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Performance Based Decision System In Determining Post Closure Care (pcc) Duration In Florida Landfills

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PERFORMANCE BASED DECISION SYSTEM IN DETERMINING POST CLOSURE CARE DURATION IN FLORIDA LANDFILLS

by

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ABSTRACT

This study is an evaluation of Post Closure Care (PCC) duration of landfills using performance based methodology. The post closure care phase begins once the landfill is closed. As required by the Resource Conservation Recovery Act (RCRA) Subtitle D, PCC duration for municipal solid waste landfills is 30 years. During the PCC period, the landfill operator/owner is required to conduct monitoring for leachate, landfill gas, and ground-water and maintain the integrity of the cap so that the landfill does not impose a threat to surrounding human health and environment (HH&E). The duration of PCC can be reduced by the director of an approved State if an owner/operator of a landfill demonstrates that the landfill exhibits no threat to the surrounding HH&E or can be increased if the director of the approved State determines that an increased PCC period is required for the protection of HH&E. RCRA provides flexibility in optimizing PCC duration of landfills, although it does not identify the criteria/methodology which can be used in demonstrating the status of a landfill from the point of PCC. Researchers worldwide recognize that the threat imposed by a landfill after closure depends on the extent of degradation occurring inside the landfill. The increased functional stability of landfills reduces its risk to the surrounding HH&E. However, there is a wide range of opinions in defining functional stability of a landfill. The present thesis applies performance based methodology, developed by Environmental Research and Education Foundation (EREF), to making a decision on the PCC of landfills.

Performance based methodology is a modular approach encompassing all four PCC components of landfills (Leachate, gas, groundwater and cap maintenance). This methodology was applied to Alachua County Southwest Landfill (ACSWLF) in Alachua County, Florida. Each module was analyzed individually and recommendations on the PCC monitoring at the landfill site were provided.

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CHAPTER 1
INTRODUCTION

In 2006, U.S. residents, businesses, and institutions produced more than 251 million tons of municipal solid waste, otherwise known as garbage. This is approximately 4.6 pounds of waste per person per day. The majority of this waste is currently managed by disposal in municipal solid waste landfills [EPA, 2008]. Waste should ideally be reduced prior to generation. If the generation of waste can not be avoided, opportunities for waste recycle or reuse should be explored. If both of the options mentioned above are not feasible, then waste should be disposed in landfills. Thus landfills occupy the bottom most position in the waste management pyramid recommended by EPA, suggesting as the least preferred option of solid waste disposal [EPA, 2008]. However, landfilling by far is the most commonly used method worldwide for solid waste disposal. Landfills have come a long way from an open dump to a bioreactor. Earlier solid waste was placed into open dumps outside the city. Shortly, the consequences of open dumping were recognized and safer options of solid waste disposal and handling were implemented.

New generation landfills are recognized as an engineered structure with an impermeable liner at the bottom to protect natural groundwater sources. They are covered with an impermeable cap at the top to minimize infiltration of precipitation into the landfill. This approach of preventing moisture infiltration is termed as conventional approach where the landfill acts as a storage facility for municipal solid waste. Along with technological advances in construction and design methods, some operational advancement is also occurring. A good example of operational advancement is liquid injection in the landfills to promote rapid and complete biodegradation of the waste.

The enactment of Resource Conservation Recovery Act (RCRA) in 1979 has changed the solid waste handling approach in the United States. RCRA has created guidelines for siting, construction, operation and monitoring of landfills to make solid waste disposal safe to HH&E. For the current study, RCRA – Subtitle D guidelines for municipal solid waste landfills (MSW) are considered.

As per Subtitle D RCRA, the minimum liner requirements in Florida are a composite liner (High Density Polyethylene – HDPE and compacted clay liner) A cap is required to be equally or less permeable than that of the liner, hence usually a similar combination as described in the case of liners (HDPE and compacted clay) is observed for the final cap. Once the landfill is closed with a final cap, post closure care (PCC) begins for the landfills. A PCC duration of 30 years is required by RCRA for MSW landfills. During this time, landfill operators/owners monitor for four important components: (a) Leachate (b) Landfill gas (c) Groundwater and (d) the integrity of the cap. These activities are further described in Chapter 2.

The objective of this study is to estimate PCC duration in a Florida landfill using performance based methodology. The landfill considered for the study is the Alachua County Southwest Landfill (ACSWLF) in Alachua County. The performance based methodology was developed by the Environmental Education Research Foundation (EREF). The purpose of PCC is to monitor for landfill emissions (leachate and landfill gas) and protect human health & environment (HH&E) from their impact. In order to release a landfill from PCC activities, it should be safe to HH&E from these perspectives: (a) organic, inorganic and heavy metal concentrations in leachate must be within acceptable limits and (b) The gaseous emissions from landfills should be low. A final decision should be made by considering the impact of leachate and gas release on HH&E. During the application of the performance based methodology, various parameters include leachate concentration, leachate quantity and gas production was analyzed. Variations in these parameters are mainly analyzed with time. In this study, only the impact of leachate on groundwater is considered. There is no surface water body present near the ACSWLF.

CHAPTER 2
LITERATURE REVIEW

2.1. Post Closure Care (PCC) – Regulatory Aspects

The Resource Conservation Recovery Act commonly referred to as RCRA, was passed by the U.S. Congress in 1976 as an amendment to the Solid Waste Disposal Act of 1965. RCRA was an effort to make solid and hazardous waste management safer from the point of view of HH&E. RCRA also focused on reducing waste production and conservation of resources. Under RCRA, all open dumps were banned, promoting safer disposal of solid waste. In most cases individual states followed RCRA, but were given the flexibility to modify RCRA standards. Modified standards could not be less stringent than federal RCRA standards. RCRA is divided into sections called Subtitles. Subtitle C and D regulate waste disposal and handling for hazardous and non-hazardous waste respectively. For the project under study non-hazardous waste regulations (RCRA Subtitle D) governing municipal solid waste (MSW) management are considered.

RCRA Subtitle D describes regulations for safer MSW handling and disposal. These guidelines mainly revolve around landfill siting criteria (Subpart – B), operation (Subpart-C), design (Subpart-D), long-term care (Subpart-F) and financial assurance (Subpart-F). This section describes regulations governing post closure care (PCC) of landfills.

PCC begins when the landfill is closed. PCC duration prescribed by RCRA is 30 years. During the PCC period, landfill owner/operators are required monitor for leachate, landfill gas, and ground-water and maintain integrity of cap so that the landfill does not pose any threat to surrounding HH&E. Landfill owner/operators are required to perform the following activities during PCC duration.

2.1.1 Leachate Monitoring

Under leachate monitoring, owner/operators of landfill are required to collect and dispose leachate collected by leachate collection systems. Owner/operators are also required to maintain leachate collection systems by flushing or pressure cleaning removal pipes on a regular basis to reduce the accumulation of sediments, precipitation and to prevent biological fouling, and also to inspection and maintenance of leachate storage systems. Sampling and analysis of leachate is required to be performed regularly [RCRA Subtitle D, Subpart F].

2.1.2 Groundwater Monitoring

During PCC groundwater monitoring must be performed semi-annually. The impact of leachate and landfill gas on groundwater can be identified by performing groundwater monitoring.

2.1.3 Landfill Gas Monitoring

Monitoring of landfill gas at the property boundary and in on-site structures, operation and maintenance of the landfill gas extraction system is required (if such a system exists). Most large modern landfills are required to operate such a system to comply with the New Source Performance Standards (NSPS) under the Clean Air Act (CAA). Gas monitoring also involves upgrades or repairs to landfill gas management system components; mitigation of off-site gas migration concerns [RCRA Subtitle D, Subpart E].

2.1.4 Cap Maintenance

Cap maintenance is performed regularly to preserve the integrity of the landfill final cover. Inspections are usually performed to detect eroded banks, patches of dead vegetation, animal burrows, subsidence and cracks on the cover. Regular mowing of vegetation must be performed at least twice a year. Depending of the condition on cap, owner/operators are required to perform repairs to maintain the cap integrity.

Leachate and landfill gas are produced as a result of various biochemical reactions occurring in the landfill which continue after closure. Regular monitoring for PCC components mentioned above (leachate, landfill gas, groundwater and cap) can not only be useful in preventing or handling any major mishap due to leachate leaks or gas migration, but can also be helpful in understanding landfill processes and leachate and gas production variation with time after closure.

RCRA requires landfill monitoring during PCC duration which is usually 30 years. As described in RCRA, Subpart F- 40 CFR 258.61 (6.6.1.b) "*The length of PCC can be decreased by the Director of an approved State if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by the director of an approved state*" Alternatively, PCC duration can be increased if the Director of an approved State determines that increased PCC duration is necessary to protect HH&E. RCRA provides flexibility in optimizing PCC duration; however it does not provide the criteria or methodology to demonstrate the landfill waste functional stability which can be helpful in taking decision regarding PCC duration. As new generation (Subtitle D) landfills are approaching completion of PCC duration (30 years), an increasing interest in termination or optimization of PCC duration by researchers and regulators has occurred.

RCRA is one of the important regulations directly governing PCC of landfills. Other than RCRA, regulations having indirect impact on landfill PCC are New Source Performance Standards (NSPS) and Emission Guidelines (EG) and the Research

Development and Demonstration Rule (RD&D). The RD&D rule was passed by the U.S. Congress in 2004, encouraging the use of innovative technologies in operation of MSWLFs after successful demonstration from owner/operators that proposed use of technology does not pose an increased risk to HH&E. The RD&D rule authorizes several specific landfill operating practices and designs including the use of alternative cover system, surface water run-on controls, and non-indigenous liquid addition, which are not allowed under Subtitle D regulations [§258.4, Subpart A]. Use of operating technologies such as non-indigenous liquid addition may have an impact on PCC duration. The RD&D rule does change in PCC duration and activities, although some flexibility is provided to Subtitle D.

Although PCC is very important from the point of view of landfill impact on HH&E protection, it is usually considered as a burden due to the high costs of PCC. However, these days different options include beneficial post closure use (end-use) of landfills and use of landfill gas for energy generation (LFGTE) may help to change the approach of landfill owner/operators towards PCC [Stief, 2001]. As new generation landfills (Subtitle D) approaching the end of PCC, it is very important for regulators to make the right decisions regarding terminating or optimizing PCC duration and activities.

2.2 Landfill Stabilization Process

Termination of PCC activities is a very important decision and must be taken responsibly to avoid an adverse impact on HH&E. Researchers worldwide recognize that threats imposed by landfills after closure depend on the extent of degradation of waste occurring inside the landfill. Increased functional stability of landfilled waste reduces its risk to surrounding HH&E. However, there is a wide range of opinions defining stability of landfills. The functional stability of waste refers to the phase of the waste such that it poses no threat to HH&E. Potential threats to HH&E should be assessed in terms of leachate quantity and quality, gas production, stability of slopes, landfill settlement, human exposure, end-use and other factors [SWANA, 2004, Cited from EPCC Vol I]. Another recently defined criterion for functional stability of a landfill was when waste inside the landfill is degraded to an extent that it has the same characteristics as that of inert material without the potential to produce long-term pollution [Valencia et al., 2006].

Leachate and landfill gas are produced as a result of various biochemical reactions occurring inside the landfill. The quantity and quality of leachate and gas produced changes with time and can be used as a tool in predicting landfill status from the point of view of waste stabilization and ultimately PCC duration. A similar approach was established by RCRA when defining PCC duration of 30 years, where it is assumed that MSW may take 30 years to stabilize inside the landfill. Before discussing waste functional stability parameters it is important to understand various transformations MSW goes through with time. These transformations can be physical, chemical and biological in nature. Physical transformation processes can be in the form of mechanical volume reduction through compaction and particle size reduction through shredding the waste. Chemical transformation processes take place in the form of precipitation, sorption and complex formations. Biological transformations are far more significant than physical and chemical processes. During biological transformations, organic waste fractions are transformed to carbon dioxide and methane resulting in reduced mass and volume of waste.

Cellulose and hemi-cellulose comprise a major fraction (45%-50%) of organic MSW which undergoes biological transformation, producing leachate and landfill gas [Barlaz et. al., 1989]. Biological transformations are dominated by anaerobic conditions inside the landfill. Researchers have documented the process of waste degradation with time inside the landfill. Pohland et. al. (1983) described five phases that MSW goes through, resulting in the production of leachate and landfill gas. These five phases are described as follows:

I. **Initial Adjustment Phase:** This phase is mainly associated with initial waste placement. Moisture starts accumulating and conditions begin to become suitable for bacterial growth.

II. **Transition Phase:** In the transition phase field capacity of the waste is exceeded and leachate is produced. A transition from aerobic to anaerobic phase occurs with nitrate and sulfate being primary electron acceptors creating reducing conditions. Volatile fatty acids (VFAs) start appearing in this phase. Oxygen is utilized in the production of carbon dioxide.

III. **Acid Formation Phase:** As a result of continuing hydrolysis and fermentation of MSW, VFA accumulates resulting in reduced leachate pH. Reduced pH conditions promote mobilization and complexation of metals. The organic strength of leachate is very high during this phase. During this phase metals can be found in leachate at higher concentrations.

IV. **Methane Fermentation Phase:** Methane and carbon dioxide are formed during the methane fermentation phase by methane forming bacteria (methanogenic bacteria), consuming VFAs. The organic strength of leachate reduces with increased gas production. The pH of leachate starts increasing supporting growth of methanogenic bacteria. The oxidation-reduction potential (ORP) of leachate is lowest during this phase.

V. **Final Maturation:** During the final maturation phase nutrient and substrate become limiting. Gas production reduces drastically and leachate becoming more stable and dilute. Oxygen may slowly reappear increasing the ORP of the leachate.

Leachate and gas characteristics can help in phase identification of MSW. Most commonly used indicator parameters and their range in different phases is shown in Table 1.

The mode of operation can play a very important role in achieving the phases above. Operating the landfill as a bioreactor by liquid injection is one of the operating modes, and has gained popularity worldwide. A brief discussion on liquid injection in landfill is included ahead in the Chapter 2.

Table 1: Leachate and gas composition at different phases [Pohland, 1983]

Leachate/Gas	**Transition phase**	**Acid formation phase**	**Methane fermentation phase**	**Final maturation phase**
BOD_5	100-10,900	1000-57,700	600- 3,400	4-120
COD	480-18,000	1,500-71,100	580- 9,760	31-900
BOD_5:COD	0.23-0.87	0.4-0.8	0.17- 0.64	0.02- 0.13
NH_3-N	120-125	2-1,030	6- 430	6- 430
TKN	180-860	14-7,970	25-82	7- 490
pH	6.7	4.7-7.7	6.3-8.8	7.1-8.8
Sulfate	10-458	10-3240	Absent	5-40
ORP	+40 to -80	+80 to -240	-70 to -240	+97 to +163
Sulfide	Essentially absent	0-818	0.9	Absent
Chloride	30-5,000	30-5,000	30-5,000	30-5,000
Methane	Absent	Very low	30-60 %	0-<10 %

Leachate/Gas	Transition phase	Acid formation phase	Methane fermentation phase	Final maturation phase
Carbon dioxide	0-10	10-30	30-60	<40
Oxygen	20	0-5	0-5	>5
Hydrogen	Absent	0-2	<0.1	0-2

2.3. Landfill Leachate Characteristics

Leachate is produced as a result of excess moisture percolation through the waste layers in the landfill. Leachate is an important PCC component where, along with managing a leachate collection and disposal system, the operator is required to monitor for leachate composition and report the contaminants to the regulatory authority. Contaminants found in leachate for the purpose of this study are categorized into organic matter, inorganic indicators and metals. Variation of the contaminants in leachate due to landfill characteristics and age are described below.

2.3.1 Organic Indicator/Contaminants

Biological oxygen demand (BOD), chemical oxygen demand (COD) and total organic carbon (TOC) are generally used as indicators of organic strength of the leachate. It is important to understand the nature of the leachate produced so that decisions on further treatment or disposal of leachate can be made. Researchers in the past have studied leachate quality from MSW and variations occurring in leachate quality with the age of the landfill. Leachate characteristics during different phases especially in acetic and methanogenic phase are discussed from literature.

Ehrig (1988) reported leachate characteristics under acetic and methanogenic phase of landfilling. BOD_5 (5-day Biological Oxygen Demand) and COD (Chemical Oxygen Demand) concentrations of leachate in acetic and methanogenic phases are described in Table 2 as reported by Ehrig (1983). It can be seen that BOD_5 concentration in the acetic phase are very high as a result of accumulating volatile fatty acids resulting from fermentation of organic components of MSW. A significant reduction in BOD_5 concentration is observed during the methanogenic phase which can be associated with methane generation by methanogenic bacteria consuming VFA. Pohland (1983) described leachate characteristics in various phases as shown in Table 1, where a similar behavior can be seen from the BOD_5 and COD strengths in acetic and methanogenic phases.

Table 2: Leachate BOD_5 and COD strength in acetic and methanogenic phases [Ehrig 1988]

Parameters	Average	Range
Acetic phase		
BOD_5, mg/L	13,000	4,000-40,000
COD	22,000	6000-60,000
Methanogenic phase		
BOD_5	180	20-550
COD	3000	500-4500

Although various studies have confirmed reducing organic strength in leachate, this can not be the only criteria in making decisions on functional stability of landfills. BOD_5/COD ratio is one of the important biodegradability indicators used by researchers. . BOD_5/COD ratio greater than 0.4 represents a leachate produced during the acetic phase showing good biodegradability, while a BOD_5/COD ratio less than 0.1 indicates a stable leachate with low biodegradability of organic contents [Ehrig, 1983].

A study conducted by Kjeldsen (2000), describing the characteristics of leachate from old MSW landfills presented low concentration of organic compounds in the leachate and also low BOD_5/COD ratio (0.11 to 0.12). Reduced BOD_5/COD ratio, which is considered as a good indicator of stability leachate [Reinhart et al. 1995; Valencia et al., 2008; Ehrig, 1983, Barlaz et al. 2002] can be due to very low concentrations of biodegradable compounds and also the presence of higher concentrations of recalcitrant organic compounds such as humic substances (HS) [Reinhart et al, 1998; Barlaz et al, 2002]. Relatively higher percentages of humic substances in organic content in leachate from methanogenic the phase were also observed by Harmsen, 1983, Artiola-Fortuny and Fuller (1982), and Frimmel and Weis (1991) [Cited from Barlaz et. al. 2002].

Zhao et al. (1999) performed characterization of leachate from the closed (Shanghai Refuse Landfill) landfill and analyzed for leachate BOD_5, COD, ammonia and chloride over a four-year period. It was observed that leachate biodegradability reduced with time as suggested by a decreased BOD_5/COD ratio. As a part of the study, mathematical models were developed predicting long-term concentrations for the studied contaminants. It was predicted that long-term concentrations for BOD would fall below regulatory limits. COD was observed to follow a reducing trend, although at higher concentrations.

2.3.2. Inorganic Indicators

Inorganic indicators from MSW leachate under consideration are shown in Table 1. Some inorganic indicators vary with the phase of the landfill while some indicators remain unchanged irrespective of the phase [Pohland, 1983; Ehrig, 1988; Christhophersen et al. 2000]. As shown in Table 1 sulfate/sulfide varies with the age/phase of the landfill while chloride and ammonia and some cations (sodium and potassium) are observed to be relatively constant throughout the landfill phases.

Higher sulfate concentrations are observed during acetic phase which can be due to oxidation of elemental sulfur to sulfate from the previous phase. Under methanogenic conditions sulfate is not observed as a result of microbial reduction of sulfate to sulfide

[Christensen et al., 2001]. Other inorganic indicators include calcium, magnesium, iron, manganese and zinc. These cations follow similar patterns with higher concentrations during the acetic phase followed by lower concentrations during the methanogenic phase. The methanogenic phase is dominated by near neutral or slightly alkaline conditions, promoting precipitation and sorption of cations. Another reason concentrations of inorganic cations decline could be lower organic content in the leachate which otherwise would promote complexing with cations [Ehrig, 1983].

Table 1 (Pohland 1983) and Table 3 (Ehrig 1988) show some inorganic parameters which do not vary in concentrations during acetic and methanogenic phase. Chloride, sodium, potassium and ammonia are included in this category. Ammonia is produced as a result of decomposition of proteins. It is identified as a long-term problem as there are no means to biodegrade ammonia under methanogenic conditions. Similar findings are presented in a study of 13 sanitary landfills in Wisconsin, USA (Krug and Ham, 1997), where equivalent concentration ranges and time dependency of selected parameter were found (Cited from Christensen et al., 2001).

Table 3: Inorganic indicators with no difference between acetic and methanogenic phase [Ehrig 1983]

Parameter	Average	Range
Chloride (mg/L)	2100	100-5000
Sodium (mg/L)	1350	50-4000
Potassium (mg/L)	1100	10-2500
NH_4 (mg-N/L)	600	50-5000

2.3.3 Heavy Metals

When leachate monitoring is performed, it is required to characterize the leachate for the presence of heavy metals because of their potential health hazards. Due to their impact on human health, metals like mercury, lead, arsenic, chromium and cadmium have low primary drinking water standards. Along with the nature of waste in the landfill, detection of metals in the leachate is reported as a function of stabilization phase, pH, flow rate and concentration of complexing agents [Reinhart and Grosh, 1997]. Metals are detected in leachate during the acetic phase where pH of the leachate reduces due to acid accumulation, promoting metals mobility. Several phenomenon like complexation by inorganic and organic ligands formation and sorption to colloids are capable of mobilizing metals and increasing their concentration in leachate [Barlaz et. al, 2001]. When metals are not detected in leachate from MSWLF, as observed in the leachate from methanogenic phase [Pohland 1983, Ehrig, 1988]; it does not mean that the landfill does not possess any metals; but processes like precipitation and sorption are attenuating metals in the landfill leachate. Due to conditions promoting precipitation of heavy metals with sulfide, hydroxide and carbonate, metal concentrations in leachate from methanogenic phase are usually low [Chu et al., 1994; Qasim and Chiang, Ehrig, 1988; Barlaz et al., 2001; Reinhart et al. 1997].

The heavy metal concentrations in MSW landfill leachate from different literature studies are shown in Table 4. Iron, manganese and copper are not included in the heavy metal category as they not considered to be toxic, although secondary drinking water standards exist. They are, however, considered as inorganic indicators of waste. Maximum contaminants levels (MCL) for the respective metals are given in Table 4. The MCL values are primary drinking water standards followed in United States which is exceedingly strict standards for leachate [Barlaz et al. 2002].

The metal concentrations in leachate are of concern if leachate is discharged to surface water or reaches the groundwater. Although there is wide variation in metal concentrations (Table 4), studies in the past have concluded that metal concentration in leachate is not a matter of concern as these concentration seldom exceed regulatory standards [Reinhart and Grosh, 1995; Barlaz et al. 2002; Kjeldsen & Christhopersen, 2001]. Researchers are trying to understand the behavior of metals once conditions shift to aerobic after waste stabilization. Inconsistent results are obtained from the studies conducted by aerating anaerobically degraded waste [Martensson et. al. 1999]. More research is required to be conducted in this area to address the issue of long-term behavior of the metals.

Table 4: Metal concentration in leachate from different landfills

Metals (MCL)	**1**	**2**	**4**	**5**	**6**
Arsenic (10 μg/L)	160	16	-	-	-
Cadmium (5 μg/L)	6	6.8	10	-	<10
Cobalt (No MCL)	55	-	-	-	-
Nickel (100 μg/L)	200	130	90	-	30-130
Lead (15 μg/L)	90	70	140	BDL-105	<20
Chromium (100 μg/L)	300	76	40	BDL-5	20-220
Copper (1000 μg/L)	80	70	30	-	10-130
Mercury (2 μg/L)	10	5.2	-	-	-

1. Leachate characteristics presented by Ehrig (1983)
2. Leachate characteristics from Old Danish landfills presented by Christensen et al. (2001)
3. Leachate characteristics from old landfills from UK presented by Robinson et al., 1985 cited in Mendez et al. (1988)
4. South Florida Landfills, 1985
5. Gin Drinkers Bay landfill, Hong-Kong, L.M. Chu et al., 1991

2.4. Landfill Gas

Landfill gas is produced as a result of microbial anaerobic decomposition of organic matter. Landfill gas is mainly composed of methane (~50%), carbon dioxide (~50%) and non-methane organic compounds (NMOC) in trace quantities. Gas production from landfills is a function of the nature of the waste, moisture content, pH, temperature and the presence of nutrients [Farquhar and Rovers, 1973]. The composition and quantity of gas changes with the age of the landfill. During the aerobic phase the dominant gas produced is carbon dioxide. As conditions become anaerobic and methanogenic activities initiate, methane appears. It is important to collect the landfill gas and dispose it in a responsible manner because methane is a potent greenhouse gas. Another driving force behind landfill gas collection is the use of methane as a source of energy. Under NSPS/EG rules gas collection has become mandatory for landfills with a capacity of 2.5 million megagrams (MG) or more. Earlier a common trend was to collect the gas and burn it using a flare. Now methane is identified and used as a source of energy. EPA started the Landfill Methane Outreach Program (LMOP) in 1994 to promote use of methane as a source of energy by creating an alliance among states, energy users/providers the landfill gas industry and communities. As of 2007, there were 424 landfill gas to energy (LFGTE) projects active in the United States [LMOP, 2008]. Landfill gas (LFG), which continues to be emitted after closure of landfill needs to be considered when making any decision regarding PCC.

As required by Subtitle D under RCRA, landfill owner/operators are required to collect landfill gas to prevent exposure of humans to the gas. Methane is explosive within the range of 5% to 15% of the air volume. Landfill owner/operators must ensure that the concentration of methane gas does not exceed 25% of the lower explosive limits (LEL) in the facility and cannot exceed LEL at the facility boundary [RCRA-Subtitle D].

Landfill gas at the site can be collected in two ways passive gas collection systems and active gas collection system. Passive gas collection systems facilitate collection of gas under gas pressure and concentrations inside the landfill. On the other hand active gas collection systems use pumps or vacuum to extract the gas using collection wells. Active gas collection system may be costly as compared to a passive gas collection system, although they provide an efficient way to collect the gas. Active gas collection systems also facilitate measurement of gas production, composition and pressure [ASTDR, 2008]. Once gas is collected it can be carried to a flare to minimize the impact on surrounding HH&E. Another option dealing with the collected LFG which is gaining attention worldwide is conversion of LFG to energy (LFGTE). LFGTE at the site can prove to be an economic benefit to the owner of the landfill, reducing the cost of PCC.

For landfills with a capacity of less than 2.5 million tons, only a passive gas collection system would be required initially, so the issue of whether a gas collection and control system can be terminated after closure is not relevant. For termination of an active gas collection system to be acceptable several things need to be confirmed. Initially a reducing gas production from the landfill must be confirmed. Once LFG production is shown to be declining the remaining LFG potential must be estimated. The landfill gas remaining potential is a very important term used in the performance based methodology and will be discussed further in Chapter 3. If gas remaining potential is low (less than 10% of the gas potential – EPCC Methodology) the impact of discontinuing active gas collection in terms of greenhouse gas emissions, odor and explosion hazard should be evaluated.

