	-81.2901
120	2.30259	0.240426	97.5408	-80.7365
121	2.30259	0.253347	97.605	-80.1531
122	2.30259	0.263715	97.6745	-79.5459
123	2.30259	0.276714	97.7511	-78.9087
124	2.30259	0.28976	97.835	-78.2415
125	2.30259	0.302855	97.9268	-77.5442
126	2.30259	0.316004	98.0266	-76.8166
127	2.30259	0.329206	98.135	-76.0585
128	2.30259	0.342466	98.2523	-75.27
129	2.30259	0.355788	98.3789	-74.4508
130	2.30259	0.369171	98.5151	-73.6007
131	2.30259	0.382622	98.6615	-72.7197
132	2.30259	0.396142	98.8185	-71.8075
133	2.30259	0.409735	98.9864	-70.8641
134	2.30259	0.423405	99.1656	-69.8892
135	2.30259	0.437153	99.3567	-68.8826
136	2.30259	0.450985	99.5601	-67.8442
137	2.30259	0.464904	99.7763	-66.7737
138	2.30259	0.478914	100.006	-65.6709
139	2.30259	0.493018	100.249	-64.5357
140	2.30259	0.507221	100.506	-63.3678
141	2.30259	0.521527	100.778	-62.1669
142	2.30259	0.533048	101.062	-60.9395
143	2.30259	0.547551	101.362	-59.6788
144	2.30259	0.56217	101.678	-58.3843
145	2.30259	0.576911	102.011	-57.0559
146	2.30259	0.591776	102.361	-55.6933
147	2.30259	0.606775	102.729	-54.2962
148	2.30259	0.621911	103.116	-52.8642
149	2.30259	0.637192	103.522	-51.397
150	2.30259	0.652622	103.948	-49.8943
151	2.30259	0.668209	104.394	-48.3557
152	2.30259	0.68396	104.862	-46.7808
153	2.30259	0.699883	105.352	-45.1692
154	2.30259	0.715986	105.865	-43.5206
155	2.30259	0.732275	106.401	-41.8345
156	2.30259	0.748762	106.961	-40.1104
157	2.30259	0.765456	107.547	-38.3479
158	2.30259	0.782366	108.16	-36.5464
159	2.30259	0.7995	108.799	-34.7055
160	2.30259	0.816874	109.466	-32.8246
161	2.30259	0.834498	110.162	-30.9031
162	2.30259	0.848786	110.883	-28.9487
163	2.30259	0.866894	111.634	-26.9526
164	2.30259	0.885291	112.418	-24.9141
165	2.30259	0.903992	113.235	-22.8326
166	2.30259	0.923014	114.087	-20.7073
167	2.30259	0.942375	114.975	-18.5374
168	2.30259	0.9621	115.901	-16.3221
169	2.30259	0.982202	116.866	-14.0605
170	2.30259	1.00271	117.871	-11.7516
171	2.30259	1.02365	118.919	-9.39458
172	2.30259	1.04505	120.011	-6.98826
173	2.30259	1.06694	121.149	-4.53155

174	2.30259	1.08935	122.336	-2.02323
175	2.30259	1.11232	123.573	0.537986
176	2.30259	1.1359	124.864	3.15348
177	2.30259	1.16012	126.209	5.82476
178	2.30259	1.18504	127.614	8.55342
179	2.30259	1.21073	129.08	11.3412
180	2.30259	1.23724	130.61	14.1901
181	2.30259	1.26464	132.21	17.102
182	2.30259	1.28727	133.867	20.0661
183	2.30259	1.31652	135.6	23.0975
184	2.30259	1.34694	137.414	26.1989
185	2.30259	1.37866	139.315	29.3734
186	2.30259	1.41183	141.308	32.6242
187	2.30259	1.44663	143.401	35.9552
188	2.30259	1.48328	145.601	39.3706
189	2.30259	1.52203	147.918	42.8752
190	2.30259	1.56322	150.361	46.4747
191	2.30259	1.60725	152.945	50.1755
192	2.30259	1.65463	155.682	53.9854
193	2.37955	1.70604	158.593	58.045
194	2.62467	1.76241	161.699	62.6708
195	2.99573	1.82501	165.03	68.138
196	3.26194	1.8957	168.623	74.3216
197	3.4012	1.97737	172.533	81.0471
198	3.46574	2.07485	176.838	88.2379
199	3.91202	2.19728	181.666	96.8338
200	3.93378	2.36561	187.263	106.14
201	4.35927	2.65209	194.296	117.701

Data Set Standard Deviation = 0.917323
Numerator = 13853.5
Denominator = 32699.3
W Statistic = 0.423662 = 13853.5 / 32699.3

5% Critical value of 0.976 exceeds 0.423662
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.423662
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	190
	9/23/1999	2.19722 J	189
	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	171

Rank Sum = 1540
Rank Mean = 102.667

Background Rank Sum = 1540
Background Rank Mean = 102.667

Compliance Wells

Well ID	Date	Result	Rank
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	168
	11/15/2009	-0.634878 J	172

Rank Sum = 1495
Rank Mean = 93.4375

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	198
	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	191
	11/18/2006	ND<2.30259	82.5
	5/23/2007	ND<2.30259	82.5
	11/28/2007	2.07944 J	188
	6/5/2008	ND<2.30259	82.5
	11/20/2008	ND<2.30259	82.5
	6/11/2009	-0.527633 J	173
	11/15/2009	-0.314711 J	174

Rank Sum = 2656.5
Rank Mean = 102.173

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	181
	6/5/2008	ND<2.30259	82.5
	11/20/2008	ND<2.30259	82.5
	6/11/2009	0.182322	176
	11/15/2009	0.262364	178

Rank Sum = 2432.5
Rank Mean = 93.5577

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	195
	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	194
	5/23/2007	1.72098 J	182
	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	175
	11/15/2009	-1.10866 J	167

Rank Sum = 2728
Rank Mean = 104.923

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	183
	6/5/2008	ND<2.30259	82.5
	11/20/2008	ND<2.30259	82.5
	6/11/2009	0.470004	179
	11/15/2009	0.182322	177

Rank Sum = 1611.5
Rank Mean = 100.719

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	185

	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	170
	11/15/2009	-0.994252 J	169

Rank Sum = 2421.5
Rank Mean = 93.1346

MW-8	7/20/1995	ND<2.30259	82.5
	8/24/1995	ND<2.30259	82.5
	9/28/1995	3.93378	200
	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	197
	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	166

Rank Sum = 2378
Rank Mean = 95.12

MW-7	7/20/1995	ND<2.30259	82.5
	8/24/1995	ND<2.30259	82.5
	9/28/1995	4.35927	201
	10/26/1995	3.26194	196
	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	199
	9/23/1999	2.30259 J	192
	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	193
	11/28/2007	1.95445 J	186
	6/5/2008	2.02155 J	187
	11/20/2008	1.79176 J	184
	6/11/2009	0.832909	180

Rank Sum = 3038

Rank Mean = 121.52

Calculation Results:

Kruskal-Wallis H Statistic = 4.67965
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 10.2438
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
4.67965 < 15.5073 indicating no significant group difference at 5% significance level
10.2438 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ug/L)

Parameter: Cyanide

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 196
Total Non-Detect: 193
Percent Non-Detects: 98.4694%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original	
MW-13	15	15 (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<0.0025	ND<0.0025	

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original	
MW-12AR	16	15 (93.75%)	3/16/1999	ND<20	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<0.0025	ND<0.0025	
			11/15/2009	4.2 J	4.2 J	
MW-7	25	25 (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<0.0025	ND<0.0025	
MW-10	25	25 (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<0.0025	ND<0.0025	
MW-9	25	25 (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<0.0025		ND<0.0025
MW-11R	25	24 (96%)	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	14 J	14 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	ND<0.0025		ND<0.0025
MW-6	25	24 (96%)	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	14 J	14 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	ND<0.0025		ND<0.0025
MW-12BR	15	15 (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<0.0025		ND<0.0025
MW-8	25	25 (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<0.0025		ND<0.0025

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Cyanide

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.00125	-2.57583	6.63492	-0.00321979
2	0.00125	-2.32634	12.0468	-0.00612772
3	0.00125	-2.17009	16.7561	-0.00884033
4	0.00125	-2.05375	20.974	-0.0114075
5	0.00125	-1.95996	24.8154	-0.0138575
6	0.00125	-1.88079	28.3528	-0.0162085
7	0.00125	-1.81191	31.6358	-0.0184733
8	0.00125	-1.75069	34.7007	-0.0206617
9	0.00125	-1.6954	37.5751	-0.022781
10	4.2	-1.64485	40.2806	-6.93116
11	10	-1.59819	42.8348	-22.9131
12	10	-1.55477	45.2522	-38.4608
13	10	-1.5141	47.5447	-53.6018
14	10	-1.46838	49.7008	-68.2857
15	10	-1.4325	51.7529	-82.6107
16	10	-1.39838	53.7083	-96.5945
17	10	-1.36581	55.5738	-110.253
18	10	-1.33462	57.355	-123.599
19	10	-1.30469	59.0572	-136.646
20	10	-1.27588	60.6851	-149.404
21	10	-1.24809	62.2428	-161.885
22	10	-1.22123	63.7342	-174.098
23	10	-1.19522	65.1627	-186.05
24	10	-1.17	66.5316	-197.75
25	10	-1.1455	67.8438	-209.205
26	10	-1.12168	69.102	-220.422
27	10	-1.0939	70.2986	-231.361
28	10	-1.07138	71.4464	-242.074
29	10	-1.04939	72.5476	-252.568
30	10	-1.02789	73.6042	-262.847
31	10	-1.00687	74.618	-272.916
32	10	-0.986272	75.5907	-282.778
33	10	-0.966088	76.524	-292.439
34	10	-0.946291	77.4195	-301.902
35	10	-0.926859	78.2786	-311.171
36	10	-0.907769	79.1026	-320.249
37	10	-0.889006	79.893	-329.139
38	10	-0.87055	80.6508	-337.844
39	10	-0.852385	81.3774	-346.368
40	10	-0.830953	82.0679	-354.678
41	10	-0.813379	82.7294	-362.811
42	10	-0.796056	83.3632	-370.772
43	10	-0.778966	83.9699	-378.562
44	10	-0.7621	84.5507	-386.183
45	10	-0.745449	85.1064	-393.637
46	10	-0.729003	85.6379	-400.927
47	10	-0.712751	86.1459	-408.055
48	10	-0.696684	86.6313	-415.021
49	10	-0.680797	87.0947	-421.829

50	10	-0.665079	87.5371	-428.48
51	10	-0.649522	87.959	-434.975
52	10	-0.634124	88.3611	-441.317
53	10	-0.615839	88.7403	-447.475
54	10	-0.6007689.1012	-453.483	
55	10	-0.585815	89.4444	-459.341
56	10	-0.570999	89.7705	-465.051
57	10	-0.556308	90.0799	-470.614
58	10	-0.541736	90.3734	-476.031
59	10	-0.5272890.6514	-481.304	
60	10	-0.5129390.9145	-486.433	
61	10	-0.498687	91.1632	-491.42
62	10	-0.484544	91.398	-496.266
63	10	-0.470498	91.6194	-500.971
64	10	-0.456542	91.8278	-505.536
65	10	-0.442676	92.0238	-509.963
66	10	-0.426148	92.2054	-514.224
67	10	-0.412463	92.3755	-518.349
68	10	-0.398855	92.5346	-522.337
69	10	-0.385321	92.683	-526.191
70	10	-0.371856	92.8213	-529.909
71	10	-0.358459	92.9498	-533.494
72	10	-0.345126	93.0689	-536.945
73	10	-0.331854	93.1791	-540.264
74	10	-0.318639	93.2806	-543.45
75	10	-0.305481	93.3739	-546.505
76	10	-0.292375	93.4594	-549.429
77	10	-0.279319	93.5374	-552.222
78	10	-0.266311	93.6083	-554.885
79	10	-0.250759	93.6712	-557.392
80	10	-0.237847	93.7278	-559.771
81	10	-0.224974	93.7784	-562.021
82	10	-0.212137	93.8234	-564.142
83	10	-0.199336	93.8631	-566.135
84	10	-0.186567	93.8979	-568.001
85	10	-0.173829	93.9282	-569.739
86	10	-0.161119	93.9541	-571.351
87	10	-0.148434	93.9762	-572.835
88	10	-0.135774	93.9946	-574.193
89	10	-0.123135	94.0097	-575.424
90	10	-0.110516	94.022	-576.529
91	10	-0.0979139	94.0315	-577.508
92	10	-0.0828129	94.0384	-578.336
93	10	-0.0702426	94.0433	-579.039
94	10	-0.0576847	94.0467	-579.616
95	10	-0.0451348	94.0487	-580.067
96	10	-0.0325917	94.0498	-580.393
97	10	-0.0200544	94.0502	-580.593
98	10	-0.00751925	94.0502	-580.669
99	10	0.00751925	94.0503	-580.593
100	10	0.0200544	94.0507	-580.393
101	10	0.0325917	94.0517	-580.067
102	10	0.0451348	94.0538	-579.616
103	10	0.0576847	94.0571	-579.039
104	10	0.0702426	94.062	-578.336
105	10	0.0828129	94.0689	-577.508
106	10	0.0979139	94.0785	-576.529
107	10	0.110516	94.0907	-575.424
108	10	0.123135	94.1059	-574.193
109	10	0.135774	94.1243	-572.835
110	10	0.148434	94.1463	-571.351
111	10	0.161119	94.1723	-569.739

112	10	0.173829		94.2025	-568.001
113	10	0.186567		94.2373	-566.135
114	10	0.199336		94.2771	-564.142
115	10	0.212137		94.3221	-562.021
116	10	0.224974		94.3727	-559.771
117	10	0.237847		94.4292	-557.392
118	10	0.250759		94.4921	-554.885
119	10	0.266311		94.563	-552.222
120	10	0.279319		94.6411	-549.429
121	10	0.292375		94.7265	-546.505
122	10	0.305481		94.8199	-543.45
123	10	0.318639		94.9214	-540.264
124	10	0.331854		95.0315	-536.945
125	10	0.345126		95.1506	-533.494
126	10	0.358459		95.2791	-529.909
127	10	0.371856		95.4174	-526.191
128	10	0.385321		95.5659	-522.337
129	10	0.398855		95.725	-518.349
130	10	0.412463		95.8951	-514.224
131	10	0.426148		96.0767	-509.963
132	10	0.442676		96.2726	-505.536
133	10	0.456542		96.4811	-500.971
134	10	0.470498		96.7024	-496.266
135	10	0.484544		96.9372	-491.42
136	10	0.498687		97.1859	-486.433
137	10	0.51293	97.449	-481.304	
138	10	0.52728	97.727	-476.031	
139	10	0.541736		98.0205	-470.614
140	10	0.556308		98.33	-465.051
141	10	0.570999		98.656	-459.341
142	10	0.585815		98.9992	-453.483
143	10	0.60076	99.3601	-447.475	
144	10	0.615839		99.7394	-441.317
145	10	0.634124		100.141	-434.975
146	10	0.649522		100.563	-428.48
147	10	0.665079		101.006	-421.829
148	10	0.680797		101.469	-415.021
149	10	0.696684		101.955	-408.055
150	10	0.712751		102.463	-400.927
151	10	0.729003		102.994	-393.637
152	10	0.745449		103.55	-386.183
153	10	0.7621	104.131	-378.562	
154	10	0.778966		104.737	-370.772
155	10	0.796056		105.371	-362.811
156	10	0.813379		106.033	-354.678
157	10	0.830953		106.723	-346.368
158	10	0.852385		107.45	-337.844
159	10	0.87055	108.207	-329.139	
160	10	0.889006		108.998	-320.249
161	10	0.907769		109.822	-311.171
162	10	0.926859		110.681	-301.902
163	10	0.946291		111.576	-292.439
164	10	0.966088		112.51	-282.778
165	10	0.986272		113.482	-272.916
166	10	1.00687	114.496	-262.847	
167	10	1.02789	115.553	-252.568	
168	10	1.04939	116.654	-242.074	
169	10	1.07138	117.802	-231.361	
170	10	1.0939	118.998	-220.422	
171	10	1.12168	120.257	-209.205	
172	10	1.1455	121.569	-197.75	
173	10	1.17	122.938	-186.05	

174	10	1.19522	124.366	-174.098
175	10	1.22123	125.858	-161.885
176	10	1.24809	127.415	-149.404
177	10	1.27588	129.043	-136.646
178	10	1.30469	130.745	-123.599
179	10	1.33462	132.527	-110.253
180	10	1.36581	134.392	-96.5945
181	10	1.39838	136.348	-82.6107
182	10	1.4325	138.4	-68.2857
183	10	1.46838	140.556	-53.6018
184	10	1.5141	142.848	-38.4608
185	10	1.55477	145.266	-22.9131
186	10	1.59819	147.82	-6.93116
187	10	1.64485	150.525	9.51737
188	10	1.6954	153.4	26.4713
189	10	1.75069	156.465	43.9782
190	10	1.81191	159.748	62.0973
191	10	1.88079	163.285	80.9052
192	10	1.95996	167.126	100.505
193	10	2.05375	171.344	121.042
194	10	2.17009	176.054	142.743
195	14	2.32634	181.466	175.312
196	14	2.57583	188.1	211.374

Data Set Standard Deviation = 2.17927
Numerator = 44678.8
Denominator = 174199
W Statistic = 0.256482 = 44678.8 / 174199

5% Critical value of 0.976 exceeds 0.256482
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.256482
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Cyanide

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-6.68461	-2.57583	6.63492	17.2185
2	-6.68461	-2.32634	12.0468	32.7691
3	-6.68461	-2.17009	16.7561	47.2754
4	-6.68461	-2.05375	20.974	61.0039
5	-6.68461	-1.95996	24.8154	74.1054
6	-6.68461	-1.88079	28.3528	86.6778
7	-6.68461	-1.81191	31.6358	98.7897
8	-6.68461	-1.75069	34.7007	110.492
9	-6.68461	-1.6954	37.5751	121.825
10	1.43508	-1.64485	40.2806	119.465
11	2.30259	-1.59819	42.8348	115.785
12	2.30259	-1.55477	45.2522	112.205
13	2.30259	-1.5141	47.5447	108.719
14	2.30259	-1.46838	49.7008	105.338
15	2.30259	-1.4325	51.7529	102.039
16	2.30259	-1.39838	53.7083	98.8192
17	2.30259	-1.36581	55.5738	95.6743
18	2.30259	-1.33462	57.355	92.6013
19	2.30259	-1.30469	59.0572	89.5971
20	2.30259	-1.27588	60.6851	86.6593
21	2.30259	-1.24809	62.2428	83.7855
22	2.30259	-1.22123	63.7342	80.9735
23	2.30259	-1.19522	65.1627	78.2214
24	2.30259	-1.17	66.5316	75.5274
25	2.30259	-1.1455	67.8438	72.8897
26	2.30259	-1.12168	69.102	70.307
27	2.30259	-1.0939	70.2986	67.7882
28	2.30259	-1.07138	71.4464	65.3213
29	2.30259	-1.04939	72.5476	62.905
30	2.30259	-1.02789	73.6042	60.5381
31	2.30259	-1.00687	74.618	58.2197
32	2.30259	-0.986272		75.5907 55.9488
33	2.30259	-0.966088		76.524 53.7243
34	2.30259	-0.946291		77.4195 51.5454
35	2.30259	-0.926859		78.2786 49.4112
36	2.30259	-0.907769		79.1026 47.321
37	2.30259	-0.889006		79.893 45.274
38	2.30259	-0.87055	80.6508	43.2694
39	2.30259	-0.852385		81.3774 41.3068
40	2.30259	-0.830953		82.0679 39.3934
41	2.30259	-0.813379		82.7294 37.5205
42	2.30259	-0.796056		83.3632 35.6876
43	2.30259	-0.778966		83.9699 33.8939
44	2.30259	-0.7621	84.5507	32.1391
45	2.30259	-0.745449		85.1064 30.4227
46	2.30259	-0.729003		85.6379 28.7441
47	2.30259	-0.712751		86.1459 27.1029
48	2.30259	-0.696684		86.6313 25.4987
49	2.30259	-0.680797		87.0947 23.9311

50	2.30259	-0.665079	87.5371	22.3997
51	2.30259	-0.649522	87.959	20.9041
52	2.30259	-0.634124	88.3611	19.444
53	2.30259	-0.615839	88.7403	18.026
54	2.30259	-0.6007689.1012	16.6427	
55	2.30259	-0.585815	89.4444	15.2938
56	2.30259	-0.570999	89.7705	13.979
57	2.30259	-0.556308	90.0799	12.6981
58	2.30259	-0.541736	90.3734	11.4507
59	2.30259	-0.5272890.6514	10.2366	
60	2.30259	-0.5129390.9145	9.05553	
61	2.30259	-0.498687	91.1632	7.90726
62	2.30259	-0.484544	91.398	6.79155
63	2.30259	-0.470498	91.6194	5.70819
64	2.30259	-0.456542	91.8278	4.65697
65	2.30259	-0.442676	92.0238	3.63767
66	2.30259	-0.426148	92.2054	2.65642
67	2.30259	-0.412463	92.3755	1.70669
68	2.30259	-0.398855	92.5346	0.788294
69	2.30259	-0.385321	92.683	-0.0989404
70	2.30259	-0.371856	92.8213	-0.95517
71	2.30259	-0.358459	92.9498	-1.78055
72	2.30259	-0.345126	93.0689	-2.57524
73	2.30259	-0.331854	93.1791	-3.33936
74	2.30259	-0.318639	93.2806	-4.07305
75	2.30259	-0.305481	93.3739	-4.77645
76	2.30259	-0.292375	93.4594	-5.44967
77	2.30259	-0.279319	93.5374	-6.09282
78	2.30259	-0.266311	93.6083	-6.70603
79	2.30259	-0.250759	93.6712	-7.28342
80	2.30259	-0.237847	93.7278	-7.83108
81	2.30259	-0.224974	93.7784	-8.34911
82	2.30259	-0.212137	93.8234	-8.83757
83	2.30259	-0.199336	93.8631	-9.29656
84	2.30259	-0.186567	93.8979	-9.72614
85	2.30259	-0.173829	93.9282	-10.1264
86	2.30259	-0.161119	93.9541	-10.4974
87	2.30259	-0.148434	93.9762	-10.8392
88	2.30259	-0.135774	93.9946	-11.1518
89	2.30259	-0.123135	94.0097	-11.4353
90	2.30259	-0.110516	94.022	-11.6898
91	2.30259	-0.0979139	94.0315	-11.9153
92	2.30259	-0.0828129	94.0384	-12.1059
93	2.30259	-0.0702426	94.0433	-12.2677
94	2.30259	-0.0576847	94.0467	-12.4005
95	2.30259	-0.0451348	94.0487	-12.5044
96	2.30259	-0.0325917	94.0498	-12.5795
97	2.30259	-0.0200544	94.0502	-12.6257
98	2.30259	-0.00751925	94.0502	-12.643
99	2.30259	0.00751925	94.0503	-12.6257
100	2.30259	0.0200544	94.0507	-12.5795
101	2.30259	0.0325917	94.0517	-12.5044
102	2.30259	0.0451348	94.0538	-12.4005
103	2.30259	0.0576847	94.0571	-12.2677
104	2.30259	0.0702426	94.062	-12.1059
105	2.30259	0.0828129	94.0689	-11.9153
106	2.30259	0.0979139	94.0785	-11.6898
107	2.30259	0.110516	94.0907	-11.4353
108	2.30259	0.123135	94.1059	-11.1518
109	2.30259	0.135774	94.1243	-10.8392
110	2.30259	0.148434	94.1463	-10.4974
111	2.30259	0.161119	94.1723	-10.1264

112	2.30259	0.173829		94.2025	-9.72614
113	2.30259	0.186567		94.2373	-9.29656
114	2.30259	0.199336		94.2771	-8.83757
115	2.30259	0.212137		94.3221	-8.34911
116	2.30259	0.224974		94.3727	-7.83108
117	2.30259	0.237847		94.4292	-7.28342
118	2.30259	0.250759		94.4921	-6.70603
119	2.30259	0.266311		94.563	-6.09282
120	2.30259	0.279319		94.6411	-5.44967
121	2.30259	0.292375		94.7265	-4.77645
122	2.30259	0.305481		94.8199	-4.07305
123	2.30259	0.318639		94.9214	-3.33936
124	2.30259	0.331854		95.0315	-2.57524
125	2.30259	0.345126		95.1506	-1.78055
126	2.30259	0.358459		95.2791	-0.95517
127	2.30259	0.371856		95.4174	-0.0989404
128	2.30259	0.385321		95.5659	0.788294
129	2.30259	0.398855		95.725	1.70669
130	2.30259	0.412463		95.8951	2.65642
131	2.30259	0.426148		96.0767	3.63767
132	2.30259	0.442676		96.2726	4.65697
133	2.30259	0.456542		96.4811	5.70819
134	2.30259	0.470498		96.7024	6.79155
135	2.30259	0.484544		96.9372	7.90726
136	2.30259	0.498687		97.1859	9.05553
137	2.30259	0.51293	97.449	10.2366	
138	2.30259	0.52728	97.727	11.4507	
139	2.30259	0.541736		98.0205	12.6981
140	2.30259	0.556308		98.33	13.979
141	2.30259	0.570999		98.656	15.2938
142	2.30259	0.585815		98.9992	16.6427
143	2.30259	0.60076	99.3601	18.026	
144	2.30259	0.615839		99.7394	19.444
145	2.30259	0.634124		100.141	20.9041
146	2.30259	0.649522		100.563	22.3997
147	2.30259	0.665079		101.006	23.9311
148	2.30259	0.680797		101.469	25.4987
149	2.30259	0.696684		101.955	27.1029
150	2.30259	0.712751		102.463	28.7441
151	2.30259	0.729003		102.994	30.4227
152	2.30259	0.745449		103.55	32.1391
153	2.30259	0.7621	104.131	33.8939	
154	2.30259	0.778966		104.737	35.6876
155	2.30259	0.796056		105.371	37.5205
156	2.30259	0.813379		106.033	39.3934
157	2.30259	0.830953		106.723	41.3068
158	2.30259	0.852385		107.45	43.2694
159	2.30259	0.87055	108.207	45.274	
160	2.30259	0.889006		108.998	47.321
161	2.30259	0.907769		109.822	49.4112
162	2.30259	0.926859		110.681	51.5454
163	2.30259	0.946291		111.576	53.7243
164	2.30259	0.966088		112.51	55.9488
165	2.30259	0.986272		113.482	58.2197
166	2.30259	1.00687	114.496	60.5381	
167	2.30259	1.02789	115.553	62.905	
168	2.30259	1.04939	116.654	65.3213	
169	2.30259	1.07138	117.802	67.7882	
170	2.30259	1.0939	118.998	70.307	
171	2.30259	1.12168	120.257	72.8897	
172	2.30259	1.1455	121.569	75.5274	
173	2.30259	1.17	122.938	78.2214	

174	2.30259	1.19522	124.366	80.9735
175	2.30259	1.22123	125.858	83.7855
176	2.30259	1.24809	127.415	86.6593
177	2.30259	1.27588	129.043	89.5971
178	2.30259	1.30469	130.745	92.6013
179	2.30259	1.33462	132.527	95.6743
180	2.30259	1.36581	134.392	98.8192
181	2.30259	1.39838	136.348	102.039
182	2.30259	1.4325	138.4	105.338
183	2.30259	1.46838	140.556	108.719
184	2.30259	1.5141	142.848	112.205
185	2.30259	1.55477	145.266	115.785
186	2.30259	1.59819	147.82	119.465
187	2.30259	1.64485	150.525	123.252
188	2.30259	1.6954	153.4	127.156
189	2.30259	1.75069	156.465	131.187
190	2.30259	1.81191	159.748	135.359
191	2.30259	1.88079	163.285	139.69
192	2.30259	1.95996	167.126	144.203
193	2.30259	2.05375	171.344	148.932
194	2.30259	2.17009	176.054	153.929
195	2.63906	2.32634	181.466	160.068
196	2.63906	2.57583	188.1	166.866

Data Set Standard Deviation = 1.88702
Numerator = 27844.2
Denominator = 130611
W Statistic = 0.213185 = 27844.2 / 130611

5% Critical value of 0.976 exceeds 0.213185
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.213185
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Cyanide

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

Total Percent Non-Detects = 98.4694%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 15
Maximum Background Concentration = 2.30259
Confidence Level = 65.2%
False Positive Rate = 34.8%

Location	Date	Samples	Mean	Significant
MW-12AR	11/15/2009	1	1.43508	FALSE
MW-7	6/11/2009	1	-6.68461	FALSE
MW-10	6/11/2009	1	-6.68461	FALSE
MW-9	6/11/2009	1	-6.68461	FALSE
MW-11R	6/11/2009	1	-6.68461	FALSE
MW-6	6/11/2009	1	-6.68461	FALSE
MW-12BR	6/11/2009	1	-6.68461	FALSE
MW-8	6/11/2009	1	-6.68461	FALSE

Concentrations (ug/L)

Parameter: Dibutyl Phthalate

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 196
Total Non-Detect: 195
Percent Non-Detects: 99.4898%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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
			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<0.52	ND<0.52

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-9	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	ND<10	ND<10
			6/11/2009	ND<0.52	ND<0.52
			11/15/2009	3 J	3 J

MW-6	25	25 (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<0.52		ND<0.52
MW-8	25	25 (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<0.51		ND<0.51
MW-10	25	25 (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<0.52	ND<0.52	
MW-12BR	15	15 (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	
		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<0.51	ND<0.51	
MW-12AR	15	15 (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	
		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<0.51	ND<0.51	
MW-7	25	25 (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<0.5	ND<0.5
MW-11R25	25 (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<0.5	ND<0.5

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Dibutyl Phthalate

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.25	-2.575836	3.63492	-0.643959
2	0.25	-2.326341	2.0468	-1.22554
3	0.255	-2.170091	6.7561	-1.77892
4	0.255	-2.053752	0.974	-2.30262
5	0.255	-1.959962	4.8154	-2.80241
6	0.26	-1.880792	8.3528	-3.29142
7	0.26	-1.811913	1.6358	-3.76252
8	0.26	-1.750693	4.7007	-4.21769
9	0.26	-1.6954	37.5751	-4.6585
10	3	-1.644854	0.2806	-9.59306
11	5	-1.598194	2.8348	-17.584
12	5	-1.554774	5.2522	-25.3579
13	5	-1.5141	47.5447	-32.9284
14	5	-1.468384	9.7008	-40.2703
15	5	-1.4325	51.7529	-47.4328
16	5	-1.398385	3.7083	-54.4247
17	5	-1.365815	5.5738	-61.2537
18	5	-1.334625	7.355	-67.9269
19	5	-1.304695	9.0572	-74.4503
20	5	-1.275886	0.6851	-80.8297
21	5	-1.248096	2.2428	-87.0701
22	5	-1.221236	3.7342	-93.1762
23	5	-1.195226	5.1627	-99.1524
24	5	-1.17	66.5316	-105.002
25	5	-1.1455	67.8438	-110.73
26	5	-1.121686	9.102	-116.338
27	5	-1.0939	70.2986	-121.808
28	5	-1.071387	1.4464	-127.165
29	5	-1.049397	2.5476	-132.412
30	5	-1.027897	3.6042	-137.551
31	5	-1.006877	4.618	-142.585
32	5	-0.986272	75.5907	-147.517
33	5	-0.966088	76.524	-152.347
34	5	-0.946291	77.4195	-157.079
35	5	-0.926859	78.2786	-161.713
36	5	-0.907769	79.1026	-166.252
37	5	-0.889006	79.893	-170.697
38	5	-0.870558	0.6508	-175.05
39	5	-0.852385	81.3774	-179.311
40	5	-0.830953	82.0679	-183.466
41	5	-0.813379	82.7294	-187.533
42	5	-0.796056	83.3632	-191.513
43	5	-0.778966	83.9699	-195.408
44	5	-0.7621	84.5507	-199.219
45	5	-0.745449	85.1064	-202.946
46	5	-0.729003	85.6379	-206.591
47	5	-0.712751	86.1459	-210.155
48	5	-0.696684	86.6313	-213.638
49	5	-0.680797	87.0947	-217.042

50	5	-0.665079	87.5371	-220.368
51	5	-0.649522	87.959	-223.615
52	5	-0.634124	88.3611	-226.786
53	5	-0.615839	88.7403	-229.865
54	5	-0.6007689.1012	-232.869	
55	5	-0.585815	89.4444	-235.798
56	5	-0.570999	89.7705	-238.653
57	5	-0.556308	90.0799	-241.434
58	5	-0.541736	90.3734	-244.143
59	5	-0.5272890.6514	-246.779	
60	5	-0.5129390.9145	-249.344	
61	5	-0.498687	91.1632	-251.838
62	5	-0.484544	91.398	-254.26
63	5	-0.470498	91.6194	-256.613
64	5	-0.456542	91.8278	-258.895
65	5	-0.442676	92.0238	-261.109
66	5	-0.426148	92.2054	-263.24
67	5	-0.412463	92.3755	-265.302
68	5	-0.398855	92.5346	-267.296
69	5	-0.385321	92.683	-269.223
70	5	-0.371856	92.8213	-271.082
71	5	-0.358459	92.9498	-272.874
72	5	-0.345126	93.0689	-274.6
73	5	-0.331854	93.1791	-276.259
74	5	-0.318639	93.2806	-277.852
75	5	-0.305481	93.3739	-279.38
76	5	-0.292375	93.4594	-280.842
77	5	-0.279319	93.5374	-282.238
78	5	-0.266311	93.6083	-283.57
79	5	-0.250759	93.6712	-284.824
80	5	-0.237847	93.7278	-286.013
81	5	-0.224974	93.7784	-287.138
82	5	-0.212137	93.8234	-288.198
83	5	-0.199336	93.8631	-289.195
84	5	-0.186567	93.8979	-290.128
85	5	-0.173829	93.9282	-290.997
86	5	-0.161119	93.9541	-291.803
87	5	-0.148434	93.9762	-292.545
88	5	-0.135774	93.9946	-293.224
89	5	-0.123135	94.0097	-293.839
90	5	-0.110516	94.022	-294.392
91	5	-0.0979139	94.0315	-294.882
92	5	-0.0828129	94.0384	-295.296
93	5	-0.0702426	94.0433	-295.647
94	5	-0.0576847	94.0467	-295.935
95	5	-0.0451348	94.0487	-296.161
96	5	-0.0325917	94.0498	-296.324
97	5	-0.0200544	94.0502	-296.424
98	5	-0.00751925	94.0502	-296.462
99	5	0.00751925	94.0503	-296.424
100	5	0.0200544	94.0507	-296.324
101	5	0.0325917	94.0517	-296.161
102	5	0.0451348	94.0538	-295.935
103	5	0.0576847	94.0571	-295.647
104	5	0.0702426	94.062	-295.296
105	5	0.0828129	94.0689	-294.882
106	5	0.0979139	94.0785	-294.392
107	5	0.110516	94.0907	-293.839
108	5	0.123135	94.1059	-293.224
109	5	0.135774	94.1243	-292.545
110	5	0.148434	94.1463	-291.803
111	5	0.161119	94.1723	-290.997

112	5	0.173829	94.2025	-290.128
113	5	0.186567	94.2373	-289.195
114	5	0.199336	94.2771	-288.198
115	5	0.212137	94.3221	-287.138
116	5	0.224974	94.3727	-286.013
117	5	0.237847	94.4292	-284.824
118	5	0.250759	94.4921	-283.57
119	5	0.266311	94.563	-282.238
120	5	0.279319	94.6411	-280.842
121	5	0.292375	94.7265	-279.38
122	5	0.305481	94.8199	-277.852
123	5	0.318639	94.9214	-276.259
124	5	0.331854	95.0315	-274.6
125	5	0.345126	95.1506	-272.874
126	5	0.358459	95.2791	-271.082
127	5	0.371856	95.4174	-269.223
128	5	0.385321	95.5659	-267.296
129	5	0.398855	95.725	-265.302
130	5	0.412463	95.8951	-263.24
131	5	0.426148	96.0767	-261.109
132	5	0.442676	96.2726	-258.895
133	5	0.456542	96.4811	-256.613
134	5	0.470498	96.7024	-254.26
135	5	0.484544	96.9372	-251.838
136	5	0.498687	97.1859	-249.344
137	5	0.51293	97.449	-246.779
138	5	0.52728	97.727	-244.143
139	5	0.541736	98.0205	-241.434
140	5	0.556308	98.33	-238.653
141	5	0.570999	98.656	-235.798
142	5	0.585815	98.9992	-232.869
143	5	0.60076	99.3601	-229.865
144	5	0.615839	99.7394	-226.786
145	5	0.634124	100.141	-223.615
146	5	0.649522	100.563	-220.368
147	5	0.665079	101.006	-217.042
148	5	0.680797	101.469	-213.638
149	5	0.696684	101.955	-210.155
150	5	0.712751	102.463	-206.591
151	5	0.729003	102.994	-202.946
152	5	0.745449	103.55	-199.219
153	5	0.7621	104.131	-195.408
154	5	0.778966	104.737	-191.513
155	5	0.796056	105.371	-187.533
156	5	0.813379	106.033	-183.466
157	5	0.830953	106.723	-179.311
158	5	0.852385	107.45	-175.05
159	5	0.87055	108.207	-170.697
160	5	0.889006	108.998	-166.252
161	5	0.907769	109.822	-161.713
162	5	0.926859	110.681	-157.079
163	5	0.946291	111.576	-152.347
164	5	0.966088	112.51	-147.517
165	5	0.986272	113.482	-142.585
166	5	1.00687	114.496	-137.551
167	5	1.02789	115.553	-132.412
168	5	1.04939	116.654	-127.165
169	5	1.07138	117.802	-121.808
170	5	1.0939	118.998	-116.338
171	5	1.12168	120.257	-110.73
172	5	1.1455	121.569	-105.002
173	5	1.17	122.938	-99.1524

174	5	1.19522	124.366	-93.1762
175	5	1.22123	125.858	-87.0701
176	5	1.24809	127.415	-80.8297
177	5	1.27588	129.043	-74.4503
178	5	1.30469	130.745	-67.9269
179	5	1.33462	132.527	-61.2537
180	5	1.36581	134.392	-54.4247
181	5	1.39838	136.348	-47.4328
182	5	1.4325	138.4	-40.2703
183	5	1.46838	140.556	-32.9284
184	5	1.5141	142.848	-25.3579
185	5	1.55477	145.266	-17.584
186	5	1.59819	147.82	-9.59306
187	5	1.64485	150.525	-1.36879
188	5	1.6954	153.4	7.1082
189	5	1.75069	156.465	15.8616
190	5	1.81191	159.748	24.9212
191	5	1.88079	163.285	34.3251
192	5	1.95996	167.126	44.125
193	5	2.05375	171.344	54.3937
194	5	2.17009	176.054	65.2441
195	5	2.32634	181.466	76.8759
196	5	2.57583	188.1	89.755

Data Set Standard Deviation = 1.00345
Numerator = 8055.97
Denominator = 36933.2
W Statistic = 0.218122 = 8055.97 / 36933.2

5% Critical value of 0.976 exceeds 0.218122
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.218122
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Dibutyl Phthalate

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.38629	-2.57583	6.63492	3.57086
2	-1.38629	-2.32634	12.0468	6.79586
3	-1.36649	-2.17009	16.7561	9.76127
4	-1.36649	-2.05375	20.974	12.5677
5	-1.36649	-1.95996	24.8154	15.246
6	-1.34707	-1.88079	28.3528	17.7795
7	-1.34707	-1.81191	31.6358	20.2203
8	-1.34707	-1.75069	34.7007	22.5786
9	-1.34707	-1.6954	37.5751	24.8624
10	1.09861	-1.64485	40.2806	23.0554
11	1.60944	-1.59819	42.8348	20.4832
12	1.60944	-1.55477	45.2522	17.9809
13	1.60944	-1.5141	47.5447	15.544
14	1.60944	-1.46838	49.7008	13.1808
15	1.60944	-1.4325	51.7529	10.8752
16	1.60944	-1.39838	53.7083	8.62464
17	1.60944	-1.36581	55.5738	6.42645
18	1.60944	-1.33462	57.355	4.27846
19	1.60944	-1.30469	59.0572	2.17865
20	1.60944	-1.27588	60.6851	0.125206
21	1.60944	-1.24809	62.2428	-1.88351
22	1.60944	-1.22123	63.7342	-3.849
23	1.60944	-1.19522	65.1627	-5.77264
24	1.60944	-1.17	66.5316	-7.65568
25	1.60944	-1.1455	67.8438	-9.4993
26	1.60944	-1.12168	69.102	-11.3046
27	1.60944	-1.0939	70.2986	-13.0651
28	1.60944	-1.07138	71.4464	-14.7894
29	1.60944	-1.04939	72.5476	-16.4784
30	1.60944	-1.02789	73.6042	-18.1327
31	1.60944	-1.00687	74.618	-19.7532
32	1.60944	-0.986272	75.5907	-21.3405
33	1.60944	-0.966088	76.524	-22.8954
34	1.60944	-0.946291	77.4195	-24.4184
35	1.60944	-0.926859	78.2786	-25.9101
36	1.60944	-0.907769	79.1026	-27.3711
37	1.60944	-0.889006	79.893	-28.8019
38	1.60944	-0.870558	80.6508	-30.203
39	1.60944	-0.852385	81.3774	-31.5749
40	1.60944	-0.830953	82.0679	-32.9122
41	1.60944	-0.813379	82.7294	-34.2213
42	1.60944	-0.796056	83.3632	-35.5025
43	1.60944	-0.778966	83.9699	-36.7562
44	1.60944	-0.7621	84.5507	-37.9828
45	1.60944	-0.745449	85.1064	-39.1825
46	1.60944	-0.729003	85.6379	-40.3558
47	1.60944	-0.712751	86.1459	-41.5029
48	1.60944	-0.696684	86.6313	-42.6242
49	1.60944	-0.680797	87.0947	-43.7199

50	1.60944	-0.665079	87.5371	-44.7903
51	1.60944	-0.649522	87.959	-45.8357
52	1.60944	-0.634124	88.3611	-46.8563
53	1.60944	-0.615839	88.7403	-47.8474
54	1.60944	-0.6007689.1012	-48.8143	
55	1.60944	-0.585815	89.4444	-49.7571
56	1.60944	-0.570999	89.7705	-50.6761
57	1.60944	-0.556308	90.0799	-51.5715
58	1.60944	-0.541736	90.3734	-52.4433
59	1.60944	-0.5272890.6514	-53.292	
60	1.60944	-0.5129390.9145	-54.1175	
61	1.60944	-0.498687	91.1632	-54.9201
62	1.60944	-0.484544	91.398	-55.6999
63	1.60944	-0.470498	91.6194	-56.4572
64	1.60944	-0.456542	91.8278	-57.192
65	1.60944	-0.442676	92.0238	-57.9044
66	1.60944	-0.426148	92.2054	-58.5903
67	1.60944	-0.412463	92.3755	-59.2541
68	1.60944	-0.398855	92.5346	-59.896
69	1.60944	-0.385321	92.683	-60.5162
70	1.60944	-0.371856	92.8213	-61.1147
71	1.60944	-0.358459	92.9498	-61.6916
72	1.60944	-0.345126	93.0689	-62.2471
73	1.60944	-0.331854	93.1791	-62.7812
74	1.60944	-0.318639	93.2806	-63.294
75	1.60944	-0.305481	93.3739	-63.7856
76	1.60944	-0.292375	93.4594	-64.2562
77	1.60944	-0.279319	93.5374	-64.7057
78	1.60944	-0.266311	93.6083	-65.1344
79	1.60944	-0.250759	93.6712	-65.5379
80	1.60944	-0.237847	93.7278	-65.9207
81	1.60944	-0.224974	93.7784	-66.2828
82	1.60944	-0.212137	93.8234	-66.6242
83	1.60944	-0.199336	93.8631	-66.9451
84	1.60944	-0.186567	93.8979	-67.2453
85	1.60944	-0.173829	93.9282	-67.5251
86	1.60944	-0.161119	93.9541	-67.7844
87	1.60944	-0.148434	93.9762	-68.0233
88	1.60944	-0.135774	93.9946	-68.2418
89	1.60944	-0.123135	94.0097	-68.44
90	1.60944	-0.110516	94.022	-68.6179
91	1.60944	-0.0979139	94.0315	-68.7755
92	1.60944	-0.0828129	94.0384	-68.9087
93	1.60944	-0.0702426	94.0433	-69.0218
94	1.60944	-0.0576847	94.0467	-69.1146
95	1.60944	-0.0451348	94.0487	-69.1873
96	1.60944	-0.0325917	94.0498	-69.2397
97	1.60944	-0.0200544	94.0502	-69.272
98	1.60944	-0.00751925	94.0502	-69.2841
99	1.60944	0.00751925	94.0503	-69.272
100	1.60944	0.0200544	94.0507	-69.2397
101	1.60944	0.0325917	94.0517	-69.1873
102	1.60944	0.0451348	94.0538	-69.1146
103	1.60944	0.0576847	94.0571	-69.0218
104	1.60944	0.0702426	94.062	-68.9087
105	1.60944	0.0828129	94.0689	-68.7755
106	1.60944	0.0979139	94.0785	-68.6179
107	1.60944	0.110516	94.0907	-68.44
108	1.60944	0.123135	94.1059	-68.2418
109	1.60944	0.135774	94.1243	-68.0233
110	1.60944	0.148434	94.1463	-67.7844
111	1.60944	0.161119	94.1723	-67.5251

112	1.60944	0.173829		94.2025	-67.2453
113	1.60944	0.186567		94.2373	-66.9451
114	1.60944	0.199336		94.2771	-66.6242
115	1.60944	0.212137		94.3221	-66.2828
116	1.60944	0.224974		94.3727	-65.9207
117	1.60944	0.237847		94.4292	-65.5379
118	1.60944	0.250759		94.4921	-65.1344
119	1.60944	0.266311		94.563	-64.7057
120	1.60944	0.279319		94.6411	-64.2562
121	1.60944	0.292375		94.7265	-63.7856
122	1.60944	0.305481		94.8199	-63.294
123	1.60944	0.318639		94.9214	-62.7812
124	1.60944	0.331854		95.0315	-62.2471
125	1.60944	0.345126		95.1506	-61.6916
126	1.60944	0.358459		95.2791	-61.1147
127	1.60944	0.371856		95.4174	-60.5162
128	1.60944	0.385321		95.5659	-59.896
129	1.60944	0.398855		95.725	-59.2541
130	1.60944	0.412463		95.8951	-58.5903
131	1.60944	0.426148		96.0767	-57.9044
132	1.60944	0.442676		96.2726	-57.192
133	1.60944	0.456542		96.4811	-56.4572
134	1.60944	0.470498		96.7024	-55.6999
135	1.60944	0.484544		96.9372	-54.9201
136	1.60944	0.498687		97.1859	-54.1175
137	1.60944	0.51293	97.449	-53.292	
138	1.60944	0.52728	97.727	-52.4433	
139	1.60944	0.541736		98.0205	-51.5715
140	1.60944	0.556308		98.33	-50.6761
141	1.60944	0.570999		98.656	-49.7571
142	1.60944	0.585815		98.9992	-48.8143
143	1.60944	0.60076	99.3601	-47.8474	
144	1.60944	0.615839		99.7394	-46.8563
145	1.60944	0.634124		100.141	-45.8357
146	1.60944	0.649522		100.563	-44.7903
147	1.60944	0.665079		101.006	-43.7199
148	1.60944	0.680797		101.469	-42.6242
149	1.60944	0.696684		101.955	-41.5029
150	1.60944	0.712751		102.463	-40.3558
151	1.60944	0.729003		102.994	-39.1825
152	1.60944	0.745449		103.55	-37.9828
153	1.60944	0.7621	104.131	-36.7562	
154	1.60944	0.778966		104.737	-35.5025
155	1.60944	0.796056		105.371	-34.2213
156	1.60944	0.813379		106.033	-32.9122
157	1.60944	0.830953		106.723	-31.5749
158	1.60944	0.852385		107.45	-30.203
159	1.60944	0.87055	108.207	-28.8019	
160	1.60944	0.889006		108.998	-27.3711
161	1.60944	0.907769		109.822	-25.9101
162	1.60944	0.926859		110.681	-24.4184
163	1.60944	0.946291		111.576	-22.8954
164	1.60944	0.966088		112.51	-21.3405
165	1.60944	0.986272		113.482	-19.7532
166	1.60944	1.00687	114.496	-18.1327	
167	1.60944	1.02789	115.553	-16.4784	
168	1.60944	1.04939	116.654	-14.7894	
169	1.60944	1.07138	117.802	-13.0651	
170	1.60944	1.0939	118.998	-11.3046	
171	1.60944	1.12168	120.257	-9.4993	
172	1.60944	1.1455	121.569	-7.65568	
173	1.60944	1.17	122.938	-5.77264	

174	1.60944	1.19522	124.366	-3.849
175	1.60944	1.22123	125.858	-1.88351
176	1.60944	1.24809	127.415	0.125206
177	1.60944	1.27588	129.043	2.17865
178	1.60944	1.30469	130.745	4.27846
179	1.60944	1.33462	132.527	6.42645
180	1.60944	1.36581	134.392	8.62464
181	1.60944	1.39838	136.348	10.8752
182	1.60944	1.4325	138.4	13.1808
183	1.60944	1.46838	140.556	15.544
184	1.60944	1.5141	142.848	17.9809
185	1.60944	1.55477	145.266	20.4832
186	1.60944	1.59819	147.82	23.0554
187	1.60944	1.64485	150.525	25.7027
188	1.60944	1.6954	153.4	28.4313
189	1.60944	1.75069	156.465	31.2489
190	1.60944	1.81191	159.748	34.1651
191	1.60944	1.88079	163.285	37.1921
192	1.60944	1.95996	167.126	40.3465
193	1.60944	2.05375	171.344	43.6519
194	1.60944	2.17009	176.054	47.1446
195	1.60944	2.32634	181.466	50.8887
196	1.60944	2.57583	188.1	55.0343

Data Set Standard Deviation = 0.624096
Numerator = 3028.77
Denominator = 14286.6
W Statistic = 0.212002 = 3028.77 / 14286.6

5% Critical value of 0.976 exceeds 0.212002
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.212002
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Dibutyl Phthalate

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

Total Percent Non-Detects = 99.4898%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 15
Maximum Background Concentration = 1.60944
Confidence Level = 65.2%
False Positive Rate = 34.8%

Location	Date	Samples	Mean	Significant
MW-9	11/15/2009	1	1.09861	FALSE
MW-6	6/11/2009	1	-1.34707	FALSE
MW-8	6/11/2009	1	-1.36649	FALSE
MW-10	6/11/2009	1	-1.34707	FALSE
MW-12BR	6/11/2009	1	-1.36649	FALSE
MW-12AR	6/11/2009	1	-1.36649	FALSE
MW-7	6/11/2009	1	-1.38629	FALSE
MW-11R	6/11/2009	1	-1.38629	FALSE

Concentrations (ug/L)

Parameter: Dichlorodifluoromethane

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 196
Total Non-Detect: 139
Percent Non-Detects: 70.9184%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-11R	26	9 (34.6154%)	7/20/1995	ND<2	ND<2
			8/24/1995	59	59
			9/28/1995	16	16
			10/26/1995	ND<2	ND<2
			11/19/1996	120	120
			12/19/1996	120	120
			3/24/1997	49	49
			9/24/1997	20	20
			4/7/1998	27	27
			9/23/1998	13	13
			3/16/1999	8.1	8.1
			9/23/1999	ND<2	ND<2
			3/15/2000	15	15
			9/24/2003	ND<2	ND<2
			3/11/2004	ND<2	ND<2
			10/12/2004	ND<2	ND<2
			4/1/2005	4.85	4.85
			10/25/2005	0.8 J	0.8 J
			4/29/2006	ND<2	ND<2
			11/18/2006	0.68 J	0.68 J
			5/23/2007	ND<2	ND<2
			11/28/2007	0.41 J	0.41 J
			6/5/2008	ND<2	ND<2
			11/20/2008	1.64 J	1.64 J
			6/11/2009	1.3	1.3
			11/15/2009	1.1	1.1

MW-10	25	18 (72%)	7/20/1995		ND<2	ND<2	
			8/24/1995	1.7 J	1.7 J		
			9/28/1995	2	2		
			10/26/1995	ND<2	ND<2		
			11/19/1996	ND<2	ND<2		
			12/19/1996	8	8		
			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	2.96	2.96		
			10/25/2005	2.13	2.13		
			4/29/2006	1.5 J	1.5 J		
			11/18/2006	0.62 J	0.62 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<0.25		ND<0.25	
MW-12AR		15	9 (60%)	3/16/1999		ND<2	ND<2
			9/23/1999	ND<2	ND<2		
			3/15/2000	12	12		
			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	5.11	5.11		
			4/29/2006	4.41	4.41		
			11/18/2006	3.61	3.61		
			5/23/2007	ND<2	ND<2		
			11/28/2007	1.81 J	1.81 J		
			6/5/2008	1.45 J	1.45 J		
			11/20/2008	ND<2	ND<2		
			6/11/2009	ND<0.25		ND<0.25	
MW-12BR		15	13 (86.6667%)	3/16/1999		9.6	9.6
			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	3.73	3.73		
			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	
MW-6	25	24 (96%)	7/20/1995		ND<2	ND<2	
			8/24/1995	ND<2	ND<2		
			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	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
MW-7	25	20 (80%)	7/20/1995		ND<2	ND<2
			8/24/1995	19	19	
			9/28/1995	20	20	
			10/26/1995	ND<2	ND<2	
			11/19/1996	20	20	
			12/19/1996	ND<2	ND<2	
			3/24/1997	10	10	
			9/24/1997	ND<2	ND<2	
			4/7/1998	5.7	5.7	
			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
MW-9	25	16 (64%)	7/20/1995		ND<2	ND<2
			8/24/1995	49	49	
			9/28/1995	42	42	
			10/26/1995	ND<2	ND<2	
			11/19/1996	49	49	
			12/19/1996	71	71	
			3/24/1997	18	18	
			9/24/1997	20	20	
			4/7/1998	5.7	5.7	
			9/23/1998	ND<2	ND<2	
			3/16/1999	11	11	
			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	1.66 J	1.66 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
MW-8	25	15 (60%)	7/20/1995		ND<2	ND<2
			8/24/1995	8.8	8.8	
			9/28/1995	8	8	
			10/26/1995	ND<2	ND<2	
			11/19/1996	12	12	
			12/19/1996	13	13	
			3/24/1997	8	8	
			9/24/1997	ND<2	ND<2	
			4/7/1998	5.7	5.7	
			9/23/1998	ND<2	ND<2	
			3/16/1999	2.1	2.1	
			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	0.61 J	0.61 J	
			11/18/2006	0.58 J	0.58 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	1.9	1.9	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Dichlorodifluoromethane

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.125	-2.575836	3.63492	-0.321979
2	0.125	-2.326341	2.0468	-0.612772
3	0.125	-2.170091	6.7561	-0.884033
4	0.125	-2.053752	0.974	-1.14075
5	0.125	-1.959962	4.8154	-1.38575
6	0.125	-1.880792	8.3528	-1.62085
7	0.125	-1.811913	1.6358	-1.84733
8	0.41	-1.750693	4.7007	-2.56512
9	0.58	-1.6954	37.5751	-3.54845
10	0.6	-1.644854	0.2806	-4.53536
11	0.61	-1.598194	2.8348	-5.51026
12	0.62	-1.554774	5.2522	-6.47421
13	0.68	-1.5141	47.5447	-7.50381
14	0.8	-1.468384	9.7008	-8.67851
15	1	-1.4325	51.7529	-10.111
16	1	-1.398385	3.7083	-11.5094
17	1	-1.365815	5.5738	-12.8752
18	1	-1.334625	7.355	-14.2098
19	1	-1.304695	9.0572	-15.5145
20	1	-1.275886	0.6851	-16.7904
21	1	-1.248096	2.2428	-18.0385
22	1	-1.221236	3.7342	-19.2597
23	1	-1.195226	5.1627	-20.4549
24	1	-1.17	66.5316	-21.6249
25	1	-1.1455	67.8438	-22.7704
26	1	-1.121686	9.102	-23.8921
27	1	-1.0939	70.2986	-24.986
28	1	-1.071387	1.4464	-26.0574
29	1	-1.049397	2.5476	-27.1068
30	1	-1.027897	3.6042	-28.1347
31	1	-1.006877	4.618	-29.1415
32	1	-0.986272	75.5907	-30.1278
33	1	-0.966088	76.524	-31.0939
34	1	-0.946291	77.4195	-32.0402
35	1	-0.926859	78.2786	-32.967
36	1	-0.907769	79.1026	-33.8748
37	1	-0.889006	79.893	-34.7638
38	1	-0.870558	0.6508	-35.6344
39	1	-0.852385	81.3774	-36.4867
40	1	-0.830953	82.0679	-37.3177
41	1	-0.813379	82.7294	-38.1311
42	1	-0.796056	83.3632	-38.9271
43	1	-0.778966	83.9699	-39.7061
44	1	-0.7621	84.5507	-40.4682
45	1	-0.745449	85.1064	-41.2136
46	1	-0.729003	85.6379	-41.9426
47	1	-0.712751	86.1459	-42.6554
48	1	-0.696684	86.6313	-43.3521
49	1	-0.680797	87.0947	-44.0329

50	1	-0.665079	87.5371	-44.698
51	1	-0.649522	87.959	-45.3475
52	1	-0.634124	88.3611	-45.9816
53	1	-0.615839	88.7403	-46.5974
54	1	-0.6007689.1012	-47.1982	
55	1	-0.585815	89.4444	-47.784
56	1	-0.570999	89.7705	-48.355
57	1	-0.556308	90.0799	-48.9113
58	1	-0.541736	90.3734	-49.4531
59	1	-0.5272890.6514	-49.9803	
60	1	-0.5129390.9145	-50.4933	
61	1	-0.498687	91.1632	-50.992
62	1	-0.484544	91.398	-51.4765
63	1	-0.470498	91.6194	-51.947
64	1	-0.456542	91.8278	-52.4035
65	1	-0.442676	92.0238	-52.8462
66	1	-0.426148	92.2054	-53.2724
67	1	-0.412463	92.3755	-53.6848
68	1	-0.398855	92.5346	-54.0837
69	1	-0.385321	92.683	-54.469
70	1	-0.371856	92.8213	-54.8409
71	1	-0.358459	92.9498	-55.1993
72	1	-0.345126	93.0689	-55.5444
73	1	-0.331854	93.1791	-55.8763
74	1	-0.318639	93.2806	-56.1949
75	1	-0.305481	93.3739	-56.5004
76	1	-0.292375	93.4594	-56.7928
77	1	-0.279319	93.5374	-57.0721
78	1	-0.266311	93.6083	-57.3384
79	1	-0.250759	93.6712	-57.5892
80	1	-0.237847	93.7278	-57.827
81	1	-0.224974	93.7784	-58.052
82	1	-0.212137	93.8234	-58.2641
83	1	-0.199336	93.8631	-58.4635
84	1	-0.186567	93.8979	-58.65
85	1	-0.173829	93.9282	-58.8239
86	1	-0.161119	93.9541	-58.985
87	1	-0.148434	93.9762	-59.1334
88	1	-0.135774	93.9946	-59.2692
89	1	-0.123135	94.0097	-59.3923
90	1	-0.110516	94.022	-59.5029
91	1	-0.0979139	94.0315	-59.6008
92	1	-0.0828129	94.0384	-59.6836
93	1	-0.0702426	94.0433	-59.7538
94	1	-0.0576847	94.0467	-59.8115
95	1	-0.0451348	94.0487	-59.8566
96	1	-0.0325917	94.0498	-59.8892
97	1	-0.0200544	94.0502	-59.9093
98	1	-0.00751925	94.0502	-59.9168
99	1	0.00751925	94.0503	-59.9093
100	1	0.0200544	94.0507	-59.8892
101	1	0.0325917	94.0517	-59.8566
102	1	0.0451348	94.0538	-59.8115
103	1	0.0576847	94.0571	-59.7538
104	1	0.0702426	94.062	-59.6836
105	1	0.0828129	94.0689	-59.6008
106	1	0.0979139	94.0785	-59.5029
107	1	0.110516	94.0907	-59.3923
108	1	0.123135	94.1059	-59.2692
109	1	0.135774	94.1243	-59.1334
110	1	0.148434	94.1463	-58.985
111	1	0.161119	94.1723	-58.8239

112	1	0.173829		94.2025	-58.65
113	1	0.186567		94.2373	-58.4635
114	1	0.199336		94.2771	-58.2641
115	1	0.212137		94.3221	-58.052
116	1	0.224974		94.3727	-57.827
117	1	0.237847		94.4292	-57.5892
118	1	0.250759		94.4921	-57.3384
119	1	0.266311		94.563	-57.0721
120	1	0.279319		94.6411	-56.7928
121	1	0.292375		94.7265	-56.5004
122	1	0.305481		94.8199	-56.1949
123	1	0.318639		94.9214	-55.8763
124	1	0.331854		95.0315	-55.5444
125	1	0.345126		95.1506	-55.1993
126	1	0.358459		95.2791	-54.8409
127	1	0.371856		95.4174	-54.469
128	1	0.385321		95.5659	-54.0837
129	1	0.398855		95.725	-53.6848
130	1	0.412463		95.8951	-53.2724
131	1	0.426148		96.0767	-52.8462
132	1	0.442676		96.2726	-52.4035
133	1	0.456542		96.4811	-51.947
134	1	0.470498		96.7024	-51.4765
135	1	0.484544		96.9372	-50.992
136	1	0.498687		97.1859	-50.4933
137	1	0.51293	97.449	-49.9803	
138	1	0.52728	97.727	-49.4531	
139	1	0.541736		98.0205	-48.9113
140	1	0.556308		98.33	-48.355
141	1	0.570999		98.656	-47.784
142	1	0.585815		98.9992	-47.1982
143	1	0.60076	99.3601	-46.5974	
144	1	0.615839		99.7394	-45.9816
145	1	0.634124		100.141	-45.3475
146	1	0.649522		100.563	-44.698
147	1.1	0.665079		101.006	-43.9664
148	1.3	0.680797		101.469	-43.0813
149	1.45	0.696684		101.955	-42.0711
150	1.5	0.712751		102.463	-41.002
151	1.64	0.729003		102.994	-39.8065
152	1.66	0.745449		103.55	-38.569
153	1.7	0.7621	104.131	-37.2734	
154	1.81	0.778966		104.737	-35.8635
155	1.9	0.796056		105.371	-34.351
156	2	0.813379		106.033	-32.7242
157	2.1	0.830953		106.723	-30.9792
158	2.13	0.852385		107.45	-29.1637
159	2.96	0.87055	108.207	-26.5868	
160	3.61	0.889006		108.998	-23.3775
161	3.73	0.907769		109.822	-19.9915
162	4.41	0.926859		110.681	-15.9041
163	4.85	0.946291		111.576	-11.3146
164	5.11	0.966088		112.51	-6.37788
165	5.7	0.986272		113.482	-0.756126
166	5.7	1.00687	114.496	4.98301	
167	5.7	1.02789	115.553	10.842	
168	8	1.04939	116.654	19.2371	
169	8	1.07138	117.802	27.8081	
170	8	1.0939	118.998	36.5593	
171	8.1	1.12168	120.257	45.6449	
172	8.8	1.1455	121.569	55.7253	
173	9.6	1.17	122.938	66.9573	

174	10	1.19522	124.366	78.9095
175	11	1.22123	125.858	92.3431
176	12	1.24809	127.415	107.32
177	12	1.27588	129.043	122.631
178	13	1.30469	130.745	139.592
179	13	1.33462	132.527	156.942
180	15	1.36581	134.392	177.429
181	16	1.39838	136.348	199.803
182	18	1.4325	138.4	225.588
183	19	1.46838	140.556	253.487
184	20	1.5141	142.848	283.769
185	20	1.55477	145.266	314.865
186	20	1.59819	147.82	346.828
187	20	1.64485	150.525	379.726
188	27	1.6954	153.4	425.501
189	42	1.75069	156.465	499.03
190	49	1.81191	159.748	587.814
191	49	1.88079	163.285	679.973
192	49	1.95996	167.126	776.011
193	59	2.05375	171.344	897.182
194	71	2.17009	176.054	1051.26
195	120	2.32634	181.466	1330.42
196	120	2.57583	188.1	1639.52

Data Set Standard Deviation = 15.318
Numerator = 2.68802e+006
Denominator = 8.60651e+006
W Statistic = 0.312324 = 2.68802e+006 / 8.60651e+006

5% Critical value of 0.976 exceeds 0.312324
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.312324
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Dichlorodifluoromethane

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.07944	-2.57583	6.63492	5.3563
2	-2.07944	-2.32634	12.0468	10.1938
3	-2.07944	-2.17009	16.7561	14.7064
4	-2.07944	-2.05375	20.974	18.977
5	-2.07944	-1.95996	24.8154	23.0526
6	-2.07944	-1.88079	28.3528	26.9636
7	-2.07944	-1.81191	31.6358	30.7314
8	-0.891598	-1.75069	34.7007	32.2923
9	-0.544727	-1.6954	37.5751	33.2158
10	-0.510826	-1.64485	40.2806	34.0561
11	-0.494296	-1.59819	42.8348	34.8461
12	-0.478036	-1.55477	45.2522	35.5893
13	-0.385662	-1.5141	47.5447	36.1732
14	-0.223144	-1.46838	49.7008	36.5009
15	0	-1.4325	51.7529	36.5009
16	0	-1.39838	53.7083	36.5009
17	0	-1.36581	55.5738	36.5009
18	0	-1.33462	57.355	36.5009
19	0	-1.30469	59.0572	36.5009
20	0	-1.27588	60.6851	36.5009
21	0	-1.24809	62.2428	36.5009
22	0	-1.22123	63.7342	36.5009
23	0	-1.19522	65.1627	36.5009
24	0	-1.17	66.5316	36.5009
25	0	-1.1455	67.8438	36.5009
26	0	-1.12168	69.102	36.5009
27	0	-1.0939	70.2986	36.5009
28	0	-1.07138	71.4464	36.5009
29	0	-1.04939	72.5476	36.5009
30	0	-1.02789	73.6042	36.5009
31	0	-1.00687	74.618	36.5009
32	0	-0.986272	75.5907	36.5009
33	0	-0.966088	76.524	36.5009
34	0	-0.946291	77.4195	36.5009
35	0	-0.926859	78.2786	36.5009
36	0	-0.907769	79.1026	36.5009
37	0	-0.889006	79.893	36.5009
38	0	-0.870558	80.6508	36.5009
39	0	-0.852385	81.3774	36.5009
40	0	-0.830953	82.0679	36.5009
41	0	-0.813379	82.7294	36.5009
42	0	-0.796056	83.3632	36.5009
43	0	-0.778966	83.9699	36.5009
44	0	-0.7621	84.5507	36.5009
45	0	-0.745449	85.1064	36.5009
46	0	-0.729003	85.6379	36.5009
47	0	-0.712751	86.1459	36.5009
48	0	-0.696684	86.6313	36.5009
49	0	-0.680797	87.0947	36.5009