Vadose zone monitoring is recommended during PCC so that the impact of gas migration on the groundwater, if any, can be evaluated. LFG can significantly impact groundwater. Carbon dioxide in LFG may dissolve in the groundwater forming a weak acid and promoting dissolution of naturally occurring metals. The contamination by NMOCs has also been observed. An active gas collection system can prevent dissolution of gas components in the groundwater [Prosser and Waineo, 1999; GC Environmental].

To design a gas collection system it is important to estimate the quantity of gas produced from the landfill. As recommended by USEPA, gas generation can be estimated using a first order model as follows:

$$Q = 2kL_oM_ie^{-kt}$$

Where

Q = total annual gas production rate (m^3/year),

L_o = methane generation potential (m^3 methane/MG of waste),

k = decay coefficient ($year^{-1}$),

M_i = waste in place (MG) and

t = age of waste (year).

The Landfill Gas Emission Model (LandGEM) is widely used in the US to estimate the quantity of LFG produced. In the absence of specific values of data default values are provided in LandGEM. LandGEM default values are mentioned in Table 5. L_o and k values may vary depending on the mode of operation of landfills. For example, for a landfill operated as a bioreactor these values were observed different than EPA recommended values. In the next section 2.5 the impact of leachate recirculation on leachate and gas quantity and quality from landfills and its probable impact on PCC duration of landfill are discussed.

Table 5: Default Lo and k values used in LandGEM [EPA, 2005]

	L_o, m^3/megagrams	**k, yr^{-1}**
CAA	170	0.05
AP-42	100	0.04
Bioreactor	96	0.25

2.5. Landfill as Bioreactor

The operation of a landfill as a bioreactor by liquid injection has gained popularity worldwide. After a successful demonstration of leachate recirculation benefits at lab scale in the early 1970s [Pohland et al, 1970], a first full scale leachate recirculation demonstration was performed in 1980 [Natale and Anderson, 1985; Pacey et al. 1987; Cited from Reinhart et al, 2002]. Reduced leachate treatment cost, air space recovery and higher gas production, which can be used for energy generation, are making liquid injection a popular option. The RD&D rule, described in section 2.1, allows introduction of leachate and other liquid in the landfill and operation as a bioreactor.

Liquid injection is conducted to enhance the biodegradation process of municipal solid waste inside the landfill. It also offers a cost-effective way for in-situ leachate treatment, increased biogas production, and potentially reduced PCC duration and costs associated with PCC [Reinhart et al. 1995; Barlaz et al, 2006; Valencia et al, 2006; San and Onay, 2001; Benson et al, 2006; Otieno, 1994; Sponza et al., 2003]. Landfill phases are not altered due to leachate recirculation, although their durations are shortened.

Researchers at Outer Loop Recycling Disposal Facility, Kentucky (2006) presented results from a study where leachate and gas produced from four cells, two with recirculation (As-built cells) and two without recirculation (Control cells) were monitored over a period of five years. Leachate BOD, COD and BOD_5/COD ratio from the cells were compared. As compared to controls, as-built cells showed rapid biodegradation with significant reduction of BOD with time as well as reducing BOD_5/COD ratio. Gas production from both the cells was also compared. Gas production from the as-built cell was much higher than the control cell. The site specific methane generation potential was estimated to be 59 m^3/MG, lower than LandGEM default values for wet and conventional landfills (Table 5). The decay potential was estimated to be 0.061 yr-1 and 0.16 yr-1 for As-built cells and Control-cells respectively. L_o was observed to be lower than EPA recommended values for wet and conventional landfills, however k values were observed higher for As-built (wet) cells, indicating rapid gas generation as compared with the Control cells.

Similar results showing rapid degradation with leachate recirculation was reported by Valencia et al. (2004). Although MSW was well degraded as a result of leachate recirculation, waste was not considered to have reached a stable state (final storage quality as defined in the study) due to relatively high metal concentrations in the leachate.

Various studies have been conducted on leachate recirculation and its impact on waste degradation [Reinhart et. al. 1995; Onay et. al. 2001; Mehta et. al. 2002; Morris et. al. 2003; Otieno, 1994; Sponza et. al. 2003; Valencia et. al. 2008; Bae et. al. 1998; Benson et. al. 2006]. Among the literature reviewed, almost all the studies have shown a more rapid biodegradation rate due to leachate recirculation. Feasibility of LFGTE from the gas produced may become feasible as a result of increased gas production rates. Rapid stabilization can help in reducing PCC duration, ultimately reducing the costs associated with it.

2.6 Summary

PCC duration is 30 years for modern landfills as required by RCRA Subtitle D landfills. Termination of PCC of a landfill is a very important decision and must be taken considering its consequences on surrounding HH&E. Once MSW inside the landfill reaches a functionally stable state, that waste mass imposes no risk on HH&E and it can be assumed to be safe to terminate PCC. However, defining stability of landfill waste has a broad range. Literature cited in this section summarized studies showing variations in leachate, gas and quality with the age of landfills and accelerated biodegradation and probable reduction in PCC using liquid injection.

Along with in-situ leachate treatment, liquid injection is considered to be a good mode of reaching stability earlier as compared to conventional landfills and thus can shorten the PCC duration required for the landfill [Reinhart et al. 1995; Barlaz et al 2000;]. Researchers have documented effects of leachate recirculation on leachate characteristics and gas production which is an inevitable part of present discussion due to its impact on PCC duration and. Also the landfill under consideration for the study is operated as a bioreactor with leachate recirculation. Implementation of options to enhance degradation may help to reduce the risk of landfill emissions (leachate and gas) on the HH&E and may help in reducing PCC duration. More research should be performed for evaluation of parameters determining functional stability of landfills as new generation landfills are approaching end of PCC duration (30 years). The technical criteria need to be developed, which may be helpful to regulators, operators and owners of landfills, in determining their PCC duration so that landfill does not impose any risk to HH&E.

CHAPTER 3
FACILITY DESCRIPTION

3.1 Site Location

The Alachua County Southwest Landfill (ACSWLF) is a 232 acre solid waste management facility located off State Road (SR) 24, approximately 2 miles southwest of the City of Archer, Florida (Figure 1). About 95 acres of the total area is utilized as waste disposal areas. Table 6 summarizes various waste disposal units accommodated by the facility. The ACSWLF facility is mainly surrounded by agricultural activities showing sparse residential developments. A subsurface investigation study conducted at the site reported three soil strata; fine sand, silty sand and clayey sand; underlain by limestone embedding the Floridan aquifer. Floridan aquifer is the only source of groundwater in the area. A northeastern groundwater flow direction with an average groundwater velocity of 0.13 feet/day was calculated by assuming a hydraulic conductivity of 110 ft/day and a potentiometric gradient of 0.00023 foot/foot [CH2M Hill and ESE, 1986]. In the coming sections, waste accepted at the site, leachate and gas collection systems and final cap at the landfill are discussed. Figure 2 and Figure 3 describe the site layout and important events that have occurred during the lifetime of ACSWLF respectively.

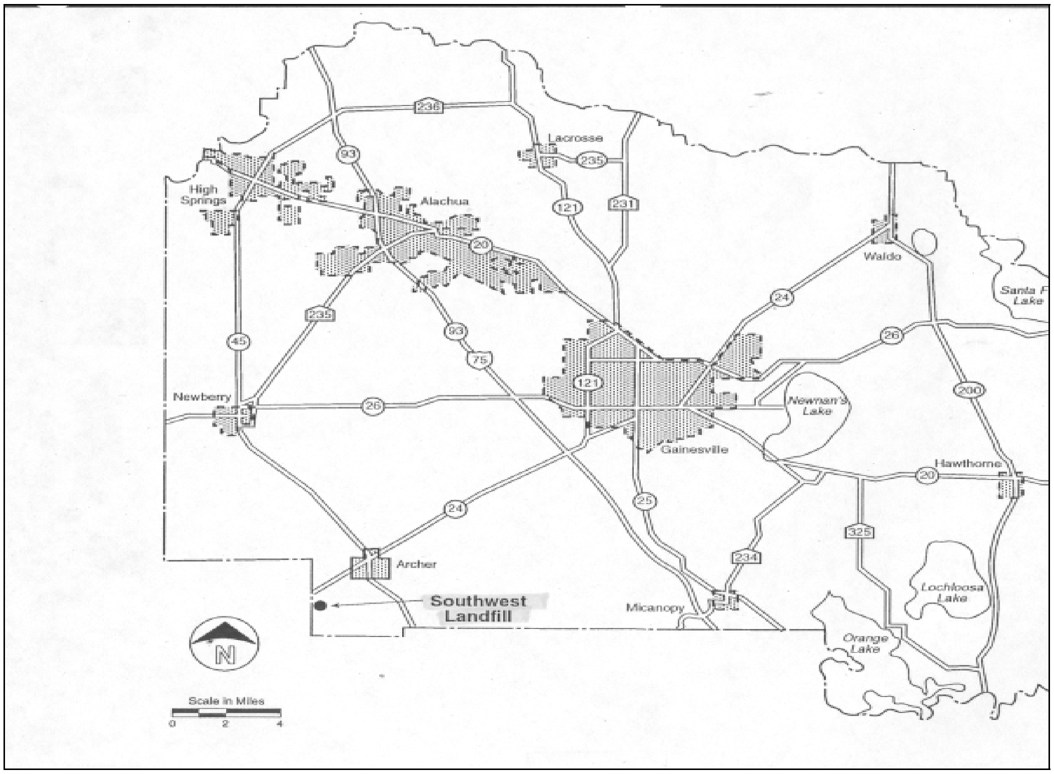

Figure 1: Location of ACSWLF

Table 6: Location and status of disposal facilities at Alachua County solid waste management facility

Disposal Unit	Area, Acres	Location on site	Status/Year
Class III	7	Southwest	Closed/1992
Class I, unlined	30	Southeast	Closed/1987
Class I, unlined	11	Southeast	Closed/1991
Class I, lined	27	Northeast	Closed/1999
Asbestos disposal area, unlined	8 acres	Southwest	Closed

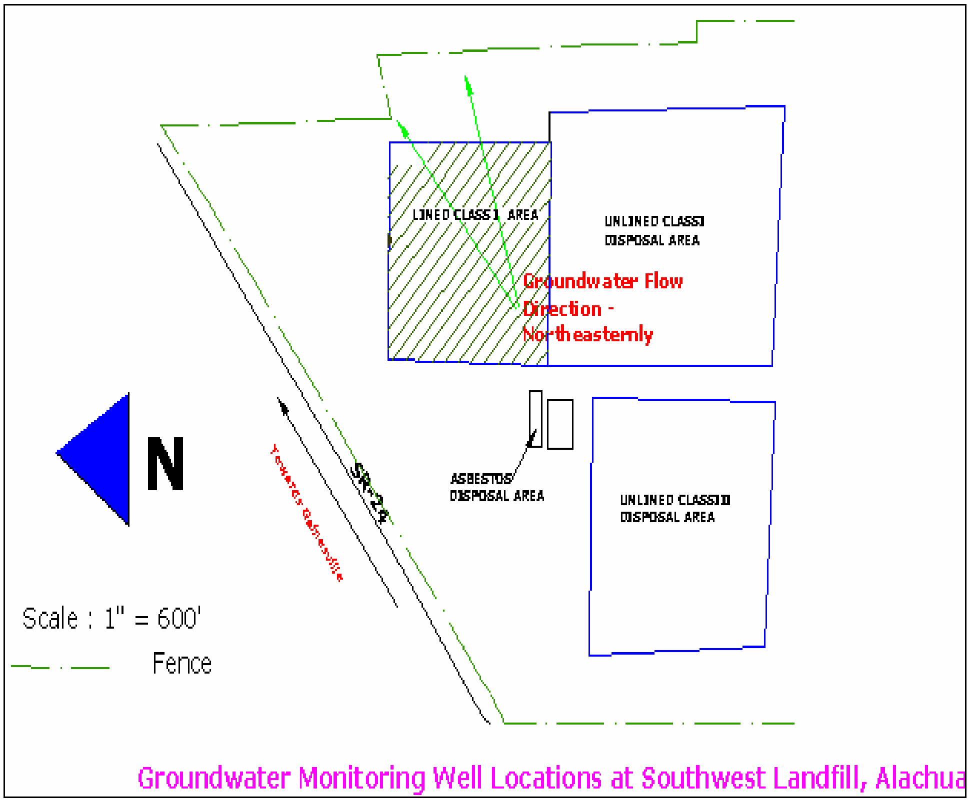

Figure 2: Layout of ACSWLF

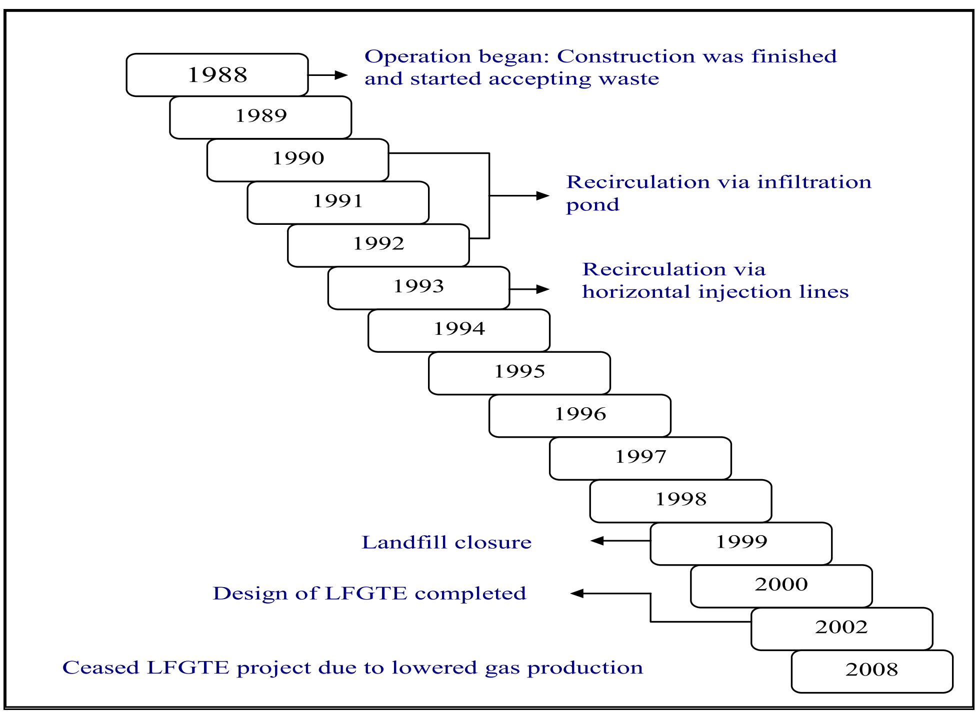

Figure 3: History of ACSWLF

3.2 Waste Characterization at ACSWLF

The disposal area under consideration for the application of the performance based methodology to evaluate PCC duration, is the Class I lined 27-acre area. The ACSWLF began accepting waste in the spring of 1988. The nature of waste accepted was mainly municipal solid waste (MSW). Tires, construction and demolition (C&D) waste was not included in Class I area. A waste characterization study of waste in place was performed in 1991 by TIA Solid waste Management Consultants. Table 2 describes waste composition at ACSWLF [Manley, 1992].

The ACSWLF facility was permitted in 1988 and was expected to reach its capacity in 1994. However as a result of State mandated recycling in 1988, demand on the ACSWLF reduced and the expected life of landfill increased allowing waste acceptance through 1999. Along with mandated recycling, some operational and design modification also contributed to increased capacity of the landfill [Alachua County Public Works]. ACSWLF received waste at a rate of approximately 350 tons per day. Table 7 represents composition of waste accepted at site while Table 8 shows the quantity of waste accepted at ACSWLF from year 1989 to 1998. From Table 8, it can be observed that MSW acceptance rate at the landfill remain almost constant from 1989 to 1994; however it shows some increase in the waste quantities accepted from 1994.

Table 7: Waste characterization study performed at ACSWLF [Manley, 1992]

Material	% of waste in Class I landfill
Newsprints	8.6
Corrugated paper	14.1
High grade paper	3.7
Mixed scrap paper	10.3
Non-recycle paper	11
Plastic (PET)	0.4
Plastic (HDPE)	1.3
Other plastic cont.	0.8
Film plastic	5.6
Other plastic	4.9
Glass – other	0
Clear glass cont	2.8
Colored glass cont	1.4
Aluminum cans	1.1
Tin/steel cans	1.9
Ferrous metals	1.1
Non-ferrous metals	0.8
Rubber	0.8
Textile	4.1
Leather	0
Food waste	5.7
Mixed material	304
Ceramics	0.6
Miscellaneous	7.7
Household hazardous waste	1.3
Diapers	2.7

Table 8: Yearly waste accepted at ACSWLF from 1989-1998 [FDEP, 2000]

Year	Waste accepted at landfill, tons
1989	121975.1
1990	121063.5
1991	120827.6
1992	120002.0
1993	121597.0
1994	129799.3
1995	133303.6
1996	132105.4
1997	134747.6
1998	137442.8

3.3 Leachate Collection and Treatment System

The ACSWLF was constructed and operated as required by RCRA Subtitle D regulations. The ACSWLF was lined with a composite liner system consisting of a 24 inch sand protection and drainage layer, a synthetic filter fabric, a 60-mil high density polyethylene (HDPE) membrane and 12” of clay compacted to a permeability of 1×10^{-7} cm/sec. The leachate collection pipes are HDPE, embedded in a gravel-filled trench. The ACSWLF was operated as a bioreactor by leachate recirculation, which was conducted in collaboration with the University of Florida, Alachua County and CH2MHILL as part of a research project. Initially, leachate recirculation was performed using infiltration ponds from 1992 to 1994. After 1994 horizontal injection lines (HIL) were used for leachate recirculation. Before leachate recirculation, leachate was pre-treated on-site in an equalization and lime treatment facility and then transferred to the Kannapaha Waste Waster Treatment Plant for offsite disposal. Before transferring leachate to the equalization tank and physical/chemical treatment facility, it is collected in a pre-cast, reinforced concrete sump, 10’ in diameter and approximately 30’ deep. Leachate is transferred from sump to onsite treatment (neutralization tank) by submersible pumps. Leachate characterization was performed on the raw leachate collected from the sump. After leachate recirculation was implemented at the site, most of the leachate produced was treated inside the landfill by recirculation thus reducing the load on offsite treatment. A semiannual monitoring of leachate is performed at the site where leachate is evaluated for regulated parameters as required by RCRA regulations (Appendix I and II of 40 CFR).

3.4 Gas Collection System

An active gas collection system has been installed at the site. There are a total of 83 gas collection wells at the site. This number includes gas wells on the closed lined 30 acre (35 wells) and 11 acre (20 wells) Class I areas. Wells are distributed in a symmetrical pattern on the 27 acres class I area such that they are 250’ apart in the north-south direction and 200’ in the east-west direction. Gas collected from wells is carried by HDPE pipe configured in a manifold arrangement [Kurt, 1994]. Collected gas is treated in two ways, flared at the site and converted to energy by sending gas to landfill gas to energy (LFGTE). In 1992 a flare system was installed at the site and gas collected from the 30-acre Class I and 11-acre class I area was sent to the flare. At this time, gas production was mainly occurring from the 11-acre Class I area. Another important step taken at the ACSWLF was implementation of a LFGTE project, where landfill gas produced is converted to energy. LFGTE was implemented in collaboration with Gainesville Regional Utilities (GRU) in year 2003. LFGTE system requires 325 scfm of landfill gas for each of the four engines/generators operating at ACSWLF to produce electricity. Landfill gas is automatically carried to the flare system when the LFGTE system is not operating effectively. The gas collection system facilitates recording gas flow rate and gas composition. LFGTE facility was active from year 2004 to 2008 and terminated by GRU in 2008 due to declining gas production.

3.5 Groundwater Monitoring System

The ACSWLF is located on the eastern edge of the Brooksville Ridge. Subsurface investigation conducted at the site showed three soil strata underlain by limestone bedrock embedding the Floridan Aquifer. Groundwater flow direction at the site is northeasterly, with an average groundwater velocity of 1 to 3 feet/day [Alachua County Public Works].

Figure 4 shows a groundwater monitoring well distribution layout at ACSWLF. With a northeasterly groundwater flow direction, wells SW-2D, SW-3D and SW-P1 can be considered as up-gradient or background wells. These wells are supposed to indicate the background water quality at the landfill site which will be useful for comparing concentrations at compliance well locations. Presently there is a total of 23 groundwater monitoring wells. Monitoring frequency is mostly quarterly; except for few parameters which are measured on a semi-annual basis.

3.6 Landfill Cap

The final cover was placed at the ACSWLF in 1999. The cover is mainly composed of a 24" drainage layer, a 40-mil geomembrane and a 24" vertical percolation layer. The cap supports Bahia and Italian rye vegetation, depending on the season. A routine inspection of cap is performed to check the vegetation growth, cracks development on the cap and settlement of the cap.

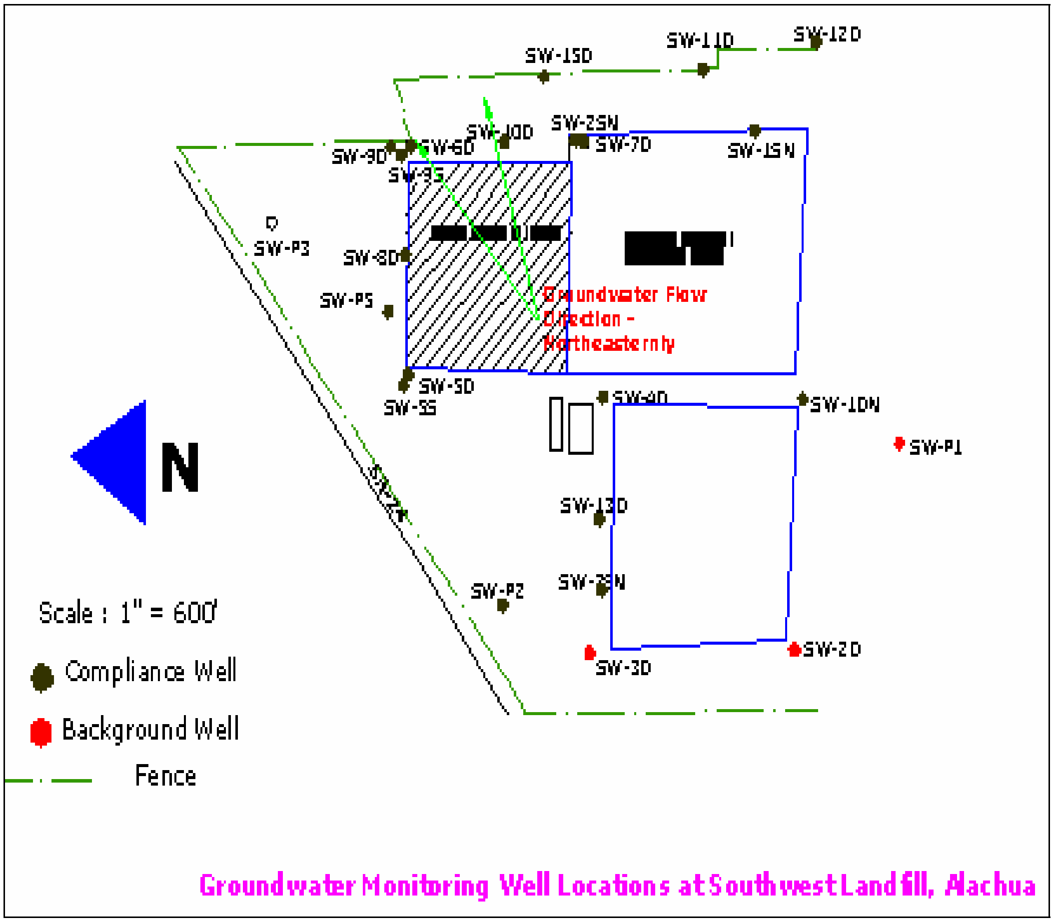

Figure 4: Location of groundwater monitoring wells (GWMW) at ACSWLF

3.7 End Use

Information obtained described the intended end use of the landfill as grassland. Although presently the landfill is being used as waste drop off area for the surrounding community. In the future the landfill may also be used as a wood processing facility.

CHAPTER 4
METHODOLOGY

4.1 Introduction

The PCC duration for modern landfills is 30 years. The duration of PCC can be reduced by the director of an approved State if an owner/operator of a landfill demonstrates that the landfill exhibits no threat to the surrounding HH&E or can be increased if the director of the approved State determines that an increased PCC period is required for the protection of HH&E. RCRA provides flexibility in optimizing PCC duration of landfills, although it does not identify the criteria/methodology which can be used in demonstrating the status of a landfill from the point of PCC. The performance based methodology is designed for evaluation of post closure care (PCC) duration and activities for modern landfills. The performance based methodology (hereafter referred to as Evaluation of Post Closure Care – EPCC methodology) was developed by Geosyntec Consultants in collaboration with a broad team of technical experts and leading researchers. The project was funded by Environmental Research & Education Foundation (EREF). The EPCC methodology can be applied to landfills complying with RCRA Subtitle D [Technical Manial - EPCC Methodology, 2006].

The EPCC methodology is divided into four modules and this categorization is based on the classification of PCC activities as directed by RCRA. Figure 5 shows PCC components as required by Subtitle D. Modules as per categorized by EPCC methodology are: (a) Leachate module (b) Landfill gas module (c) Groundwater module and (d) Cap module. The EPCC methodology gives flexibility in the order of module evaluations however it is recommended to evaluate cap module in the end as the landfill cap has an impact on leachate and gas production.

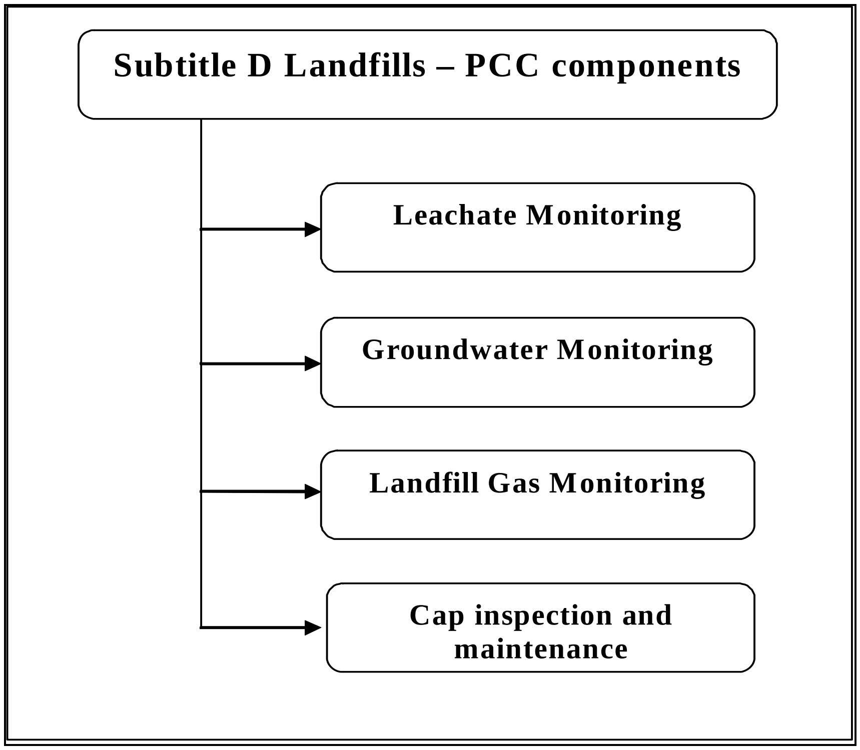

Figure 5: The components of Subtitle D Landfills PCC

The EPCC methodology also provides a conservative and quick approach for modules evaluation where worst case scenarios are evaluated. This approach is termed as the "fast-track" method. If no risk is identified as a result of worst case scenarios, then recommended PCC activities are safe to implement. If the worst case scenario indicates risk to HH&E, a detailed evaluation using EPCC methodology is recommended before implementing the recommended change in PCC.