50	0	-0.665079	87.5371	36.5009
51	0	-0.649522	87.959	36.5009
52	0	-0.634124	88.3611	36.5009
53	0	-0.615839	88.7403	36.5009
54	0	-0.6007689.1012	36.5009	
55	0	-0.585815	89.4444	36.5009
56	0	-0.570999	89.7705	36.5009
57	0	-0.556308	90.0799	36.5009
58	0	-0.541736	90.3734	36.5009
59	0	-0.5272890.6514	36.5009	
60	0	-0.5129390.9145	36.5009	
61	0	-0.498687	91.1632	36.5009
62	0	-0.484544	91.398	36.5009
63	0	-0.470498	91.6194	36.5009
64	0	-0.456542	91.8278	36.5009
65	0	-0.442676	92.0238	36.5009
66	0	-0.426148	92.2054	36.5009
67	0	-0.412463	92.3755	36.5009
68	0	-0.398855	92.5346	36.5009
69	0	-0.385321	92.683	36.5009
70	0	-0.371856	92.8213	36.5009
71	0	-0.358459	92.9498	36.5009
72	0	-0.345126	93.0689	36.5009
73	0	-0.331854	93.1791	36.5009
74	0	-0.318639	93.2806	36.5009
75	0	-0.305481	93.3739	36.5009
76	0	-0.292375	93.4594	36.5009
77	0	-0.279319	93.5374	36.5009
78	0	-0.266311	93.6083	36.5009
79	0	-0.250759	93.6712	36.5009
80	0	-0.237847	93.7278	36.5009
81	0	-0.224974	93.7784	36.5009
82	0	-0.212137	93.8234	36.5009
83	0	-0.199336	93.8631	36.5009
84	0	-0.186567	93.8979	36.5009
85	0	-0.173829	93.9282	36.5009
86	0	-0.161119	93.9541	36.5009
87	0	-0.148434	93.9762	36.5009
88	0	-0.135774	93.9946	36.5009
89	0	-0.123135	94.0097	36.5009
90	0	-0.110516	94.022	36.5009
91	0	-0.0979139	94.0315	36.5009
92	0	-0.0828129	94.0384	36.5009
93	0	-0.0702426	94.0433	36.5009
94	0	-0.0576847	94.0467	36.5009
95	0	-0.0451348	94.0487	36.5009
96	0	-0.0325917	94.0498	36.5009
97	0	-0.0200544	94.0502	36.5009
98	0	-0.00751925	94.0502	36.5009
99	0	0.00751925	94.0503	36.5009
100	0	0.0200544	94.0507	36.5009
101	0	0.0325917	94.0517	36.5009
102	0	0.0451348	94.0538	36.5009
103	0	0.0576847	94.0571	36.5009
104	0	0.0702426	94.062	36.5009
105	0	0.0828129	94.0689	36.5009
106	0	0.0979139	94.0785	36.5009
107	0	0.110516	94.0907	36.5009
108	0	0.123135	94.1059	36.5009
109	0	0.135774	94.1243	36.5009
110	0	0.148434	94.1463	36.5009
111	0	0.161119	94.1723	36.5009

112	0	0.173829		94.2025	36.5009
113	0	0.186567		94.2373	36.5009
114	0	0.199336		94.2771	36.5009
115	0	0.212137		94.3221	36.5009
116	0	0.224974		94.3727	36.5009
117	0	0.237847		94.4292	36.5009
118	0	0.250759		94.4921	36.5009
119	0	0.266311		94.563	36.5009
120	0	0.279319		94.6411	36.5009
121	0	0.292375		94.7265	36.5009
122	0	0.305481		94.8199	36.5009
123	0	0.318639		94.9214	36.5009
124	0	0.331854		95.0315	36.5009
125	0	0.345126		95.1506	36.5009
126	0	0.358459		95.2791	36.5009
127	0	0.371856		95.4174	36.5009
128	0	0.385321		95.5659	36.5009
129	0	0.398855		95.725	36.5009
130	0	0.412463		95.8951	36.5009
131	0	0.426148		96.0767	36.5009
132	0	0.442676		96.2726	36.5009
133	0	0.456542		96.4811	36.5009
134	0	0.470498		96.7024	36.5009
135	0	0.484544		96.9372	36.5009
136	0	0.498687		97.1859	36.5009
137	0	0.51293	97.449	36.5009	
138	0	0.52728	97.727	36.5009	
139	0	0.541736		98.0205	36.5009
140	0	0.556308		98.33	36.5009
141	0	0.570999		98.656	36.5009
142	0	0.585815		98.9992	36.5009
143	0	0.60076	99.3601	36.5009	
144	0	0.615839		99.7394	36.5009
145	0	0.634124		100.141	36.5009
146	0	0.649522		100.563	36.5009
147	0.0953102		0.665079		101.006	36.5643
148	0.262364		0.680797		101.469	36.7429
149	0.371564		0.696684		101.955	37.0017
150	0.405465		0.712751		102.463	37.2907
151	0.494696		0.729003		102.994	37.6514
152	0.506818		0.745449		103.55	38.0292
153	0.530628		0.7621	104.131	38.4336	
154	0.593327		0.778966		104.737	38.8958
155	0.641854		0.796056		105.371	39.4067
156	0.693147		0.813379		106.033	39.9705
157	0.741937		0.830953		106.723	40.587
158	0.756122		0.852385		107.45	41.2315
159	1.08519	0.87055	108.207	42.1762		
160	1.28371	0.889006		108.998	43.3175	
161	1.31641	0.907769		109.822	44.5125	
162	1.48387	0.926859		110.681	45.8878	
163	1.57898	0.946291		111.576	47.382	
164	1.6312	0.966088		112.51	48.9579	
165	1.74047	0.986272		113.482	50.6744	
166	1.74047	1.00687	114.496	52.4268		
167	1.74047	1.02789	115.553	54.2159		
168	2.07944	1.04939	116.654	56.398		
169	2.07944	1.07138	117.802	58.6259		
170	2.07944	1.0939	118.998	60.9006		
171	2.09186	1.12168	120.257	63.247		
172	2.17475	1.1455	121.569	65.7381		
173	2.26176	1.17	122.938	68.3844		

174	2.30259	1.19522	124.366	71.1365
175	2.3979	1.22123	125.858	74.0649
176	2.48491	1.24809	127.415	77.1663
177	2.48491	1.27588	129.043	80.3367
178	2.56495	1.30469	130.745	83.6831
179	2.56495	1.33462	132.527	87.1064
180	2.70805	1.36581	134.392	90.8051
181	2.77259	1.39838	136.348	94.6822
182	2.89037	1.4325	138.4	98.8226
183	2.94444	1.46838	140.556	103.146
184	2.99573	1.5141	142.848	107.682
185	2.99573	1.55477	145.266	112.34
186	2.99573	1.59819	147.82	117.128
187	2.99573	1.64485	150.525	122.055
188	3.29584	1.6954	153.4	127.643
189	3.73767	1.75069	156.465	134.186
190	3.89182	1.81191	159.748	141.238
191	3.89182	1.88079	163.285	148.558
192	3.89182	1.95996	167.126	156.185
193	4.07754	2.05375	171.344	164.56
194	4.26268	2.17009	176.054	173.81
195	4.78749	2.32634	181.466	184.947
196	4.78749	2.57583	188.1	197.279

Data Set Standard Deviation = 1.23812
Numerator = 38919.1
Denominator = 56227.9
W Statistic = 0.692167 = 38919.1 / 56227.9

5% Critical value of 0.976 exceeds 0.692167
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.692167
Evidence of non-normality at 99% level of significance

Kruskal-Wallis Non-Parametric Test

Parameter: Dichlorodifluoromethane

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	70
	9/23/1999	ND<0	70
	3/15/2000	ND<0	70
	9/24/2003	ND<0	70
	3/11/2004	ND<0	70
	10/12/2004	ND<0	70
	4/1/2005	ND<0	70
	10/25/2005	ND<0	70
	4/29/2006	ND<0	70
	11/18/2006	ND<0	70
	5/23/2007	ND<0	70
	11/28/2007	ND<0	70
	6/5/2008	ND<0	70
	11/20/2008	ND<0	70
	6/11/2009	ND<-2.07944	70

Rank Sum = 1050
Rank Mean = 70

Background Rank Sum = 1050
Background Rank Mean = 70

Compliance Wells

Well ID	Date	Result	Rank
MW-11R	7/20/1995	ND<0	70
	8/24/1995	4.07754	193
	9/28/1995	2.77259	181
	10/26/1995	ND<0	70
	11/19/1996	4.78749	195
	12/19/1996	4.78749	196
	3/24/1997	3.89182	190
	9/24/1997	2.99573	184
	4/7/1998	3.29584	188
	9/23/1998	2.56495	178
	3/16/1999	2.09186	171
	9/23/1999	ND<0	70
	3/15/2000	2.70805	180
	9/24/2003	ND<0	70
	3/11/2004	ND<0	70
	10/12/2004	ND<0	70
	4/1/2005	1.57898	163
	10/25/2005	-0.223144 J	146
	4/29/2006	ND<0	70
	11/18/2006	-0.385662 J	145
	5/23/2007	ND<0	70
	11/28/2007	-0.891598 J	140
	6/5/2008	ND<0	70

	11/20/2008	0.494696	J	151
	6/11/2009	0.262364		148
	11/15/2009	0.0953102		147

Rank Sum = 3526
Rank Mean = 135.615

MW-10	7/20/1995	ND<0	70	
	8/24/1995	0.530628	J	153
	9/28/1995	0.693147		156
	10/26/1995	ND<0	70	
	11/19/1996	ND<0	70	
	12/19/1996	2.07944		168
	3/24/1997	ND<0	70	
	9/24/1997	ND<0	70	
	4/7/1998	ND<0	70	
	9/23/1998	ND<0	70	
	3/16/1999	ND<0	70	
	9/23/1999	ND<0	70	
	3/15/2000	ND<0	70	
	9/24/2003	ND<0	70	
	3/11/2004	ND<0	70	
	10/12/2004	ND<0	70	
	4/1/2005	1.08519		159
	10/25/2005	0.756122		158
	4/29/2006	0.405465	J	150
	11/18/2006	-0.478036	J	144
	5/23/2007	ND<0	70	
	11/28/2007	ND<0	70	
	6/5/2008	ND<0	70	
	11/20/2008	ND<0	70	
	6/11/2009	ND<-2.07944		70

Rank Sum = 2348
Rank Mean = 93.92

MW-12AR	3/16/1999	ND<0	70	
	9/23/1999	ND<0	70	
	3/15/2000	2.48491		176
	9/24/2003	ND<0	70	
	3/11/2004	ND<0	70	
	10/12/2004	ND<0	70	
	4/1/2005	ND<0	70	
	10/25/2005	1.6312	164	
	4/29/2006	1.48387		162
	11/18/2006	1.28371		160
	5/23/2007	ND<0	70	
	11/28/2007	0.593327	J	154
	6/5/2008	0.371564	J	149
	11/20/2008	ND<0	70	
	6/11/2009	ND<-2.07944		70

Rank Sum = 1595
Rank Mean = 106.333

MW-12BR	3/16/1999	2.26176		173
	9/23/1999	ND<0	70	
	3/15/2000	ND<0	70	
	9/24/2003	ND<0	70	
	3/11/2004	ND<0	70	
	10/12/2004	ND<0	70	
	4/1/2005	1.31641		161
	10/25/2005	ND<0	70	
	4/29/2006	ND<0	70	
	11/18/2006	ND<0	70	

	5/23/2007	ND<0	70	
	11/28/2007	ND<0	70	
	6/5/2008	ND<0	70	
	11/20/2008	ND<0	70	
	6/11/2009	ND<-2.07944		70

Rank Sum = 1244
Rank Mean = 82.9333

MW-6	7/20/1995	ND<0	70	
	8/24/1995	ND<0	70	
	9/28/1995	-0.510826 J		142
	10/26/1995	ND<0	70	
	11/19/1996	ND<0	70	
	12/19/1996	ND<0	70	
	3/24/1997	ND<0	70	
	9/24/1997	ND<0	70	
	4/7/1998	ND<0	70	
	9/23/1998	ND<0	70	
	3/16/1999	ND<0	70	
	9/23/1999	ND<0	70	
	3/15/2000	ND<0	70	
	9/24/2003	ND<0	70	
	3/11/2004	ND<0	70	
	10/12/2004	ND<0	70	
	4/1/2005	ND<0	70	
	10/25/2005	ND<0	70	
	4/29/2006	ND<0	70	
	11/18/2006	ND<0	70	
	5/23/2007	ND<0	70	
	11/28/2007	ND<0	70	
	6/5/2008	ND<0	70	
	11/20/2008	ND<0	70	
	6/11/2009	ND<-2.07944		70

Rank Sum = 1822
Rank Mean = 72.88

MW-7	7/20/1995	ND<0	70	
	8/24/1995	2.94444		183
	9/28/1995	2.99573		185
	10/26/1995	ND<0	70	
	11/19/1996	2.99573		186
	12/19/1996	ND<0	70	
	3/24/1997	2.30259		174
	9/24/1997	ND<0	70	
	4/7/1998	1.74047	165	
	9/23/1998	ND<0	70	
	3/16/1999	ND<0	70	
	9/23/1999	ND<0	70	
	3/15/2000	ND<0	70	
	9/24/2003	ND<0	70	
	3/11/2004	ND<0	70	
	10/12/2004	ND<0	70	
	4/1/2005	ND<0	70	
	10/25/2005	ND<0	70	
	4/29/2006	ND<0	70	
	11/18/2006	ND<0	70	
	5/23/2007	ND<0	70	
	11/28/2007	ND<0	70	
	6/5/2008	ND<0	70	
	11/20/2008	ND<0	70	
	6/11/2009	ND<-2.07944		70

Rank Sum = 2293

Rank Mean = 91.72

MW-9	7/20/1995	ND<0	70	
	8/24/1995	3.89182		191
	9/28/1995	3.73767		189
	10/26/1995	ND<0	70	
	11/19/1996	3.89182		192
	12/19/1996	4.26268		194
	3/24/1997	2.89037		182
	9/24/1997	2.99573		187
	4/7/1998	1.74047	166	
	9/23/1998	ND<0	70	
	3/16/1999	2.3979	175	
	9/23/1999	ND<0	70	
	3/15/2000	ND<0	70	
	9/24/2003	ND<0	70	
	3/11/2004	ND<0	70	
	10/12/2004	ND<0	70	
	4/1/2005	0.506818 J	152	
	10/25/2005	ND<0	70	
	4/29/2006	ND<0	70	
	11/18/2006	ND<0	70	
	5/23/2007	ND<0	70	
	11/28/2007	ND<0	70	
	6/5/2008	ND<0	70	
	11/20/2008	ND<0	70	
	6/11/2009	ND<-2.07944		70

Rank Sum = 2748
Rank Mean = 109.92

MW-8	7/20/1995	ND<0	70	
	8/24/1995	2.17475		172
	9/28/1995	2.07944		169
	10/26/1995	ND<0	70	
	11/19/1996	2.48491		177
	12/19/1996	2.56495		179
	3/24/1997	2.07944		170
	9/24/1997	ND<0	70	
	4/7/1998	1.74047	167	
	9/23/1998	ND<0	70	
	3/16/1999	0.741937		157
	9/23/1999	ND<0	70	
	3/15/2000	ND<0	70	
	9/24/2003	ND<0	70	
	3/11/2004	ND<0	70	
	10/12/2004	ND<0	70	
	4/1/2005	ND<0	70	
	10/25/2005	ND<0	70	
	4/29/2006	-0.494296 J		143
	11/18/2006	-0.544727 J		141
	5/23/2007	ND<0	70	
	11/28/2007	ND<0	70	
	6/5/2008	ND<0	70	
	11/20/2008	ND<0	70	
	6/11/2009	0.641854		155

Rank Sum = 2680
Rank Mean = 107.2

Calculation Results:

Kruskal-Wallis H Statistic = 23.5547

Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 36.6137
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
23.5547 > 15.5073 indicating a significant group difference at 5% significance level
36.6137 > 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 70

Well	Mean Rank	Dif from Bkg	Critical Value
MW-11R	135.615	65.6154	42.7862
MW-10	93.92	23.92	43.0981
MW-12AR	106.333	36.3333	48.1852
MW-12BR	82.9333	12.9333	48.1852
MW-6	72.88	2.88	43.0981
MW-7	91.72	21.72	43.0981
MW-9	109.92	39.92	43.0981
MW-8	107.2	37.2	43.0981

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 70

Well	Mean Rank	Dif from Bkg	Critical Value
MW-11R	135.615	65.6154	46.2033
MW-10	93.92	23.92	46.5401
MW-12AR	106.333	36.3333	52.0334
MW-12BR	82.9333	12.9333	52.0334
MW-6	72.88	2.88	46.5401
MW-7	91.72	21.72	46.5401
MW-9	109.92	39.92	46.5401
MW-8	107.2	37.2	46.5401

Mann-Kendall Trend Analysis

Parameter: Dichlorodifluoromethane

Location: MW-11R

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

95% Confidence Level

Xj	Xk	Xj - Xk		Positives	Negatives
4.07754		ND<0	4.07754	1	0
2.77259		ND<0	2.77259	2	0
ND<0	ND<0	0	2	0	
4.78749		ND<0	4.78749	3	0
4.78749		ND<0	4.78749	4	0
3.89182		ND<0	3.89182	5	0
2.99573		ND<0	2.99573	6	0
3.29584		ND<0	3.29584	7	0
2.56495		ND<0	2.56495	8	0
2.09186		ND<0	2.09186	9	0
ND<0	ND<0	0	9	0	
2.70805		ND<0	2.70805	10	0
ND<0	ND<0	0	10	0	
ND<0	ND<0	0	10	0	
ND<0	ND<0	0	10	0	
1.57898		ND<0	1.57898	11	0
-0.223144 J		ND<0	-0.223144	11	1
ND<0	ND<0	0	11	1	
-0.385662 J		ND<0	-0.385662	11	2
ND<0	ND<0	0	11	2	
-0.891598 J		ND<0	-0.891598	11	3
ND<0	ND<0	0	11	3	
0.494696 J		ND<0	0.494696	12	3
0.262364		ND<0	0.262364	13	3
0.0953102		ND<0	0.0953102	14	3
2.77259		4.07754	-1.304951	4	4
ND<0	4.07754		-4.077541	4	5
4.78749		4.07754	0.709954	15	5
4.78749		4.07754	0.709954	16	5
3.89182		4.07754	-0.185717	16	6
2.99573		4.07754	-1.081811	6	7
3.29584		4.07754	-0.781701	16	8
2.56495		4.07754	-1.512591	6	9
2.09186		4.07754	-1.985671	6	10
ND<0	4.07754		-4.077541	6	11
2.70805		4.07754	-1.369491	6	12
ND<0	4.07754		-4.077541	6	13
ND<0	4.07754		-4.077541	6	14
ND<0	4.07754		-4.077541	6	15
1.57898		4.07754	-2.498561	6	16
-0.223144 J		4.07754	-4.300681	6	17
ND<0	4.07754		-4.077541	6	18
-0.385662 J		4.07754	-4.4632	16	19
ND<0	4.07754		-4.077541	6	20
-0.891598 J		4.07754	-4.969141	6	21
ND<0	4.07754		-4.077541	6	22
0.494696 J		4.07754	-3.582841	6	23

0.262364		4.07754	-3.815171	6	24	
0.0953102		4.07754	-3.982231	6	25	
ND<0	2.77259	-2.772591	6	26		
4.78749	2.77259	2.0149	17	26		
4.78749	2.77259	2.0149	18	26		
3.89182	2.77259	1.11923	19	26		
2.99573	2.77259	0.223144	20	26		
3.29584	2.77259	0.523248	21	26		
2.56495	2.77259	-0.207639	21	27		
2.09186	2.77259	-0.680725	21	28		
ND<0	2.77259	-2.772592	1	29		
2.70805	2.77259	-0.0645385	21	30		
ND<0	2.77259	-2.772592	1	31		
ND<0	2.77259	-2.772592	1	32		
ND<0	2.77259	-2.772592	1	33		
1.57898	2.77259	-1.193612	1	34		
-0.223144 J	2.77259	-2.995732	1	35		
ND<0	2.77259	-2.772592	1	36		
-0.385662 J	2.77259	-3.158252	1	37		
ND<0	2.77259	-2.772592	1	38		
-0.891598 J	2.77259	-3.664192	1	39		
ND<0	2.77259	-2.772592	1	40		
0.494696 J	2.77259	-2.277892	1	41		
0.262364	2.77259	-2.510222	1	42		
0.0953102	2.77259	-2.677282	1	43		
4.78749	ND<0	4.78749	22	43		
4.78749	ND<0	4.78749	23	43		
3.89182	ND<0	3.89182	24	43		
2.99573	ND<0	2.99573	25	43		
3.29584	ND<0	3.29584	26	43		
2.56495	ND<0	2.56495	27	43		
2.09186	ND<0	2.09186	28	43		
ND<0	ND<0	0	28	43		
2.70805	ND<0	2.70805	29	43		
ND<0	ND<0	0	29	43		
ND<0	ND<0	0	29	43		
ND<0	ND<0	0	29	43		
1.57898	ND<0	1.57898	30	43		
-0.223144 J	ND<0	-0.223144	30	44		
ND<0	ND<0	0	30	44		
-0.385662 J	ND<0	-0.385662	30	45		
ND<0	ND<0	0	30	45		
-0.891598 J	ND<0	-0.891598	30	46		
ND<0	ND<0	0	30	46		
0.494696 J	ND<0	0.494696	31	46		
0.262364	ND<0	0.262364	32	46		
0.0953102	ND<0	0.0953102	33	46		
4.78749	4.78749	0	33	46		
3.89182	4.78749	-0.895671	33	47		
2.99573	4.78749	-1.791763	3	48		
3.29584	4.78749	-1.491653	3	49		
2.56495	4.78749	-2.222543	3	50		
2.09186	4.78749	-2.695633	3	51		
ND<0	4.78749	-4.787493	3	52		
2.70805	4.78749	-2.079433	3	53		
ND<0	4.78749	-4.787493	3	54		
ND<0	4.78749	-4.787493	3	55		
ND<0	4.78749	-4.787493	3	56		
1.57898	4.78749	-3.208513	3	57		

-0.223144 J	4.78749	-5.0106433	58	
ND<0	4.78749	-4.7874933	59	
-0.385662 J	4.78749	-5.1731533	60	
ND<0	4.78749	-4.7874933	61	
-0.891598 J	4.78749	-5.6790933	62	
ND<0	4.78749	-4.7874933	63	
0.494696 J	4.78749	-4.2928 33	64	
0.262364	4.78749	-4.5251333	65	
0.0953102	4.78749	-4.6921833	66	
3.89182	4.78749	-0.895671	33	67
2.99573	4.78749	-1.7917633	68	
3.29584	4.78749	-1.4916533	69	
2.56495	4.78749	-2.2225433	70	
2.09186	4.78749	-2.6956333	71	
ND<0	4.78749	-4.7874933	72	
2.70805	4.78749	-2.0794433	73	
ND<0	4.78749	-4.7874933	74	
ND<0	4.78749	-4.7874933	75	
ND<0	4.78749	-4.7874933	76	
1.57898	4.78749	-3.2085133	77	
-0.223144 J	4.78749	-5.0106433	78	
ND<0	4.78749	-4.7874933	79	
-0.385662 J	4.78749	-5.1731533	80	
ND<0	4.78749	-4.7874933	81	
-0.891598 J	4.78749	-5.6790933	82	
ND<0	4.78749	-4.7874933	83	
0.494696 J	4.78749	-4.2928 33	84	
0.262364	4.78749	-4.5251333	85	
0.0953102	4.78749	-4.6921833	86	
2.99573	3.89182	-0.896088	33	87
3.29584	3.89182	-0.595983	33	88
2.56495	3.89182	-1.3268733	89	
2.09186	3.89182	-1.7999633	90	
ND<0	3.89182	-3.8918233	91	
2.70805	3.89182	-1.1837733	92	
ND<0	3.89182	-3.8918233	93	
ND<0	3.89182	-3.8918233	94	
ND<0	3.89182	-3.8918233	95	
1.57898	3.89182	-2.3128433	96	
-0.223144 J	3.89182	-4.1149633	97	
ND<0	3.89182	-3.8918233	98	
-0.385662 J	3.89182	-4.2774833	99	
ND<0	3.89182	-3.8918233	100	
-0.891598 J	3.89182	-4.7834233	101	
ND<0	3.89182	-3.8918233	102	
0.494696 J	3.89182	-3.3971233	103	
0.262364	3.89182	-3.6294633	104	
0.0953102	3.89182	-3.7965133	105	
3.29584	2.99573	0.300105	34	105
2.56495	2.99573	-0.430783	34	106
2.09186	2.99573	-0.903868	34	107
ND<0	2.99573	-2.9957334	108	
2.70805	2.99573	-0.287682	34	109
ND<0	2.99573	-2.9957334	110	
ND<0	2.99573	-2.9957334	111	
ND<0	2.99573	-2.9957334	112	
1.57898	2.99573	-1.4167534	113	
-0.223144 J	2.99573	-3.2188834	114	
ND<0	2.99573	-2.9957334	115	

-0.385662 J 2.99573 -3.3813934 116
ND<0 2.99573 -2.9957334 117
-0.891598 J 2.99573 -3.8873334 118
ND<0 2.99573 -2.9957334 119
0.494696 J 2.99573 -2.5010434 120
0.262364 2.99573 -2.7333734 121
0.0953102 2.99573 -2.9004234 122

2.56495 3.29584 -0.730888 34 123
2.09186 3.29584 -1.2039734 124
ND<0 3.29584 -3.2958434 125
2.70805 3.29584 -0.587787 34 126
ND<0 3.29584 -3.2958434 127
ND<0 3.29584 -3.2958434 128
ND<0 3.29584 -3.2958434 129
1.57898 3.29584 -1.7168634 130
-0.223144 J 3.29584 -3.5189834 131
ND<0 3.29584 -3.2958434 132
-0.385662 J 3.29584 -3.6815 34 133
ND<0 3.29584 -3.2958434 134
-0.891598 J 3.29584 -4.1874334 135
ND<0 3.29584 -3.2958434 136
0.494696 J 3.29584 -2.8011434 137
0.262364 3.29584 -3.0334734 138
0.0953102 3.29584 -3.2005334 139

2.09186 2.56495 -0.473085 34 140
ND<0 2.56495 -2.5649534 141
2.70805 2.56495 0.143101 35 141
ND<0 2.56495 -2.5649535 142
ND<0 2.56495 -2.5649535 143
ND<0 2.56495 -2.5649535 144
1.57898 2.56495 -0.985971 35 145
-0.223144 J 2.56495 -2.7880935 146
ND<0 2.56495 -2.5649535 147
-0.385662 J 2.56495 -2.9506135 148
ND<0 2.56495 -2.5649535 149
-0.891598 J 2.56495 -3.4565535 150
ND<0 2.56495 -2.5649535 151
0.494696 J 2.56495 -2.0702535 152
0.262364 2.56495 -2.3025935 153
0.0953102 2.56495 -2.4696435 154

ND<0 2.09186 -2.0918635 155
2.70805 2.09186 0.616186 36 155
ND<0 2.09186 -2.0918636 156
ND<0 2.09186 -2.0918636 157
ND<0 2.09186 -2.0918636 158
1.57898 2.09186 -0.512885 36 159
-0.223144 J 2.09186 -2.3150136 160
ND<0 2.09186 -2.0918636 161
-0.385662 J 2.09186 -2.4775336 162
ND<0 2.09186 -2.0918636 163
-0.891598 J 2.09186 -2.9834636 164
ND<0 2.09186 -2.0918636 165
0.494696 J 2.09186 -1.5971736 166
0.262364 2.09186 -1.8295 36 167
0.0953102 2.09186 -1.9965536 168

2.70805 ND<0 2.70805 37 168
ND<0 ND<0 0 37 168
ND<0 ND<0 0 37 168

ND<0	ND<0	0	37	168		
1.57898		ND<0	1.57898	38	168	
-0.223144 J		ND<0	-0.223144		38	169
ND<0	ND<0	0	38	169		
-0.385662 J		ND<0	-0.385662		38	170
ND<0	ND<0	0	38	170		
-0.891598 J		ND<0	-0.891598		38	171
ND<0	ND<0	0	38	171		
0.494696 J		ND<0	0.494696		39	171
0.262364		ND<0	0.262364		40	171
0.0953102		ND<0	0.0953102		41	171
ND<0	2.70805		-2.7080541		172	
ND<0	2.70805		-2.7080541		173	
ND<0	2.70805		-2.7080541		174	
1.57898		2.70805		-1.1290741		175
-0.223144 J		2.70805		-2.9311941		176
ND<0	2.70805		-2.7080541		177	
-0.385662 J		2.70805		-3.0937141		178
ND<0	2.70805		-2.7080541		179	
-0.891598 J		2.70805		-3.5996541		180
ND<0	2.70805		-2.7080541		181	
0.494696 J		2.70805		-2.2133541		182
0.262364		2.70805		-2.4456941		183
0.0953102		2.70805		-2.6127441		184
ND<0	ND<0	0	41	184		
ND<0	ND<0	0	41	184		
1.57898		ND<0	1.57898	42	184	
-0.223144 J		ND<0	-0.223144		42	185
ND<0	ND<0	0	42	185		
-0.385662 J		ND<0	-0.385662		42	186
ND<0	ND<0	0	42	186		
-0.891598 J		ND<0	-0.891598		42	187
ND<0	ND<0	0	42	187		
0.494696 J		ND<0	0.494696		43	187
0.262364		ND<0	0.262364		44	187
0.0953102		ND<0	0.0953102		45	187
ND<0	ND<0	0	45	187		
1.57898		ND<0	1.57898	46	187	
-0.223144 J		ND<0	-0.223144		46	188
ND<0	ND<0	0	46	188		
-0.385662 J		ND<0	-0.385662		46	189
ND<0	ND<0	0	46	189		
-0.891598 J		ND<0	-0.891598		46	190
ND<0	ND<0	0	46	190		
0.494696 J		ND<0	0.494696		47	190
0.262364		ND<0	0.262364		48	190
0.0953102		ND<0	0.0953102		49	190
1.57898		ND<0	1.57898	50	190	
-0.223144 J		ND<0	-0.223144		50	191
ND<0	ND<0	0	50	191		
-0.385662 J		ND<0	-0.385662		50	192
ND<0	ND<0	0	50	192		
-0.891598 J		ND<0	-0.891598		50	193
ND<0	ND<0	0	50	193		
0.494696 J		ND<0	0.494696		51	193
0.262364		ND<0	0.262364		52	193
0.0953102		ND<0	0.0953102		53	193

-0.223144 J	1.57898	-1.8021253	194		
ND<0	1.57898	-1.5789853	195		
-0.385662 J	1.57898	-1.9646453	196		
ND<0	1.57898	-1.5789853	197		
-0.891598 J	1.57898	-2.4705853	198		
ND<0	1.57898	-1.5789853	199		
0.494696 J	1.57898	-1.0842853	200		
0.262364	1.57898	-1.3166153	201		
0.0953102	1.57898	-1.4836753	202		
ND<0	-0.223144 J	0.223144	54	202	
-0.385662 J	-0.223144 J	-0.162519	54	203	
ND<0	-0.223144 J	0.223144	55	203	
-0.891598 J	-0.223144 J	-0.668455	55	204	
ND<0	-0.223144 J	0.223144	56	204	
0.494696 J	-0.223144 J	0.71784	57	204	
0.262364	-0.223144 J	0.485508	58	204	
0.0953102	-0.223144 J	0.318454	59	204	
-0.385662 J	ND<0	-0.385662	59	205	
ND<0	ND<0	0	59	205	
-0.891598 J	ND<0	-0.891598	59	206	
ND<0	ND<0	0	59	206	
0.494696 J	ND<0	0.494696	60	206	
0.262364	ND<0	0.262364	61	206	
0.0953102	ND<0	0.0953102	62	206	
ND<0	-0.385662 J	0.385662	63	206	
-0.891598 J	-0.385662 J	-0.505936	63	207	
ND<0	-0.385662 J	0.385662	64	207	
0.494696 J	-0.385662 J	0.880359	65	207	
0.262364	-0.385662 J	0.648027	66	207	
0.0953102	-0.385662 J	0.480973	67	207	
-0.891598 J	ND<0	-0.891598	67	208	
ND<0	ND<0	0	67	208	
0.494696 J	ND<0	0.494696	68	208	
0.262364	ND<0	0.262364	69	208	
0.0953102	ND<0	0.0953102	70	208	
ND<0	-0.891598 J	0.891598	71	208	
0.494696 J	-0.891598 J	1.38629	72	208	
0.262364	-0.891598 J	1.15396	73	208	
0.0953102	-0.891598 J	0.986908	74	208	
0.494696 J	ND<0	0.494696	75	208	
0.262364	ND<0	0.262364	76	208	
0.0953102	ND<0	0.0953102	77	208	
0.262364	0.494696 J	-0.232332	77	209	
0.0953102	0.494696 J	-0.399386	77	210	
0.0953102	0.262364	-0.167054	77	211	

S Statistic = 77 - 211 = -134

Tied Group	Value	Members
1	0	9
2	4.78749	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
11/15/2009	1

There are 0 time periods with multiple data

A = 1674
B = 0
C = 504
D = 0
E = 74
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1965.33
Z-Score = -3.00008
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.00008| > 1.97737 indicating a trend

Concentrations (ug/L)

Parameter: Lead

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 198
Total Non-Detect: 144
Percent Non-Detects: 72.7273%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	12 (80%)	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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12AR	16	9 (56.25%)	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
			11/15/2009	0.44	0.44
MW-7	26	16 (61.5385%)	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	
			11/15/2009	0.16 J	0.16 J	
MW-12BR		16	10 (62.5%)	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	
			11/15/2009	0.26 J	0.26 J	
MW-11R	25	18 (72%)	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	
MW-6	25	19 (76%)	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
MW-9	25	20 (80%)	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
MW-8	25	18 (72%)	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
MW-10	25	22 (88%)	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	

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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.04	-2.575836	3.63492	-0.103033
2	0.04	-2.326341	2.0468	-0.196087
3	0.04	-2.170091	6.7561	-0.282891
4	0.04	-2.053752	0.974	-0.365041
5	0.04	-1.959962	4.8154	-0.443439
6	0.14	-1.880792	8.3528	-0.70675
7	0.16	-1.811913	1.6358	-0.996656
8	0.17	-1.750693	4.7007	-1.29427
9	0.17	-1.6954	37.5751	-1.58249
10	0.26	-1.644854	0.2806	-2.01015
11	0.34	-1.598194	2.8348	-2.55354
12	0.44	-1.554774	5.2522	-3.23764
13	0.5	-1.5141	47.5447	-3.99469
14	0.5	-1.475794	9.7226	-4.73258
15	0.5	-1.439535	1.7949	-5.45235
16	0.5	-1.405075	3.7691	-6.15489
17	0.5	-1.3722	55.6521	-6.84099
18	0.5	-1.340755	7.4497	-7.51137
19	0.5	-1.310585	9.1673	-8.16666
20	0.5	-1.281556	0.8097	-8.80743
21	0.5	-1.253576	2.3811	-9.43421
22	0.5	-1.226536	3.8855	-10.0475
23	0.5	-1.200366	5.3263	-10.6477
24	0.5	-1.174996	6.7069	-11.2352
25	0.5	-1.150356	8.0302	-11.8103
26	0.5	-1.126396	9.299	-12.3735
27	0.5	-1.103067	0.5157	-12.9251
28	0.5	-1.080327	1.6828	-13.4652
29	0.5	-1.058127	2.8025	-13.9943
30	0.5	-1.036437	3.8766	-14.5125
31	0.5	-1.015227	4.9073	-15.0201
32	0.5	-0.994457	75.8963	-15.5173
33	0.5	-0.974114	76.8452	-16.0044
34	0.5	-0.954165	77.7556	-16.4815
35	0.5	-0.934597	8.6291	-16.9488
36	0.5	-0.915365	79.4669	-17.4064
37	0.5	-0.896473	80.2706	-17.8547
38	0.5	-0.877897	81.0413	-18.2936
39	0.5	-0.859618	81.7803	-18.7234
40	0.5	-0.838054	82.4826	-19.1425
41	0.5	-0.820379	83.1556	-19.5527
42	0.5	-0.802956	83.8004	-19.9541
43	0.5	-0.785774	84.4178	-20.347
44	0.5	-0.768821	85.0089	-20.7314
45	0.5	-0.752084	85.5745	-21.1075
46	0.5	-0.735557	86.1156	-21.4753
47	0.5	-0.719228	86.6328	-21.8349
48	0.5	-0.703089	87.1272	-22.1864
49	0.5	-0.687131	87.5993	-22.53

50	0.5	-0.671346	88.05	-22.8657
51	0.5	-0.655726	88.48	-23.1935
52	0.5	-0.640266	88.89	-23.5136
53	0.5	-0.624956	89.2805	-23.8261
54	0.5	-0.609791	89.6524	-24.131
55	0.5	-0.594766	90.0061	-24.4284
56	0.5	-0.579873	90.3424	-24.7183
57	0.5	-0.565108	90.6617	-25.0009
58	0.5	-0.550465	90.9647	-25.2761
59	0.5	-0.5359491.252	-25.5441	
60	0.5	-0.521527	91.5239	-25.8049
61	0.5	-0.507221	91.7812	-26.0585
62	0.5	-0.493018	92.0243	-26.305
63	0.5	-0.478914	92.2536	-26.5444
64	0.5	-0.464904	92.4698	-26.7769
65	0.5	-0.450985	92.6732	-27.0024
66	0.5	-0.437153	92.8643	-27.221
67	0.5	-0.423405	93.0435	-27.4327
68	0.5	-0.409735	93.2114	-27.6375
69	0.5	-0.396142	93.3684	-27.8356
70	0.5	-0.382622	93.5148	-28.0269
71	0.5	-0.369171	93.651	-28.2115
72	0.5	-0.355788	93.7776	-28.3894
73	0.5	-0.342466	93.8949	-28.5606
74	0.5	-0.329206	94.0033	-28.7252
75	0.5	-0.316004	94.1031	-28.8832
76	0.5	-0.302855	94.1949	-29.0347
77	0.5	-0.2897694.2788	-29.1795	
78	0.5	-0.276714	94.3554	-29.3179
79	0.5	-0.263715	94.4249	-29.4497
80	0.5	-0.248174	94.4865	-29.5738
81	0.5	-0.235269	94.5419	-29.6915
82	0.5	-0.222403	94.5913	-29.8027
83	0.5	-0.209575	94.6353	-29.9075
84	0.5	-0.196779	94.674	-30.0059
85	0.5	-0.184017	94.7079	-30.0979
86	0.5	-0.171285	94.7372	-30.1835
87	0.5	-0.158579	94.7623	-30.2628
88	0.5	-0.1459 94.7836	-30.3357	
89	0.5	-0.133244	94.8014	-30.4024
90	0.5	-0.1206194.8159	-30.4627	
91	0.5	-0.107995	94.8276	-30.5167
92	0.5	-0.0953969	94.8367	-30.5644
93	0.5	-0.0828129	94.8435	-30.6058
94	0.5	-0.0702426	94.8485	-30.6409
95	0.5	-0.0576847	94.8518	-30.6697
96	0.5	-0.0451348	94.8538	-30.6923
97	0.5	-0.0325917	94.8549	-30.7086
98	0.5	-0.0200544	94.8553	-30.7186
99	0.5	-0.00751925	94.8554	-30.7224
100	0.5	0.00751925	94.8554	-30.7186
101	0.5	0.0200544	94.8558	-30.7086
102	0.5	0.0325917	94.8569	-30.6923
103	0.5	0.0451348	94.8589	-30.6697
104	0.5	0.0576847	94.8623	-30.6409
105	0.5	0.0702426	94.8672	-30.6058
106	0.5	0.0828129	94.874	-30.5644
107	0.5	0.0953969	94.8831	-30.5167
108	0.5	0.107995	94.8948	-30.4627
109	0.5	0.12061 94.9094	-30.4024	
110	0.5	0.133244	94.9271	-30.3357
111	0.5	0.1459 94.9484	-30.2628	

112	0.5	0.158579	94.9735	-30.1835
113	0.5	0.171285	95.0029	-30.0979
114	0.5	0.184017	95.0367	-30.0059
115	0.5	0.196779	95.0755	-29.9075
116	0.5	0.209575	95.1194	-29.8027
117	0.5	0.222403	95.1689	-29.6915
118	0.5	0.235269	95.2242	-29.5738
119	0.5	0.248174	95.2858	-29.4497
120	0.5	0.263715	95.3553	-29.3179
121	0.5	0.276714	95.4319	-29.1795
122	0.5	0.28976	95.5159	-29.0347
123	0.5	0.302855	95.6076	-28.8832
124	0.5	0.316004	95.7075	-28.7252
125	0.5	0.329206	95.8158	-28.5606
126	0.5	0.342466	95.9331	-28.3894
127	0.5	0.355788	96.0597	-28.2115
128	0.5	0.369171	96.196	-28.0269
129	0.5	0.382622	96.3424	-27.8356
130	0.5	0.396142	96.4993	-27.6375
131	0.5	0.409735	96.6672	-27.4327
132	0.5	0.423405	96.8465	-27.221
133	0.5	0.437153	97.0376	-27.0024
134	0.5	0.450985	97.241	-26.7769
135	0.5	0.464904	97.4571	-26.5444
136	0.5	0.478914	97.6865	-26.305
137	0.5	0.493018	97.9295	-26.0585
138	0.5	0.507221	98.1868	-25.8049
139	0.5	0.521527	98.4588	-25.5441
140	0.5	0.53594	98.746	-25.2761
141	0.5	0.550465	99.049	-25.0009
142	0.5	0.565108	99.3684	-24.7183
143	0.5	0.579873	99.7046	-24.4284
144	0.5	0.594766	100.058	-24.131
145	0.5	0.609791	100.43	-23.8261
146	0.5	0.624956	100.821	-23.5136
147	0.5	0.640266	101.231	-23.1935
148	0.5	0.655726	101.661	-22.8657
149	0.5	0.671346	102.111	-22.53
150	0.5	0.687131	102.584	-22.1864
151	0.5	0.703089	103.078	-21.8349
152	0.5	0.719228	103.595	-21.4753
153	0.52	0.735557	104.136	-21.0928
154	0.62	0.752084	104.702	-20.6265
155	0.63	0.768821	105.293	-20.1421
156	0.65	0.785774	105.91	-19.6314
157	0.66	0.802956	106.555	-19.1014
158	0.68	0.820379	107.228	-18.5436
159	0.73	0.838054	107.93	-17.9318
160	0.73	0.859618	108.669	-17.3043
161	0.81	0.877897	109.44	-16.5932
162	1.22	0.896473	110.244	-15.4995
163	2.72	0.915365	111.082	-13.0097
164	3	0.93459	111.955	-10.2059
165	3	0.954165	112.866	-7.3434
166	3.4	0.974114	113.814	-4.03141
167	3.5	0.994457	114.803	-0.550812
168	3.7	1.01522	115.834	3.20551
169	3.8	1.03643	116.908	7.14395
170	4	1.05812	118.028	11.3764
171	4.8	1.08032	119.195	16.562
172	5	1.10306	120.412	22.0773
173	5	1.12639	121.68	27.7092

174	5	1.15035	123.004	33.461
175	5.9	1.17499	124.384	40.3934
176	6	1.20036	125.825	47.5956
177	6	1.22653	127.33	54.9548
178	6	1.25357	128.901	62.4761
179	8	1.28155	130.543	72.7286
180	8.1	1.31058	132.261	83.3442
181	8.9	1.34075	134.059	95.277
182	9	1.3722	135.942	107.627
183	9	1.40507	137.916	120.272
184	10.3	1.43953	139.988	135.1
185	11	1.47579	142.166	151.333
186	11.9	1.5141	144.459	169.351
187	12	1.55477	146.876	188.008
188	12.8	1.59819	149.43	208.465
189	13	1.64485	152.136	229.848
190	13	1.6954	155.01	251.889
191	13.3	1.75069	158.075	275.173
192	14.1	1.81191	161.358	300.721
193	19.6	1.88079	164.895	337.584
194	21	1.95996	168.737	378.743
195	21.5	2.05375	172.955	422.899
196	22	2.17009	177.664	470.641
197	40.6	2.32634	183.076	565.09
198	73	2.57583	189.711	753.126

Data Set Standard Deviation = 6.98515
Numerator = 567199
Denominator = 1.82352e+006
W Statistic = 0.311047 = 567199 / 1.82352e+006

5% Critical value of 0.976 exceeds 0.311047
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.311047
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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-3.21888	-2.57583	6.63492	8.29129
2	-3.21888	-2.32634	12.0468	15.7795
3	-3.21888	-2.17009	16.7561	22.7647
4	-3.21888	-2.05375	20.974	29.3755
5	-3.21888	-1.95996	24.8154	35.6844
6	-1.96611	-1.88079	28.3528	39.3822
7	-1.83258	-1.81191	31.6358	42.7027
8	-1.77196	-1.75069	34.7007	45.8048
9	-1.77196	-1.6954	37.5751	48.809
10	-1.34707	-1.64485	40.2806	51.0248
11	-1.07881	-1.59819	42.8348	52.7489
12	-0.820981	-1.55477	45.2522	54.0253
13	-0.693147	-1.5141	47.5447	55.0748
14	-0.693147	-1.47579	49.7226	56.0978
15	-0.693147	-1.43953	51.7949	57.0956
16	-0.693147	-1.40507	53.7691	58.0695
17	-0.693147	-1.3722	55.6521	59.0206
18	-0.693147	-1.34075	57.4497	59.95
19	-0.693147	-1.31058	59.1673	60.8584
20	-0.693147	-1.28155	60.8097	61.7467
21	-0.693147	-1.25357	62.3811	62.6156
22	-0.693147	-1.22653	63.8855	63.4658
23	-0.693147	-1.20036	65.3263	64.2978
24	-0.693147	-1.17499	66.7069	65.1122
25	-0.693147	-1.15035	68.0302	65.9096
26	-0.693147	-1.12639	69.299	66.6904
27	-0.693147	-1.10306	70.5157	67.4549
28	-0.693147	-1.08032	71.6828	68.2038
29	-0.693147	-1.05812	72.8025	68.9372
30	-0.693147	-1.03643	73.8766	69.6556
31	-0.693147	-1.01522	74.9073	70.3593
32	-0.693147	-0.994457	75.8963	71.0486
33	-0.693147	-0.974114	76.8452	71.7238
34	-0.693147	-0.954165	77.7556	72.3852
35	-0.693147	-0.93459	78.6291	73.033
36	-0.693147	-0.915365	79.4669	73.6675
37	-0.693147	-0.896473	80.2706	74.2889
38	-0.693147	-0.877897	81.0413	74.8974
39	-0.693147	-0.859618	81.7803	75.4932
40	-0.693147	-0.838054	82.4826	76.0741
41	-0.693147	-0.820379	83.1556	76.6428
42	-0.693147	-0.802956	83.8004	77.1993
43	-0.693147	-0.785774	84.4178	77.744
44	-0.693147	-0.768821	85.0089	78.2769
45	-0.693147	-0.752084	85.5745	78.7982
46	-0.693147	-0.735557	86.1156	79.308
47	-0.693147	-0.719228	86.6328	79.8066
48	-0.693147	-0.703089	87.1272	80.2939
49	-0.693147	-0.687131	87.5993	80.7702

50	-0.693147	-0.671346	88.05	81.2355
51	-0.693147	-0.655726	88.48	81.6901
52	-0.693147	-0.640266	88.89	82.1339
53	-0.693147	-0.624956	89.2805	82.567
54	-0.693147	-0.609791	89.6524	82.9897
55	-0.693147	-0.594766	90.0061	83.402
56	-0.693147	-0.579873	90.3424	83.8039
57	-0.693147	-0.565108	90.6617	84.1956
58	-0.693147	-0.550465	90.9647	84.5772
59	-0.693147	-0.5359491.252	84.9487	
60	-0.693147	-0.521527	91.5239	85.3102
61	-0.693147	-0.507221	91.7812	85.6617
62	-0.693147	-0.493018	92.0243	86.0035
63	-0.693147	-0.478914	92.2536	86.3354
64	-0.693147	-0.464904	92.4698	86.6577
65	-0.693147	-0.450985	92.6732	86.9703
66	-0.693147	-0.437153	92.8643	87.2733
67	-0.693147	-0.423405	93.0435	87.5668
68	-0.693147	-0.409735	93.2114	87.8508
69	-0.693147	-0.396142	93.3684	88.1254
70	-0.693147	-0.382622	93.5148	88.3906
71	-0.693147	-0.369171	93.651	88.6465
72	-0.693147	-0.355788	93.7776	88.8931
73	-0.693147	-0.342466	93.8949	89.1305
74	-0.693147	-0.329206	94.0033	89.3586
75	-0.693147	-0.316004	94.1031	89.5777
76	-0.693147	-0.302855	94.1949	89.7876
77	-0.693147	-0.2897694.2788	89.9884	
78	-0.693147	-0.276714	94.3554	90.1802
79	-0.693147	-0.263715	94.4249	90.363
80	-0.693147	-0.248174	94.4865	90.5351
81	-0.693147	-0.235269	94.5419	90.6981
82	-0.693147	-0.222403	94.5913	90.8523
83	-0.693147	-0.209575	94.6353	90.9976
84	-0.693147	-0.196779	94.674	91.134
85	-0.693147	-0.184017	94.7079	91.2615
86	-0.693147	-0.171285	94.7372	91.3802
87	-0.693147	-0.158579	94.7623	91.4902
88	-0.693147	-0.1459 94.7836	91.5913	
89	-0.693147	-0.133244	94.8014	91.6836
90	-0.693147	-0.1206194.8159	91.7672	
91	-0.693147	-0.107995	94.8276	91.8421
92	-0.693147	-0.0953969	94.8367	91.9082
93	-0.693147	-0.0828129	94.8435	91.9656
94	-0.693147	-0.0702426	94.8485	92.0143
95	-0.693147	-0.0576847	94.8518	92.0543
96	-0.693147	-0.0451348	94.8538	92.0856
97	-0.693147	-0.0325917	94.8549	92.1082
98	-0.693147	-0.0200544	94.8553	92.1221
99	-0.693147	-0.00751925	94.8554	92.1273
100	-0.693147	0.00751925	94.8554	92.1221
101	-0.693147	0.0200544	94.8558	92.1082
102	-0.693147	0.0325917	94.8569	92.0856
103	-0.693147	0.0451348	94.8589	92.0543
104	-0.693147	0.0576847	94.8623	92.0143
105	-0.693147	0.0702426	94.8672	91.9656
106	-0.693147	0.0828129	94.874	91.9082
107	-0.693147	0.0953969	94.8831	91.8421
108	-0.693147	0.107995	94.8948	91.7672
109	-0.693147	0.12061 94.9094	91.6836	
110	-0.693147	0.133244	94.9271	91.5913
111	-0.693147	0.1459 94.9484	91.4902	

112	-0.693147		0.158579	94.9735	91.3802
113	-0.693147		0.171285	95.0029	91.2615
114	-0.693147		0.184017	95.0367	91.134
115	-0.693147		0.196779	95.0755	90.9976
116	-0.693147		0.209575	95.1194	90.8523
117	-0.693147		0.222403	95.1689	90.6981
118	-0.693147		0.235269	95.2242	90.5351
119	-0.693147		0.248174	95.2858	90.363
120	-0.693147		0.263715	95.3553	90.1802
121	-0.693147		0.276714	95.4319	89.9884
122	-0.693147		0.28976	95.5159	89.7876
123	-0.693147		0.302855	95.6076	89.5777
124	-0.693147		0.316004	95.7075	89.3586
125	-0.693147		0.329206	95.8158	89.1305
126	-0.693147		0.342466	95.9331	88.8931
127	-0.693147		0.355788	96.0597	88.6465
128	-0.693147		0.369171	96.196	88.3906
129	-0.693147		0.382622	96.3424	88.1254
130	-0.693147		0.396142	96.4993	87.8508
131	-0.693147		0.409735	96.6672	87.5668
132	-0.693147		0.423405	96.8465	87.2733
133	-0.693147		0.437153	97.0376	86.9703
134	-0.693147		0.450985	97.241	86.6577
135	-0.693147		0.464904	97.4571	86.3354
136	-0.693147		0.478914	97.6865	86.0035
137	-0.693147		0.493018	97.9295	85.6617
138	-0.693147		0.507221	98.1868	85.3102
139	-0.693147		0.521527	98.4588	84.9487
140	-0.693147		0.53594	98.746	84.5772
141	-0.693147		0.550465	99.049	84.1956
142	-0.693147		0.565108	99.3684	83.8039
143	-0.693147		0.579873	99.7046	83.402
144	-0.693147		0.594766	100.058	82.9897
145	-0.693147		0.609791	100.43	82.567
146	-0.693147		0.624956	100.821	82.1339
147	-0.693147		0.640266	101.231	81.6901
148	-0.693147		0.655726	101.661	81.2355
149	-0.693147		0.671346	102.111	80.7702
150	-0.693147		0.687131	102.584	80.2939
151	-0.693147		0.703089	103.078	79.8066
152	-0.693147		0.719228	103.595	79.308
153	-0.653926		0.735557	104.136	78.827
154	-0.478036		0.752084	104.702	78.4675
155	-0.462035		0.768821	105.293	78.1123
156	-0.430783		0.785774	105.91	77.7738
157	-0.415515		0.802956	106.555	77.4402
158	-0.385662		0.820379	107.228	77.1238
159	-0.314711		0.838054	107.93	76.86
160	-0.314711		0.859618	108.669	76.5895
161	-0.210721		0.877897	109.44	76.4045
162	0.198851		0.896473	110.244	76.5828
163	1.00063	0.915365		111.082	77.4987
164	1.09861	0.93459	111.955	78.5255	
165	1.09861	0.954165		112.866	79.5737
166	1.22378	0.974114		113.814	80.7658
167	1.25276	0.994457		114.803	82.0116
168	1.30833	1.01522	115.834	83.3399	
169	1.335	1.03643	116.908	84.7235	
170	1.38629	1.05812	118.028	86.1904	
171	1.56862	1.08032	119.195	87.885	
172	1.60944	1.10306	120.412	89.6603	
173	1.60944	1.12639	121.68	91.4732	

174	1.60944	1.15035	123.004	93.3246
175	1.77495	1.17499	124.384	95.4101
176	1.79176	1.20036	125.825	97.5609
177	1.79176	1.22653	127.33	99.7585
178	1.79176	1.25357	128.901	102.005
179	2.07944	1.28155	130.543	104.67
180	2.09186	1.31058	132.261	107.411
181	2.18605	1.34075	134.059	110.342
182	2.19722	1.3722	135.942	113.357
183	2.19722	1.40507	137.916	116.444
184	2.33214	1.43953	139.988	119.802
185	2.3979	1.47579	142.166	123.34
186	2.47654	1.5141	144.459	127.09
187	2.48491	1.55477	146.876	130.954
188	2.54945	1.59819	149.43	135.028
189	2.56495	1.64485	152.136	139.247
190	2.56495	1.6954	155.01	143.596
191	2.58776	1.75069	158.075	148.126
192	2.64617	1.81191	161.358	152.921
193	2.97553	1.88079	164.895	158.517
194	3.04452	1.95996	168.737	164.484
195	3.06805	2.05375	172.955	170.785
196	3.09104	2.17009	177.664	177.493
197	3.70377	2.32634	183.076	186.109
198	4.29046	2.57583	189.711	197.161

Data Set Standard Deviation = 1.25274
Numerator = 38872.3
Denominator = 58651.8
W Statistic = 0.662765 = 38872.3 / 58651.8

5% Critical value of 0.976 exceeds 0.662765
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.662765
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	172
	9/23/1999	2.07944	179
	3/15/2000	3.04452	194
	9/24/2003	ND<-0.693147	72.5
	3/11/2004	ND<-0.693147	72.5
	10/12/2004	ND<-0.693147	72.5
	4/1/2005	ND<-0.693147	72.5
	10/25/2005	ND<-0.693147	72.5
	4/29/2006	ND<-0.693147	72.5
	11/18/2006	ND<-0.693147	72.5
	5/23/2007	ND<-0.693147	72.5
	11/28/2007	ND<-0.693147	72.5
	6/5/2008	ND<-0.693147	72.5
	11/20/2008	ND<-0.693147	72.5
	6/11/2009	ND<-3.21888	72.5

Rank Sum = 1415
Rank Mean = 94.3333

Background Rank Sum = 1415
Background Rank Mean = 94.3333

Compliance Wells

Well ID	Date	Result	Rank
MW-12AR	3/16/1999	ND<-0.693147	72.5
	9/23/1999	1.79176	176
	3/15/2000	2.3979	185
	9/24/2003	ND<-0.693147	72.5
	3/11/2004	ND<-0.693147	72.5
	10/12/2004	ND<-0.693147	72.5
	4/1/2005	ND<-0.693147	72.5
	10/25/2005	ND<-0.693147	72.5
	4/29/2006	-0.385662 J	158
	11/18/2006	ND<-0.693147	72.5
	5/23/2007	-0.210721 J	161
	11/28/2007	ND<-0.693147	72.5
	6/5/2008	ND<-0.693147	72.5
	11/20/2008	-0.314711 J	159
	6/11/2009	-1.07881	150
	11/15/2009	-0.820981	151

Rank Sum = 1792.5
Rank Mean = 112.031

MW-7	7/20/1995	ND<-0.693147	72.5
	8/24/1995	2.54945	188
	9/28/1995	3.70377	197

	10/26/1995	2.64617	192
	11/19/1996	ND<-0.693147	72.5
	12/19/1996	3.06805	195
	3/24/1997	ND<-0.693147	72.5
	9/24/1997	ND<-0.693147	72.5
	4/7/1998	ND<-0.693147	72.5
	9/23/1998	ND<-0.693147	72.5
	3/16/1999	2.19722	182
	9/23/1999	1.60944	173
	3/15/2000	ND<-0.693147	72.5
	9/24/2003	ND<-0.693147	72.5
	3/11/2004	ND<-0.693147	72.5
	10/12/2004	ND<-0.693147	72.5
	4/1/2005	ND<-0.693147	72.5
	10/25/2005	ND<-0.693147	72.5
	4/29/2006	ND<-0.693147	72.5
	11/18/2006	ND<-0.693147	72.5
	5/23/2007	ND<-0.693147	72.5
	11/28/2007	ND<-0.693147	72.5
	6/5/2008	-0.653926 J	153
	11/20/2008	-0.314711 J	160
	6/11/2009	-1.77196 J	147
	11/15/2009	-1.83258 J	146

Rank Sum = 2893
Rank Mean = 111.269

MW-12BR	3/16/1999	ND<-0.693147	72.5
	9/23/1999	1.79176	177
	3/15/2000	ND<-0.693147	72.5
	9/24/2003	ND<-0.693147	72.5
	3/11/2004	ND<-0.693147	72.5
	10/12/2004	ND<-0.693147	72.5
	4/1/2005	ND<-0.693147	72.5
	10/25/2005	-0.478036 J	154
	4/29/2006	-0.693147 J	152
	11/18/2006	ND<-0.693147	72.5
	5/23/2007	ND<-0.693147	72.5
	11/28/2007	ND<-0.693147	72.5
	6/5/2008	ND<-0.693147	72.5
	11/20/2008	1.00063	163
	6/11/2009	-1.77196 J	148
	11/15/2009	-1.34707 J	149

Rank Sum = 1668
Rank Mean = 104.25

MW-11R	7/20/1995	1.335	169
	8/24/1995	1.79176	178
	9/28/1995	1.30833	168
	10/26/1995	2.47654	186
	11/19/1996	ND<-0.693147	72.5
	12/19/1996	ND<-0.693147	72.5
	3/24/1997	ND<-0.693147	72.5
	9/24/1997	ND<-0.693147	72.5
	4/7/1998	ND<-0.693147	72.5
	9/23/1998	ND<-0.693147	72.5
	3/16/1999	ND<-0.693147	72.5
	9/23/1999	2.19722	183
	3/15/2000	ND<-0.693147	72.5
	9/24/2003	ND<-0.693147	72.5
	3/11/2004	ND<-0.693147	72.5
	10/12/2004	ND<-0.693147	72.5
	4/1/2005	ND<-0.693147	72.5

	10/25/2005	ND<-0.693147	72.5
	4/29/2006	0.198851	162
	11/18/2006	ND<-0.693147	72.5
	5/23/2007	ND<-0.693147	72.5
	11/28/2007	ND<-0.693147	72.5
	6/5/2008	ND<-0.693147	72.5
	11/20/2008	-0.462035 J	155
	6/11/2009	ND<-3.21888	72.5

Rank Sum = 2506
Rank Mean = 100.24

MW-6	7/20/1995	2.09186	180
	8/24/1995	1.77495	175
	9/28/1995	1.22378	166
	10/26/1995	ND<-0.693147	72.5
	11/19/1996	ND<-0.693147	72.5
	12/19/1996	2.33214	184
	3/24/1997	ND<-0.693147	72.5
	9/24/1997	2.48491	187
	4/7/1998	2.56495	189
	9/23/1998	ND<-0.693147	72.5
	3/16/1999	ND<-0.693147	72.5
	9/23/1999	ND<-0.693147	72.5
	3/15/2000	ND<-0.693147	72.5
	9/24/2003	ND<-0.693147	72.5
	3/11/2004	ND<-0.693147	72.5
	10/12/2004	ND<-0.693147	72.5
	4/1/2005	ND<-0.693147	72.5
	10/25/2005	ND<-0.693147	72.5
	4/29/2006	ND<-0.693147	72.5
	11/18/2006	ND<-0.693147	72.5
	5/23/2007	ND<-0.693147	72.5
	11/28/2007	ND<-0.693147	72.5
	6/5/2008	ND<-0.693147	72.5
	11/20/2008	ND<-0.693147	72.5
	6/11/2009	ND<-3.21888	72.5

Rank Sum = 2458.5
Rank Mean = 98.34

MW-9	7/20/1995	1.38629	170
	8/24/1995	1.09861	164
	9/28/1995	1.25276	167
	10/26/1995	ND<-0.693147	72.5
	11/19/1996	ND<-0.693147	72.5
	12/19/1996	ND<-0.693147	72.5
	3/24/1997	ND<-0.693147	72.5
	9/24/1997	3.09104	196
	4/7/1998	ND<-0.693147	72.5
	9/23/1998	ND<-0.693147	72.5
	3/16/1999	ND<-0.693147	72.5
	9/23/1999	ND<-0.693147	72.5
	3/15/2000	ND<-0.693147	72.5
	9/24/2003	ND<-0.693147	72.5
	3/11/2004	ND<-0.693147	72.5
	10/12/2004	ND<-0.693147	72.5
	4/1/2005	ND<-0.693147	72.5
	10/25/2005	ND<-0.693147	72.5
	4/29/2006	-0.415515 J	157
	11/18/2006	ND<-0.693147	72.5
	5/23/2007	ND<-0.693147	72.5
	11/28/2007	ND<-0.693147	72.5
	6/5/2008	ND<-0.693147	72.5

	11/20/2008	ND<-0.693147	72.5
	6/11/2009	ND<-3.21888	72.5

Rank Sum = 2304
Rank Mean = 92.16

MW-8	7/20/1995	1.09861	165
	8/24/1995	2.18605	181
	9/28/1995	2.97553	193
	10/26/1995	ND<-0.693147	72.5
	11/19/1996	ND<-0.693147	72.5
	12/19/1996	2.58776	191
	3/24/1997	ND<-0.693147	72.5
	9/24/1997	ND<-0.693147	72.5
	4/7/1998	ND<-0.693147	72.5
	9/23/1998	2.56495	190
	3/16/1999	ND<-0.693147	72.5
	9/23/1999	4.29046	198
	3/15/2000	ND<-0.693147	72.5
	9/24/2003	ND<-0.693147	72.5
	3/11/2004	ND<-0.693147	72.5
	10/12/2004	ND<-0.693147	72.5
	4/1/2005	ND<-0.693147	72.5
	10/25/2005	ND<-0.693147	72.5
	4/29/2006	ND<-0.693147	72.5
	11/18/2006	ND<-0.693147	72.5
	5/23/2007	ND<-0.693147	72.5
	11/28/2007	ND<-0.693147	72.5
	6/5/2008	ND<-0.693147	72.5
	11/20/2008	-0.430783 J	156
	6/11/2009	ND<-3.21888	72.5

Rank Sum = 2579
Rank Mean = 103.16

MW-10	7/20/1995	ND<-0.693147	72.5
	8/24/1995	1.56862	171
	9/28/1995	ND<-0.693147	72.5
	10/26/1995	ND<-0.693147	72.5
	11/19/1996	ND<-0.693147	72.5
	12/19/1996	ND<-0.693147	72.5
	3/24/1997	ND<-0.693147	72.5
	9/24/1997	ND<-0.693147	72.5
	4/7/1998	ND<-0.693147	72.5
	9/23/1998	ND<-0.693147	72.5
	3/16/1999	ND<-0.693147	72.5
	9/23/1999	1.60944	174
	3/15/2000	ND<-0.693147	72.5
	9/24/2003	ND<-0.693147	72.5
	3/11/2004	ND<-0.693147	72.5
	10/12/2004	ND<-0.693147	72.5
	4/1/2005	ND<-0.693147	72.5
	10/25/2005	ND<-0.693147	72.5
	4/29/2006	ND<-0.693147	72.5
	11/18/2006	ND<-0.693147	72.5
	5/23/2007	ND<-0.693147	72.5
	11/28/2007	ND<-0.693147	72.5
	6/5/2008	ND<-0.693147	72.5
	11/20/2008	ND<-0.693147	72.5
	6/11/2009	-1.96611 J	145

Rank Sum = 2085
Rank Mean = 83.4

Calculation Results:

Kruskal-Wallis H Statistic = 4.59408
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 7.46598
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
4.59408 < 15.5073 indicating no significant group difference at 5% significance level
7.46598 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ug/L)