In the following sections all four modules are described in detail, presenting data requirements and evaluation procedures.

4.2 Leachate Module

4.2.1 Introduction

The evaluation of the leachate module involves making a decision on whether the leachate collection and removal system (LCRS) can be modified or terminated without exerting risk to the surrounding HH&E. As required by RCRA, landfill operators/owner are required to collect and dispose the leachate in a responsible manner. Along with the maintenance of LCRS system, semiannual leachate monitoring is also performed during the PCC period. The Leachate module is initiated with a pre-requisite module where data requirements for the leachate module are examined.

4.2.2 Pre-requisite Module

The following pre-requisites need to be satisfied for the evaluation of the leachate module:

a. A LCRS must be present at the site. The presence of a LCRS enables the modifications of PCC and also facilitates availability of the leachate monitoring data.
b. Historical leachate monitoring data play an important role in evaluation of the leachate module. Landfill operators/owners are required to monitor leachate semi-annually [Subtitle D-RCRA]. Semi-annual leachate monitoring is performed for contaminants described in 40 CFR, Chapter I, Appendix I and II, Part 258.57.
c. Site information including geography of site, subsurface information, potential receiving water bodies and groundwater flow direction is required.
d. Details of landfill components which includes landfill liner and cap details.
e. No evidence of current leachate related impacts requiring assessment or corrective action. If any leachate impacts have been reported in the past, long-term impacts of these events need to be discussed before making any decision in the evaluation of leachate module and other modules.

Once data collection for the module is completed, actual module evaluation is performed as described in the next section.

4.2.3 Leachate Module Evaluation

The main objective of the leachate module is to study variations in concentration of leachate contaminants over time and verify whether the current leachate management strategy can be optimized by reducing or discontinuing monitoring for some of the contaminants or leachate monitoring can be completely stopped. Availability of adequate leachate monitoring data makes trend analysis of the leachate contaminants convenient, leading to reliable decision making under the given circumstances. Mostly, the contaminants considered for the present study are regulated parameters described in Appendix I and II, Part 258.57.

a. Can change be evaluated: In this step availability of the pre-requisites and data requirement described in the section 4.2.2 of this chapter is confirmed prior to the evaluation of the module.

b. Evaluate Change: Under this step, analysis of the monitoring parameters is performed. The EPCC methodology has classified monitoring parameters into two categories. (1) Detection parameters (DP) which include BOD, COD, BOD mass flux and leachate flow rate and (2) Regulated parameters (RP) which include the Federal or State regulated contaminants. The Possibility of evaluation of any change is confirmed in this phase by analysis of DP. If any one of the detection parameter mentioned above is showing a reducing trend, then the module can be evaluated further to optimize the leachate monitoring under PCC, otherwise it is recommended to continue the leachate monitoring as regulated.

c. Statistical analysis of RP: In this step, historical monitoring data for regulated parameters are statistically analyzed. The aim is to establish a model describing behavior of the contaminants over time. Statistical analysis and trend estimation was performed using Minitab 15, statistical tool developed by Minitab Inc. Probable future concentrations using trend estimation can be further compared with the MCL through this step of the leachate module evaluation.

d. Surveillance Monitoring: Once statistical analysis of RPs is completed, a decision regarding monitoring of RP is taken depending on its behavior with time including present and future concentrations. While making final decision regarding RPs, various conditions such as, type of liner, presence/absence of a cap, nature of the cap, geological conditions, and end-use should be considered. Termination of monitoring for all or some of the RP and termination of LCRS operation can be some of the outcomes of the leachate module analysis.

The analysis mentioned above is site specific. Steps that need to be taken for evaluation may vary depending on the landfill site, landfill status (closed or active) and the data availability.

4.3 Landfill Gas Module

4.3.1 Introduction

The landfill gas module (herewith referred to as gas module) is evaluated to make decisions on existing LFG control or migration monitoring such that its intensity can be can be optimized or terminated after proving that it exhibits no threat to HH&E. LFG is produced as a result of various bio-chemical reactions occurring in the landfill. As followed in leachate module, module evaluation is preceded by a pre-requisite module. Following steps are followed for the gas module.

4.3.2 Pre-requisite Module

The following are the data requirements for the gas module:

a. An active gas collection system / LFG monitoring system must be present at site.

b. Information regarding disposal of collected gas is also required to take a decision on active gas monitoring on site. For example, presence of flare on site, LFGTE or combination of both.

c. Quantity of gas produced from the landfill, gas composition, gas pressure

d. Landfill characteristics; type of current or future cover system, type of liner in place, amount of waste in place.

e. Nature of potential receptors and their sensitivity

f. Results from migration monitoring, if performed

Figure 6 describes steps to be taken for the pre-requisite module before initiating evaluation of gas module.

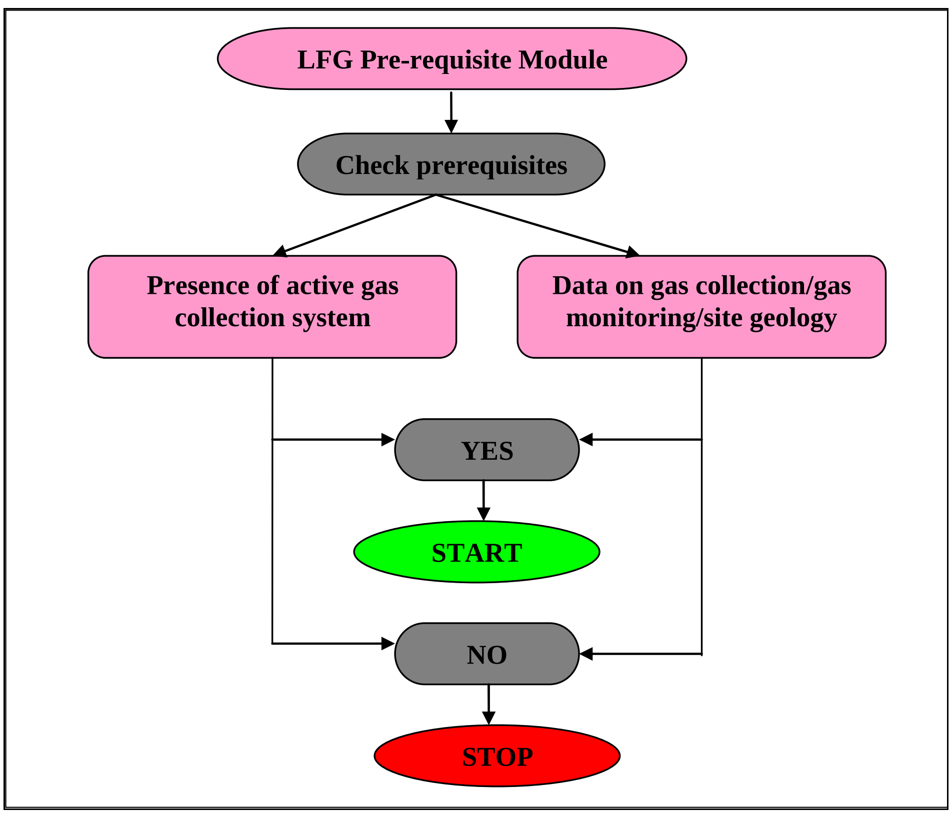

Figure 6: LFG Pre-requisite Module

4.3.3 Landfill Gas Module Evaluation

Once data requirements are satisfied in the pre-requisite module, gas system evaluation can be initiated. The outcomes from gas module evaluation can be categorized as: (1) continued operation of existing gas collection and monitoring system and (2) accept recommended changes of discontinuation or modification of existing gas collection system (i.e. shift from active to partially active or convert gas collection from active to passive)if they exert no risk on HH&E.

Following steps are followed in the evaluation of gas module.

a. **Can change be evaluated:** A decision as to whether gas module can be evaluated or not is made in this step. The presence of an active gas collection system and availability of gas monitoring data allow further of the gas module.

b. **Evaluate change:** This step mainly involves analysis of historical gas generation data. Figure 7 shows steps that need to be followed while evaluating the gas module.

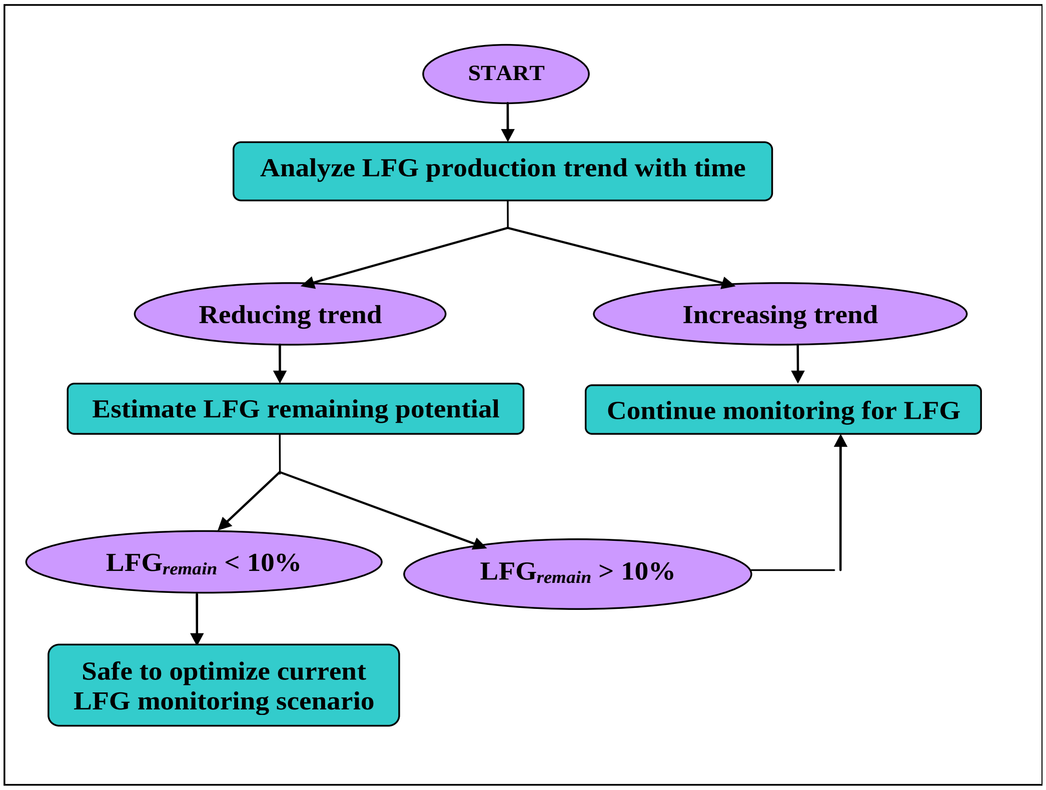

Figure 7: LFG Module Evaluation Steps [EPCC Methodology, 2007]

Further modifications of the gas collection system depend upon the trend of gas production. For example an increasing trend requires continued monitoring at the site for the protection of HH&E. Conversely, if gas production is showing a reducing trend, EPCC methodology recommends estimation of landfill gas remaining potential (LFG_{remain}). If the gas remaining potential is less than 10% of total gas production, methodology recommends that modification of the current gas collection and monitoring system can be possible after a successful demonstration of no risk to HH&E. EPCC methodology has provided four criteria which can help in the decision making process on future changes in gas management strategy. These criteria are as follows:

i. **Remaining LFG potential (LFG $_{remain}$ % of total):** LFG_{remain} is an estimation of the quantity of gas to be emitted by the landfill in the future, which is proportional to the remaining biodegradability of the waste. Use of available gas generation data (from LFG monitoring) or LandGEM is recommended for estimation of LFG_{remain}. LFG_{remain} can be estimated by equation 1.

$$\mathbf{LFG}_{remain} = \frac{\mathbf{LFG}_{total} - \mathbf{LFG}_{alreadyproduced}}{\mathbf{LFG}_{total}} \times 100\ \% \qquad \mathbf{(1)}$$

Where:

LFG_{remain} = Remaining LFG producing g potential, %

LFG_{total} = Total gas produced from the waste in place, m^3

$LFG_{alreadyproduced}$ = LFG produced till the time of evaluation, m^3

ii. Type of current or future cover system: Under this section final cover and its permeability need to be taken into account. Landfill covers are classified as low permeable and high permeable covers. Low permeable covers mainly include geomembrane and/or compacted clay components while permeable covers are without geomembrane and/or compacted clay. A cover with high permeability may require gas monitoring for a longer time as a result of higher moisture in the landfill.

iii. Sensitivity of potential receptor: This characteristic defines the nature of potential exposure surrounding the landfill, residential developments, density of residential developments and commercial developments around the landfill. If the receptors are sensitive risk assessment of proposed modifications must be performed.

iv. Buffer zone between waste management unit (WMU): Buffer zone around the landfill is used to separate the facility from other land use types. Buffer zones are usually provided to mitigate environmental problems such as dust and odor migration from the landfill. Usually a buffer zone of at least 50 m is provided in between WMUs and the surrounding areas.

c. **Surveillance Monitoring:** Once a change in gas management/monitoring strategy is finalized, the EPCC methodology recommends surveillance monitoring. The surveillance monitoring period is intended to confirm that the modifications in the gas management strategy perform as predicted. If recommended changes are suitable from the aspect of HH&E, these changes are accepted. If not, then steps from Part b are repeated with an improved modification strategy or continuing with the original gas management approach.

4.4 Groundwater Module

4.4.1 Introduction

The purpose of groundwater monitoring is to determining whether there is any impact on the groundwater due to leachate or landfill gas. Minimum sampling frequency required by RCRA is semi-annual during active, closure and post closure periods of landfill operation. Groundwater monitoring requirements after closure are the same as that during active periods. Groundwater monitoring is usually conducted for parameters described in Appendix I and II of 40 CFR § 258.75. Although neither the Subtitle D regulations nor other applicable guidance documents mandate changes to the detection monitoring parameter (DMP) following closure, 40 CFR §258.54 permits certain components of the monitoring program to be revised after a site has closed (e.g., the sampling frequency or number of parameters may be reduced under an optimized DMP).. "*The Director of an approved State may delete any of the appendix II monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit*" [40 CFR §258.54(b)]. The purpose of the groundwater module is to provide a defensible procedure so that a decision on continuing or discontinuing present groundwater monitoring strategy can be made. Historical monitoring data are used for statistical analysis and decision making. Statistical analysis is performed to confirm the contamination of down-gradient wells; where down-gradient well contaminants concentrations are compared with MCL or background well concentrations. Another task performed as part of groundwater module is estimation of contaminant time of travel (TOT) using subsurface data from the site.

4.4.2. Pre-requisite Module

The data requirement for the evaluation of groundwater module is as follows:

a. Historical groundwater monitoring data

b. Subsurface investigation details at the site, for example, strata underlying the landfill, depth of vadose zone, depth of saturated zone, groundwater velocity in the area, groundwater direction.

c. Outcomes from leachate and landfill gas module.

d. Site layout, groundwater monitoring well details

4.4.3. Groundwater Module Evaluation Procedure

As mentioned earlier, the objective of the groundwater module is to analyze the groundwater monitoring data and current groundwater monitoring plan, and decide whether it can be optimized or terminated without impacting HH&E. The following steps are taken to evaluate groundwater module.

a. **Can change be evaluated:** For evaluation of groundwater module presence of groundwater monitoring as recommended by RCRA is mandatory. Once data collected during the pre-requisite module, a decision is made based on the available data on groundwater monitoring and site details. The groundwater should not be evaluated if site is already going through a regulatory corrective action.

b. **Evaluate change:** The pre-requisite module where data collection is performed is followed by analyzing groundwater monitoring data. Statistical tools, as they were used in leachate module, have a key role in analyzing the groundwater monitoring data. Statistical analysis may differ slightly, in that the aim of the leachate module was primarily statistical analysis to establish a trend/model for contaminant concentration in leachate, where as in this case the primary aim is to detect contamination and then establish a concentration trend, if possible. EPA has recommended several methods to detect the contamination statistically. Depending on data availability, contamination can be detected in three ways [EPA 1989]:

1. Compare the compliance monitoring well data with the background well concentrations. Background wells are located hydraulically up-gradient. It is expected that they represent groundwater quality up-gradient from the landfill.
2. Another approach is to compare the monitoring well concentrations with MCLs recommended by federal or state agencies, in this case the Florida Department of Environmental Protection (FDEP). For most of the contaminants this approach is followed except for the contaminants without MCLs.
3. Compare monitoring well concentrations with historical concentrations from the same well. This approach is called an “intra-well” comparison approach. This method can be used if the background well shows some contamination or MCL and background well data are absent.

Similar to the leachate module, Minitab 15 and ChemStat were used in the groundwater evaluation. ChemStat is developed by Scientific Software Group and complies with the 1989 and 1982 statistical analysis compliance guidance developed by USEPA for the groundwater monitoring data analysis from RCRA landfills. Analysis of Variance (ANOVA) was one of the options available for statistical comparisons, however as recommended by EPA , for data over a longer period of time, other options such as confidence interval, tolerance interval, and test of proportions should be used. In most of the cases the data was compared with regulated values MCL or Health Advisory Level (HAL) instead of background values. Figure 8 describes the steps to be followed statistical analysis of groundwater monitoring data.

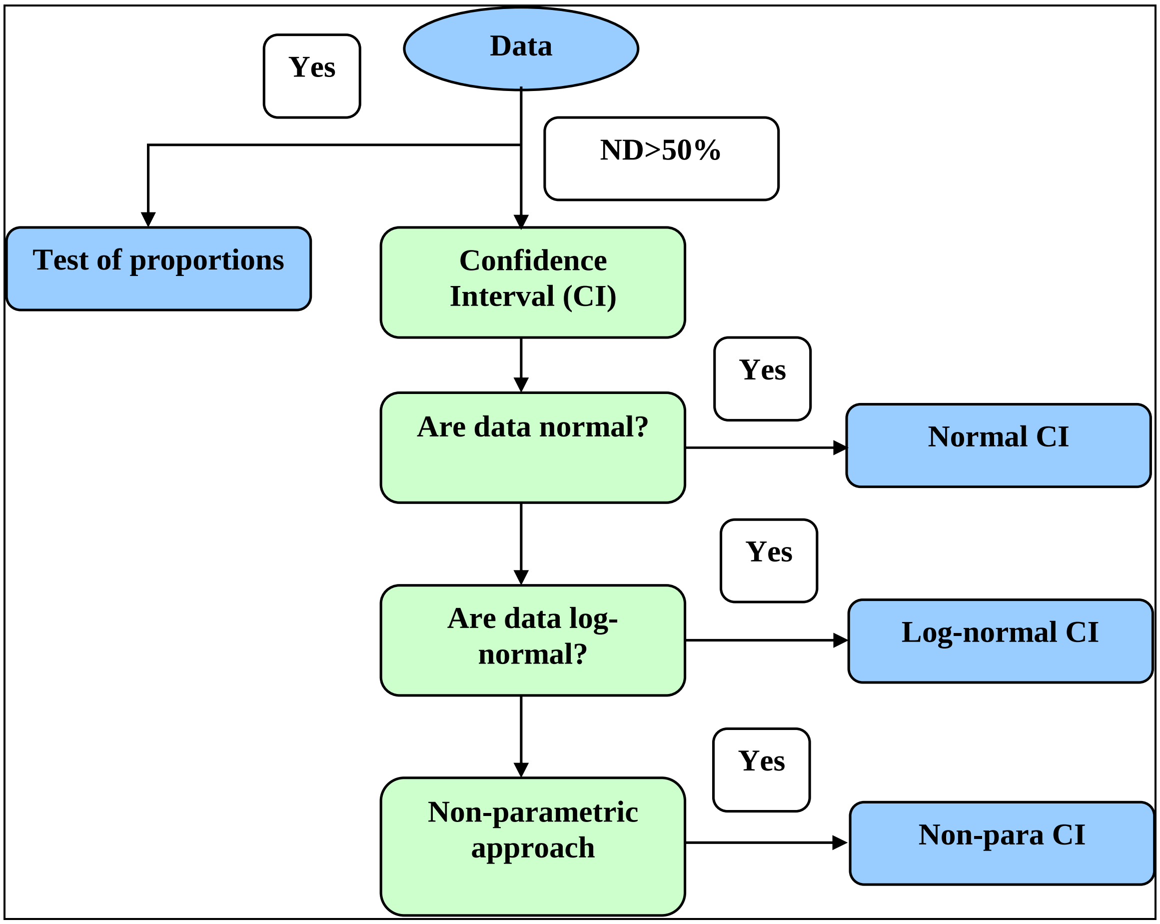

Figure 8: An overview of statistical approach followed during evaluation of groundwater monitoring data (ND – Non-detects, CI – Confidence Interval)

Another task performed during groundwater evaluation is the evaluation of contaminant time of travel (TOT). TOT is the time required for a possible leachate plume to travel to the point of compliance (POC). Estimation of TOT requires subsurface investigation data which include depth of subsurface strata and hydraulic conductivity of the vadose zone and saturated zone. Total TOT for a hypothetical leachate plume is estimated as followed:

$$\mathbf{TOT}_{total} = \mathbf{(TOT)}_{vadose} + \mathbf{(TOT)}_{sat} \qquad \mathbf{(2)}$$

Where

TOT_{total} = TOT required for a possible contaminant plume to POC, years

$(TOT)_{vadose}$ = TOT required for a possible contaminant plume to migrate vertically through vadose zone, years

$(TOT)_{sat}$ = TOT required for a possible contaminant plume to migrate horizontally through saturated zone, years

The conservative TOT estimation procedure suggests that any past leachate release from the WMU has already been detected and shows no excess concentrations with respect to background concentrations or MCL, then modification or termination in groundwater monitoring frequency is recommended.

c. Surveillance monitoring: The decision made from statistical analysis of groundwater monitoring wells and TOT estimation are followed by surveillance monitoring to confirm whether the proposed modification is valid and not exerting any threat to surrounding HH&E.

4.5 Cap Module

4.5.1 Introduction

The purpose of the cap module is to make a decision as to whether the present cap monitoring/maintenance system can be optimized or terminated if the proposed change is not imposing any threat on HH&E. A final cap is constructed once a landfill reaches its capacity. As of regulatory requirements, the cap is required to be equal or lower hydraulic conductivity than the liner system. Hence, cap systems are composed of similar components to those of the liner. The cap is constructed to achieve following objectives:

a. Prevent infiltration of moisture into the landfill,

b. Separate waste from vectors,

c. Control landfill gas emissions and/or enhance the landfill gas recovery system, and

d. Protect HH&E.

4.5.2 Pre-requisite Module

An interim or final cap must be installed at the landfill and should be designed to meet regulations for the evaluation of cap module. Data requirements for the evaluation of cap module are as follows:

a. Outcomes from leachate, gas and groundwater module,

b. Cap structure details, components and material,

c. History of cap maintenance, and

d. Settlement and erosion data.

4.5.3 Cap Module Evaluation

a. Can change be evaluated: Leachate, landfill gas and groundwater modules must be completed before evaluation of the cap module. The cap maintenance can not be terminated if leachate/gas/groundwater modules are under surveillance monitoring. Once all components are evaluated and data mentioned above are collected the cap can be evaluated.

b. Evaluate change: The recommended change regarding cap inspection monitoring and maintenance (CIMM) can be in the following forms:

i. Modification of the present cap is required as the cap is not sufficient to maintain the outcomes from other modules.

ii. The Cap is required for the outcomes from other modules, but still requires maintenance and monitoring

iii. The present cap system is sufficient to maintain the outcomes of other modules in the absence of maintenance and monitoring.

Historical cap maintenance data can be very important along with the knowledge of historical settlement at the landfill. Landfill settlement can be categorized as primary and secondary settlement. Primary settlement occurs mainly due to compression under load of upper waste. Settlement due to primary compression occurs quickly, may be completed shortly after the waste placement [Sower, 1973; Edil et. al., 1973; cited from Gourc, 2007; Sharma et. al.]. Secondary settlement which mainly occurs due to biodegradation of waste can account for a major portion of settlement and can take place over many years [Rao, 1974; Sower, 1973; Rao et. al. 1974; cited from Zeiss et al, 2007]. As the ACSWLF was closed in 1999, present landfill settlement can be related to the biodegradation of waste. Actual historical settlement data are not available for ACSWLF.

The de-minimus level of care for the landfill must be followed by the landfill owners as per regulatory requirements even if all other modules of PCC are terminated.

The activities that must be performed during de-minimus level of care include meeting the end-use of the landfill, maintaining institutional control, controlling public access, satisfying local ordinances and fulfilling other non-MSW land management requirements. These and other activities are termed as custodial–care under EPCC methodology.

CHAPTER 5
MODULES EVALUATION

5.1 Leachate Module Evaluation

5.1.1 Purpose

The purpose of the leachate module is to evaluate the leachate data from the ACSWLF. The ACSWLF is a Class I landfill, operated as a bioreactor. The main objective of the leachate module is to study variations in concentration of leachate contaminants over a period of time and verify if the current leachate management strategy can be optimized by reducing or discontinuing monitoring for some of the contaminants or whether leachate monitoring can be completely stopped.

For the most part, the contaminants considered for the study are Florida Department of Environmental Protection (FDEP) regulated parameters. Data collection is the first step in the leachate module. Detailed leachate monitoring data were obtained from 1993 through 2006, courtesy of Jones & Edmunds, who conducted monitoring at the ACSWLF, and made it available for the study. Changes in the contaminant concentration and mass, before and after capping are studied and compared with Maximum Contaminant Levels (MCLs) to evaluate their impact on HH&E. Along with current concentrations, future concentrations are also predicted from the statistical model and compared with MCLs set by FDEP.

On the whole, specific objectives of the leachate module are to:

1. Review historic leachate monitoring, data collection,
2. Analyze the variation of contaminant concentration with time and compare with MCLs,
3. Estimate the statistical trend for the contaminant(s), if possible.

4. Analyze the trend and make predictions regarding future concentrations and monitoring.
5. Discuss the impact of leachate monitoring on post closure care (PCC), by suggesting whether monitoring for a given contaminant is necessary or can be stopped as it is not harmful to HH&E.

5.1.2 Methodology

As mentioned earlier, for this task, leachate monitoring data from 1993 to 2006 are available. The ACSWLF leachate is monitored for about 200 contaminants. Most of the contaminants, (175 contaminants) are almost always below the laboratory detection limit. Thus this analysis is limited to 25 contaminants including BOD, COD and leachate flow. The performance based methodology has categorized overall parameters into two types.

a. **Decision parameters:** BOD_5 concentration, COD, Leachate flow and BOD mass (the product of BOD concentration and leachate Flow) are used as decision parameters. Before starting analysis of regulated parameters, a decreasing trend in any one of the decision parameters needs to be confirmed. BOD and COD are historically used in studies conducted on leachate concentrations over time. Statistically significant reducing trend was obtained for BOD5 concentration (Figure 9), leachate production (Figure 10) and BOD mass flux (Figure 11). Statistical software Minitab15 was used for statistical analysis and trend estimation purposes. Along with the BOD mass flux, BOD_5/COD ratio was also analyzed as it is considered to be a very helpful parameter, commonly used as an indicator of leachate maturity. Figure 13 shows BOD_5/COD ratio in leachate at ACSWLF. It is seen that BOD_5 to COD ratio is decreasing below 0.1. This is an indication that leachate is approaching stable quality and implies that further biological decomposition of leachate will be very slow. A low BOD_5/COD ratio is necessary but insufficient parameter describing stability of leachate. Lower BOD_5/COD ratio may be due to the nature of leachate collected. Usually leachate is collected from the bottom of a landfill. If bottom layer of waste is well decomposed then organics in percolating leachate are likely to get consumed and thus not showing representative of leachate from upper layers [Barlaz et al, 2002].

On the other hand, COD is not showing much variation in concentrations. Humic and fulvic acid concentrations building in the leachate can be one of the reasons behind this trend [Bataresh 2006]. Total organic content (TOC) is also be analyzed along with COD, but TOC data were not analyzed because it is not monitored regularly.

Figure 10 shows yearly leachate generation at ACSWLF, which describes a reducing trend in the leachate production with time, except for year 2005. In March 2005 leachate production was found unusually high. Analysis of detection parameters above confirmed a reducing trend in BOD mass flux and leachate production. In the next section analysis of regulated parameter is discussed.

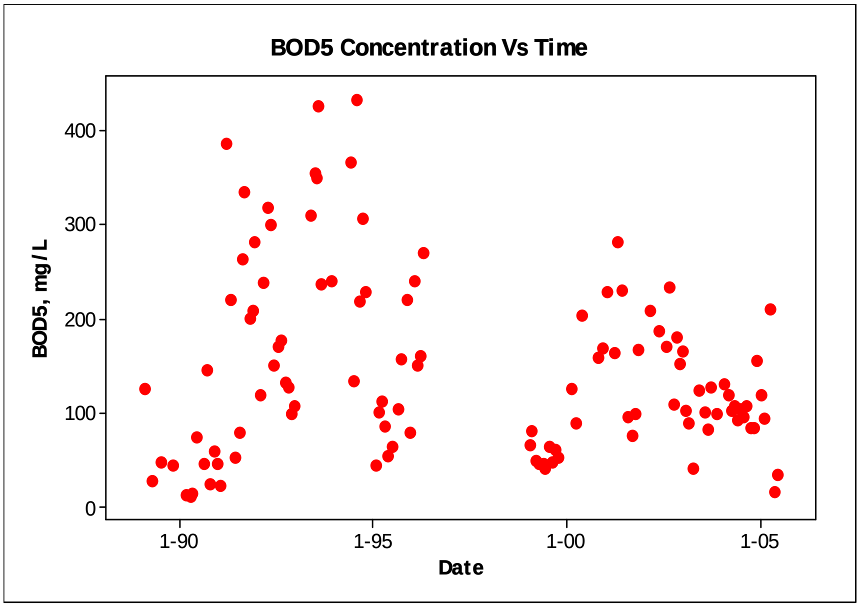

Figure 9: BOD5 concentration variation with time

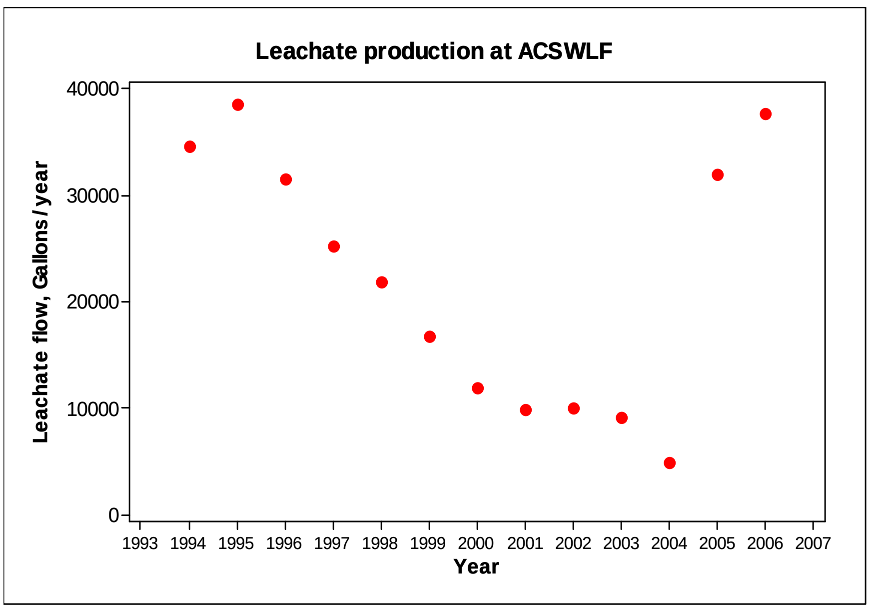

Figure 10: Daily leachate production at ACSWLF

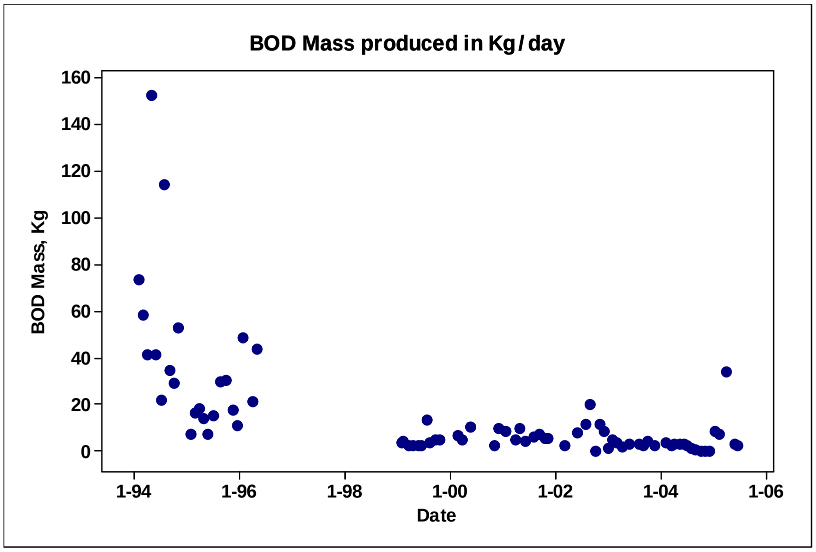

Figure 11: BOD mass flux production with time

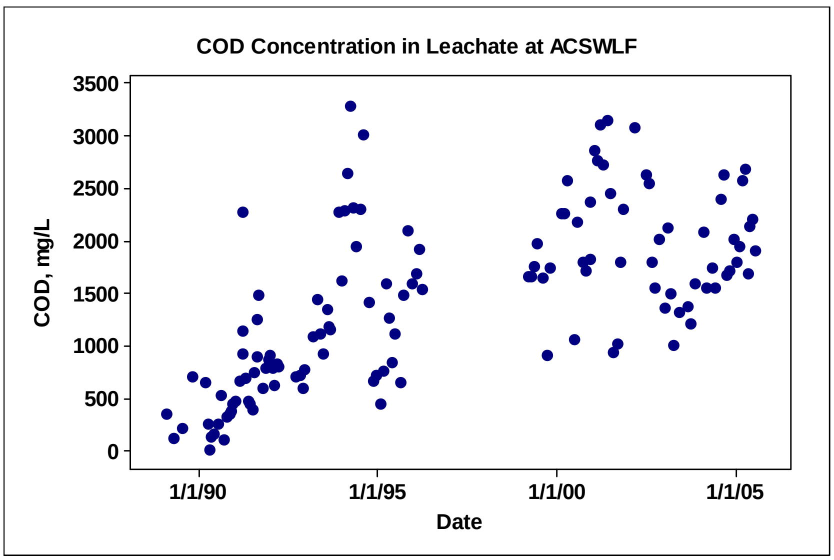

Figure 12: COD concentration in leachate at ACSWLF

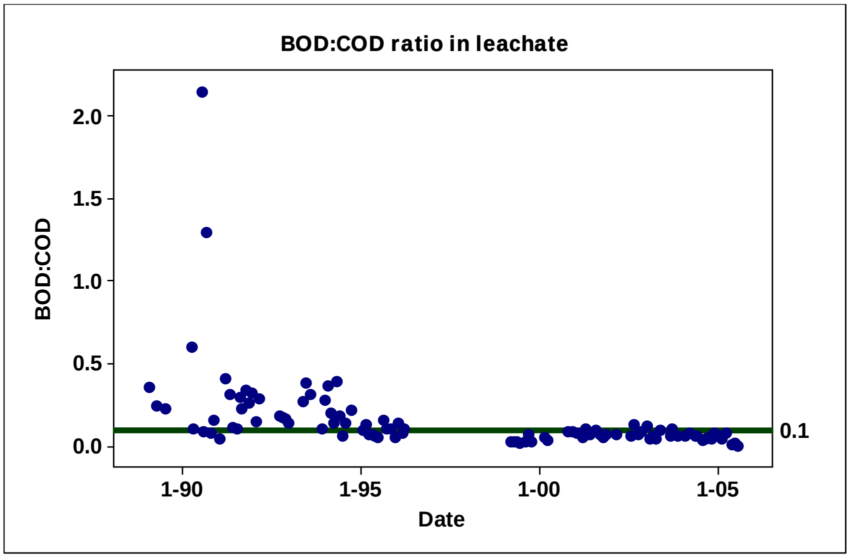

Figure 13: BOD_5/COD ratio variation with time

b. Regulated parameters: Once a decreasing trend in the decision parameter is confirmed, regulated parameters can be analyzed. These are EPA regulated contaminants, which are required to be monitored during the PCC period of 30 years.

Following are target contaminants above laboratory detection limit and are needed to be analyzed in detail. For simplicity they are categorized in Table 9.

Table 9: Categorization of detect contaminants from ACSWLF leachate

Contaminants	Monitoring Span	TME[1]	Detects	ND[2]	%ND	MCL[3]	Unit
METALS							
Antimony	1993-2006	22	11	11	50	6	µg/L
Arsenic	1993-2006	29	27	2	6.9	50	µg/L
Cadmium	1993-2006	30	2	28	93	5	µg/L
Chromium	1996-2006	27	23	4	14.8	100	µg/L
Cobalt	1996-2006	20	7	13	65	NA	µg/L
Mercury	1993-2006	22	1	21	95	2	µg/L
Nickel	1993-2006	22	22	0	100	100	µg/L
Sodium	1993-2006	29	19	0	0	160	mg/L
Vanadium	1996-2006	20	19	1	5	NA	µg/L
INORGANIC INDICATORS							
Chloride	1993-2006	27	27	0	0	250	Mg/L
Conductivity	1993-2006	21	21	0	0	NA	
Dissolved oxygen	1993-2006	21	21	0	0	NA	mg/L

Contaminants	Monitoring Span	TME[1]	Detects	ND[2]	%ND	MCL[3]	Unit
Fluorene		14	2	12	85.7	500	µg/L
Sulfide		12	5	7	58.3	NA	µg/L
Iron	1993-2006	29	29	0	0	300	µg/L
ORGANIC CONTAMINANTS							
Acetone	1996-2006	20	12	8	40	NA	µg/L
C,1,2 dichloroethene	1998-2005	15	7	8	53.3	NA	µg/L
Ethyl benzene	1993-2006	29	22	7	24.1	700	µg/L
Naphthalene	1993-2006	14	10	4	28.5	100	µg/L
Styrene	1996-2006	20	7	13	65	100	µg/L
Toluene	1993-2006	29	25	4	13.8	1000	µg/L
TDS	1998-2006	29	29	0	0	500	mg/L
Total phenolics	1993-1995	2	2	0	0	NA	µg/L
Total xylene	1993-2004	27	27	0	0	10000	µg/L

1 TME – Total monitoring events
2. ND – Non-detects
3. MCL – Maximum Contamination Limit

5.1.3 Statistical Analysis

Contaminant concentrations in the leachate, monitoring date, waste age, and MCL concentrations are required for statistical analysis of regulated target parameters. In most cases, it was observed that data followed a normal or lognormal distribution. Hence linear or exponential trends are applicable to most of the target parameters. Before trend analysis a scatter plot of the data, which gives an idea of the scatter of concentration data over time is analyzed, and compared with data before and after capping year and MCL concentrations. This is followed by normality/ log-normality test, outlier check and trend estimation. Varying trends were observed with different types of contaminants. Normality/log-normality tests were performed using probability plots, while outlier tests were performed using box-plots. These tests, including linear regression, were conducted using Minitab 15, a statistical tool.

5.1.4 Regulated Parameter Analysis

As described in Table 9 regulated parameters from Appendix I and II of 40 CFR § 258.1 were considered for statistical analysis. For convenience, regulated parameters were categorized as organic volatile, inorganic indicators and metals.

For most of the contaminants, monitoring data were available from 1993-2005. Most of the organic contaminants showed a reducing trend with time. For example, Xylenes (Figure A-9) show a decreasing trend throughout the period of monitoring and is always below MCL (10,000 μg/L; Figure A-10). In year 2005 and 2006, leachate production increased drastically, but Xylenes concentrations are still reducing. This continuous reducing trend and below MCL concentrations, lead a recommendation of discontinued monitoring for Xylenes. Discontinued monitoring has to be preceded by a period of reduced monitoring frequency to check whether or not the contaminant is following the earlier observed trend. Another trend followed by VOCs was reducing concentrations after closure for example 1,4 dichlorobenzene (Figure A-11). From Figure A-11 it can be seen that 1,4 dichlorobenzene concentrations have reached peak in 2000 and reducing afterwards. A similar trend was followed by acetone (Figure A-1) Reducing concentrations of organic contaminants can be related to the methanogenic phase when VOC consumption by methanogenic bacteria resulting in the production of methane. Other organic contaminants found in leachate were C 1, 2 dichloroethene (Figure A-2), toluene (Figure A-3), naphthalene (Figure A-5) and ethyl benzene (Figure A-7). These figures are attached in Appendix A. Leachate contaminants were compared with MCL. It was observed that most of the organic contaminants are below MCL.

Metals with higher detection frequency (> 5%) were analyzed. Behavior of metals in leachate is a function of characteristics of leachate such as pH, leachate flow and the concentration of complexing agents [Reinhart and Grosh, 1995]. Iron is discussed in inorganic parameter sections as it is not considered to be a heavy metal. Among heavy metals arsenic, chromium, and cobalt show maximum detection frequency. Cobalt is not a regulated parameter and does not possess MCL. The range of concentration of metals found in leachate is shown in Table 10. Figures A-12 to A-19 from Appendix A describes metal concentrations with time and compares them with MCL. It was observed that except arsenic and nickel all the metals were found in concentrations below MCL. Mercury was detected only once below MCL. Lead and cadmium although found above MCL show a low detection frequency. Metal sorption and precipitation may decrease metal concentration/detection in the leachate. Sulfide, which may precipitate with metals and prevent them from remaining in solution as complexes, was also analyzed. Sulfide monitoring data were obtained from 1996 to 2004. Sulfide was detected in leachate on five monitoring events, at low concentrations. Figure A-22 describes sulfide concentration observed in leachate. Carbonate, which is abundant in landfills [Barlaz et al, 2002] can form precipitate with metals like cadmium, nickel, zinc, copper and lead. However, solubility of metal carbonates is generally higher than metal sulfides [Christensen et al, 2000]. Chromium is an exception to this as it does not form an insoluble sulfide precipitate [Barlaz et al, 2002].

Table 10: Range of metal concentration in leachate

Metal	Concentration range, μg/L	MCL, μg/L
Arsenic	BDL-280	10
Antimony	1-16	6
Cadmium	BDL-6	5
Cobalt	0.2-250	NA
Copper	BDL-11	1000
Iron	2400-25000	300
Lead	BDL-7.6	15
Mercury	BDL-1.5	2
Nickel	97-780	100

Metals, partly due to attenuation properties like sorption, precipitation, are not considered to be a severe groundwater problem from leachate. A survey in Germany (Arneth et al., 1989) including 92 abandoned waste disposal sites revealed that for cadmium and lead 78% and 85%, respectively, of down-gradient groundwater samples were below detection limits and only 3% of the samples exceeded the drinking water standards [Christensen et al., 2001]. However metals such as arsenic, chromium and nickel are required to be monitored at ACSWLF in the future due to high detection frequency and concentrations above MCL.

Inorganic indicators include Ammonia – N (Figure A-23), chlorides (Figure A-24), TDS and iron are included in this category. In case of Ammonia – N it is seen that concentration has declined after capping. As pH of leachate is always below 8, it can be said that ammonium nitrogen species are in the form of ammonium ion, which may inhibit the degradation process, but it not as toxic, as dissolved unionized ammonia, predominant at higher pH (above 10) (Berge et. al. 2004). Continued monitoring for ammonia – N is recommended. Similarly, continued monitoring for chlorides is also recommended, as they are varying with the leachate production rate in the landfill and are present in concentrations above the secondary MCL. Chloride variations are presented in Figure A-24 (Appendix A), where it can be seen that chloride concentrations are reducing after year 2000. However reduction in concentration is very slow, unlike organic contaminants. Reinhart and Grosh (1995) observed a reduction in SO_4^{-2} to Cl^- concentration ratio as the landfill moves into the anaerobic phase. This is due to reduction of sulfate to sulfide while chloride is only removed by washout. However this ratio could not be analyzed due to insufficient sulfate monitoring data. Iron also shows a significant reducing trend, although concentrations are above secondary drinking water standard limits.

5.1.5 Recommendations of the Leachate Module

In the case of detection parameters, BOD_5 and BOD mass flux show a reducing trend. BOD_5/COD ratio has reached below 0.1, indicating a biologically stable leachate. On the other hand, COD concentrations are fairly constant at a range of 1500-2000 mg/L. Remaining COD in the leachate can be attributed to humic acid and fulvic acid production in the leachate. Around 90% of the regulated contaminants are below the laboratory detection limits throughout the monitoring events (1993-2006). The non-detects suggest that monitoring frequency for these parameters can be reduced followed by discontinued monitoring if the same trend continues. Therefore, only 25 target parameters including detection parameters will need to be monitored. In case of organic contaminants it was observed that most of contaminants (e.g. xylene, toluene, and naphthalene) followed a decreasing trend and is below MCL. Acetone and 1,4 dichlorobenzene showed a reducing trend after capping, however its concentrations could not be compared with MCL as they are not a regulated parameter. There are only inorganic parameters (metals and non-metals), that need to be monitored in the future. In case of metals, copper is detected only once, which indicates that monitoring can be done less frequently, while arsenic, chromium, and iron were observed consistently with concentrations above MCL, hence continued monitoring is suggested for them. A reduced monitoring frequency is recommended for mercury, lead and cadmium due to lower detection frequency.

5.2 Landfill Gas Module

Once all pre-requisites were satisfied, evaluation of LFG was initiated. The evaluation of LFG module involved following steps:

a. Analyze landfill gas production rate over time
b. Analyze LFG composition
c. Estimate quantity of total LFG emitted
d. Estimate LFG remaining potential

5.2.1 Analysis of Gas Production over Time

Figure 14 shows daily gas production over time. The ACSWLF was closed in year 1999 and trend shown in Figure 14 describes after closure gas production. It can be seen from Figure 14 that LFG production has decreased with time since closure.

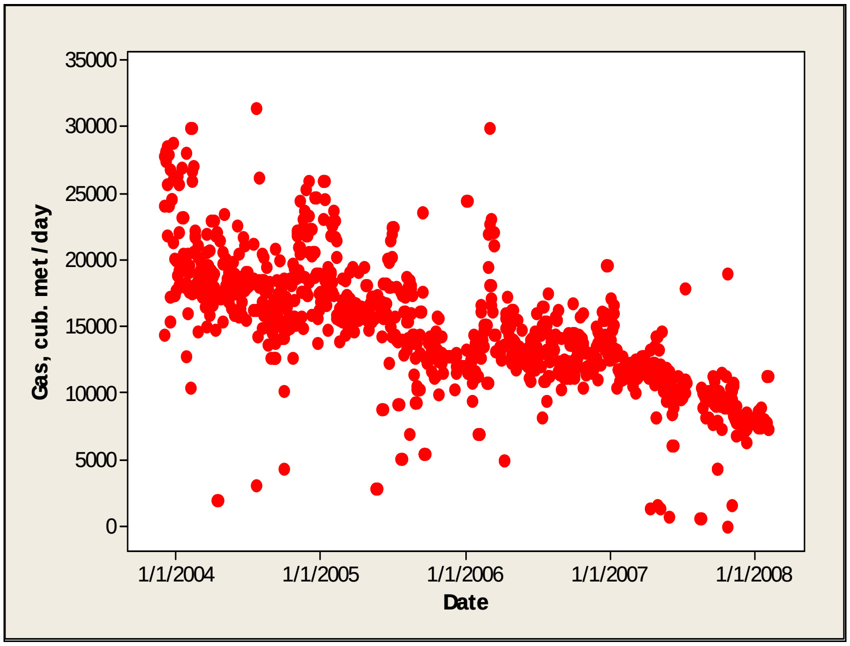

Figure 14: Daily gas collection at ACSWLF after closure

5.2.2 Estimation of Total Gas Emission

Once gas trends with time were described, the next task was to estimate LFG remaining potential. Total quantity of gas produced from landfill and landfill gas produced through year 2007 needs to be estimated for this purpose. Figure 15 describes yearly gas production from the landfill. An increasing gas production trend before closure and reducing trend after closure can be confirmed. LFG production data before closure were obtained from Palumbo (1998) using a flux chamber.

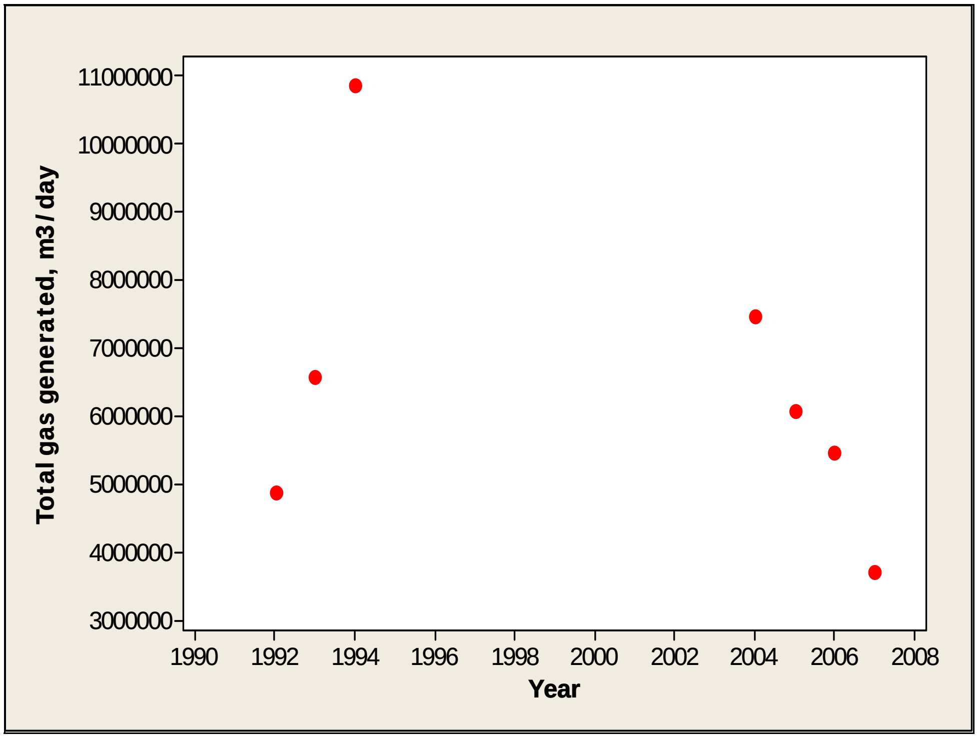

Figure 15: Yearly gas production at ACSWLF

Calculations performed for total gas estimation are as follows:

5.2.2.1 Available data for estimation of gas emission include the following:

- Daily gas generation – available from 2004 to 2007
- Yearly gas production – available from 1992 to 1994
- Waste in place = 1,154,723 Megagrams

5.2.2.2 Calculations

Yearly gas production data was plotted for values shown in Table 11.

Table 11: Yearly gas production at ACSWLF [UF, 2008; Palumbo, 1998]

Year	Gas production, m^3/year
1992	489,985,0
1993	658,011,4
1994	108,650,88
2004	746,915,6
2005	607,761,4
2006	547,210,3
2007	372,733,7

As data availability on gas generation from landfill was limited, total gas production was estimated by extrapolating models developed before and after closure. For gas generation values after closure, 90% of gas collection efficiency was assumed for an active gas collection system. Models describing gas generation rate before and after closure were as follows:

Best fit describing gas generation before closure:

$$Q = 1528448 \text{ Year} \quad (3)$$

Best fit describing gas generation after closure:

$$Q = 26390742 - 1183097 \text{ Year} \quad (4)$$

Year and quantity of maximum gas production and total gas production can be estimated using equations 3 and 4. To estimate the total gas produced, the area under the curve from Figure 15 was calculated. The area under the curve is equal to the area of the triangle with height being equal to the quantity of maximum gas production and base is equal to time required for gas generation to reach zero in the future. Table 12 values obtained from calculations described above.

Table 12: Summary of gas production at ACSWLF

Parameter	Value	Unit
Year of maximum gas production	9.7 (Year 1999)	Years
Quantity of maximum gas production	153,000,00	m^3
Total gas production (LFG_{total})	175,000,000	m^3
Year of zero gas generation	22.3 (Year 2011)	Years
Gas produced through 2007 ($LFG_{present}$)	162,789,014.5	m^3

5.2.3 Landfill Gas Remaining Potential

Once parameters in Table 12 were estimated, LFG remaining potential was estimated as follows:

$$LFG_{remain} = \frac{LFG_{total} - LFG_{present}}{LFG_{total}} \times 100\ \% \qquad (5)$$

Where

LFG_{remain} = LFG remaining potential, %

LFG_{total} = Total LFG produced, m^3

$LFG_{present}$ = Gas produced to present year, m^3

LFG remaining potential was estimated to be 4.4 % which is less than the recommended (<10%) in the methodology for optimization of gas monitoring/collection system.

Once LFG remaining potential was estimated, the next step was to calculate methane generation potential and decay rate. Methane generation potential is calculates as:

$$L_o = (LFG_{total} / 2 * M_t) \qquad (6)$$

In equation (6) M_t is total mass of waste in place while L_o is methane generation potential in m^3/MG of waste. The total quantity of gas is divided by 2 to estimate the quantity of methane produced, assuming that methane is 50% of the total gas. A methane generation potential of 74 m^3/MG was estimated. To estimate the decay rate (k), LandGEM (Landfill Gas Emission Model) was used. For a known waste acceptance rate and the estimated L_o, yearly gas production for varying k values was estimated using a trial and error method. Yearly gas production values were compared with actual gas generated values in the respective year. A k value of 0.13 per year was observed to give minimum error between actual gas production and modeled gas production values. Default values recommended by LandGEM produced higher gas generation values than the actual values. Figure 16 compares actual and modeled (L_o =74 m^3/MG and k = 0.13 per year) gas generation values. Modeled values were observed close to the actual gas generation values with 90% gas collection efficiency.