Parameter: Nickel

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 200
Total Non-Detect: 161
Percent Non-Detects: 80.5%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	11 (73.3333%)	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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12AR	16	13 (81.25%)	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
			11/15/2009	1	1
MW-12BR	16	11 (68.75%)	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	
			11/15/2009	1.8	1.8	
MW-9	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	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	
			11/15/2009	0.69 J	0.69 J	
MW-11R	26	21 (80.7692%)	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	
			11/15/2009	0.58 J	0.58 J	

MW-6	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	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	
			11/15/2009	0.32 J	0.32 J	
MW-7	25	19 (76%)	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	
MW-8	25	22 (88%)	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	
MW-10	25	20 (80%)	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	

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 = 200

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.32	-2.65209	7.03356	-0.848668
2	0.35	-2.36561	12.6297	-1.67663
3	0.36	-2.19728	17.4578	-2.46766
4	0.54	-2.07485	21.7627	-3.58807
5	0.58	-1.97737	25.6727	-4.73495
6	0.59	-1.8957	29.2664	-5.85341
7	0.63	-1.82501	32.597	-7.00316
8	0.69	-1.76241	35.7031	-8.21922
9	0.71	-1.70604	38.6137	-9.43052
10	0.87	-1.65463	41.3515	-10.87
11	1	-1.60725	43.9348	-12.4773
12	1.03	-1.56322	46.3784	-14.0874
13	1.03	-1.52203	48.695	-15.6551
14	1.04	-1.48328	50.8951	-17.1977
15	1.1	-1.44663	52.9879	-18.789
16	1.25	-1.41183	54.9811	-20.5538
17	1.27	-1.37866	56.8818	-22.3047
18	1.31	-1.34694	58.6961	-24.0692
19	1.41	-1.31652	60.4293	-25.9255
20	1.74	-1.28727	62.0864	-28.1653
21	1.8	-1.25908	63.6717	-30.4317
22	1.89	-1.23187	65.1892	-32.7599
23	2.2	-1.20553	66.6425	-35.4121
24	2.29	-1.18	68.0349	-38.1143
25	3.1	-1.15522	69.3694	-41.6955
26	4	-1.13113	70.6489	-46.22
27	4.96	-1.10768	71.8758	-51.7141
28	5	-1.08482	73.0527	-57.1382
29	6	-1.06252	74.1816	-63.5133
30	6	-1.04073	75.2647	-69.7577
31	6	-1.01943	76.304	-75.8743
32	10	-0.998575	77.3011	-85.86
33	10	-0.97815	78.2579	-95.6415
34	16	-0.958125	79.1759	-110.972
35	25	-0.938476	80.0566	-134.433
36	25	-0.919183	80.9015	-157.413
37	25	-0.900227	81.7119	-179.919
38	25	-0.881587	82.4891	-201.958
39	25	-0.863249	83.2343	-223.54
40	25	-0.845198	83.9487	-244.67
41	25	-0.830953	84.6392	-265.443
42	25	-0.813379	85.3008	-285.778
43	25	-0.796056	85.9345	-305.679
44	25	-0.778966	86.5413	-325.153
45	25	-0.7621	87.122	-344.206
46	25	-0.745449	87.6777	-362.842
47	25	-0.729003	88.2092	-381.067
48	25	-0.712751	88.7172	-398.886
49	25	-0.696684	89.2026	-416.303

50	25	-0.680797	89.6661	-433.323
51	25	-0.665079	90.1084	-449.95
52	25	-0.649522	90.5303	-466.188
53	25	-0.634124	90.9324	-482.041
54	25	-0.618872	91.3154	-497.513
55	25	-0.603765	91.6799	-512.607
56	25	-0.588793	92.0266	-527.327
57	25	-0.573953	92.356	-541.676
58	25	-0.559237	92.6688	-555.657
59	25	-0.544642	92.9654	-569.273
60	25	-0.530162	93.2465	-582.527
61	25	-0.515791	93.5125	-595.421
62	25	-0.501527	93.764	-607.96
63	25	-0.487364	94.0016	-620.144
64	25	-0.473299	94.2256	-631.976
65	25	-0.459327	94.4366	-643.459
66	25	-0.445443	94.635	-654.595
67	25	-0.431644	94.8213	-665.387
68	25	-0.417928	94.996	-675.835
69	25	-0.4042995.1594	-685.942	
70	25	-0.390726	95.3121	-695.71
71	25	-0.377233	95.4544	-705.141
72	25	-0.363809	95.5867	-714.236
73	25	-0.350451	95.7095	-722.997
74	25	-0.337155	95.8232	-731.426
75	25	-0.323919	95.9281	-739.524
76	25	-0.310738	96.0247	-747.293
77	25	-0.297612	96.1133	-754.733
78	25	-0.284535	96.1942	-761.846
79	25	-0.271509	96.268	-768.634
80	25	-0.258527	96.3348	-775.097
81	25	-0.248174	96.3964	-781.302
82	25	-0.235269	96.4517	-787.183
83	25	-0.222403	96.5012	-792.744
84	25	-0.209575	96.5451	-797.983
85	25	-0.196779	96.5838	-802.902
86	25	-0.184017	96.6177	-807.503
87	25	-0.171285	96.647	-811.785
88	25	-0.158579	96.6722	-815.749
89	25	-0.1459 96.6935	-819.397	
90	25	-0.133244	96.7112	-822.728
91	25	-0.1206196.7258	-825.743	
92	25	-0.107995	96.7374	-828.443
93	25	-0.0953969	96.7465	-830.828
94	25	-0.0828129	96.7534	-832.898
95	25	-0.0702426	96.7583	-834.654
96	25	-0.0576847	96.7617	-836.097
97	25	-0.0451348	96.7637	-837.225
98	25	-0.0325917	96.7648	-838.04
99	25	-0.0200544	96.7652	-838.541
100	25	-0.00751925	96.7652	-838.729
101	25	0.00751925	96.7653	-838.541
102	25	0.0200544	96.7657	-838.04
103	25	0.0325917	96.7667	-837.225
104	25	0.0451348	96.7688	-836.097
105	25	0.0576847	96.7721	-834.654
106	25	0.0702426	96.777	-832.898
107	25	0.0828129	96.7839	-830.828
108	25	0.0953969	96.793	-828.443
109	25	0.107995	96.8047	-825.743
110	25	0.12061 96.8192	-822.728	
111	25	0.133244	96.837	-819.397

112	25	0.1459	96.8582	-815.749
113	25	0.158579	96.8834	-811.785
114	25	0.171285	96.9127	-807.503
115	25	0.184017	96.9466	-802.902
116	25	0.196779	96.9853	-797.983
117	25	0.209575	97.0292	-792.744
118	25	0.222403	97.0787	-787.183
119	25	0.235269	97.134	-781.302
120	25	0.248174	97.1956	-775.097
121	25	0.258527	97.2625	-768.634
122	25	0.271509	97.3362	-761.846
123	25	0.284535	97.4172	-754.733
124	25	0.297612	97.5057	-747.293
125	25	0.310738	97.6023	-739.524
126	25	0.323919	97.7072	-731.426
127	25	0.337155	97.8209	-722.997
128	25	0.350451	97.9437	-714.236
129	25	0.363809	98.0761	-705.141
130	25	0.377233	98.2184	-695.71
131	25	0.390726	98.371	-685.942
132	25	0.40429	98.5345	-675.835
133	25	0.417928	98.7091	-665.387
134	25	0.431644	98.8955	-654.595
135	25	0.445443	99.0939	-643.459
136	25	0.459327	99.3049	-631.976
137	25	0.473299	99.5289	-620.144
138	25	0.487364	99.7664	-607.96
139	25	0.501527	100.018	-595.421
140	25	0.515791	100.284	-582.527
141	25	0.530162	100.565	-569.273
142	25	0.544642	100.862	-555.657
143	25	0.559237	101.174	-541.676
144	25	0.573953	101.504	-527.327
145	25	0.588793	101.851	-512.607
146	25	0.603765	102.215	-497.513
147	25	0.618872	102.598	-482.041
148	25	0.634124	103	-466.188
149	25	0.649522	103.422	-449.95
150	25	0.665079	103.864	-433.323
151	25	0.680797	104.328	-416.303
152	25	0.696684	104.813	-398.886
153	25	0.712751	105.321	-381.067
154	25	0.729003	105.853	-362.842
155	25	0.745449	106.408	-344.206
156	25	0.7621	106.989	-325.153
157	25	0.778966	107.596	-305.679
158	25	0.796056	108.23	-285.778
159	25	0.813379	108.891	-265.443
160	25	0.830953	109.582	-244.67
161	25	0.845198	110.296	-223.54
162	25	0.863249	111.041	-201.958
163	25	0.881587	111.818	-179.919
164	25	0.900227	112.629	-157.413
165	25	0.919183	113.474	-134.433
166	25	0.938476	114.355	-110.972
167	25	0.958125	115.273	-87.0184
168	25	0.97815	116.229	-62.5646
169	25	0.998575	117.226	-37.6003
170	25	1.01943	118.266	-12.1146
171	25	1.04073	119.349	13.9037
172	25	1.06252	120.478	40.4667
173	25	1.08482	121.655	67.5873

174	25	1.10768	122.882	95.2793
175	25	1.13113	124.161	123.558
176	25	1.15522	125.496	152.438
177	25	1.18	126.888	181.938
178	25	1.20553	128.341	212.076
179	25	1.23187	129.859	242.873
180	25	1.25908	131.444	274.35
181	25	1.28727	133.101	306.532
182	25	1.31652	134.834	339.445
183	25	1.34694	136.649	373.118
184	25	1.37866	138.549	407.585
185	25	1.41183	140.543	442.881
186	25	1.44663	142.635	479.046
187	25	1.48328	144.835	516.128
188	25	1.52203	147.152	554.179
189	25	1.56322	149.596	593.26
190	25	1.60725	152.179	633.441
191	25	1.65463	154.917	674.807
192	25	1.70604	157.827	717.458
193	25	1.76241	160.933	761.518
194	25	1.82501	164.264	807.143
195	25	1.8957	167.858	854.536
196	38	1.97737	171.768	929.676
197	60	2.07485	176.073	1054.17
198	63	2.19728	180.901	1192.6
199	72	2.36561	186.497	1362.92
200	180	2.65209	193.53	1840.3

Data Set Standard Deviation = 15.0482
Numerator = 3.38669e+006
Denominator = 8.72107e+006
W Statistic = 0.388334 = 3.38669e+006 / 8.72107e+006

5% Critical value of 0.976 exceeds 0.388334
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.388334
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 = 200

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-1.13943	-2.65209	7.03356	3.02188
2	-1.04982	-2.36561	12.6297	5.50535
3	-1.02165	-2.19728	17.4578	7.75021
4	-0.616186		-2.07485	21.7627	9.0287
5	-0.544727		-1.97737	25.6727	10.1058
6	-0.527633		-1.8957	29.2664	11.1061
7	-0.462035		-1.82501	32.597	11.9493
8	-0.371064		-1.76241	35.7031	12.6032
9	-0.34249	-1.70604	38.6137	13.1875
10	-0.139262		-1.65463	41.3515	13.418
11	0	-1.60725	43.9348	13.418
12	0.0295588		-1.56322	46.3784	13.3718
13	0.0295588		-1.52203	48.695	13.3268
14	0.0392207		-1.48328	50.8951	13.2686
15	0.0953102		-1.44663	52.9879	13.1307
16	0.223144		-1.41183	54.9811	12.8157
17	0.239017		-1.37866	56.8818	12.4862
18	0.270027		-1.34694	58.6961	12.1225
19	0.34359	-1.31652	60.4293	11.6701
20	0.553885		-1.28727	62.0864	10.9571
21	0.587787		-1.25908	63.6717	10.217
22	0.636577		-1.23187	65.1892	9.43286
23	0.788457		-1.20553	66.6425	8.48235
24	0.828552		-1.18	68.0349	7.50466
25	1.1314	-1.15522	69.3694	6.19764
26	1.38629	-1.13113	70.6489	4.62956
27	1.60141	-1.10768	71.8758	2.85571
28	1.60944	-1.08482	73.0527	1.10976
29	1.79176	-1.06252	74.1816	-0.794022
30	1.79176	-1.04073	75.2647	-2.65876
31	1.79176	-1.01943	76.304	-4.48533
32	2.30259	-0.998575	77.3011	-6.78464
33	2.30259	-0.97815	78.2579	-9.03691
34	2.77259	-0.958125	79.1759	-11.6934
35	3.21888	-0.938476	80.0566	-14.7142
36	3.21888	-0.919183	80.9015	-17.673
37	3.21888	-0.900227	81.7119	-20.5707
38	3.21888	-0.881587	82.4891	-23.4084
39	3.21888	-0.863249	83.2343	-26.1871
40	3.21888	-0.845198	83.9487	-28.9077
41	3.21888	-0.830953	84.6392	-31.5824
42	3.21888	-0.813379	85.3008	-34.2006
43	3.21888	-0.796056	85.9345	-36.763
44	3.21888	-0.778966	86.5413	-39.2704
45	3.21888	-0.7621	87.122	-41.7235
46	3.21888	-0.745449	87.6777	-44.123
47	3.21888	-0.729003	88.2092	-46.4696
48	3.21888	-0.712751	88.7172	-48.7638
49	3.21888	-0.696684	89.2026	-51.0064

50	3.21888	-0.680797	89.6661	-53.1978
51	3.21888	-0.665079	90.1084	-55.3386
52	3.21888	-0.649522	90.5303	-57.4293
53	3.21888	-0.634124	90.9324	-59.4705
54	3.21888	-0.618872	91.3154	-61.4625
55	3.21888	-0.603765	91.6799	-63.406
56	3.21888	-0.588793	92.0266	-65.3012
57	3.21888	-0.573953	92.356	-67.1487
58	3.21888	-0.559237	92.6688	-68.9488
59	3.21888	-0.544642	92.9654	-70.702
60	3.21888	-0.530162	93.2465	-72.4085
61	3.21888	-0.515791	93.5125	-74.0688
62	3.21888	-0.501527	93.764	-75.6831
63	3.21888	-0.487364	94.0016	-77.2519
64	3.21888	-0.473299	94.2256	-78.7754
65	3.21888	-0.459327	94.4366	-80.2539
66	3.21888	-0.445443	94.635	-81.6877
67	3.21888	-0.431644	94.8213	-83.0771
68	3.21888	-0.417928	94.996	-84.4224
69	3.21888	-0.404299	95.1594	-85.7237
70	3.21888	-0.390726	95.3121	-86.9814
71	3.21888	-0.377233	95.4544	-88.1957
72	3.21888	-0.363809	95.5867	-89.3668
73	3.21888	-0.350451	95.7095	-90.4948
74	3.21888	-0.337155	95.8232	-91.5801
75	3.21888	-0.323919	95.9281	-92.6227
76	3.21888	-0.310738	96.0247	-93.623
77	3.21888	-0.297612	96.1133	-94.5809
78	3.21888	-0.284535	96.1942	-95.4968
79	3.21888	-0.271509	96.268	-96.3708
80	3.21888	-0.258527	96.3348	-97.2029
81	3.21888	-0.248174	96.3964	-98.0018
82	3.21888	-0.235269	96.4517	-98.7591
83	3.21888	-0.222403	96.5012	-99.475
84	3.21888	-0.209575	96.5451	-100.15
85	3.21888	-0.196779	96.5838	-100.783
86	3.21888	-0.184017	96.6177	-101.375
87	3.21888	-0.171285	96.647	-101.927
88	3.21888	-0.158579	96.6722	-102.437
89	3.21888	-0.1459	96.6935	-102.907
90	3.21888	-0.133244	96.7112	-103.336
91	3.21888	-0.120619	96.7258	-103.724
92	3.21888	-0.107995	96.7374	-104.071
93	3.21888	-0.0953969	96.7465	-104.379
94	3.21888	-0.0828129	96.7534	-104.645
95	3.21888	-0.0702426	96.7583	-104.871
96	3.21888	-0.0576847	96.7617	-105.057
97	3.21888	-0.0451348	96.7637	-105.202
98	3.21888	-0.0325917	96.7648	-105.307
99	3.21888	-0.0200544	96.7652	-105.372
100	3.21888	-0.00751925	96.7652	-105.396
101	3.21888	0.00751925	96.7653	-105.372
102	3.21888	0.0200544	96.7657	-105.307
103	3.21888	0.0325917	96.7667	-105.202
104	3.21888	0.0451348	96.7688	-105.057
105	3.21888	0.0576847	96.7721	-104.871
106	3.21888	0.0702426	96.777	-104.645
107	3.21888	0.0828129	96.7839	-104.379
108	3.21888	0.0953969	96.793	-104.071
109	3.21888	0.107995	96.8047	-103.724
110	3.21888	0.12061	96.8192	-103.336
111	3.21888	0.133244	96.837	-102.907

112	3.21888	0.1459	96.8582	-102.437
113	3.21888	0.158579	96.8834	-101.927
114	3.21888	0.171285	96.9127	-101.375
115	3.21888	0.184017	96.9466	-100.783
116	3.21888	0.196779	96.9853	-100.15
117	3.21888	0.209575	97.0292	-99.475
118	3.21888	0.222403	97.0787	-98.7591
119	3.21888	0.235269	97.134	-98.0018
120	3.21888	0.248174	97.1956	-97.2029
121	3.21888	0.258527	97.2625	-96.3708
122	3.21888	0.271509	97.3362	-95.4968
123	3.21888	0.284535	97.4172	-94.5809
124	3.21888	0.297612	97.5057	-93.623
125	3.21888	0.310738	97.6023	-92.6227
126	3.21888	0.323919	97.7072	-91.5801
127	3.21888	0.337155	97.8209	-90.4948
128	3.21888	0.350451	97.9437	-89.3668
129	3.21888	0.363809	98.0761	-88.1957
130	3.21888	0.377233	98.2184	-86.9814
131	3.21888	0.390726	98.371	-85.7237
132	3.21888	0.40429	98.5345	-84.4224
133	3.21888	0.417928	98.7091	-83.0771
134	3.21888	0.431644	98.8955	-81.6877
135	3.21888	0.445443	99.0939	-80.2539
136	3.21888	0.459327	99.3049	-78.7754
137	3.21888	0.473299	99.5289	-77.2519
138	3.21888	0.487364	99.7664	-75.6831
139	3.21888	0.501527	100.018	-74.0688
140	3.21888	0.515791	100.284	-72.4085
141	3.21888	0.530162	100.565	-70.702
142	3.21888	0.544642	100.862	-68.9488
143	3.21888	0.559237	101.174	-67.1487
144	3.21888	0.573953	101.504	-65.3012
145	3.21888	0.588793	101.851	-63.406
146	3.21888	0.603765	102.215	-61.4625
147	3.21888	0.618872	102.598	-59.4705
148	3.21888	0.634124	103	-57.4293
149	3.21888	0.649522	103.422	-55.3386
150	3.21888	0.665079	103.864	-53.1978
151	3.21888	0.680797	104.328	-51.0064
152	3.21888	0.696684	104.813	-48.7638
153	3.21888	0.712751	105.321	-46.4696
154	3.21888	0.729003	105.853	-44.123
155	3.21888	0.745449	106.408	-41.7235
156	3.21888	0.7621	106.989	-39.2704
157	3.21888	0.778966	107.596	-36.763
158	3.21888	0.796056	108.23	-34.2006
159	3.21888	0.813379	108.891	-31.5824
160	3.21888	0.830953	109.582	-28.9077
161	3.21888	0.845198	110.296	-26.1871
162	3.21888	0.863249	111.041	-23.4084
163	3.21888	0.881587	111.818	-20.5707
164	3.21888	0.900227	112.629	-17.673
165	3.21888	0.919183	113.474	-14.7142
166	3.21888	0.938476	114.355	-11.6934
167	3.21888	0.958125	115.273	-8.60931
168	3.21888	0.97815	116.229	-5.46077
169	3.21888	0.998575	117.226	-2.24648
170	3.21888	1.01943	118.266	1.03493
171	3.21888	1.04073	119.349	4.38492
172	3.21888	1.06252	120.478	7.80504
173	3.21888	1.08482	121.655	11.2969

174	3.21888	1.10768	122.882	14.8624
175	3.21888	1.13113	124.161	18.5034
176	3.21888	1.15522	125.496	22.2219
177	3.21888	1.18	126.888	26.0202
178	3.21888	1.20553	128.341	29.9006
179	3.21888	1.23187	129.859	33.8659
180	3.21888	1.25908	131.444	37.9187
181	3.21888	1.28727	133.101	42.0623
182	3.21888	1.31652	134.834	46.3
183	3.21888	1.34694	136.649	50.6356
184	3.21888	1.37866	138.549	55.0733
185	3.21888	1.41183	140.543	59.6178
186	3.21888	1.44663	142.635	64.2744
187	3.21888	1.48328	144.835	69.0489
188	3.21888	1.52203	147.152	73.9481
189	3.21888	1.56322	149.596	78.9799
190	3.21888	1.60725	152.179	84.1535
191	3.21888	1.65463	154.917	89.4795
192	3.21888	1.70604	157.827	94.971
193	3.21888	1.76241	160.933	100.644
194	3.21888	1.82501	164.264	106.518
195	3.21888	1.8957	167.858	112.621
196	3.63759	1.97737	171.768	119.813
197	4.09434	2.07485	176.073	128.308
198	4.14313	2.19728	180.901	137.412
199	4.27667	2.36561	186.497	147.529
200	5.19296	2.65209	193.53	161.301

Data Set Standard Deviation = 1.1339
Numerator = 26018.1
Denominator = 49516.4
W Statistic = 0.525444 = 26018.1 / 49516.4

5% Critical value of 0.976 exceeds 0.525444
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.525444
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	190
	9/23/1999	ND<3.21888	81
	3/15/2000	ND<3.21888	81
	9/24/2003	ND<3.21888	81
	3/11/2004	ND<3.21888	81
	10/12/2004	ND<3.21888	81
	4/1/2005	ND<3.21888	81
	10/25/2005	ND<3.21888	81
	4/29/2006	ND<3.21888	81
	11/18/2006	0.239017 J	178
	5/23/2007	ND<3.21888	81
	11/28/2007	ND<3.21888	81
	6/5/2008	0.0392207 J	175
	11/20/2008	ND<3.21888	81
	6/11/2009	-1.02165 J	164

Rank Sum = 1598
Rank Mean = 106.533

Background Rank Sum = 1598
Background Rank Mean = 106.533

Compliance Wells

Well ID	Date	Result	Rank
MW-12AR	3/16/1999	ND<3.21888	81
	9/23/1999	ND<3.21888	81
	3/15/2000	ND<3.21888	81
	9/24/2003	ND<3.21888	81
	3/11/2004	ND<3.21888	81
	10/12/2004	ND<3.21888	81
	4/1/2005	ND<3.21888	81
	10/25/2005	ND<3.21888	81
	4/29/2006	ND<3.21888	81
	11/18/2006	ND<3.21888	81
	5/23/2007	ND<3.21888	81
	11/28/2007	ND<3.21888	81
	6/5/2008	0.223144 J	177
	11/20/2008	ND<3.21888	81
	6/11/2009	0.0953102	176
	11/15/2009	0	172

Rank Sum = 1578
Rank Mean = 98.625

MW-12BR	3/16/1999	ND<3.21888	81
	9/23/1999	ND<3.21888	81
	3/15/2000	ND<3.21888	81

	9/24/2003	ND<3.21888	81
	3/11/2004	ND<3.21888	81
	10/12/2004	ND<3.21888	81
	4/1/2005	ND<3.21888	81
	10/25/2005	ND<3.21888	81
	4/29/2006	ND<3.21888	81
	11/18/2006	0.828552 J	185
	5/23/2007	ND<3.21888	81
	11/28/2007	1.38629 J	187
	6/5/2008	1.1314 J	186
	11/20/2008	ND<3.21888	81
	6/11/2009	0.788457	184
	11/15/2009	0.587787	182

Rank Sum = 1815
Rank Mean = 113.438

MW-9	7/20/1995	ND<3.21888	81
	8/24/1995	ND<3.21888	81
	9/28/1995	ND<3.21888	81
	10/26/1995	ND<3.21888	81
	11/19/1996	ND<3.21888	81
	12/19/1996	ND<3.21888	81
	3/24/1997	ND<3.21888	81
	9/24/1997	ND<3.21888	81
	4/7/1998	4.27667	199
	9/23/1998	ND<3.21888	81
	3/16/1999	ND<3.21888	81
	9/23/1999	ND<3.21888	81
	3/15/2000	ND<3.21888	81
	9/24/2003	ND<3.21888	81
	3/11/2004	ND<3.21888	81
	10/12/2004	ND<3.21888	81
	4/1/2005	ND<3.21888	81
	10/25/2005	ND<3.21888	81
	4/29/2006	ND<3.21888	81
	11/18/2006	ND<3.21888	81
	5/23/2007	ND<3.21888	81
	11/28/2007	ND<3.21888	81
	6/5/2008	0.0295588 J	173
	11/20/2008	ND<3.21888	81
	6/11/2009	-0.139262	171
	11/15/2009	-0.371064 J	169

Rank Sum = 2494
Rank Mean = 95.9231

MW-11R	7/20/1995	ND<3.21888	81
	8/24/1995	ND<3.21888	81
	9/28/1995	ND<3.21888	81
	10/26/1995	ND<3.21888	81
	11/19/1996	ND<3.21888	81
	12/19/1996	ND<3.21888	81
	3/24/1997	ND<3.21888	81
	9/24/1997	2.30259 J	193
	4/7/1998	ND<3.21888	81
	9/23/1998	ND<3.21888	81
	3/16/1999	ND<3.21888	81
	9/23/1999	1.79176 J	191
	3/15/2000	ND<3.21888	81
	9/24/2003	ND<3.21888	81
	3/11/2004	ND<3.21888	81
	10/12/2004	ND<3.21888	81
	4/1/2005	ND<3.21888	81

	10/25/2005	ND<3.21888	81
	4/29/2006	ND<3.21888	81
	11/18/2006	0.34359 J	180
	5/23/2007	ND<3.21888	81
	11/28/2007	ND<3.21888	81
	6/5/2008	ND<3.21888	81
	11/20/2008	ND<3.21888	81
	6/11/2009	-0.462035	168
	11/15/2009	-0.544727 J	166

Rank Sum = 2599
Rank Mean = 99.9615

MW-6	7/20/1995	ND<3.21888	81
	8/24/1995	ND<3.21888	81
	9/28/1995	ND<3.21888	81
	10/26/1995	ND<3.21888	81
	11/19/1996	ND<3.21888	81
	12/19/1996	ND<3.21888	81
	3/24/1997	ND<3.21888	81
	9/24/1997	ND<3.21888	81
	4/7/1998	ND<3.21888	81
	9/23/1998	ND<3.21888	81
	3/16/1999	ND<3.21888	81
	9/23/1999	2.30259 J	194
	3/15/2000	ND<3.21888	81
	9/24/2003	ND<3.21888	81
	3/11/2004	ND<3.21888	81
	10/12/2004	ND<3.21888	81
	4/1/2005	ND<3.21888	81
	10/25/2005	ND<3.21888	81
	4/29/2006	ND<3.21888	81
	11/18/2006	1.60141 J	188
	5/23/2007	ND<3.21888	81
	11/28/2007	ND<3.21888	81
	6/5/2008	ND<3.21888	81
	11/20/2008	ND<3.21888	81
	6/11/2009	-1.04982 J	163
	11/15/2009	-1.13943 J	162

Rank Sum = 2489
Rank Mean = 95.7308

MW-7	7/20/1995	ND<3.21888	81
	8/24/1995	ND<3.21888	81
	9/28/1995	ND<3.21888	81
	10/26/1995	ND<3.21888	81
	11/19/1996	ND<3.21888	81
	12/19/1996	ND<3.21888	81
	3/24/1997	ND<3.21888	81
	9/24/1997	ND<3.21888	81
	4/7/1998	4.14313	198
	9/23/1998	ND<3.21888	81
	3/16/1999	1.79176	192
	9/23/1999	ND<3.21888	81
	3/15/2000	ND<3.21888	81
	9/24/2003	ND<3.21888	81
	3/11/2004	ND<3.21888	81
	10/12/2004	ND<3.21888	81
	4/1/2005	ND<3.21888	81
	10/25/2005	ND<3.21888	81
	4/29/2006	ND<3.21888	81
	11/18/2006	0.553885 J	181
	5/23/2007	ND<3.21888	81

	11/28/2007	ND<3.21888	81
	6/5/2008	0.636577 J	183
	11/20/2008	2.77259 J	195
	6/11/2009	-0.34249	170

Rank Sum = 2658
Rank Mean = 106.32

MW-8	7/20/1995	ND<3.21888	81
	8/24/1995	ND<3.21888	81
	9/28/1995	ND<3.21888	81
	10/26/1995	ND<3.21888	81
	11/19/1996	ND<3.21888	81
	12/19/1996	ND<3.21888	81
	3/24/1997	ND<3.21888	81
	9/24/1997	ND<3.21888	81
	4/7/1998	4.09434	197
	9/23/1998	ND<3.21888	81
	3/16/1999	ND<3.21888	81
	9/23/1999	ND<3.21888	81
	3/15/2000	ND<3.21888	81
	9/24/2003	ND<3.21888	81
	3/11/2004	ND<3.21888	81
	10/12/2004	ND<3.21888	81
	4/1/2005	ND<3.21888	81
	10/25/2005	ND<3.21888	81
	4/29/2006	ND<3.21888	81
	11/18/2006	ND<3.21888	81
	5/23/2007	ND<3.21888	81
	11/28/2007	ND<3.21888	81
	6/5/2008	0.0295588 J	174
	11/20/2008	ND<3.21888	81
	6/11/2009	-0.616186 J	165

Rank Sum = 2318
Rank Mean = 92.72

MW-10	7/20/1995	ND<3.21888	81
	8/24/1995	ND<3.21888	81
	9/28/1995	ND<3.21888	81
	10/26/1995	ND<3.21888	81
	11/19/1996	ND<3.21888	81
	12/19/1996	ND<3.21888	81
	3/24/1997	ND<3.21888	81
	9/24/1997	ND<3.21888	81
	4/7/1998	5.19296	200
	9/23/1998	ND<3.21888	81
	3/16/1999	1.60944 J	189
	9/23/1999	3.63759 J	196
	3/15/2000	ND<3.21888	81
	9/24/2003	ND<3.21888	81
	3/11/2004	ND<3.21888	81
	10/12/2004	ND<3.21888	81
	4/1/2005	ND<3.21888	81
	10/25/2005	ND<3.21888	81
	4/29/2006	ND<3.21888	81
	11/18/2006	ND<3.21888	81
	5/23/2007	ND<3.21888	81
	11/28/2007	ND<3.21888	81
	6/5/2008	0.270027 J	179
	11/20/2008	ND<3.21888	81
	6/11/2009	-0.527633 J	167

Rank Sum = 2551
Rank Mean = 102.04

Calculation Results:

Kruskal-Wallis H Statistic = 2.04275
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 4.27044
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
2.04275 < 15.5073 indicating no significant group difference at 5% significance level
4.27044 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ug/L)

Parameter: Nitrate

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 142
Total Non-Detect: 110
Percent Non-Detects: 77.4648%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	11 (73.3333%)	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	0.42 J	0.42 J

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12AR	16	11 (68.75%)	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	0.24 J M	0.24 J M
			11/15/2009	640 J	640 J
MW-9	16	13 (81.25%)	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<0.1	ND<0.1		
MW-12BR		15	11 (73.3333%)	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	0.15 J M	0.15 J M		
MW-11R	16	12 (75%)	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	0.27 J M	0.27 J M		
MW-10	16	14 (87.5%)	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<0.1	ND<0.1		
MW-8	16	14 (87.5%)	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<0.1	ND<0.1	
MW-7	16	12 (75%)	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	0.18 J M	0.18 J M	
MW-6	16	12 (75%)	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	0.2 J M	0.2 J M	

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 = 142

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.05	-2.512136	.31081	-0.125607
2	0.05	-2.2262	11.2668	-0.236917
3	0.05	-2.0537	15.4847	-0.339604
4	0.15	-1.9268	19.1974	-0.62863
5	0.18	-1.8250	22.528	-0.957131
6	0.2	-1.7392	25.5529	-1.30497
7	0.24	-1.6645	28.3236	-1.70447
8	0.27	-1.5981	30.8778	-2.13598
9	0.42	-1.5382	33.2439	-2.78202
10	10	-1.4832	35.444	-17.6148
11	14	-1.4325	37.4961	-37.6699
12	15	-1.3851	39.4148	-58.4475
13	15	-1.3407	41.2124	-78.5588
14	15	-1.2988	42.8994	-98.0413
15	15	-1.2590	44.4847	-116.928
16	15	-1.2212	45.9761	-135.246
17	15	-1.1850	47.3804	-153.022
18	15	-1.1503	48.7037	-170.277
19	15	-1.1169	49.9514	-187.032
20	15	-1.0848	51.1282	-203.304
21	15	-1.0537	52.2386	-219.11
22	15	-1.0236	53.2865	-234.465
23	15	-0.994457	54.2754	-249.382
24	15	-0.966088	55.2087	-263.873
25	15	-0.938476	56.0895	-277.95
26	15	-0.911562	56.9204	-291.624
27	15	-0.885291	57.7041	-304.903
28	15	-0.859618	58.4431	-317.797
29	15	-0.834498	59.1395	-330.315
30	15	-0.809896	59.7954	-342.463
31	15	-0.785774	60.4128	-354.25
32	15	-0.7621	60.9936	-365.681
33	15	-0.738846	61.5395	-376.764
34	15	-0.715986	62.0522	-387.504
35	15	-0.693493	62.5331	-397.906
36	15	-0.671346	62.9838	-407.976
37	15	-0.649522	63.4057	-417.719
38	15	-0.628006	63.8001	-427.139
39	15	-0.606775	64.1683	-436.241
40	15	-0.585815	64.5114	-445.028
41	15	-0.565108	64.8308	-453.505
42	15	-0.544642	65.1274	-461.674
43	15	-0.524401	65.4024	-469.54
44	15	-0.504372	65.6568	-477.106
45	15	-0.484544	65.8916	-484.374
46	15	-0.464904	66.1077	-491.348
47	15	-0.445443	66.3061	-498.029
48	15	-0.426148	66.4877	-504.422
49	15	-0.407	016	6.6534 -510.527

50	15	-0.388022	66.804	-516.347
51	15	-0.369171	66.9403	-521.885
52	15	-0.350451	67.0631	-527.141
53	15	-0.331854	67.1732	-532.119
54	15	-0.3133767.2714	-536.82	
55	15	-0.294992	67.3584	-541.245
56	15	-0.276714	67.435	-545.395
57	15	-0.258527	67.5018	-549.273
58	15	-0.240426	67.5596	-552.88
59	15	-0.222403	67.6091	-556.216
60	15	-0.204452	67.6509	-559.283
61	15	-0.186567	67.6857	-562.081
62	15	-0.168741	67.7142	-564.612
63	15	-0.150969	67.737	-566.877
64	15	-0.133244	67.7547	-568.875
65	15	-0.115562	67.7681	-570.609
66	15	-0.0979139	67.7777	-572.078
67	15	-0.0802981	67.7841	-573.282
68	15	-0.0627062	67.788	-574.223
69	15	-0.0451348	67.7901	-574.9
70	15	-0.0275759	67.7908	-575.313
71	15	-0.0100272	67.7909	-575.464
72	15	0.0100272	67.791	-575.313
73	15	0.0275759	67.7918	-574.9
74	15	0.0451348	67.7938	-574.223
75	15	0.0627062	67.7978	-573.282
76	15	0.0802981	67.8042	-572.078
77	15	0.0979139	67.8138	-570.609
78	15	0.115562	67.8272	-568.875
79	15	0.133244	67.8449	-566.877
80	15	0.150969	67.8677	-564.612
81	15	0.168741	67.8962	-562.081
82	15	0.186567	67.931	-559.283
83	15	0.204452	67.9728	-556.216
84	15	0.222403	68.0222	-552.88
85	15	0.240426	68.0801	-549.273
86	15	0.258527	68.1469	-545.395
87	15	0.276714	68.2235	-541.245
88	15	0.294992	68.3105	-536.82
89	15	0.31337 68.4087	-532.119	
90	15	0.331854	68.5188	-527.141
91	15	0.350451	68.6416	-521.885
92	15	0.369171	68.7779	-516.347
93	15	0.388022	68.9285	-510.527
94	15	0.40701 69.0941	-504.422	
95	15	0.426148	69.2757	-498.029
96	15	0.445443	69.4742	-491.348
97	15	0.464904	69.6903	-484.374
98	15	0.484544	69.9251	-477.106
99	15	0.504372	70.1795	-469.54
100	15	0.524401	70.4545	-461.674
101	17	0.544642	70.7511	-452.416
102	18	0.565108	71.0704	-442.244
103	20	0.585815	71.4136	-430.527
104	20	0.606775	71.7818	-418.392
105	20	0.628006	72.1762	-405.832
106	20	0.649522	72.5981	-392.841
107	20	0.671346	73.0488	-379.414
108	20	0.693493	73.5297	-365.544
109	20	0.715986	74.0423	-351.225
110	20	0.738846	74.5882	-336.448
111	20	0.7621 75.169	-321.206	

112	20	0.785774	75.7865	-305.49
113	20	0.809896	76.4424	-289.292
114	20	0.834498	77.1388	-272.602
115	20	0.859618	77.8777	-255.41
116	20	0.885291	78.6615	-237.704
117	20	0.911562	79.4924	-219.473
118	20	0.938476	80.3732	-200.704
119	20	0.966088	81.3065	-181.382
120	20	0.994457	82.2954	-161.493
121	20	1.02365	83.3433	-141.02
122	20	1.05375	84.4537	-119.945
123	21	1.08482	85.6305	-97.1634
124	22	1.11699	86.8782	-72.5897
125	22	1.15035	88.2015	-47.2821
126	29	1.18504	89.6058	-12.9158
127	33	1.22123	91.0972	27.3848
128	33	1.25908	92.6825	68.9345
129	35	1.29884	94.3695	114.394
130	36	1.34075	96.1671	162.661
131	38	1.38517	98.0858	215.297
132	38	1.4325	100.138	269.733
133	55	1.48328	102.338	351.313
134	58	1.5382	104.704	440.529
135	60	1.59819	107.258	536.42
136	68	1.66456	110.029	649.61
137	74	1.7392	113.054	778.311
138	94	1.82501	116.384	949.862
139	160	1.92684	120.097	1258.16
140	217	2.05375	124.315	1703.82
141	276	2.22621	129.271	2318.25
142	640	2.51213	135.582	3926.02

Data Set Standard Deviation = 60.9746
Numerator = 1.54136e+007
Denominator = 7.10753e+007
W Statistic = 0.216863 = 1.54136e+007 / 7.10753e+007

5% Critical value of 0.976 exceeds 0.216863
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.216863
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 = 142

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.99573	-2.51213	6.31081	7.52568
2	-2.99573	-2.22621	11.2668	14.1948
3	-2.99573	-2.05375	15.4847	20.3473
4	-1.89712	-1.92684	19.1974	24.0027
5	-1.7148	-1.82501	22.528	27.1322
6	-1.60944	-1.7392	25.5529	29.9314
7	-1.42712	-1.66456	28.3236	32.3069
8	-1.30933	-1.59819	30.8778	34.3995
9	-0.867501	-1.5382	33.2439	35.7338
10	2.30259	-1.48328	35.444	32.3185
11	2.63906	-1.4325	37.4961	28.538
12	2.70805	-1.38517	39.4148	24.7869
13	2.70805	-1.34075	41.2124	21.1561
14	2.70805	-1.29884	42.8994	17.6387
15	2.70805	-1.25908	44.4847	14.2291
16	2.70805	-1.22123	45.9761	10.9219
17	2.70805	-1.18504	47.3804	7.71278
18	2.70805	-1.15035	48.7037	4.59758
19	2.70805	-1.11699	49.9514	1.57272
20	2.70805	-1.08482	51.1282	-1.36504
21	2.70805	-1.05375	52.2386	-4.21863
22	2.70805	-1.02365	53.2865	-6.99073
23	2.70805	-0.994457	54.2754	-9.68377
24	2.70805	-0.966088	55.2087	-12.3
25	2.70805	-0.938476	56.0895	-14.8414
26	2.70805	-0.911562	56.9204	-17.31
27	2.70805	-0.885291	57.7041	-19.7074
28	2.70805	-0.859618	58.4431	-22.0353
29	2.70805	-0.834498	59.1395	-24.2951
30	2.70805	-0.809896	59.7954	-26.4884
31	2.70805	-0.785774	60.4128	-28.6163
32	2.70805	-0.7621	60.9936	-30.6801
33	2.70805	-0.738846	61.5395	-32.6809
34	2.70805	-0.715986	62.0522	-34.6199
35	2.70805	-0.693493	62.5331	-36.4979
36	2.70805	-0.671346	62.9838	-38.3159
37	2.70805	-0.649522	63.4057	-40.0749
38	2.70805	-0.628006	63.8001	-41.7755
39	2.70805	-0.606775	64.1683	-43.4187
40	2.70805	-0.585815	64.5114	-45.0051
41	2.70805	-0.565108	64.8308	-46.5355
42	2.70805	-0.544642	65.1274	-48.0104
43	2.70805	-0.524401	65.4024	-49.4305
44	2.70805	-0.504372	65.6568	-50.7963
45	2.70805	-0.484544	65.8916	-52.1085
46	2.70805	-0.464904	66.1077	-53.3675
47	2.70805	-0.445443	66.3061	-54.5738
48	2.70805	-0.426148	66.4877	-55.7278
49	2.70805	-0.407016	66.6534	-56.83

50	2.70805	-0.388022	66.804	-57.8808
51	2.70805	-0.369171	66.9403	-58.8805
52	2.70805	-0.350451	67.0631	-59.8296
53	2.70805	-0.331854	67.1732	-60.7282
54	2.70805	-0.3133767.2714	-61.5769	
55	2.70805	-0.294992	67.3584	-62.3757
56	2.70805	-0.276714	67.435	-63.1251
57	2.70805	-0.258527	67.5018	-63.8252
58	2.70805	-0.240426	67.5596	-64.4763
59	2.70805	-0.222403	67.6091	-65.0785
60	2.70805	-0.204452	67.6509	-65.6322
61	2.70805	-0.186567	67.6857	-66.1374
62	2.70805	-0.168741	67.7142	-66.5944
63	2.70805	-0.150969	67.737	-67.0032
64	2.70805	-0.133244	67.7547	-67.3641
65	2.70805	-0.115562	67.7681	-67.677
66	2.70805	-0.0979139	67.7777	-67.9422
67	2.70805	-0.0802981	67.7841	-68.1596
68	2.70805	-0.0627062	67.788	-68.3294
69	2.70805	-0.0451348	67.7901	-68.4517
70	2.70805	-0.0275759	67.7908	-68.5263
71	2.70805	-0.0100272	67.7909	-68.5535
72	2.70805	0.0100272	67.791	-68.5263
73	2.70805	0.0275759	67.7918	-68.4517
74	2.70805	0.0451348	67.7938	-68.3294
75	2.70805	0.0627062	67.7978	-68.1596
76	2.70805	0.0802981	67.8042	-67.9422
77	2.70805	0.0979139	67.8138	-67.677
78	2.70805	0.115562	67.8272	-67.3641
79	2.70805	0.133244	67.8449	-67.0032
80	2.70805	0.150969	67.8677	-66.5944
81	2.70805	0.168741	67.8962	-66.1374
82	2.70805	0.186567	67.931	-65.6322
83	2.70805	0.204452	67.9728	-65.0785
84	2.70805	0.222403	68.0222	-64.4763
85	2.70805	0.240426	68.0801	-63.8252
86	2.70805	0.258527	68.1469	-63.1251
87	2.70805	0.276714	68.2235	-62.3757
88	2.70805	0.294992	68.3105	-61.5769
89	2.70805	0.31337 68.4087	-60.7282	
90	2.70805	0.331854	68.5188	-59.8296
91	2.70805	0.350451	68.6416	-58.8805
92	2.70805	0.369171	68.7779	-57.8808
93	2.70805	0.388022	68.9285	-56.83
94	2.70805	0.40701 69.0941	-55.7278	
95	2.70805	0.426148	69.2757	-54.5738
96	2.70805	0.445443	69.4742	-53.3675
97	2.70805	0.464904	69.6903	-52.1085
98	2.70805	0.484544	69.9251	-50.7963
99	2.70805	0.504372	70.1795	-49.4305
100	2.70805	0.524401	70.4545	-48.0104
101	2.83321	0.544642	70.7511	-46.4673
102	2.89037	0.565108	71.0704	-44.8339
103	2.99573	0.585815	71.4136	-43.079
104	2.99573	0.606775	71.7818	-41.2612
105	2.99573	0.628006	72.1762	-39.3799
106	2.99573	0.649522	72.5981	-37.4341
107	2.99573	0.671346	73.0488	-35.4229
108	2.99573	0.693493	73.5297	-33.3454
109	2.99573	0.715986	74.0423	-31.2005
110	2.99573	0.738846	74.5882	-28.9871
111	2.99573	0.7621 75.169	-26.7041	

112	2.99573	0.785774	75.7865	-24.3501
113	2.99573	0.809896	76.4424	-21.9239
114	2.99573	0.834498	77.1388	-19.4239
115	2.99573	0.859618	77.8777	-16.8488
116	2.99573	0.885291	78.6615	-14.1967
117	2.99573	0.911562	79.4924	-11.4659
118	2.99573	0.938476	80.3732	-8.65445
119	2.99573	0.966088	81.3065	-5.76031
120	2.99573	0.994457	82.2954	-2.78118
121	2.99573	1.02365	83.3433	0.285408
122	2.99573	1.05375	84.4537	3.44215
123	3.04452	1.08482	85.6305	6.74491
124	3.09104	1.11699	86.8782	10.1976
125	3.09104	1.15035	88.2015	13.7533
126	3.3673	1.18504	89.6058	17.7437
127	3.49651	1.22123	91.0972	22.0138
128	3.49651	1.25908	92.6825	26.4162
129	3.55535	1.29884	94.3695	31.034
130	3.58352	1.34075	96.1671	35.8386
131	3.63759	1.38517	98.0858	40.8773
132	3.63759	1.4325	100.138	46.0881
133	4.00733	1.48328	102.338	52.0321
134	4.06044	1.5382	104.704	58.2779
135	4.09434	1.59819	107.258	64.8215
136	4.21951	1.66456	110.029	71.8451
137	4.30407	1.7392	113.054	79.3307
138	4.54329	1.82501	116.384	87.6223
139	5.07517	1.92684	120.097	97.4013
140	5.3799	2.05375	124.315	108.45
141	5.6204	2.22621	129.271	120.962
142	6.46147	2.51213	135.582	137.194

Data Set Standard Deviation = 1.35423
Numerator = 18822.3
Denominator = 35059.4
W Statistic = 0.53687 = 18822.3 / 35059.4

5% Critical value of 0.976 exceeds 0.53687
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.53687
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	55.5
	9/23/1999	ND<2.70805	55.5
	3/15/2000	ND<2.70805	55.5
	9/24/2003	ND<2.70805	55.5
	3/11/2004	ND<2.70805	55.5
	10/12/2004	ND<2.70805	55.5
	4/1/2005	ND<2.99573	55.5
	10/25/2005	ND<2.99573	55.5
	4/29/2006	4.21951	136
	11/18/2006	4.54329	138
	5/23/2007	2.63906 J	118
	11/28/2007	ND<2.70805	55.5
	6/5/2008	ND<2.70805	55.5
	11/20/2008	ND<2.70805	55.5
	6/11/2009	-0.867501 J	116

Rank Sum = 1118.5
Rank Mean = 74.5667

Background Rank Sum = 1118.5
Background Rank Mean = 74.5667

Compliance Wells

Well ID	Date	Result	Rank
MW-12AR	3/16/1999	ND<2.70805	55.5
	9/23/1999	ND<2.70805	55.5
	3/15/2000	ND<2.70805	55.5
	9/24/2003	ND<2.70805	55.5
	3/11/2004	ND<2.70805	55.5
	10/12/2004	ND<2.70805	55.5
	4/1/2005	ND<2.99573	55.5
	10/25/2005	ND<2.99573	55.5
	4/29/2006	5.07517	139
	11/18/2006	5.6204	141
	5/23/2007	5.3799	140
	11/28/2007	ND<2.70805	55.5
	6/5/2008	ND<2.70805	55.5
	11/20/2008	ND<2.70805	55.5
	6/11/2009	-1.42712 J M	114
	11/15/2009	6.46147 J	142

Rank Sum = 1286.5
Rank Mean = 80.4063

MW-9	9/23/1998	ND<2.70805	55.5
	3/16/1999	ND<2.70805	55.5
	9/23/1999	ND<2.70805	55.5

	3/15/2000	ND<2.70805	55.5
	9/24/2003	ND<2.70805	55.5
	3/11/2004	ND<2.70805	55.5
	10/12/2004	ND<2.70805	55.5
	4/1/2005	ND<2.99573	55.5
	10/25/2005	ND<2.99573	55.5
	4/29/2006	2.30259 J	117
	11/18/2006	2.70805 J	119
	5/23/2007	3.3673 J	126
	11/28/2007	ND<2.70805	55.5
	6/5/2008	ND<2.70805	55.5
	11/20/2008	ND<2.70805	55.5
	6/11/2009	ND<-2.99573	55.5

Rank Sum = 1083.5
Rank Mean = 67.7188

MW-12BR	3/16/1999	ND<2.70805	55.5
	9/23/1999	ND<2.70805	55.5
	3/15/2000	ND<2.70805	55.5
	9/24/2003	ND<2.70805	55.5
	3/11/2004	ND<2.70805	55.5
	10/12/2004	ND<2.70805	55.5
	4/1/2005	ND<2.99573	55.5
	10/25/2005	ND<2.99573	55.5
	4/29/2006	3.49651 J	127
	11/18/2006	3.09104 J	124
	5/23/2007	2.99573 J	122
	11/28/2007	ND<2.70805	55.5
	6/5/2008	ND<2.70805	55.5
	11/20/2008	ND<2.70805	55.5
	6/11/2009	-1.89712 J M	111

Rank Sum = 1094.5
Rank Mean = 72.9667

MW-11R	9/23/1998	ND<2.70805	55.5
	3/16/1999	ND<2.70805	55.5
	9/23/1999	ND<2.70805	55.5
	3/15/2000	ND<2.70805	55.5
	9/24/2003	ND<2.70805	55.5
	3/11/2004	ND<2.70805	55.5
	10/12/2004	ND<2.70805	55.5
	4/1/2005	ND<2.99573	55.5
	10/25/2005	ND<2.99573	55.5
	4/29/2006	2.89037 J	121
	11/18/2006	4.09434	135
	5/23/2007	3.49651	128
	11/28/2007	ND<2.70805	55.5
	6/5/2008	ND<2.70805	55.5
	11/20/2008	ND<2.70805	55.5
	6/11/2009	-1.30933 J M	115

Rank Sum = 1165
Rank Mean = 72.8125

MW-10	9/23/1998	ND<2.70805	55.5
	3/16/1999	ND<2.70805	55.5
	9/23/1999	ND<2.70805	55.5
	3/15/2000	ND<2.70805	55.5
	9/24/2003	ND<2.70805	55.5
	3/11/2004	ND<2.70805	55.5
	10/12/2004	ND<2.70805	55.5
	4/1/2005	ND<2.99573	55.5
	10/25/2005	ND<2.99573	55.5

	4/29/2006	3.63759 J	131
	11/18/2006	ND<2.70805	55.5
	5/23/2007	3.63759	132
	11/28/2007	ND<2.70805	55.5
	6/5/2008	ND<2.70805	55.5
	11/20/2008	ND<2.70805	55.5
	6/11/2009	ND<-2.99573	55.5

Rank Sum = 1040
Rank Mean = 65

MW-8	9/23/1998	ND<2.70805	55.5
	3/16/1999	ND<2.70805	55.5
	9/23/1999	ND<2.70805	55.5
	3/15/2000	ND<2.70805	55.5
	9/24/2003	ND<2.70805	55.5
	3/11/2004	ND<2.70805	55.5
	10/12/2004	ND<2.70805	55.5
	4/1/2005	ND<2.99573	55.5
	10/25/2005	ND<2.99573	55.5
	4/29/2006	ND<2.99573	55.5
	11/18/2006	2.83321 J	120
	5/23/2007	3.55535	129
	11/28/2007	ND<2.70805	55.5
	6/5/2008	ND<2.70805	55.5
	11/20/2008	ND<2.70805	55.5
	6/11/2009	ND<-2.99573	55.5

Rank Sum = 1026
Rank Mean = 64.125

MW-7	9/23/1998	ND<2.70805	55.5
	3/16/1999	ND<2.70805	55.5
	9/23/1999	ND<2.70805	55.5
	3/15/2000	ND<2.70805	55.5
	9/24/2003	ND<2.70805	55.5
	3/11/2004	ND<2.70805	55.5
	10/12/2004	ND<2.70805	55.5
	4/1/2005	ND<2.99573	55.5
	10/25/2005	ND<2.99573	55.5
	4/29/2006	3.09104 J	125
	11/18/2006	4.06044	134
	5/23/2007	4.30407	137
	11/28/2007	ND<2.70805	55.5
	6/5/2008	ND<2.70805	55.5
	11/20/2008	ND<2.70805	55.5
	6/11/2009	-1.7148 J M	112

Rank Sum = 1174
Rank Mean = 73.375

MW-6	9/23/1998	ND<2.70805	55.5
	3/16/1999	ND<2.70805	55.5
	9/23/1999	ND<2.70805	55.5
	3/15/2000	ND<2.70805	55.5
	9/24/2003	ND<2.70805	55.5
	3/11/2004	ND<2.70805	55.5
	10/12/2004	ND<2.70805	55.5
	4/1/2005	ND<2.99573	55.5
	10/25/2005	ND<2.99573	55.5
	4/29/2006	4.00733	133
	11/18/2006	3.04452 J	123
	5/23/2007	3.58352	130
	11/28/2007	ND<2.70805	55.5
	6/5/2008	ND<2.70805	55.5

11/20/2008	ND<2.70805	55.5
6/11/2009	-1.60944 J M	113

Rank Sum = 1165
Rank Mean = 72.8125

Calculation Results:

Kruskal-Wallis H Statistic = 1.96722
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 3.67591
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
1.96722 < 15.5073 indicating no significant group difference at 5% significance level
3.67591 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ug/L)

Parameter: Selenium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 196
Total Non-Detect: 172
Percent Non-Detects: 87.7551%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-10	26	21 (80.7692%)	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
			11/15/2009	0.25 J	0.25 J

MW-7	25	21 (84%)	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		
MW-12BR	15	14 (93.3333%)	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	
MW-11R	25	22 (88%)	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
MW-12AR	15	13 (86.6667%)	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	1.54 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
MW-6	25	25 (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
MW-8	25	21 (84%)	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
MW-9	25	20 (80%)	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

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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.105	-2.57583	6.63492	-0.270463
2	0.105	-2.32634	12.0468	-0.514729
3	0.105	-2.17009	16.7561	-0.742588
4	0.105	-2.05375	20.974	-0.958232
5	0.105	-1.95996	24.8154	-1.16403
6	0.105	-1.88079	28.3528	-1.36151
7	0.105	-1.81191	31.6358	-1.55176
8	0.25	-1.75069	34.7007	-1.98943
9	0.25	-1.6954	37.5751	-2.41328
10	0.27	-1.64485	40.2806	-2.85739
11	1	-1.59819	42.8348	-4.45558
12	1	-1.55477	45.2522	-6.01036
13	1	-1.5141	47.5447	-7.52446
14	1	-1.46838	49.7008	-8.99284
15	1	-1.4325	51.7529	-10.4253
16	1	-1.39838	53.7083	-11.8237
17	1	-1.36581	55.5738	-13.1895
18	1	-1.33462	57.355	-14.5242
19	1	-1.30469	59.0572	-15.8288
20	1	-1.27588	60.6851	-17.1047
21	1	-1.24809	62.2428	-18.3528
22	1	-1.22123	63.7342	-19.574
23	1	-1.19522	65.1627	-20.7693
24	1	-1.17	66.5316	-21.9393
25	1	-1.1455	67.8438	-23.0848
26	1	-1.12168	69.102	-24.2064
27	1	-1.0939	70.2986	-25.3003
28	1	-1.07138	71.4464	-26.3717
29	1	-1.04939	72.5476	-27.4211
30	1	-1.02789	73.6042	-28.449
31	1	-1.00687	74.618	-29.4559
32	1	-0.986272	75.5907	-30.4421
33	1	-0.966088	76.524	-31.4082
34	1	-0.946291	77.4195	-32.3545
35	1	-0.926859	78.2786	-33.2814
36	1	-0.907769	79.1026	-34.1891
37	1	-0.889006	79.893	-35.0781
38	1	-0.870558	80.6508	-35.9487
39	1	-0.852385	81.3774	-36.8011
40	1	-0.830953	82.0679	-37.632
41	1	-0.813379	82.7294	-38.4454
42	1	-0.796056	83.3632	-39.2415
43	1	-0.778966	83.9699	-40.0204
44	1	-0.7621	84.5507	-40.7825
45	1	-0.745449	85.1064	-41.528
46	1	-0.729003	85.6379	-42.257
47	1	-0.712751	86.1459	-42.9697
48	1	-0.696684	86.6313	-43.6664
49	1	-0.680797	87.0947	-44.3472

50	1	-0.665079	87.5371	-45.0123
51	1	-0.649522	87.959	-45.6618
52	1	-0.634124	88.3611	-46.2959
53	1	-0.615839	88.7403	-46.9118
54	1	-0.6007689.1012	-47.5125	
55	1	-0.585815	89.4444	-48.0984
56	1	-0.570999	89.7705	-48.6694
57	1	-0.556308	90.0799	-49.2257
58	1	-0.541736	90.3734	-49.7674
59	1	-0.5272890.6514	-50.2947	
60	1	-0.5129390.9145	-50.8076	
61	1	-0.498687	91.1632	-51.3063
62	1	-0.484544	91.398	-51.7908
63	1	-0.470498	91.6194	-52.2613
64	1	-0.456542	91.8278	-52.7179
65	1	-0.442676	92.0238	-53.1606
66	1	-0.426148	92.2054	-53.5867
67	1	-0.412463	92.3755	-53.9992
68	1	-0.398855	92.5346	-54.398
69	1	-0.385321	92.683	-54.7833
70	1	-0.371856	92.8213	-55.1552
71	1	-0.358459	92.9498	-55.5137
72	1	-0.345126	93.0689	-55.8588
73	1	-0.331854	93.1791	-56.1906
74	1	-0.318639	93.2806	-56.5093
75	1	-0.305481	93.3739	-56.8148
76	1	-0.292375	93.4594	-57.1071
77	1	-0.279319	93.5374	-57.3864
78	1	-0.266311	93.6083	-57.6528
79	1	-0.250759	93.6712	-57.9035
80	1	-0.237847	93.7278	-58.1414
81	1	-0.224974	93.7784	-58.3663
82	1	-0.212137	93.8234	-58.5785
83	1	-0.199336	93.8631	-58.7778
84	1	-0.186567	93.8979	-58.9644
85	1	-0.173829	93.9282	-59.1382
86	1	-0.161119	93.9541	-59.2993
87	1	-0.148434	93.9762	-59.4478
88	1	-0.135774	93.9946	-59.5835
89	1	-0.123135	94.0097	-59.7067
90	1	-0.110516	94.022	-59.8172
91	1	-0.0979139	94.0315	-59.9151
92	1	-0.0828129	94.0384	-59.9979
93	1	-0.0702426	94.0433	-60.0682
94	1	-0.0576847	94.0467	-60.1258
95	1	-0.0451348	94.0487	-60.171
96	1	-0.0325917	94.0498	-60.2036
97	1	-0.0200544	94.0502	-60.2236
98	1	-0.00751925	94.0502	-60.2311
99	1	0.00751925	94.0503	-60.2236
100	1	0.0200544	94.0507	-60.2036
101	1	0.0325917	94.0517	-60.171
102	1	0.0451348	94.0538	-60.1258
103	1	0.0576847	94.0571	-60.0682
104	1	0.0702426	94.062	-59.9979
105	1	0.0828129	94.0689	-59.9151
106	1	0.0979139	94.0785	-59.8172
107	1	0.110516	94.0907	-59.7067
108	1	0.123135	94.1059	-59.5835
109	1	0.135774	94.1243	-59.4478
110	1	0.148434	94.1463	-59.2993
111	1	0.161119	94.1723	-59.1382

112	1	0.173829		94.2025	-58.9644
113	1	0.186567		94.2373	-58.7778
114	1	0.199336		94.2771	-58.5785
115	1	0.212137		94.3221	-58.3663
116	1	0.224974		94.3727	-58.1414
117	1	0.237847		94.4292	-57.9035
118	1	0.250759		94.4921	-57.6528
119	1	0.266311		94.563	-57.3864
120	1	0.279319		94.6411	-57.1071
121	1	0.292375		94.7265	-56.8148
122	1	0.305481		94.8199	-56.5093
123	1	0.318639		94.9214	-56.1906
124	1	0.331854		95.0315	-55.8588
125	1	0.345126		95.1506	-55.5137
126	1	0.358459		95.2791	-55.1552
127	1	0.371856		95.4174	-54.7833
128	1	0.385321		95.5659	-54.398
129	1	0.398855		95.725	-53.9992
130	1	0.412463		95.8951	-53.5867
131	1	0.426148		96.0767	-53.1606
132	1	0.442676		96.2726	-52.7179
133	1	0.456542		96.4811	-52.2613
134	1	0.470498		96.7024	-51.7908
135	1	0.484544		96.9372	-51.3063
136	1	0.498687		97.1859	-50.8076
137	1	0.51293	97.449	-50.2947	
138	1	0.52728	97.727	-49.7674	
139	1	0.541736		98.0205	-49.2257
140	1	0.556308		98.33	-48.6694
141	1	0.570999		98.656	-48.0984
142	1	0.585815		98.9992	-47.5125
143	1	0.60076	99.3601	-46.9118	
144	1	0.615839		99.7394	-46.2959
145	1	0.634124		100.141	-45.6618
146	1	0.649522		100.563	-45.0123
147	1	0.665079		101.006	-44.3472
148	1	0.680797		101.469	-43.6664
149	1	0.696684		101.955	-42.9697
150	1	0.712751		102.463	-42.257
151	1	0.729003		102.994	-41.528
152	1	0.745449		103.55	-40.7825
153	1	0.7621	104.131	-40.0204	
154	1	0.778966		104.737	-39.2415
155	1	0.796056		105.371	-38.4454
156	1	0.813379		106.033	-37.632
157	1	0.830953		106.723	-36.8011
158	1	0.852385		107.45	-35.9487
159	1	0.87055	108.207	-35.0781	
160	1	0.889006		108.998	-34.1891
161	1	0.907769		109.822	-33.2814
162	1	0.926859		110.681	-32.3545
163	1	0.946291		111.576	-31.4082
164	1	0.966088		112.51	-30.4421
165	1	0.986272		113.482	-29.4559
166	1	1.00687	114.496	-28.449	
167	1	1.02789	115.553	-27.4211	
168	1	1.04939	116.654	-26.3717	
169	1	1.07138	117.802	-25.3003	
170	1	1.0939	118.998	-24.2064	
171	1	1.12168	120.257	-23.0848	
172	1	1.1455	121.569	-21.9393	
173	1	1.17	122.938	-20.7693	

174	1	1.19522	124.366	-19.574
175	1	1.22123	125.858	-18.3528
176	1.04	1.24809	127.415	-17.0548
177	1.04	1.27588	129.043	-15.7279
178	1.12	1.30469	130.745	-14.2666
179	1.32	1.33462	132.527	-12.5049
180	1.34	1.36581	134.392	-10.6747
181	1.39	1.39838	136.348	-8.73101
182	1.52	1.4325	138.4	-6.5536
183	1.54	1.46838	140.556	-4.29229
184	1.54	1.5141	142.848	-1.96057
185	1.63	1.55477	145.266	0.573709
186	1.83	1.59819	147.82	3.4984
187	1.83	1.64485	150.525	6.50848
188	1.89	1.6954	153.4	9.71278
189	2.06	1.75069	156.465	13.3192
190	20	1.81191	159.748	49.5575
191	27	1.88079	163.285	100.339
192	52	1.95996	167.126	202.257
193	58	2.05375	171.344	321.374
194	68	2.17009	176.054	468.94
195	90	2.32634	181.466	678.311
196	160	2.57583	188.1	1090.44

Data Set Standard Deviation = 14.9322
Numerator = 1.18907e+006
Denominator = 8.1785e+006
W Statistic = 0.14539 = 1.18907e+006 / 8.1785e+006

5% Critical value of 0.976 exceeds 0.14539
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.14539
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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.25379	-2.57583	6.63492	5.8054
2	-2.25379	-2.32634	12.0468	11.0485
3	-2.25379	-2.17009	16.7561	15.9394
4	-2.25379	-2.05375	20.974	20.5682
5	-2.25379	-1.95996	24.8154	24.9855
6	-2.25379	-1.88079	28.3528	29.2244
7	-2.25379	-1.81191	31.6358	33.3081
8	-1.38629	-1.75069	34.7007	35.7351
9	-1.38629	-1.6954	37.5751	38.0854
10	-1.30933	-1.64485	40.2806	40.2391
11	0	-1.59819	42.8348	40.2391
12	0	-1.55477	45.2522	40.2391
13	0	-1.5141	47.5447	40.2391
14	0	-1.46838	49.7008	40.2391
15	0	-1.4325	51.7529	40.2391
16	0	-1.39838	53.7083	40.2391
17	0	-1.36581	55.5738	40.2391
18	0	-1.33462	57.355	40.2391
19	0	-1.30469	59.0572	40.2391
20	0	-1.27588	60.6851	40.2391
21	0	-1.24809	62.2428	40.2391
22	0	-1.22123	63.7342	40.2391
23	0	-1.19522	65.1627	40.2391
24	0	-1.17	66.5316	40.2391
25	0	-1.1455	67.8438	40.2391
26	0	-1.12168	69.102	40.2391
27	0	-1.0939	70.2986	40.2391
28	0	-1.07138	71.4464	40.2391
29	0	-1.04939	72.5476	40.2391
30	0	-1.02789	73.6042	40.2391
31	0	-1.00687	74.618	40.2391
32	0	-0.986272	75.5907	40.2391
33	0	-0.966088	76.524	40.2391
34	0	-0.946291	77.4195	40.2391
35	0	-0.926859	78.2786	40.2391
36	0	-0.907769	79.1026	40.2391
37	0	-0.889006	79.893	40.2391
38	0	-0.870558	80.6508	40.2391
39	0	-0.852385	81.3774	40.2391
40	0	-0.830953	82.0679	40.2391
41	0	-0.813379	82.7294	40.2391
42	0	-0.796056	83.3632	40.2391
43	0	-0.778966	83.9699	40.2391
44	0	-0.7621	84.5507	40.2391
45	0	-0.745449	85.1064	40.2391
46	0	-0.729003	85.6379	40.2391
47	0	-0.712751	86.1459	40.2391
48	0	-0.696684	86.6313	40.2391
49	0	-0.680797	87.0947	40.2391