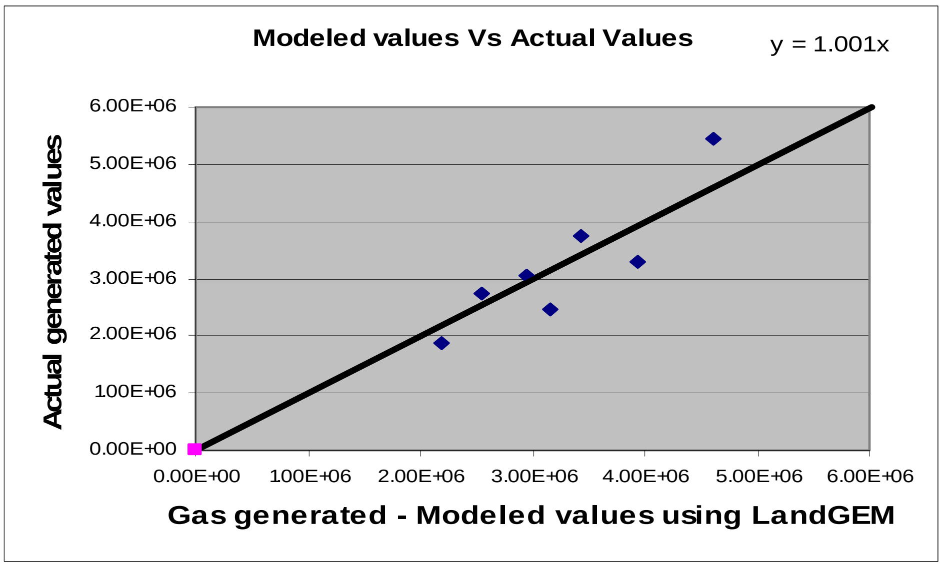

Figure 16: Modeled gas Vs Actual gas generation

The L_o and k values obtained were less than EPA recommended values for wet landfills i.e. 100m^3/MG and 0.3 yr^{-1} [EPA, 2005]. L_o value of 73m^3/MG was observed to be close to some other bioreactor studies (Benson et. al, 2007) which estimated a L_o value in a range of 38-96 m^3/MG. The decay rate found is higher than EPA recommended values (0.04 and 0.05 $year^{-1}$ for CAA and AP-42 respectively), but less than for wet landfills. The decay rate is approximately the same as used in Europe for gas prediction [Benson et al. 2007]. Table 13 describes a comparison between EPA recommended values for conventional landfills, wet landfills and values estimated for ACSWLF.

Table 13: Comparison of L_o and k value

Parameter	EPA recommended values			Site specific values
	CAA	**AP-42**	**Wet landfills**	
L_o, m^3/MG	170	100	100	74
k, yr^{-1}	0.04	0.05	0.3	0.13

As described in earlier sections, an active LFGTE system was operating at the site in collaboration with GRU. The LFGTE system requires 325 scfm of landfill gas for each of four engine/generators operating to produce electricity. Figure 17 describes the trend in gas production rate (scfm) with time which is compared with the gas production rate required to keep all four generators in operation. It was observed that with time gas production rate has been reducing and has fallen below 325 scfm. Since year 2007 gas generation rate has been consistently below 325 scfm. In 2008 GRU terminated LFGTE due to low gas production.

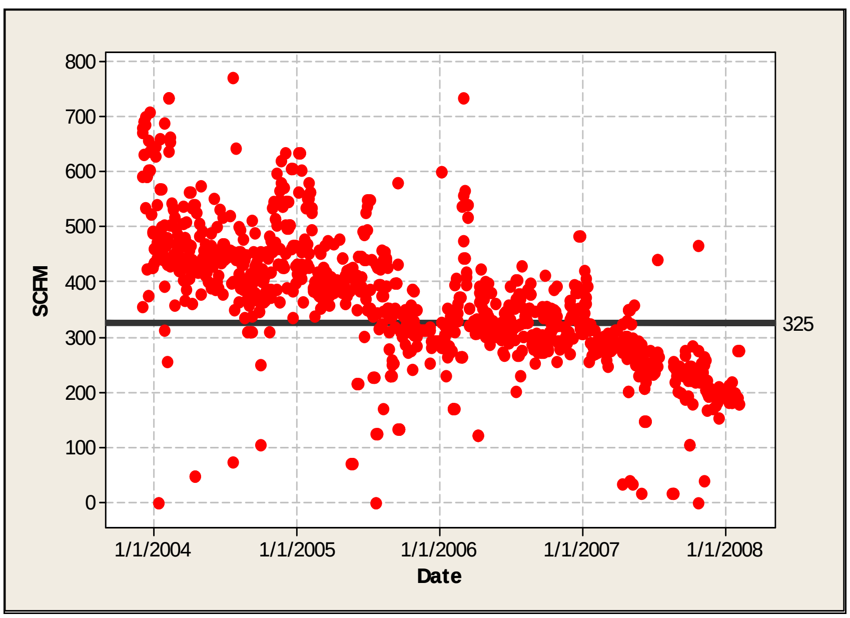

Figure 17: LFG generation rate (scfm) at ACSWLF

5.2.4 Recommendations of the Gas Module

Historical landfill gas generation from the ACSWLF was analyzed. A reducing trend of gas production was confirmed from the available gas generation data. A LFG remaining potential was found to be 4%, which means that more than 90% of gas has been emitted to date. Lower remaining gas potential also suggests shifting from an active to a passive gas collection system. A surveillance monitoring should be performed before converting gas collection system from active to passive. A partial active system shut down can also be initiated before completely shifting to a passive system. A risk assessment study needs to be performed evaluating the impact of gas emitted to the atmosphere on HH&E. The ACSWLF is in a rural setting, with no residential and commercial developments. Also present end-use of the landfill (waste drop off area and wood processing area) restricts full public access to the site. All these aspects need to be considered in making a final decision on PCC duration at the ACSWLF.

5.3 Groundwater Module

5.3.1 Introduction

Primarily, the groundwater module is a tool for deciding when monitoring parameters can be eliminated from detection monitoring (DM). Also the groundwater monitoring (GWM) helps in making a decision regarding optimizing the current groundwater monitoring plan during the PCC period.

The first step in the groundwater (GW) module is data collection. The evaluation process in the GWM includes analysis of historical data for Detection Monitoring Parameters (DMPs). This mainly involves statistical analysis and comparison of historical monitoring data with Maximum Contamination Limit (MCL) values, background concentrations, or intra-well concentration comparisons, depending on the availability of data. This step will help in identifying any contamination appearing at monitoring wells over time. If contamination was detected, its impact on groundwater was evaluated. This overall process will help in confirming a No Migration Demonstration (NMD) and identify changes in the current DM plan that can be made.

The ACSWLF is located on the eastern edge of Brooksville Ridge. Subsurface investigation conducted at the site showed three soil strata underlain by limestone bedrock embedding the Floridan Aquifer. Groundwater flow direction at the site is northeasterly, with an average groundwater velocity of 1 feet/day [ACSWLF, Alachua County Public Works].

Presently there are 23 groundwater monitoring wells. Monitoring frequency is mostly quarterly; except for few parameters which are measured on a semi-annual basis. A total of around 200 parameters are monitored, out of which about 80% parameters consistently show concentrations below detection limit (BDL). Thus this analysis is limited to a few contaminants, most of which are metals (e.g. arsenic, barium, iron, nickel), some inorganic indicators (e.g. pH, dissolved oxygen), and a few VOCs (e.g. acetone, benzene, and vinyl chloride). For almost all contaminants, data were obtained over the period of 1994-2007 (Jones Edmunds and Associates, 2007). Please see Figure 4 (Chapter 2, Facility Description) for the distribution of monitoring wells around ACSWLF.

5.3.2 VOCs Data Analysis

This section includes statistical analysis of monitoring data for VOCs. A range of frequently detected VOC concentrations in leachate and groundwater is listed in Table 14. This analysis will help in taking decision on optimizing or terminating monitoring for VOCs mentioned in table 14. VOCs having higher detection frequency are mainly considered for analysis. Detection frequency of contaminants in Table 14 is shown in Figure 18. Most of the VOCs observed were detected in down-gradient wells, except acetone which is detected in background well SW-2D.

Table 14: Frequently detected contaminants at groundwater monitoring wells [Jones Edmunds and Associates, 2007]

VOCs	TME	Leachate range, µg/L	MCL, µg/L	GW range, µg/L	
				Background	Compliance
1,1-dichloroethane	775	BDL	70	BDL	0.3-6
1,2-dichlorobenzene	837	NA	NA	BDL	1-2
1,4-dichlorobenzene	834	0.5-34	75	BDL	0.2-19
Acetone	379	29-1000	NA	16-430	BDL
C-1,2 dichloroethene	396	1-7.7	NA	BDL	0.4-8
Chlorobenzene	828	0.5-5	NA	BDL	3-95.8
Chloroethane	768	0.25-12.5	12	4	1-4
Chloroform	768	0.5-2.5	80	0.2	0.2
Chloromethane	455	BDL	2.7	0.8-3	2
Dichlorodifluoromethane	430	BDL	1000	BDL	1-15
Methylene chloride	768	BDL	NA	21	1-21
Tetrachloroethene	768	BDL	NA	21	1-6
Vinyl chloride	748	BDL	1	BDL	1-4.9

Acetone was not detected frequently in the groundwater. Unlike other VOCs detected, acetone reached a maximum concentration in year 2000 and then was no longer detected (see Figure 19). Being a contaminant in a background well only, it can be assumed that acetone contamination is due to a seven-acre Class III disposal area to the south of the site. No MCL is available for acetone, but intra-well comparisons show a significant contamination at well SW-2D prior to 2000.

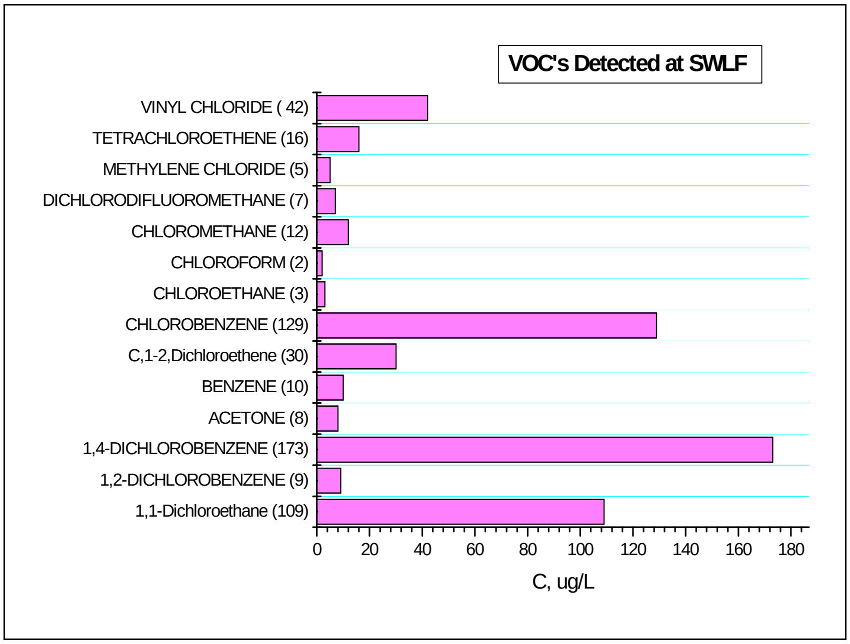

Figure 18: Detection frequency of VOCs at ACSWLF

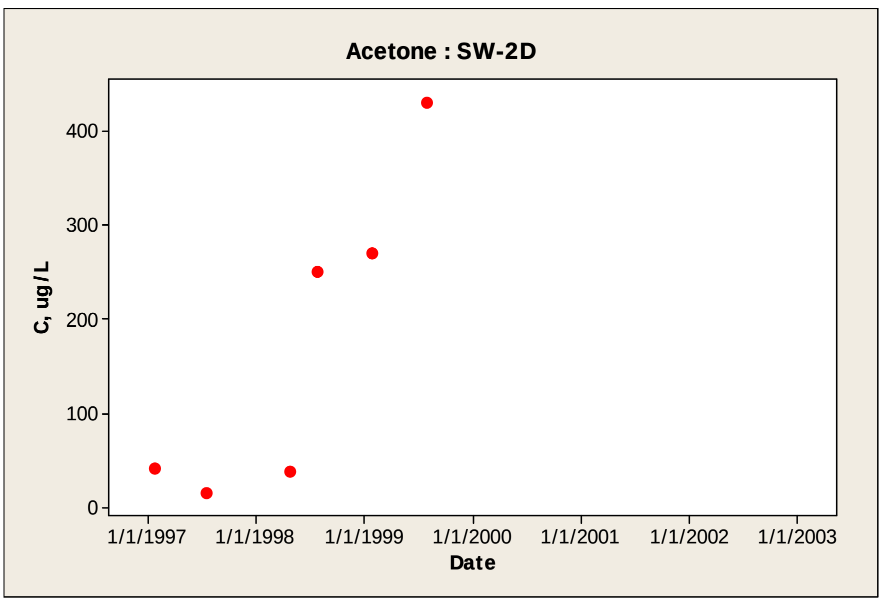

Figure 19: Acetone concentrations at ACSWLF well SW-2D

The most frequently detected organic contaminant in GWM wells was 1, 4-dichlorobenzene (DCB). It is mainly seen in compliance wells SW-4D, SW-7D and SW-10D. It was not detected in background wells. Although detected consistently, concentration has never reached the MCL (75 µg/L). As shown in Table 15, it was found in leachate where it showed a reducing trend after closure. Concentrations found in groundwater are almost half of that found in leachate. Figure 20 shows 1, 4-DCB concentration at wells SW-4D, SW-7D and SW-10D. 1, 4 DCB is reported to biodegrade under both aerobic and anaerobic conditions [Jiangbi Liu, 2008]. As shown in Figure 20, 1,4 DCB concentration was constant in SW-10D while showed a reducing trend in well SW-7D and then followed very few variations in concentrations. On the other hand SW-4D showed an increasing concentration followed by somewhat reducing trend. In these wells, reduced DO levels (DO < 1) may promote reductive dechlorination of 1,4-dichlorobenzene, forming chlorobenzene [Aronson et. al.1999] and reducing DCB concentrations over time. Significant reduction in DO level in well SW-4D and SW-7D can also occur as a result of sampling error. Although 1,4 DCB was frequently detected in well SW-4D, SW-7D and SW-10D, it never exceeded MCL. A CI analysis conducted for 1,4 DCB showed no contamination when compared with MCL.

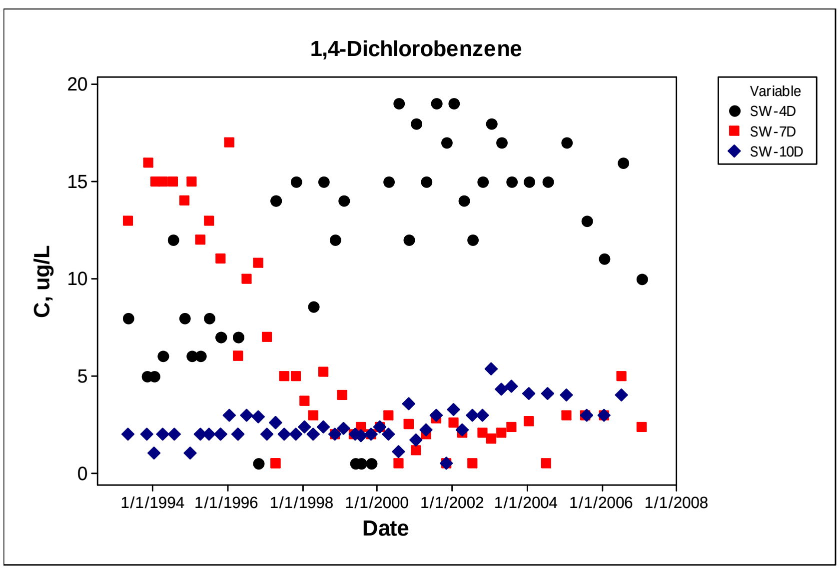

Figure 20: 1, 4 dichlorobenzene at ACSWLF

The second most frequently detected contaminant was chlorobenzene (Figure 21). It was detected only in down-gradient wells SW-4D, SW-7D and SW-10D. As no MCL is available for chlorobenzene, intra-well comparisons were performed for wells SW-4D and SW-10D, which indicates a significant contamination in these wells.

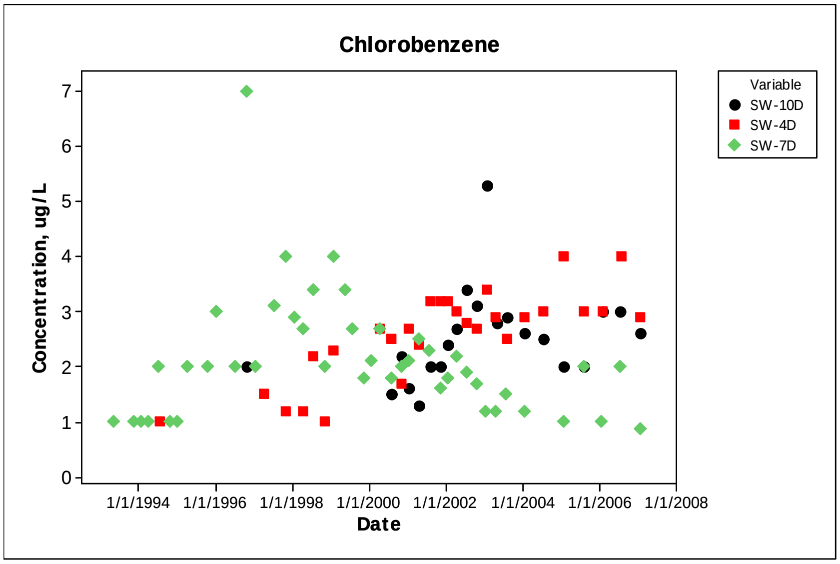

Figure 21: Chlorobenzene concentration at ACSWLF GWM wells

Another organic contaminant detected in compliance wells is 1, 1-dichloroethane (DCA). Most of the data (86%) for this compound were BDL. 1, 1-DCA does not have a MCL value but the health advisory limit (HAL) set by FDEP is 70 µg/L. Observed concentrations for this compound were much lower than HAL. When compared with the HAL value, statistically no contamination was observed. Figure 22 shows 1, 1-DCA concentrations at the ACSWLF site. There is limited literature available on biodegradation of 1, 1-DCA. Some studies conclude slow biodegradation under anaerobic conditions.

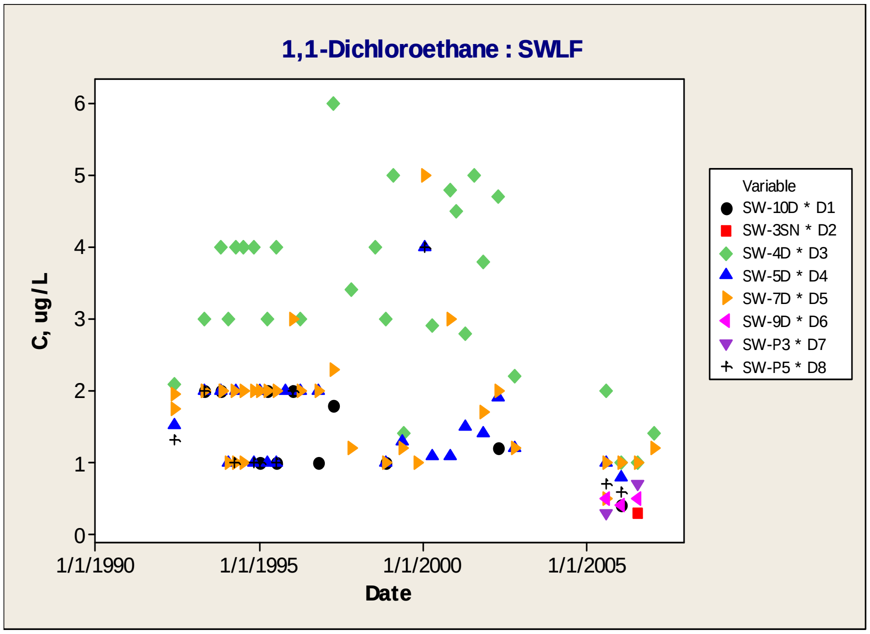

Figure 22: 1,1 dichloroethane concentration at GWM wells at ACSWLF

Vinyl chloride was consistently found in well SW-4D. The MCL for Vinyl Chloride is 1 µg/L, and for most of the time, concentrations exceeded this limit (see figure 23). From the literature data, vinyl chloride effectively biodegrades under aerobic conditions [Aronson et. al.1999]. Vinyl chloride comes from dechlorination of chlorinated ethene [Ellis and Anderson, 2008], under anaerobic conditions. Vinyl chloride concentrations in well SW-4D (Figure 24) after year 2000 declined as did dissolved oxygen levels (Figure 24). Vinyl chloride concentrations well SW-4D is represented in figure 23.

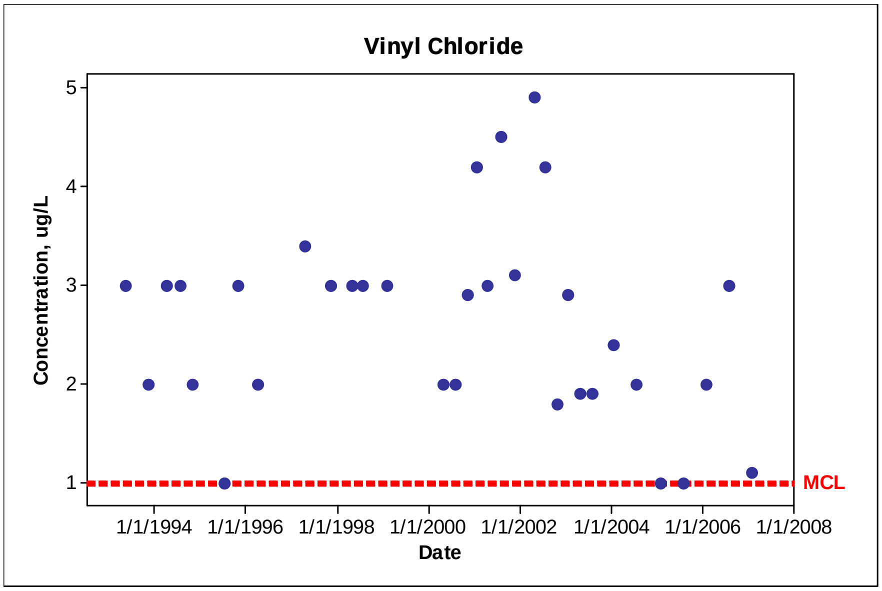

Figure 23: Vinyl chloride concentrations at SW-4D

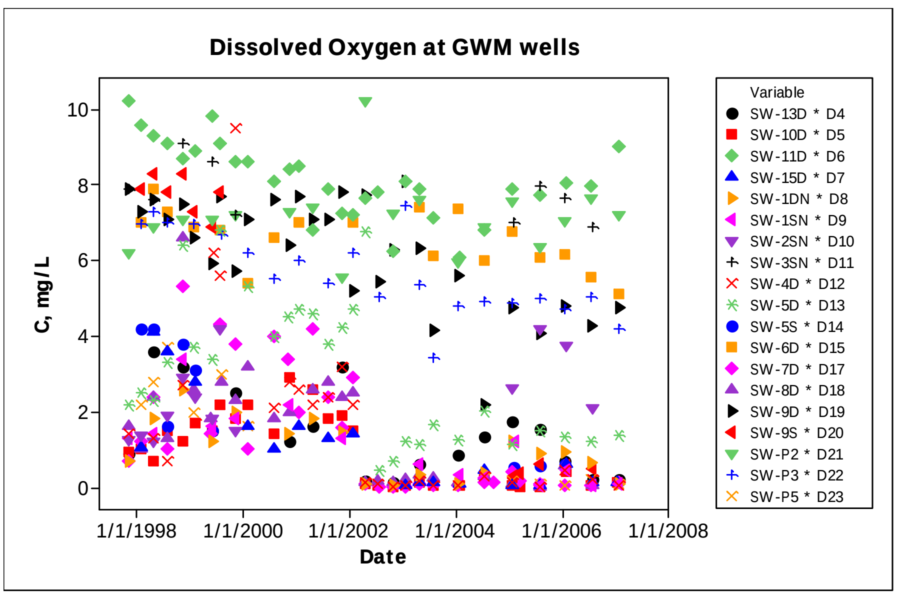

Figure 24: DO at GWM wells at ACSWLF

Other VOCs which were less frequently detected in groundwater include 1, 2-dichlorobenzene, benzene, C-1,2-dichloroethene, chloroethane, chloroform, however they are found below regulatory limits with low detection frequency. Concentrations over time for these contaminants at different monitoring wells are shown in Appendix A.

Chloroform (Figure 21, Appendix A) was detected in wells SW-2D and SW-5S, but concentrations were below MCL (80 µg/L). SW-4D showed the presence of tetrachloroethene up to year 1999; afterwards it was always BDL. Tetrachloroethene was not detected in any other compliance or background wells. Cis-1,2-dichloroethene is another contaminant which was detected consistently in well SW-4D. This is not a regulated parameter and hence a MCL is not available. According to literature, cis-1,2-DCE rapidly biodegrades under anaerobic conditions [Liu and Liptak, 2000], producing vinyl chloride. And its concentrations in well SW-4D decreased after year 1999 when DO concentrations were very low. For other compliance wells, cis-1,2-DCE was not consistently detected. Another contaminant, for which anaerobic conditions are suitable for biodegradation is chloroethane (Figure 27, Appendix I), but its detection frequency is very low. The HAL for chloroethane is 12 µg/L and it was always found at concentrations below the HAL. Chloromethane, only found in wells SW-2D, SW-10D and SW-13D, had a low detection frequency as well. The HAL for chloromethane is 2.5 µg/L. Concentrations exceeded HAL before year 2000. After 2000 either it was BDL or found at low concentrations. Anaerobic conditions may favor biodegradation of chloromethane in groundwater [Aronson et. al.1999]. Other VOCs found in groundwater include dichlorodifluoromethane, 1,2-dichlorobenzene and methylene chloride, but they had very low detection frequency and were always below the HAL/MCL.

Table 14 has summarized the VOCs with higher detection frequencies in groundwater. Other VOCs monitored at the site are always found BDL. A reduced monitoring frequency is suggested for the VOCs that are always found BDL, followed by discontinued monitoring, provided that the same trend continues. From the VOCs mentioned in Table 14 a reduced monitoring frequency for acetone, benzene, C-1, 2-dichloroethene, chloroethane, chloroform, chloromethane, dichlorodifluoromethane, methylene chloride, and tetrachloroethene is recommended. Very low detection frequency and concentrations always below MCL or HAL can support a decision of reduced monitoring frequency for these parameters. Chloroethane, 1,1-Dichloroethane, chlorobenzene and 1,4-dichlorobenzene are consistently detected in some monitoring wells. Their concentrations are always below MCL/HAL. It is recommended to reduce the monitoring frequency for these parameters. If concentrations from future monitoring events still are below MCL/HAL then it can be released from monitoring. Continued monitoring for vinyl chloride is recommended due to consistent values above MCL in well SW-4D. It was seen in leachate module that most of the VOCs are reducing in concentration and are expected to continue this trend. This behavior is expected to be seen in groundwater as well. Statistical analysis of VOCs and metals is attached in Appendix B.

5.3.3 Metals Analysis

The following metals were found at ACSWLF ground water monitoring wells: antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, nickel, and Zinc. Figure 25 shows the detection frequency for each metal. Iron was the most frequently detected metal, while cobalt was the least detected one. To compare the well concentrations with MCL or background well concentrations, a similar approach was used to that described in Section 3. For all the metals, monitoring data were available from 1994-2007. The range of metal concentrations found in leachate and groundwater is shown in Table 15. For most of the metals, concentrations in leachate were much higher than concentrations in groundwater.

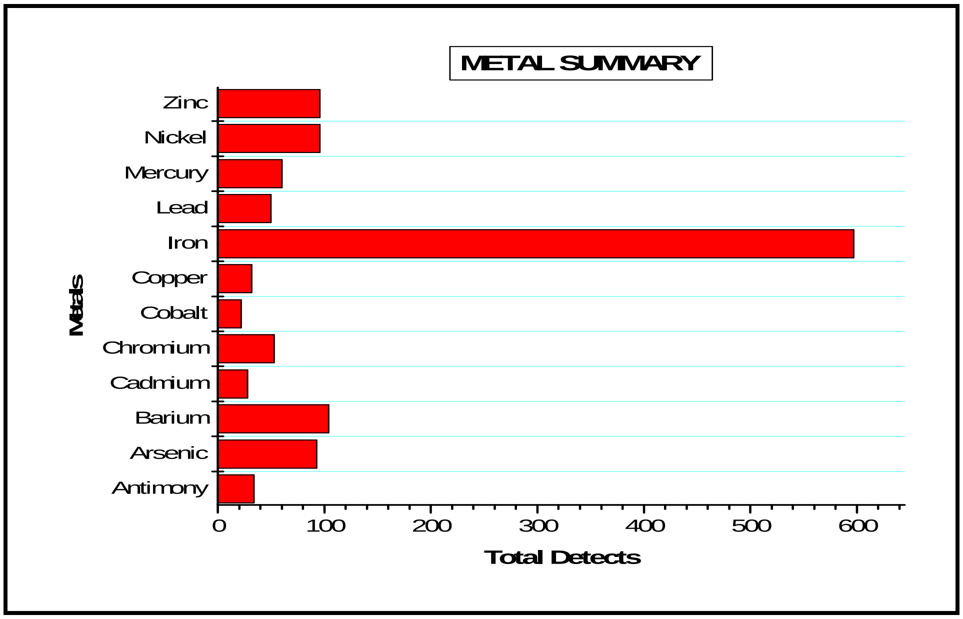

Figure 25: Metal detection frequency at ACSWLF

Table 15: Metal concentrations in leachate and GWM wells

Metal	Total Monitoring Events	Leachate Range, µg/L	GW-Range, µg/L		MCL, µg/L
			Up-gradient	Down-gradient	
Antimony	398	1-41	0.7-2.5	0.7-9	6
Arsenic	764	0-280	1.43-27	1.2-32	10
Barium	401	19-50	2-21	1-420	2000
Cadmium	761	6-14	0.409	0.18-13	5
Chromium	761	0-190	16-18	1.25-53	100
Cobalt	374	0.2-250	Always BDL	0.4-40	NA
Copper	421	11-3100	2-15	0.6-110	1300
Iron	763	2400-25000	32-5190	190-40000	300
Lead	761	1.5-50	3.6-5.8	1-49.2	15
Mercury	760	0.035-1.5	0.1-0.6	0.087-1.6	2
Nickel	397	97-780	4-14	0.698-72	100
Zinc	410	25-500	1.4-110	1-1300	NA

For analysis of metals in groundwater, it is very important to understand pH conditions, which may help in predicting mobility of metals and further decide their fate in groundwater. pH for all groundwater monitoring wells is shown in Figure 28.

Antimony was found in both leachate and groundwater. The MCL for Antimony is 6 ug/L. Figure 17 shows the antimony distribution at groundwater monitoring wells. It is seen that antimony appeared in wells after year 2005, although concentrations are consistently lower than MCL value. The mobility of antimony in soils is not clearly understood. Some studies indicate that antimony is highly mobile, while others conclude that it gets strongly adsorbed in soil. In water, it usually adheres to sediments [EPA-2008]. Antimony is not detected in groundwater for a long time. Therefore it is possible that it has been attenuated by soil absorption.

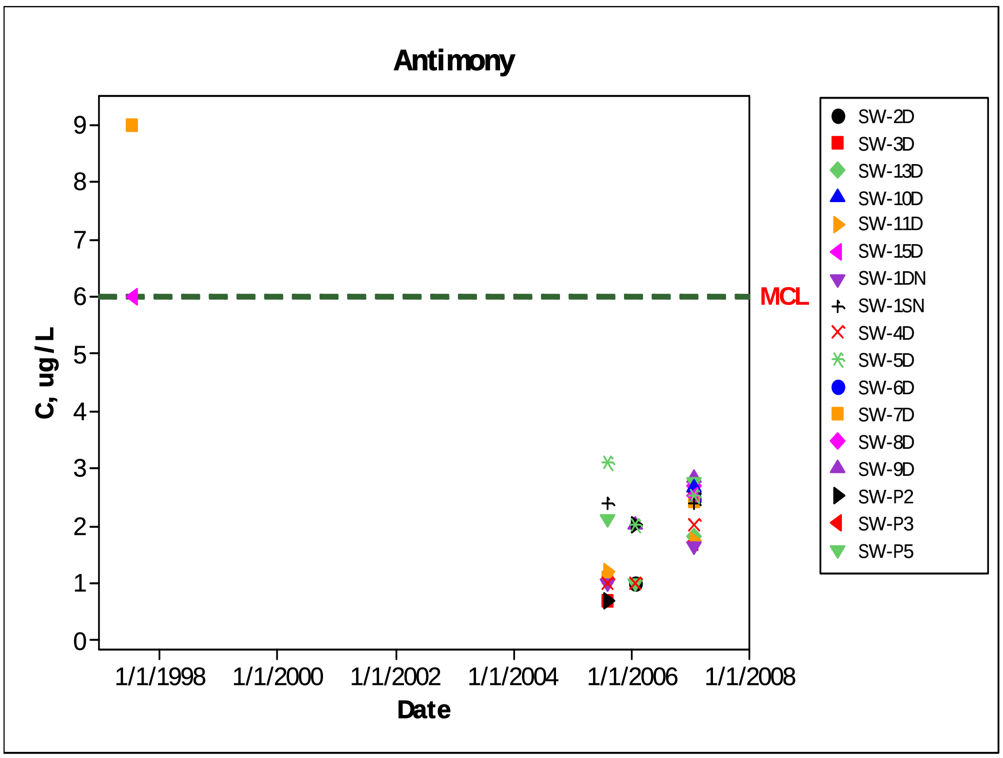

Figure 26: Antimony concentration at GWM wells

Arsenic is naturally occurring element in the environment [USGS, 1999]. An Arsenic distribution map published by USGS, shows an average concentration of 1 ug/L in the Floridian aquifer. Arsenic concentrations in ACSWLF wells were greater than 1 ug/L as shown in Figure 27. When compared with arsenic levels in leachate, it was observed that concentrations in groundwater increased with increased concentration in leachate. Since closure, leachate arsenic concentrations have declined as have groundwater concentrations. The leachate module has confirmed the reducing trend of arsenic in leachate. As per some literature data arsenic compounds can strongly sorb to soils and therefore are typically transported only over short distances in groundwater. Under aerobic and higher pH conditions, arsenic mobility increases [McLean and Beldose, 1992]. The test of proportions method was used to detect contamination in compliance wells. Statistical analysis confirms no contamination of compliance wells due to arsenic.

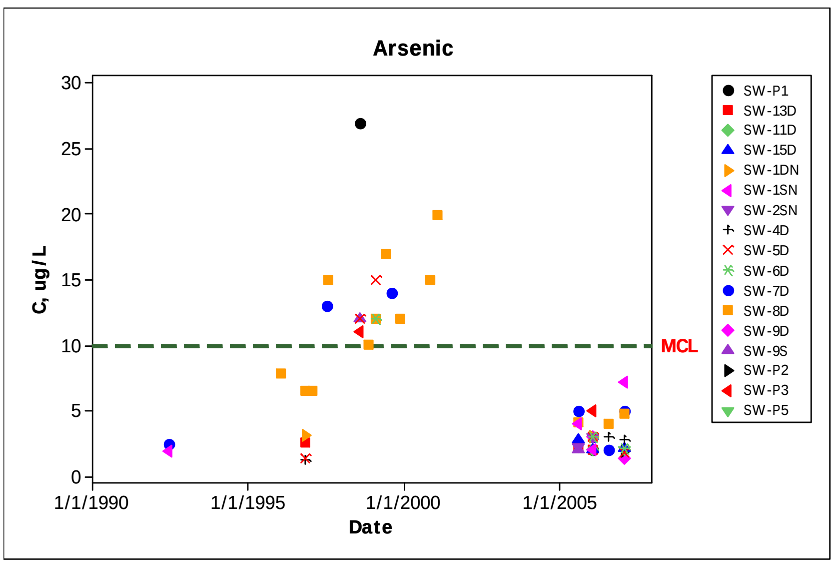

Figure 27: Arsenic concentration at GWM wells

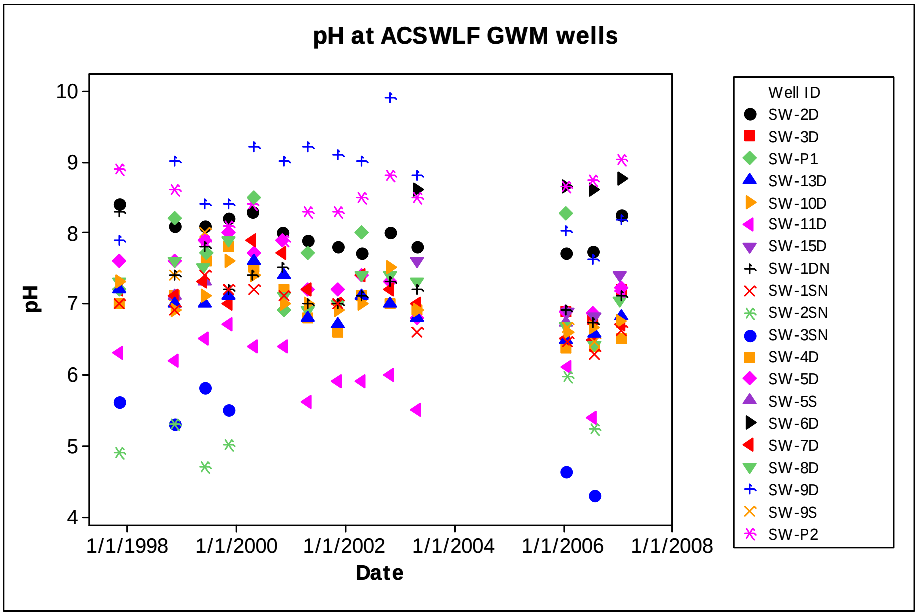

Figure 28: pH at ACSWLF GWM wells

Barium, chromium, copper, nickel and zinc were also detected in monitoring wells but all of them have concentrations always below MCL. Barium was detected consistently in all wells. A parametric confidence interval (CI) method [Appendix II] which compares concentration from each well with barium MCL was conducted to detect any contamination due to leachate. From the CI analysis method no contamination was contamination.

Chromium has the greatest detection frequency at compliance well SW-11D (Figure 18). A parametric CI [Appendix B] method indicated no contamination for well SW-11D when compared with MCL. From Table 15, it is seen that chromium concentration in leachate is higher than in groundwater. Chromium immobility through soil [EPA, 2004] may retard chromium movement in groundwater. From a statistical analysis, it may be concluded that there is no chromium contamination in well SW-11D.

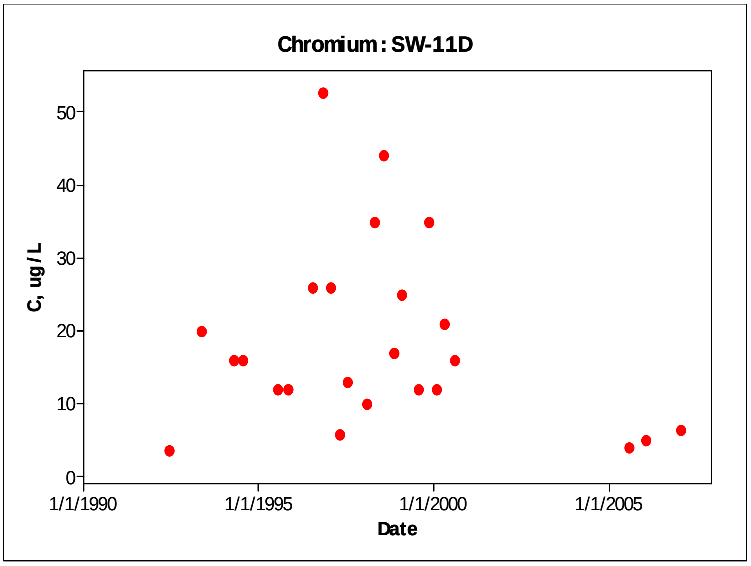

Figure 29: Chromium concentration at SW-11D

Copper had a very low detection frequency in leachate. A test of proportion conducted for copper at all monitoring wells shows no significant contamination [Appendix B]. Similar to copper, cadmium had a low detection frequency in groundwater and leachate. Cadmium can precipitate as a carbonate [ASTDR, 2007], which may prevent migration of cadmium from landfill area should it leach.

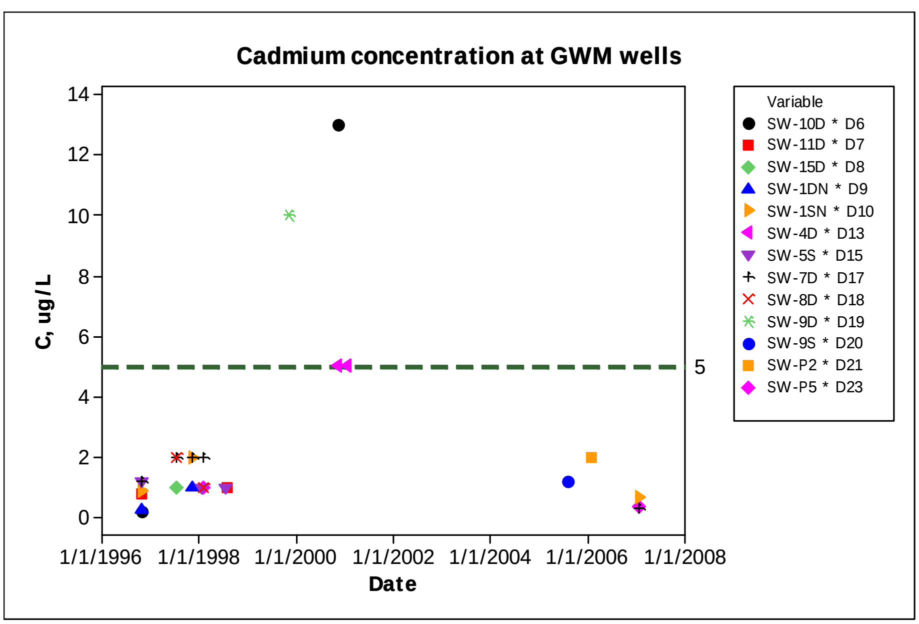

Figure 30: Cadmium concentration at GWM wells at ACSWLF

Nickel had a higher detection frequency in wells SW-10D, SW-11D, SW-4D, SW-7D and SW-8D than other metals, although concentrations have never reached the MCL. Nickel was detected in leachate at concentrations higher than MCL. The concentration range in groundwater was much lower than leachate as a result of dilution. Statistical analysis (CI) of nickel concentrations suggests no contamination of compliance wells.

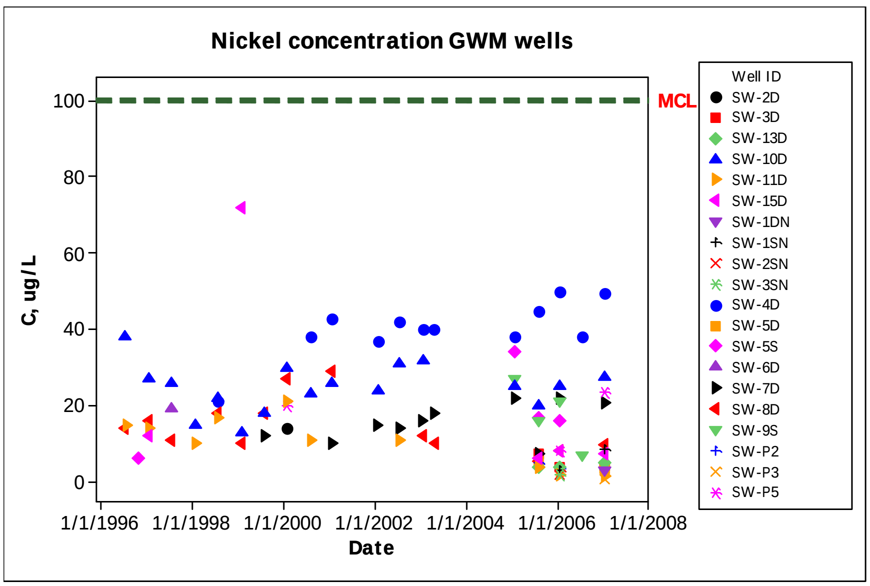

Figure 31: Nickel concentration at GWM wells

Lead was frequently detected in well SW-11D (Figure 31) at concentrations greater than MCL and was found in leachate. Statistically, well SW-11D showed a significant contamination at a concentration 49 ug/L. Lead mobility increases at lower pH (<6) due to formation of mobile complexes.

Mercury was detected frequently in wells SW-4D and SW-5D (Figure 32). MCL for mercury is 2μg/L and concentrations were always below it.

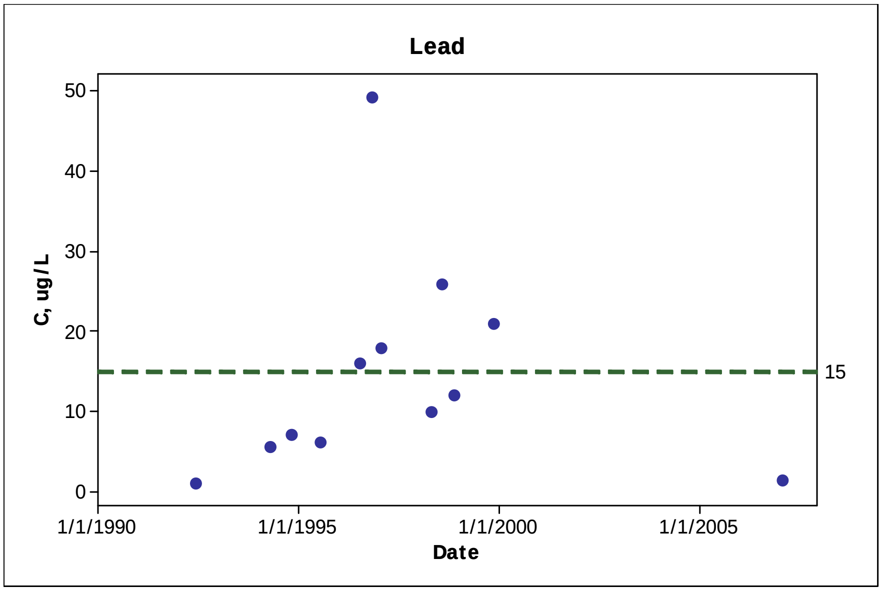

Figure 32: Lead concentration at GWM well SW-11D

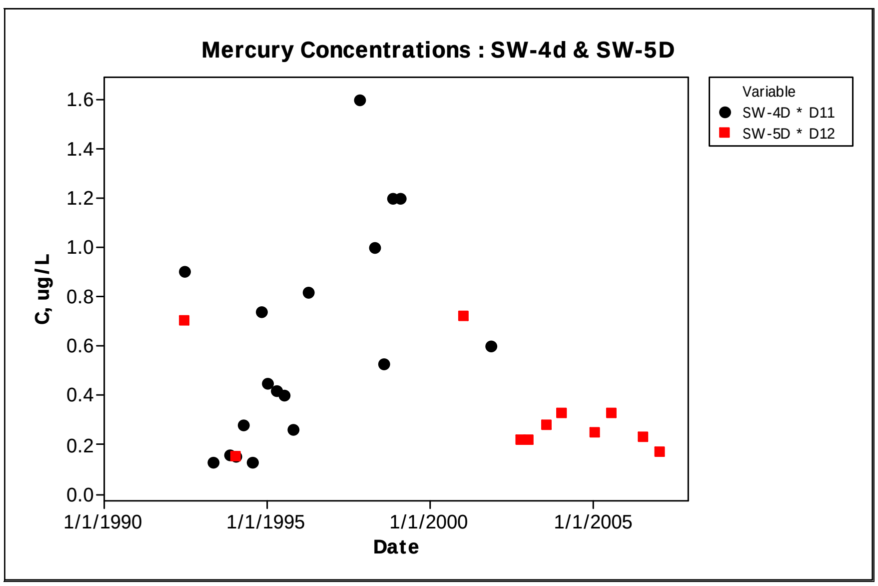

Figure 33: Mercury concentrations at SW-4D & 5D

5.3.4 Recommendations of the Groundwater Module

All trace metals detected in groundwater wells were analyzed statistically. Wells with higher or consistent detection frequency were considered priority wells for analysis of metal contaminants. The range of contaminants in leachate and groundwater was reported in Table 15. All of the metal contaminants found in leachate were also detected in groundwater wells. Antimony, barium, chromium, copper, cobalt and nickel were always found below MCL concentrations, and hence a reduced monitoring frequency is suggested for them. If their concentrations remain below MCL consistently or show a reducing trend, these metals can be terminated from monitoring. A continued monitoring is suggested for mercury, cadmium, arsenic and lead because higher detection frequency /concentrations exceeding or close to MCL. A reduced monitoring frequency of at wells SW-9D, SW-7D, SW-12D, SW-P1 and SW-2D is recommended as only a few metals with a low detection frequency were found at these locations. It is recommended to sample private wells off site but down-gradient from the landfill area. Such sampling may help in tracking transport potential of heavy metals and VOCs outside the landfill site and confirm no-migration conditions at the site.

Overall, it is seen that compliance wells are showing presence of VOCs and metals in groundwater. As shown in Figure 2, an unlined Class III landfill is located to the south (up-gradient) of the Class I Lined landfill. Since groundwater flows northeasterly, there may be some contribution from the Class III landfill of metals and VOCs to groundwater.

5.4 Cap Module Evaluation

As described in the pre-requisites for cap module (Chapter 4, Methodology), outcomes from leachate and gas module were used for making decision on cap inspection, maintenance and monitoring. The historical landfill settlement data was not available for ACSWLF. Hence outcomes of leachate and gas evaluations are considered for the cap analysis. The important outcome that should be considered in the cap module analysis is biodegradability of waste, which was described using parameters such as BOD_5/COD ratio and reducing BOD concentrations and mass flux. It was observed that

BOD_5/COD ratio was consistently below 0.1 from year 2000 (Figure 13), which describes reducing biodegradability of the waste. Biodegradability of the waste can be considered to evaluate the probable landfill settling capacity, as the landfill is closed and most of the settling occurring in this phase is considered due to the biodegradation of waste, termed as secondary settling [Sharma et al. 2007]. The gas remaining potential estimated in gas module was 4%, indicating that more than 90% of the waste is biodegraded, and showing very low gas emissions in future.

However it is recommended to continue a regular inspection and monitoring for cap as some settlement was recently observed at the site. As leachate, gas and groundwater are also under surveillance monitoring to observe the recommended changes in monitoring frequency of different contaminants; it is recommended to continue cap inspection, maintenance and monitoring (CIMM) for the cap at ACSWLF.

CHAPTER 6
SUMMARY AND RECOMMENDATIONS

The performance based methodology was applied to ACSWLF for the determination of PCC duration. A modular approach, individually considering each element of PCC, was adopted. Leachate, landfill gas, groundwater and cap modules were evaluated and recommendations were provided depending on the outcomes of the modules.

Each module began with a pre-requisite module, facilitating data collection for that module. For ACSWLF data were obtained from the Alachua County Public Works Department, University of Florida and Jones & Edmunds. It was observed that good data collection on various activities at the site provided helpful in the application of the performance based methodology, leading to an increased reliability as well as accuracy of the study.

The evaluation began with the leachate module. ACSWLF liner is a composite liner with a leachate collection system. In the leachate module evaluation, mainly historical leachate monitoring data were analyzed. Initially a significant reducing trend in detection parameters i.e. BOD, BOD mass and leachate flow was confirmed. COD concentrations were observed in the range of 1500-2000 mg/L. Remaining COD in the leachate can be attributed to humic acid and fulvic acid production in the leachate. It was observed that for a total of 270 regulated parameters, 245 were always BDL. Remaining 25 parameters were categorized as organic contaminants, inorganic indicators and heavy metals. These contaminants were compared with MCL standards which are very strict standards for leachte, hence establishment of new risk based standards for leachate parameters is strongly recommended. Organic contaminants were always found below MCL with a reducing trend. Therefore, it was recommended to reduce monitoring frequency for organic contaminants. If a similar trend continues, organic contaminants can be terminated from leachate monitoring. Metals including arsenic, cobalt and nickel need to be monitored as they were detected with higher concentrations in the leachate. However for mercury, cadmium and chromium, reduced monitoring frequency was recommended as they rarely exceeded the MCL values and also due to their low detection frequency. It was observed that leachate production showed a significant reducing trend except in year 2005 and 2006. In these years quantity of leachate produced was unusually high. This can be related to higher leachate recirculation in the respective years or some settlement of the cap may allow excess water/moisture infiltration in to the landfill.

Groundwater monitoring data at different monitoring were statistically analyzed. The purpose was to confirm any contamination of the down-gradient water quality as compared to background water quality or MCLs. The contaminants were again classified into volatile organic compounds and heavy metals for the purpose of analysis. The analysis was conducted for the contaminants with higher detection frequency. A reduced monitoring frequency for acetone, benzene, C-1, 2-dichloroethene, chloroethane, chloroform, chloromethane, dichlorodifluoromethane, methylene chloride, and tetrachloroethene was recommended due to lower detection frequency and concentrations always below MCL/HAL. Chloroethane, 1,1-Dichloroethane, chlorobenzene and 1,4-dichlorobenzene are consistently detected in some monitoring wells; however, their concentrations are always below MCL/HAL. It is recommended to continue monitoring for these parameters. For VOCs a reduced monitoring frequency is recommended, except for vinyl chloride, should be monitored because it shows a higher detection frequency with concentrations always above MCL in well SW-4D. In the case of metals, chromium, lead, arsenic and mercury were recommended for continued monitoring were recommended due to higher detection frequency and concentrations higher or close to MCL values. However these heavy metals were observed in leachate with a very low detection frequency, except arsenic. Presence of these metals in groundwater could be due to the unlined Class III landfill to the south of the Class I lined area.