50	0	-0.665079	87.5371	40.2391
51	0	-0.649522	87.959	40.2391
52	0	-0.634124	88.3611	40.2391
53	0	-0.615839	88.7403	40.2391
54	0	-0.6007689.1012	40.2391	
55	0	-0.585815	89.4444	40.2391
56	0	-0.570999	89.7705	40.2391
57	0	-0.556308	90.0799	40.2391
58	0	-0.541736	90.3734	40.2391
59	0	-0.5272890.6514	40.2391	
60	0	-0.5129390.9145	40.2391	
61	0	-0.498687	91.1632	40.2391
62	0	-0.484544	91.398	40.2391
63	0	-0.470498	91.6194	40.2391
64	0	-0.456542	91.8278	40.2391
65	0	-0.442676	92.0238	40.2391
66	0	-0.426148	92.2054	40.2391
67	0	-0.412463	92.3755	40.2391
68	0	-0.398855	92.5346	40.2391
69	0	-0.385321	92.683	40.2391
70	0	-0.371856	92.8213	40.2391
71	0	-0.358459	92.9498	40.2391
72	0	-0.345126	93.0689	40.2391
73	0	-0.331854	93.1791	40.2391
74	0	-0.318639	93.2806	40.2391
75	0	-0.305481	93.3739	40.2391
76	0	-0.292375	93.4594	40.2391
77	0	-0.279319	93.5374	40.2391
78	0	-0.266311	93.6083	40.2391
79	0	-0.250759	93.6712	40.2391
80	0	-0.237847	93.7278	40.2391
81	0	-0.224974	93.7784	40.2391
82	0	-0.212137	93.8234	40.2391
83	0	-0.199336	93.8631	40.2391
84	0	-0.186567	93.8979	40.2391
85	0	-0.173829	93.9282	40.2391
86	0	-0.161119	93.9541	40.2391
87	0	-0.148434	93.9762	40.2391
88	0	-0.135774	93.9946	40.2391
89	0	-0.123135	94.0097	40.2391
90	0	-0.110516	94.022	40.2391
91	0	-0.0979139	94.0315	40.2391
92	0	-0.0828129	94.0384	40.2391
93	0	-0.0702426	94.0433	40.2391
94	0	-0.0576847	94.0467	40.2391
95	0	-0.0451348	94.0487	40.2391
96	0	-0.0325917	94.0498	40.2391
97	0	-0.0200544	94.0502	40.2391
98	0	-0.00751925	94.0502	40.2391
99	0	0.00751925	94.0503	40.2391
100	0	0.0200544	94.0507	40.2391
101	0	0.0325917	94.0517	40.2391
102	0	0.0451348	94.0538	40.2391
103	0	0.0576847	94.0571	40.2391
104	0	0.0702426	94.062	40.2391
105	0	0.0828129	94.0689	40.2391
106	0	0.0979139	94.0785	40.2391
107	0	0.110516	94.0907	40.2391
108	0	0.123135	94.1059	40.2391
109	0	0.135774	94.1243	40.2391
110	0	0.148434	94.1463	40.2391
111	0	0.161119	94.1723	40.2391

112	0	0.173829		94.2025	40.2391
113	0	0.186567		94.2373	40.2391
114	0	0.199336		94.2771	40.2391
115	0	0.212137		94.3221	40.2391
116	0	0.224974		94.3727	40.2391
117	0	0.237847		94.4292	40.2391
118	0	0.250759		94.4921	40.2391
119	0	0.266311		94.563	40.2391
120	0	0.279319		94.6411	40.2391
121	0	0.292375		94.7265	40.2391
122	0	0.305481		94.8199	40.2391
123	0	0.318639		94.9214	40.2391
124	0	0.331854		95.0315	40.2391
125	0	0.345126		95.1506	40.2391
126	0	0.358459		95.2791	40.2391
127	0	0.371856		95.4174	40.2391
128	0	0.385321		95.5659	40.2391
129	0	0.398855		95.725	40.2391
130	0	0.412463		95.8951	40.2391
131	0	0.426148		96.0767	40.2391
132	0	0.442676		96.2726	40.2391
133	0	0.456542		96.4811	40.2391
134	0	0.470498		96.7024	40.2391
135	0	0.484544		96.9372	40.2391
136	0	0.498687		97.1859	40.2391
137	0	0.51293	97.449	40.2391	
138	0	0.52728	97.727	40.2391	
139	0	0.541736		98.0205	40.2391
140	0	0.556308		98.33	40.2391
141	0	0.570999		98.656	40.2391
142	0	0.585815		98.9992	40.2391
143	0	0.60076	99.3601	40.2391	
144	0	0.615839		99.7394	40.2391
145	0	0.634124		100.141	40.2391
146	0	0.649522		100.563	40.2391
147	0	0.665079		101.006	40.2391
148	0	0.680797		101.469	40.2391
149	0	0.696684		101.955	40.2391
150	0	0.712751		102.463	40.2391
151	0	0.729003		102.994	40.2391
152	0	0.745449		103.55	40.2391
153	0	0.7621	104.131	40.2391	
154	0	0.778966		104.737	40.2391
155	0	0.796056		105.371	40.2391
156	0	0.813379		106.033	40.2391
157	0	0.830953		106.723	40.2391
158	0	0.852385		107.45	40.2391
159	0	0.87055	108.207	40.2391	
160	0	0.889006		108.998	40.2391
161	0	0.907769		109.822	40.2391
162	0	0.926859		110.681	40.2391
163	0	0.946291		111.576	40.2391
164	0	0.966088		112.51	40.2391
165	0	0.986272		113.482	40.2391
166	0	1.00687	114.496	40.2391	
167	0	1.02789	115.553	40.2391	
168	0	1.04939	116.654	40.2391	
169	0	1.07138	117.802	40.2391	
170	0	1.0939	118.998	40.2391	
171	0	1.12168	120.257	40.2391	
172	0	1.1455	121.569	40.2391	
173	0	1.17	122.938	40.2391	

174	0	1.19522	124.366	40.2391	
175	0	1.22123	125.858	40.2391	
176	0.0392207		1.24809	127.415	40.288
177	0.0392207		1.27588	129.043	40.3381
178	0.113329		1.30469	130.745	40.4859
179	0.277632		1.33462	132.527	40.8564
180	0.29267	1.36581	134.392	41.2562	
181	0.329304		1.39838	136.348	41.7167
182	0.41871	1.4325	138.4	42.3165	
183	0.431782		1.46838	140.556	42.9505
184	0.431782		1.5141	142.848	43.6043
185	0.48858	1.55477	145.266	44.3639	
186	0.604316		1.59819	147.82	45.3297
187	0.604316		1.64485	150.525	46.3237
188	0.636577		1.6954	153.4	47.403
189	0.722706		1.75069	156.465	48.6682
190	2.99573	1.81191	159.748	54.0962	
191	3.29584	1.88079	163.285	60.295	
192	3.95124	1.95996	167.126	68.0393	
193	4.06044	2.05375	171.344	76.3784	
194	4.21951	2.17009	176.054	85.5351	
195	4.49981	2.32634	181.466	96.0032	
196	5.07517	2.57583	188.1	109.076	

Data Set Standard Deviation = 0.901964
Numerator = 11897.6
Denominator = 29840.3
W Statistic = 0.398709 = 11897.6 / 29840.3

5% Critical value of 0.976 exceeds 0.398709
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.398709
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	86.5	
	9/23/1999	ND<0	86.5	
	3/15/2000	ND<0	86.5	
	9/24/2003	ND<0	86.5	
	3/11/2004	ND<0	86.5	
	10/12/2004	ND<0	86.5	
	4/1/2005	ND<0	86.5	
	10/25/2005	ND<0	86.5	
	4/29/2006	ND<0	86.5	
	11/18/2006	ND<0	86.5	
	5/23/2007	ND<0	86.5	
	11/28/2007	ND<0	86.5	
	6/5/2008	ND<0	86.5	
	11/20/2008	ND<0	86.5	
	6/11/2009	ND<-2.25379		86.5

Rank Sum = 1297.5
Rank Mean = 86.5

Background Rank Sum = 1297.5
Background Rank Mean = 86.5

Compliance Wells

Well ID	Date	Result		Rank
MW-10	7/20/1995	ND<0	86.5	
	8/24/1995	ND<0	86.5	
	9/28/1995	ND<0	86.5	
	10/26/1995	ND<0	86.5	
	11/19/1996	ND<0	86.5	
	12/19/1996	ND<0	86.5	
	3/24/1997	ND<0	86.5	
	9/24/1997	ND<0	86.5	
	4/7/1998	5.07517	196	
	9/23/1998	ND<0	86.5	
	3/16/1999	ND<0	86.5	
	9/23/1999	ND<0	86.5	
	3/15/2000	ND<0	86.5	
	9/24/2003	ND<0	86.5	
	3/11/2004	ND<0	86.5	
	10/12/2004	ND<0	86.5	
	4/1/2005	ND<0	86.5	
	10/25/2005	ND<0	86.5	
	4/29/2006	ND<0	86.5	
	11/18/2006	0.0392207 J		176
	5/23/2007	ND<0	86.5	
	11/28/2007	ND<0	86.5	
	6/5/2008	0.722706	189	

	11/20/2008	ND<0	86.5	
	6/11/2009	-1.38629 J		173
	11/15/2009	-1.38629 J		174

Rank Sum = 2724.5
Rank Mean = 104.788

MW-7	7/20/1995	ND<0	86.5	
	8/24/1995	ND<0	86.5	
	9/28/1995	ND<0	86.5	
	10/26/1995	ND<0	86.5	
	11/19/1996	ND<0	86.5	
	12/19/1996	ND<0	86.5	
	3/24/1997	ND<0	86.5	
	9/24/1997	ND<0	86.5	
	4/7/1998	4.06044	193	
	9/23/1998	ND<0	86.5	
	3/16/1999	4.49981		195
	9/23/1999	ND<0	86.5	
	3/15/2000	ND<0	86.5	
	9/24/2003	ND<0	86.5	
	3/11/2004	ND<0	86.5	
	10/12/2004	ND<0	86.5	
	4/1/2005	ND<0	86.5	
	10/25/2005	ND<0	86.5	
	4/29/2006	0.29267 J		180
	11/18/2006	ND<0	86.5	
	5/23/2007	ND<0	86.5	
	11/28/2007	ND<0	86.5	
	6/5/2008	ND<0	86.5	
	11/20/2008	ND<0	86.5	
	6/11/2009	-1.30933 J		175

Rank Sum = 2559.5
Rank Mean = 102.38

MW-12BR	3/16/1999	ND<0	86.5	
	9/23/1999	ND<0	86.5	
	3/15/2000	ND<0	86.5	
	9/24/2003	ND<0	86.5	
	3/11/2004	ND<0	86.5	
	10/12/2004	ND<0	86.5	
	4/1/2005	0.636577 J	188	
	10/25/2005	ND<0	86.5	
	4/29/2006	ND<0	86.5	
	11/18/2006	ND<0	86.5	
	5/23/2007	ND<0	86.5	
	11/28/2007	ND<0	86.5	
	6/5/2008	ND<0	86.5	
	11/20/2008	ND<0	86.5	
	6/11/2009	ND<-2.25379		86.5

Rank Sum = 1399
Rank Mean = 93.2667

MW-11R	7/20/1995	ND<0	86.5	
	8/24/1995	ND<0	86.5	
	9/28/1995	ND<0	86.5	
	10/26/1995	ND<0	86.5	
	11/19/1996	ND<0	86.5	
	12/19/1996	ND<0	86.5	
	3/24/1997	ND<0	86.5	
	9/24/1997	ND<0	86.5	
	4/7/1998	2.99573	190	
	9/23/1998	ND<0	86.5	

	3/16/1999	ND<0	86.5	
	9/23/1999	ND<0	86.5	
	3/15/2000	ND<0	86.5	
	9/24/2003	ND<0	86.5	
	3/11/2004	ND<0	86.5	
	10/12/2004	ND<0	86.5	
	4/1/2005	ND<0	86.5	
	10/25/2005	ND<0	86.5	
	4/29/2006	0.329304 J		181
	11/18/2006	0.113329 J		178
	5/23/2007	ND<0	86.5	
	11/28/2007	ND<0	86.5	
	6/5/2008	ND<0	86.5	
	11/20/2008	ND<0	86.5	
	6/11/2009	ND<-2.25379		86.5

Rank Sum = 2452
Rank Mean = 98.08

MW-12AR	3/16/1999	ND<0	86.5	
	9/23/1999	ND<0	86.5	
	3/15/2000	ND<0	86.5	
	9/24/2003	ND<0	86.5	
	3/11/2004	ND<0	86.5	
	10/12/2004	ND<0	86.5	
	4/1/2005	ND<0	86.5	
	10/25/2005	0.431782 J		183
	4/29/2006	0.604316 J		186
	11/18/2006	ND<0	86.5	
	5/23/2007	ND<0	86.5	
	11/28/2007	ND<0	86.5	
	6/5/2008	ND<0	86.5	
	11/20/2008	ND<0	86.5	
	6/11/2009	ND<-2.25379		86.5

Rank Sum = 1493.5
Rank Mean = 99.5667

MW-6	7/20/1995	ND<0	86.5	
	8/24/1995	ND<0	86.5	
	9/28/1995	ND<0	86.5	
	10/26/1995	ND<0	86.5	
	11/19/1996	ND<0	86.5	
	12/19/1996	ND<0	86.5	
	3/24/1997	ND<0	86.5	
	9/24/1997	ND<0	86.5	
	4/7/1998	ND<0	86.5	
	9/23/1998	ND<0	86.5	
	3/16/1999	ND<0	86.5	
	9/23/1999	ND<0	86.5	
	3/15/2000	ND<0	86.5	
	9/24/2003	ND<0	86.5	
	3/11/2004	ND<0	86.5	
	10/12/2004	ND<0	86.5	
	4/1/2005	ND<0	86.5	
	10/25/2005	ND<0	86.5	
	4/29/2006	ND<0	86.5	
	11/18/2006	ND<0	86.5	
	5/23/2007	ND<0	86.5	
	11/28/2007	ND<0	86.5	
	6/5/2008	ND<0	86.5	
	11/20/2008	ND<0	86.5	
	6/11/2009	ND<-2.25379		86.5

Rank Sum = 2162.5

Rank Mean = 86.5

MW-8	7/20/1995	ND<0	86.5	
	8/24/1995	ND<0	86.5	
	9/28/1995	ND<0	86.5	
	10/26/1995	ND<0	86.5	
	11/19/1996	ND<0	86.5	
	12/19/1996	ND<0	86.5	
	3/24/1997	ND<0	86.5	
	9/24/1997	ND<0	86.5	
	4/7/1998	3.95124	192	
	9/23/1998	ND<0	86.5	
	3/16/1999	ND<0	86.5	
	9/23/1999	ND<0	86.5	
	3/15/2000	ND<0	86.5	
	9/24/2003	ND<0	86.5	
	3/11/2004	ND<0	86.5	
	10/12/2004	ND<0	86.5	
	4/1/2005	0.48858 J	185	
	10/25/2005	0.41871 J		182
	4/29/2006	0.0392207 J		177
	11/18/2006	ND<0	86.5	
	5/23/2007	ND<0	86.5	
	11/28/2007	ND<0	86.5	
	6/5/2008	ND<0	86.5	
	11/20/2008	ND<0	86.5	
	6/11/2009	ND<-2.25379		86.5

Rank Sum = 2552.5
Rank Mean = 102.1

MW-9	7/20/1995	ND<0	86.5	
	8/24/1995	ND<0	86.5	
	9/28/1995	ND<0	86.5	
	10/26/1995	ND<0	86.5	
	11/19/1996	ND<0	86.5	
	12/19/1996	ND<0	86.5	
	3/24/1997	3.29584		191
	9/24/1997	ND<0	86.5	
	4/7/1998	4.21951	194	
	9/23/1998	ND<0	86.5	
	3/16/1999	ND<0	86.5	
	9/23/1999	ND<0	86.5	
	3/15/2000	ND<0	86.5	
	9/24/2003	ND<0	86.5	
	3/11/2004	ND<0	86.5	
	10/12/2004	ND<0	86.5	
	4/1/2005	0.431782 J	184	
	10/25/2005	0.604316 J		187
	4/29/2006	0.277632 J		179
	11/18/2006	ND<0	86.5	
	5/23/2007	ND<0	86.5	
	11/28/2007	ND<0	86.5	
	6/5/2008	ND<0	86.5	
	11/20/2008	ND<0	86.5	
	6/11/2009	ND<-2.25379		86.5

Rank Sum = 2665
Rank Mean = 106.6

Calculation Results:

Kruskal-Wallis H Statistic = 2.97143

Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 9.16522
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
2.97143 < 15.5073 indicating no significant group difference at 5% significance level
9.16522 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties

Concentrations (ug/L)

Parameter: Tetrachloroethene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 198
Total Non-Detect: 137
Percent Non-Detects: 69.1919%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-11R	26	14 (53.8462%)	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
			11/15/2009	0.3 J	0.3 J

MW-9	26	14 (53.8462%)	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	
			11/15/2009	0.58 J	0.58 J	
MW-10	26	16 (61.5385%)	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
			11/15/2009	0.29 J	0.29 J	
MW-8	25	6 (24%)	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	
MW-12AR	15	12 (80%)	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	
MW-12BR	15	14 (93.3333%)	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	
MW-6	25	25 (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
MW-7	25	21 (84%)	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

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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.075	-2.575836	3.63492	-0.193188
2	0.075	-2.326341	2.0468	-0.367663
3	0.075	-2.170091	6.7561	-0.53042
4	0.075	-2.053752	0.974	-0.684451
5	0.075	-1.959962	4.8154	-0.831448
6	0.075	-1.880792	8.3528	-0.972507
7	0.21	-1.811913	1.6358	-1.35301
8	0.28	-1.750693	4.7007	-1.8432
9	0.29	-1.6954	37.5751	-2.33487
10	0.29	-1.644854	0.2806	-2.81187
11	0.3	-1.598194	2.8348	-3.29133
12	0.3	-1.554774	5.2522	-3.75776
13	0.31	-1.5141	47.5447	-4.22714
14	0.32	-1.475794	9.7226	-4.69939
15	0.32	-1.439535	1.7949	-5.16004
16	0.35	-1.405075	3.7691	-5.65181
17	0.36	-1.3722	55.6521	-6.14581
18	0.38	-1.340755	7.4497	-6.65529
19	0.39	-1.310585	9.1673	-7.16642
20	0.4	-1.281556	0.8097	-7.67904
21	0.41	-1.253576	2.3811	-8.193
22	0.41	-1.226536	3.8855	-8.69588
23	0.42	-1.200366	5.3263	-9.20003
24	0.43	-1.174996	6.7069	-9.70528
25	0.46	-1.150356	8.0302	-10.2344
26	0.49	-1.126396	9.299	-10.7864
27	0.51	-1.103067	0.5157	-11.3489
28	0.54	-1.080327	1.6828	-11.9323
29	0.55	-1.058127	2.8025	-12.5143
30	0.58	-1.036437	3.8766	-13.1154
31	0.65	-1.015227	4.9073	-13.7753
32	0.67	-0.994457	75.8963	-14.4416
33	0.71	-0.974114	76.8452	-15.1332
34	0.71	-0.954165	77.7556	-15.8107
35	0.75	-0.934597	8.6291	-16.5116
36	0.8	-0.915365	79.4669	-17.2439
37	0.8	-0.896473	80.2706	-17.9611
38	0.8	-0.877897	81.0413	-18.6634
39	0.84	-0.859618	81.7803	-19.3855
40	0.86	-0.838054	82.4826	-20.1062
41	0.9	-0.820379	83.1556	-20.8445
42	0.9	-0.802956	83.8004	-21.5672
43	0.96	-0.785774	84.4178	-22.3215
44	1	-0.768821	85.0089	-23.0904
45	1	-0.752084	85.5745	-23.8424
46	1	-0.735557	86.1156	-24.578
47	1	-0.719228	86.6328	-25.2972
48	1	-0.703089	87.1272	-26.0003
49	1	-0.687131	87.5993	-26.6875

50	1	-0.671346	88.05	-27.3588
51	1	-0.655726	88.48	-28.0145
52	1	-0.640266	88.89	-28.6548
53	1	-0.624956	89.2805	-29.2797
54	1	-0.609791	89.6524	-29.8895
55	1	-0.594766	90.0061	-30.4843
56	1	-0.579873	90.3424	-31.0642
57	1	-0.565108	90.6617	-31.6293
58	1	-0.550465	90.9647	-32.1797
59	1	-0.5359491.252	-32.7157	
60	1	-0.521527	91.5239	-33.2372
61	1	-0.507221	91.7812	-33.7444
62	1	-0.493018	92.0243	-34.2375
63	1	-0.478914	92.2536	-34.7164
64	1	-0.464904	92.4698	-35.1813
65	1	-0.450985	92.6732	-35.6323
66	1	-0.437153	92.8643	-36.0694
67	1	-0.423405	93.0435	-36.4928
68	1	-0.409735	93.2114	-36.9026
69	1	-0.396142	93.3684	-37.2987
70	1	-0.382622	93.5148	-37.6813
71	1	-0.369171	93.651	-38.0505
72	1	-0.355788	93.7776	-38.4063
73	1	-0.342466	93.8949	-38.7487
74	1	-0.329206	94.0033	-39.0779
75	1	-0.316004	94.1031	-39.3939
76	1	-0.302855	94.1949	-39.6968
77	1	-0.2897694.2788	-39.9866	
78	1	-0.276714	94.3554	-40.2633
79	1	-0.263715	94.4249	-40.527
80	1	-0.248174	94.4865	-40.7752
81	1	-0.235269	94.5419	-41.0104
82	1	-0.222403	94.5913	-41.2328
83	1	-0.209575	94.6353	-41.4424
84	1	-0.196779	94.674	-41.6392
85	1	-0.184017	94.7079	-41.8232
86	1	-0.171285	94.7372	-41.9945
87	1	-0.158579	94.7623	-42.1531
88	1	-0.1459 94.7836	-42.299	
89	1	-0.133244	94.8014	-42.4322
90	1	-0.1206194.8159	-42.5528	
91	1	-0.107995	94.8276	-42.6608
92	1	-0.0953969	94.8367	-42.7562
93	1	-0.0828129	94.8435	-42.839
94	1	-0.0702426	94.8485	-42.9093
95	1	-0.0576847	94.8518	-42.967
96	1	-0.0451348	94.8538	-43.0121
97	1	-0.0325917	94.8549	-43.0447
98	1	-0.0200544	94.8553	-43.0647
99	1	-0.00751925	94.8554	-43.0723
100	1	0.00751925	94.8554	-43.0647
101	1	0.0200544	94.8558	-43.0447
102	1	0.0325917	94.8569	-43.0121
103	1	0.0451348	94.8589	-42.967
104	1	0.0576847	94.8623	-42.9093
105	1	0.0702426	94.8672	-42.839
106	1	0.0828129	94.874	-42.7562
107	1	0.0953969	94.8831	-42.6608
108	1	0.107995	94.8948	-42.5528
109	1	0.12061 94.9094	-42.4322	
110	1	0.133244	94.9271	-42.299
111	1	0.1459 94.9484	-42.1531	

112	1	0.158579	94.9735	-41.9945
113	1	0.171285	95.0029	-41.8232
114	1	0.184017	95.0367	-41.6392
115	1	0.196779	95.0755	-41.4424
116	1	0.209575	95.1194	-41.2328
117	1	0.222403	95.1689	-41.0104
118	1	0.235269	95.2242	-40.7752
119	1	0.248174	95.2858	-40.527
120	1	0.263715	95.3553	-40.2633
121	1	0.276714	95.4319	-39.9866
122	1	0.28976	95.5159	-39.6968
123	1	0.302855	95.6076	-39.3939
124	1	0.316004	95.7075	-39.0779
125	1	0.329206	95.8158	-38.7487
126	1	0.342466	95.9331	-38.4063
127	1	0.355788	96.0597	-38.0505
128	1	0.369171	96.196	-37.6813
129	1	0.382622	96.3424	-37.2987
130	1	0.396142	96.4993	-36.9026
131	1	0.409735	96.6672	-36.4928
132	1	0.423405	96.8465	-36.0694
133	1	0.437153	97.0376	-35.6323
134	1	0.450985	97.241	-35.1813
135	1	0.464904	97.4571	-34.7164
136	1	0.478914	97.6865	-34.2375
137	1	0.493018	97.9295	-33.7444
138	1	0.507221	98.1868	-33.2372
139	1	0.521527	98.4588	-32.7157
140	1	0.53594	98.746	-32.1797
141	1	0.550465	99.049	-31.6293
142	1	0.565108	99.3684	-31.0642
143	1	0.579873	99.7046	-30.4843
144	1	0.594766	100.058	-29.8895
145	1	0.609791	100.43	-29.2797
146	1	0.624956	100.821	-28.6548
147	1	0.640266	101.231	-28.0145
148	1	0.655726	101.661	-27.3588
149	1	0.671346	102.111	-26.6875
150	1	0.687131	102.584	-26.0003
151	1	0.703089	103.078	-25.2972
152	1	0.719228	103.595	-24.578
153	1	0.735557	104.136	-23.8424
154	1	0.752084	104.702	-23.0904
155	1	0.768821	105.293	-22.3215
156	1	0.785774	105.91	-21.5358
157	1	0.802956	106.555	-20.7328
158	1	0.820379	107.228	-19.9124
159	1	0.838054	107.93	-19.0744
160	1	0.859618	108.669	-18.2148
161	1	0.877897	109.44	-17.3369
162	1	0.896473	110.244	-16.4404
163	1	0.915365	111.082	-15.525
164	1	0.93459	111.955	-14.5904
165	1	0.954165	112.866	-13.6363
166	1	0.974114	113.814	-12.6622
167	1	0.994457	114.803	-11.6677
168	1	1.01522	115.834	-10.6525
169	1	1.03643	116.908	-9.61604
170	1	1.05812	118.028	-8.55792
171	1	1.08032	119.195	-7.4776
172	1	1.10306	120.412	-6.37454
173	1	1.12639	121.68	-5.24815

174	1	1.15035	123.004	-4.0978
175	1.6	1.17499	124.384	-2.21782
176	2	1.20036	125.825	0.182902
177	2	1.22653	127.33	2.63596
178	2.1	1.25357	128.901	5.26845
179	2.18	1.28155	130.543	8.06223
180	2.3	1.31058	132.261	11.0766
181	2.4	1.34075	134.059	14.2944
182	2.64	1.3722	135.942	17.917
183	2.69	1.40507	137.916	21.6966
184	2.7	1.43953	139.988	25.5834
185	3.2	1.47579	142.166	30.3059
186	4	1.5141	144.459	36.3623
187	4.4	1.55477	146.876	43.2033
188	5.34	1.59819	149.43	51.7377
189	6	1.64485	152.136	61.6068
190	8	1.6954	155.01	75.17
191	30.4	1.75069	158.075	128.391
192	31	1.81191	161.358	184.56
193	32.2	1.88079	164.895	245.122
194	34	1.95996	168.737	311.76
195	49	2.05375	172.955	412.394
196	59	2.17009	177.664	540.429
197	88	2.32634	183.076	745.147
198	99	2.57583	189.711	1000.15

Data Set Standard Deviation = 11.4634
Numerator = 1.00031e+006
Denominator = 4.91114e+006
W Statistic = 0.203682 = 1.00031e+006 / 4.91114e+006

5% Critical value of 0.976 exceeds 0.203682
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.203682
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 = 198

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.59027	-2.57583	6.63492	6.6721
2	-2.59027	-2.32634	12.0468	12.6979
3	-2.59027	-2.17009	16.7561	18.3191
4	-2.59027	-2.05375	20.974	23.6388
5	-2.59027	-1.95996	24.8154	28.7156
6	-2.59027	-1.88079	28.3528	33.5874
7	-1.56065	-1.81191	31.6358	36.4151
8	-1.27297	-1.75069	34.7007	38.6437
9	-1.23787	-1.6954	37.5751	40.7424
10	-1.23787	-1.64485	40.2806	42.7785
11	-1.20397	-1.59819	42.8348	44.7027
12	-1.20397	-1.55477	45.2522	46.5746
13	-1.17118	-1.5141	47.5447	48.3479
14	-1.13943	-1.47579	49.7226	50.0295
15	-1.13943	-1.43953	51.7949	51.6697
16	-1.04982	-1.40507	53.7691	53.1448
17	-1.02165	-1.3722	55.6521	54.5467
18	-0.967584	-1.34075	57.4497	55.844
19	-0.941609	-1.31058	59.1673	57.0781
20	-0.916291	-1.28155	60.8097	58.2523
21	-0.891598	-1.25357	62.3811	59.37
22	-0.891598	-1.22653	63.8855	60.4636
23	-0.867501	-1.20036	65.3263	61.5049
24	-0.84397	-1.17499	66.7069	62.4965
25	-0.776529	-1.15035	68.0302	63.3898
26	-0.71335	-1.12639	69.299	64.1933
27	-0.673345	-1.10306	70.5157	64.9361
28	-0.616186	-1.08032	71.6828	65.6018
29	-0.597837	-1.05812	72.8025	66.2343
30	-0.544727	-1.03643	73.8766	66.7989
31	-0.430783	-1.01522	74.9073	67.2362
32	-0.400478	-0.994457	75.8963	67.6345
33	-0.34249	-0.974114	76.8452	67.9681
34	-0.34249	-0.954165	77.7556	68.2949
35	-0.287682	-0.93459	78.6291	68.5638
36	-0.223144	-0.915365	79.4669	68.768
37	-0.223144	-0.896473	80.2706	68.9681
38	-0.223144	-0.877897	81.0413	69.164
39	-0.174353	-0.859618	81.7803	69.3139
40	-0.150823	-0.838054	82.4826	69.4403
41	-0.105361	-0.820379	83.1556	69.5267
42	-0.105361	-0.802956	83.8004	69.6113
43	-0.040822	-0.785774	84.4178	69.6434
44	0	-0.768821	85.0089	69.6434
45	0	-0.752084	85.5745	69.6434
46	0	-0.735557	86.1156	69.6434
47	0	-0.719228	86.6328	69.6434
48	0	-0.703089	87.1272	69.6434
49	0	-0.687131	87.5993	69.6434

50	0	-0.671346	88.05	69.6434
51	0	-0.655726	88.48	69.6434
52	0	-0.640266	88.89	69.6434
53	0	-0.624956	89.2805	69.6434
54	0	-0.609791	89.6524	69.6434
55	0	-0.594766	90.0061	69.6434
56	0	-0.579873	90.3424	69.6434
57	0	-0.565108	90.6617	69.6434
58	0	-0.550465	90.9647	69.6434
59	0	-0.5359491.252	69.6434	
60	0	-0.521527	91.5239	69.6434
61	0	-0.507221	91.7812	69.6434
62	0	-0.493018	92.0243	69.6434
63	0	-0.478914	92.2536	69.6434
64	0	-0.464904	92.4698	69.6434
65	0	-0.450985	92.6732	69.6434
66	0	-0.437153	92.8643	69.6434
67	0	-0.423405	93.0435	69.6434
68	0	-0.409735	93.2114	69.6434
69	0	-0.396142	93.3684	69.6434
70	0	-0.382622	93.5148	69.6434
71	0	-0.369171	93.651	69.6434
72	0	-0.355788	93.7776	69.6434
73	0	-0.342466	93.8949	69.6434
74	0	-0.329206	94.0033	69.6434
75	0	-0.316004	94.1031	69.6434
76	0	-0.302855	94.1949	69.6434
77	0	-0.2897694.2788	69.6434	
78	0	-0.276714	94.3554	69.6434
79	0	-0.263715	94.4249	69.6434
80	0	-0.248174	94.4865	69.6434
81	0	-0.235269	94.5419	69.6434
82	0	-0.222403	94.5913	69.6434
83	0	-0.209575	94.6353	69.6434
84	0	-0.196779	94.674	69.6434
85	0	-0.184017	94.7079	69.6434
86	0	-0.171285	94.7372	69.6434
87	0	-0.158579	94.7623	69.6434
88	0	-0.1459 94.7836	69.6434	
89	0	-0.133244	94.8014	69.6434
90	0	-0.1206194.8159	69.6434	
91	0	-0.107995	94.8276	69.6434
92	0	-0.0953969	94.8367	69.6434
93	0	-0.0828129	94.8435	69.6434
94	0	-0.0702426	94.8485	69.6434
95	0	-0.0576847	94.8518	69.6434
96	0	-0.0451348	94.8538	69.6434
97	0	-0.0325917	94.8549	69.6434
98	0	-0.0200544	94.8553	69.6434
99	0	-0.00751925	94.8554	69.6434
100	0	0.00751925	94.8554	69.6434
101	0	0.0200544	94.8558	69.6434
102	0	0.0325917	94.8569	69.6434
103	0	0.0451348	94.8589	69.6434
104	0	0.0576847	94.8623	69.6434
105	0	0.0702426	94.8672	69.6434
106	0	0.0828129	94.874	69.6434
107	0	0.0953969	94.8831	69.6434
108	0	0.107995	94.8948	69.6434
109	0	0.12061 94.9094	69.6434	
110	0	0.133244	94.9271	69.6434
111	0	0.1459 94.9484	69.6434	

112	0	0.158579	94.9735	69.6434
113	0	0.171285	95.0029	69.6434
114	0	0.184017	95.0367	69.6434
115	0	0.196779	95.0755	69.6434
116	0	0.209575	95.1194	69.6434
117	0	0.222403	95.1689	69.6434
118	0	0.235269	95.2242	69.6434
119	0	0.248174	95.2858	69.6434
120	0	0.263715	95.3553	69.6434
121	0	0.276714	95.4319	69.6434
122	0	0.28976	95.5159	69.6434
123	0	0.302855	95.6076	69.6434
124	0	0.316004	95.7075	69.6434
125	0	0.329206	95.8158	69.6434
126	0	0.342466	95.9331	69.6434
127	0	0.355788	96.0597	69.6434
128	0	0.369171	96.196	69.6434
129	0	0.382622	96.3424	69.6434
130	0	0.396142	96.4993	69.6434
131	0	0.409735	96.6672	69.6434
132	0	0.423405	96.8465	69.6434
133	0	0.437153	97.0376	69.6434
134	0	0.450985	97.241	69.6434
135	0	0.464904	97.4571	69.6434
136	0	0.478914	97.6865	69.6434
137	0	0.493018	97.9295	69.6434
138	0	0.507221	98.1868	69.6434
139	0	0.521527	98.4588	69.6434
140	0	0.53594	98.746	69.6434
141	0	0.550465	99.049	69.6434
142	0	0.565108	99.3684	69.6434
143	0	0.579873	99.7046	69.6434
144	0	0.594766	100.058	69.6434
145	0	0.609791	100.43	69.6434
146	0	0.624956	100.821	69.6434
147	0	0.640266	101.231	69.6434
148	0	0.655726	101.661	69.6434
149	0	0.671346	102.111	69.6434
150	0	0.687131	102.584	69.6434
151	0	0.703089	103.078	69.6434
152	0	0.719228	103.595	69.6434
153	0	0.735557	104.136	69.6434
154	0	0.752084	104.702	69.6434
155	0	0.768821	105.293	69.6434
156	0	0.785774	105.91	69.6434
157	0	0.802956	106.555	69.6434
158	0	0.820379	107.228	69.6434
159	0	0.838054	107.93	69.6434
160	0	0.859618	108.669	69.6434
161	0	0.877897	109.44	69.6434
162	0	0.896473	110.244	69.6434
163	0	0.915365	111.082	69.6434
164	0	0.93459	111.955	69.6434
165	0	0.954165	112.866	69.6434
166	0	0.974114	113.814	69.6434
167	0	0.994457	114.803	69.6434
168	0	1.01522	115.834	69.6434
169	0	1.03643	116.908	69.6434
170	0	1.05812	118.028	69.6434
171	0	1.08032	119.195	69.6434
172	0	1.10306	120.412	69.6434
173	0	1.12639	121.68	69.6434

174	0	1.15035	123.004	69.6434	
175	0.470004		1.17499	124.384	70.1956
176	0.693147		1.20036	125.825	71.0276
177	0.693147		1.22653	127.33	71.8778
178	0.741937		1.25357	128.901	72.8079
179	0.779325		1.28155	130.543	73.8066
180	0.832909		1.31058	132.261	74.8982
181	0.875469		1.34075	134.059	76.072
182	0.970779		1.3722	135.942	77.4041
183	0.989541		1.40507	137.916	78.7945
184	0.993252		1.43953	139.988	80.2243
185	1.16315	1.47579	142.166	81.9409	
186	1.38629	1.5141	144.459	84.0399	
187	1.4816	1.55477	146.876	86.3434	
188	1.67523	1.59819	149.43	89.0208	
189	1.79176	1.64485	152.136	91.9679	
190	2.07944	1.6954	155.01	95.4934	
191	3.41444	1.75069	158.075	101.471	
192	3.43399	1.81191	161.358	107.693	
193	3.47197	1.88079	164.895	114.223	
194	3.52636	1.95996	168.737	121.135	
195	3.89182	2.05375	172.955	129.128	
196	4.07754	2.17009	177.664	137.976	
197	4.47734	2.32634	183.076	148.392	
198	4.59512	2.57583	189.711	160.228	

Data Set Standard Deviation = 1.02947
Numerator = 25673.1
Denominator = 39608.1
W Statistic = 0.648178 = 25673.1 / 39608.1

5% Critical value of 0.976 exceeds 0.648178
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.648178
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	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<-2.59027	69

Rank Sum = 1035
Rank Mean = 69

Background Rank Sum = 1035
Background Rank Mean = 69

Compliance Wells

Well ID	Date	Result	Rank
MW-11R	7/20/1995	0.741937	178
	8/24/1995	1.4816	187
	9/28/1995	0.693147	176
	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	0.993252	184
	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	0.970779	182
	10/25/2005	-0.776529 J	156
	4/29/2006	ND<0	69
	11/18/2006	-0.71335 J	157
	5/23/2007	ND<0	69
	11/28/2007	-0.967584 J	149
	6/5/2008	ND<0	69

	11/20/2008	-0.916291	J	151
	6/11/2009	0.832909		180
	11/15/2009	-1.20397	J	142

Rank Sum = 2994
Rank Mean = 115.154

MW-9	7/20/1995	-0.84397	J	155
	8/24/1995	-0.673345	J	158
	9/28/1995	-0.223144	J	167
	10/26/1995	-0.105361	J	172
	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	-1.13943	J	145
	10/25/2005	ND<0	69	
	4/29/2006	-1.23787	J	140
	11/18/2006	-1.56065	J	138
	5/23/2007	ND<0	69	
	11/28/2007	-1.27297	J	139
	6/5/2008	-0.891598	J	152
	11/20/2008	-0.891598	J	153
	6/11/2009	-0.941609	J	150
	11/15/2009	-0.544727	J	161

Rank Sum = 2796
Rank Mean = 107.538

MW-10	7/20/1995	-0.34249	J	164
	8/24/1995	0.470004		175
	9/28/1995	ND<0	69	
	10/26/1995	0.693147		177
	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	-0.287682	J	166
	10/25/2005	-0.34249	J	165
	4/29/2006	-0.040822	J	174
	11/18/2006	-0.597837	J	160
	5/23/2007	ND<0	69	
	11/28/2007	-1.17118	J	144
	6/5/2008	-1.02165	J	148
	11/20/2008	ND<0	69	
	6/11/2009	ND<-2.59027		69
	11/15/2009	-1.23787	J	141

Rank Sum = 2718

Rank Mean = 104.538

MW-8	7/20/1995	1.16315		185
	8/24/1995	4.59512		198
	9/28/1995	4.47734		197
	10/26/1995	2.07944		190
	11/19/1996	ND<0	69	
	12/19/1996	4.07754		196
	3/24/1997	3.89182		195
	9/24/1997	3.52636		194
	4/7/1998	ND<0	69	
	9/23/1998	3.43399		192
	3/16/1999	3.41444		191
	9/23/1999	3.47197		193
	3/15/2000	ND<0	69	
	9/24/2003	ND<0	69	
	3/11/2004	1.79176		189
	10/12/2004	ND<0	69	
	4/1/2005	1.67523		188
	10/25/2005	0.779325		179
	4/29/2006	0.875469		181
	11/18/2006	0.989541		183
	5/23/2007	ND<0	69	
	11/28/2007	-0.616186 J		159
	6/5/2008	-0.174353 J		170
	11/20/2008	-0.430783 J		162
	6/11/2009	-0.223144 J		168

Rank Sum = 3924
Rank Mean = 156.96

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	-1.13943 J		146
	4/29/2006	-1.04982 J		147
	11/18/2006	ND<0	69	
	5/23/2007	ND<0	69	
	11/28/2007	ND<0	69	
	6/5/2008	-1.20397 J		143
	11/20/2008	ND<0	69	
	6/11/2009	ND<-2.59027		69

Rank Sum = 1264
Rank Mean = 84.2667

MW-12BR	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	-0.867501 J		154
	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<-2.59027	69

Rank Sum = 1120
Rank Mean = 74.6667

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<-2.59027	69

Rank Sum = 1725
Rank Mean = 69

MW-7	7/20/1995	-0.150823 J	171
	8/24/1995	-0.400478 J	163
	9/28/1995	-0.223144 J	169
	10/26/1995	-0.105361 J	173
	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<-2.59027	69

Rank Sum = 2125
Rank Mean = 85

Calculation Results:

Kruskal-Wallis H Statistic = 44.6018
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 66.6941
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
44.6018 > 15.5073 indicating a significant group difference at 5% significance level
66.6941 > 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-11R	115.154	46.1538	43.2217
MW-9	107.538	38.5385	43.2217
MW-10	104.538	35.5385	43.2217
MW-8	156.96	87.96	43.5368
MW-12AR	84.2667	15.2667	48.6756
MW-12BR	74.6667	5.66667	48.6756
MW-6	69	0	43.5368
MW-7	85	16	43.5368

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-11R	115.154	46.1538	46.6736
MW-9	107.538	38.5385	46.6736
MW-10	104.538	35.5385	46.6736
MW-8	156.96	87.96	47.0138
MW-12AR	84.2667	15.2667	52.5631
MW-12BR	74.6667	5.66667	52.5631
MW-6	69	0	47.0138
MW-7	85	16	47.0138

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		
0.693147	1.4816	-0.788457	5	21	
1.38629	1.4816	-0.0953102	5	22	
ND<0	1.4816	-1.4816	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	
0.993252	1.4816	-0.488353	5	29	
ND<0	1.4816	-1.4816	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	
0.970779	1.4816	-0.510826	5	35	
-0.776529 J	1.4816	-2.258135	36		
ND<0	1.4816	-1.4816	5	37	
-0.71335 J	1.4816	-2.194955	38		
ND<0	1.4816	-1.4816	5	39	
-0.967584 J	1.4816	-2.449195	40		
ND<0	1.4816	-1.4816	5	41	
-0.916291 J	1.4816	-2.3979	5	42	

0.832909	1.4816	-0.648695	5	43	
-1.20397 J	1.4816	-2.685585	44		
1.38629	0.693147	0.693147	6	44	
ND<0	0.693147	-0.693147	6	45	
ND<0	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	
0.993252	0.693147	0.300105	7	50	
ND<0	0.693147	-0.693147	7	51	
ND<0	0.693147	-0.693147	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	
0.970779	0.693147	0.277632	8	55	
-0.776529 J	0.693147	-1.469688	56		
ND<0	0.693147	-0.693147	8	57	
-0.71335 J	0.693147	-1.4065	8	58	
ND<0	0.693147	-0.693147	8	59	
-0.967584 J	0.693147	-1.660738	60		
ND<0	0.693147	-0.693147	8	61	
-0.916291 J	0.693147	-1.609448	62		
0.832909	0.693147	0.139762	9	62	
-1.20397 J	0.693147	-1.897129	63		
ND<0	1.38629	-1.386299	64		
ND<0	1.38629	-1.386299	65		
ND<0	1.38629	-1.386299	66		
ND<0	1.38629	-1.386299	67		
ND<0	1.38629	-1.386299	68		
ND<0	1.38629	-1.386299	69		
0.993252	1.38629	-0.393043	9	70	
ND<0	1.38629	-1.386299	71		
ND<0	1.38629	-1.386299	72		
ND<0	1.38629	-1.386299	73		
ND<0	1.38629	-1.386299	74		
ND<0	1.38629	-1.386299	75		
0.970779	1.38629	-0.415515	9	76	
-0.776529 J	1.38629	-2.162829	77		
ND<0	1.38629	-1.386299	78		
-0.71335 J	1.38629	-2.099649	79		
ND<0	1.38629	-1.386299	80		
-0.967584 J	1.38629	-2.353889	81		
ND<0	1.38629	-1.386299	82		
-0.916291 J	1.38629	-2.302599	83		
0.832909	1.38629	-0.553385	9	84	
-1.20397 J	1.38629	-2.590279	85		
ND<0	ND<0	0	9	85	
ND<0	ND<0	0	9	85	
ND<0	ND<0	0	9	85	
ND<0	ND<0	0	9	85	
ND<0	ND<0	0	9	85	
0.993252	ND<0	0.993252	10	85	
ND<0	ND<0	0	10	85	
ND<0	ND<0	0	10	85	
ND<0	ND<0	0	10	85	
ND<0	ND<0	0	10	85	
ND<0	ND<0	0	10	85	
0.970779	ND<0	0.970779	11	85	

-0.776529 J ND<0 -0.776529 11 86
ND<0 ND<0 0 11 86
-0.71335 J ND<0 -0.713351 1 87
ND<0 ND<0 0 11 87
-0.967584 J ND<0 -0.967584 11 88
ND<0 ND<0 0 11 88
-0.916291 J ND<0 -0.916291 11 89
0.832909 ND<0 0.832909 12 89
-1.20397 J ND<0 -1.203971 2 90

ND<0 ND<0 0 12 90
ND<0 ND<0 0 12 90
ND<0 ND<0 0 12 90
ND<0 ND<0 0 12 90
0.993252 ND<0 0.993252 13 90
ND<0 ND<0 0 13 90
ND<0 ND<0 0 13 90
ND<0 ND<0 0 13 90
ND<0 ND<0 0 13 90
ND<0 ND<0 0 13 90
0.970779 ND<0 0.970779 14 90
-0.776529 J ND<0 -0.776529 14 91
ND<0 ND<0 0 14 91
-0.71335 J ND<0 -0.713351 4 92
ND<0 ND<0 0 14 92
-0.967584 J ND<0 -0.967584 14 93
ND<0 ND<0 0 14 93
-0.916291 J ND<0 -0.916291 14 94
0.832909 ND<0 0.832909 15 94
-1.20397 J ND<0 -1.203971 5 95

ND<0 ND<0 0 15 95
ND<0 ND<0 0 15 95
ND<0 ND<0 0 15 95
0.993252 ND<0 0.993252 16 95
ND<0 ND<0 0 16 95
ND<0 ND<0 0 16 95
ND<0 ND<0 0 16 95
ND<0 ND<0 0 16 95
ND<0 ND<0 0 16 95
0.970779 ND<0 0.970779 17 95
-0.776529 J ND<0 -0.776529 17 96
ND<0 ND<0 0 17 96
-0.71335 J ND<0 -0.713351 7 97
ND<0 ND<0 0 17 97
-0.967584 J ND<0 -0.967584 17 98
ND<0 ND<0 0 17 98
-0.916291 J ND<0 -0.916291 17 99
0.832909 ND<0 0.832909 18 99
-1.20397 J ND<0 -1.203971 8 100

ND<0 ND<0 0 18 100
ND<0 ND<0 0 18 100
0.993252 ND<0 0.993252 19 100
ND<0 ND<0 0 19 100
ND<0 ND<0 0 19 100
ND<0 ND<0 0 19 100
ND<0 ND<0 0 19 100
ND<0 ND<0 0 19 100
0.970779 ND<0 0.970779 20 100
-0.776529 J ND<0 -0.776529 20 101
ND<0 ND<0 0 20 101

-0.71335 J ND<0 -0.7133520 102
ND<0 ND<0 0 20 102
-0.967584 J ND<0 -0.967584 20 103
ND<0 ND<0 0 20 103
-0.916291 J ND<0 -0.916291 20 104
0.832909 ND<0 0.832909 21 104
-1.20397 J ND<0 -1.2039721 105

ND<0 ND<0 0 21 105
0.993252 ND<0 0.993252 22 105
ND<0 ND<0 0 22 105
ND<0 ND<0 0 22 105
ND<0 ND<0 0 22 105
ND<0 ND<0 0 22 105
ND<0 ND<0 0 22 105
0.970779 ND<0 0.970779 23 105
-0.776529 J ND<0 -0.776529 23 106
ND<0 ND<0 0 23 106
-0.71335 J ND<0 -0.7133523 107
ND<0 ND<0 0 23 107
-0.967584 J ND<0 -0.967584 23 108
ND<0 ND<0 0 23 108
-0.916291 J ND<0 -0.916291 23 109
0.832909 ND<0 0.832909 24 109
-1.20397 J ND<0 -1.2039724 110

0.993252 ND<0 0.993252 25 110
ND<0 ND<0 0 25 110
ND<0 ND<0 0 25 110
ND<0 ND<0 0 25 110
ND<0 ND<0 0 25 110
ND<0 ND<0 0 25 110
0.970779 ND<0 0.970779 26 110
-0.776529 J ND<0 -0.776529 26 111
ND<0 ND<0 0 26 111
-0.71335 J ND<0 -0.7133526 112
ND<0 ND<0 0 26 112
-0.967584 J ND<0 -0.967584 26 113
ND<0 ND<0 0 26 113
-0.916291 J ND<0 -0.916291 26 114
0.832909 ND<0 0.832909 27 114
-1.20397 J ND<0 -1.2039727 115

ND<0 0.993252 -0.993252 27 116
ND<0 0.993252 -0.993252 27 117
ND<0 0.993252 -0.993252 27 118
ND<0 0.993252 -0.993252 27 119
ND<0 0.993252 -0.993252 27 120
0.970779 0.993252 -0.0224729 27 121
-0.776529 J 0.993252 -1.7697827 122
ND<0 0.993252 -0.993252 27 123
-0.71335 J 0.993252 -1.7066 27 124
ND<0 0.993252 -0.993252 27 125
-0.967584 J 0.993252 -1.9608427 126
ND<0 0.993252 -0.993252 27 127
-0.916291 J 0.993252 -1.9095427 128
0.832909 0.993252 -0.160343 27 129
-1.20397 J 0.993252 -2.1972227 130

ND<0 ND<0 0 27 130
ND<0 ND<0 0 27 130
ND<0 ND<0 0 27 130

ND<0	ND<0	0	27	130		
0.970779		ND<0	0.970779		28	130
-0.776529 J		ND<0	-0.776529		28	131
ND<0	ND<0	0	28	131		
-0.71335 J		ND<0	-0.713352	8	132	
ND<0	ND<0	0	28	132		
-0.967584 J		ND<0	-0.967584		28	133
ND<0	ND<0	0	28	133		
-0.916291 J		ND<0	-0.916291		28	134
0.832909		ND<0	0.832909		29	134
-1.20397 J		ND<0	-1.203972	9	135	
ND<0	ND<0	0	29	135		
ND<0	ND<0	0	29	135		
ND<0	ND<0	0	29	135		
0.970779		ND<0	0.970779		30	135
-0.776529 J		ND<0	-0.776529		30	136
ND<0	ND<0	0	30	136		
-0.71335 J		ND<0	-0.713353	0	137	
ND<0	ND<0	0	30	137		
-0.967584 J		ND<0	-0.967584		30	138
ND<0	ND<0	0	30	138		
-0.916291 J		ND<0	-0.916291		30	139
0.832909		ND<0	0.832909		31	139
-1.20397 J		ND<0	-1.203973	1	140	
ND<0	ND<0	0	31	140		
ND<0	ND<0	0	31	140		
0.970779		ND<0	0.970779		32	140
-0.776529 J		ND<0	-0.776529		32	141
ND<0	ND<0	0	32	141		
-0.71335 J		ND<0	-0.713353	2	142	
ND<0	ND<0	0	32	142		
-0.967584 J		ND<0	-0.967584		32	143
ND<0	ND<0	0	32	143		
-0.916291 J		ND<0	-0.916291		32	144
0.832909		ND<0	0.832909		33	144
-1.20397 J		ND<0	-1.203973	3	145	
ND<0	ND<0	0	33	145		
0.970779		ND<0	0.970779		34	145
-0.776529 J		ND<0	-0.776529		34	146
ND<0	ND<0	0	34	146		
-0.71335 J		ND<0	-0.713353	4	147	
ND<0	ND<0	0	34	147		
-0.967584 J		ND<0	-0.967584		34	148
ND<0	ND<0	0	34	148		
-0.916291 J		ND<0	-0.916291		34	149
0.832909		ND<0	0.832909		35	149
-1.20397 J		ND<0	-1.203973	5	150	
0.970779		ND<0	0.970779		36	150
-0.776529 J		ND<0	-0.776529		36	151
ND<0	ND<0	0	36	151		
-0.71335 J		ND<0	-0.713353	6	152	
ND<0	ND<0	0	36	152		
-0.967584 J		ND<0	-0.967584		36	153
ND<0	ND<0	0	36	153		
-0.916291 J		ND<0	-0.916291		36	154
0.832909		ND<0	0.832909		37	154
-1.20397 J		ND<0	-1.203973	7	155	

-0.776529 J 0.970779 -1.7473137 156
ND<0 0.970779 -0.970779 37 157
-0.71335 J 0.970779 -1.6841337 158
ND<0 0.970779 -0.970779 37 159
-0.967584 J 0.970779 -1.9383637 160
ND<0 0.970779 -0.970779 37 161
-0.916291 J 0.970779 -1.8870737 162
0.832909 0.970779 -0.1378737 163
-1.20397 J 0.970779 -2.1747537 164

ND<0 -0.776529 J 0.776529 38 164
-0.71335 J -0.776529 J 0.0631789 39 164
ND<0 -0.776529 J 0.776529 40 164
-0.967584 J -0.776529 J -0.191055 40 165
ND<0 -0.776529 J 0.776529 41 165
-0.916291 J -0.776529 J -0.139762 41 166
0.832909 -0.776529 J 1.60944 42 166
-1.20397 J -0.776529 J -0.427444 42 167

-0.71335 J ND<0 -0.7133542 168
ND<0 ND<0 0 42 168
-0.967584 J ND<0 -0.967584 42 169
ND<0 ND<0 0 42 169
-0.916291 J ND<0 -0.916291 42 170
0.832909 ND<0 0.832909 43 170
-1.20397 J ND<0 -1.2039743 171

ND<0 -0.71335 J 0.71335 44 171
-0.967584 J -0.71335 J -0.254234 44 172
ND<0 -0.71335 J 0.71335 45 172
-0.916291 J -0.71335 J -0.202941 45 173
0.832909 -0.71335 J 1.54626 46 173
-1.20397 J -0.71335 J -0.490623 46 174

-0.967584 J ND<0 -0.967584 46 175
ND<0 ND<0 0 46 175
-0.916291 J ND<0 -0.916291 46 176
0.832909 ND<0 0.832909 47 176
-1.20397 J ND<0 -1.2039747 177

ND<0 -0.967584 J 0.967584 48 177
-0.916291 J -0.967584 J 0.0512933 49 177
0.832909 -0.967584 J 1.80049 50 177
-1.20397 J -0.967584 J -0.236389 50 178

-0.916291 J ND<0 -0.916291 50 179
0.832909 ND<0 0.832909 51 179
-1.20397 J ND<0 -1.2039751 180

0.832909 -0.916291 J 1.7492 52 180
-1.20397 J -0.916291 J -0.287682 52 181

-1.20397 J 0.832909 -2.0368852 182

S Statistic = 52 - 182 = -130

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
11/15/2009	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 = -3.10626
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.10626| > 1.97737 indicating a trend

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
4.47734	4.59512	-0.117783	11	14
2.07944	4.59512	-2.515681	11	15
ND<0	4.59512	-4.595121	11	16
4.07754	4.59512	-0.517582	11	17
3.89182	4.59512	-0.7033	11	18
3.52636	4.59512	-1.068761	11	19
ND<0	4.59512	-4.595121	11	20
3.43399	4.59512	-1.161131	11	21
3.41444	4.59512	-1.180681	11	22
3.47197	4.59512	-1.123151	11	23
ND<0	4.59512	-4.595121	11	24
ND<0	4.59512	-4.595121	11	25
1.79176	4.59512	-2.803361	11	26
ND<0	4.59512	-4.595121	11	27
1.67523	4.59512	-2.919891	11	28
0.779325	4.59512	-3.815791	11	29
0.875469	4.59512	-3.719651	11	30
0.989541	4.59512	-3.605581	11	31
ND<0	4.59512	-4.595121	11	32
-0.616186 J	4.59512	-5.211311	11	33
-0.174353 J	4.59512	-4.769471	11	34
-0.430783 J	4.59512	-5.0259	11	35
-0.223144 J	4.59512	-4.818261	11	36

2.07944		4.47734		-2.3979	11	37
ND<0	4.47734		-4.4773	11	38	
4.07754		4.47734		-0.399799	11	39
3.89182		4.47734		-0.585517	11	40
3.52636		4.47734		-0.950976	11	41
ND<0	4.47734		-4.4773	11	42	
3.43399		4.47734		-1.04335	11	43
3.41444		4.47734		-1.06289	11	44
3.47197		4.47734		-1.00537	11	45
ND<0	4.47734		-4.4773	11	46	
ND<0	4.47734		-4.4773	11	47	
1.79176		4.47734		-2.68558	11	48
ND<0	4.47734		-4.4773	11	49	
1.67523		4.47734		-2.80211	11	50
0.779325		4.47734		-3.69801	11	51
0.875469		4.47734		-3.60187	11	52
0.989541		4.47734		-3.4878	11	53
ND<0	4.47734		-4.4773	11	54	
-0.616186 J		4.47734		-5.09352	11	55
-0.174353 J		4.47734		-4.65169	11	56
-0.430783 J		4.47734		-4.90812	11	57
-0.223144 J		4.47734		-4.70048	11	58
ND<0	2.07944		-2.0794	11	59	
4.07754		2.07944		1.9981	12	59
3.89182		2.07944		1.81238	13	59
3.52636		2.07944		1.44692	14	59
ND<0	2.07944		-2.0794	14	60	
3.43399		2.07944		1.35455	15	60
3.41444		2.07944		1.335	16	60
3.47197		2.07944		1.39252	17	60
ND<0	2.07944		-2.0794	17	61	
ND<0	2.07944		-2.0794	17	62	
1.79176		2.07944		-0.287682	17	63
ND<0	2.07944		-2.0794	17	64	
1.67523		2.07944		-0.404216	17	65
0.779325		2.07944		-1.30012	17	66
0.875469		2.07944		-1.20397	17	67
0.989541		2.07944		-1.0899	17	68
ND<0	2.07944		-2.0794	17	69	
-0.616186 J		2.07944		-2.69563	17	70
-0.174353 J		2.07944		-2.25379	17	71
-0.430783 J		2.07944		-2.51022	17	72
-0.223144 J		2.07944		-2.30259	17	73
4.07754		ND<0	4.07754	18	73	
3.89182		ND<0	3.89182	19	73	
3.52636		ND<0	3.52636	20	73	
ND<0	ND<0	0	20	73		
3.43399		ND<0	3.43399	21	73	
3.41444		ND<0	3.41444	22	73	
3.47197		ND<0	3.47197	23	73	
ND<0	ND<0	0	23	73		
ND<0	ND<0	0	23	73		
1.79176		ND<0	1.79176	24	73	
ND<0	ND<0	0	24	73		
1.67523		ND<0	1.67523	25	73	
0.779325		ND<0	0.779325		26	73
0.875469		ND<0	0.875469		27	73
0.989541		ND<0	0.989541		28	73
ND<0	ND<0	0	28	73		

-0.616186 J	ND<0	-0.616186	28	74	
-0.174353 J	ND<0	-0.174353	28	75	
-0.430783 J	ND<0	-0.430783	28	76	
-0.223144 J	ND<0	-0.223144	28	77	
3.89182	4.07754	-0.185717	28	78	
3.52636	4.07754	-0.551177	28	79	
ND<0	4.07754	-4.0775428	80		
3.43399	4.07754	-0.6435528	81		
3.41444	4.07754	-0.663095	28	82	
3.47197	4.07754	-0.605571	28	83	
ND<0	4.07754	-4.0775428	84		
ND<0	4.07754	-4.0775428	85		
1.79176	4.07754	-2.2857828	86		
ND<0	4.07754	-4.0775428	87		
1.67523	4.07754	-2.4023128	88		
0.779325	4.07754	-3.2982128	89		
0.875469	4.07754	-3.2020728	90		
0.989541	4.07754	-3.088 28	91		
ND<0	4.07754	-4.0775428	92		
-0.616186 J	4.07754	-4.6937228	93		
-0.174353 J	4.07754	-4.2518928	94		
-0.430783 J	4.07754	-4.5083228	95		
-0.223144 J	4.07754	-4.3006828	96		
3.52636	3.89182	-0.3654628	97		
ND<0	3.89182	-3.8918228	98		
3.43399	3.89182	-0.457833	28	99	
3.41444	3.89182	-0.477378	28	100	
3.47197	3.89182	-0.419854	28	101	
ND<0	3.89182	-3.8918228	102		
ND<0	3.89182	-3.8918228	103		
1.79176	3.89182	-2.1000628	104		
ND<0	3.89182	-3.8918228	105		
1.67523	3.89182	-2.2165928	106		
0.779325	3.89182	-3.1125 28	107		
0.875469	3.89182	-3.0163528	108		
0.989541	3.89182	-2.9022828	109		
ND<0	3.89182	-3.8918228	110		
-0.616186 J	3.89182	-4.5080128	111		
-0.174353 J	3.89182	-4.0661728	112		
-0.430783 J	3.89182	-4.3226 28	113		
-0.223144 J	3.89182	-4.1149628	114		
ND<0	3.52636	-3.5263628	115		
3.43399	3.52636	-0.0923733	28	116	
3.41444	3.52636	-0.111918	28	117	
3.47197	3.52636	-0.0543941	28	118	
ND<0	3.52636	-3.5263628	119		
ND<0	3.52636	-3.5263628	120		
1.79176	3.52636	-1.7346 28	121		
ND<0	3.52636	-3.5263628	122		
1.67523	3.52636	-1.8511328	123		
0.779325	3.52636	-2.7470428	124		
0.875469	3.52636	-2.6508928	125		
0.989541	3.52636	-2.5368228	126		
ND<0	3.52636	-3.5263628	127		
-0.616186 J	3.52636	-4.1425528	128		
-0.174353 J	3.52636	-3.7007128	129		
-0.430783 J	3.52636	-3.9571428	130		
-0.223144 J	3.52636	-3.7495 28	131		

3.43399		ND<0	3.43399	29	131	
3.41444		ND<0	3.41444	30	131	
3.47197		ND<0	3.47197	31	131	
ND<0	ND<0	0	31	131		
ND<0	ND<0	0	31	131		
1.79176		ND<0	1.79176	32	131	
ND<0	ND<0	0	32	131		
1.67523		ND<0	1.67523	33	131	
0.779325		ND<0	0.779325	34	131	
0.875469		ND<0	0.875469	35	131	
0.989541		ND<0	0.989541	36	131	
ND<0	ND<0	0	36	131		
-0.616186 J		ND<0	-0.616186	36	132	
-0.174353 J		ND<0	-0.174353	36	133	
-0.430783 J		ND<0	-0.430783	36	134	
-0.223144 J		ND<0	-0.223144	36	135	
3.41444		3.43399	-0.0195446	36	136	
3.47197		3.43399	0.0379792	37	136	
ND<0	3.43399	-3.4339937	137			
ND<0	3.43399	-3.4339937	138			
1.79176		3.43399	-1.6422337	139		
ND<0	3.43399	-3.4339937	140			
1.67523		3.43399	-1.7587637	141		
0.779325		3.43399	-2.6546637	142		
0.875469		3.43399	-2.5585237	143		
0.989541		3.43399	-2.4444537	144		
ND<0	3.43399	-3.4339937	145			
-0.616186 J		3.43399	-4.0501737	146		
-0.174353 J		3.43399	-3.6083437	147		
-0.430783 J		3.43399	-3.8647737	148		
-0.223144 J		3.43399	-3.6571337	149		
3.47197		3.41444	0.0575238	38	149	
ND<0	3.41444	-3.4144438	150			
ND<0	3.41444	-3.4144438	151			
1.79176		3.41444	-1.6226838	152		
ND<0	3.41444	-3.4144438	153			
1.67523		3.41444	-1.7392238	154		
0.779325		3.41444	-2.6351238	155		
0.875469		3.41444	-2.5389738	156		
0.989541		3.41444	-2.4249 38	157		
ND<0	3.41444	-3.4144438	158			
-0.616186 J		3.41444	-4.0306338	159		
-0.174353 J		3.41444	-3.5888 38	160		
-0.430783 J		3.41444	-3.8452338	161		
-0.223144 J		3.41444	-3.6375938	162		
ND<0	3.47197	-3.4719738	163			
ND<0	3.47197	-3.4719738	164			
1.79176		3.47197	-1.6802138	165		
ND<0	3.47197	-3.4719738	166			
1.67523		3.47197	-1.7967438	167		
0.779325		3.47197	-2.6926438	168		
0.875469		3.47197	-2.5965 38	169		
0.989541		3.47197	-2.4824338	170		
ND<0	3.47197	-3.4719738	171			
-0.616186 J		3.47197	-4.0881538	172		
-0.174353 J		3.47197	-3.6463238	173		
-0.430783 J		3.47197	-3.9027538	174		
-0.223144 J		3.47197	-3.6951138	175		

ND<0	ND<0	0	38	175		
1.79176		ND<0	1.79176	39	175	
ND<0	ND<0	0	39	175		
1.67523		ND<0	1.67523	40	175	
0.779325		ND<0	0.779325	41	175	
0.875469		ND<0	0.875469	42	175	
0.989541		ND<0	0.989541	43	175	
ND<0	ND<0	0	43	175		
-0.616186 J		ND<0	-0.616186	43	176	
-0.174353 J		ND<0	-0.174353	43	177	
-0.430783 J		ND<0	-0.430783	43	178	
-0.223144 J		ND<0	-0.223144	43	179	
1.79176		ND<0	1.79176	44	179	
ND<0	ND<0	0	44	179		
1.67523		ND<0	1.67523	45	179	
0.779325		ND<0	0.779325	46	179	
0.875469		ND<0	0.875469	47	179	
0.989541		ND<0	0.989541	48	179	
ND<0	ND<0	0	48	179		
-0.616186 J		ND<0	-0.616186	48	180	
-0.174353 J		ND<0	-0.174353	48	181	
-0.430783 J		ND<0	-0.430783	48	182	
-0.223144 J		ND<0	-0.223144	48	183	
ND<0	1.79176		-1.791764	8	184	
1.67523		1.79176		-0.116534	48	185
0.779325		1.79176		-1.012434	8	186
0.875469		1.79176		-0.916291	48	187
0.989541		1.79176		-0.802218	48	188
ND<0	1.79176		-1.791764	8	189	
-0.616186 J		1.79176		-2.407954	8	190
-0.174353 J		1.79176		-1.966114	8	191
-0.430783 J		1.79176		-2.222544	8	192
-0.223144 J		1.79176		-2.0149	48	193
1.67523		ND<0	1.67523	49	193	
0.779325		ND<0	0.779325	50	193	
0.875469		ND<0	0.875469	51	193	
0.989541		ND<0	0.989541	52	193	
ND<0	ND<0	0	52	193		
-0.616186 J		ND<0	-0.616186	52	194	
-0.174353 J		ND<0	-0.174353	52	195	
-0.430783 J		ND<0	-0.430783	52	196	
-0.223144 J		ND<0	-0.223144	52	197	
0.779325		1.67523		-0.895901	52	198
0.875469		1.67523		-0.799757	52	199
0.989541		1.67523		-0.685684	52	200
ND<0	1.67523		-1.675235	2	201	
-0.616186 J		1.67523		-2.291415	2	202
-0.174353 J		1.67523		-1.849585	2	203
-0.430783 J		1.67523		-2.106015	2	204
-0.223144 J		1.67523		-1.898375	2	205
0.875469		0.779325		0.0961439	53	205
0.989541		0.779325		0.210216	54	205
ND<0	0.779325		-0.779325	54	206	
-0.616186 J		0.779325		-1.395515	4	207
-0.174353 J		0.779325		-0.953678	54	208
-0.430783 J		0.779325		-1.210115	4	209
-0.223144 J		0.779325		-1.002475	4	210

0.989541	0.875469	0.114072	55	210
ND<0	0.875469	-0.875469	55	211
-0.616186 J	0.875469	-1.4916555	212	
-0.174353 J	0.875469	-1.0498255	213	
-0.430783 J	0.875469	-1.3062555	214	
-0.223144 J	0.875469	-1.0986155	215	
ND<0	0.989541	-0.989541	55	216
-0.616186 J	0.989541	-1.6057355	217	
-0.174353 J	0.989541	-1.1638955	218	
-0.430783 J	0.989541	-1.4203255	219	
-0.223144 J	0.989541	-1.2126855	220	
-0.616186 J	ND<0	-0.616186	55	221
-0.174353 J	ND<0	-0.174353	55	222
-0.430783 J	ND<0	-0.430783	55	223
-0.223144 J	ND<0	-0.223144	55	224
-0.174353 J	-0.616186 J	0.441833	56	224
-0.430783 J	-0.616186 J	0.185403	57	224
-0.223144 J	-0.616186 J	0.393043	58	224
-0.430783 J	-0.174353 J	-0.2564358	225	
-0.223144 J	-0.174353 J	-0.0487902	58	226
-0.223144 J	-0.430783 J	0.207639	59	226

S Statistic = 59 - 226 = -167

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

There are 0 time periods with multiple data

A = 510
B = 0
C = 120
D = 0
E = 30
F = 0
a = 33000
b = 124200
c = 1200
Group Variance = 1805
Z-Score = -3.90723
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.90723| > 1.97737 indicating a trend

Concentrations (ug/L)

Parameter: Thallium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 196
Total Non-Detect: 194
Percent Non-Detects: 98.9796%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (100%)	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<0.1	ND<0.1

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-12BR	16	15 (93.75%)	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<0.1	ND<0.1
			11/15/2009	0.1 J	0.1 J
MW-7	25	24 (96%)	7/20/1995	ND<1	ND<1
			8/24/1995	ND<1	ND<1
			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	ND<1	ND<1	
			3/15/2000	ND<1	ND<1	
			9/24/2003	ND<1	ND<1	
			3/11/2004	10	10	
			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<0.1	ND<0.1	
MW-8	25	25 (100%)	7/20/1995		ND<1	ND<1
			8/24/1995	ND<1	ND<1	
			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	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<0.1	ND<0.1	
MW-9	25	25 (100%)	7/20/1995		ND<1	ND<1
			8/24/1995	ND<1	ND<1	
			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	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<0.1	ND<0.1	
MW-6	25	25 (100%)	7/20/1995	ND<1	ND<1	
			8/24/1995	ND<1	ND<1	
			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	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<0.1	ND<0.1	
MW-12AR	15	15 (100%)	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<0.1	ND<0.1	
MW-11R	25	25 (100%)	7/20/1995	ND<1	ND<1	
			8/24/1995	ND<1	ND<1	
			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	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<0.1	ND<0.1	
MW-10	25	25 (100%)	7/20/1995	ND<1	ND<1	
			8/24/1995	ND<1	ND<1	
			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	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<0.1	ND<0.1	

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original

Shapiro-Francia Test of Normality

Parameter: Thallium

All Locations

Normality Test of Parameter Concentrations

Original Data (Not Transformed)
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.05	-2.575836	3.63492	-0.128792
2	0.05	-2.326341	2.0468	-0.245109
3	0.05	-2.170091	6.7561	-0.353613
4	0.05	-2.053752	0.974	-0.456301
5	0.05	-1.959962	4.8154	-0.554299
6	0.05	-1.880792	8.3528	-0.648338
7	0.05	-1.811913	1.6358	-0.738934
8	0.05	-1.750693	4.7007	-0.826468
9	0.05	-1.6954	37.5751	-0.911238
10	0.1	-1.644854	0.2806	-1.07572
11	0.5	-1.598194	2.8348	-1.87482
12	0.5	-1.554774	5.2522	-2.65221
13	0.5	-1.5141	47.5447	-3.40926
14	0.5	-1.468384	9.7008	-4.14345
15	0.5	-1.4325	51.7529	-4.8597
16	0.5	-1.398385	3.7083	-5.55889
17	0.5	-1.365815	5.5738	-6.24179
18	0.5	-1.334625	7.355	-6.9091
19	0.5	-1.304695	9.0572	-7.56145
20	0.5	-1.275886	0.6851	-8.19939
21	0.5	-1.248096	2.2428	-8.82343
22	0.5	-1.221236	3.7342	-9.43404
23	0.5	-1.195226	5.1627	-10.0317
24	0.5	-1.17	66.5316	-10.6167
25	0.5	-1.1455	67.8438	-11.1894
26	0.5	-1.121686	9.102	-11.7502
27	0.5	-1.0939	70.2986	-12.2972
28	0.5	-1.071387	1.4464	-12.8329
29	0.5	-1.049397	2.5476	-13.3576
30	0.5	-1.027897	3.6042	-13.8715
31	0.5	-1.006877	4.618	-14.375
32	0.5	-0.986272	75.5907	-14.8681
33	0.5	-0.966088	76.524	-15.3511
34	0.5	-0.946291	77.4195	-15.8243
35	0.5	-0.926859	78.2786	-16.2877
36	0.5	-0.907769	79.1026	-16.7416
37	0.5	-0.889006	79.893	-17.1861
38	0.5	-0.870558	0.6508	-17.6214
39	0.5	-0.852385	81.3774	-18.0476
40	0.5	-0.830953	82.0679	-18.463
41	0.5	-0.813379	82.7294	-18.8697
42	0.5	-0.796056	83.3632	-19.2678
43	0.5	-0.778966	83.9699	-19.6572
44	0.5	-0.7621	84.5507	-20.0383
45	0.5	-0.745449	85.1064	-20.411
46	0.5	-0.729003	85.6379	-20.7755
47	0.5	-0.712751	86.1459	-21.1319
48	0.5	-0.696684	86.6313	-21.4802
49	0.5	-0.680797	87.0947	-21.8206

50	0.5	-0.665079	87.5371	-22.1532
51	0.5	-0.649522	87.959	-22.4779
52	0.5	-0.634124	88.3611	-22.795
53	0.5	-0.615839	88.7403	-23.1029
54	0.5	-0.6007689.1012	-23.4033	
55	0.5	-0.585815	89.4444	-23.6962
56	0.5	-0.570999	89.7705	-23.9817
57	0.5	-0.556308	90.0799	-24.2599
58	0.5	-0.541736	90.3734	-24.5307
59	0.5	-0.5272890.6514	-24.7944	
60	0.5	-0.5129390.9145	-25.0508	
61	0.5	-0.498687	91.1632	-25.3002
62	0.5	-0.484544	91.398	-25.5424
63	0.5	-0.470498	91.6194	-25.7777
64	0.5	-0.456542	91.8278	-26.006
65	0.5	-0.442676	92.0238	-26.2273
66	0.5	-0.426148	92.2054	-26.4404
67	0.5	-0.412463	92.3755	-26.6466
68	0.5	-0.398855	92.5346	-26.846
69	0.5	-0.385321	92.683	-27.0387
70	0.5	-0.371856	92.8213	-27.2246
71	0.5	-0.358459	92.9498	-27.4039
72	0.5	-0.345126	93.0689	-27.5764
73	0.5	-0.331854	93.1791	-27.7423
74	0.5	-0.318639	93.2806	-27.9017
75	0.5	-0.305481	93.3739	-28.0544
76	0.5	-0.292375	93.4594	-28.2006
77	0.5	-0.279319	93.5374	-28.3403
78	0.5	-0.266311	93.6083	-28.4734
79	0.5	-0.250759	93.6712	-28.5988
80	0.5	-0.237847	93.7278	-28.7177
81	0.5	-0.224974	93.7784	-28.8302
82	0.5	-0.212137	93.8234	-28.9363
83	0.5	-0.199336	93.8631	-29.0359
84	0.5	-0.186567	93.8979	-29.1292
85	0.5	-0.173829	93.9282	-29.2161
86	0.5	-0.161119	93.9541	-29.2967
87	0.5	-0.148434	93.9762	-29.3709
88	0.5	-0.135774	93.9946	-29.4388
89	0.5	-0.123135	94.0097	-29.5004
90	0.5	-0.110516	94.022	-29.5556
91	0.5	-0.0979139	94.0315	-29.6046
92	0.5	-0.0828129	94.0384	-29.646
93	0.5	-0.0702426	94.0433	-29.6811
94	0.5	-0.0576847	94.0467	-29.7099
95	0.5	-0.0451348	94.0487	-29.7325
96	0.5	-0.0325917	94.0498	-29.7488
97	0.5	-0.0200544	94.0502	-29.7588
98	0.5	-0.00751925	94.0502	-29.7626
99	0.5	0.00751925	94.0503	-29.7588
100	0.5	0.0200544	94.0507	-29.7488
101	0.5	0.0325917	94.0517	-29.7325
102	0.5	0.0451348	94.0538	-29.7099
103	0.5	0.0576847	94.0571	-29.6811
104	0.5	0.0702426	94.062	-29.646
105	0.5	0.0828129	94.0689	-29.6046
106	0.5	0.0979139	94.0785	-29.5556
107	0.5	0.110516	94.0907	-29.5004
108	0.5	0.123135	94.1059	-29.4388
109	0.5	0.135774	94.1243	-29.3709
110	0.5	0.148434	94.1463	-29.2967
111	0.5	0.161119	94.1723	-29.2161

112	0.5	0.173829		94.2025	-29.1292
113	0.5	0.186567		94.2373	-29.0359
114	0.5	0.199336		94.2771	-28.9363
115	0.5	0.212137		94.3221	-28.8302
116	0.5	0.224974		94.3727	-28.7177
117	0.5	0.237847		94.4292	-28.5988
118	0.5	0.250759		94.4921	-28.4734
119	0.5	0.266311		94.563	-28.3403
120	0.5	0.279319		94.6411	-28.2006
121	0.5	0.292375		94.7265	-28.0544
122	0.5	0.305481		94.8199	-27.9017
123	0.5	0.318639		94.9214	-27.7423
124	0.5	0.331854		95.0315	-27.5764
125	0.5	0.345126		95.1506	-27.4039
126	0.5	0.358459		95.2791	-27.2246
127	0.5	0.371856		95.4174	-27.0387
128	0.5	0.385321		95.5659	-26.846
129	0.5	0.398855		95.725	-26.6466
130	0.5	0.412463		95.8951	-26.4404
131	0.5	0.426148		96.0767	-26.2273
132	0.5	0.442676		96.2726	-26.006
133	0.5	0.456542		96.4811	-25.7777
134	0.5	0.470498		96.7024	-25.5424
135	0.5	0.484544		96.9372	-25.3002
136	0.5	0.498687		97.1859	-25.0508
137	0.5	0.51293	97.449	-24.7944	
138	0.5	0.52728	97.727	-24.5307	
139	0.5	0.541736		98.0205	-24.2599
140	0.5	0.556308		98.33	-23.9817
141	0.5	0.570999		98.656	-23.6962
142	0.5	0.585815		98.9992	-23.4033
143	0.5	0.60076	99.3601	-23.1029	
144	0.5	0.615839		99.7394	-22.795
145	0.5	0.634124		100.141	-22.4779
146	0.5	0.649522		100.563	-22.1532
147	0.5	0.665079		101.006	-21.8206
148	0.5	0.680797		101.469	-21.4802
149	0.5	0.696684		101.955	-21.1319
150	0.5	0.712751		102.463	-20.7755
151	0.5	0.729003		102.994	-20.411
152	0.5	0.745449		103.55	-20.0383
153	0.5	0.7621	104.131	-19.6572	
154	0.5	0.778966		104.737	-19.2678
155	0.5	0.796056		105.371	-18.8697
156	0.5	0.813379		106.033	-18.463
157	0.5	0.830953		106.723	-18.0476
158	0.5	0.852385		107.45	-17.6214
159	0.5	0.87055	108.207	-17.1861	
160	0.5	0.889006		108.998	-16.7416
161	0.5	0.907769		109.822	-16.2877
162	0.5	0.926859		110.681	-15.8243
163	0.5	0.946291		111.576	-15.3511
164	0.5	0.966088		112.51	-14.8681
165	0.5	0.986272		113.482	-14.375
166	0.5	1.00687	114.496	-13.8715	
167	0.5	1.02789	115.553	-13.3576	
168	0.5	1.04939	116.654	-12.8329	
169	0.5	1.07138	117.802	-12.2972	
170	0.5	1.0939	118.998	-11.7502	
171	0.5	1.12168	120.257	-11.1894	
172	0.5	1.1455	121.569	-10.6167	
173	0.5	1.17	122.938	-10.0317	

174	0.5	1.19522	124.366	-9.43404
175	0.5	1.22123	125.858	-8.82343
176	0.5	1.24809	127.415	-8.19939
177	0.5	1.27588	129.043	-7.56145
178	0.5	1.30469	130.745	-6.9091
179	0.5	1.33462	132.527	-6.24179
180	0.5	1.36581	134.392	-5.55889
181	0.5	1.39838	136.348	-4.8597
182	0.5	1.4325	138.4	-4.14345
183	0.5	1.46838	140.556	-3.40926
184	0.5	1.5141	142.848	-2.65221
185	0.5	1.55477	145.266	-1.87482
186	0.5	1.59819	147.82	-1.07572
187	0.5	1.64485	150.525	-0.253297
188	0.5	1.6954	153.4	0.594402
189	0.5	1.75069	156.465	1.46975
190	0.5	1.81191	159.748	2.3757
191	0.5	1.88079	163.285	3.3161
192	0.5	1.95996	167.126	4.29608
193	0.5	2.05375	171.344	5.32295
194	0.5	2.17009	176.054	6.408
195	0.5	2.32634	181.466	7.57117
196	10	2.57583	188.1	33.3295

Data Set Standard Deviation = 0.687255
Numerator = 1110.86
Denominator = 17324.5
W Statistic = 0.0641205 = 1110.86 / 17324.5

5% Critical value of 0.976 exceeds 0.0641205
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.0641205
Evidence of non-normality at 99% level of significance

Shapiro-Francia Test of Normality

Parameter: Thallium

All Locations

Normality Test of Parameter Concentrations

Natural Logarithm Transformation
Non-Detects Replaced with 1/2 DL
Total Number of Measurements = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)	
1	-2.99573	-2.57583	6.63492	7.71651	
2	-2.99573	-2.32634	12.0468	14.6856	
3	-2.99573	-2.17009	16.7561	21.1866	
4	-2.99573	-2.05375	20.974	27.3391	
5	-2.99573	-1.95996	24.8154	33.2106	
6	-2.99573	-1.88079	28.3528	38.845	
7	-2.99573	-1.81191	31.6358	44.273	
8	-2.99573	-1.75069	34.7007	49.5176	
9	-2.99573	-1.6954	37.5751	54.5965	
10	-2.30259	-1.64485	40.2806	58.3839	
11	-0.693147	-1.59819	42.8348	59.4917	
12	-0.693147	-1.55477	45.2522	60.5694	
13	-0.693147	-1.5141	47.5447	61.6189	
14	-0.693147	-1.46838	49.7008	62.6367	
15	-0.693147	-1.4325	51.7529	63.6296	
16	-0.693147	-1.39838	53.7083	64.5989	
17	-0.693147	-1.36581	55.5738	65.5456	
18	-0.693147	-1.33462	57.355	66.4707	
19	-0.693147	-1.30469	59.0572	67.3751	
20	-0.693147	-1.27588	60.6851	68.2594	
21	-0.693147	-1.24809	62.2428	69.1245	
22	-0.693147	-1.22123	63.7342	69.971	
23	-0.693147	-1.19522	65.1627	70.7995	
24	-0.693147	-1.17	66.5316	71.6105	
25	-0.693147	-1.1455	67.8438	72.4045	
26	-0.693147	-1.12168	69.102	73.182	
27	-0.693147	-1.0939	70.2986	73.9402	
28	-0.693147	-1.07138	71.4464	74.6828	
29	-0.693147	-1.04939	72.5476	75.4102	
30	-0.693147	-1.02789	73.6042	76.1227	
31	-0.693147	-1.00687	74.618	76.8206	
32	-0.693147	-0.986272		75.5907	77.5042
33	-0.693147	-0.966088		76.524	78.1738
34	-0.693147	-0.946291		77.4195	78.8298
35	-0.693147	-0.926859		78.2786	79.4722
36	-0.693147	-0.907769		79.1026	80.1014
37	-0.693147	-0.889006		79.893	80.7176
38	-0.693147	-0.870558	0.6508	81.3211	
39	-0.693147	-0.852385		81.3774	81.9119
40	-0.693147	-0.830953		82.0679	82.4879
41	-0.693147	-0.813379		82.7294	83.0517
42	-0.693147	-0.796056		83.3632	83.6034
43	-0.693147	-0.778966		83.9699	84.1434
44	-0.693147	-0.7621	84.5507	84.6716	
45	-0.693147	-0.745449		85.1064	85.1883
46	-0.693147	-0.729003		85.6379	85.6936
47	-0.693147	-0.712751		86.1459	86.1877
48	-0.693147	-0.696684		86.6313	86.6706
49	-0.693147	-0.680797		87.0947	87.1425

50	-0.693147	-0.665079	87.5371	87.6035
51	-0.693147	-0.649522	87.959	88.0537
52	-0.693147	-0.634124	88.3611	88.4932
53	-0.693147	-0.615839	88.7403	88.9201
54	-0.693147	-0.6007689.1012	89.3365	
55	-0.693147	-0.585815	89.4444	89.7426
56	-0.693147	-0.570999	89.7705	90.1384
57	-0.693147	-0.556308	90.0799	90.524
58	-0.693147	-0.541736	90.3734	90.8995
59	-0.693147	-0.5272890.6514	91.2649	
60	-0.693147	-0.5129390.9145	91.6205	
61	-0.693147	-0.498687	91.1632	91.9661
62	-0.693147	-0.484544	91.398	92.302
63	-0.693147	-0.470498	91.6194	92.6281
64	-0.693147	-0.456542	91.8278	92.9446
65	-0.693147	-0.442676	92.0238	93.2514
66	-0.693147	-0.426148	92.2054	93.5468
67	-0.693147	-0.412463	92.3755	93.8327
68	-0.693147	-0.398855	92.5346	94.1092
69	-0.693147	-0.385321	92.683	94.3763
70	-0.693147	-0.371856	92.8213	94.634
71	-0.693147	-0.358459	92.9498	94.8825
72	-0.693147	-0.345126	93.0689	95.1217
73	-0.693147	-0.331854	93.1791	95.3517
74	-0.693147	-0.318639	93.2806	95.5726
75	-0.693147	-0.305481	93.3739	95.7843
76	-0.693147	-0.292375	93.4594	95.987
77	-0.693147	-0.279319	93.5374	96.1806
78	-0.693147	-0.266311	93.6083	96.3652
79	-0.693147	-0.250759	93.6712	96.539
80	-0.693147	-0.237847	93.7278	96.7039
81	-0.693147	-0.224974	93.7784	96.8598
82	-0.693147	-0.212137	93.8234	97.0068
83	-0.693147	-0.199336	93.8631	97.145
84	-0.693147	-0.186567	93.8979	97.2743
85	-0.693147	-0.173829	93.9282	97.3948
86	-0.693147	-0.161119	93.9541	97.5065
87	-0.693147	-0.148434	93.9762	97.6094
88	-0.693147	-0.135774	93.9946	97.7035
89	-0.693147	-0.123135	94.0097	97.7888
90	-0.693147	-0.110516	94.022	97.8654
91	-0.693147	-0.0979139	94.0315	97.9333
92	-0.693147	-0.0828129	94.0384	97.9907
93	-0.693147	-0.0702426	94.0433	98.0394
94	-0.693147	-0.0576847	94.0467	98.0794
95	-0.693147	-0.0451348	94.0487	98.1107
96	-0.693147	-0.0325917	94.0498	98.1333
97	-0.693147	-0.0200544	94.0502	98.1472
98	-0.693147	-0.00751925	94.0502	98.1524
99	-0.693147	0.00751925	94.0503	98.1472
100	-0.693147	0.0200544	94.0507	98.1333
101	-0.693147	0.0325917	94.0517	98.1107
102	-0.693147	0.0451348	94.0538	98.0794
103	-0.693147	0.0576847	94.0571	98.0394
104	-0.693147	0.0702426	94.062	97.9907
105	-0.693147	0.0828129	94.0689	97.9333
106	-0.693147	0.0979139	94.0785	97.8654
107	-0.693147	0.110516	94.0907	97.7888
108	-0.693147	0.123135	94.1059	97.7035
109	-0.693147	0.135774	94.1243	97.6094
110	-0.693147	0.148434	94.1463	97.5065
111	-0.693147	0.161119	94.1723	97.3948

112	-0.693147	0.173829		94.2025	97.2743
113	-0.693147	0.186567		94.2373	97.145
114	-0.693147	0.199336		94.2771	97.0068
115	-0.693147	0.212137		94.3221	96.8598
116	-0.693147	0.224974		94.3727	96.7039
117	-0.693147	0.237847		94.4292	96.539
118	-0.693147	0.250759		94.4921	96.3652
119	-0.693147	0.266311		94.563	96.1806
120	-0.693147	0.279319		94.6411	95.987
121	-0.693147	0.292375		94.7265	95.7843
122	-0.693147	0.305481		94.8199	95.5726
123	-0.693147	0.318639		94.9214	95.3517
124	-0.693147	0.331854		95.0315	95.1217
125	-0.693147	0.345126		95.1506	94.8825
126	-0.693147	0.358459		95.2791	94.634
127	-0.693147	0.371856		95.4174	94.3763
128	-0.693147	0.385321		95.5659	94.1092
129	-0.693147	0.398855		95.725	93.8327
130	-0.693147	0.412463		95.8951	93.5468
131	-0.693147	0.426148		96.0767	93.2514
132	-0.693147	0.442676		96.2726	92.9446
133	-0.693147	0.456542		96.4811	92.6281
134	-0.693147	0.470498		96.7024	92.302
135	-0.693147	0.484544		96.9372	91.9661
136	-0.693147	0.498687		97.1859	91.6205
137	-0.693147	0.51293	97.449	91.2649	
138	-0.693147	0.52728	97.727	90.8995	
139	-0.693147	0.541736		98.0205	90.524
140	-0.693147	0.556308		98.33	90.1384
141	-0.693147	0.570999		98.656	89.7426
142	-0.693147	0.585815		98.9992	89.3365
143	-0.693147	0.60076	99.3601	88.9201	
144	-0.693147	0.615839		99.7394	88.4932
145	-0.693147	0.634124		100.141	88.0537
146	-0.693147	0.649522		100.563	87.6035
147	-0.693147	0.665079		101.006	87.1425
148	-0.693147	0.680797		101.469	86.6706
149	-0.693147	0.696684		101.955	86.1877
150	-0.693147	0.712751		102.463	85.6936
151	-0.693147	0.729003		102.994	85.1883
152	-0.693147	0.745449		103.55	84.6716
153	-0.693147	0.7621	104.131	84.1434	
154	-0.693147	0.778966		104.737	83.6034
155	-0.693147	0.796056		105.371	83.0517
156	-0.693147	0.813379		106.033	82.4879
157	-0.693147	0.830953		106.723	81.9119
158	-0.693147	0.852385		107.45	81.3211
159	-0.693147	0.87055	108.207	80.7176	
160	-0.693147	0.889006		108.998	80.1014
161	-0.693147	0.907769		109.822	79.4722
162	-0.693147	0.926859		110.681	78.8298
163	-0.693147	0.946291		111.576	78.1738
164	-0.693147	0.966088		112.51	77.5042
165	-0.693147	0.986272		113.482	76.8206
166	-0.693147	1.00687	114.496	76.1227	
167	-0.693147	1.02789	115.553	75.4102	
168	-0.693147	1.04939	116.654	74.6828	
169	-0.693147	1.07138	117.802	73.9402	
170	-0.693147	1.0939	118.998	73.182	
171	-0.693147	1.12168	120.257	72.4045	
172	-0.693147	1.1455	121.569	71.6105	
173	-0.693147	1.17	122.938	70.7995	

174	-0.693147		1.19522	124.366	69.971
175	-0.693147		1.22123	125.858	69.1245
176	-0.693147		1.24809	127.415	68.2594
177	-0.693147		1.27588	129.043	67.3751
178	-0.693147		1.30469	130.745	66.4707
179	-0.693147		1.33462	132.527	65.5456
180	-0.693147		1.36581	134.392	64.5989
181	-0.693147		1.39838	136.348	63.6296
182	-0.693147		1.4325	138.4	62.6367
183	-0.693147		1.46838	140.556	61.6189
184	-0.693147		1.5141	142.848	60.5694
185	-0.693147		1.55477	145.266	59.4917
186	-0.693147		1.59819	147.82	58.3839
187	-0.693147		1.64485	150.525	57.2438
188	-0.693147		1.6954	153.4	56.0686
189	-0.693147		1.75069	156.465	54.8552
190	-0.693147		1.81191	159.748	53.5992
191	-0.693147		1.88079	163.285	52.2956
192	-0.693147		1.95996	167.126	50.937
193	-0.693147		2.05375	171.344	49.5135
194	-0.693147		2.17009	176.054	48.0093
195	-0.693147		2.32634	181.466	46.3968
196	2.30259	2.57583	188.1	52.3279	

Data Set Standard Deviation = 0.542426
Numerator = 2738.21
Denominator = 10792.1
W Statistic = 0.253724 = 2738.21 / 10792.1

5% Critical value of 0.976 exceeds 0.253724
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.253724
Evidence of non-normality at 99% level of significance

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Thallium

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

Total Percent Non-Detects = 98.9796%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 15
Maximum Background Concentration = 0
Confidence Level = 65.2%
False Positive Rate = 34.8%

Location	Date	Samples	Mean	Significant
MW-12BR	11/15/2009	1	-2.30259	FALSE
MW-7	6/11/2009	1	-2.99573	FALSE
MW-8	6/11/2009	1	-2.99573	FALSE
MW-9	6/11/2009	1	-2.99573	FALSE
MW-6	6/11/2009	1	-2.99573	FALSE
MW-12AR	6/11/2009	1	-2.99573	FALSE
MW-11R	6/11/2009	1	-2.99573	FALSE
MW-10	6/11/2009	1	-2.99573	FALSE

Concentrations (ug/L)

Parameter: trans-1,2-Dichloroethene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 196
Total Non-Detect: 174
Percent Non-Detects: 88.7755%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original	
MW-13	15	15 (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	

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original	
MW-10	26	16 (61.5385%)	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	
			11/15/2009	0.27 J	0.27 J	

MW-8	25	15 (60%)	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	
MW-7	25	25 (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	
MW-12BR		15	14 (93.3333%)	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	
MW-6	25	25 (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	
MW-12AR	15	15 (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	
MW-9	25	25 (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	
MW-11R25	24 (96%)	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	

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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.1	-2.575836	3.63492	-0.257583
2	0.1	-2.326341	2.0468	-0.490218
3	0.1	-2.170091	6.7561	-0.707227
4	0.1	-2.053752	0.974	-0.912602
5	0.1	-1.959962	4.8154	-1.1086
6	0.1	-1.880792	8.3528	-1.29668
7	0.1	-1.811913	1.6358	-1.47787
8	0.1	-1.750693	4.7007	-1.65294
9	0.1	-1.6954	37.5751	-1.82248
10	0.21	-1.644854	0.2806	-2.1679
11	0.22	-1.598194	2.8348	-2.5195
12	0.24	-1.554774	5.2522	-2.89264
13	0.24	-1.5141	47.5447	-3.25603
14	0.25	-1.468384	9.7008	-3.62312
15	0.27	-1.4325	51.7529	-4.0099
16	0.28	-1.398385	3.7083	-4.40145
17	0.28	-1.365815	5.5738	-4.78387
18	0.28	-1.334625	7.355	-5.15757
19	0.29	-1.304695	9.0572	-5.53592
20	0.34	-1.275886	0.6851	-5.96972
21	0.4	-1.248096	2.2428	-6.46896
22	0.4	-1.221236	3.7342	-6.95745
23	0.52	-1.195226	5.1627	-7.57896
24	0.55	-1.17	66.5316	-8.22246
25	0.59	-1.1455	67.8438	-8.89831
26	0.6	-1.121686	9.102	-9.57132
27	0.7	-1.0939	70.2986	-10.337
28	1	-1.071387	1.4464	-11.4084
29	1	-1.049397	2.5476	-12.4578
30	1	-1.027897	3.6042	-13.4857
31	1	-1.006877	4.618	-14.4926
32	1	-0.986272	75.5907	-15.4788
33	1	-0.966088	76.524	-16.4449
34	1	-0.946291	77.4195	-17.3912
35	1	-0.926859	78.2786	-18.3181
36	1	-0.907769	79.1026	-19.2258
37	1	-0.889006	79.893	-20.1149
38	1	-0.870558	0.6508	-20.9854
39	1	-0.852385	81.3774	-21.8378
40	1	-0.830953	82.0679	-22.6687
41	1	-0.813379	82.7294	-23.4821
42	1	-0.796056	83.3632	-24.2782
43	1	-0.778966	83.9699	-25.0571
44	1	-0.7621	84.5507	-25.8192
45	1	-0.745449	85.1064	-26.5647
46	1	-0.729003	85.6379	-27.2937
47	1	-0.712751	86.1459	-28.0064
48	1	-0.696684	86.6313	-28.7031
49	1	-0.680797	87.0947	-29.3839

50	1	-0.665079	87.5371	-30.049
51	1	-0.649522	87.959	-30.6985
52	1	-0.634124	88.3611	-31.3327
53	1	-0.615839	88.7403	-31.9485
54	1	-0.6007689.1012	-32.5493	
55	1	-0.585815	89.4444	-33.1351
56	1	-0.570999	89.7705	-33.7061
57	1	-0.556308	90.0799	-34.2624
58	1	-0.541736	90.3734	-34.8041
59	1	-0.5272890.6514	-35.3314	
60	1	-0.5129390.9145	-35.8443	
61	1	-0.498687	91.1632	-36.343
62	1	-0.484544	91.398	-36.8275
63	1	-0.470498	91.6194	-37.298
64	1	-0.456542	91.8278	-37.7546
65	1	-0.442676	92.0238	-38.1973
66	1	-0.426148	92.2054	-38.6234
67	1	-0.412463	92.3755	-39.0359
68	1	-0.398855	92.5346	-39.4347
69	1	-0.385321	92.683	-39.8201
70	1	-0.371856	92.8213	-40.1919
71	1	-0.358459	92.9498	-40.5504
72	1	-0.345126	93.0689	-40.8955
73	1	-0.331854	93.1791	-41.2273
74	1	-0.318639	93.2806	-41.546
75	1	-0.305481	93.3739	-41.8515
76	1	-0.292375	93.4594	-42.1438
77	1	-0.279319	93.5374	-42.4232
78	1	-0.266311	93.6083	-42.6895
79	1	-0.250759	93.6712	-42.9402
80	1	-0.237847	93.7278	-43.1781
81	1	-0.224974	93.7784	-43.4031
82	1	-0.212137	93.8234	-43.6152
83	1	-0.199336	93.8631	-43.8145
84	1	-0.186567	93.8979	-44.0011
85	1	-0.173829	93.9282	-44.1749
86	1	-0.161119	93.9541	-44.336
87	1	-0.148434	93.9762	-44.4845
88	1	-0.135774	93.9946	-44.6203
89	1	-0.123135	94.0097	-44.7434
90	1	-0.110516	94.022	-44.8539
91	1	-0.0979139	94.0315	-44.9518
92	1	-0.0828129	94.0384	-45.0346
93	1	-0.0702426	94.0433	-45.1049
94	1	-0.0576847	94.0467	-45.1626
95	1	-0.0451348	94.0487	-45.2077
96	1	-0.0325917	94.0498	-45.2403
97	1	-0.0200544	94.0502	-45.2603
98	1	-0.00751925	94.0502	-45.2679
99	1	0.00751925	94.0503	-45.2603
100	1	0.0200544	94.0507	-45.2403
101	1	0.0325917	94.0517	-45.2077
102	1	0.0451348	94.0538	-45.1626
103	1	0.0576847	94.0571	-45.1049
104	1	0.0702426	94.062	-45.0346
105	1	0.0828129	94.0689	-44.9518
106	1	0.0979139	94.0785	-44.8539
107	1	0.110516	94.0907	-44.7434
108	1	0.123135	94.1059	-44.6203
109	1	0.135774	94.1243	-44.4845
110	1	0.148434	94.1463	-44.336
111	1	0.161119	94.1723	-44.1749

112	1	0.173829		94.2025	-44.0011
113	1	0.186567		94.2373	-43.8145
114	1	0.199336		94.2771	-43.6152
115	1	0.212137		94.3221	-43.4031
116	1	0.224974		94.3727	-43.1781
117	1	0.237847		94.4292	-42.9402
118	1	0.250759		94.4921	-42.6895
119	1	0.266311		94.563	-42.4232
120	1	0.279319		94.6411	-42.1438
121	1	0.292375		94.7265	-41.8515
122	1	0.305481		94.8199	-41.546
123	1	0.318639		94.9214	-41.2273
124	1	0.331854		95.0315	-40.8955
125	1	0.345126		95.1506	-40.5504
126	1	0.358459		95.2791	-40.1919
127	1	0.371856		95.4174	-39.8201
128	1	0.385321		95.5659	-39.4347
129	1	0.398855		95.725	-39.0359
130	1	0.412463		95.8951	-38.6234
131	1	0.426148		96.0767	-38.1973
132	1	0.442676		96.2726	-37.7546
133	1	0.456542		96.4811	-37.298
134	1	0.470498		96.7024	-36.8275
135	1	0.484544		96.9372	-36.343
136	1	0.498687		97.1859	-35.8443
137	1	0.51293	97.449	-35.3314	
138	1	0.52728	97.727	-34.8041	
139	1	0.541736		98.0205	-34.2624
140	1	0.556308		98.33	-33.7061
141	1	0.570999		98.656	-33.1351
142	1	0.585815		98.9992	-32.5493
143	1	0.60076	99.3601	-31.9485	
144	1	0.615839		99.7394	-31.3327
145	1	0.634124		100.141	-30.6985
146	1	0.649522		100.563	-30.049
147	1	0.665079		101.006	-29.3839
148	1	0.680797		101.469	-28.7031
149	1	0.696684		101.955	-28.0064
150	1	0.712751		102.463	-27.2937
151	1	0.729003		102.994	-26.5647
152	1	0.745449		103.55	-25.8192
153	1	0.7621	104.131	-25.0571	
154	1	0.778966		104.737	-24.2782
155	1	0.796056		105.371	-23.4821
156	1	0.813379		106.033	-22.6687
157	1	0.830953		106.723	-21.8378
158	1	0.852385		107.45	-20.9854
159	1	0.87055	108.207	-20.1149	
160	1	0.889006		108.998	-19.2258
161	1	0.907769		109.822	-18.3181
162	1	0.926859		110.681	-17.3912
163	1	0.946291		111.576	-16.4449
164	1	0.966088		112.51	-15.4788
165	1	0.986272		113.482	-14.4926
166	1	1.00687	114.496	-13.4857	
167	1	1.02789	115.553	-12.4578	
168	1	1.04939	116.654	-11.4084	
169	1	1.07138	117.802	-10.337	
170	1	1.0939	118.998	-9.24315	
171	1	1.12168	120.257	-8.12147	
172	1	1.1455	121.569	-6.97597	
173	1	1.17	122.938	-5.80597	

174	1	1.19522	124.366	-4.61074
175	1	1.22123	125.858	-3.38952
176	1	1.24809	127.415	-2.14143
177	1	1.27588	129.043	-0.865554
178	1	1.30469	130.745	0.439132
179	1	1.33462	132.527	1.77376
180	1	1.36581	134.392	3.13956
181	1	1.39838	136.348	4.53794
182	1	1.4325	138.4	5.97044
183	1	1.46838	140.556	7.43883
184	1	1.5141	142.848	8.95293
185	1	1.55477	145.266	10.5077
186	1	1.59819	147.82	12.1059
187	1	1.64485	150.525	13.7507
188	1	1.6954	153.4	15.4461
189	1	1.75069	156.465	17.1968
190	1	1.81191	159.748	19.0087
191	1	1.88079	163.285	20.8895
192	1	1.95996	167.126	22.8495
193	3.65	2.05375	171.344	30.3457
194	4	2.17009	176.054	39.026
195	4.8	2.32634	181.466	50.1925
196	5	2.57583	188.1	63.0717

Data Set Standard Deviation = 0.559846
Numerator = 3978.03
Denominator = 11496.4
W Statistic = 0.346024 = 3978.03 / 11496.4

5% Critical value of 0.976 exceeds 0.346024
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.346024
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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.30259	-2.57583	6.63492	5.93108
2	-2.30259	-2.32634	12.0468	11.2877
3	-2.30259	-2.17009	16.7561	16.2845
4	-2.30259	-2.05375	20.974	21.0134
5	-2.30259	-1.95996	24.8154	25.5264
6	-2.30259	-1.88079	28.3528	29.8571
7	-2.30259	-1.81191	31.6358	34.0292
8	-2.30259	-1.75069	34.7007	38.0603
9	-2.30259	-1.6954	37.5751	41.9641
10	-1.56065	-1.64485	40.2806	44.5311
11	-1.51413	-1.59819	42.8348	46.951
12	-1.42712	-1.55477	45.2522	49.1698
13	-1.42712	-1.5141	47.5447	51.3306
14	-1.38629	-1.46838	49.7008	53.3662
15	-1.30933	-1.4325	51.7529	55.2419
16	-1.27297	-1.39838	53.7083	57.0219
17	-1.27297	-1.36581	55.5738	58.7606
18	-1.27297	-1.33462	57.355	60.4595
19	-1.23787	-1.30469	59.0572	62.0745
20	-1.07881	-1.27588	60.6851	63.451
21	-0.916291	-1.24809	62.2428	64.5946
22	-0.916291	-1.22123	63.7342	65.7136
23	-0.653926	-1.19522	65.1627	66.4952
24	-0.597837	-1.17	66.5316	67.1946
25	-0.527633	-1.1455	67.8438	67.799
26	-0.510826	-1.12168	69.102	68.372
27	-0.356675	-1.0939	70.2986	68.7622
28	0	-1.07138	71.4464	68.7622
29	0	-1.04939	72.5476	68.7622
30	0	-1.02789	73.6042	68.7622
31	0	-1.00687	74.618	68.7622
32	0	-0.986272	75.5907	68.7622
33	0	-0.966088	76.524	68.7622
34	0	-0.946291	77.4195	68.7622
35	0	-0.926859	78.2786	68.7622
36	0	-0.907769	79.1026	68.7622
37	0	-0.889006	79.893	68.7622
38	0	-0.87055	80.6508	68.7622
39	0	-0.852385	81.3774	68.7622
40	0	-0.830953	82.0679	68.7622
41	0	-0.813379	82.7294	68.7622
42	0	-0.796056	83.3632	68.7622
43	0	-0.778966	83.9699	68.7622
44	0	-0.7621	84.5507	68.7622
45	0	-0.745449	85.1064	68.7622
46	0	-0.729003	85.6379	68.7622
47	0	-0.712751	86.1459	68.7622
48	0	-0.696684	86.6313	68.7622
49	0	-0.680797	87.0947	68.7622

50	0	-0.665079	87.5371	68.7622
51	0	-0.649522	87.959	68.7622
52	0	-0.634124	88.3611	68.7622
53	0	-0.615839	88.7403	68.7622
54	0	-0.6007689.1012	68.7622	
55	0	-0.585815	89.4444	68.7622
56	0	-0.570999	89.7705	68.7622
57	0	-0.556308	90.0799	68.7622
58	0	-0.541736	90.3734	68.7622
59	0	-0.5272890.6514	68.7622	
60	0	-0.5129390.9145	68.7622	
61	0	-0.498687	91.1632	68.7622
62	0	-0.484544	91.398	68.7622
63	0	-0.470498	91.6194	68.7622
64	0	-0.456542	91.8278	68.7622
65	0	-0.442676	92.0238	68.7622
66	0	-0.426148	92.2054	68.7622
67	0	-0.412463	92.3755	68.7622
68	0	-0.398855	92.5346	68.7622
69	0	-0.385321	92.683	68.7622
70	0	-0.371856	92.8213	68.7622
71	0	-0.358459	92.9498	68.7622
72	0	-0.345126	93.0689	68.7622
73	0	-0.331854	93.1791	68.7622
74	0	-0.318639	93.2806	68.7622
75	0	-0.305481	93.3739	68.7622
76	0	-0.292375	93.4594	68.7622
77	0	-0.279319	93.5374	68.7622
78	0	-0.266311	93.6083	68.7622
79	0	-0.250759	93.6712	68.7622
80	0	-0.237847	93.7278	68.7622
81	0	-0.224974	93.7784	68.7622
82	0	-0.212137	93.8234	68.7622
83	0	-0.199336	93.8631	68.7622
84	0	-0.186567	93.8979	68.7622
85	0	-0.173829	93.9282	68.7622
86	0	-0.161119	93.9541	68.7622
87	0	-0.148434	93.9762	68.7622
88	0	-0.135774	93.9946	68.7622
89	0	-0.123135	94.0097	68.7622
90	0	-0.110516	94.022	68.7622
91	0	-0.0979139	94.0315	68.7622
92	0	-0.0828129	94.0384	68.7622
93	0	-0.0702426	94.0433	68.7622
94	0	-0.0576847	94.0467	68.7622
95	0	-0.0451348	94.0487	68.7622
96	0	-0.0325917	94.0498	68.7622
97	0	-0.0200544	94.0502	68.7622
98	0	-0.00751925	94.0502	68.7622
99	0	0.00751925	94.0503	68.7622
100	0	0.0200544	94.0507	68.7622
101	0	0.0325917	94.0517	68.7622
102	0	0.0451348	94.0538	68.7622
103	0	0.0576847	94.0571	68.7622
104	0	0.0702426	94.062	68.7622
105	0	0.0828129	94.0689	68.7622
106	0	0.0979139	94.0785	68.7622
107	0	0.110516	94.0907	68.7622
108	0	0.123135	94.1059	68.7622
109	0	0.135774	94.1243	68.7622
110	0	0.148434	94.1463	68.7622
111	0	0.161119	94.1723	68.7622

112	0	0.173829		94.2025	68.7622
113	0	0.186567		94.2373	68.7622
114	0	0.199336		94.2771	68.7622
115	0	0.212137		94.3221	68.7622
116	0	0.224974		94.3727	68.7622
117	0	0.237847		94.4292	68.7622
118	0	0.250759		94.4921	68.7622
119	0	0.266311		94.563	68.7622
120	0	0.279319		94.6411	68.7622
121	0	0.292375		94.7265	68.7622
122	0	0.305481		94.8199	68.7622
123	0	0.318639		94.9214	68.7622
124	0	0.331854		95.0315	68.7622
125	0	0.345126		95.1506	68.7622
126	0	0.358459		95.2791	68.7622
127	0	0.371856		95.4174	68.7622
128	0	0.385321		95.5659	68.7622
129	0	0.398855		95.725	68.7622
130	0	0.412463		95.8951	68.7622
131	0	0.426148		96.0767	68.7622
132	0	0.442676		96.2726	68.7622
133	0	0.456542		96.4811	68.7622
134	0	0.470498		96.7024	68.7622
135	0	0.484544		96.9372	68.7622
136	0	0.498687		97.1859	68.7622
137	0	0.51293	97.449	68.7622	
138	0	0.52728	97.727	68.7622	
139	0	0.541736		98.0205	68.7622
140	0	0.556308		98.33	68.7622
141	0	0.570999		98.656	68.7622
142	0	0.585815		98.9992	68.7622
143	0	0.60076	99.3601	68.7622	
144	0	0.615839		99.7394	68.7622
145	0	0.634124		100.141	68.7622
146	0	0.649522		100.563	68.7622
147	0	0.665079		101.006	68.7622
148	0	0.680797		101.469	68.7622
149	0	0.696684		101.955	68.7622
150	0	0.712751		102.463	68.7622
151	0	0.729003		102.994	68.7622
152	0	0.745449		103.55	68.7622
153	0	0.7621	104.131	68.7622	
154	0	0.778966		104.737	68.7622
155	0	0.796056		105.371	68.7622
156	0	0.813379		106.033	68.7622
157	0	0.830953		106.723	68.7622
158	0	0.852385		107.45	68.7622
159	0	0.87055	108.207	68.7622	
160	0	0.889006		108.998	68.7622
161	0	0.907769		109.822	68.7622
162	0	0.926859		110.681	68.7622
163	0	0.946291		111.576	68.7622
164	0	0.966088		112.51	68.7622
165	0	0.986272		113.482	68.7622
166	0	1.00687	114.496	68.7622	
167	0	1.02789	115.553	68.7622	
168	0	1.04939	116.654	68.7622	
169	0	1.07138	117.802	68.7622	
170	0	1.0939	118.998	68.7622	
171	0	1.12168	120.257	68.7622	
172	0	1.1455	121.569	68.7622	
173	0	1.17	122.938	68.7622	

174	0	1.19522	124.366	68.7622
175	0	1.22123	125.858	68.7622
176	0	1.24809	127.415	68.7622
177	0	1.27588	129.043	68.7622
178	0	1.30469	130.745	68.7622
179	0	1.33462	132.527	68.7622
180	0	1.36581	134.392	68.7622
181	0	1.39838	136.348	68.7622
182	0	1.4325	138.4	68.7622
183	0	1.46838	140.556	68.7622
184	0	1.5141	142.848	68.7622
185	0	1.55477	145.266	68.7622
186	0	1.59819	147.82	68.7622
187	0	1.64485	150.525	68.7622
188	0	1.6954	153.4	68.7622
189	0	1.75069	156.465	68.7622
190	0	1.81191	159.748	68.7622
191	0	1.88079	163.285	68.7622
192	0	1.95996	167.126	68.7622
193	1.29473	2.05375	171.344	71.4212
194	1.38629	2.17009	176.054	74.4296
195	1.56862	2.32634	181.466	78.0787
196	1.60944	2.57583	188.1	82.2244

Data Set Standard Deviation = 0.614183
Numerator = 6760.85
Denominator = 13836.3
W Statistic = 0.488632 = 6760.85 / 13836.3

5% Critical value of 0.976 exceeds 0.488632
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.488632
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	87.5	
	9/23/1999	ND<0	87.5	
	3/15/2000	ND<0	87.5	
	9/24/2003	ND<0	87.5	
	3/11/2004	ND<0	87.5	
	10/12/2004	ND<0	87.5	
	4/1/2005	ND<0	87.5	
	10/25/2005	ND<0	87.5	
	4/29/2006	ND<0	87.5	
	11/18/2006	ND<0	87.5	
	5/23/2007	ND<0	87.5	
	11/28/2007	ND<0	87.5	
	6/5/2008	ND<0	87.5	
	11/20/2008	ND<0	87.5	
	6/11/2009	ND<-2.30259		87.5

Rank Sum = 1312.5
Rank Mean = 87.5

Background Rank Sum = 1312.5
Background Rank Mean = 87.5

Compliance Wells

Well ID	Date	Result		Rank
MW-10	7/20/1995	ND<0	87.5	
	8/24/1995	-1.07881	J	185
	9/28/1995	-0.356675	J	192
	10/26/1995	-0.510826	J	191
	11/19/1996	ND<0	87.5	
	12/19/1996	ND<0	87.5	
	3/24/1997	ND<0	87.5	
	9/24/1997	ND<0	87.5	
	4/7/1998	ND<0	87.5	
	9/23/1998	ND<0	87.5	
	3/16/1999	ND<0	87.5	
	9/23/1999	ND<0	87.5	
	3/15/2000	ND<0	87.5	
	9/24/2003	ND<0	87.5	
	3/11/2004	ND<0	87.5	
	10/12/2004	ND<0	87.5	
	4/1/2005	-1.42712	J	177
	10/25/2005	-1.42712	J	178
	4/29/2006	-1.23787	J	184
	11/18/2006	-0.527633	J	190
	5/23/2007	ND<0	87.5	
	11/28/2007	-1.27297	J	181
	6/5/2008	ND<0	87.5	

	11/20/2008	-1.56065	J	175
	6/11/2009	ND<-2.30259		87.5
	11/15/2009	-1.30933	J	180

Rank Sum = 3233
Rank Mean = 124.346

MW-8	7/20/1995	ND<0	87.5	
	8/24/1995	1.56862		195
	9/28/1995	1.38629		194
	10/26/1995	-0.916291	J	186
	11/19/1996	ND<0	87.5	
	12/19/1996	ND<0	87.5	
	3/24/1997	1.60944		196
	9/24/1997	ND<0	87.5	
	4/7/1998	ND<0	87.5	
	9/23/1998	ND<0	87.5	
	3/16/1999	ND<0	87.5	
	9/23/1999	ND<0	87.5	
	3/15/2000	ND<0	87.5	
	9/24/2003	ND<0	87.5	
	3/11/2004	ND<0	87.5	
	10/12/2004	ND<0	87.5	
	4/1/2005	-1.27297	J	182
	10/25/2005	-0.653926	J	188
	4/29/2006	-1.27297	J	183
	11/18/2006	1.29473		193
	5/23/2007	ND<0	87.5	
	11/28/2007	-0.597837	J	189
	6/5/2008	ND<0	87.5	
	11/20/2008	-1.38629	J	179
	6/11/2009	ND<-2.30259		87.5

Rank Sum = 3197.5
Rank Mean = 127.9

MW-7	7/20/1995	ND<0	87.5	
	8/24/1995	ND<0	87.5	
	9/28/1995	ND<0	87.5	
	10/26/1995	ND<0	87.5	
	11/19/1996	ND<0	87.5	
	12/19/1996	ND<0	87.5	
	3/24/1997	ND<0	87.5	
	9/24/1997	ND<0	87.5	
	4/7/1998	ND<0	87.5	
	9/23/1998	ND<0	87.5	
	3/16/1999	ND<0	87.5	
	9/23/1999	ND<0	87.5	
	3/15/2000	ND<0	87.5	
	9/24/2003	ND<0	87.5	
	3/11/2004	ND<0	87.5	
	10/12/2004	ND<0	87.5	
	4/1/2005	ND<0	87.5	
	10/25/2005	ND<0	87.5	
	4/29/2006	ND<0	87.5	
	11/18/2006	ND<0	87.5	
	5/23/2007	ND<0	87.5	
	11/28/2007	ND<0	87.5	
	6/5/2008	ND<0	87.5	
	11/20/2008	ND<0	87.5	
	6/11/2009	ND<-2.30259		87.5

Rank Sum = 2187.5
Rank Mean = 87.5

MW-12BR	3/16/1999	ND<0	87.5	
	9/23/1999	ND<0	87.5	
	3/15/2000	ND<0	87.5	
	9/24/2003	ND<0	87.5	
	3/11/2004	ND<0	87.5	
	10/12/2004	ND<0	87.5	
	4/1/2005	-1.51413 J	176	
	10/25/2005	ND<0	87.5	
	4/29/2006	ND<0	87.5	
	11/18/2006	ND<0	87.5	
	5/23/2007	ND<0	87.5	
	11/28/2007	ND<0	87.5	
	6/5/2008	ND<0	87.5	
	11/20/2008	ND<0	87.5	
	6/11/2009	ND<-2.30259	87.5	

Rank Sum = 1401
Rank Mean = 93.4

MW-6	7/20/1995	ND<0	87.5
	8/24/1995	ND<0	87.5
	9/28/1995	ND<0	87.5
	10/26/1995	ND<0	87.5
	11/19/1996	ND<0	87.5
	12/19/1996	ND<0	87.5
	3/24/1997	ND<0	87.5
	9/24/1997	ND<0	87.5
	4/7/1998	ND<0	87.5
	9/23/1998	ND<0	87.5
	3/16/1999	ND<0	87.5
	9/23/1999	ND<0	87.5
	3/15/2000	ND<0	87.5
	9/24/2003	ND<0	87.5
	3/11/2004	ND<0	87.5
	10/12/2004	ND<0	87.5
	4/1/2005	ND<0	87.5
	10/25/2005	ND<0	87.5
	4/29/2006	ND<0	87.5
	11/18/2006	ND<0	87.5
	5/23/2007	ND<0	87.5
	11/28/2007	ND<0	87.5
	6/5/2008	ND<0	87.5
	11/20/2008	ND<0	87.5
	6/11/2009	ND<-2.30259	87.5

Rank Sum = 2187.5
Rank Mean = 87.5

MW-12AR	3/16/1999	ND<0	87.5	
	9/23/1999	ND<0	87.5	
	3/15/2000	ND<0	87.5	
	9/24/2003	ND<0	87.5	
	3/11/2004	ND<0	87.5	
	10/12/2004	ND<0	87.5	
	4/1/2005	ND<0	87.5	
	10/25/2005	ND<0	87.5	
	4/29/2006	ND<0	87.5	
	11/18/2006	ND<0	87.5	
	5/23/2007	ND<0	87.5	
	11/28/2007	ND<0	87.5	
	6/5/2008	ND<0	87.5	
	11/20/2008	ND<0	87.5	
	6/11/2009	ND<-2.30259	87.5	

Rank Sum = 1312.5

Rank Mean = 87.5

MW-9	7/20/1995	ND<0	87.5	
	8/24/1995	ND<0	87.5	
	9/28/1995	ND<0	87.5	
	10/26/1995	ND<0	87.5	
	11/19/1996	ND<0	87.5	
	12/19/1996	ND<0	87.5	
	3/24/1997	ND<0	87.5	
	9/24/1997	ND<0	87.5	
	4/7/1998	ND<0	87.5	
	9/23/1998	ND<0	87.5	
	3/16/1999	ND<0	87.5	
	9/23/1999	ND<0	87.5	
	3/15/2000	ND<0	87.5	
	9/24/2003	ND<0	87.5	
	3/11/2004	ND<0	87.5	
	10/12/2004	ND<0	87.5	
	4/1/2005	ND<0	87.5	
	10/25/2005	ND<0	87.5	
	4/29/2006	ND<0	87.5	
	11/18/2006	ND<0	87.5	
	5/23/2007	ND<0	87.5	
	11/28/2007	ND<0	87.5	
	6/5/2008	ND<0	87.5	
	11/20/2008	ND<0	87.5	
	6/11/2009	ND<-2.30259	87.5	

Rank Sum = 2187.5
Rank Mean = 87.5

MW-11R	7/20/1995	ND<0	87.5	
	8/24/1995	ND<0	87.5	
	9/28/1995	ND<0	87.5	
	10/26/1995	-0.916291 J	187	
	11/19/1996	ND<0	87.5	
	12/19/1996	ND<0	87.5	
	3/24/1997	ND<0	87.5	
	9/24/1997	ND<0	87.5	
	4/7/1998	ND<0	87.5	
	9/23/1998	ND<0	87.5	
	3/16/1999	ND<0	87.5	
	9/23/1999	ND<0	87.5	
	3/15/2000	ND<0	87.5	
	9/24/2003	ND<0	87.5	
	3/11/2004	ND<0	87.5	
	10/12/2004	ND<0	87.5	
	4/1/2005	ND<0	87.5	
	10/25/2005	ND<0	87.5	
	4/29/2006	ND<0	87.5	
	11/18/2006	ND<0	87.5	
	5/23/2007	ND<0	87.5	
	11/28/2007	ND<0	87.5	
	6/5/2008	ND<0	87.5	
	11/20/2008	ND<0	87.5	
	6/11/2009	ND<-2.30259	87.5	

Rank Sum = 2287
Rank Mean = 91.48

Calculation Results:

Kruskal-Wallis H Statistic = 16.5663

Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 55.1553
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
16.5663 > 15.5073 indicating a significant group difference at 5% significance level
55.1553 > 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 87.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	124.346	36.8462	42.7862	
MW-8	127.9	40.4	43.0981	
MW-7	87.5	0	43.0981	
MW-12BR		93.4	5.9	48.1852
MW-6	87.5	0	43.0981	
MW-12AR		87.5	0	48.1852
MW-9	87.5	0	43.0981	
MW-11R	91.48	3.98	43.0981	

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 87.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-10	124.346	36.8462	46.2033	
MW-8	127.9	40.4	46.5401	
MW-7	87.5	0	46.5401	
MW-12BR		93.4	5.9	52.0334
MW-6	87.5	0	46.5401	
MW-12AR		87.5	0	52.0334
MW-9	87.5	0	46.5401	
MW-11R	91.48	3.98	46.5401	

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: trans-1,2-Dichloroethene

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

Total Percent Non-Detects = 88.7755%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 15
Maximum Background Concentration = 0
Confidence Level = 65.2%
False Positive Rate = 34.8%

Location	Date	Samples	Mean	Significant
MW-10	11/15/2009	1	-1.30933	FALSE
MW-8	6/11/2009	1	-2.30259	FALSE
MW-7	6/11/2009	1	-2.30259	FALSE
MW-12BR	6/11/2009	1	-2.30259	FALSE
MW-6	6/11/2009	1	-2.30259	FALSE
MW-12AR	6/11/2009	1	-2.30259	FALSE
MW-9	6/11/2009	1	-2.30259	FALSE
MW-11R	6/11/2009	1	-2.30259	FALSE

Concentrations (ppb)

Parameter: Trichloroethene

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 199
Total Non-Detect: 121
Percent Non-Detects: 60.804%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-8	25	4 (16%)	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

MW-7	25	21 (84%)	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	
MW-12AR	16	9 (56.25%)	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	
			11/15/2009	0.13 J	0.13 J	
MW-9	26	13 (50%)	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	
			11/15/2009	0.73 J	0.73 J	
MW-10	26	13 (50%)	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	
			11/15/2009	0.94 J	0.94 J	
MW-11R	26	9 (34.6154%)	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	
			11/15/2009	0.22 J	0.22 J	

MW-12BR	15	12 (80%)	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	
MW-6	25	25 (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	

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 = 199

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.065	-2.575836	3.63492	-0.167429
2	0.065	-2.326341	2.0468	-0.318641
3	0.065	-2.170091	6.7561	-0.459697
4	0.065	-2.053752	0.974	-0.593191
5	0.065	-1.959962	4.8154	-0.720588
6	0.13	-1.880792	8.3528	-0.965091
7	0.22	-1.811913	1.6358	-1.36371
8	0.23	-1.750693	4.7007	-1.76637
9	0.29	-1.6954	37.5751	-2.25804
10	0.33	-1.644854	0.2806	-2.80084
11	0.35	-1.598194	2.8348	-3.3602
12	0.43	-1.554774	5.2522	-4.02876
13	0.45	-1.5141	47.5447	-4.7101
14	0.45	-1.475794	9.7226	-5.37421
15	0.5	-1.439535	1.7949	-6.09397
16	0.53	-1.405075	3.7691	-6.83866
17	0.55	-1.3722	55.6521	-7.59338
18	0.58	-1.340755	7.4497	-8.37101
19	0.59	-1.310585	9.1673	-9.14426
20	0.59	-1.281556	0.8097	-9.90037
21	0.6	-1.253576	2.3811	-10.6525
22	0.6	-1.226536	3.8855	-11.3884
23	0.64	-1.200366	5.3263	-12.1567
24	0.67	-1.174996	6.7069	-12.9439
25	0.7	-1.150356	8.0302	-13.7491
26	0.73	-1.126396	9.299	-14.5714
27	0.74	-1.103067	0.5157	-15.3877
28	0.8	-1.080327	1.6828	-16.2519
29	0.8	-1.058127	2.8025	-17.0984
30	0.88	-1.036437	3.8766	-18.0105
31	0.89	-1.015227	4.9073	-18.914
32	0.9	-0.994457	75.8963	-19.809
33	0.91	-0.974114	76.8452	-20.6955
34	0.94	-0.954165	77.7556	-21.5924
35	0.96	-0.934597	8.6291	-22.4896
36	1	-0.919183	79.474	-23.4088
37	1	-0.896473	80.2776	-24.3053
38	1	-0.877897	81.0483	-25.1832
39	1	-0.859618	81.7873	-26.0428
40	1	-0.841621	82.4956	-26.8844
41	1	-0.823893	83.1744	-27.7083
42	1	-0.806422	83.8247	-28.5147
43	1	-0.789191	84.4475	-29.3039
44	1	-0.772193	85.0438	-30.0761
45	1	-0.755415	85.6145	-30.8315
46	1	-0.738846	86.1604	-31.5704
47	1	-0.722479	86.6823	-32.2928
48	1	-0.706302	87.1812	-32.9991
49	1	-0.690309	87.6577	-33.6895

50	1	-0.674498	8.1127	-34.3639
51	1	-0.658838	88.5467	-35.0228
52	1	-0.643345	88.9606	-35.6661
53	1	-0.628006	89.355	-36.2941
54	1	-0.612813	89.7305	-36.9069
55	1	-0.597761	90.0879	-37.5047
56	1	-0.582841	90.4276	-38.0875
57	1	-0.570999	90.7536	-38.6585
58	1	-0.553384	91.0598	-39.2119
59	1	-0.541736	91.3533	-39.7537
60	1	-0.524401	91.6283	-40.2781
61	1	-0.512939	1.8914	-40.791
62	1	-0.495859	2.1373	-41.2868
63	1	-0.481728	92.3693	-41.7686
64	1	-0.467699	92.5881	-42.2363
65	1	-0.453763	92.794	-42.69
66	1	-0.439913	92.9875	-43.13
67	1	-0.426148	93.1691	-43.5561
68	1	-0.412463	93.3392	-43.9686
69	1	-0.398855	93.4983	-44.3674
70	1	-0.385321	93.6468	-44.7527
71	1	-0.371856	93.7851	-45.1246
72	1	-0.358459	93.9136	-45.4831
73	1	-0.345126	94.0327	-45.8282
74	1	-0.331854	94.1428	-46.16
75	1	-0.318639	94.2443	-46.4787
76	1	-0.305481	94.3377	-46.7842
77	1	-0.292375	94.4231	-47.0765
78	1	-0.279319	94.5012	-47.3558
79	1	-0.266311	94.5721	-47.6222
80	1	-0.253347	94.6363	-47.8755
81	1	-0.240426	94.6941	-48.1159
82	1	-0.230118	94.747	-48.3461
83	1	-0.214702	94.7931	-48.5608
84	1	-0.204452	94.8349	-48.7652
85	1	-0.189118	94.8707	-48.9543
86	1	-0.178929	4.9027	-49.1332
87	1	-0.163659	94.9295	-49.2969
88	1	-0.150969	94.9523	-49.4479
89	1	-0.138305	94.9714	-49.5862
90	1	-0.125661	94.9872	-49.7118
91	1	-0.113039	95	-49.8249
92	1	-0.100433	95.0101	-49.9253
93	1	-0.0878447	95.0178	-50.0132
94	1	-0.0752698	95.0234	-50.0884
95	1	-0.0627062	95.0274	-50.1511
96	1	-0.0501541	95.0299	-50.2013
97	1	-0.0376076	95.0313	-50.2389
98	1	-0.0250691	95.0319	-50.264
99	1	-0.0125328	95.0321	-50.2765
100	1	0	95.0321	-50.2765
101	1	0.0125328	95.0322	-50.264
102	1	0.0250691	95.0329	-50.2389
103	1	0.0376076	95.0343	-50.2013
104	1	0.0501541	95.0368	-50.1511
105	1	0.0627062	95.0407	-50.0884
106	1	0.0752698	95.0464	-50.0132
107	1	0.0878447	95.0541	-49.9253
108	1	0.100433	95.0642	-49.8249
109	1	0.113039	95.077	-49.7118
110	1	0.125661	95.0928	-49.5862
111	1	0.138305	95.1119	-49.4479