Historical gas production data were analyzed for the gas module. The ACSWLF is operated as a bioreactor and a LFGTE project was active at the site through 2007. A reducing trend was observed in gas production after closure (year 1999). Due to lack of actual gas production data total gas production, year and quantity of maximum gas production and gas production through 2007 were estimated using graphical approach. A gas remaining potential of 4% was estimated for ACSWLF, which indicates very low gas generation potential from the landfill. In 2008 GRU ceased LFGTE at site due to lower gas production, which was consistent with the analysis performed in this study. Presently gas collected from the landfill flared.

Finally the cap module was evaluated and it was recommended to continue monitoring and inspection for the cap at the ACSWLF. Historical settlement data for ACSWLF were not available, recently settlement was observed at the site by the operators. As ACSWLF was closed during year 1999, it was assumed that landfill settlement during 2008 was mainly occurring due to biodegradation of the waste and secondary settlement. Although, the BOD_5/COD ratio, lower gas production and reduced

BOD mass flux indicate low biodegradability of waste it is recommended to continue CIMM as monitoring of other landfill are at present not terminated from PCC.

Overall, performance based methodology can prove useful to regulators and owner/operators of landfills to make decision regarding PCC. From historical data analysis of leachate, landfill gas and groundwater, it can be evaluated that 30 years of complied PCC may be too long period for ACSWFL. The waste shows a lower biodegradability, approaching functional stability, as inferred from the analysis of leachate and landfill gas. VOCs in leachate at the site show a reducing trend in both leachate and groundwater, while metals were low in concentration and detection frequency. Duration of surveillance monitoring is provided to implement the above recommended changes. If, during surveillance monitoring, it is observed that leachate quality and quantity and landfill gas generation are occurring as predicted and are imposing no threat to HH&E, termination of PCC components is possible in the future. However, custodial-care of landfill must be continued after termination of PCC.

APPENDIX A:
VARIATION OF ORGANIC AND METAL CONTAMINANTS CONCENTRATION IN LEACHATE AND GROUNDWATER

I. Variation of organic contaminants concentration in leachate with time

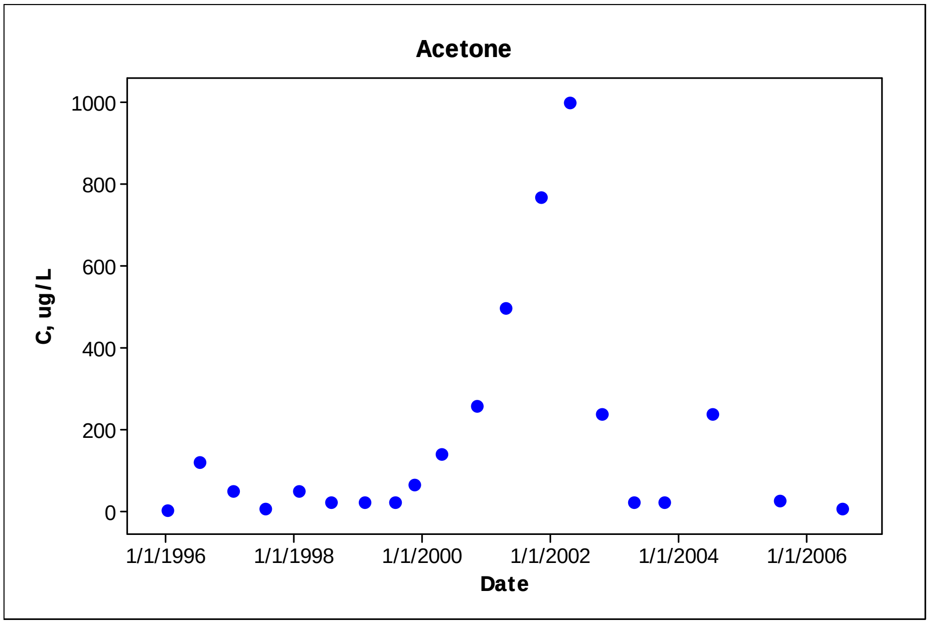

Figure A-1: Acetone concentration variation with time

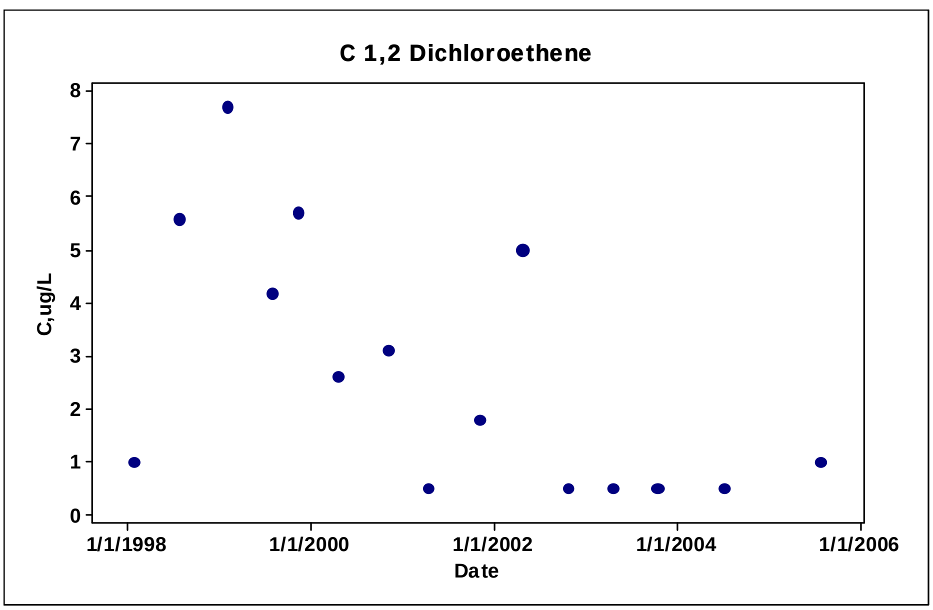

Figure A-2: 1, 4 dichlorobenzene concentration variation with time

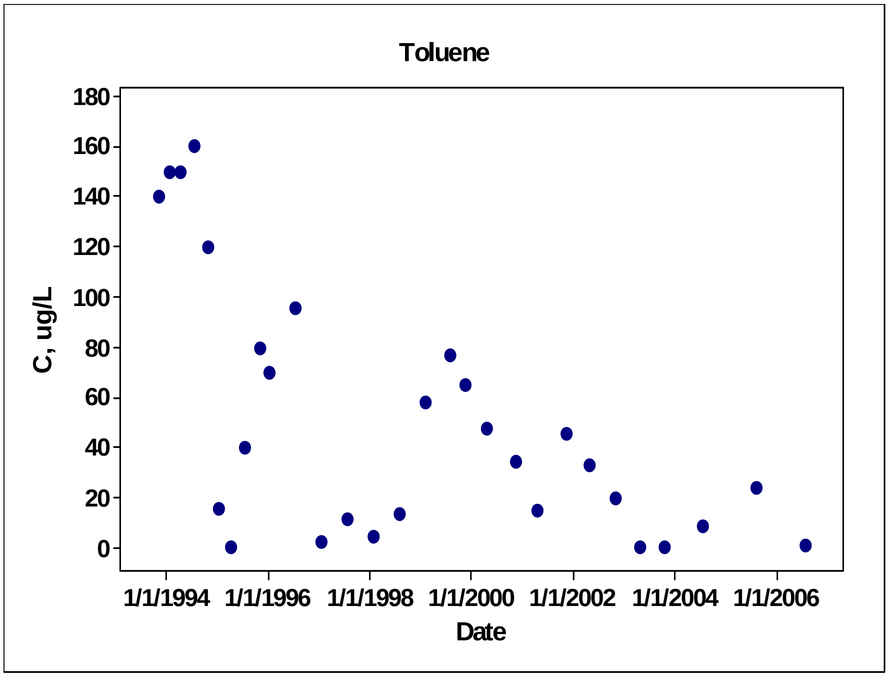

Figure A-3: Toluene concentration variation with time

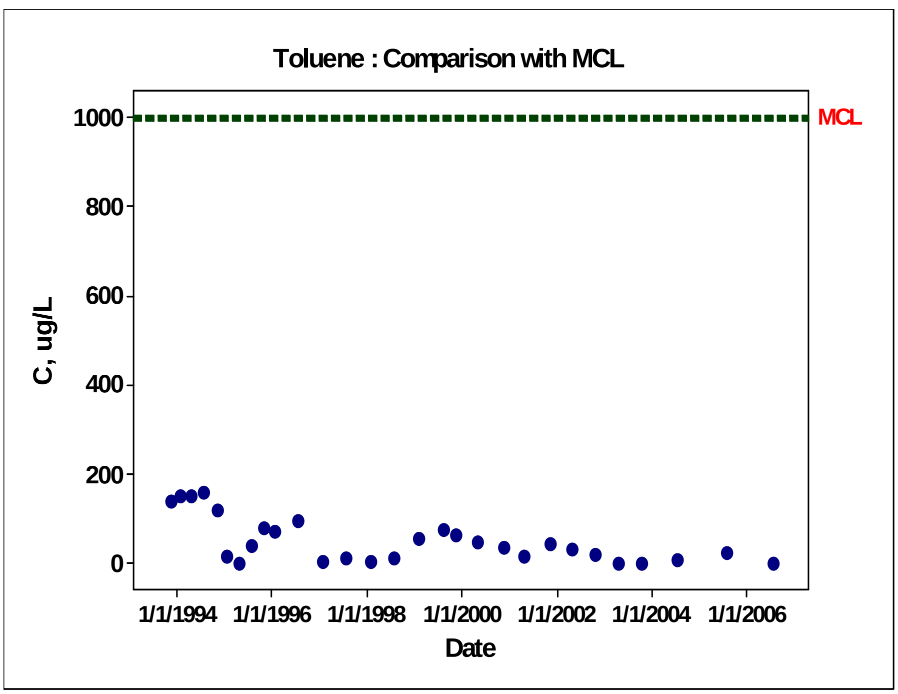

Figure A-4: Comparison of Toluene concentration with MCL

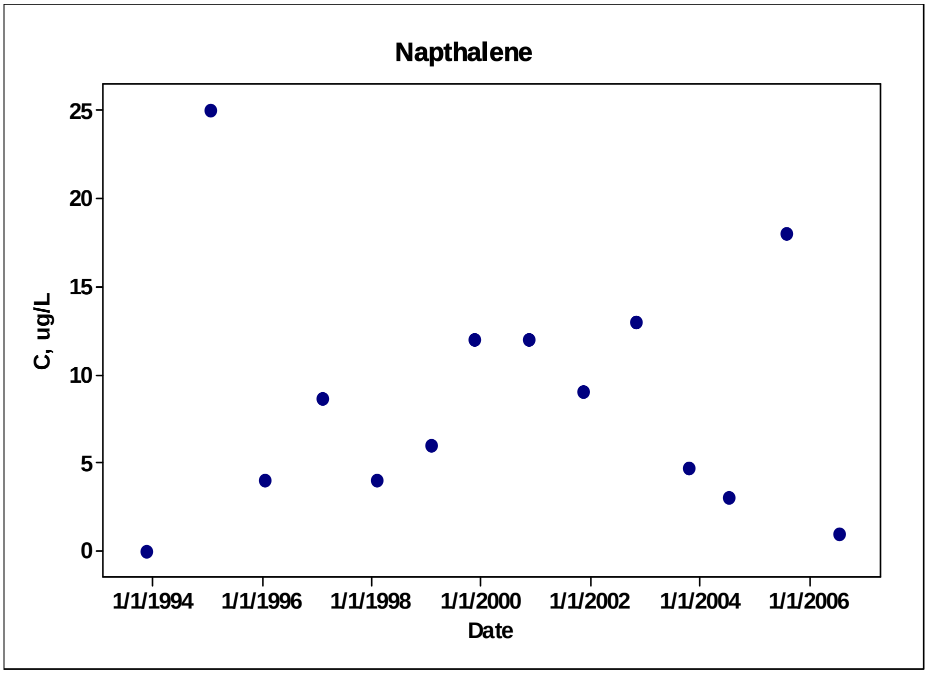

Figure A-5: Naphthalene variation with time

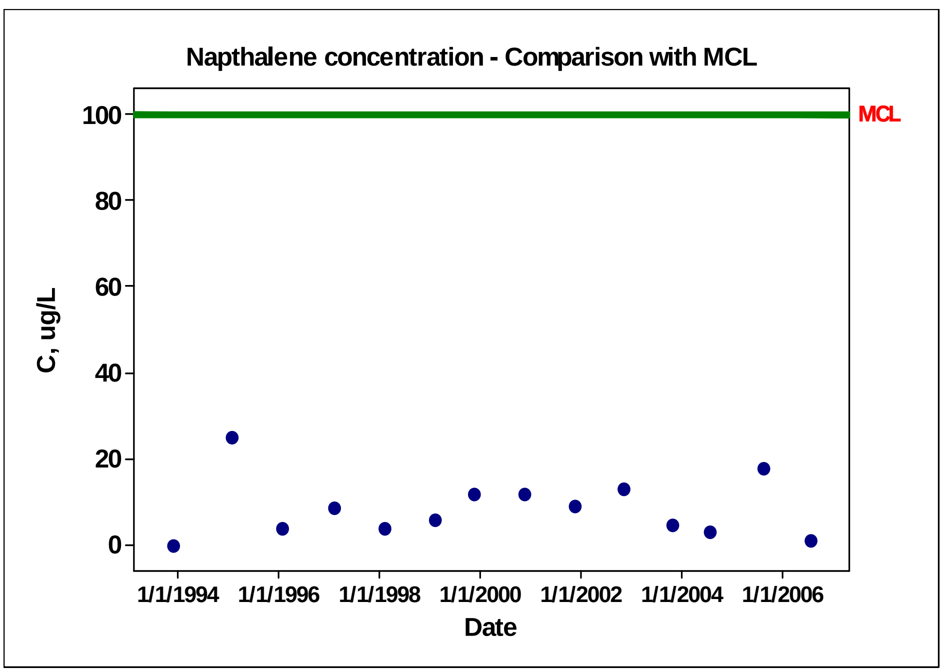

Figure A-6: Comparison of naphthalene concentration with MCL

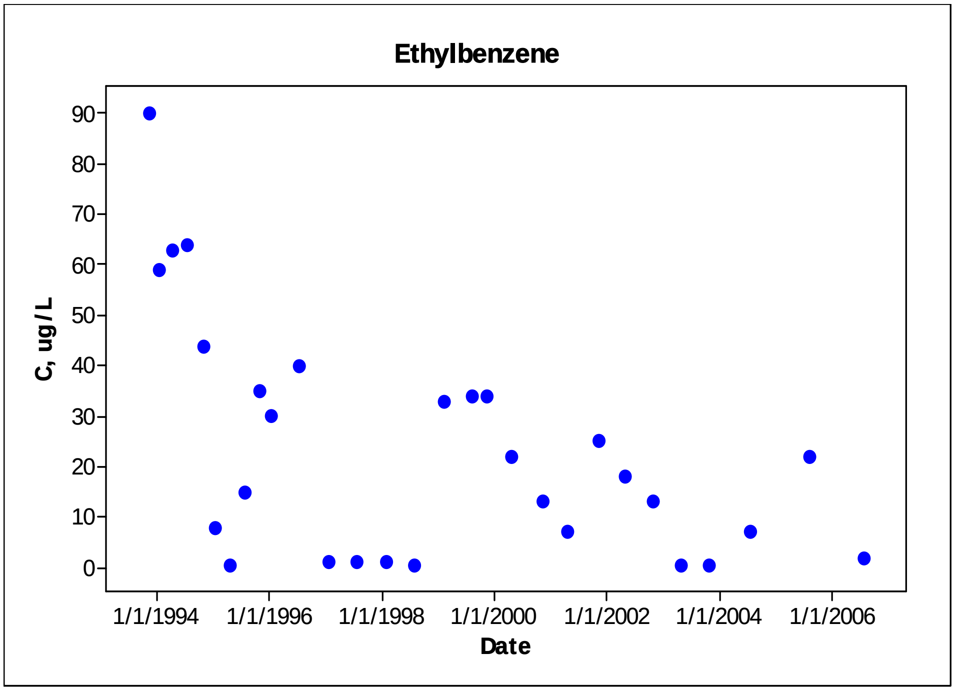

Figure A-7: Ethylbenzene concentration variation with time

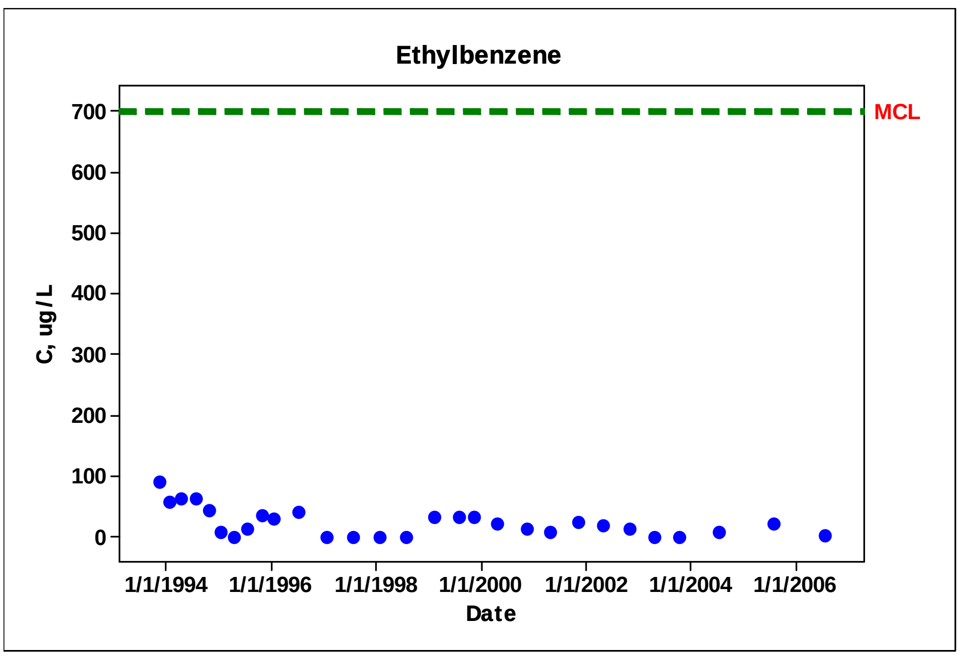

Figure A-8: Ethylbenzene concentration comparison with MCL

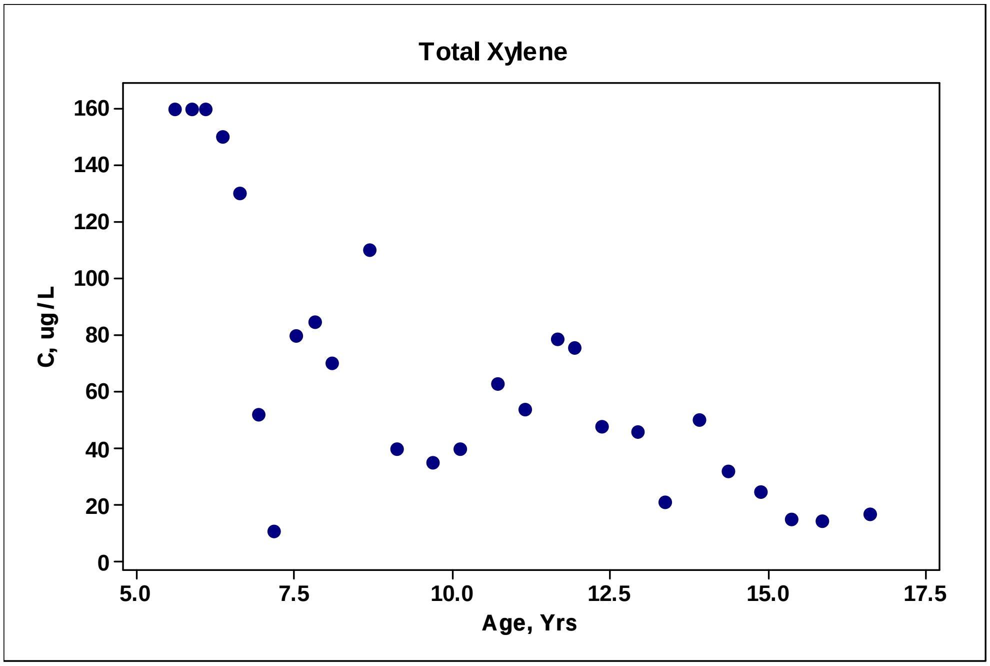

Figure A-9: Variation of total xylenes with time

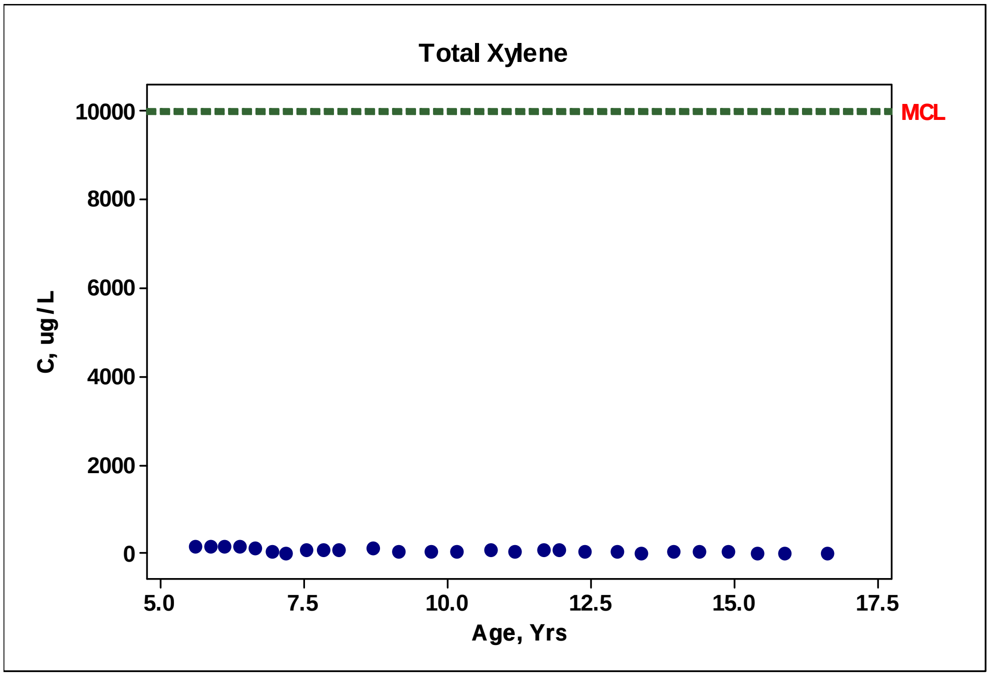

Figure A-10: Comparison of total xylenes with MCL

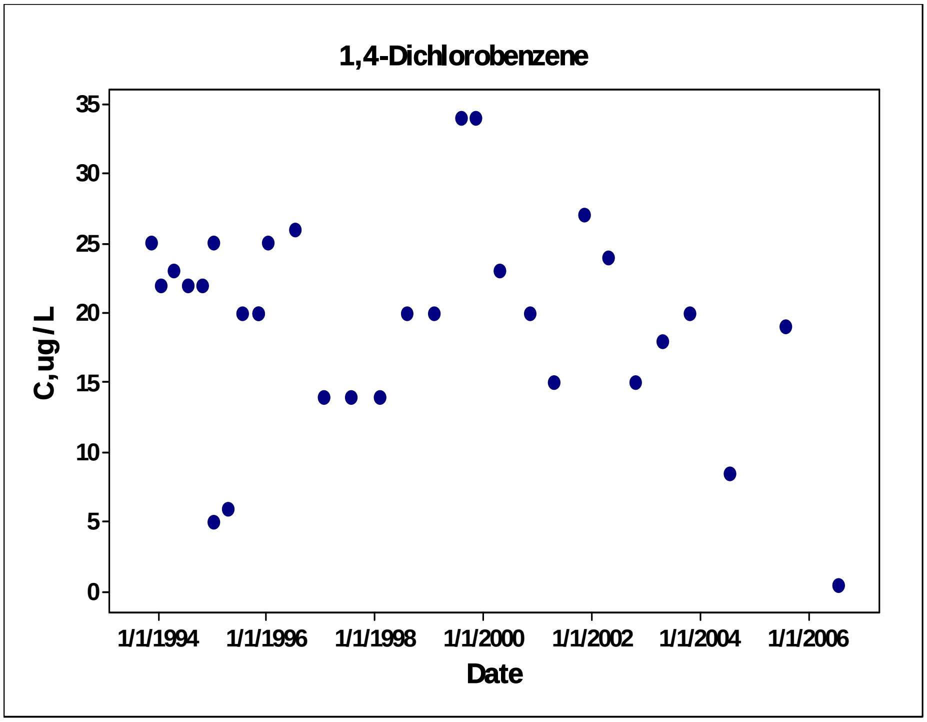

Figure A-11: 1,4 dichlorobenzene variation with time.