112	1	0.150969	95.1347	-49.2969
113	1	0.163659	95.1615	-49.1332
114	1	0.176374	95.1926	-48.9569
115	1	0.189118	95.2283	-48.7678
116	1	0.201894	95.2691	-48.5659
117	1	0.214702	95.3152	-48.3512
118	1	0.227545	95.367	-48.1236
119	1	0.240426	95.4248	-47.8832
120	1	0.253347	95.489	-47.6298
121	1	0.266311	95.5599	-47.3635
122	1	0.279319	95.6379	-47.0842
123	1	0.292375	95.7234	-46.7918
124	1	0.305481	95.8167	-46.4864
125	1	0.318639	95.9182	-46.1677
126	1	0.331854	96.0284	-45.8359
127	1	0.345126	96.1475	-45.4907
128	1	0.358459	96.276	-45.1323
129	1	0.371856	96.4143	-44.7604
130	1	0.385321	96.5627	-44.3751
131	1	0.398855	96.7218	-43.9762
132	1	0.412463	96.8919	-43.5638
133	1	0.426148	97.0735	-43.1376
134	1	0.439913	97.2671	-42.6977
135	1	0.453763	97.473	-42.244
136	1	0.467699	97.6917	-41.7763
137	1	0.481728	97.9238	-41.2945
138	1	0.49585	98.1696	-40.7987
139	1	0.510074	98.4298	-40.2886
140	1	0.524401	98.7048	-39.7642
141	1	0.538836	98.9952	-39.2254
142	1	0.553384	99.3014	-38.672
143	1	0.568052	99.6241	-38.1039
144	1	0.582841	99.9638	-37.5211
145	1	0.597761	100.321	-36.9233
146	1	0.612813	100.697	-36.3105
147	1	0.628006	101.091	-35.6825
148	1	0.643345	101.505	-35.0392
149	1	0.658838	101.939	-34.3803
150	1	0.67449	102.394	-33.7058
151	1	0.690309	102.87	-33.0155
152	1	0.706302	103.369	-32.3092
153	1	0.722479	103.891	-31.5867
154	1	0.738846	104.437	-30.8479
155	1.01	0.755415	105.008	-30.0849
156	1.1	0.772193	105.604	-29.2355
157	1.15	0.789191	106.227	-28.3279
158	1.27	0.806422	106.877	-27.3038
159	1.28	0.823893	107.556	-26.2492
160	1.3	0.841621	108.264	-25.1551
161	1.3	0.859618	109.003	-24.0376
162	1.5	0.877897	109.774	-22.7208
163	1.6	0.896473	110.578	-21.2864
164	2	0.915365	111.416	-19.4557
165	2.14	0.93459	112.289	-17.4556
166	2.2	0.954165	113.199	-15.3565
167	2.22	0.974114	114.148	-13.1939
168	2.29	0.994457	115.137	-10.9166
169	2.3	1.01522	116.168	-8.58163
170	3	1.03643	117.242	-5.47233
171	3	1.05812	118.362	-2.29797
172	3.01	1.08032	119.529	0.953798
173	3.2	1.10306	120.746	4.4836

174	3.5	1.12639	122.014	8.42597
175	3.54	1.15035	123.338	12.4982
176	4.18	1.17499	124.718	17.4097
177	4.5	1.20036	126.159	22.8113
178	5.1	1.22653	127.664	29.0666
179	5.2	1.25357	129.235	35.5851
180	6	1.28155	130.877	43.2744
181	6.1	1.31058	132.595	51.2689
182	6.66	1.34075	134.393	60.1984
183	7	1.3722	136.276	69.8038
184	8	1.40507	138.25	81.0444
185	8.8	1.43953	140.322	93.7123
186	8.9	1.47579	142.5	106.847
187	9	1.5141	144.792	120.474
188	15	1.55477	147.21	143.795
189	19	1.59819	149.764	174.161
190	77.4	1.64485	152.47	301.473
191	120	1.6954	155.344	504.92
192	120	1.75069	158.409	715.003
193	150	1.81191	161.692	986.79
194	150	1.88079	165.229	1268.91
195	160	1.95996	169.071	1582.5
196	190	2.05375	173.289	1972.71
197	260	2.17009	177.998	2536.94
198	280	2.32634	183.41	3188.31
199	300	2.57583	190.045	3961.06

Data Set Standard Deviation = 42.4424
Numerator = 1.569e+007
Denominator = 6.7783e+007
W Statistic = 0.231474 = 1.569e+007 / 6.7783e+007

5% Critical value of 0.976 exceeds 0.231474
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.231474
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 = 199

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.73337	-2.57583	6.63492	7.0407
2	-2.73337	-2.32634	12.0468	13.3995
3	-2.73337	-2.17009	16.7561	19.3311
4	-2.73337	-2.05375	20.974	24.9448
5	-2.73337	-1.95996	24.8154	30.3021
6	-2.04022	-1.88079	28.3528	34.1393
7	-1.51413	-1.81191	31.6358	36.8827
8	-1.46968	-1.75069	34.7007	39.4557
9	-1.23787	-1.6954	37.5751	41.5544
10	-1.10866	-1.64485	40.2806	43.378
11	-1.04982	-1.59819	42.8348	45.0558
12	-0.84397	-1.55477	45.2522	46.368
13	-0.798508	-1.5141	47.5447	47.577
14	-0.798508	-1.47579	49.7226	48.7554
15	-0.693147	-1.43953	51.7949	49.7532
16	-0.634878	-1.40507	53.7691	50.6453
17	-0.597837	-1.3722	55.6521	51.4656
18	-0.544727	-1.34075	57.4497	52.196
19	-0.527633	-1.31058	59.1673	52.8875
20	-0.527633	-1.28155	60.8097	53.5637
21	-0.510826	-1.25357	62.3811	54.204
22	-0.510826	-1.22653	63.8855	54.8306
23	-0.446287	-1.20036	65.3263	55.3663
24	-0.400478	-1.17499	66.7069	55.8368
25	-0.356675	-1.15035	68.0302	56.2471
26	-0.314711	-1.12639	69.299	56.6016
27	-0.301105	-1.10306	70.5157	56.9338
28	-0.223144	-1.08032	71.6828	57.1748
29	-0.223144	-1.05812	72.8025	57.4109
30	-0.127833	-1.03643	73.8766	57.5434
31	-0.116534	-1.01522	74.9073	57.6617
32	-0.105361	-0.994457	75.8963	57.7665
33	-0.0943107	-0.974114	76.8452	57.8584
34	-0.0618754	-0.954165	77.7556	57.9174
35	-0.040822	-0.93459	78.6291	57.9556
36	0	-0.919183	79.474	57.9556
37	0	-0.896473	80.2776	57.9556
38	0	-0.877897	81.0483	57.9556
39	0	-0.859618	81.7873	57.9556
40	0	-0.841621	82.4956	57.9556
41	0	-0.823893	83.1744	57.9556
42	0	-0.806422	83.8247	57.9556
43	0	-0.789191	84.4475	57.9556
44	0	-0.772193	85.0438	57.9556
45	0	-0.755415	85.6145	57.9556
46	0	-0.738846	86.1604	57.9556
47	0	-0.722479	86.6823	57.9556
48	0	-0.706302	87.1812	57.9556
49	0	-0.690309	87.6577	57.9556

50	0	-0.674	988.1127	57.9556
51	0	-0.658838	88.5467	57.9556
52	0	-0.643345	88.9606	57.9556
53	0	-0.628006	89.355	57.9556
54	0	-0.612813	89.7305	57.9556
55	0	-0.597761	90.0879	57.9556
56	0	-0.582841	90.4276	57.9556
57	0	-0.570999	90.7536	57.9556
58	0	-0.553384	91.0598	57.9556
59	0	-0.541736	91.3533	57.9556
60	0	-0.524401	91.6283	57.9556
61	0	-0.512	939	1.8914 57.9556
62	0	-0.495	859	2.1373 57.9556
63	0	-0.481728	92.3693	57.9556
64	0	-0.467699	92.5881	57.9556
65	0	-0.453763	92.794	57.9556
66	0	-0.439913	92.9875	57.9556
67	0	-0.426148	93.1691	57.9556
68	0	-0.412463	93.3392	57.9556
69	0	-0.398855	93.4983	57.9556
70	0	-0.385321	93.6468	57.9556
71	0	-0.371856	93.7851	57.9556
72	0	-0.358459	93.9136	57.9556
73	0	-0.345126	94.0327	57.9556
74	0	-0.331854	94.1428	57.9556
75	0	-0.318639	94.2443	57.9556
76	0	-0.305481	94.3377	57.9556
77	0	-0.292375	94.4231	57.9556
78	0	-0.279319	94.5012	57.9556
79	0	-0.266311	94.5721	57.9556
80	0	-0.253347	94.6363	57.9556
81	0	-0.240426	94.6941	57.9556
82	0	-0.230118	94.747	57.9556
83	0	-0.214702	94.7931	57.9556
84	0	-0.204452	94.8349	57.9556
85	0	-0.189118	94.8707	57.9556
86	0	-0.178	929	4.9027 57.9556
87	0	-0.163659	94.9295	57.9556
88	0	-0.150969	94.9523	57.9556
89	0	-0.138305	94.9714	57.9556
90	0	-0.125661	94.9872	57.9556
91	0	-0.113039	95	57.9556
92	0	-0.100433	95.0101	57.9556
93	0	-0.0878447	95.0178	57.9556
94	0	-0.0752698	95.0234	57.9556
95	0	-0.0627062	95.0274	57.9556
96	0	-0.0501541	95.0299	57.9556
97	0	-0.0376076	95.0313	57.9556
98	0	-0.0250691	95.0319	57.9556
99	0	-0.0125328	95.0321	57.9556
100	0	0	95.0321	57.9556
101	0	0.0125328	95.0322	57.9556
102	0	0.0250691	95.0329	57.9556
103	0	0.0376076	95.0343	57.9556
104	0	0.0501541	95.0368	57.9556
105	0	0.0627062	95.0407	57.9556
106	0	0.0752698	95.0464	57.9556
107	0	0.0878447	95.0541	57.9556
108	0	0.100433	95.0642	57.9556
109	0	0.113039	95.077	57.9556
110	0	0.125661	95.0928	57.9556
111	0	0.138305	95.1119	57.9556

112	0	0.150969	95.1347	57.9556	
113	0	0.163659	95.1615	57.9556	
114	0	0.176374	95.1926	57.9556	
115	0	0.189118	95.2283	57.9556	
116	0	0.201894	95.2691	57.9556	
117	0	0.214702	95.3152	57.9556	
118	0	0.227545	95.367	57.9556	
119	0	0.240426	95.4248	57.9556	
120	0	0.253347	95.489	57.9556	
121	0	0.266311	95.5599	57.9556	
122	0	0.279319	95.6379	57.9556	
123	0	0.292375	95.7234	57.9556	
124	0	0.305481	95.8167	57.9556	
125	0	0.318639	95.9182	57.9556	
126	0	0.331854	96.0284	57.9556	
127	0	0.345126	96.1475	57.9556	
128	0	0.358459	96.276	57.9556	
129	0	0.371856	96.4143	57.9556	
130	0	0.385321	96.5627	57.9556	
131	0	0.398855	96.7218	57.9556	
132	0	0.412463	96.8919	57.9556	
133	0	0.426148	97.0735	57.9556	
134	0	0.439913	97.2671	57.9556	
135	0	0.453763	97.473	57.9556	
136	0	0.467699	97.6917	57.9556	
137	0	0.481728	97.9238	57.9556	
138	0	0.49585	98.1696	57.9556	
139	0	0.510074	98.4298	57.9556	
140	0	0.524401	98.7048	57.9556	
141	0	0.538836	98.9952	57.9556	
142	0	0.553384	99.3014	57.9556	
143	0	0.568052	99.6241	57.9556	
144	0	0.582841	99.9638	57.9556	
145	0	0.597761	100.321	57.9556	
146	0	0.612813	100.697	57.9556	
147	0	0.628006	101.091	57.9556	
148	0	0.643345	101.505	57.9556	
149	0	0.658838	101.939	57.9556	
150	0	0.67449	102.394	57.9556	
151	0	0.690309	102.87	57.9556	
152	0	0.706302	103.369	57.9556	
153	0	0.722479	103.891	57.9556	
154	0	0.738846	104.437	57.9556	
155	0.00995033	0.755415	105.008	57.9631	
156	0.0953102	0.772193	105.604	58.0367	
157	0.139762	0.789191	106.227	58.147	
158	0.239017	0.806422	106.877	58.3397	
159	0.24686	0.823893	107.556	58.5431	
160	0.262364	0.841621	108.264	58.7639	
161	0.262364	0.859618	109.003	58.9895	
162	0.405465	0.877897	109.774	59.3454	
163	0.470004	0.896473	110.578	59.7668	
164	0.693147	0.915365	111.416	60.4012	
165	0.760806	0.93459	112.289	61.1123	
166	0.788457	0.954165	113.199	61.8646	
167	0.797507	0.974114	114.148	62.6415	
168	0.828552	0.994457	115.137	63.4654	
169	0.832909	1.01522	116.168	64.311	
170	1.09861	1.03643	117.242	65.4497	
171	1.09861	1.05812	118.362	66.6121	
172	1.10194	1.08032	119.529	67.8026	
173	1.16315	1.10306	120.746	69.0856	

174	1.25276	1.12639	122.014	70.4967
175	1.26413	1.15035	123.338	71.9509
176	1.43031	1.17499	124.718	73.6315
177	1.50408	1.20036	126.159	75.4369
178	1.62924	1.22653	127.664	77.4352
179	1.64866	1.25357	129.235	79.5019
180	1.79176	1.28155	130.877	81.7982
181	1.80829	1.31058	132.595	84.1681
182	1.89612	1.34075	134.393	86.7103
183	1.94591	1.3722	136.276	89.3805
184	2.07944	1.40507	138.25	92.3023
185	2.17475	1.43953	140.322	95.4329
186	2.18605	1.47579	142.5	98.659
187	2.19722	1.5141	144.792	101.986
188	2.70805	1.55477	147.21	106.196
189	2.94444	1.59819	149.764	110.902
190	4.34899	1.64485	152.47	118.055
191	4.78749	1.6954	155.344	126.172
192	4.78749	1.75069	158.409	134.554
193	5.01064	1.81191	161.692	143.632
194	5.01064	1.88079	165.229	153.056
195	5.07517	1.95996	169.071	163.004
196	5.24702	2.05375	173.289	173.78
197	5.56068	2.17009	177.998	185.847
198	5.63479	2.32634	183.41	198.955
199	5.70378	2.57583	190.045	213.647

Data Set Standard Deviation = 1.36835
Numerator = 45645.1
Denominator = 70455.8
W Statistic = 0.647855 = 45645.1 / 70455.8

5% Critical value of 0.976 exceeds 0.647855
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.647855
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	61
	9/23/1999	ND<0	61
	3/15/2000	ND<0	61
	9/24/2003	ND<0	61
	3/11/2004	ND<0	61
	10/12/2004	ND<0	61
	4/1/2005	ND<0	61
	10/25/2005	ND<0	61
	4/29/2006	ND<0	61
	11/18/2006	ND<0	61
	5/23/2007	ND<0	61
	11/28/2007	ND<0	61
	6/5/2008	ND<0	61
	11/20/2008	ND<0	61
	6/11/2009	ND<-2.73337	61

Rank Sum = 915
Rank Mean = 61

Background Rank Sum = 915
Background Rank Mean = 61

Compliance Wells

Well ID	Date	Result	Rank
MW-8	7/20/1995	2.94444	189
	8/24/1995	5.70378	199
	9/28/1995	5.24702	196
	10/26/1995	2.70805	188
	11/19/1996	ND<0	61
	12/19/1996	5.63479	198
	3/24/1997	5.56068	197
	9/24/1997	5.01064	193
	4/7/1998	4.78749	191
	9/23/1998	5.01064	194
	3/16/1999	4.78749	192
	9/23/1999	4.34899	190
	3/15/2000	5.07517	195
	9/24/2003	ND<0	61
	3/11/2004	2.18605	186
	10/12/2004	ND<0	61
	4/1/2005	0.828552	168
	10/25/2005	1.89612	182
	4/29/2006	0.797507	167
	11/18/2006	1.26413	175
	5/23/2007	0.470004	163
	11/28/2007	1.43031	176
	6/5/2008	ND<0 J	61

	11/20/2008	0.262364 J	160
	6/11/2009	0.262364	161

Rank Sum = 4104
Rank Mean = 164.16

MW-7	7/20/1995	0.0953102	156
	8/24/1995	-0.223144 J	144
	9/28/1995	-0.105361 J	148
	10/26/1995	0 J	152
	11/19/1996	ND<0	61
	12/19/1996	ND<0	61
	3/24/1997	ND<0	61
	9/24/1997	ND<0	61
	4/7/1998	ND<0	61
	9/23/1998	ND<0	61
	3/16/1999	ND<0	61
	9/23/1999	ND<0	61
	3/15/2000	ND<0	61
	9/24/2003	ND<0	61
	3/11/2004	ND<0	61
	10/12/2004	ND<0	61
	4/1/2005	ND<0	61
	10/25/2005	ND<0	61
	4/29/2006	ND<0	61
	11/18/2006	ND<0	61
	5/23/2007	ND<0	61
	11/28/2007	ND<0	61
	6/5/2008	ND<0	61
	11/20/2008	ND<0	61
	6/11/2009	ND<-2.73337	61

Rank Sum = 1881
Rank Mean = 75.24

MW-12AR	3/16/1999	ND<0	61
	9/23/1999	ND<0	61
	3/15/2000	ND<0	61
	9/24/2003	1.64866	179
	3/11/2004	ND<0	61
	10/12/2004	ND<0	61
	4/1/2005	ND<0	61
	10/25/2005	-0.446287 J	139
	4/29/2006	-0.597837 J	133
	11/18/2006	-1.04982 J	127
	5/23/2007	ND<0	61
	11/28/2007	-0.798508 J	129
	6/5/2008	ND<0	61
	11/20/2008	-1.46968 J	124
	6/11/2009	ND<-2.73337	61
	11/15/2009	-2.04022 J	122

Rank Sum = 1502
Rank Mean = 93.875

MW-9	7/20/1995	-1.10866 J	126
	8/24/1995	-0.693147 J	131
	9/28/1995	-0.223144 J	145
	10/26/1995	0 J	153
	11/19/1996	ND<0	61
	12/19/1996	ND<0	61
	3/24/1997	ND<0	61
	9/24/1997	ND<0	61
	4/7/1998	ND<0	61
	9/23/1998	ND<0	61

	3/16/1999	ND<0	61	
	9/23/1999	ND<0	61	
	3/15/2000	ND<0	61	
	9/24/2003	ND<0	61	
	3/11/2004	ND<0	61	
	10/12/2004	ND<0	61	
	4/1/2005	-0.356675 J	141	
	10/25/2005	-0.634878 J		132
	4/29/2006	-0.798508 J		130
	11/18/2006	-0.84397 J		128
	5/23/2007	-0.510826 J		137
	11/28/2007	-0.301105 J		143
	6/5/2008	ND<0	61	
	11/20/2008	-0.510826 J		138
	6/11/2009	-0.400478 J		140
	11/15/2009	-0.314711 J		142

Rank Sum = 2579
Rank Mean = 99.1923

MW-10	7/20/1995	-0.544727 J		134
	8/24/1995	0.788457		166
	9/28/1995	1.09861		170
	10/26/1995	1.09861		171
	11/19/1996	ND<0	61	
	12/19/1996	ND<0	61	
	3/24/1997	ND<0	61	
	9/24/1997	ND<0	61	
	4/7/1998	ND<0	61	
	9/23/1998	ND<0	61	
	3/16/1999	1.16315		173
	9/23/1999	ND<0	61	
	3/15/2000	ND<0	61	
	9/24/2003	ND<0	61	
	3/11/2004	ND<0	61	
	10/12/2004	ND<0	61	
	4/1/2005	-0.127833 J	146	
	10/25/2005	0.139762 J		157
	4/29/2006	0.239017 J		158
	11/18/2006	-0.116534 J		147
	5/23/2007	ND<0	61	
	11/28/2007	0 J	154	
	6/5/2008	ND<0	61	
	11/20/2008	-0.0943107 J		149
	6/11/2009	-0.527633 J		135
	11/15/2009	-0.0618754 J		150

Rank Sum = 2803
Rank Mean = 107.808

MW-11R	7/20/1995	1.25276		174
	8/24/1995	2.17475		185
	9/28/1995	1.79176		180
	10/26/1995	2.07944		184
	11/19/1996	ND<0	61	
	12/19/1996	2.19722		187
	3/24/1997	1.94591		183
	9/24/1997	ND<0	61	
	4/7/1998	ND<0	61	
	9/23/1998	ND<0	61	
	3/16/1999	1.62924		178
	9/23/1999	0.832909		169
	3/15/2000	ND<0	61	
	9/24/2003	ND<0	61	

	3/11/2004	ND<0	61	
	10/12/2004	ND<0	61	
	4/1/2005	1.10194	172	
	10/25/2005	0.24686 J	159	
	4/29/2006	-0.527633 J	136	
	11/18/2006	-0.040822 J	151	
	5/23/2007	0.693147	164	
	11/28/2007	0.00995033 J	155	
	6/5/2008	ND<0	61	
	11/20/2008	-1.23787 J	125	
	6/11/2009	0.405465	162	
	11/15/2009	-1.51413 J	123	

Rank Sum = 3336
Rank Mean = 128.308

MW-12BR	3/16/1999	1.80829	181	
	9/23/1999	1.50408	177	
	3/15/2000	ND<0	61	
	9/24/2003	ND<0	61	
	3/11/2004	ND<0	61	
	10/12/2004	ND<0	61	
	4/1/2005	0.760806	165	
	10/25/2005	ND<0	61	
	4/29/2006	ND<0	61	
	11/18/2006	ND<0	61	
	5/23/2007	ND<0	61	
	11/28/2007	ND<0	61	
	6/5/2008	ND<0	61	
	11/20/2008	ND<0	61	
	6/11/2009	ND<-2.73337	61	

Rank Sum = 1255
Rank Mean = 83.6667

MW-6	7/20/1995	ND<0	61
	8/24/1995	ND<0	61
	9/28/1995	ND<0	61
	10/26/1995	ND<0	61
	11/19/1996	ND<0	61
	12/19/1996	ND<0	61
	3/24/1997	ND<0	61
	9/24/1997	ND<0	61
	4/7/1998	ND<0	61
	9/23/1998	ND<0	61
	3/16/1999	ND<0	61
	9/23/1999	ND<0	61
	3/15/2000	ND<0	61
	9/24/2003	ND<0	61
	3/11/2004	ND<0	61
	10/12/2004	ND<0	61
	4/1/2005	ND<0	61
	10/25/2005	ND<0	61
	4/29/2006	ND<0	61
	11/18/2006	ND<0	61
	5/23/2007	ND<0	61
	11/28/2007	ND<0	61
	6/5/2008	ND<0	61
	11/20/2008	ND<0	61
	6/11/2009	ND<-2.73337	61

Rank Sum = 1525
Rank Mean = 61

Calculation Results:

Kruskal-Wallis H Statistic = 62.1459
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 80.1667
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
62.1459 > 15.5073 indicating a significant group difference at 5% significance level
80.1667 > 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 61

Well	Mean Rank		Dif from Bkg	Critical Value
MW-8	164.16	103.16	43.7561	
MW-7	75.24	14.24	43.7561	
MW-12AR		93.875	32.875	48.1504
MW-9	99.1923	38.1923	43.4394	
MW-10	107.808	46.8077	43.4394	
MW-11R	128.308	67.3077	43.4394	
MW-12BR		83.6667	22.6667	48.9208
MW-6	61	0	43.7561	

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 61

Well	Mean Rank		Dif from Bkg	Critical Value
MW-8	164.16	103.16	47.2507	
MW-7	75.24	14.24	47.2507	
MW-12AR		93.875	32.875	51.9959
MW-9	99.1923	38.1923	46.9087	
MW-10	107.808	46.8077	46.9087	
MW-11R	128.308	67.3077	46.9087	
MW-12BR		83.6667	22.6667	52.8279
MW-6	61	0	47.2507	

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	-2.9444	10	3	
2.18605	2.94444	-0.758388		10	4
ND<0	2.94444	-2.9444	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	-2.4744	10	10	
1.43031	2.94444	-1.51413	10	11	
ND<0 J	2.94444	-2.9444	10	12	
0.262364 J	2.94444	-2.68207	10	13	
0.262364	2.94444	-2.68207	10	14	
5.24702	5.70378	-0.456758		10	15
2.70805	5.70378	-2.99573	10	16	
ND<0	5.70378	-5.7037	10	17	
5.63479	5.70378	-0.068992	9	10	18
5.56068	5.70378	-0.143101		10	19
5.01064	5.70378	-0.693147		10	20
4.78749	5.70378	-0.916291		10	21
5.01064	5.70378	-0.693147		10	22
4.78749	5.70378	-0.916291		10	23
4.34899	5.70378	-1.3548	10	24	
5.07517	5.70378	-0.628609		10	25
ND<0	5.70378	-5.7037	10	26	
2.18605	5.70378	-3.51773	10	27	
ND<0	5.70378	-5.7037	10	28	
0.828552	5.70378	-4.87523	10	29	
1.89612	5.70378	-3.80766	10	30	
0.797507	5.70378	-4.90628	10	31	
1.26413	5.70378	-4.43966	10	32	
0.470004	5.70378	-5.23378	10	33	
1.43031	5.70378	-4.27347	10	34	
ND<0 J	5.70378	-5.7037	10	35	
0.262364 J	5.70378	-5.44142	10	36	
0.262364	5.70378	-5.44142	10	37	

2.70805	5.24702	-2.538971	0	38	
ND<0	5.24702	-5.247021	0	39	
5.63479	5.24702	0.387766	11	39	
5.56068	5.24702	0.313658	12	39	
5.01064	5.24702	-0.236389	12	40	
4.78749	5.24702	-0.459532	12	41	
5.01064	5.24702	-0.236389	12	42	
4.78749	5.24702	-0.459532	12	43	
4.34899	5.24702	-0.898037	12	44	
5.07517	5.24702	-0.171851	2	45	
ND<0	5.24702	-5.247021	2	46	
2.18605	5.24702	-3.060971	2	47	
ND<0	5.24702	-5.247021	2	48	
0.828552	5.24702	-4.418471	2	49	
1.89612	5.24702	-3.3509	12	50	
0.797507	5.24702	-4.449521	2	51	
1.26413	5.24702	-3.9829	12	52	
0.470004	5.24702	-4.777021	2	53	
1.43031	5.24702	-3.816711	2	54	
ND<0 J	5.24702	-5.247021	2	55	
0.262364 J	5.24702	-4.984661	2	56	
0.262364	5.24702	-4.984661	2	57	
ND<0	2.70805	-2.708051	2	58	
5.63479	2.70805	2.92674	13	58	
5.56068	2.70805	2.85263	14	58	
5.01064	2.70805	2.30259	15	58	
4.78749	2.70805	2.07944	16	58	
5.01064	2.70805	2.30259	17	58	
4.78749	2.70805	2.07944	18	58	
4.34899	2.70805	1.64094	19	58	
5.07517	2.70805	2.36712	20	58	
ND<0	2.70805	-2.708052	0	59	
2.18605	2.70805	-0.521999	20	60	
ND<0	2.70805	-2.708052	0	61	
0.828552	2.70805	-1.8795	20	62	
1.89612	2.70805	-0.811931	20	63	
0.797507	2.70805	-1.910542	0	64	
1.26413	2.70805	-1.443922	0	65	
0.470004	2.70805	-2.238052	0	66	
1.43031	2.70805	-1.277742	0	67	
ND<0 J	2.70805	-2.708052	0	68	
0.262364 J	2.70805	-2.445692	0	69	
0.262364	2.70805	-2.445692	0	70	
5.63479	ND<0	5.63479	21	70	
5.56068	ND<0	5.56068	22	70	
5.01064	ND<0	5.01064	23	70	
4.78749	ND<0	4.78749	24	70	
5.01064	ND<0	5.01064	25	70	
4.78749	ND<0	4.78749	26	70	
4.34899	ND<0	4.34899	27	70	
5.07517	ND<0	5.07517	28	70	
ND<0	ND<0	0	28	70	
2.18605	ND<0	2.18605	29	70	
ND<0	ND<0	0	29	70	
0.828552	ND<0	0.828552	30	70	
1.89612	ND<0	1.89612	31	70	
0.797507	ND<0	0.797507	32	70	
1.26413	ND<0	1.26413	33	70	
0.470004	ND<0	0.470004	34	70	

1.43031	ND<0	1.43031	35	70	
ND<0 J	ND<0	0	35	70	
0.262364 J	ND<0	0.262364	36	70	
0.262364	ND<0	0.262364	37	70	
5.56068	5.63479	-0.074108	37	71	
5.01064	5.63479	-0.624154	37	72	
4.78749	5.63479	-0.847298	37	73	
5.01064	5.63479	-0.624154	37	74	
4.78749	5.63479	-0.847298	37	75	
4.34899	5.63479	-1.2858	37	76	
5.07517	5.63479	-0.559616	37	77	
ND<0	5.63479	-5.6347937	78		
2.18605	5.63479	-3.4487437	79		
ND<0	5.63479	-5.6347937	80		
0.828552	5.63479	-4.8062437	81		
1.89612	5.63479	-3.7386737	82		
0.797507	5.63479	-4.8372837	83		
1.26413	5.63479	-4.3706637	84		
0.470004	5.63479	-5.1647937	85		
1.43031	5.63479	-4.2044837	86		
ND<0 J	5.63479	-5.6347937	87		
0.262364 J	5.63479	-5.3724337	88		
0.262364	5.63479	-5.3724337	89		
5.01064	5.56068	-0.550046	37	90	
4.78749	5.56068	-0.7731937	91		
5.01064	5.56068	-0.550046	37	92	
4.78749	5.56068	-0.7731937	93		
4.34899	5.56068	-1.2116937	94		
5.07517	5.56068	-0.485508	37	95	
ND<0	5.56068	-5.5606837	96		
2.18605	5.56068	-3.3746337	97		
ND<0	5.56068	-5.5606837	98		
0.828552	5.56068	-4.7321337	99		
1.89612	5.56068	-3.6645637	100		
0.797507	5.56068	-4.7631737	101		
1.26413	5.56068	-4.2965537	102		
0.470004	5.56068	-5.0906837	103		
1.43031	5.56068	-4.1303737	104		
ND<0 J	5.56068	-5.5606837	105		
0.262364 J	5.56068	-5.2983237	106		
0.262364	5.56068	-5.2983237	107		
4.78749	5.01064	-0.223144	37	108	
5.01064	5.01064	0	37	108	
4.78749	5.01064	-0.223144	37	109	
4.34899	5.01064	-0.661649	37	110	
5.07517	5.01064	0.0645385	38	110	
ND<0	5.01064	-5.0106438	111		
2.18605	5.01064	-2.8245838	112		
ND<0	5.01064	-5.0106438	113		
0.828552	5.01064	-4.1820838	114		
1.89612	5.01064	-3.1145238	115		
0.797507	5.01064	-4.2131338	116		
1.26413	5.01064	-3.7465138	117		
0.470004	5.01064	-4.5406338	118		
1.43031	5.01064	-3.5803238	119		
ND<0 J	5.01064	-5.0106438	120		
0.262364 J	5.01064	-4.7482738	121		
0.262364	5.01064	-4.7482738	122		

5.01064	4.78749	0.223144	39	122
4.78749	4.78749	0	39	122
4.34899	4.78749	-0.438505	39	123
5.07517	4.78749	0.287682	40	123
ND<0	4.78749	-4.7874940	124	
2.18605	4.78749	-2.6014440	125	
ND<0	4.78749	-4.7874940	126	
0.828552	4.78749	-3.9589440	127	
1.89612	4.78749	-2.8913740	128	
0.797507	4.78749	-3.9899840	129	
1.26413	4.78749	-3.5233740	130	
0.470004	4.78749	-4.3174940	131	
1.43031	4.78749	-3.3571840	132	
ND<0 J	4.78749	-4.7874940	133	
0.262364 J	4.78749	-4.5251340	134	
0.262364	4.78749	-4.5251340	135	
4.78749	5.01064	-0.223144	40	136
4.34899	5.01064	-0.661649	40	137
5.07517	5.01064	0.0645385	41	137
ND<0	5.01064	-5.0106441	138	
2.18605	5.01064	-2.8245841	139	
ND<0	5.01064	-5.0106441	140	
0.828552	5.01064	-4.1820841	141	
1.89612	5.01064	-3.1145241	142	
0.797507	5.01064	-4.2131341	143	
1.26413	5.01064	-3.7465141	144	
0.470004	5.01064	-4.5406341	145	
1.43031	5.01064	-3.5803241	146	
ND<0 J	5.01064	-5.0106441	147	
0.262364 J	5.01064	-4.7482741	148	
0.262364	5.01064	-4.7482741	149	
4.34899	4.78749	-0.438505	41	150
5.07517	4.78749	0.287682	42	150
ND<0	4.78749	-4.7874942	151	
2.18605	4.78749	-2.6014442	152	
ND<0	4.78749	-4.7874942	153	
0.828552	4.78749	-3.9589442	154	
1.89612	4.78749	-2.8913742	155	
0.797507	4.78749	-3.9899842	156	
1.26413	4.78749	-3.5233742	157	
0.470004	4.78749	-4.3174942	158	
1.43031	4.78749	-3.3571842	159	
ND<0 J	4.78749	-4.7874942	160	
0.262364 J	4.78749	-4.5251342	161	
0.262364	4.78749	-4.5251342	162	
5.07517	4.34899	0.726187	43	162
ND<0	4.34899	-4.3489943	163	
2.18605	4.34899	-2.1629443	164	
ND<0	4.34899	-4.3489943	165	
0.828552	4.34899	-3.5204343	166	
1.89612	4.34899	-2.4528743	167	
0.797507	4.34899	-3.5514843	168	
1.26413	4.34899	-3.0848643	169	
0.470004	4.34899	-3.8789843	170	
1.43031	4.34899	-2.9186843	171	
ND<0 J	4.34899	-4.3489943	172	
0.262364 J	4.34899	-4.0866243	173	
0.262364	4.34899	-4.0866243	174	

ND<0 5.07517 -5.0751743 175
2.18605 5.07517 -2.8891243 176
ND<0 5.07517 -5.0751743 177
0.828552 5.07517 -4.2466243 178
1.89612 5.07517 -3.1790543 179
0.797507 5.07517 -4.2776743 180
1.26413 5.07517 -3.8110543 181
0.470004 5.07517 -4.6051743 182
1.43031 5.07517 -3.6448643 183
ND<0 J 5.07517 -5.0751743 184
0.262364 J 5.07517 -4.8128143 185
0.262364 5.07517 -4.8128143 186

2.18605 ND<0 2.18605 44 186
ND<0 ND<0 0 44 186
0.828552 ND<0 0.828552 45 186
1.89612 ND<0 1.89612 46 186
0.797507 ND<0 0.797507 47 186
1.26413 ND<0 1.26413 48 186
0.470004 ND<0 0.470004 49 186
1.43031 ND<0 1.43031 50 186
ND<0 J ND<0 0 50 186
0.262364 J ND<0 0.262364 51 186
0.262364 ND<0 0.262364 52 186

ND<0 2.18605 -2.1860552 187
0.828552 2.18605 -1.3575 52 188
1.89612 2.18605 -0.289932 52 189
0.797507 2.18605 -1.3885452 190
1.26413 2.18605 -0.921925 52 191
0.470004 2.18605 -1.7160552 192
1.43031 2.18605 -0.7557452 193
ND<0 J 2.18605 -2.1860552 194
0.262364 J 2.18605 -1.9236952 195
0.262364 2.18605 -1.9236952 196

0.828552 ND<0 0.828552 53 196
1.89612 ND<0 1.89612 54 196
0.797507 ND<0 0.797507 55 196
1.26413 ND<0 1.26413 56 196
0.470004 ND<0 0.470004 57 196
1.43031 ND<0 1.43031 58 196
ND<0 J ND<0 0 58 196
0.262364 J ND<0 0.262364 59 196
0.262364 ND<0 0.262364 60 196

1.89612 0.828552 1.06757 61 196
0.797507 0.828552 -0.0310446 61 197
1.26413 0.828552 0.435575 62 197
0.470004 0.828552 -0.358548 62 198
1.43031 0.828552 0.601759 63 198
ND<0 J 0.828552 -0.828552 63 199
0.262364 J 0.828552 -0.566188 63 200
0.262364 0.828552 -0.566188 63 201

0.797507 1.89612 -1.0986163 202
1.26413 1.89612 -0.631993 63 203
0.470004 1.89612 -1.4261263 204
1.43031 1.89612 -0.465808 63 205
ND<0 J 1.89612 -1.8961263 206
0.262364 J 1.89612 -1.6337663 207
0.262364 1.89612 -1.6337663 208

1.26413	0.797507	0.46662	64	208
0.470004	0.797507	-0.327504	64	209
1.43031	0.797507	0.632804	65	209
ND<0 J	0.797507	-0.797507	65	210
0.262364 J	0.797507	-0.535143	65	211
0.262364	0.797507	-0.535143	65	212
0.470004	1.26413	-0.794123	65	213
1.43031	1.26413	0.166185	66	213
ND<0 J	1.26413	-1.2641366	214	
0.262364 J	1.26413	-1.0017666	215	
0.262364	1.26413	-1.0017666	216	
1.43031	0.470004	0.960308	67	216
ND<0 J	0.470004	-0.470004	67	217
0.262364 J	0.470004	-0.207639	67	218
0.262364	0.470004	-0.207639	67	219
ND<0 J	1.43031	-1.4303167	220	
0.262364 J	1.43031	-1.1679567	221	
0.262364	1.43031	-1.1679567	222	
0.262364 J	ND<0 J	0.262364	68	222
0.262364	ND<0 J	0.262364	69	222
0.262364	0.262364 J	0	69	222

S Statistic = 69 - 222 = -153

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
There are 0 time periods with multiple data

A = 210
B = 0
C = 24
D = 0
E = 18
F = 0
a = 33000
b = 124200
c = 1200
Group Variance = 1821.67
Z-Score = -3.5613
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.5613| > 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
1.09861		0.788457	0.310155	26 0
1.09861		0.788457	0.310155	27 0
ND<0	0.788457	-0.788457	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
1.16315		0.788457	0.374693	28 6
ND<0	0.788457	-0.788457	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
-0.127833 J		0.788457	-0.916291	28 12
0.139762 J		0.788457	-0.648695	28 13
0.239017 J		0.788457	-0.5494428	14
-0.116534 J		0.788457	-0.904991	28 15
ND<0	0.788457	-0.788457	28	16
0 J	0.788457	-0.788457	28	17
ND<0	0.788457	-0.788457	28	18
-0.0943107 J		0.788457	-0.882768	28 19

-0.527633 J	0.788457	-1.3160928	20		
-0.0618754 J	0.788457	-0.850333	28	21	
1.09861	1.09861	0	28	21	
ND<0	1.09861	-1.0986128	22		
ND<0	1.09861	-1.0986128	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		
1.16315	1.09861	0.0645385	29	27	
ND<0	1.09861	-1.0986129	28		
ND<0	1.09861	-1.0986129	29		
ND<0	1.09861	-1.0986129	30		
ND<0	1.09861	-1.0986129	31		
ND<0	1.09861	-1.0986129	32		
-0.127833 J	1.09861	-1.2264529	33		
0.139762 J	1.09861	-0.9588529	34		
0.239017 J	1.09861	-0.859595	29	35	
-0.116534 J	1.09861	-1.2151529	36		
ND<0	1.09861	-1.0986129	37		
0 J	1.09861	-1.0986129	38		
ND<0	1.09861	-1.0986129	39		
-0.0943107 J	1.09861	-1.1929229	40		
-0.527633 J	1.09861	-1.6262529	41		
-0.0618754 J	1.09861	-1.1604929	42		
ND<0	1.09861	-1.0986129	43		
ND<0	1.09861	-1.0986129	44		
ND<0	1.09861	-1.0986129	45		
ND<0	1.09861	-1.0986129	46		
ND<0	1.09861	-1.0986129	47		
ND<0	1.09861	-1.0986129	48		
1.16315	1.09861	0.0645385	30	48	
ND<0	1.09861	-1.0986130	49		
ND<0	1.09861	-1.0986130	50		
ND<0	1.09861	-1.0986130	51		
ND<0	1.09861	-1.0986130	52		
ND<0	1.09861	-1.0986130	53		
-0.127833 J	1.09861	-1.2264530	54		
0.139762 J	1.09861	-0.9588530	55		
0.239017 J	1.09861	-0.859595	30	56	
-0.116534 J	1.09861	-1.2151530	57		
ND<0	1.09861	-1.0986130	58		
0 J	1.09861	-1.0986130	59		
ND<0	1.09861	-1.0986130	60		
-0.0943107 J	1.09861	-1.1929230	61		
-0.527633 J	1.09861	-1.6262530	62		
-0.0618754 J	1.09861	-1.1604930	63		
ND<0	ND<0	0	30	63	
ND<0	ND<0	0	30	63	
ND<0	ND<0	0	30	63	
ND<0	ND<0	0	30	63	
ND<0	ND<0	0	30	63	
1.16315	ND<0	1.16315	31	63	
ND<0	ND<0	0	31	63	
ND<0	ND<0	0	31	63	
ND<0	ND<0	0	31	63	
ND<0	ND<0	0	31	63	
ND<0	ND<0	0	31	63	
-0.127833 J	ND<0	-0.127833	31	64	

0.139762 J		ND<0	0.139762	32	64
0.239017 J		ND<0	0.239017	33	64
-0.116534 J		ND<0	-0.116534	33	65
ND<0	ND<0	0	33	65	
0 J	ND<0	0	33	65	
ND<0	ND<0	0	33	65	
-0.0943107 J		ND<0	-0.0943107	33	66
-0.527633 J		ND<0	-0.527633	33	67
-0.0618754 J		ND<0	-0.0618754	33	68
ND<0	ND<0	0	33	68	
ND<0	ND<0	0	33	68	
ND<0	ND<0	0	33	68	
ND<0	ND<0	0	33	68	
1.16315		ND<0	1.16315	34	68
ND<0	ND<0	0	34	68	
ND<0	ND<0	0	34	68	
ND<0	ND<0	0	34	68	
ND<0	ND<0	0	34	68	
ND<0	ND<0	0	34	68	
-0.127833 J		ND<0	-0.127833	34	69
0.139762 J		ND<0	0.139762	35	69
0.239017 J		ND<0	0.239017	36	69
-0.116534 J		ND<0	-0.116534	36	70
ND<0	ND<0	0	36	70	
0 J	ND<0	0	36	70	
ND<0	ND<0	0	36	70	
-0.0943107 J		ND<0	-0.0943107	36	71
-0.527633 J		ND<0	-0.527633	36	72
-0.0618754 J		ND<0	-0.0618754	36	73
ND<0	ND<0	0	36	73	
ND<0	ND<0	0	36	73	
ND<0	ND<0	0	36	73	
1.16315		ND<0	1.16315	37	73
ND<0	ND<0	0	37	73	
ND<0	ND<0	0	37	73	
ND<0	ND<0	0	37	73	
ND<0	ND<0	0	37	73	
ND<0	ND<0	0	37	73	
-0.127833 J		ND<0	-0.127833	37	74
0.139762 J		ND<0	0.139762	38	74
0.239017 J		ND<0	0.239017	39	74
-0.116534 J		ND<0	-0.116534	39	75
ND<0	ND<0	0	39	75	
0 J	ND<0	0	39	75	
ND<0	ND<0	0	39	75	
-0.0943107 J		ND<0	-0.0943107	39	76
-0.527633 J		ND<0	-0.527633	39	77
-0.0618754 J		ND<0	-0.0618754	39	78
ND<0	ND<0	0	39	78	
ND<0	ND<0	0	39	78	
1.16315		ND<0	1.16315	40	78
ND<0	ND<0	0	40	78	
ND<0	ND<0	0	40	78	
ND<0	ND<0	0	40	78	
ND<0	ND<0	0	40	78	
ND<0	ND<0	0	40	78	
-0.127833 J		ND<0	-0.127833	40	79
0.139762 J		ND<0	0.139762	41	79
0.239017 J		ND<0	0.239017	42	79

-0.116534 J		ND<0	-0.116534		42	80
ND<0	ND<0	0	42	80		
0 J	ND<0	0	42	80		
ND<0	ND<0	0	42	80		
-0.0943107 J		ND<0	-0.0943107		42	81
-0.527633 J		ND<0	-0.527633		42	82
-0.0618754 J		ND<0	-0.0618754		42	83
ND<0	ND<0	0	42	83		
1.16315		ND<0	1.16315	43	83	
ND<0	ND<0	0	43	83		
ND<0	ND<0	0	43	83		
ND<0	ND<0	0	43	83		
ND<0	ND<0	0	43	83		
ND<0	ND<0	0	43	83		
-0.127833 J		ND<0	-0.127833		43	84
0.139762 J		ND<0	0.139762		44	84
0.239017 J		ND<0	0.239017		45	84
-0.116534 J		ND<0	-0.116534		45	85
ND<0	ND<0	0	45	85		
0 J	ND<0	0	45	85		
ND<0	ND<0	0	45	85		
-0.0943107 J		ND<0	-0.0943107		45	86
-0.527633 J		ND<0	-0.527633		45	87
-0.0618754 J		ND<0	-0.0618754		45	88
1.16315		ND<0	1.16315	46	88	
ND<0	ND<0	0	46	88		
ND<0	ND<0	0	46	88		
ND<0	ND<0	0	46	88		
ND<0	ND<0	0	46	88		
ND<0	ND<0	0	46	88		
-0.127833 J		ND<0	-0.127833		46	89
0.139762 J		ND<0	0.139762		47	89
0.239017 J		ND<0	0.239017		48	89
-0.116534 J		ND<0	-0.116534		48	90
ND<0	ND<0	0	48	90		
0 J	ND<0	0	48	90		
ND<0	ND<0	0	48	90		
-0.0943107 J		ND<0	-0.0943107		48	91
-0.527633 J		ND<0	-0.527633		48	92
-0.0618754 J		ND<0	-0.0618754		48	93
ND<0	1.16315		-1.163154	8	94	
ND<0	1.16315		-1.163154	8	95	
ND<0	1.16315		-1.163154	8	96	
ND<0	1.16315		-1.163154	8	97	
ND<0	1.16315		-1.163154	8	98	
-0.127833 J		1.16315		-1.290984	8	99
0.139762 J		1.16315		-1.023394	8	100
0.239017 J		1.16315		-0.924134	48	101
-0.116534 J		1.16315		-1.279684	8	102
ND<0	1.16315		-1.163154	8	103	
0 J	1.16315		-1.163154	8	104	
ND<0	1.16315		-1.163154	8	105	
-0.0943107 J		1.16315		-1.257464	8	106
-0.527633 J		1.16315		-1.690784	8	107
-0.0618754 J		1.16315		-1.225034	8	108
ND<0	ND<0	0	48	108		
ND<0	ND<0	0	48	108		
ND<0	ND<0	0	48	108		

ND<0	ND<0	0	48	108		
-0.127833 J		ND<0	-0.127833		48	109
0.139762 J		ND<0	0.139762		49	109
0.239017 J		ND<0	0.239017		50	109
-0.116534 J		ND<0	-0.116534		50	110
ND<0	ND<0	0	50	110		
0 J	ND<0	0	50	110		
ND<0	ND<0	0	50	110		
-0.0943107 J		ND<0	-0.0943107		50	111
-0.527633 J		ND<0	-0.527633		50	112
-0.0618754 J		ND<0	-0.0618754		50	113
ND<0	ND<0	0	50	113		
ND<0	ND<0	0	50	113		
ND<0	ND<0	0	50	113		
-0.127833 J		ND<0	-0.127833		50	114
0.139762 J		ND<0	0.139762		51	114
0.239017 J		ND<0	0.239017		52	114
-0.116534 J		ND<0	-0.116534		52	115
ND<0	ND<0	0	52	115		
0 J	ND<0	0	52	115		
ND<0	ND<0	0	52	115		
-0.0943107 J		ND<0	-0.0943107		52	116
-0.527633 J		ND<0	-0.527633		52	117
-0.0618754 J		ND<0	-0.0618754		52	118
ND<0	ND<0	0	52	118		
ND<0	ND<0	0	52	118		
-0.127833 J		ND<0	-0.127833		52	119
0.139762 J		ND<0	0.139762		53	119
0.239017 J		ND<0	0.239017		54	119
-0.116534 J		ND<0	-0.116534		54	120
ND<0	ND<0	0	54	120		
0 J	ND<0	0	54	120		
ND<0	ND<0	0	54	120		
-0.0943107 J		ND<0	-0.0943107		54	121
-0.527633 J		ND<0	-0.527633		54	122
-0.0618754 J		ND<0	-0.0618754		54	123
ND<0	ND<0	0	54	123		
-0.127833 J		ND<0	-0.127833		54	124
0.139762 J		ND<0	0.139762		55	124
0.239017 J		ND<0	0.239017		56	124
-0.116534 J		ND<0	-0.116534		56	125
ND<0	ND<0	0	56	125		
0 J	ND<0	0	56	125		
ND<0	ND<0	0	56	125		
-0.0943107 J		ND<0	-0.0943107		56	126
-0.527633 J		ND<0	-0.527633		56	127
-0.0618754 J		ND<0	-0.0618754		56	128
-0.127833 J		ND<0	-0.127833		56	129
0.139762 J		ND<0	0.139762		57	129
0.239017 J		ND<0	0.239017		58	129
-0.116534 J		ND<0	-0.116534		58	130
ND<0	ND<0	0	58	130		
0 J	ND<0	0	58	130		
ND<0	ND<0	0	58	130		
-0.0943107 J		ND<0	-0.0943107		58	131
-0.527633 J		ND<0	-0.527633		58	132
-0.0618754 J		ND<0	-0.0618754		58	133

0.139762 J	-0.127833 J	0.267595	59	133
0.239017 J	-0.127833 J	0.36685	60	133
-0.116534 J	-0.127833 J	0.0112996	61	133
ND<0	-0.127833 J	0.127833	62	133
0 J	-0.127833 J	0.127833	63	133
ND<0	-0.127833 J	0.127833	64	133
-0.0943107 J	-0.127833 J	0.0335227	65	133
-0.527633 J	-0.127833 J	-0.399799	65	134
-0.0618754 J	-0.127833 J	0.065958	66	134
0.239017 J	0.139762 J	0.099255	67	134
-0.116534 J	0.139762 J	-0.256296	67	135
ND<0	0.139762 J	-0.139762	67	136
0 J	0.139762 J	-0.139762	67	137
ND<0	0.139762 J	-0.139762	67	138
-0.0943107 J	0.139762 J	-0.234073	67	139
-0.527633 J	0.139762 J	-0.667395	67	140
-0.0618754 J	0.139762 J	-0.201637	67	141
-0.116534 J	0.239017 J	-0.355551	67	142
ND<0	0.239017 J	-0.239017	67	143
0 J	0.239017 J	-0.239017	67	144
ND<0	0.239017 J	-0.239017	67	145
-0.0943107 J	0.239017 J	-0.333328	67	146
-0.527633 J	0.239017 J	-0.7666567	147	
-0.0618754 J	0.239017 J	-0.300892	67	148
ND<0	-0.116534 J	0.116534	68	148
0 J	-0.116534 J	0.116534	69	148
ND<0	-0.116534 J	0.116534	70	148
-0.0943107 J	-0.116534 J	0.0222231	71	148
-0.527633 J	-0.116534 J	-0.411099	71	149
-0.0618754 J	-0.116534 J	0.0546584	72	149
0 J	ND<0	0	72	149
ND<0	ND<0	0	72	149
-0.0943107 J	ND<0	-0.0943107	72	150
-0.527633 J	ND<0	-0.527633	72	151
-0.0618754 J	ND<0	-0.0618754	72	152
ND<0	0 J	0	72	152
-0.0943107 J	0 J	-0.0943107	72	153
-0.527633 J	0 J	-0.527633	72	154
-0.0618754 J	0 J	-0.0618754	72	155
-0.0943107 J	ND<0	-0.0943107	72	156
-0.527633 J	ND<0	-0.527633	72	157
-0.0618754 J	ND<0	-0.0618754	72	158
-0.527633 J	-0.0943107 J	-0.433322	72	159
-0.0618754 J	-0.0943107 J	0.0324353	73	159
-0.0618754 J	-0.527633 J	0.465757	74	159

S Statistic = 74 - 159 = -85

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
11/15/2009	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 = -2.02326
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-2.02326| > 1.97737 indicating a trend

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	
1.79176	2.17475	-0.382992	6	20
2.07944	2.17475	-0.0953102	6	21
ND<0	2.17475	-2.174756	22	
2.19722	2.17475	0.0224729	7	22
1.94591	2.17475	-0.228842	7	23
ND<0	2.17475	-2.174757	24	
ND<0	2.17475	-2.174757	25	
ND<0	2.17475	-2.174757	26	
1.62924	2.17475	-0.545511	7	27
0.832909	2.17475	-1.341847	28	
ND<0	2.17475	-2.174757	29	
ND<0	2.17475	-2.174757	30	
ND<0	2.17475	-2.174757	31	
ND<0	2.17475	-2.174757	32	
1.10194	2.17475	-1.072817	33	
0.24686 J	2.17475	-1.927897	34	
-0.527633 J	2.17475	-2.702387	35	
-0.040822 J	2.17475	-2.215577	36	
0.693147	2.17475	-1.4816	7	37
0.00995033 J	2.17475	-2.1648	7	38
ND<0	2.17475	-2.174757	39	
-1.23787 J	2.17475	-3.412637	40	

0.405465	2.17475	-1.769297	41	
-1.51413 J	2.17475	-3.688887	42	
2.07944	1.79176	0.287682	8	42
ND<0	1.79176	-1.791768	43	
2.19722	1.79176	0.405465	9	43
1.94591	1.79176	0.154151	10	43
ND<0	1.79176	-1.7917610	44	
ND<0	1.79176	-1.7917610	45	
ND<0	1.79176	-1.7917610	46	
1.62924	1.79176	-0.162519	10	47
0.832909	1.79176	-0.9588510	48	
ND<0	1.79176	-1.7917610	49	
ND<0	1.79176	-1.7917610	50	
ND<0	1.79176	-1.7917610	51	
ND<0	1.79176	-1.7917610	52	
1.10194	1.79176	-0.689819	10	53
0.24686 J	1.79176	-1.5449 10	54	
-0.527633 J	1.79176	-2.3193910	55	
-0.040822 J	1.79176	-1.8325810	56	
0.693147	1.79176	-1.0986110	57	
0.00995033 J	1.79176	-1.7818110	58	
ND<0	1.79176	-1.7917610	59	
-1.23787 J	1.79176	-3.0296310	60	
0.405465	1.79176	-1.3862910	61	
-1.51413 J	1.79176	-3.3058910	62	
ND<0	2.07944	-2.0794410	63	
2.19722	2.07944	0.117783	11	63
1.94591	2.07944	-0.133531	11	64
ND<0	2.07944	-2.0794411	65	
ND<0	2.07944	-2.0794411	66	
ND<0	2.07944	-2.0794411	67	
1.62924	2.07944	-0.450201	11	68
0.832909	2.07944	-1.2465311	69	
ND<0	2.07944	-2.0794411	70	
ND<0	2.07944	-2.0794411	71	
ND<0	2.07944	-2.0794411	72	
ND<0	2.07944	-2.0794411	73	
1.10194	2.07944	-0.977501	11	74
0.24686 J	2.07944	-1.8325811	75	
-0.527633 J	2.07944	-2.6070711	76	
-0.040822 J	2.07944	-2.1202611	77	
0.693147	2.07944	-1.3862911	78	
0.00995033 J	2.07944	-2.0694911	79	
ND<0	2.07944	-2.0794411	80	
-1.23787 J	2.07944	-3.3173211	81	
0.405465	2.07944	-1.6739811	82	
-1.51413 J	2.07944	-3.5935711	83	
2.19722	ND<0	2.19722 12	83	
1.94591	ND<0	1.94591 13	83	
ND<0	ND<0	0 13	83	
ND<0	ND<0	0 13	83	
ND<0	ND<0	0 13	83	
1.62924	ND<0	1.62924 14	83	
0.832909	ND<0	0.832909	15	83
ND<0	ND<0	0 15	83	
ND<0	ND<0	0 15	83	
ND<0	ND<0	0 15	83	
ND<0	ND<0	0 15	83	
1.10194	ND<0	1.10194 16	83	

0.24686 J	ND<0	0.24686	17	83		
-0.527633 J	ND<0	-0.527633	17	84		
-0.040822 J	ND<0	-0.040822	17	85		
0.693147	ND<0	0.693147	18	85		
0.00995033 J	ND<0	0.00995033	19	85		
ND<0	ND<0	0	19	85		
-1.23787 J	ND<0	-1.23787	19	86		
0.405465	ND<0	0.405465	20	86		
-1.51413 J	ND<0	-1.51413	20	87		
1.94591	2.19722	-0.25131	4	20	88	
ND<0	2.19722	-2.19722	20	89		
ND<0	2.19722	-2.19722	20	90		
ND<0	2.19722	-2.19722	20	91		
1.62924	2.19722	-0.56798	4	20	92	
0.832909	2.19722	-1.36432	20	93		
ND<0	2.19722	-2.19722	20	94		
ND<0	2.19722	-2.19722	20	95		
ND<0	2.19722	-2.19722	20	96		
ND<0	2.19722	-2.19722	20	97		
1.10194	2.19722	-1.09528	20	98		
0.24686 J	2.19722	-1.95036	20	99		
-0.527633 J	2.19722	-2.72486	20	100		
-0.040822 J	2.19722	-2.23805	20	101		
0.693147	2.19722	-1.50408	20	102		
0.00995033 J	2.19722	-2.18727	20	103		
ND<0	2.19722	-2.19722	20	104		
-1.23787 J	2.19722	-3.4351	20	105		
0.405465	2.19722	-1.79176	20	106		
-1.51413 J	2.19722	-3.71135	20	107		
ND<0	1.94591	-1.94591	20	108		
ND<0	1.94591	-1.94591	20	109		
ND<0	1.94591	-1.94591	20	110		
1.62924	1.94591	-0.31667	20	111		
0.832909	1.94591	-1.113	20	112		
ND<0	1.94591	-1.94591	20	113		
ND<0	1.94591	-1.94591	20	114		
ND<0	1.94591	-1.94591	20	115		
ND<0	1.94591	-1.94591	20	116		
1.10194	1.94591	-0.84397	20	117		
0.24686 J	1.94591	-1.69905	20	118		
-0.527633 J	1.94591	-2.47354	20	119		
-0.040822 J	1.94591	-1.98673	20	120		
0.693147	1.94591	-1.25276	20	121		
0.00995033 J	1.94591	-1.93596	20	122		
ND<0	1.94591	-1.94591	20	123		
-1.23787 J	1.94591	-3.18378	20	124		
0.405465	1.94591	-1.54045	20	125		
-1.51413 J	1.94591	-3.46004	20	126		
ND<0	ND<0	0	20	126		
ND<0	ND<0	0	20	126		
1.62924	ND<0	1.62924	21	126		
0.832909	ND<0	0.832909	22	126		
ND<0	ND<0	0	22	126		
ND<0	ND<0	0	22	126		
ND<0	ND<0	0	22	126		
ND<0	ND<0	0	22	126		
1.10194	ND<0	1.10194	23	126		
0.24686 J	ND<0	0.24686	24	126		
-0.527633 J	ND<0	-0.527633	24	127		

-0.040822 J	ND<0	-0.040822	24	128	
0.693147	ND<0	0.693147	25	128	
0.00995033 J	ND<0	0.00995033	26	128	
ND<0	ND<0	0	26	128	
-1.23787 J	ND<0	-1.2378726	129		
0.405465	ND<0	0.405465	27	129	
-1.51413 J	ND<0	-1.5141327	130		
ND<0	ND<0	0	27	130	
1.62924	ND<0	1.62924 28	130		
0.832909	ND<0	0.832909	29	130	
ND<0	ND<0	0	29	130	
ND<0	ND<0	0	29	130	
ND<0	ND<0	0	29	130	
ND<0	ND<0	0	29	130	
1.10194	ND<0	1.10194 30	130		
0.24686 J	ND<0	0.24686 31	130		
-0.527633 J	ND<0	-0.527633	31	131	
-0.040822 J	ND<0	-0.040822	31	132	
0.693147	ND<0	0.693147	32	132	
0.00995033 J	ND<0	0.00995033	33	132	
ND<0	ND<0	0	33	132	
-1.23787 J	ND<0	-1.2378733	133		
0.405465	ND<0	0.405465	34	133	
-1.51413 J	ND<0	-1.5141334	134		
1.62924	ND<0	1.62924 35	134		
0.832909	ND<0	0.832909	36	134	
ND<0	ND<0	0	36	134	
ND<0	ND<0	0	36	134	
ND<0	ND<0	0	36	134	
ND<0	ND<0	0	36	134	
1.10194	ND<0	1.10194 37	134		
0.24686 J	ND<0	0.24686 38	134		
-0.527633 J	ND<0	-0.527633	38	135	
-0.040822 J	ND<0	-0.040822	38	136	
0.693147	ND<0	0.693147	39	136	
0.00995033 J	ND<0	0.00995033	40	136	
ND<0	ND<0	0	40	136	
-1.23787 J	ND<0	-1.2378740	137		
0.405465	ND<0	0.405465	41	137	
-1.51413 J	ND<0	-1.5141341	138		
0.832909	1.62924	-0.796331	41	139	
ND<0	1.62924	-1.6292441	140		
ND<0	1.62924	-1.6292441	141		
ND<0	1.62924	-1.6292441	142		
ND<0	1.62924	-1.6292441	143		
1.10194	1.62924	-0.5273 41	144		
0.24686 J	1.62924	-1.3823841	145		
-0.527633 J	1.62924	-2.1568741	146		
-0.040822 J	1.62924	-1.6700641	147		
0.693147	1.62924	-0.936093	41	148	
0.00995033 J	1.62924	-1.6192941	149		
ND<0	1.62924	-1.6292441	150		
-1.23787 J	1.62924	-2.8671141	151		
0.405465	1.62924	-1.2237841	152		
-1.51413 J	1.62924	-3.1433741	153		
ND<0	0.832909	-0.832909	41	154	
ND<0	0.832909	-0.832909	41	155	
ND<0	0.832909	-0.832909	41	156	

ND<0	0.832909	-0.832909	41	157	
1.10194	0.832909	0.269031	42	157	
0.24686 J	0.832909	-0.586049	42	158	
-0.527633 J	0.832909	-1.3605442	159		
-0.040822 J	0.832909	-0.873731	42	160	
0.693147	0.832909	-0.139762	42	161	
0.00995033 J	0.832909	-0.822959	42	162	
ND<0	0.832909	-0.832909	42	163	
-1.23787 J	0.832909	-2.0707842	164		
0.405465	0.832909	-0.427444	42	165	
-1.51413 J	0.832909	-2.3470442	166		

ND<0	ND<0	0	42	166	
ND<0	ND<0	0	42	166	
ND<0	ND<0	0	42	166	
1.10194	ND<0	1.10194	43	166	
0.24686 J	ND<0	0.24686	44	166	
-0.527633 J	ND<0	-0.527633	44	167	
-0.040822 J	ND<0	-0.040822	44	168	
0.693147	ND<0	0.693147	45	168	
0.00995033 J	ND<0	0.00995033	46	168	
ND<0	ND<0	0	46	168	
-1.23787 J	ND<0	-1.2378746	169		
0.405465	ND<0	0.405465	47	169	
-1.51413 J	ND<0	-1.5141347	170		

ND<0	ND<0	0	47	170	
ND<0	ND<0	0	47	170	
1.10194	ND<0	1.10194	48	170	
0.24686 J	ND<0	0.24686	49	170	
-0.527633 J	ND<0	-0.527633	49	171	
-0.040822 J	ND<0	-0.040822	49	172	
0.693147	ND<0	0.693147	50	172	
0.00995033 J	ND<0	0.00995033	51	172	
ND<0	ND<0	0	51	172	
-1.23787 J	ND<0	-1.2378751	173		
0.405465	ND<0	0.405465	52	173	
-1.51413 J	ND<0	-1.5141352	174		

ND<0	ND<0	0	52	174	
1.10194	ND<0	1.10194	53	174	
0.24686 J	ND<0	0.24686	54	174	
-0.527633 J	ND<0	-0.527633	54	175	
-0.040822 J	ND<0	-0.040822	54	176	
0.693147	ND<0	0.693147	55	176	
0.00995033 J	ND<0	0.00995033	56	176	
ND<0	ND<0	0	56	176	
-1.23787 J	ND<0	-1.2378756	177		
0.405465	ND<0	0.405465	57	177	
-1.51413 J	ND<0	-1.5141357	178		

1.10194	ND<0	1.10194	58	178	
0.24686 J	ND<0	0.24686	59	178	
-0.527633 J	ND<0	-0.527633	59	179	
-0.040822 J	ND<0	-0.040822	59	180	
0.693147	ND<0	0.693147	60	180	
0.00995033 J	ND<0	0.00995033	61	180	
ND<0	ND<0	0	61	180	
-1.23787 J	ND<0	-1.2378761	181		
0.405465	ND<0	0.405465	62	181	
-1.51413 J	ND<0	-1.5141362	182		

0.24686 J	1.10194	-0.8550862	183	
-0.527633 J	1.10194	-1.6295762	184	
-0.040822 J	1.10194	-1.1427662	185	
0.693147	1.10194	-0.408793	62	186
0.00995033 J	1.10194	-1.0919962	187	
ND<0	1.10194	-1.1019462	188	
-1.23787 J	1.10194	-2.3398162	189	
0.405465	1.10194	-0.696475	62	190
-1.51413 J	1.10194	-2.6160762	191	
-0.527633 J	0.24686 J	-0.774493	62	192
-0.040822 J	0.24686 J	-0.287682	62	193
0.693147	0.24686 J	0.446287	63	193
0.00995033 J	0.24686 J	-0.2369163	194	
ND<0	0.24686 J	-0.2468663	195	
-1.23787 J	0.24686 J	-1.4847363	196	
0.405465	0.24686 J	0.158605	64	196
-1.51413 J	0.24686 J	-1.7609964	197	
-0.040822 J	-0.527633 J	0.486811	65	197
0.693147	-0.527633 J	1.22078	66	197
0.00995033 J	-0.527633 J	0.537583	67	197
ND<0	-0.527633 J	0.527633	68	197
-1.23787 J	-0.527633 J	-0.710242	68	198
0.405465	-0.527633 J	0.933098	69	198
-1.51413 J	-0.527633 J	-0.986495	69	199
0.693147	-0.040822 J	0.733969	70	199
0.00995033 J	-0.040822 J	0.0507723	71	199
ND<0	-0.040822 J	0.040822	72	199
-1.23787 J	-0.040822 J	-1.1970572	200	
0.405465	-0.040822 J	0.446287	73	200
-1.51413 J	-0.040822 J	-1.4733173	201	
0.00995033 J	0.693147	-0.683197	73	202
ND<0	0.693147	-0.693147	73	203
-1.23787 J	0.693147	-1.9310273	204	
0.405465	0.693147	-0.287682	73	205
-1.51413 J	0.693147	-2.2072773	206	
ND<0	0.00995033 J	-0.00995033	73	207
-1.23787 J	0.00995033 J	-1.2478273	208	
0.405465	0.00995033 J	0.395515	74	208
-1.51413 J	0.00995033 J	-1.5240874	209	
-1.23787 J	ND<0	-1.2378774	210	
0.405465	ND<0	0.405465	75	210
-1.51413 J	ND<0	-1.5141375	211	
0.405465	-1.23787 J	1.64334	76	211
-1.51413 J	-1.23787 J	-0.276253	76	212
-1.51413 J	0.405465	-1.9195976	213	

S Statistic = 76 - 213 = -137

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
11/15/2009	1

There are 0 time periods with multiple data

A = 1656
B = 0
C = 504
D = 0
E = 72
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1966.33
Z-Score = -3.06698
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-3.06698| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: Vanadium

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 196
Total Non-Detect: 147
Percent Non-Detects: 75%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	13 (86.6667%)	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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-11R	25	23 (92%)	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

MW-12AR	15	12 (80%)	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		
MW-7	25	12 (48%)	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		
MW-12BR	15	14 (93.3333%)	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		
MW-10	26	16 (61.5385%)	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	
			11/15/2009	1.5 J	1.5 J	
MW-8	25	13 (52%)	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	
MW-6	25	24 (96%)	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	
MW-9	25	20 (80%)	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	

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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.7	-2.57583	6.63492	-1.80308
2	0.7	-2.32634	12.0468	-3.43152
3	0.7	-2.17009	16.7561	-4.95059
4	0.7	-2.05375	20.974	-6.38821
5	0.7	-1.95996	24.8154	-7.76018
6	0.7	-1.88079	28.3528	-9.07674
7	1.4	-1.81191	31.6358	-11.6134
8	1.5	-1.75069	34.7007	-14.2394
9	1.9	-1.6954	37.5751	-17.4607
10	2.5	-1.64485	40.2806	-21.5728
11	2.94	-1.59819	42.8348	-26.2715
12	3.07	-1.55477	45.2522	-31.0447
13	3.77	-1.5141	47.5447	-36.7528
14	4	-1.46838	49.7008	-42.6264
15	4.3	-1.4325	51.7529	-48.7861
16	4.47	-1.39838	53.7083	-55.0369
17	5.32	-1.36581	55.5738	-62.303
18	6	-1.33462	57.355	-70.3107
19	6	-1.30469	59.0572	-78.1388
20	7	-1.27588	60.6851	-87.07
21	8.33	-1.24809	62.2428	-97.4665
22	9	-1.22123	63.7342	-108.458
23	9	-1.19522	65.1627	-119.215
24	9	-1.17	66.5316	-129.745
25	10	-1.1455	67.8438	-141.2
26	10	-1.12168	69.102	-152.416
27	10	-1.0939	70.2986	-163.355
28	10	-1.07138	71.4464	-174.069
29	10	-1.04939	72.5476	-184.563
30	10	-1.02789	73.6042	-194.842
31	10	-1.00687	74.618	-204.911
32	10	-0.986272	75.5907	-214.773
33	10	-0.966088	76.524	-224.434
34	10	-0.946291	77.4195	-233.897
35	10	-0.926859	78.2786	-243.166
36	10	-0.907769	79.1026	-252.243
37	10	-0.889006	79.893	-261.133
38	10	-0.87055	80.6508	-269.839
39	10	-0.852385	81.3774	-278.363
40	10	-0.830953	82.0679	-286.672
41	10	-0.813379	82.7294	-294.806
42	10	-0.796056	83.3632	-302.767
43	10	-0.778966	83.9699	-310.556
44	10	-0.7621	84.5507	-318.177
45	10	-0.745449	85.1064	-325.632
46	10	-0.729003	85.6379	-332.922
47	10	-0.712751	86.1459	-340.049
48	10	-0.696684	86.6313	-347.016
49	10	-0.680797	87.0947	-353.824

50	10	-0.665079	87.5371	-360.475
51	10	-0.649522	87.959	-366.97
52	10	-0.634124	88.3611	-373.311
53	10	-0.615839	88.7403	-379.47
54	10	-0.6007689.1012	-385.477	
55	10	-0.585815	89.4444	-391.336
56	10	-0.570999	89.7705	-397.046
57	10	-0.556308	90.0799	-402.609
58	10	-0.541736	90.3734	-408.026
59	10	-0.5272890.6514	-413.299	
60	10	-0.5129390.9145	-418.428	
61	10	-0.498687	91.1632	-423.415
62	10	-0.484544	91.398	-428.26
63	10	-0.470498	91.6194	-432.965
64	10	-0.456542	91.8278	-437.531
65	10	-0.442676	92.0238	-441.958
66	10	-0.426148	92.2054	-446.219
67	10	-0.412463	92.3755	-450.344
68	10	-0.398855	92.5346	-454.332
69	10	-0.385321	92.683	-458.185
70	10	-0.371856	92.8213	-461.904
71	10	-0.358459	92.9498	-465.489
72	10	-0.345126	93.0689	-468.94
73	10	-0.331854	93.1791	-472.258
74	10	-0.318639	93.2806	-475.445
75	10	-0.305481	93.3739	-478.5
76	10	-0.292375	93.4594	-481.423
77	10	-0.279319	93.5374	-484.217
78	10	-0.266311	93.6083	-486.88
79	10	-0.250759	93.6712	-489.387
80	10	-0.237847	93.7278	-491.766
81	10	-0.224974	93.7784	-494.015
82	10	-0.212137	93.8234	-496.137
83	10	-0.199336	93.8631	-498.13
84	10	-0.186567	93.8979	-499.996
85	10	-0.173829	93.9282	-501.734
86	10	-0.161119	93.9541	-503.345
87	10	-0.148434	93.9762	-504.83
88	10	-0.135774	93.9946	-506.187
89	10	-0.123135	94.0097	-507.419
90	10	-0.110516	94.022	-508.524
91	10	-0.0979139	94.0315	-509.503
92	10	-0.0828129	94.0384	-510.331
93	10	-0.0702426	94.0433	-511.034
94	10	-0.0576847	94.0467	-511.61
95	10	-0.0451348	94.0487	-512.062
96	10	-0.0325917	94.0498	-512.388
97	10	-0.0200544	94.0502	-512.588
98	10	-0.00751925	94.0502	-512.663
99	10	0.00751925	94.0503	-512.588
100	10	0.0200544	94.0507	-512.388
101	10	0.0325917	94.0517	-512.062
102	10	0.0451348	94.0538	-511.61
103	10	0.0576847	94.0571	-511.034
104	10	0.0702426	94.062	-510.331
105	10	0.0828129	94.0689	-509.503
106	10	0.0979139	94.0785	-508.524
107	10	0.110516	94.0907	-507.419
108	10	0.123135	94.1059	-506.187
109	10	0.135774	94.1243	-504.83
110	10	0.148434	94.1463	-503.345
111	10	0.161119	94.1723	-501.734

112	10	0.173829		94.2025	-499.996
113	10	0.186567		94.2373	-498.13
114	10	0.199336		94.2771	-496.137
115	10	0.212137		94.3221	-494.015
116	10	0.224974		94.3727	-491.766
117	10	0.237847		94.4292	-489.387
118	10	0.250759		94.4921	-486.88
119	10	0.266311		94.563	-484.217
120	10	0.279319		94.6411	-481.423
121	10	0.292375		94.7265	-478.5
122	10	0.305481		94.8199	-475.445
123	10	0.318639		94.9214	-472.258
124	10	0.331854		95.0315	-468.94
125	10	0.345126		95.1506	-465.489
126	10	0.358459		95.2791	-461.904
127	10	0.371856		95.4174	-458.185
128	10	0.385321		95.5659	-454.332
129	10	0.398855		95.725	-450.344
130	10	0.412463		95.8951	-446.219
131	10	0.426148		96.0767	-441.958
132	10	0.442676		96.2726	-437.531
133	10	0.456542		96.4811	-432.965
134	10	0.470498		96.7024	-428.26
135	10	0.484544		96.9372	-423.415
136	10	0.498687		97.1859	-418.428
137	10	0.51293	97.449	-413.299	
138	10	0.52728	97.727	-408.026	
139	10	0.541736		98.0205	-402.609
140	10	0.556308		98.33	-397.046
141	10	0.570999		98.656	-391.336
142	10	0.585815		98.9992	-385.477
143	10	0.60076	99.3601	-379.47	
144	10	0.615839		99.7394	-373.311
145	10	0.634124		100.141	-366.97
146	10	0.649522		100.563	-360.475
147	10	0.665079		101.006	-353.824
148	10	0.680797		101.469	-347.016
149	10	0.696684		101.955	-340.049
150	10	0.712751		102.463	-332.922
151	10	0.729003		102.994	-325.632
152	10	0.745449		103.55	-318.177
153	10	0.7621	104.131	-310.556	
154	10	0.778966		104.737	-302.767
155	10	0.796056		105.371	-294.806
156	10	0.813379		106.033	-286.672
157	10	0.830953		106.723	-278.363
158	10	0.852385		107.45	-269.839
159	10	0.87055	108.207	-261.133	
160	10	0.889006		108.998	-252.243
161	10	0.907769		109.822	-243.166
162	10	0.926859		110.681	-233.897
163	10	0.946291		111.576	-224.434
164	10	0.966088		112.51	-214.773
165	10	0.986272		113.482	-204.911
166	11	1.00687	114.496	-193.835	
167	12	1.02789	115.553	-181.5	
168	16	1.04939	116.654	-164.71	
169	21.2	1.07138	117.802	-141.997	
170	22	1.0939	118.998	-117.931	
171	22	1.12168	120.257	-93.2543	
172	25	1.1455	121.569	-64.6167	
173	27	1.17	122.938	-33.0267	

174	39	1.19522	124.366	13.587
175	41	1.22123	125.858	63.6573
176	42	1.24809	127.415	116.077
177	43	1.27588	129.043	170.94
178	44	1.30469	130.745	228.346
179	44	1.33462	132.527	287.069
180	50	1.36581	134.392	355.36
181	52	1.39838	136.348	428.075
182	52	1.4325	138.4	502.565
183	62	1.46838	140.556	593.605
184	64	1.5141	142.848	690.508
185	73	1.55477	145.266	804.006
186	76	1.59819	147.82	925.469
187	96	1.64485	150.525	1083.37
188	110	1.6954	153.4	1269.87
189	120	1.75069	156.465	1479.95
190	122	1.81191	159.748	1701
191	160	1.88079	163.285	2001.93
192	164	1.95996	167.126	2323.36
193	178	2.05375	171.344	2688.93
194	245	2.17009	176.054	3220.6
195	270	2.32634	181.466	3848.72
196	274	2.57583	188.1	4554.49

Data Set Standard Deviation = 40.0903
Numerator = 2.07434e+007
Denominator = 5.89527e+007
W Statistic = 0.351865 = 2.07434e+007 / 5.89527e+007

5% Critical value of 0.976 exceeds 0.351865
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.351865
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 = 196

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-0.356675	-2.57583	6.63492	0.918736
2	-0.356675	-2.32634	12.0468	1.74848
3	-0.356675	-2.17009	16.7561	2.5225
4	-0.356675	-2.05375	20.974	3.25502
5	-0.356675	-1.95996	24.8154	3.95409
6	-0.356675	-1.88079	28.3528	4.62492
7	0.336472	-1.81191	31.6358	4.01526
8	0.405465	-1.75069	34.7007	3.30542
9	0.641854	-1.6954	37.5751	2.21722
10	0.916291	-1.64485	40.2806	0.710058
11	1.07841	-1.59819	42.8348	-1.01345
12	1.12168	-1.55477	45.2522	-2.7574
13	1.32708	-1.5141	47.5447	-4.76673
14	1.38629	-1.46838	49.7008	-6.80234
15	1.45862	-1.4325	51.7529	-8.89181
16	1.49739	-1.39838	53.7083	-10.9857
17	1.67147	-1.36581	55.5738	-13.2686
18	1.79176	-1.33462	57.355	-15.66
19	1.79176	-1.30469	59.0572	-17.9976
20	1.94591	-1.27588	60.6851	-20.4804
21	2.11986	-1.24809	62.2428	-23.1262
22	2.19722	-1.22123	63.7342	-25.8095
23	2.19722	-1.19522	65.1627	-28.4356
24	2.19722	-1.17	66.5316	-31.0064
25	2.30259	-1.1455	67.8438	-33.644
26	2.30259	-1.12168	69.102	-36.2268
27	2.30259	-1.0939	70.2986	-38.7456
28	2.30259	-1.07138	71.4464	-41.2125
29	2.30259	-1.04939	72.5476	-43.6288
30	2.30259	-1.02789	73.6042	-45.9956
31	2.30259	-1.00687	74.618	-48.314
32	2.30259	-0.986272	75.5907	-50.585
33	2.30259	-0.966088	76.524	-52.8095
34	2.30259	-0.946291	77.4195	-54.9884
35	2.30259	-0.926859	78.2786	-57.1226
36	2.30259	-0.907769	79.1026	-59.2128
37	2.30259	-0.889006	79.893	-61.2598
38	2.30259	-0.870558	80.6508	-63.2643
39	2.30259	-0.852385	81.3774	-65.227
40	2.30259	-0.830953	82.0679	-67.1403
41	2.30259	-0.813379	82.7294	-69.0132
42	2.30259	-0.796056	83.3632	-70.8462
43	2.30259	-0.778966	83.9699	-72.6398
44	2.30259	-0.7621	84.5507	-74.3946
45	2.30259	-0.745449	85.1064	-76.1111
46	2.30259	-0.729003	85.6379	-77.7897
47	2.30259	-0.712751	86.1459	-79.4309
48	2.30259	-0.696684	86.6313	-81.035
49	2.30259	-0.680797	87.0947	-82.6026

50	2.30259	-0.665079	87.5371	-84.134
51	2.30259	-0.649522	87.959	-85.6296
52	2.30259	-0.634124	88.3611	-87.0897
53	2.30259	-0.615839	88.7403	-88.5078
54	2.30259	-0.6007689.1012	-89.8911	
55	2.30259	-0.585815	89.4444	-91.2399
56	2.30259	-0.570999	89.7705	-92.5547
57	2.30259	-0.556308	90.0799	-93.8357
58	2.30259	-0.541736	90.3734	-95.0831
59	2.30259	-0.5272890.6514	-96.2972	
60	2.30259	-0.5129390.9145	-97.4782	
61	2.30259	-0.498687	91.1632	-98.6265
62	2.30259	-0.484544	91.398	-99.7422
63	2.30259	-0.470498	91.6194	-100.826
64	2.30259	-0.456542	91.8278	-101.877
65	2.30259	-0.442676	92.0238	-102.896
66	2.30259	-0.426148	92.2054	-103.877
67	2.30259	-0.412463	92.3755	-104.827
68	2.30259	-0.398855	92.5346	-105.745
69	2.30259	-0.385321	92.683	-106.633
70	2.30259	-0.371856	92.8213	-107.489
71	2.30259	-0.358459	92.9498	-108.314
72	2.30259	-0.345126	93.0689	-109.109
73	2.30259	-0.331854	93.1791	-109.873
74	2.30259	-0.318639	93.2806	-110.607
75	2.30259	-0.305481	93.3739	-111.31
76	2.30259	-0.292375	93.4594	-111.983
77	2.30259	-0.279319	93.5374	-112.627
78	2.30259	-0.266311	93.6083	-113.24
79	2.30259	-0.250759	93.6712	-113.817
80	2.30259	-0.237847	93.7278	-114.365
81	2.30259	-0.224974	93.7784	-114.883
82	2.30259	-0.212137	93.8234	-115.371
83	2.30259	-0.199336	93.8631	-115.83
84	2.30259	-0.186567	93.8979	-116.26
85	2.30259	-0.173829	93.9282	-116.66
86	2.30259	-0.161119	93.9541	-117.031
87	2.30259	-0.148434	93.9762	-117.373
88	2.30259	-0.135774	93.9946	-117.686
89	2.30259	-0.123135	94.0097	-117.969
90	2.30259	-0.110516	94.022	-118.224
91	2.30259	-0.0979139	94.0315	-118.449
92	2.30259	-0.0828129	94.0384	-118.64
93	2.30259	-0.0702426	94.0433	-118.801
94	2.30259	-0.0576847	94.0467	-118.934
95	2.30259	-0.0451348	94.0487	-119.038
96	2.30259	-0.0325917	94.0498	-119.113
97	2.30259	-0.0200544	94.0502	-119.159
98	2.30259	-0.00751925	94.0502	-119.177
99	2.30259	0.00751925	94.0503	-119.159
100	2.30259	0.0200544	94.0507	-119.113
101	2.30259	0.0325917	94.0517	-119.038
102	2.30259	0.0451348	94.0538	-118.934
103	2.30259	0.0576847	94.0571	-118.801
104	2.30259	0.0702426	94.062	-118.64
105	2.30259	0.0828129	94.0689	-118.449
106	2.30259	0.0979139	94.0785	-118.224
107	2.30259	0.110516	94.0907	-117.969
108	2.30259	0.123135	94.1059	-117.686
109	2.30259	0.135774	94.1243	-117.373
110	2.30259	0.148434	94.1463	-117.031
111	2.30259	0.161119	94.1723	-116.66

112	2.30259	0.173829		94.2025	-116.26
113	2.30259	0.186567		94.2373	-115.83
114	2.30259	0.199336		94.2771	-115.371
115	2.30259	0.212137		94.3221	-114.883
116	2.30259	0.224974		94.3727	-114.365
117	2.30259	0.237847		94.4292	-113.817
118	2.30259	0.250759		94.4921	-113.24
119	2.30259	0.266311		94.563	-112.627
120	2.30259	0.279319		94.6411	-111.983
121	2.30259	0.292375		94.7265	-111.31
122	2.30259	0.305481		94.8199	-110.607
123	2.30259	0.318639		94.9214	-109.873
124	2.30259	0.331854		95.0315	-109.109
125	2.30259	0.345126		95.1506	-108.314
126	2.30259	0.358459		95.2791	-107.489
127	2.30259	0.371856		95.4174	-106.633
128	2.30259	0.385321		95.5659	-105.745
129	2.30259	0.398855		95.725	-104.827
130	2.30259	0.412463		95.8951	-103.877
131	2.30259	0.426148		96.0767	-102.896
132	2.30259	0.442676		96.2726	-101.877
133	2.30259	0.456542		96.4811	-100.826
134	2.30259	0.470498		96.7024	-99.7422
135	2.30259	0.484544		96.9372	-98.6265
136	2.30259	0.498687		97.1859	-97.4782
137	2.30259	0.51293	97.449	-96.2972	
138	2.30259	0.52728	97.727	-95.0831	
139	2.30259	0.541736		98.0205	-93.8357
140	2.30259	0.556308		98.33	-92.5547
141	2.30259	0.570999		98.656	-91.2399
142	2.30259	0.585815		98.9992	-89.8911
143	2.30259	0.60076	99.3601	-88.5078	
144	2.30259	0.615839		99.7394	-87.0897
145	2.30259	0.634124		100.141	-85.6296
146	2.30259	0.649522		100.563	-84.134
147	2.30259	0.665079		101.006	-82.6026
148	2.30259	0.680797		101.469	-81.035
149	2.30259	0.696684		101.955	-79.4309
150	2.30259	0.712751		102.463	-77.7897
151	2.30259	0.729003		102.994	-76.1111
152	2.30259	0.745449		103.55	-74.3946
153	2.30259	0.7621	104.131	-72.6398	
154	2.30259	0.778966		104.737	-70.8462
155	2.30259	0.796056		105.371	-69.0132
156	2.30259	0.813379		106.033	-67.1403
157	2.30259	0.830953		106.723	-65.227
158	2.30259	0.852385		107.45	-63.2643
159	2.30259	0.87055	108.207	-61.2598	
160	2.30259	0.889006		108.998	-59.2128
161	2.30259	0.907769		109.822	-57.1226
162	2.30259	0.926859		110.681	-54.9884
163	2.30259	0.946291		111.576	-52.8095
164	2.30259	0.966088		112.51	-50.585
165	2.30259	0.986272		113.482	-48.314
166	2.3979	1.00687	114.496	-45.8996	
167	2.48491	1.02789	115.553	-43.3454	
168	2.77259	1.04939	116.654	-40.4359	
169	3.054	1.07138	117.802	-37.1639	
170	3.09104	1.0939	118.998	-33.7826	
171	3.09104	1.12168	120.257	-30.3155	
172	3.21888	1.1455	121.569	-26.6283	
173	3.29584	1.17	122.938	-22.7721	

174	3.66356	1.19522	124.366	-18.3934
175	3.71357	1.22123	125.858	-13.8582
176	3.73767	1.24809	127.415	-9.1933
177	3.7612	1.27588	129.043	-4.39448
178	3.78419	1.30469	130.745	0.542702
179	3.78419	1.33462	132.527	5.59317
180	3.91202	1.36581	134.392	10.9362
181	3.95124	1.39838	136.348	16.4616
182	3.95124	1.4325	138.4	22.1217
183	4.12713	1.46838	140.556	28.182
184	4.15888	1.5141	142.848	34.4789
185	4.29046	1.55477	145.266	41.1496
186	4.33073	1.59819	147.82	48.071
187	4.56435	1.64485	150.525	55.5786
188	4.70048	1.6954	153.4	63.5478
189	4.78749	1.75069	156.465	71.9292
190	4.80402	1.81191	159.748	80.6337
191	5.07517	1.88079	163.285	90.179
192	5.09987	1.95996	167.126	100.175
193	5.18178	2.05375	171.344	110.817
194	5.50126	2.17009	176.054	122.755
195	5.59842	2.32634	181.466	135.779
196	5.61313	2.57583	188.1	150.237

Data Set Standard Deviation = 0.953855
Numerator = 22571.2
Denominator = 33372.6
W Statistic = 0.676341 = 22571.2 / 33372.6

5% Critical value of 0.976 exceeds 0.676341
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.676341
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	74
	9/23/1999	2.3979 J	166
	3/15/2000	3.09104	170
	9/24/2003	ND<2.30259	74
	3/11/2004	ND<2.30259	74
	10/12/2004	ND<2.30259	74
	4/1/2005	ND<2.30259	74
	10/25/2005	ND<2.30259	74
	4/29/2006	ND<2.30259	74
	11/18/2006	ND<2.30259	74
	5/23/2007	ND<2.30259	74
	11/28/2007	ND<2.30259	74
	6/5/2008	ND<2.30259	74
	11/20/2008	ND<2.30259	74
	6/11/2009	ND<-0.356675	74

Rank Sum = 1298
Rank Mean = 86.5333

Background Rank Sum = 1298
Background Rank Mean = 86.5333

Compliance Wells

Well ID	Date	Result	Rank
MW-11R	7/20/1995	ND<2.30259	74
	8/24/1995	ND<2.30259	74
	9/28/1995	ND<2.30259	74
	10/26/1995	ND<2.30259	74
	11/19/1996	ND<2.30259	74
	12/19/1996	ND<2.30259	74
	3/24/1997	ND<2.30259	74
	9/24/1997	ND<2.30259	74
	4/7/1998	ND<2.30259	74
	9/23/1998	ND<2.30259	74
	3/16/1999	ND<2.30259	74
	9/23/1999	2.19722 J	163
	3/15/2000	ND<2.30259	74
	9/24/2003	ND<2.30259	74
	3/11/2004	ND<2.30259	74
	10/12/2004	ND<2.30259	74
	4/1/2005	ND<2.30259	74
	10/25/2005	ND<2.30259	74
	4/29/2006	ND<2.30259	74
	11/18/2006	ND<2.30259	74
	5/23/2007	1.67147	158
	11/28/2007	ND<2.30259	74
	6/5/2008	ND<2.30259	74

	11/20/2008	ND<2.30259	74
	6/11/2009	ND<-0.356675	74

Rank Sum = 2023
Rank Mean = 80.92

MW-12AR	3/16/1999	ND<2.30259	74
	9/23/1999	ND<2.30259	74
	3/15/2000	5.59842	195
	9/24/2003	3.7612	177
	3/11/2004	4.56435	187
	10/12/2004	ND<2.30259	74
	4/1/2005	ND<2.30259	74
	10/25/2005	ND<2.30259	74
	4/29/2006	ND<2.30259	74
	11/18/2006	ND<2.30259	74
	5/23/2007	ND<2.30259	74
	11/28/2007	ND<2.30259	74
	6/5/2008	ND<2.30259	74
	11/20/2008	ND<2.30259	74
	6/11/2009	ND<-0.356675	74

Rank Sum = 1447
Rank Mean = 96.4667

MW-7	7/20/1995	1.38629 J	155
	8/24/1995	ND<2.30259	74
	9/28/1995	5.61313	196
	10/26/1995	4.80402	190
	11/19/1996	ND<2.30259	74
	12/19/1996	5.18178	193
	3/24/1997	4.78749	189
	9/24/1997	4.33073	186
	4/7/1998	5.07517	191
	9/23/1998	ND<2.30259	74
	3/16/1999	ND<2.30259	74
	9/23/1999	3.29584	173
	3/15/2000	4.12713	183
	9/24/2003	ND<2.30259	74
	3/11/2004	ND<2.30259	74
	10/12/2004	ND<2.30259	74
	4/1/2005	ND<2.30259	74
	10/25/2005	ND<2.30259	74
	4/29/2006	ND<2.30259	74
	11/18/2006	ND<2.30259	74
	5/23/2007	2.11986	162
	11/28/2007	ND<2.30259	74
	6/5/2008	0.916291 J	151
	11/20/2008	2.77259 J	168
	6/11/2009	1.45862 J	156

Rank Sum = 3181
Rank Mean = 127.24

MW-12BR	3/16/1999	ND<2.30259	74
	9/23/1999	3.09104	171
	3/15/2000	ND<2.30259	74
	9/24/2003	ND<2.30259	74
	3/11/2004	ND<2.30259	74
	10/12/2004	ND<2.30259	74
	4/1/2005	ND<2.30259	74
	10/25/2005	ND<2.30259	74
	4/29/2006	ND<2.30259	74
	11/18/2006	ND<2.30259	74
	5/23/2007	ND<2.30259	74

	11/28/2007	ND<2.30259	74
	6/5/2008	ND<2.30259	74
	11/20/2008	ND<2.30259	74
	6/11/2009	ND<-0.356675	74

Rank Sum = 1207
Rank Mean = 80.4667

MW-10	7/20/1995	ND<2.30259	74
	8/24/1995	ND<2.30259	74
	9/28/1995	ND<2.30259	74
	10/26/1995	ND<2.30259	74
	11/19/1996	ND<2.30259	74
	12/19/1996	3.95124	181
	3/24/1997	ND<2.30259	74
	9/24/1997	3.91202	180
	4/7/1998	4.29046	185
	9/23/1998	ND<2.30259	74
	3/16/1999	ND<2.30259	74
	9/23/1999	1.79176 J	159
	3/15/2000	3.71357	175
	9/24/2003	ND<2.30259	74
	3/11/2004	ND<2.30259	74
	10/12/2004	ND<2.30259	74
	4/1/2005	ND<2.30259	74
	10/25/2005	ND<2.30259	74
	4/29/2006	ND<2.30259	74
	11/18/2006	ND<2.30259	74
	5/23/2007	1.32708 J	154
	11/28/2007	2.19722 J	164
	6/5/2008	ND<2.30259	74
	11/20/2008	3.66356	174
	6/11/2009	0.641854 J	150
	11/15/2009	0.405465 J	149

Rank Sum = 2855
Rank Mean = 109.808

MW-8	7/20/1995	ND<2.30259	74
	8/24/1995	ND<2.30259	74
	9/28/1995	5.50126	194
	10/26/1995	ND<2.30259	74
	11/19/1996	ND<2.30259	74
	12/19/1996	5.09987	192
	3/24/1997	3.78419	178
	9/24/1997	ND<2.30259	74
	4/7/1998	3.78419	179
	9/23/1998	4.70048	188
	3/16/1999	ND<2.30259	74
	9/23/1999	1.79176 J	160
	3/15/2000	ND<2.30259	74
	9/24/2003	ND<2.30259	74
	3/11/2004	ND<2.30259	74
	10/12/2004	ND<2.30259	74
	4/1/2005	ND<2.30259	74
	10/25/2005	ND<2.30259	74
	4/29/2006	ND<2.30259	74
	11/18/2006	1.49739 J	157
	5/23/2007	2.48491	167
	11/28/2007	3.054	169
	6/5/2008	1.07841 J	152
	11/20/2008	2.19722 J	165
	6/11/2009	0.336472 J	148

Rank Sum = 3011

Rank Mean = 120.44

MW-6	7/20/1995	ND<2.30259	74
	8/24/1995	ND<2.30259	74
	9/28/1995	ND<2.30259	74
	10/26/1995	ND<2.30259	74
	11/19/1996	ND<2.30259	74
	12/19/1996	ND<2.30259	74
	3/24/1997	ND<2.30259	74
	9/24/1997	ND<2.30259	74
	4/7/1998	ND<2.30259	74
	9/23/1998	ND<2.30259	74
	3/16/1999	ND<2.30259	74
	9/23/1999	ND<2.30259	74
	3/15/2000	4.15888	184
	9/24/2003	ND<2.30259	74
	3/11/2004	ND<2.30259	74
	10/12/2004	ND<2.30259	74
	4/1/2005	ND<2.30259	74
	10/25/2005	ND<2.30259	74
	4/29/2006	ND<2.30259	74
	11/18/2006	ND<2.30259	74
	5/23/2007	ND<2.30259	74
	11/28/2007	ND<2.30259	74
	6/5/2008	ND<2.30259	74
	11/20/2008	ND<2.30259	74
	6/11/2009	ND<-0.356675	74

Rank Sum = 1960
Rank Mean = 78.4

MW-9	7/20/1995	ND<2.30259	74
	8/24/1995	ND<2.30259	74
	9/28/1995	ND<2.30259	74
	10/26/1995	ND<2.30259	74
	11/19/1996	ND<2.30259	74
	12/19/1996	ND<2.30259	74
	3/24/1997	3.95124	182
	9/24/1997	ND<2.30259	74
	4/7/1998	ND<2.30259	74
	9/23/1998	ND<2.30259	74
	3/16/1999	ND<2.30259	74
	9/23/1999	ND<2.30259	74
	3/15/2000	3.73767	176
	9/24/2003	ND<2.30259	74
	3/11/2004	ND<2.30259	74
	10/12/2004	ND<2.30259	74
	4/1/2005	ND<2.30259	74
	10/25/2005	ND<2.30259	74
	4/29/2006	ND<2.30259	74
	11/18/2006	ND<2.30259	74
	5/23/2007	1.12168 J	153
	11/28/2007	1.94591 J	161
	6/5/2008	ND<2.30259	74
	11/20/2008	3.21888	172
	6/11/2009	ND<-0.356675	74

Rank Sum = 2324
Rank Mean = 92.96

Calculation Results:

Kruskal-Wallis H Statistic = 19.1724

Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 33.1625
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
19.1724 > 15.5073 indicating a significant group difference at 5% significance level
33.1625 > 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 86.5333

Well	Mean Rank	Dif from Bkg	Critical Value
MW-11R	80.92	-5.61333	43.0981
MW-12AR	96.4667	9.93333	48.1852
MW-7	127.24	40.7067	43.0981
MW-12BR	80.4667	-6.06667	48.1852
MW-10	109.808	23.2744	42.7862
MW-8	120.44	33.9067	43.0981
MW-6	78.4	-8.13333	43.0981
MW-9	92.96	6.42667	43.0981

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 86.5333

Well	Mean Rank	Dif from Bkg	Critical Value
MW-11R	80.92	-5.61333	46.5401
MW-12AR	96.4667	9.93333	52.0334
MW-7	127.24	40.7067	46.5401
MW-12BR	80.4667	-6.06667	52.0334
MW-10	109.808	23.2744	46.2033
MW-8	120.44	33.9067	46.5401
MW-6	78.4	-8.13333	46.5401
MW-9	92.96	6.42667	46.5401

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Vanadium

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

Total Percent Non-Detects = 75%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 15
Maximum Background Concentration = 3.09104
Confidence Level = 65.2%
False Positive Rate = 34.8%

Location	Date	Samples	Mean	Significant
MW-11R	6/11/2009	1	-0.356675	FALSE
MW-12AR	6/11/2009	1	-0.356675	FALSE
MW-7	6/11/2009	1	1.45862	FALSE
MW-12BR	6/11/2009	1	-0.356675	FALSE
MW-10	11/15/2009	1	0.405465	FALSE
MW-8	6/11/2009	1	0.336472	FALSE
MW-6	6/11/2009	1	-0.356675	FALSE
MW-9	6/11/2009	1	-0.356675	FALSE

Concentrations (ppb)

Parameter: Vinyl chloride

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 197
Total Non-Detect: 124
Percent Non-Detects: 62.9442%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	15 (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

There are 8 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-7	25	18 (72%)	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

MW-11R	25	16 (64%)	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
MW-8	25	2 (8%)	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	
MW-10	26	13 (50%)	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	
			11/15/2009	1.5	1.5	
MW-12AR		15	9 (60%)	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
MW-6	25	25 (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
MW-12BR		15	13 (86.6667%)	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
MW-9	26	13 (50%)	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	
			11/15/2009	1.2 J	1.2 J	

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 = 197

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.09	-2.575836	3.63492	-0.231825
2	0.09	-2.326341	2.0468	-0.441196
3	0.09	-2.170091	6.7561	-0.636504
4	0.09	-2.053752	0.974	-0.821341
5	0.09	-1.959962	4.8154	-0.997738
6	0.09	-1.880792	8.3528	-1.16701
7	0.35	-1.811913	1.6358	-1.80118
8	0.36	-1.750693	4.7007	-2.43143
9	0.47	-1.6954	37.5751	-3.22826
10	0.48	-1.644854	0.2806	-4.01779
11	0.52	-1.598194	2.8348	-4.84885
12	0.52	-1.554774	5.2522	-5.65733
13	0.58	-1.5141	47.5447	-6.53551
14	0.64	-1.475794	9.7226	-7.48002
15	0.69	-1.439535	1.7949	-8.4733
16	0.7	-1.405075	3.7691	-9.45685
17	0.73	-1.3722	55.6521	-10.4586
18	0.78	-1.340755	7.4497	-11.5043
19	0.8	-1.310585	9.1673	-12.5528
20	0.8	-1.275886	0.7952	-13.5735
21	0.8	-1.248096	2.3529	-14.572
22	0.8	-1.221236	3.8443	-15.549
23	0.9	-1.195226	5.2728	-16.6247
24	0.9	-1.17	66.6417	-17.6777
25	0.97	-1.1455	67.9539	-18.7888
26	1	-1.121686	9.2121	-19.9105
27	1	-1.098477	0.4187	-21.0089
28	1	-1.075847	1.5761	-22.0848
29	1	-1.053757	2.6865	-23.1385
30	1	-1.032157	3.7519	-24.1707
31	1	-1.011047	4.774	-25.1817
32	1	-0.990356	75.7549	-26.1721
33	1	-0.970094	76.6959	-27.1422
34	1	-0.950222	77.5989	-28.0924
35	1	-0.930718	78.4651	-29.0231
36	1	-0.911562	79.296	-29.9347
37	1	-0.892733	80.093	-30.8274
38	1	-0.874218	80.8573	-31.7016
39	1	-0.855996	81.59	-32.5576
40	1	-0.834498	82.2864	-33.3921
41	1	-0.816874	82.9537	-34.209
42	1	-0.7995	83.5929	-35.0085
43	1	-0.782366	84.205	-35.7909
44	1	-0.765456	84.7909	-36.5563
45	1	-0.748762	85.3515	-37.3051
46	1	-0.732275	85.8878	-38.0373
47	1	-0.715986	86.4004	-38.7533
48	1	-0.699883	86.8902	-39.4532
49	1	-0.683968	7.358	-40.1372

50	1	-0.668209	87.8045	-40.8054
51	1	-0.652622	88.2304	-41.458
52	1	-0.637192	88.6365	-42.0952
53	1	-0.621911	89.0232	-42.7171
54	1	-0.606775	89.3914	-43.3239
55	1	-0.591776	89.7416	-43.9157
56	1	-0.576911	90.0744	-44.4926
57	1	-0.562179	0.3905	-45.0547
58	1	-0.547551	90.6903	-45.6023
59	1	-0.533048	90.9744	-46.1353
60	1	-0.515791	91.2405	-46.6511
61	1	-0.501527	91.492	-47.1527
62	1	-0.487364	91.7295	-47.64
63	1	-0.473299	91.9535	-48.1133
64	1	-0.459327	92.1645	-48.5727
65	1	-0.445443	92.3629	-49.0181
66	1	-0.431644	92.5492	-49.4497
67	1	-0.417928	92.7239	-49.8677
68	1	-0.404299	2.8874	-50.272
69	1	-0.390726	93.04	-50.6627
70	1	-0.377233	93.1823	-51.0399
71	1	-0.363809	93.3147	-51.4037
72	1	-0.350451	93.4375	-51.7542
73	1	-0.337155	93.5512	-52.0913
74	1	-0.323919	93.6561	-52.4152
75	1	-0.310738	93.7527	-52.726
76	1	-0.297612	93.8412	-53.0236
77	1	-0.284535	93.9222	-53.3081
78	1	-0.271509	93.9959	-53.5796
79	1	-0.258527	94.0627	-53.8382
80	1	-0.243007	94.1218	-54.0812
81	1	-0.230118	94.1748	-54.3113
82	1	-0.217267	94.222	-54.5286
83	1	-0.204452	94.2638	-54.733
84	1	-0.191671	94.3005	-54.9247
85	1	-0.178929	4.3325	-55.1036
86	1	-0.166199	94.3601	-55.2698
87	1	-0.153505	94.3837	-55.4233
88	1	-0.140835	94.4035	-55.5641
89	1	-0.128189	94.42	-55.6923
90	1	-0.115562	94.4333	-55.8079
91	1	-0.102953	94.4439	-55.9108
92	1	-0.0903606	94.4521	-56.0012
93	1	-0.0777834	94.4581	-56.079
94	1	-0.0652187	94.4624	-56.1442
95	1	-0.0526632	94.4652	-56.1969
96	1	-0.0401167	94.4668	-56.237
97	1	-0.0275759	94.4675	-56.2646
98	1	-0.0150408	94.4678	-56.2796
99	1	0	94.4678	-56.2796
100	1	0.0150408	94.468	-56.2646
101	1	0.0275759	94.4687	-56.237
102	1	0.0401167	94.4703	-56.1969
103	1	0.0526632	94.4731	-56.1442
104	1	0.0652187	94.4774	-56.079
105	1	0.0777834	94.4834	-56.0012
106	1	0.0903606	94.4916	-55.9108
107	1	0.102953	94.5022	-55.8079
108	1	0.115562	94.5155	-55.6923
109	1	0.128189	94.532	-55.5641
110	1	0.140835	94.5518	-55.4233
111	1	0.153505	94.5754	-55.2698

112	1	0.166199	94.603	-55.1036
113	1	0.17892	94.635	-54.9247
114	1	0.191671	94.6717	-54.733
115	1	0.204452	94.7135	-54.5286
116	1	0.217267	94.7608	-54.3113
117	1	0.230118	94.8137	-54.0812
118	1	0.243007	94.8728	-53.8382
119	1	0.258527	94.9396	-53.5796
120	1	0.271509	95.0133	-53.3081
121	1	0.284535	95.0943	-53.0236
122	1	0.297612	95.1828	-52.726
123	1	0.310738	95.2794	-52.4152
124	1	0.323919	95.3843	-52.0913
125	1	0.337155	95.498	-51.7542
126	1	0.350451	95.6208	-51.4037
127	1	0.363809	95.7532	-51.0399
128	1	0.377233	95.8955	-50.6627
129	1	0.390726	96.0481	-50.272
130	1	0.40429	96.2116	-49.8677
131	1	0.417928	96.3863	-49.4497
132	1	0.431644	96.5726	-49.0181
133	1	0.445443	96.771	-48.5727
134	1	0.459327	96.982	-48.1133
135	1	0.473299	97.206	-47.64
136	1	0.487364	97.4435	-47.1527
137	1	0.501527	97.695	-46.6511
138	1	0.515791	97.9611	-46.1353
139	1	0.533048	98.2452	-45.6023
140	1	0.547551	98.545	-45.0547
141	1	0.56217	98.8611	-44.4926
142	1	0.576911	99.1939	-43.9157
143	1	0.591776	99.5441	-43.3239
144	1.17	0.606775	99.9123	-42.614
145	1.2	0.621911	100.299	-41.8677
146	1.3	0.637192	100.705	-41.0393
147	1.41	0.652622	101.131	-40.1191
148	1.45	0.668209	101.577	-39.1502
149	1.5	0.68396	102.045	-38.1243
150	1.58	0.699883	102.535	-37.0185
151	1.6	0.715986	103.048	-35.8729
152	1.65	0.732275	103.584	-34.6646
153	1.7	0.748762	104.145	-33.3917
154	1.71	0.765456	104.731	-32.0828
155	1.9	0.782366	105.343	-30.5963
156	1.91	0.7995	105.982	-29.0693
157	2	0.816874	106.649	-27.4355
158	2.08	0.834498	107.346	-25.6998
159	2.4	0.855996	108.078	-23.6454
160	2.44	0.874218	108.842	-21.5123
161	2.48	0.892733	109.639	-19.2983
162	2.59	0.911562	110.47	-16.9374
163	2.6	0.930718	111.337	-14.5175
164	2.7	0.950222	112.24	-11.9519
165	2.8	0.970094	113.181	-9.23563
166	2.81	0.990356	114.161	-6.45273
167	3	1.01104	115.184	-3.41962
168	3.57	1.03215	116.249	0.265167
169	3.6	1.05375	117.359	4.05865
170	4	1.07584	118.517	8.362
171	4	1.09847	119.723	12.7559
172	4	1.12168	120.982	17.2426
173	5	1.1455	122.294	22.9701

174	5.41	1.17	123.663	29.2998
175	7.2	1.19522	125.091	37.9054
176	10.1	1.22123	126.583	50.2398
177	12	1.24809	128.14	65.2168
178	13.7	1.27588	129.768	82.6963
179	15.2	1.31058	131.486	102.617
180	16	1.34075	133.283	124.069
181	19	1.3722	135.166	150.141
182	21.8	1.40507	137.141	180.772
183	24.6	1.43953	139.213	216.184
184	25	1.47579	141.391	253.079
185	33.2	1.5141	143.683	303.347
186	36	1.55477	146.101	359.319
187	36.6	1.59819	148.655	417.813
188	37	1.64485	151.36	478.672
189	39	1.6954	154.235	544.793
190	46	1.75069	157.3	625.324
191	46	1.81191	160.583	708.672
192	48	1.88079	164.12	798.95
193	54.2	1.95996	167.962	905.18
194	59	2.05375	172.179	1026.35
195	78	2.17009	176.889	1195.62
196	130	2.32634	182.301	1498.04
197	230	2.57583	188.936	2090.48

Data Set Standard Deviation = 21.5446
Numerator = 4.37013e+006
Denominator = 1.71888e+007
W Statistic = 0.254243 = 4.37013e+006 / 1.71888e+007

5% Critical value of 0.976 exceeds 0.254243
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.254243
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 = 197

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	-2.40795	-2.57583	6.63492	6.20247
2	-2.40795	-2.32634	12.0468	11.8042
3	-2.40795	-2.17009	16.7561	17.0296
4	-2.40795	-2.05375	20.974	21.9749
5	-2.40795	-1.95996	24.8154	26.6944
6	-2.40795	-1.88079	28.3528	31.2233
7	-1.04982	-1.81191	31.6358	33.1255
8	-1.02165	-1.75069	34.7007	34.914
9	-0.755023	-1.6954	37.5751	36.1941
10	-0.733969	-1.64485	40.2806	37.4014
11	-0.653926	-1.59819	42.8348	38.4465
12	-0.653926	-1.55477	45.2522	39.4632
13	-0.544727	-1.5141	47.5447	40.288
14	-0.446287	-1.47579	49.7226	40.9466
15	-0.371064	-1.43953	51.7949	41.4807
16	-0.356675	-1.40507	53.7691	41.9819
17	-0.314711	-1.3722	55.6521	42.4137
18	-0.248461	-1.34075	57.4497	42.7469
19	-0.223144	-1.31058	59.1673	43.0393
20	-0.223144	-1.27588	60.7952	43.324
21	-0.223144	-1.24809	62.3529	43.6025
22	-0.223144	-1.22123	63.8443	43.875
23	-0.105361	-1.19522	65.2728	44.001
24	-0.105361	-1.17	66.6417	44.1242
25	-0.0304592	-1.1455	67.9539	44.1591
26	0	-1.12168	69.2121	44.1591
27	0	-1.09847	70.4187	44.1591
28	0	-1.07584	71.5761	44.1591
29	0	-1.05375	72.6865	44.1591
30	0	-1.03215	73.7519	44.1591
31	0	-1.01104	74.774	44.1591
32	0	-0.990356	75.7549	44.1591
33	0	-0.970094	76.6959	44.1591
34	0	-0.950222	77.5989	44.1591
35	0	-0.930718	78.4651	44.1591
36	0	-0.911562	79.296	44.1591
37	0	-0.892733	80.093	44.1591
38	0	-0.874218	80.8573	44.1591
39	0	-0.855996	81.59	44.1591
40	0	-0.834498	82.2864	44.1591
41	0	-0.816874	82.9537	44.1591
42	0	-0.7995	83.5929	44.1591
43	0	-0.782366	84.205	44.1591
44	0	-0.765456	84.7909	44.1591
45	0	-0.748762	85.3515	44.1591
46	0	-0.732275	85.8878	44.1591
47	0	-0.715986	86.4004	44.1591
48	0	-0.699883	86.8902	44.1591
49	0	-0.683968	87.358	44.1591

50	0	-0.668209	87.8045	44.1591
51	0	-0.652622	88.2304	44.1591
52	0	-0.637192	88.6365	44.1591
53	0	-0.621911	89.0232	44.1591
54	0	-0.606775	89.3914	44.1591
55	0	-0.591776	89.7416	44.1591
56	0	-0.576911	90.0744	44.1591
57	0	-0.562179	90.3905	44.1591
58	0	-0.547551	90.6903	44.1591
59	0	-0.533048	90.9744	44.1591
60	0	-0.515791	91.2405	44.1591
61	0	-0.501527	91.492	44.1591
62	0	-0.487364	91.7295	44.1591
63	0	-0.473299	91.9535	44.1591
64	0	-0.459327	92.1645	44.1591
65	0	-0.445443	92.3629	44.1591
66	0	-0.431644	92.5492	44.1591
67	0	-0.417928	92.7239	44.1591
68	0	-0.404299	92.8874	44.1591
69	0	-0.390726	93.04	44.1591
70	0	-0.377233	93.1823	44.1591
71	0	-0.363809	93.3147	44.1591
72	0	-0.350451	93.4375	44.1591
73	0	-0.337155	93.5512	44.1591
74	0	-0.323919	93.6561	44.1591
75	0	-0.310738	93.7527	44.1591
76	0	-0.297612	93.8412	44.1591
77	0	-0.284535	93.9222	44.1591
78	0	-0.271509	93.9959	44.1591
79	0	-0.258527	94.0627	44.1591
80	0	-0.243007	94.1218	44.1591
81	0	-0.230118	94.1748	44.1591
82	0	-0.217267	94.222	44.1591
83	0	-0.204452	94.2638	44.1591
84	0	-0.191671	94.3005	44.1591
85	0	-0.178929	94.3325	44.1591
86	0	-0.166199	94.3601	44.1591
87	0	-0.153505	94.3837	44.1591
88	0	-0.140835	94.4035	44.1591
89	0	-0.128189	94.42	44.1591
90	0	-0.115562	94.4333	44.1591
91	0	-0.102953	94.4439	44.1591
92	0	-0.0903606	94.4521	44.1591
93	0	-0.0777834	94.4581	44.1591
94	0	-0.0652187	94.4624	44.1591
95	0	-0.0526632	94.4652	44.1591
96	0	-0.0401167	94.4668	44.1591
97	0	-0.0275759	94.4675	44.1591
98	0	-0.0150408	94.4678	44.1591
99	0	0	94.4678	44.1591
100	0	0.0150408	94.468	44.1591
101	0	0.0275759	94.4687	44.1591
102	0	0.0401167	94.4703	44.1591
103	0	0.0526632	94.4731	44.1591
104	0	0.0652187	94.4774	44.1591
105	0	0.0777834	94.4834	44.1591
106	0	0.0903606	94.4916	44.1591
107	0	0.102953	94.5022	44.1591
108	0	0.115562	94.5155	44.1591
109	0	0.128189	94.532	44.1591
110	0	0.140835	94.5518	44.1591
111	0	0.153505	94.5754	44.1591

112	0	0.166199	94.603	44.1591	
113	0	0.17892	94.635	44.1591	
114	0	0.191671	94.6717	44.1591	
115	0	0.204452	94.7135	44.1591	
116	0	0.217267	94.7608	44.1591	
117	0	0.230118	94.8137	44.1591	
118	0	0.243007	94.8728	44.1591	
119	0	0.258527	94.9396	44.1591	
120	0	0.271509	95.0133	44.1591	
121	0	0.284535	95.0943	44.1591	
122	0	0.297612	95.1828	44.1591	
123	0	0.310738	95.2794	44.1591	
124	0	0.323919	95.3843	44.1591	
125	0	0.337155	95.498	44.1591	
126	0	0.350451	95.6208	44.1591	
127	0	0.363809	95.7532	44.1591	
128	0	0.377233	95.8955	44.1591	
129	0	0.390726	96.0481	44.1591	
130	0	0.40429	96.2116	44.1591	
131	0	0.417928	96.3863	44.1591	
132	0	0.431644	96.5726	44.1591	
133	0	0.445443	96.771	44.1591	
134	0	0.459327	96.982	44.1591	
135	0	0.473299	97.206	44.1591	
136	0	0.487364	97.4435	44.1591	
137	0	0.501527	97.695	44.1591	
138	0	0.515791	97.9611	44.1591	
139	0	0.533048	98.2452	44.1591	
140	0	0.547551	98.545	44.1591	
141	0	0.56217	98.8611	44.1591	
142	0	0.576911	99.1939	44.1591	
143	0	0.591776	99.5441	44.1591	
144	0.157004	0.606775	99.9123	44.2544	
145	0.182322	0.621911	100.299	44.3678	
146	0.262364	0.637192	100.705	44.535	
147	0.34359	0.652622	101.131	44.7592	
148	0.371564	0.668209	101.577	45.0075	
149	0.405465	0.68396	102.045	45.2848	
150	0.457425	0.699883	102.535	45.6049	
151	0.470004	0.715986	103.048	45.9415	
152	0.500775	0.732275	103.584	46.3082	
153	0.530628	0.748762	104.145	46.7055	
154	0.536493	0.765456	104.731	47.1161	
155	0.641854	0.782366	105.343	47.6183	
156	0.647103	0.7995	105.982	48.1357	
157	0.693147	0.816874	106.649	48.7019	
158	0.732368	0.834498	107.346	49.313	
159	0.875469	0.855996	108.078	50.0624	
160	0.891998	0.874218	108.842	50.8422	
161	0.908259	0.892733	109.639	51.6531	
162	0.951658	0.911562	110.47	52.5206	
163	0.955511	0.930718	111.337	53.4099	
164	0.993252	0.950222	112.24	54.3537	
165	1.02962	0.970094	113.181	55.3525	
166	1.03318	0.990356	114.161	56.3757	
167	1.09861	1.01104	115.184	57.4865	
168	1.27257	1.03215	116.249	58.7999	
169	1.28093	1.05375	117.359	60.1497	
170	1.38629	1.07584	118.517	61.6412	
171	1.38629	1.09847	119.723	63.164	
172	1.38629	1.12168	120.982	64.7189	
173	1.60944	1.1455	122.294	66.5625	

174	1.68825	1.17	123.663	68.5378
175	1.97408	1.19522	125.091	70.8973
176	2.31254	1.22123	126.583	73.7214
177	2.48491	1.24809	128.14	76.8228
178	2.6174	1.27588	129.768	80.1622
179	2.7213	1.31058	131.486	83.7287
180	2.77259	1.34075	133.283	87.4461
181	2.94444	1.3722	135.166	91.4865
182	3.08191	1.40507	137.141	95.8168
183	3.20275	1.43953	139.213	100.427
184	3.21888	1.47579	141.391	105.178
185	3.50255	1.5141	143.683	110.481
186	3.58352	1.55477	146.101	116.052
187	3.60005	1.59819	148.655	121.806
188	3.61092	1.64485	151.36	127.745
189	3.66356	1.6954	154.235	133.957
190	3.82864	1.75069	157.3	140.659
191	3.82864	1.81191	160.583	147.596
192	3.8712	1.88079	164.12	154.877
193	3.99268	1.95996	167.962	162.703
194	4.07754	2.05375	172.179	171.077
195	4.35671	2.17009	176.889	180.532
196	4.86753	2.32634	182.301	191.855
197	5.43808	2.57583	188.936	205.863

Data Set Standard Deviation = 1.2816
Numerator = 42379.5
Denominator = 60823.7
W Statistic = 0.696759 = 42379.5 / 60823.7

5% Critical value of 0.976 exceeds 0.696759
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.696759
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	62.5
	9/23/1999	ND<0	62.5
	3/15/2000	ND<0	62.5
	9/24/2003	ND<0	62.5
	3/11/2004	ND<0	62.5
	10/12/2004	ND<0	62.5
	4/1/2005	ND<0	62.5
	10/25/2005	ND<0	62.5
	4/29/2006	ND<0	62.5
	11/18/2006	ND<0	62.5
	5/23/2007	ND<0	62.5
	11/28/2007	ND<0	62.5
	6/5/2008	ND<0	62.5
	11/20/2008	ND<0	62.5
	6/11/2009	ND<-2.40795	62.5

Rank Sum = 937.5
Rank Mean = 62.5

Background Rank Sum = 937.5
Background Rank Mean = 62.5

Compliance Wells

Well ID	Date	Result	Rank
MW-7	7/20/1995	ND<0	62.5
	8/24/1995	ND<0	62.5
	9/28/1995	-0.356675 J	134
	10/26/1995	ND<0	62.5
	11/19/1996	ND<0	62.5
	12/19/1996	ND<0	62.5
	3/24/1997	ND<0	62.5
	9/24/1997	ND<0	62.5
	4/7/1998	ND<0	62.5
	9/23/1998	ND<0	62.5
	3/16/1999	ND<0	62.5
	9/23/1999	ND<0	62.5
	3/15/2000	ND<0	62.5
	9/24/2003	ND<0	62.5
	3/11/2004	ND<0	62.5
	10/12/2004	ND<0	62.5
	4/1/2005	-0.653926 J	129
	10/25/2005	-1.02165 J	126
	4/29/2006	-0.446287 J	132
	11/18/2006	-1.04982 J	125
	5/23/2007	ND<0	62.5
	11/28/2007	ND<0	62.5
	6/5/2008	-0.755023 J	127

	11/20/2008	-0.544727	J	131
	6/11/2009	ND<-2.40795		62.5

Rank Sum = 2029
Rank Mean = 81.16

MW-11R	7/20/1995	ND<0	62.5	
	8/24/1995	0.641854	J	155
	9/28/1995	-0.223144	J	137
	10/26/1995	1.38629		170
	11/19/1996	ND<0	62.5	
	12/19/1996	ND<0	62.5	
	3/24/1997	ND<0	62.5	
	9/24/1997	ND<0	62.5	
	4/7/1998	ND<0	62.5	
	9/23/1998	ND<0	62.5	
	3/16/1999	0.955511		163
	9/23/1999	ND<0	62.5	
	3/15/2000	ND<0	62.5	
	9/24/2003	ND<0	62.5	
	3/11/2004	ND<0	62.5	
	10/12/2004	ND<0	62.5	
	4/1/2005	1.27257	168	
	10/25/2005	-0.105361	J	141
	4/29/2006	-0.248461	J	136
	11/18/2006	-0.223144	J	138
	5/23/2007	ND<0	62.5	
	11/28/2007	-0.733969	J	128
	6/5/2008	ND<0	62.5	
	11/20/2008	ND<0	62.5	
	6/11/2009	ND<-2.40795		62.5

Rank Sum = 2336
Rank Mean = 93.44

MW-8	7/20/1995	0.875469		159
	8/24/1995	3.82864		190
	9/28/1995	3.58352		186
	10/26/1995	1.38629		171
	11/19/1996	ND<0	62.5	
	12/19/1996	3.82864		191
	3/24/1997	3.8712	192	
	9/24/1997	3.21888		184
	4/7/1998	3.66356	189	
	9/23/1998	2.77259		180
	3/16/1999	2.6174	178	
	9/23/1999	2.7213	179	
	3/15/2000	ND<0	62.5	
	9/24/2003	5.43808		197
	3/11/2004	4.35671		195
	10/12/2004	4.86753		196
	4/1/2005	4.07754	194	
	10/25/2005	3.99268		193
	4/29/2006	3.20275		183
	11/18/2006	3.60005		187
	5/23/2007	2.94444		181
	11/28/2007	3.50255		185
	6/5/2008	3.08191	182	
	11/20/2008	2.31254		176
	6/11/2009	2.48491		177

Rank Sum = 4370
Rank Mean = 174.8

MW-10	7/20/1995	ND<0	62.5

	8/24/1995	1.09861		167
	9/28/1995	1.38629		172
	10/26/1995	1.60944		173
	11/19/1996	ND<0	62.5	
	12/19/1996	ND<0	62.5	
	3/24/1997	ND<0	62.5	
	9/24/1997	ND<0	62.5	
	4/7/1998	ND<0	62.5	
	9/23/1998	ND<0	62.5	
	3/16/1999	1.28093		169
	9/23/1999	ND<0	62.5	
	3/15/2000	ND<0	62.5	
	9/24/2003	ND<0	62.5	
	3/11/2004	ND<0	62.5	
	10/12/2004	ND<0	62.5	
	4/1/2005	0.647103 J	156	
	10/25/2005	0.908259		161
	4/29/2006	1.02962		165
	11/18/2006	0.530628 J		153
	5/23/2007	ND<0	62.5	
	11/28/2007	0.951658		162
	6/5/2008	0.500775 J	152	
	11/20/2008	0.457425 J		150
	6/11/2009	0.262364		146
	11/15/2009	0.405465		149

Rank Sum = 2887.5
Rank Mean = 111.058

MW-12AR	3/16/1999	ND<0	62.5	
	9/23/1999	ND<0	62.5	
	3/15/2000	ND<0	62.5	
	9/24/2003	ND<0	62.5	
	3/11/2004	ND<0	62.5	
	10/12/2004	ND<0	62.5	
	4/1/2005	ND<0	62.5	
	10/25/2005	0.732368		158
	4/29/2006	0.891998		160
	11/18/2006	0.157004 J		144
	5/23/2007	ND<0	62.5	
	11/28/2007	-0.0304592 J		143
	6/5/2008	-0.223144 J	139	
	11/20/2008	-0.653926 J		130
	6/11/2009	ND<-2.40795		62.5

Rank Sum = 1436.5
Rank Mean = 95.7667

MW-6	7/20/1995	ND<0	62.5	
	8/24/1995	ND<0	62.5	
	9/28/1995	ND<0	62.5	
	10/26/1995	ND<0	62.5	
	11/19/1996	ND<0	62.5	
	12/19/1996	ND<0	62.5	
	3/24/1997	ND<0	62.5	
	9/24/1997	ND<0	62.5	
	4/7/1998	ND<0	62.5	
	9/23/1998	ND<0	62.5	
	3/16/1999	ND<0	62.5	
	9/23/1999	ND<0	62.5	
	3/15/2000	ND<0	62.5	
	9/24/2003	ND<0	62.5	
	3/11/2004	ND<0	62.5	
	10/12/2004	ND<0	62.5	

	4/1/2005	ND<0	62.5	
	10/25/2005	ND<0	62.5	
	4/29/2006	ND<0	62.5	
	11/18/2006	ND<0	62.5	
	5/23/2007	ND<0	62.5	
	11/28/2007	ND<0	62.5	
	6/5/2008	ND<0	62.5	
	11/20/2008	ND<0	62.5	
	6/11/2009	ND<-2.40795	62.5	

Rank Sum = 1562.5
Rank Mean = 62.5

MW-12BR	3/16/1999	1.97408		175
	9/23/1999	ND<0	62.5	
	3/15/2000	ND<0	62.5	
	9/24/2003	ND<0	62.5	
	3/11/2004	ND<0	62.5	
	10/12/2004	ND<0	62.5	
	4/1/2005	1.68825	174	
	10/25/2005	ND<0	62.5	
	4/29/2006	ND<0	62.5	
	11/18/2006	ND<0	62.5	
	5/23/2007	ND<0	62.5	
	11/28/2007	ND<0	62.5	
	6/5/2008	ND<0	62.5	
	11/20/2008	ND<0	62.5	
	6/11/2009	ND<-2.40795	62.5	

Rank Sum = 1161.5
Rank Mean = 77.4333

MW-9	7/20/1995	ND<0	62.5	
	8/24/1995	ND<0	62.5	
	9/28/1995	-0.223144 J		140
	10/26/1995	-0.105361 J		142
	11/19/1996	ND<0	62.5	
	12/19/1996	ND<0	62.5	
	3/24/1997	ND<0	62.5	
	9/24/1997	ND<0	62.5	
	4/7/1998	ND<0	62.5	
	9/23/1998	ND<0	62.5	
	3/16/1999	0.993252		164
	9/23/1999	ND<0	62.5	
	3/15/2000	ND<0	62.5	
	9/24/2003	ND<0	62.5	
	3/11/2004	3.61092		188
	10/12/2004	ND<0	62.5	
	4/1/2005	1.03318	166	
	10/25/2005	0.371564 J		148
	4/29/2006	-0.371064 J		133
	11/18/2006	-0.314711 J		135
	5/23/2007	ND<0	62.5	
	11/28/2007	0.536493 J		154
	6/5/2008	0.470004 J	151	
	11/20/2008	0.34359 J		147
	6/11/2009	0.693147		157
	11/15/2009	0.182322 J		145

Rank Sum = 2782.5
Rank Mean = 107.019

Calculation Results:

Kruskal-Wallis H Statistic = 67.1424
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 89.4483
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
67.1424 > 15.5073 indicating a significant group difference at 5% significance level
89.4483 > 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 62.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-7	81.16	18.66	43.3175	
MW-11R	93.44	30.94	43.3175	
MW-8	174.8	112.3	43.3175	
MW-10	111.058	48.5577	43.0039	
MW-12AR		95.7667	33.2667	48.4304
MW-6	62.5	0	43.3175	
MW-12BR		77.4333	14.9333	48.4304
MW-9	107.019	44.5192	43.0039	

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 62.5

Well	Mean Rank		Dif from Bkg	Critical Value
MW-7	81.16	18.66	46.777	
MW-11R	93.44	30.94	46.777	
MW-8	174.8	112.3	46.777	
MW-10	111.058	48.5577	46.4384	
MW-12AR		95.7667	33.2667	52.2983
MW-6	62.5	0	46.777	
MW-12BR		77.4333	14.9333	52.2983
MW-9	107.019	44.5192	46.4384	

Non-Parametric Prediction Interval

Inter-Well Comparison

Parameter: Vinyl chloride

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

Total Percent Non-Detects = 62.9442%
Number of comparisons = 8
Future Samples (k) = 8
Recent Dates = 1
Background Samples (n) = 15
Maximum Background Concentration = 0
Confidence Level = 65.2%
False Positive Rate = 34.8%

Location	Date	Samples	Mean	Significant
MW-7	6/11/2009	1	-2.40795	FALSE
MW-11R	6/11/2009	1	-2.40795	FALSE
MW-8	6/11/2009	1	2.48491	TRUE
MW-10	11/15/2009	1	0.405465	TRUE
MW-12AR	6/11/2009	1	-2.40795	FALSE
MW-6	6/11/2009	1	-2.40795	FALSE
MW-12BR	6/11/2009	1	-2.40795	FALSE
MW-9	11/15/2009	1	0.182322	TRUE

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
3.58352	3.82864	-0.245122	22	3
1.38629	3.82864	-2.442322	22	4
ND<0	3.82864	-3.828622	5	
3.82864	3.82864	0	22	5
3.8712	3.82864	0.0425596	23	5
3.21888	3.82864	-0.609766	23	6
3.66356	3.82864	-0.165023	7	
2.77259	3.82864	-1.056023	8	
2.6174	3.82864	-1.211223	9	
2.7213	3.82864	-1.107323	10	
ND<0	3.82864	-3.828623	11	
5.43808	3.82864	1.60944	24	11
4.35671	3.82864	0.528067	25	11
4.86753	3.82864	1.03889	26	11
4.07754	3.82864	0.248896	27	11
3.99268	3.82864	0.16404	28	11
3.20275	3.82864	-0.625895	28	12
3.60005	3.82864	-0.228593	28	13
2.94444	3.82864	-0.884202	28	14
3.50255	3.82864	-0.326092	28	15
3.08191	3.82864	-0.746731	28	16
2.31254	3.82864	-1.516112	28	17
2.48491	3.82864	-1.343732	28	18

1.38629	3.58352	-2.197222	8	19		
ND<0	3.58352	-3.583522	8	20		
3.82864	3.58352	0.245122		29	20	
3.8712	3.58352	0.287682		30	20	
3.21888	3.58352	-0.364643		30	21	
3.66356	3.58352	0.0800427		31	21	
2.77259	3.58352	-0.810933	1	22		
2.6174	3.58352	-0.966123		31	23	
2.7213	3.58352	-0.862224		31	24	
ND<0	3.58352	-3.583523	1	25		
5.43808	3.58352	1.85456	32	25		
4.35671	3.58352	0.77319	33	25		
4.86753	3.58352	1.28402	34	25		
4.07754	3.58352	0.494019		35	25	
3.99268	3.58352	0.409162		36	25	
3.20275	3.58352	-0.380772		36	26	
3.60005	3.58352	0.0165293		37	26	
2.94444	3.58352	-0.6390837		27		
3.50255	3.58352	-0.0809691		37	28	
3.08191	3.58352	-0.501609		37	29	
2.31254	3.58352	-1.2709837		30		
2.48491	3.58352	-1.0986137		31		
ND<0	1.38629	-1.3862937		32		
3.82864	1.38629	2.44235	38	32		
3.8712	1.38629	2.48491	39	32		
3.21888	1.38629	1.83258	40	32		
3.66356	1.38629	2.27727	41	32		
2.77259	1.38629	1.38629	42	32		
2.6174	1.38629	1.2311	43	32		
2.7213	1.38629	1.335	44	32		
ND<0	1.38629	-1.3862944		33		
5.43808	1.38629	4.05178	45	33		
4.35671	1.38629	2.97041	46	33		
4.86753	1.38629	3.48124	47	33		
4.07754	1.38629	2.69124	48	33		
3.99268	1.38629	2.60639	49	33		
3.20275	1.38629	1.81645	50	33		
3.60005	1.38629	2.21375	51	33		
2.94444	1.38629	1.55814	52	33		
3.50255	1.38629	2.11626	53	33		
3.08191	1.38629	1.69562	54	33		
2.31254	1.38629	0.926241		55	33	
2.48491	1.38629	1.09861	56	33		
3.82864	ND<0	3.82864	57	33		
3.8712	ND<0	3.8712	58	33		
3.21888	ND<0	3.21888	59	33		
3.66356	ND<0	3.66356	60	33		
2.77259	ND<0	2.77259	61	33		
2.6174	ND<0	2.6174	62	33		
2.7213	ND<0	2.7213	63	33		
ND<0	ND<0	0	63	33		
5.43808	ND<0	5.43808	64	33		
4.35671	ND<0	4.35671	65	33		
4.86753	ND<0	4.86753	66	33		
4.07754	ND<0	4.07754	67	33		
3.99268	ND<0	3.99268	68	33		
3.20275	ND<0	3.20275	69	33		
3.60005	ND<0	3.60005	70	33		
2.94444	ND<0	2.94444	71	33		

3.50255		ND<0	3.50255	72	33	
3.08191		ND<0	3.08191	73	33	
2.31254		ND<0	2.31254	74	33	
2.48491		ND<0	2.48491	75	33	
3.8712	3.82864		0.0425596	76	33	
3.21888		3.82864	-0.609766	76		34
3.66356		3.82864	-0.1650876	35		
2.77259		3.82864	-1.0560576	36		
2.6174	3.82864		-1.2112576	37		
2.7213	3.82864		-1.1073576	38		
ND<0	3.82864		-3.8286476	39		
5.43808		3.82864	1.60944	77	39	
4.35671		3.82864	0.528067	78		39
4.86753		3.82864	1.03889	79	39	
4.07754		3.82864	0.248896	80		39
3.99268		3.82864	0.16404	81	39	
3.20275		3.82864	-0.625895	81		40
3.60005		3.82864	-0.228593	81		41
2.94444		3.82864	-0.884202	81		42
3.50255		3.82864	-0.326092	81		43
3.08191		3.82864	-0.746731	81		44
2.31254		3.82864	-1.5161181	45		
2.48491		3.82864	-1.3437381	46		
3.21888		3.8712	-0.652325	81	47	
3.66356		3.8712	-0.207639	81	48	
2.77259		3.8712	-1.0986181	49		
2.6174	3.8712	-1.2538181	50			
2.7213	3.8712	-1.1499181	51			
ND<0	3.8712	-3.8712 81	52			
5.43808		3.8712	1.56688	82	52	
4.35671		3.8712	0.485508	83	52	
4.86753		3.8712	0.996333	84	52	
4.07754		3.8712	0.206336	85	52	
3.99268		3.8712	0.12148	86	52	
3.20275		3.8712	-0.668455	86	53	
3.60005		3.8712	-0.271153	86	54	
2.94444		3.8712	-0.926762	86	55	
3.50255		3.8712	-0.368651	86	56	
3.08191		3.8712	-0.789291	86	57	
2.31254		3.8712	-1.5586786	58		
2.48491		3.8712	-1.3862986	59		
3.66356		3.21888	0.444686	87		59
2.77259		3.21888	-0.446287	87		60
2.6174	3.21888		-0.6014887	61		
2.7213	3.21888		-0.4975887	62		
ND<0	3.21888		-3.2188887	63		
5.43808		3.21888	2.2192	88	63	
4.35671		3.21888	1.13783	89	63	
4.86753		3.21888	1.64866	90	63	
4.07754		3.21888	0.858662	91		63
3.99268		3.21888	0.773805	92		63
3.20275		3.21888	-0.0161294	92		64
3.60005		3.21888	0.381172	93		64
2.94444		3.21888	-0.274437	93		65
3.50255		3.21888	0.283674	94		65
3.08191		3.21888	-0.136966	94		66
2.31254		3.21888	-0.9063494	67		
2.48491		3.21888	-0.733969	94		68

2.77259		3.66356		-0.890973	94	69
2.6174	3.66356		-1.0461794	70		
2.7213	3.66356		-0.942266	94	71	
ND<0	3.66356		-3.6635694	72		
5.43808		3.66356		1.77452 95	72	
4.35671		3.66356		0.693147	96	72
4.86753		3.66356		1.20397 97	72	
4.07754		3.66356		0.413976	98	72
3.99268		3.66356		0.329119	99	72
3.20275		3.66356		-0.460815	99	73
3.60005		3.66356		-0.0635134	99	74
2.94444		3.66356		-0.719123	99	75
3.50255		3.66356		-0.161012	99	76
3.08191		3.66356		-0.581652	99	77
2.31254		3.66356		-1.3510399	78	
2.48491		3.66356		-1.1786599	79	

2.6174	2.77259		-0.155193	99	80	
2.7213	2.77259		-0.0512933	99	81	
ND<0	2.77259		-2.7725999	82		
5.43808		2.77259		2.66549 100	82	
4.35671		2.77259		1.58412 101	82	
4.86753		2.77259		2.09495 102	82	
4.07754		2.77259		1.30495 103	82	
3.99268		2.77259		1.22009 104	82	
3.20275		2.77259		0.430158	105	82
3.60005		2.77259		0.82746 106	82	
2.94444		2.77259		0.17185 107	82	
3.50255		2.77259		0.729961	108	82
3.08191		2.77259		0.309321	109	82
2.31254		2.77259		-0.460053	109	83
2.48491		2.77259		-0.287682	109	84

2.7213	2.6174	0.1039	110	84		
ND<0	2.6174	-2.6174	110	85		
5.43808		2.6174	2.82068	111	85	
4.35671		2.6174	1.73931	112	85	
4.86753		2.6174	2.25014	113	85	
4.07754		2.6174	1.46014	114	85	
3.99268		2.6174	1.37529	115	85	
3.20275		2.6174	0.585351		116	85
3.60005		2.6174	0.982652		117	85
2.94444		2.6174	0.327043		118	85
3.50255		2.6174	0.885154		119	85
3.08191		2.6174	0.464514		120	85
2.31254		2.6174	-0.30486120		86	
2.48491		2.6174	-0.132489		120	87

ND<0	2.7213	-2.7213	120	88		
5.43808		2.7213	2.71678	121	88	
4.35671		2.7213	1.63541	122	88	
4.86753		2.7213	2.14624	123	88	
4.07754		2.7213	1.35624	124	88	
3.99268		2.7213	1.27139	125	88	
3.20275		2.7213	0.481451		126	88
3.60005		2.7213	0.878753		127	88
2.94444		2.7213	0.223144		128	88
3.50255		2.7213	0.781254		129	88
3.08191		2.7213	0.360615		130	88
2.31254		2.7213	-0.40876130		89	
2.48491		2.7213	-0.236389		130	90

5.43808	ND<0	5.43808	131	90
4.35671	ND<0	4.35671	132	90
4.86753	ND<0	4.86753	133	90
4.07754	ND<0	4.07754	134	90
3.99268	ND<0	3.99268	135	90
3.20275	ND<0	3.20275	136	90
3.60005	ND<0	3.60005	137	90
2.94444	ND<0	2.94444	138	90
3.50255	ND<0	3.50255	139	90
3.08191	ND<0	3.08191	140	90
2.31254	ND<0	2.31254	141	90
2.48491	ND<0	2.48491	142	90

4.35671	5.43808	-1.08137	142	91
4.86753	5.43808	-0.570545	142	92
4.07754	5.43808	-1.36054	142	93
3.99268	5.43808	-1.4454	142	94
3.20275	5.43808	-2.23533	142	95
3.60005	5.43808	-1.83803	142	96
2.94444	5.43808	-2.49364	142	97
3.50255	5.43808	-1.93553	142	98
3.08191	5.43808	-2.35617	142	99
2.31254	5.43808	-3.12554	142	100
2.48491	5.43808	-2.95317	142	101

4.86753	4.35671	0.510826	143	101
4.07754	4.35671	-0.279171	143	102
3.99268	4.35671	-0.364028	143	103
3.20275	4.35671	-1.15396	143	104
3.60005	4.35671	-0.756661	143	105
2.94444	4.35671	-1.41227	143	106
3.50255	4.35671	-0.854159	143	107
3.08191	4.35671	-1.2748	143	108
2.31254	4.35671	-2.04417	143	109
2.48491	4.35671	-1.8718	143	110

4.07754	4.86753	-0.789997	143	111
3.99268	4.86753	-0.874854	143	112
3.20275	4.86753	-1.66479	143	113
3.60005	4.86753	-1.26749	143	114
2.94444	4.86753	-1.9231	143	115
3.50255	4.86753	-1.36498	143	116
3.08191	4.86753	-1.78562	143	117
2.31254	4.86753	-2.555	143	118
2.48491	4.86753	-2.38263	143	119

3.99268	4.07754	-0.0848565	143	120
3.20275	4.07754	-0.874791	143	121
3.60005	4.07754	-0.477489	143	122
2.94444	4.07754	-1.1331	143	123
3.50255	4.07754	-0.574988	143	124
3.08191	4.07754	-0.995627	143	125
2.31254	4.07754	-1.765	143	126
2.48491	4.07754	-1.59263	143	127

3.20275	3.99268	-0.789934	143	128
3.60005	3.99268	-0.392633	143	129
2.94444	3.99268	-1.04824	143	130
3.50255	3.99268	-0.490131	143	131
3.08191	3.99268	-0.910771	143	132
2.31254	3.99268	-1.68015	143	133
2.48491	3.99268	-1.50777	143	134

3.60005	3.20275	0.397302	144	134
2.94444	3.20275	-0.258307	144	135
3.50255	3.20275	0.299803	145	135
3.08191	3.20275	-0.120836	145	136
2.31254	3.20275	-0.890211	145	137
2.48491	3.20275	-0.71784145	138	
2.94444	3.60005	-0.655609	145	139
3.50255	3.60005	-0.0974984	145	140
3.08191	3.60005	-0.518138	145	141
2.31254	3.60005	-1.28751145	142	
2.48491	3.60005	-1.11514145	143	
3.50255	2.94444	0.558111	146	143
3.08191	2.94444	0.137471	147	143
2.31254	2.94444	-0.631904	147	144
2.48491	2.94444	-0.459532	147	145
3.08191	3.50255	-0.42064147	146	
2.31254	3.50255	-1.19001147	147	
2.48491	3.50255	-1.01764147	148	
2.31254	3.08191	-0.769375	147	149
2.48491	3.08191	-0.597003	147	150
2.48491	2.31254	0.172371	148	150

S Statistic = 148 - 150 = -2

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
There are 0 time periods with multiple data

A = 36
B = 0
C = 0
D = 0
E = 4
F = 0
a = 33000
b = 124200
c = 1200
Group Variance = 1831.33
Z-Score = -0.0233677
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|-0.0233677| <= 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
1.38629		1.09861	0.287682	14	0
1.60944		1.09861	0.510826	15	0
ND<0	1.09861	-1.0986	115	1	
ND<0	1.09861	-1.0986	115	2	
ND<0	1.09861	-1.0986	115	3	
ND<0	1.09861	-1.0986	115	4	
ND<0	1.09861	-1.0986	115	5	
ND<0	1.09861	-1.0986	115	6	
1.28093		1.09861	0.182322	16	6
ND<0	1.09861	-1.0986	116	7	
ND<0	1.09861	-1.0986	116	8	
ND<0	1.09861	-1.0986	116	9	
ND<0	1.09861	-1.0986	116	10	
ND<0	1.09861	-1.0986	116	11	
0.647103 J		1.09861	-0.451509	16	12
0.908259		1.09861	-0.190354	16	13
1.02962		1.09861	-0.0689929	16	14
0.530628 J		1.09861	-0.567984	16	15
ND<0	1.09861	-1.0986	116	16	
0.951658		1.09861	-0.146954	16	17
0.500775 J		1.09861	-0.597837	16	18
0.457425 J		1.09861	-0.641187	16	19

0.262364	1.09861	-0.836248	16	20
0.405465	1.09861	-0.693147	16	21
1.60944	1.38629	0.223144	17	21
ND<0	1.38629	-1.3862917	22	
ND<0	1.38629	-1.3862917	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	
1.28093	1.38629	-0.105361	17	28
ND<0	1.38629	-1.3862917	29	
ND<0	1.38629	-1.3862917	30	
ND<0	1.38629	-1.3862917	31	
ND<0	1.38629	-1.3862917	32	
ND<0	1.38629	-1.3862917	33	
0.647103 J	1.38629	-0.739191	17	34
0.908259	1.38629	-0.478036	17	35
1.02962	1.38629	-0.356675	17	36
0.530628 J	1.38629	-0.855666	17	37
ND<0	1.38629	-1.3862917	38	
0.951658	1.38629	-0.434636	17	39
0.500775 J	1.38629	-0.885519	17	40
0.457425 J	1.38629	-0.9288717	41	
0.262364	1.38629	-1.1239317	42	
0.405465	1.38629	-0.980829	17	43
ND<0	1.60944	-1.6094417	44	
ND<0	1.60944	-1.6094417	45	
ND<0	1.60944	-1.6094417	46	
ND<0	1.60944	-1.6094417	47	
ND<0	1.60944	-1.6094417	48	
ND<0	1.60944	-1.6094417	49	
1.28093	1.60944	-0.328504	17	50
ND<0	1.60944	-1.6094417	51	
ND<0	1.60944	-1.6094417	52	
ND<0	1.60944	-1.6094417	53	
ND<0	1.60944	-1.6094417	54	
ND<0	1.60944	-1.6094417	55	
0.647103 J	1.60944	-0.962335	17	56
0.908259	1.60944	-0.701179	17	57
1.02962	1.60944	-0.579818	17	58
0.530628 J	1.60944	-1.0788117	59	
ND<0	1.60944	-1.6094417	60	
0.951658	1.60944	-0.6577817	61	
0.500775 J	1.60944	-1.1086617	62	
0.457425 J	1.60944	-1.1520117	63	
0.262364	1.60944	-1.3470717	64	
0.405465	1.60944	-1.2039717	65	
ND<0	ND<0	0	17	65
ND<0	ND<0	0	17	65
ND<0	ND<0	0	17	65
ND<0	ND<0	0	17	65
ND<0	ND<0	0	17	65
1.28093	ND<0	1.28093	18	65
ND<0	ND<0	0	18	65
ND<0	ND<0	0	18	65
ND<0	ND<0	0	18	65
ND<0	ND<0	0	18	65
ND<0	ND<0	0	18	65
0.647103 J	ND<0	0.647103	19	65

0.908259		ND<0	0.908259		20	65
1.02962		ND<0	1.02962	21	65	
0.530628	J	ND<0	0.530628		22	65
ND<0	ND<0	0	22	65		
0.951658		ND<0	0.951658		23	65
0.500775	J	ND<0	0.500775		24	65
0.457425	J	ND<0	0.457425		25	65
0.262364		ND<0	0.262364		26	65
0.405465		ND<0	0.405465		27	65
ND<0	ND<0	0	27	65		
ND<0	ND<0	0	27	65		
ND<0	ND<0	0	27	65		
ND<0	ND<0	0	27	65		
1.28093		ND<0	1.28093	28	65	
ND<0	ND<0	0	28	65		
ND<0	ND<0	0	28	65		
ND<0	ND<0	0	28	65		
ND<0	ND<0	0	28	65		
ND<0	ND<0	0	28	65		
0.647103	J	ND<0	0.647103		29	65
0.908259		ND<0	0.908259		30	65
1.02962		ND<0	1.02962	31	65	
0.530628	J	ND<0	0.530628		32	65
ND<0	ND<0	0	32	65		
0.951658		ND<0	0.951658		33	65
0.500775	J	ND<0	0.500775		34	65
0.457425	J	ND<0	0.457425		35	65
0.262364		ND<0	0.262364		36	65
0.405465		ND<0	0.405465		37	65
ND<0	ND<0	0	37	65		
ND<0	ND<0	0	37	65		
ND<0	ND<0	0	37	65		
1.28093		ND<0	1.28093	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		
ND<0	ND<0	0	38	65		
0.647103	J	ND<0	0.647103		39	65
0.908259		ND<0	0.908259		40	65
1.02962		ND<0	1.02962	41	65	
0.530628	J	ND<0	0.530628		42	65
ND<0	ND<0	0	42	65		
0.951658		ND<0	0.951658		43	65
0.500775	J	ND<0	0.500775		44	65
0.457425	J	ND<0	0.457425		45	65
0.262364		ND<0	0.262364		46	65
0.405465		ND<0	0.405465		47	65
ND<0	ND<0	0	47	65		
ND<0	ND<0	0	47	65		
1.28093		ND<0	1.28093	48	65	
ND<0	ND<0	0	48	65		
ND<0	ND<0	0	48	65		
ND<0	ND<0	0	48	65		
ND<0	ND<0	0	48	65		
ND<0	ND<0	0	48	65		
0.647103	J	ND<0	0.647103		49	65
0.908259		ND<0	0.908259		50	65
1.02962		ND<0	1.02962	51	65	

0.530628 J		ND<0	0.530628		52	65
ND<0	ND<0	0	52	65		
0.951658		ND<0	0.951658		53	65
0.500775 J		ND<0	0.500775		54	65
0.457425 J		ND<0	0.457425		55	65
0.262364		ND<0	0.262364		56	65
0.405465		ND<0	0.405465		57	65
ND<0	ND<0	0	57	65		
1.28093		ND<0	1.28093	58	65	
ND<0	ND<0	0	58	65		
ND<0	ND<0	0	58	65		
ND<0	ND<0	0	58	65		
ND<0	ND<0	0	58	65		
ND<0	ND<0	0	58	65		
0.647103 J		ND<0	0.647103		59	65
0.908259		ND<0	0.908259		60	65
1.02962		ND<0	1.02962	61	65	
0.530628 J		ND<0	0.530628		62	65
ND<0	ND<0	0	62	65		
0.951658		ND<0	0.951658		63	65
0.500775 J		ND<0	0.500775		64	65
0.457425 J		ND<0	0.457425		65	65
0.262364		ND<0	0.262364		66	65
0.405465		ND<0	0.405465		67	65
1.28093		ND<0	1.28093	68	65	
ND<0	ND<0	0	68	65		
ND<0	ND<0	0	68	65		
ND<0	ND<0	0	68	65		
ND<0	ND<0	0	68	65		
ND<0	ND<0	0	68	65		
0.647103 J		ND<0	0.647103		69	65
0.908259		ND<0	0.908259		70	65
1.02962		ND<0	1.02962	71	65	
0.530628 J		ND<0	0.530628		72	65
ND<0	ND<0	0	72	65		
0.951658		ND<0	0.951658		73	65
0.500775 J		ND<0	0.500775		74	65
0.457425 J		ND<0	0.457425		75	65
0.262364		ND<0	0.262364		76	65
0.405465		ND<0	0.405465		77	65
ND<0	1.28093		-1.2809377		66	
ND<0	1.28093		-1.2809377		67	
ND<0	1.28093		-1.2809377		68	
ND<0	1.28093		-1.2809377		69	
ND<0	1.28093		-1.2809377		70	
0.647103 J		1.28093		-0.633831	77	71
0.908259		1.28093		-0.372675	77	72
1.02962		1.28093		-0.251314	77	73
0.530628 J		1.28093		-0.750306	77	74
ND<0	1.28093		-1.2809377		75	
0.951658		1.28093		-0.329276	77	76
0.500775 J		1.28093		-0.780159	77	77
0.457425 J		1.28093		-0.823509	77	78
0.262364		1.28093		-1.0185777	79	
0.405465		1.28093		-0.875469	77	80
ND<0	ND<0	0	77	80		
ND<0	ND<0	0	77	80		
ND<0	ND<0	0	77	80		

ND<0	ND<0	0	77	80		
0.647103 J		ND<0	0.647103		78	80
0.908259		ND<0	0.908259		79	80
1.02962		ND<0	1.02962	80	80	
0.530628 J		ND<0	0.530628		81	80
ND<0	ND<0	0	81	80		
0.951658		ND<0	0.951658		82	80
0.500775 J		ND<0	0.500775		83	80
0.457425 J		ND<0	0.457425		84	80
0.262364		ND<0	0.262364		85	80
0.405465		ND<0	0.405465		86	80
ND<0	ND<0	0	86	80		
ND<0	ND<0	0	86	80		
ND<0	ND<0	0	86	80		
0.647103 J		ND<0	0.647103		87	80
0.908259		ND<0	0.908259		88	80
1.02962		ND<0	1.02962	89	80	
0.530628 J		ND<0	0.530628		90	80
ND<0	ND<0	0	90	80		
0.951658		ND<0	0.951658		91	80
0.500775 J		ND<0	0.500775		92	80
0.457425 J		ND<0	0.457425		93	80
0.262364		ND<0	0.262364		94	80
0.405465		ND<0	0.405465		95	80
ND<0	ND<0	0	95	80		
ND<0	ND<0	0	95	80		
0.647103 J		ND<0	0.647103		96	80
0.908259		ND<0	0.908259		97	80
1.02962		ND<0	1.02962	98	80	
0.530628 J		ND<0	0.530628		99	80
ND<0	ND<0	0	99	80		
0.951658		ND<0	0.951658		100	80
0.500775 J		ND<0	0.500775		101	80
0.457425 J		ND<0	0.457425		102	80
0.262364		ND<0	0.262364		103	80
0.405465		ND<0	0.405465		104	80
ND<0	ND<0	0	104	80		
0.647103 J		ND<0	0.647103		105	80
0.908259		ND<0	0.908259		106	80
1.02962		ND<0	1.02962	107	80	
0.530628 J		ND<0	0.530628		108	80
ND<0	ND<0	0	108	80		
0.951658		ND<0	0.951658		109	80
0.500775 J		ND<0	0.500775		110	80
0.457425 J		ND<0	0.457425		111	80
0.262364		ND<0	0.262364		112	80
0.405465		ND<0	0.405465		113	80
0.647103 J		ND<0	0.647103		114	80
0.908259		ND<0	0.908259		115	80
1.02962		ND<0	1.02962	116	80	
0.530628 J		ND<0	0.530628		117	80
ND<0	ND<0	0	117	80		
0.951658		ND<0	0.951658		118	80
0.500775 J		ND<0	0.500775		119	80
0.457425 J		ND<0	0.457425		120	80
0.262364		ND<0	0.262364		121	80
0.405465		ND<0	0.405465		122	80

0.908259	0.647103 J	0.261155	123	80
1.02962	0.647103 J	0.382516	124	80
0.530628 J	0.647103 J	-0.116475	124	81
ND<0	0.647103 J	-0.647103	124	82
0.951658	0.647103 J	0.304555	125	82
0.500775 J	0.647103 J	-0.146328	125	83
0.457425 J	0.647103 J	-0.189678	125	84
0.262364	0.647103 J	-0.384739	125	85
0.405465	0.647103 J	-0.241638	125	86
1.02962	0.908259	0.121361	126	86
0.530628 J	0.908259	-0.37763	126	87
ND<0	0.908259	-0.908259	126	88
0.951658	0.908259	0.0433993	127	88
0.500775 J	0.908259	-0.407483	127	89
0.457425 J	0.908259	-0.450834	127	90
0.262364	0.908259	-0.645894	127	91
0.405465	0.908259	-0.502793	127	92
0.530628 J	1.02962	-0.498991	127	93
ND<0	1.02962	-1.02962	127	94
0.951658	1.02962	-0.0779615	127	95
0.500775 J	1.02962	-0.528844	127	96
0.457425 J	1.02962	-0.572195	127	97
0.262364	1.02962	-0.767255	127	98
0.405465	1.02962	-0.624154	127	99
ND<0	0.530628 J	-0.530628	127	100
0.951658	0.530628 J	0.42103	128	100
0.500775 J	0.530628 J	-0.029853	128	101
0.457425 J	0.530628 J	-0.0732034	128	102
0.262364	0.530628 J	-0.268264	128	103
0.405465	0.530628 J	-0.125163	128	104
0.951658	ND<0	0.951658	129	104
0.500775 J	ND<0	0.500775	130	104
0.457425 J	ND<0	0.457425	131	104
0.262364	ND<0	0.262364	132	104
0.405465	ND<0	0.405465	133	104
0.500775 J	0.951658	-0.450883	133	105
0.457425 J	0.951658	-0.494233	133	106
0.262364	0.951658	-0.689294	133	107
0.405465	0.951658	-0.546193	133	108
0.457425 J	0.500775 J	-0.0433504	133	109
0.262364	0.500775 J	-0.238411	133	110
0.405465	0.500775 J	-0.0953102	133	111
0.262364	0.457425 J	-0.195061	133	112
0.405465	0.457425 J	-0.0519597	133	113
0.405465	0.262364	0.143101	134	113

S Statistic = 134 - 113 = 21

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
11/15/2009	1

There are 0 time periods with multiple data

A = 4836
B = 0
C = 1716
D = 0
E = 156
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1789.67
Z-Score = 0.472763
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|0.472763| <= 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 J		ND<0	0.182322	9	4
-0.223144 J		ND<0	-0.223144	9	5
-0.105361 J		ND<0	-0.105361	9	6
ND<0	ND<0	0	9	6	
ND<0	ND<0	0	9	6	
ND<0	ND<0	0	9	6	
ND<0	ND<0	0	9	6	
ND<0	ND<0	0	9	6	
ND<0	ND<0	0	9	6	
0.993252		ND<0	0.993252	10	6
ND<0	ND<0	0	10	6	
ND<0	ND<0	0	10	6	
ND<0	ND<0	0	10	6	
3.61092		ND<0	3.61092	11	6
ND<0	ND<0	0	11	6	
1.03318		ND<0	1.03318	12	6
0.371564 J		ND<0	0.371564	13	6
-0.371064 J		ND<0	-0.371064	13	7
-0.314711 J		ND<0	-0.314711	13	8
ND<0	ND<0	0	13	8	
0.536493 J		ND<0	0.536493	14	8
0.470004 J		ND<0	0.470004	15	8
0.34359 J		ND<0	0.34359	16	8

0.693147	ND<0	0.693147	17	8	
0.182322 J	ND<0	0.182322	18	8	
-0.105361 J	-0.223144 J	0.117783	19	8	
ND<0	-0.223144 J	0.223144	20	8	
ND<0	-0.223144 J	0.223144	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	
0.993252	-0.223144 J	1.2164	26	8	
ND<0	-0.223144 J	0.223144	27	8	
ND<0	-0.223144 J	0.223144	28	8	
ND<0	-0.223144 J	0.223144	29	8	
3.61092	-0.223144 J	3.83406	30	8	
ND<0	-0.223144 J	0.223144	31	8	
1.03318	-0.223144 J	1.25633	32	8	
0.371564 J	-0.223144 J	0.594707	33	8	
-0.371064 J	-0.223144 J	-0.147923	33	9	
-0.314711 J	-0.223144 J	-0.091567	33	10	
ND<0	-0.223144 J	0.223144	34	10	
0.536493 J	-0.223144 J	0.759637	35	10	
0.470004 J	-0.223144 J	0.693147	36	10	
0.34359 J	-0.223144 J	0.566733	37	10	
0.693147	-0.223144 J	0.916291	38	10	
0.182322 J	-0.223144 J	0.405465	39	10	
ND<0	-0.105361 J	0.105361	40	10	
ND<0	-0.105361 J	0.105361	41	10	
ND<0	-0.105361 J	0.105361	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	
0.993252	-0.105361 J	1.09861	46	10	
ND<0	-0.105361 J	0.105361	47	10	
ND<0	-0.105361 J	0.105361	48	10	
ND<0	-0.105361 J	0.105361	49	10	
3.61092	-0.105361 J	3.71628	50	10	
ND<0	-0.105361 J	0.105361	51	10	
1.03318	-0.105361 J	1.13854	52	10	
0.371564 J	-0.105361 J	0.476924	53	10	
-0.371064 J	-0.105361 J	-0.265703	53	11	
-0.314711 J	-0.105361 J	-0.209355	53	12	
ND<0	-0.105361 J	0.105361	54	12	
0.536493 J	-0.105361 J	0.641854	55	12	
0.470004 J	-0.105361 J	0.575364	56	12	
0.34359 J	-0.105361 J	0.44895	57	12	
0.693147	-0.105361 J	0.798508	58	12	
0.182322 J	-0.105361 J	0.287682	59	12	
ND<0	ND<0	0	59	12	
ND<0	ND<0	0	59	12	
ND<0	ND<0	0	59	12	
ND<0	ND<0	0	59	12	
ND<0	ND<0	0	59	12	
0.993252	ND<0	0.993252	60	12	
ND<0	ND<0	0	60	12	
ND<0	ND<0	0	60	12	
ND<0	ND<0	0	60	12	
3.61092	ND<0	3.61092	61	12	
ND<0	ND<0	0	61	12	
1.03318	ND<0	1.03318	62	12	

0.371564 J		ND<0	0.371564	63	12
-0.371064 J		ND<0	-0.371064	63	13
-0.314711 J		ND<0	-0.314711	63	14
ND<0	ND<0	0	63	14	
0.536493 J		ND<0	0.536493	64	14
0.470004 J		ND<0	0.470004	65	14
0.34359 J		ND<0	0.34359	66	14
0.693147		ND<0	0.693147	67	14
0.182322 J		ND<0	0.182322	68	14
ND<0	ND<0	0	68	14	
ND<0	ND<0	0	68	14	
ND<0	ND<0	0	68	14	
ND<0	ND<0	0	68	14	
0.993252		ND<0	0.993252	69	14
ND<0	ND<0	0	69	14	
ND<0	ND<0	0	69	14	
ND<0	ND<0	0	69	14	
3.61092		ND<0	3.61092	70	14
ND<0	ND<0	0	70	14	
1.03318		ND<0	1.03318	71	14
0.371564 J		ND<0	0.371564	72	14
-0.371064 J		ND<0	-0.371064	72	15
-0.314711 J		ND<0	-0.314711	72	16
ND<0	ND<0	0	72	16	
0.536493 J		ND<0	0.536493	73	16
0.470004 J		ND<0	0.470004	74	16
0.34359 J		ND<0	0.34359	75	16
0.693147		ND<0	0.693147	76	16
0.182322 J		ND<0	0.182322	77	16
ND<0	ND<0	0	77	16	
ND<0	ND<0	0	77	16	
ND<0	ND<0	0	77	16	
0.993252		ND<0	0.993252	78	16
ND<0	ND<0	0	78	16	
ND<0	ND<0	0	78	16	
ND<0	ND<0	0	78	16	
3.61092		ND<0	3.61092	79	16
ND<0	ND<0	0	79	16	
1.03318		ND<0	1.03318	80	16
0.371564 J		ND<0	0.371564	81	16
-0.371064 J		ND<0	-0.371064	81	17
-0.314711 J		ND<0	-0.314711	81	18
ND<0	ND<0	0	81	18	
0.536493 J		ND<0	0.536493	82	18
0.470004 J		ND<0	0.470004	83	18
0.34359 J		ND<0	0.34359	84	18
0.693147		ND<0	0.693147	85	18
0.182322 J		ND<0	0.182322	86	18
ND<0	ND<0	0	86	18	
ND<0	ND<0	0	86	18	
0.993252		ND<0	0.993252	87	18
ND<0	ND<0	0	87	18	
ND<0	ND<0	0	87	18	
ND<0	ND<0	0	87	18	
3.61092		ND<0	3.61092	88	18
ND<0	ND<0	0	88	18	
1.03318		ND<0	1.03318	89	18
0.371564 J		ND<0	0.371564	90	18
-0.371064 J		ND<0	-0.371064	90	19

-0.314711 J ND<0 -0.314711 90 20
ND<0 ND<0 0 90 20
0.536493 J ND<0 0.536493 91 20
0.470004 J ND<0 0.470004 92 20
0.34359 J ND<0 0.34359 93 20
0.693147 ND<0 0.693147 94 20
0.182322 J ND<0 0.182322 95 20

ND<0 ND<0 0 95 20
0.993252 ND<0 0.993252 96 20
ND<0 ND<0 0 96 20
ND<0 ND<0 0 96 20
ND<0 ND<0 0 96 20
3.61092 ND<0 3.61092 97 20
ND<0 ND<0 0 97 20
1.03318 ND<0 1.03318 98 20
0.371564 J ND<0 0.371564 99 20
-0.371064 J ND<0 -0.371064 99 21
-0.314711 J ND<0 -0.314711 99 22
ND<0 ND<0 0 99 22
0.536493 J ND<0 0.536493 100 22
0.470004 J ND<0 0.470004 101 22
0.34359 J ND<0 0.34359 102 22
0.693147 ND<0 0.693147 103 22
0.182322 J ND<0 0.182322 104 22

0.993252 ND<0 0.993252 105 22
ND<0 ND<0 0 105 22
ND<0 ND<0 0 105 22
ND<0 ND<0 0 105 22
3.61092 ND<0 3.61092 106 22
ND<0 ND<0 0 106 22
1.03318 ND<0 1.03318 107 22
0.371564 J ND<0 0.371564 108 22
-0.371064 J ND<0 -0.371064 108 23
-0.314711 J ND<0 -0.314711 108 24
ND<0 ND<0 0 108 24
0.536493 J ND<0 0.536493 109 24
0.470004 J ND<0 0.470004 110 24
0.34359 J ND<0 0.34359 111 24
0.693147 ND<0 0.693147 112 24
0.182322 J ND<0 0.182322 113 24

ND<0 0.993252 -0.993252 113 25
ND<0 0.993252 -0.993252 113 26
ND<0 0.993252 -0.993252 113 27
3.61092 0.993252 2.61767 114 27
ND<0 0.993252 -0.993252 114 28
1.03318 0.993252 0.0399327 115 28
0.371564 J 0.993252 -0.621688 115 29
-0.371064 J 0.993252 -1.36432 115 30
-0.314711 J 0.993252 -1.30796 115 31
ND<0 0.993252 -0.993252 115 32
0.536493 J 0.993252 -0.456758 115 33
0.470004 J 0.993252 -0.523248 115 34
0.34359 J 0.993252 -0.649662 115 35
0.693147 0.993252 -0.300105 115 36
0.182322 J 0.993252 -0.81093 115 37

ND<0 ND<0 0 115 37
ND<0 ND<0 0 115 37
3.61092 ND<0 3.61092 116 37

ND<0	ND<0	0	116	37		
1.03318		ND<0	1.03318	117	37	
0.371564 J		ND<0	0.371564		118	37
-0.371064 J		ND<0	-0.371064		118	38
-0.314711 J		ND<0	-0.314711		118	39
ND<0	ND<0	0	118	39		
0.536493 J		ND<0	0.536493		119	39
0.470004 J		ND<0	0.470004		120	39
0.34359 J		ND<0	0.34359	121	39	
0.693147		ND<0	0.693147		122	39
0.182322 J		ND<0	0.182322		123	39
ND<0	ND<0	0	123	39		
3.61092		ND<0	3.61092	124	39	
ND<0	ND<0	0	124	39		
1.03318		ND<0	1.03318	125	39	
0.371564 J		ND<0	0.371564		126	39
-0.371064 J		ND<0	-0.371064		126	40
-0.314711 J		ND<0	-0.314711		126	41
ND<0	ND<0	0	126	41		
0.536493 J		ND<0	0.536493		127	41
0.470004 J		ND<0	0.470004		128	41
0.34359 J		ND<0	0.34359	129	41	
0.693147		ND<0	0.693147		130	41
0.182322 J		ND<0	0.182322		131	41
3.61092		ND<0	3.61092	132	41	
ND<0	ND<0	0	132	41		
1.03318		ND<0	1.03318	133	41	
0.371564 J		ND<0	0.371564		134	41
-0.371064 J		ND<0	-0.371064		134	42
-0.314711 J		ND<0	-0.314711		134	43
ND<0	ND<0	0	134	43		
0.536493 J		ND<0	0.536493		135	43
0.470004 J		ND<0	0.470004		136	43
0.34359 J		ND<0	0.34359	137	43	
0.693147		ND<0	0.693147		138	43
0.182322 J		ND<0	0.182322		139	43
ND<0	3.61092		-3.61092	139	44	
1.03318		3.61092		-2.57773	139	45
0.371564 J		3.61092		-3.23935	139	46
-0.371064 J		3.61092		-3.98198	139	47
-0.314711 J		3.61092		-3.92563	139	48
ND<0	3.61092		-3.61092	139	49	
0.536493 J		3.61092		-3.07442	139	50
0.470004 J		3.61092		-3.14091	139	51
0.34359 J		3.61092		-3.26733	139	52
0.693147		3.61092		-2.91777	139	53
0.182322 J		3.61092		-3.4286	139	54
1.03318		ND<0	1.03318	140	54	
0.371564 J		ND<0	0.371564		141	54
-0.371064 J		ND<0	-0.371064		141	55
-0.314711 J		ND<0	-0.314711		141	56
ND<0	ND<0	0	141	56		
0.536493 J		ND<0	0.536493		142	56
0.470004 J		ND<0	0.470004		143	56
0.34359 J		ND<0	0.34359	144	56	
0.693147		ND<0	0.693147		145	56
0.182322 J		ND<0	0.182322		146	56

0.371564 J	1.03318	-0.661621	146	57
-0.371064 J	1.03318	-1.40425	146	58
-0.314711 J	1.03318	-1.3479	146	59
ND<0	1.03318	-1.03318	146	60
0.536493 J	1.03318	-0.496691	146	61
0.470004 J	1.03318	-0.563181	146	62
0.34359 J	1.03318	-0.689595	146	63
0.693147	1.03318	-0.340037	146	64
0.182322 J	1.03318	-0.850863	146	65
-0.371064 J	0.371564 J	-0.742627	146	66
-0.314711 J	0.371564 J	-0.686274	146	67
ND<0	0.371564 J	-0.371564	146	68
0.536493 J	0.371564 J	0.16493	147	68
0.470004 J	0.371564 J	0.0984401	148	68
0.34359 J	0.371564 J	-0.0279739	148	69
0.693147	0.371564 J	0.321584	149	69
0.182322 J	0.371564 J	-0.189242	149	70
-0.314711 J	-0.371064 J	0.0563529	150	70
ND<0	-0.371064 J	0.371064	151	70
0.536493 J	-0.371064 J	0.907557	152	70
0.470004 J	-0.371064 J	0.841067	153	70
0.34359 J	-0.371064 J	0.714653	154	70
0.693147	-0.371064 J	1.06421	155	70
0.182322 J	-0.371064 J	0.553385	156	70
ND<0	-0.314711 J	0.314711	157	70
0.536493 J	-0.314711 J	0.851204	158	70
0.470004 J	-0.314711 J	0.784714	159	70
0.34359 J	-0.314711 J	0.6583	160	70
0.693147	-0.314711 J	1.00786	161	70
0.182322 J	-0.314711 J	0.497032	162	70
0.536493 J	ND<0	0.536493	163	70
0.470004 J	ND<0	0.470004	164	70
0.34359 J	ND<0	0.34359	165	70
0.693147	ND<0	0.693147	166	70
0.182322 J	ND<0	0.182322	167	70
0.470004 J	0.536493 J	-0.0664897	167	71
0.34359 J	0.536493 J	-0.192904	167	72
0.693147	0.536493 J	0.156654	168	72
0.182322 J	0.536493 J	-0.354172	168	73
0.34359 J	0.470004 J	-0.126414	168	74
0.693147	0.470004 J	0.223144	169	74
0.182322 J	0.470004 J	-0.287682	169	75
0.693147	0.34359 J	0.349557	170	75
0.182322 J	0.34359 J	-0.161268	170	76
0.182322 J	0.693147	-0.510826	170	77

S Statistic = 170 - 77 = 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
11/15/2009	1

There are 0 time periods with multiple data

A = 4836
B = 0
C = 1716
D = 0
E = 156
F = 0
a = 37050
b = 140400
c = 1300
Group Variance = 1789.67
Z-Score = 2.17471
Comparison Level at 1.0 - (0.05 / 2) = 97.5% confidence level = 1.97737 (two-tailed)
|2.17471| > 1.97737 indicating a trend

Concentrations (ppb)

Parameter: Zinc

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 201
Total Non-Detect: 128
Percent Non-Detects: 63.6816%
Total Background Measurements: 15
There is 1 background location

Loc.	Meas.	ND	Date	Conc.	Original
MW-13	15	9 (60%)	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

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
			11/15/2009	12	12
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	
			11/15/2009	3.9 J	3.9 J	
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	
			11/15/2009	3.1 J	3.1 J	
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		
			11/15/2009	70	70		
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		
			11/15/2009	20	20		
MW-8	25	15 (60%)	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		
MW-7	25	13 (52%)	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	
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	
			11/15/2009	7.6 J	7.6 J	

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 = 201

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	1.3	-2.65209	7.03356	-3.44771
2	3.1	-2.36561	12.6297	-10.7811
3	3.9	-2.19728	17.4578	-19.3505
4	3.9	-2.07485	21.7627	-27.4424
5	4.5	-1.97737	25.6727	-36.3406
6	5	-1.8957	29.2664	-45.8191
7	5	-1.82501	32.597	-54.9441
8	5	-1.76241	35.7031	-63.7562
9	5.56	-1.70604	38.6137	-73.2418
10	6.33	-1.65463	41.3515	-83.7155
11	6.59	-1.60725	43.9348	-94.3073
12	7.6	-1.56322	46.3784	-106.188
13	7.99	-1.52203	48.695	-118.349
14	8.3	-1.48328	50.8951	-130.66
15	8.7	-1.44663	52.9879	-143.246
16	9.5	-1.41183	54.9811	-156.658
17	10.3	-1.37866	56.8818	-170.858
18	10.8	-1.34694	58.6961	-185.405
19	11	-1.31652	60.4293	-199.887
20	11.2	-1.28727	62.0864	-214.304
21	11.6	-1.26464	63.6857	-228.974
22	12	-1.23724	65.2165	-243.821
23	12.6	-1.21073	66.6823	-259.076
24	13.1	-1.18504	68.0866	-274.6
25	14	-1.16012	69.4325	-290.842
26	18	-1.1359	70.7228	-311.288
27	20	-1.11232	71.96	-333.535
28	20	-1.08935	73.1467	-355.322
29	21	-1.06694	74.2851	-377.727
30	22	-1.04505	75.3772	-400.718
31	26	-1.02365	76.4251	-427.333
32	26	-1.00271	77.4305	-453.404
33	27	-0.982202	78.3952	-479.923
34	27	-0.9621	79.3209	-505.9
35	28	-0.942375	80.2089	-532.286
36	28	-0.923014	81.0609	-558.131
37	30	-0.903992	81.8781	-585.251
38	30	-0.885291	82.6618	-611.809
39	30	-0.866894	83.4133	-637.816
40	30	-0.848786	84.1338	-663.28
41	30	-0.834498	84.8302	-688.315
42	30	-0.816874	85.4974	-712.821
43	30	-0.7995	86.1366	-736.806
44	30	-0.782366	86.7487	-760.277
45	30	-0.765456	87.3347	-783.241
46	30	-0.748762	87.8953	-805.703
47	30	-0.732275	88.4315	-827.672
48	30	-0.715986	88.9442	-849.151
49	30	-0.699883	89.434	-870.148

50	30	-0.683968	9.9018	-890.667
51	30	-0.668209	90.3483	-910.713
52	30	-0.652622	90.7742	-930.292
53	30	-0.637192	91.1802	-949.407
54	30	-0.621911	91.567	-968.065
55	30	-0.606775	91.9352	-986.268
56	30	-0.591776	92.2854	-1004.02
57	30	-0.576911	92.6182	-1021.33
58	30	-0.562179	2.9342	-1038.19
59	30	-0.547551	93.2341	-1054.62
60	30	-0.533048	93.5182	-1070.61
61	30	-0.521527	93.7902	-1086.26
62	30	-0.507221	94.0475	-1101.47
63	30	-0.493018	94.2905	-1116.26
64	30	-0.478914	94.5199	-1130.63
65	30	-0.464904	94.736	-1144.58
66	30	-0.450985	94.9394	-1158.11
67	30	-0.437153	95.1305	-1171.22
68	30	-0.423405	95.3098	-1183.93
69	30	-0.409735	95.4777	-1196.22
70	30	-0.396142	95.6346	-1208.1
71	30	-0.382622	95.781	-1219.58
72	30	-0.369171	95.9173	-1230.66
73	30	-0.355788	96.0439	-1241.33
74	30	-0.342466	96.1611	-1251.6
75	30	-0.329206	96.2695	-1261.48
76	30	-0.316004	96.3694	-1270.96
77	30	-0.302855	96.4611	-1280.05
78	30	-0.289769	6.5451	-1288.74
79	30	-0.276714	96.6216	-1297.04
80	30	-0.263715	96.6912	-1304.95
81	30	-0.253347	96.7554	-1312.55
82	30	-0.240426	96.8132	-1319.76
83	30	-0.227545	96.8649	-1326.59
84	30	-0.214702	96.911	-1333.03
85	30	-0.201894	96.9518	-1339.09
86	30	-0.189118	96.9876	-1344.76
87	30	-0.176374	97.0187	-1350.05
88	30	-0.163659	97.0455	-1354.96
89	30	-0.150969	97.0683	-1359.49
90	30	-0.138305	97.0874	-1363.64
91	30	-0.125661	97.1032	-1367.41
92	30	-0.113039	97.116	-1370.8
93	30	-0.100433	97.126	-1373.81
94	30	-0.0878447	97.1338	-1376.45
95	30	-0.0752698	97.1394	-1378.71
96	30	-0.0627062	97.1434	-1380.59
97	30	-0.0501541	97.1459	-1382.09
98	30	-0.0376076	97.1473	-1383.22
99	30	-0.0250691	97.1479	-1383.97
100	30	-0.0125328	97.1481	-1384.35
101	30	0	97.1481	-1384.35
102	30	0.0125328	97.1482	-1383.97
103	30	0.0250691	97.1489	-1383.22
104	30	0.0376076	97.1503	-1382.09
105	30	0.0501541	97.1528	-1380.59
106	30	0.0627062	97.1567	-1378.71
107	30	0.0752698	97.1624	-1376.45
108	30	0.0878447	97.1701	-1373.81
109	30	0.100433	97.1802	-1370.8
110	30	0.113039	97.193	-1367.41
111	30	0.125661	97.2088	-1363.64

112	30	0.138305	97.2279	-1359.49
113	30	0.150969	97.2507	-1354.96
114	30	0.163659	97.2775	-1350.05
115	30	0.176374	97.3086	-1344.76
116	30	0.189118	97.3443	-1339.09
117	30	0.201894	97.3851	-1333.03
118	30	0.214702	97.4312	-1326.59
119	30	0.227545	97.483	-1319.76
120	30	0.240426	97.5408	-1312.55
121	30	0.253347	97.605	-1304.95
122	30	0.263715	97.6745	-1297.04
123	30	0.276714	97.7511	-1288.74
124	30	0.28976	97.835	-1280.05
125	30	0.302855	97.9268	-1270.96
126	30	0.316004	98.0266	-1261.48
127	30	0.329206	98.135	-1251.6
128	30	0.342466	98.2523	-1241.33
129	30	0.355788	98.3789	-1230.66
130	30	0.369171	98.5151	-1219.58
131	30	0.382622	98.6615	-1208.1
132	30	0.396142	98.8185	-1196.22
133	30	0.409735	98.9864	-1183.93
134	30	0.423405	99.1656	-1171.22
135	30	0.437153	99.3567	-1158.11
136	30	0.450985	99.5601	-1144.58
137	30	0.464904	99.7763	-1130.63
138	30	0.478914	100.006	-1116.26
139	30	0.493018	100.249	-1101.47
140	30	0.507221	100.506	-1086.26
141	30	0.521527	100.778	-1070.61
142	30	0.533048	101.062	-1054.62
143	30	0.547551	101.362	-1038.19
144	30	0.56217	101.678	-1021.33
145	30	0.576911	102.011	-1004.02
146	30	0.591776	102.361	-986.268
147	30	0.606775	102.729	-968.065
148	30	0.621911	103.116	-949.407
149	30	0.637192	103.522	-930.292
150	30	0.652622	103.948	-910.713
151	30	0.668209	104.394	-890.667
152	30	0.68396	104.862	-870.148
153	30	0.699883	105.352	-849.151
154	30	0.715986	105.865	-827.672
155	30	0.732275	106.401	-805.703
156	30	0.748762	106.961	-783.241
157	30	0.765456	107.547	-760.277
158	30	0.782366	108.16	-736.806
159	30	0.7995	108.799	-712.821
160	30	0.816874	109.466	-688.315
161	30	0.834498	110.162	-663.28
162	30	0.848786	110.883	-637.816
163	30	0.866894	111.634	-611.809
164	30.5	0.885291	112.418	-584.808
165	33.1	0.903992	113.235	-554.886
166	33.6	0.923014	114.087	-523.873
167	34.1	0.942375	114.975	-491.738
168	35	0.9621	115.901	-458.064
169	39.7	0.982202	116.866	-419.071
170	40	1.00271	117.871	-378.962
171	46	1.02365	118.919	-331.874
172	51.6	1.04505	120.011	-277.95
173	56.6	1.06694	121.149	-217.561

174	60	1.08935	122.336	-152.2
175	62	1.11232	123.573	-83.2361
176	62.4	1.1359	124.864	-12.3562
177	70	1.16012	126.209	68.8521
178	72	1.18504	127.614	154.175
179	73.8	1.21073	129.08	243.527
180	75	1.23724	130.61	336.32
181	76	1.26464	132.21	432.432
182	79	1.28727	133.867	534.127
183	88	1.31652	135.6	649.981
184	92	1.34694	137.414	773.899
185	95	1.37866	139.315	904.872
186	96	1.41183	141.308	1040.41
187	110	1.44663	143.401	1199.54
188	110	1.48328	145.601	1362.7
189	110	1.52203	147.918	1530.12
190	120	1.56322	150.361	1717.71
191	120	1.60725	152.945	1910.58
192	150	1.65463	155.682	2158.77
193	150	1.70604	158.593	2414.68
194	180	1.76241	161.699	2731.91
195	200	1.82501	165.03	3096.91
196	250	1.8957	168.623	3570.84
197	320	1.97737	172.533	4203.6
198	330	2.07485	176.838	4888.3
199	346	2.19728	181.666	5648.56
200	410	2.36561	187.263	6618.46
201	610	2.65209	194.296	8236.23

Data Set Standard Deviation = 67.6155
Numerator = 6.78355e+007
Denominator = 1.77659e+008
W Statistic = 0.38183 = 6.78355e+007 / 1.77659e+008

5% Critical value of 0.976 exceeds 0.38183
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.38183
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 = 201

i	x(i)	m(i)	sum(m^2)	sum(mx)
1	0.262364	-2.652097.03356	-0.695813	
2	1.1314	-2.3656112.6297	-3.37227	
3	1.36098	-2.1972817.4578	-6.36273	
4	1.36098	-2.0748521.7627	-9.18655	
5	1.50408	-1.9773725.6727	-12.1607	
6	1.60944	-1.8957 29.2664	-15.2117	
7	1.60944	-1.8250132.597	-18.1489	
8	1.60944	-1.7624135.7031	-20.9854	
9	1.7156	-1.7060438.6137	-23.9123	
10	1.8453	-1.6546341.3515	-26.9656	
11	1.88555	-1.6072543.9348	-29.9961	
12	2.02815	-1.5632246.3784	-33.1666	
13	2.07819	-1.5220348.695	-36.3296	
14	2.11626	-1.4832850.8951	-39.4686	
15	2.16332	-1.4466352.9879	-42.5982	
16	2.25129	-1.4118354.9811	-45.7766	
17	2.33214	-1.3786656.8818	-48.9918	
18	2.37955	-1.3469458.6961	-52.1969	
19	2.3979	-1.3165260.4293	-55.3538	
20	2.41591	-1.2872762.0864	-58.4638	
21	2.45101	-1.2646463.6857	-61.5634	
22	2.48491	-1.2372465.2165	-64.6378	
23	2.5337	-1.2107366.6823	-67.7054	
24	2.57261	-1.1850468.0866	-70.7541	
25	2.63906	-1.1601269.4325	-73.8157	
26	2.89037	-1.1359 70.7228	-77.0989	
27	2.99573	-1.1123271.96	-80.4311	
28	2.99573	-1.0893573.1467	-83.6945	
29	3.04452	-1.0669474.2851	-86.9428	
30	3.09104	-1.0450575.3772	-90.1731	
31	3.2581	-1.0236576.4251	-93.5083	
32	3.2581	-1.0027177.4305	-96.7752	
33	3.29584	-0.982202	78.3952	-100.012
34	3.29584	-0.9621 79.3209	-103.183	
35	3.3322	-0.942375	80.2089	-106.323
36	3.3322	-0.923014	81.0609	-109.399
37	3.4012	-0.903992	81.8781	-112.474
38	3.4012	-0.885291	82.6618	-115.485
39	3.4012	-0.866894	83.4133	-118.433
40	3.4012	-0.848786	84.1338	-121.32
41	3.4012	-0.834498	84.8302	-124.159
42	3.4012	-0.816874	85.4974	-126.937
43	3.4012	-0.7995 86.1366	-129.656	
44	3.4012	-0.782366	86.7487	-132.317
45	3.4012	-0.765456	87.3347	-134.921
46	3.4012	-0.748762	87.8953	-137.467
47	3.4012	-0.732275	88.4315	-139.958
48	3.4012	-0.715986	88.9442	-142.393
49	3.4012	-0.699883	89.434	-144.774

50	3.4012	-0.6839689.9018	-147.1	
51	3.4012	-0.668209	90.3483	-149.373
52	3.4012	-0.652622	90.7742	-151.592
53	3.4012	-0.637192	91.1802	-153.759
54	3.4012	-0.621911	91.567	-155.875
55	3.4012	-0.606775	91.9352	-157.938
56	3.4012	-0.591776	92.2854	-159.951
57	3.4012	-0.576911	92.6182	-161.913
58	3.4012	-0.5621792.9342	-163.825	
59	3.4012	-0.547551	93.2341	-165.688
60	3.4012	-0.533048	93.5182	-167.501
61	3.4012	-0.521527	93.7902	-169.275
62	3.4012	-0.507221	94.0475	-171
63	3.4012	-0.493018	94.2905	-172.677
64	3.4012	-0.478914	94.5199	-174.305
65	3.4012	-0.464904	94.736	-175.887
66	3.4012	-0.450985	94.9394	-177.421
67	3.4012	-0.437153	95.1305	-178.907
68	3.4012	-0.423405	95.3098	-180.348
69	3.4012	-0.409735	95.4777	-181.741
70	3.4012	-0.396142	95.6346	-183.088
71	3.4012	-0.382622	95.781	-184.39
72	3.4012	-0.369171	95.9173	-185.645
73	3.4012	-0.355788	96.0439	-186.856
74	3.4012	-0.342466	96.1611	-188.02
75	3.4012	-0.329206	96.2695	-189.14
76	3.4012	-0.316004	96.3694	-190.215
77	3.4012	-0.302855	96.4611	-191.245
78	3.4012	-0.2897696.5451	-192.23	
79	3.4012	-0.276714	96.6216	-193.172
80	3.4012	-0.263715	96.6912	-194.069
81	3.4012	-0.253347	96.7554	-194.93
82	3.4012	-0.240426	96.8132	-195.748
83	3.4012	-0.227545	96.8649	-196.522
84	3.4012	-0.214702	96.911	-197.252
85	3.4012	-0.201894	96.9518	-197.939
86	3.4012	-0.189118	96.9876	-198.582
87	3.4012	-0.176374	97.0187	-199.182
88	3.4012	-0.163659	97.0455	-199.739
89	3.4012	-0.150969	97.0683	-200.252
90	3.4012	-0.138305	97.0874	-200.722
91	3.4012	-0.125661	97.1032	-201.15
92	3.4012	-0.113039	97.116	-201.534
93	3.4012	-0.100433	97.126	-201.876
94	3.4012	-0.0878447	97.1338	-202.175
95	3.4012	-0.0752698	97.1394	-202.431
96	3.4012	-0.0627062	97.1434	-202.644
97	3.4012	-0.0501541	97.1459	-202.815
98	3.4012	-0.0376076	97.1473	-202.942
99	3.4012	-0.0250691	97.1479	-203.028
100	3.4012	-0.0125328	97.1481	-203.07
101	3.4012	0	97.1481	-203.07
102	3.4012	0.0125328	97.1482	-203.028
103	3.4012	0.0250691	97.1489	-202.942
104	3.4012	0.0376076	97.1503	-202.815
105	3.4012	0.0501541	97.1528	-202.644
106	3.4012	0.0627062	97.1567	-202.431
107	3.4012	0.0752698	97.1624	-202.175
108	3.4012	0.0878447	97.1701	-201.876
109	3.4012	0.100433	97.1802	-201.534
110	3.4012	0.113039	97.193	-201.15
111	3.4012	0.125661	97.2088	-200.722

112	3.4012	0.138305	97.2279	-200.252
113	3.4012	0.150969	97.2507	-199.739
114	3.4012	0.163659	97.2775	-199.182
115	3.4012	0.176374	97.3086	-198.582
116	3.4012	0.189118	97.3443	-197.939
117	3.4012	0.201894	97.3851	-197.252
118	3.4012	0.214702	97.4312	-196.522
119	3.4012	0.227545	97.483	-195.748
120	3.4012	0.240426	97.5408	-194.93
121	3.4012	0.253347	97.605	-194.069
122	3.4012	0.263715	97.6745	-193.172
123	3.4012	0.276714	97.7511	-192.23
124	3.4012	0.28976	97.835	-191.245
125	3.4012	0.302855	97.9268	-190.215
126	3.4012	0.316004	98.0266	-189.14
127	3.4012	0.329206	98.135	-188.02
128	3.4012	0.342466	98.2523	-186.856
129	3.4012	0.355788	98.3789	-185.645
130	3.4012	0.369171	98.5151	-184.39
131	3.4012	0.382622	98.6615	-183.088
132	3.4012	0.396142	98.8185	-181.741
133	3.4012	0.409735	98.9864	-180.348
134	3.4012	0.423405	99.1656	-178.907
135	3.4012	0.437153	99.3567	-177.421
136	3.4012	0.450985	99.5601	-175.887
137	3.4012	0.464904	99.7763	-174.305
138	3.4012	0.478914	100.006	-172.677
139	3.4012	0.493018	100.249	-171
140	3.4012	0.507221	100.506	-169.275
141	3.4012	0.521527	100.778	-167.501
142	3.4012	0.533048	101.062	-165.688
143	3.4012	0.547551	101.362	-163.825
144	3.4012	0.56217	101.678	-161.913
145	3.4012	0.576911	102.011	-159.951
146	3.4012	0.591776	102.361	-157.938
147	3.4012	0.606775	102.729	-155.875
148	3.4012	0.621911	103.116	-153.759
149	3.4012	0.637192	103.522	-151.592
150	3.4012	0.652622	103.948	-149.373
151	3.4012	0.668209	104.394	-147.1
152	3.4012	0.68396	104.862	-144.774
153	3.4012	0.699883	105.352	-142.393
154	3.4012	0.715986	105.865	-139.958
155	3.4012	0.732275	106.401	-137.467
156	3.4012	0.748762	106.961	-134.921
157	3.4012	0.765456	107.547	-132.317
158	3.4012	0.782366	108.16	-129.656
159	3.4012	0.7995	108.799	-126.937
160	3.4012	0.816874	109.466	-124.159
161	3.4012	0.834498	110.162	-121.32
162	3.4012	0.848786	110.883	-118.433
163	3.4012	0.866894	111.634	-115.485
164	3.41773	0.885291	112.418	-112.459
165	3.49953	0.903992	113.235	-109.296
166	3.51453	0.923014	114.087	-106.052
167	3.5293	0.942375	114.975	-102.726
168	3.55535	0.9621	115.901	-99.3051
169	3.68135	0.982202	116.866	-95.6893
170	3.68888	1.00271	117.871	-91.9904
171	3.82864	1.02365	118.919	-88.0712
172	3.94352	1.04505	120.011	-83.9501
173	4.03601	1.06694	121.149	-79.6439

174	4.09434	1.08935	122.336	-75.1837
175	4.12713	1.11232	123.573	-70.593
176	4.13357	1.1359	124.864	-65.8977
177	4.2485	1.16012	126.209	-60.969
178	4.27667	1.18504	127.614	-55.9009
179	4.30136	1.21073	129.08	-50.6931
180	4.31749	1.23724	130.61	-45.3514
181	4.33073	1.26464	132.21	-39.8746
182	4.36945	1.28727	133.867	-34.2499
183	4.47734	1.31652	135.6	-28.3554
184	4.52179	1.34694	137.414	-22.2648
185	4.55388	1.37866	139.315	-15.9866
186	4.56435	1.41183	141.308	-9.5425
187	4.70048	1.44663	143.401	-2.74263
188	4.70048	1.48328	145.601	4.22951
189	4.70048	1.52203	147.918	11.3838
190	4.78749	1.56322	150.361	18.8677
191	4.78749	1.60725	152.945	26.5624
192	5.01064	1.65463	155.682	34.8531
193	5.01064	1.70604	158.593	43.4015
194	5.19296	1.76241	161.699	52.5536
195	5.29832	1.82501	165.03	62.2231
196	5.52146	1.8957	168.623	72.6901
197	5.76832	1.97737	172.533	84.0962
198	5.79909	2.07485	176.838	96.1284
199	5.84644	2.19728	181.666	108.975
200	6.01616	2.36561	187.263	123.207
201	6.41346	2.65209	194.296	140.216

Data Set Standard Deviation = 0.813304
Numerator = 19660.4
Denominator = 25703.9
W Statistic = 0.76488 = 19660.4 / 25703.9

5% Critical value of 0.976 exceeds 0.76488
Evidence of non-normality at 95% level of significance

1% Critical value of 0.967 exceeds 0.76488
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	158
	3/15/2000	4.56435	186
	9/24/2003	6.41346	201
	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	144
	5/23/2007	ND<3.4012	64.5
	11/28/2007	ND<3.4012	64.5
	6/5/2008	2.41591 J	147
	11/20/2008	ND<3.4012	64.5
	6/11/2009	2.63906	152

Rank Sum = 1568.5
Rank Mean = 104.567

Background Rank Sum = 1568.5
Background Rank Mean = 104.567

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	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	ND<3.4012	64.5
	5/23/2007	2.5337 J	150
	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	132
	11/15/2009	2.48491	149

Rank Sum = 1401
Rank Mean = 87.5625

MW-11R	7/20/1995	ND<3.4012	64.5
	8/24/1995	3.5293 J	167
	9/28/1995	3.41773	164

	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	184
	4/7/1998	5.79909	198
	9/23/1998	4.70048	187
	3/16/1999	ND<3.4012	64.5
	9/23/1999	3.29584 J	160
	3/15/2000	ND<3.4012	64.5
	9/24/2003	4.09434	174
	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	154
	11/18/2006	ND<3.4012	64.5
	5/23/2007	3.68135	169
	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	171
	11/15/2009	1.36098 J	130

Rank Sum = 2825.5
Rank Mean = 108.673

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	188
	9/24/1997	ND<3.4012	64.5
	4/7/1998	5.01064	192
	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	176
	11/28/2007	6.01616	200
	6/5/2008	2.37955 J	145
	11/20/2008	ND<3.4012	64.5
	6/11/2009	3.3322	162
	11/15/2009	1.1314 J	129

Rank Sum = 2417.5
Rank Mean = 92.9808

MW-9	7/20/1995	ND<3.4012	64.5
	8/24/1995	3.49953 J	165
	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	189

	9/24/1997	ND<3.4012	64.5
	4/7/1998	ND<3.4012	64.5
	9/23/1998	4.47734	183
	3/16/1999	ND<3.4012	64.5
	9/23/1999	1.60944 J	133
	3/15/2000	ND<3.4012	64.5
	9/24/2003	4.78749	190
	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	136
	5/23/2007	4.03601	173
	11/28/2007	3.2581 J	159
	6/5/2008	ND<3.4012	64.5
	11/20/2008	ND<3.4012	64.5
	6/11/2009	3.09104	157
	11/15/2009	4.2485	177

Rank Sum = 2694
Rank Mean = 103.615

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	137
	5/23/2007	ND<3.4012	64.5
	11/28/2007	ND<3.4012	64.5
	6/5/2008	2.57261 J	151
	11/20/2008	ND<3.4012	64.5
	6/11/2009	2.11626 J	141
	11/15/2009	2.99573	155

Rank Sum = 1358
Rank Mean = 84.875

MW-8	7/20/1995	ND<3.4012	64.5
	8/24/1995	3.04452 J	156
	9/28/1995	3.51453 J	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	4.12713	175
	4/7/1998	5.01064	193
	9/23/1998	4.78749	191
	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	138
	5/23/2007	3.94352	172

	11/28/2007	3.29584 J	161
	6/5/2008	2.16332 J	142
	11/20/2008	3.3322 J	163
	6/11/2009	ND<0.262364	64.5

Rank Sum = 2624.5
Rank Mean = 104.98

MW-7	7/20/1995	ND<3.4012	64.5
	8/24/1995	3.68888 J	170
	9/28/1995	3.55535 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	4.36945	182
	4/7/1998	ND<3.4012	64.5
	9/23/1998	4.55388	185
	3/16/1999	ND<3.4012	64.5
	9/23/1999	1.60944 J	134
	3/15/2000	2.3979 J	146
	9/24/2003	5.19296	194
	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	135
	5/23/2007	4.30136	179
	11/28/2007	ND<3.4012	64.5
	6/5/2008	2.45101 J	148
	11/20/2008	4.33073	181
	6/11/2009	1.36098 J	131

Rank Sum = 2791.5
Rank Mean = 111.66

MW-6	7/20/1995	ND<3.4012	64.5
	8/24/1995	5.84644	199
	9/28/1995	2.25129 J	143
	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	178
	4/7/1998	4.31749	180
	9/23/1998	5.29832	195
	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	197
	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	140
	11/20/2008	ND<3.4012	64.5
	6/11/2009	2.89037	153
	11/15/2009	2.02815 J	139

Rank Sum = 2620.5

Rank Mean = 100.788

Calculation Results:

Kruskal-Wallis H Statistic = 4.096
Kruskal-Wallis H Statistic (adjusted for tied non-detects) = 5.52202
95% Confidence comparison value is 15.5073 at 8 degrees of freedom
4.096 < 15.5073 indicating no significant group difference at 5% significance level
5.52202 < 15.5073 indicating no significant group difference at 5% significance level when adjusted for ties