II. Variation of metals concentration in leachate with time

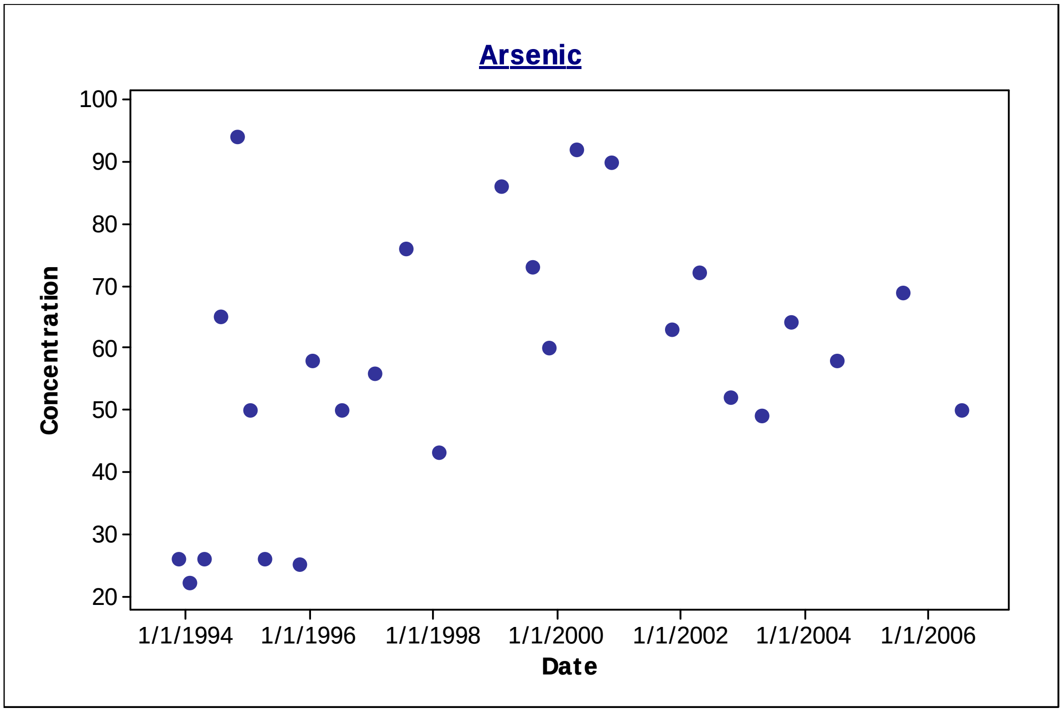

Figure A-12: Arsenic variation with time

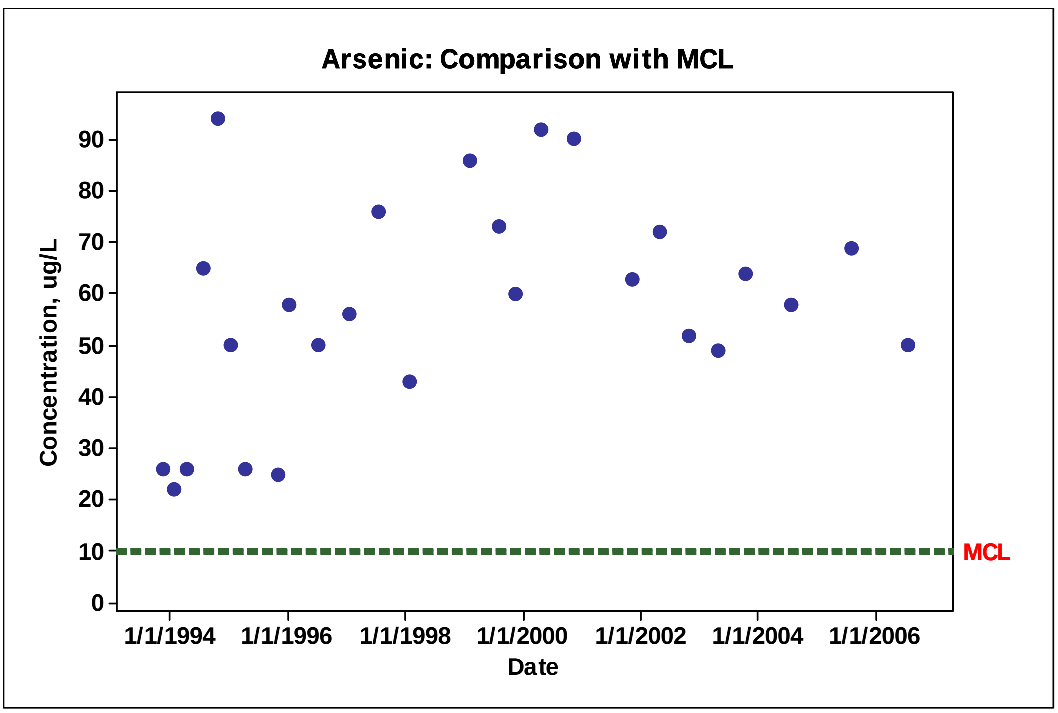

Figure A-13: Comparison of Arsenic concentration with MCL

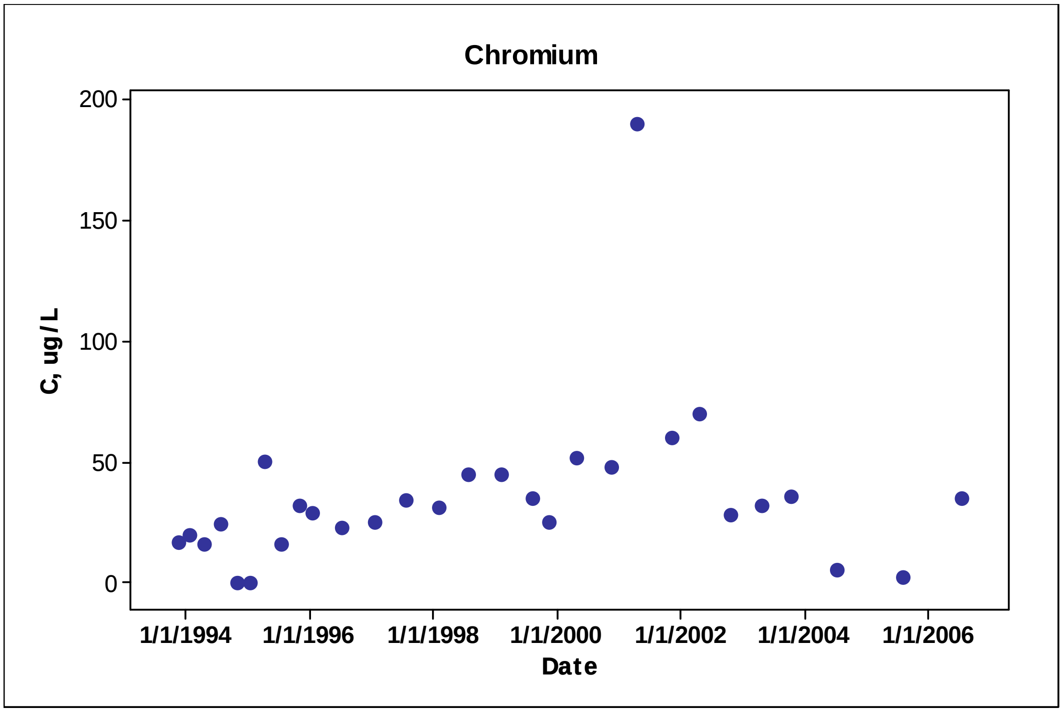

Figure A-14: Chromium concentration variation with time

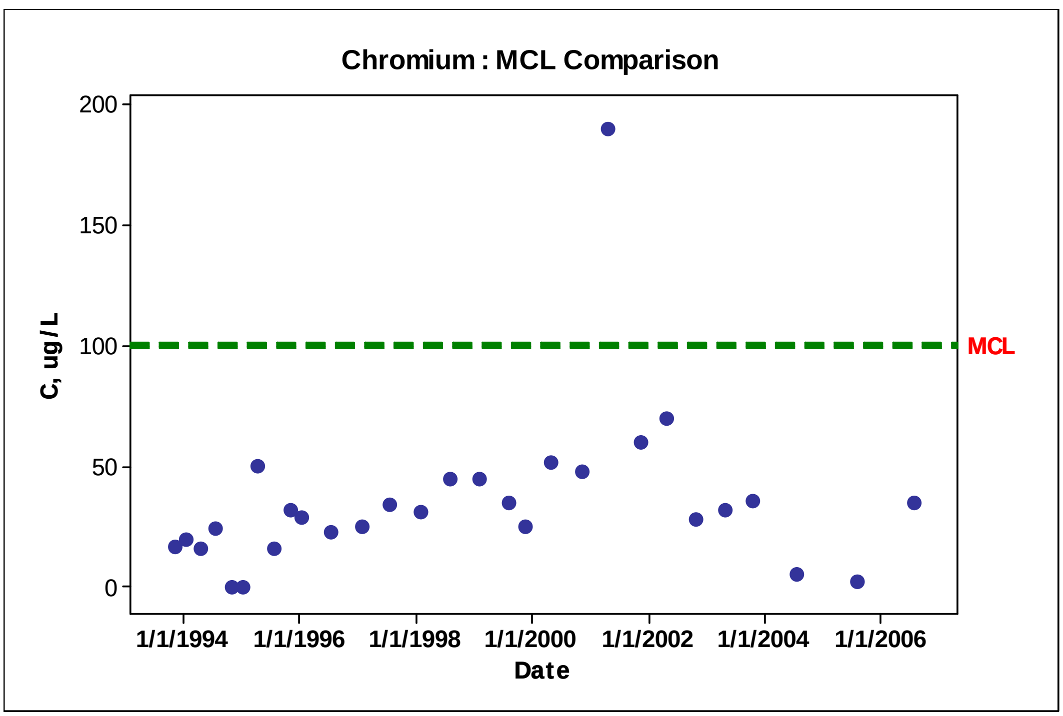

Figure A-15: Chromium concentration comparison with MCL

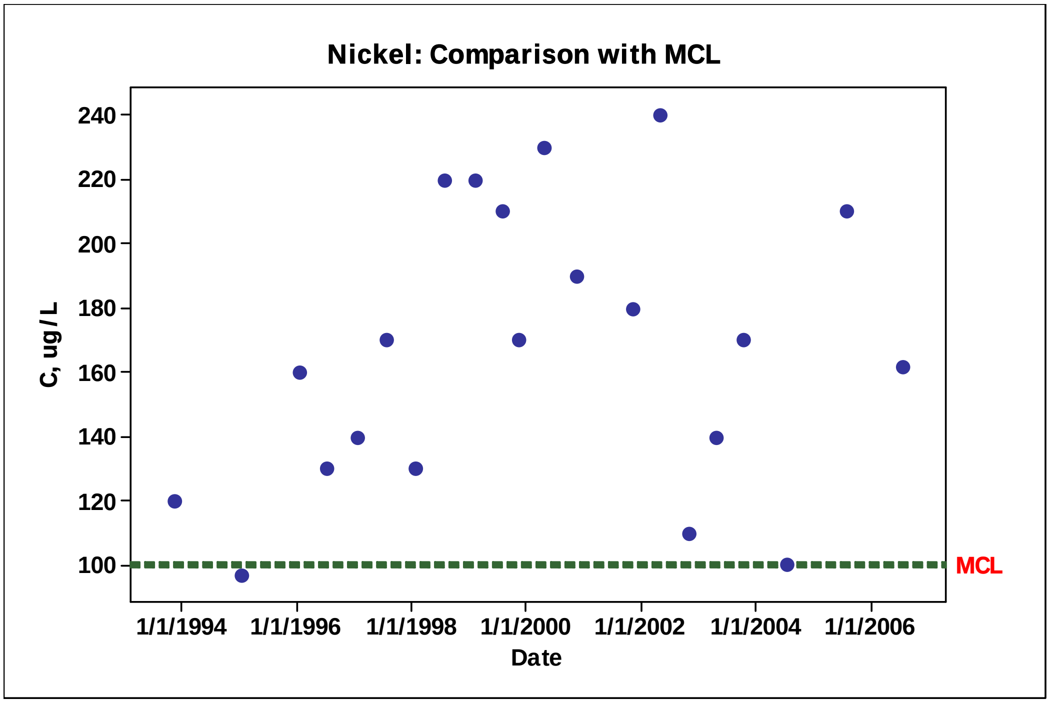

Figure A-16: Nickel variation with time and comparison with MCL

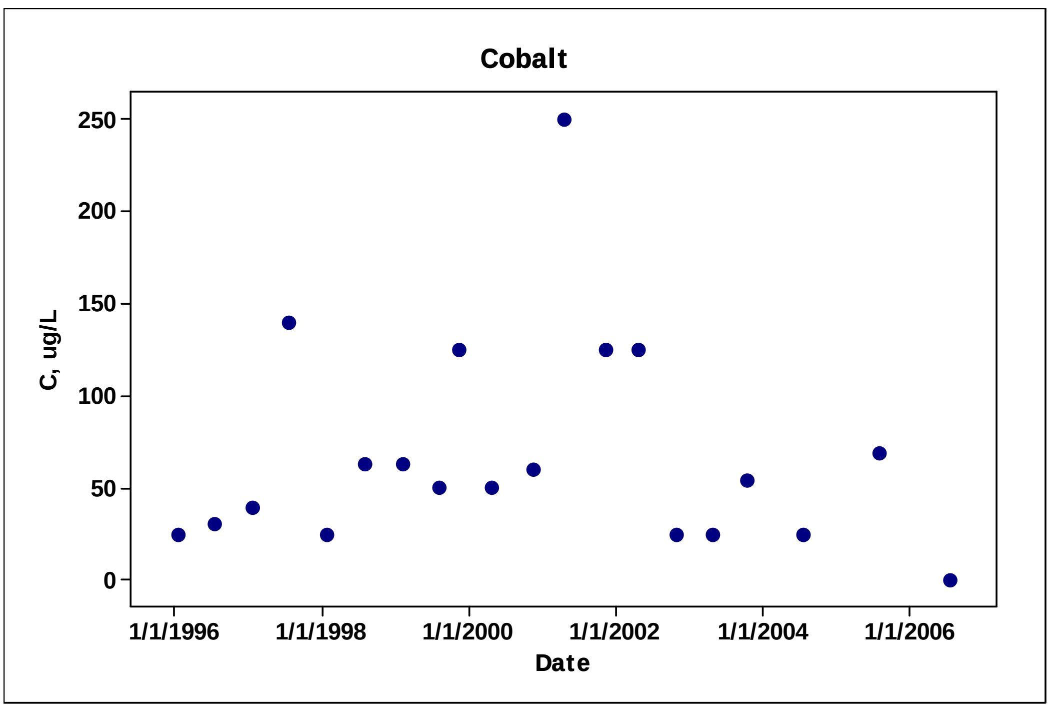

Figure A-17: Cobalt concentration variation with time

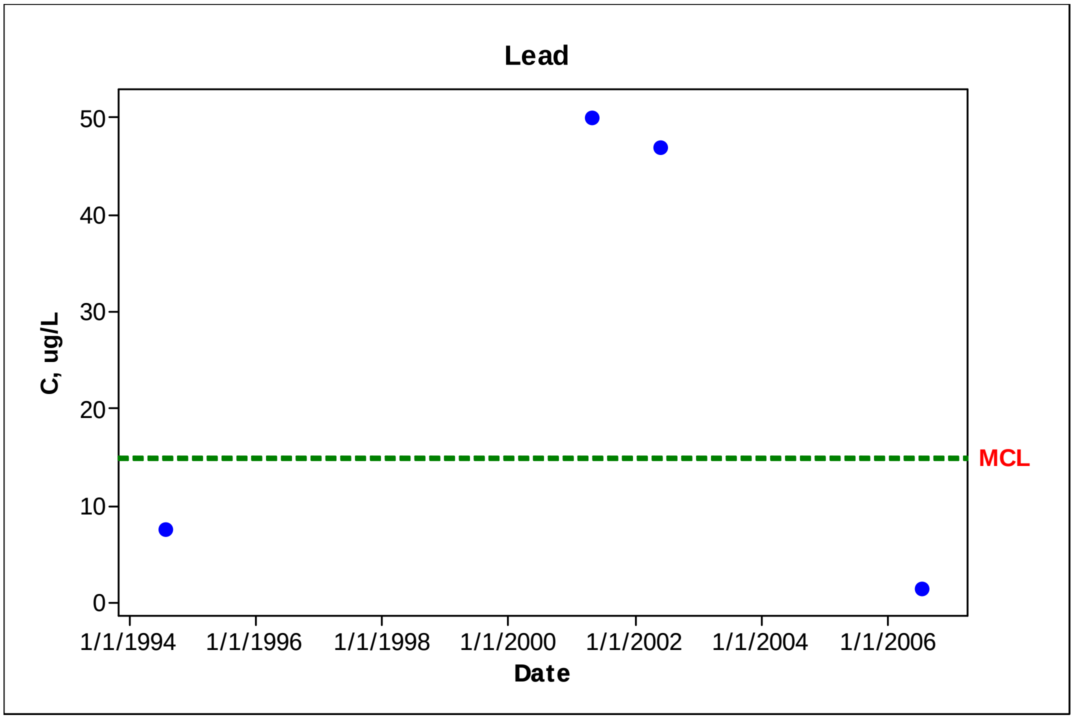

Figure A-18: Lead detected in leachate and comparison with MCL

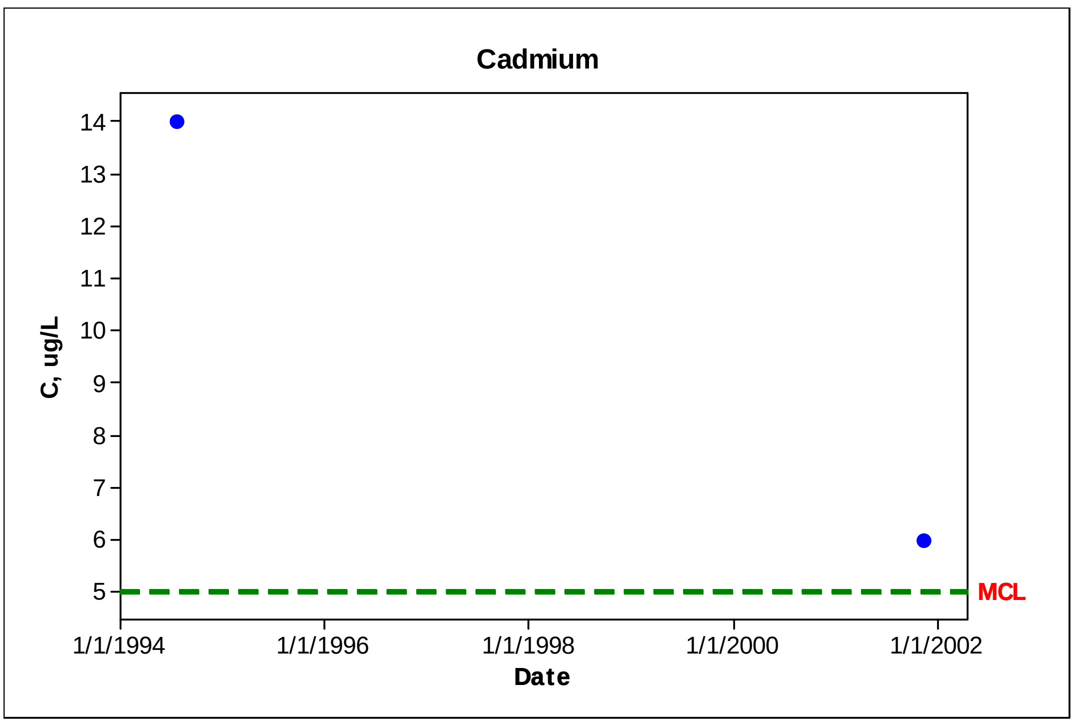

Figure A-19: Cadmium detected in leachate and comparison with MCL

III. Variation of inorganic indicators with time in leachate

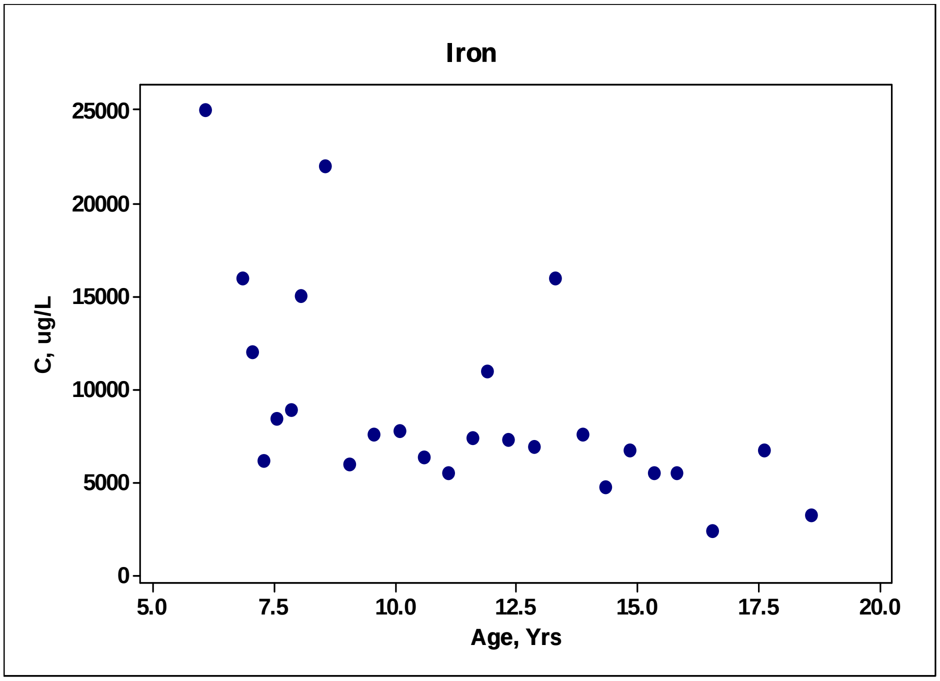

Figure A-20: Iron variation with time

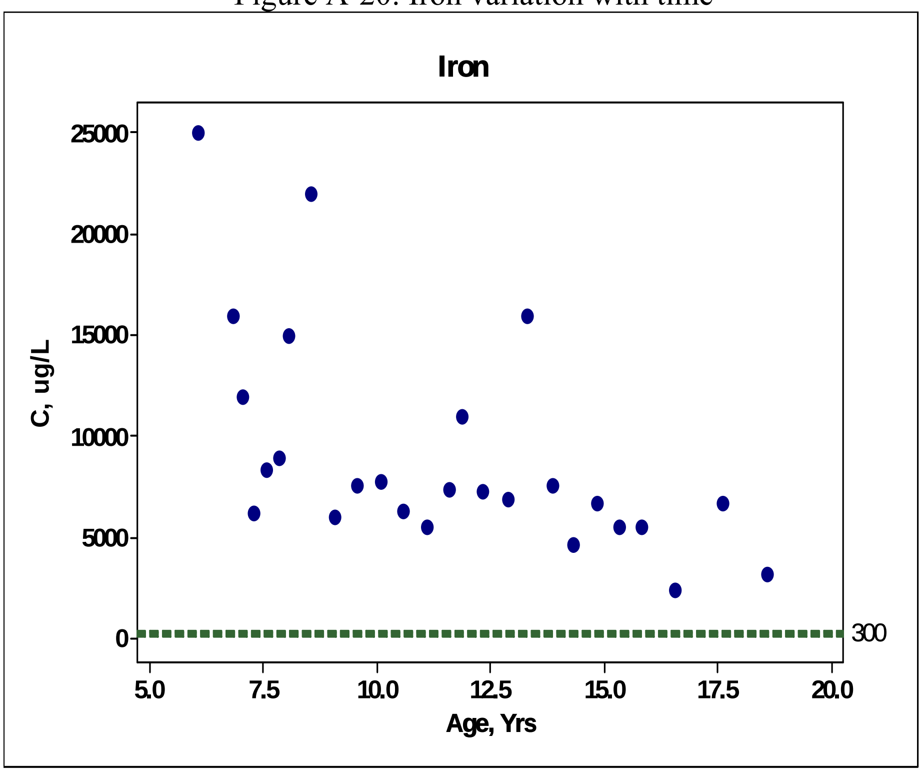

Figure A-21: Iron concentration comparison with time

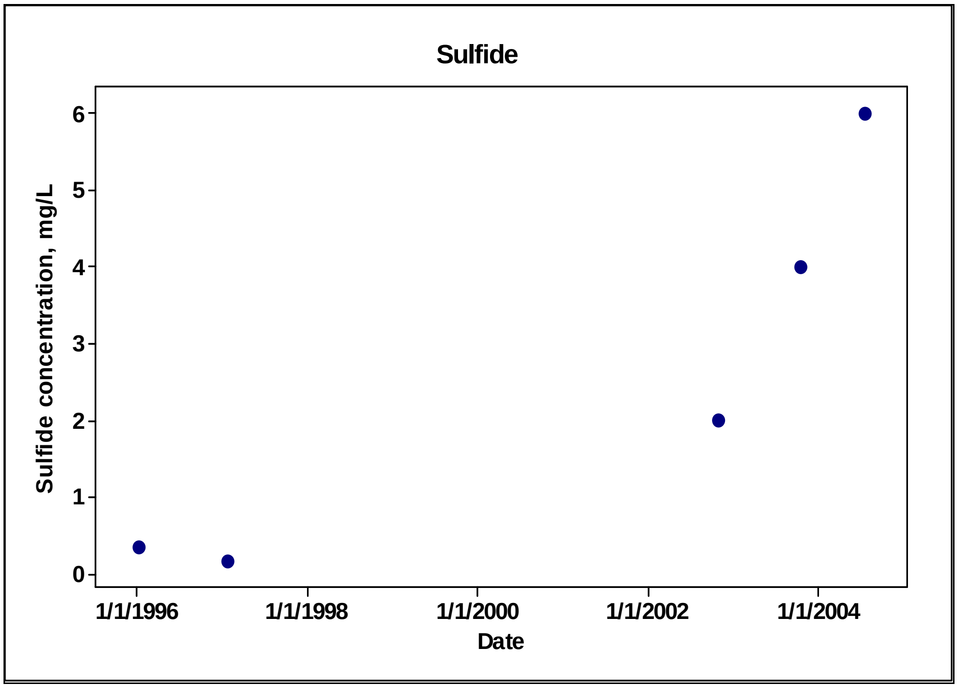

Figure A-22: Sulfide concentration Vs Time

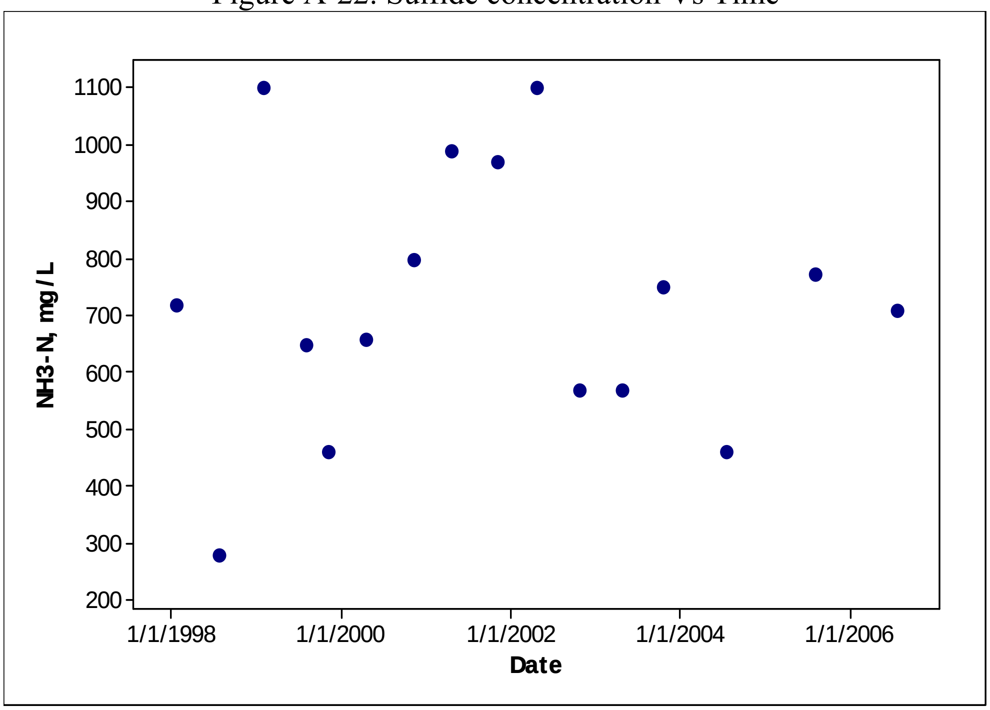

Figure A-23: Ammonia concentration Vs Time

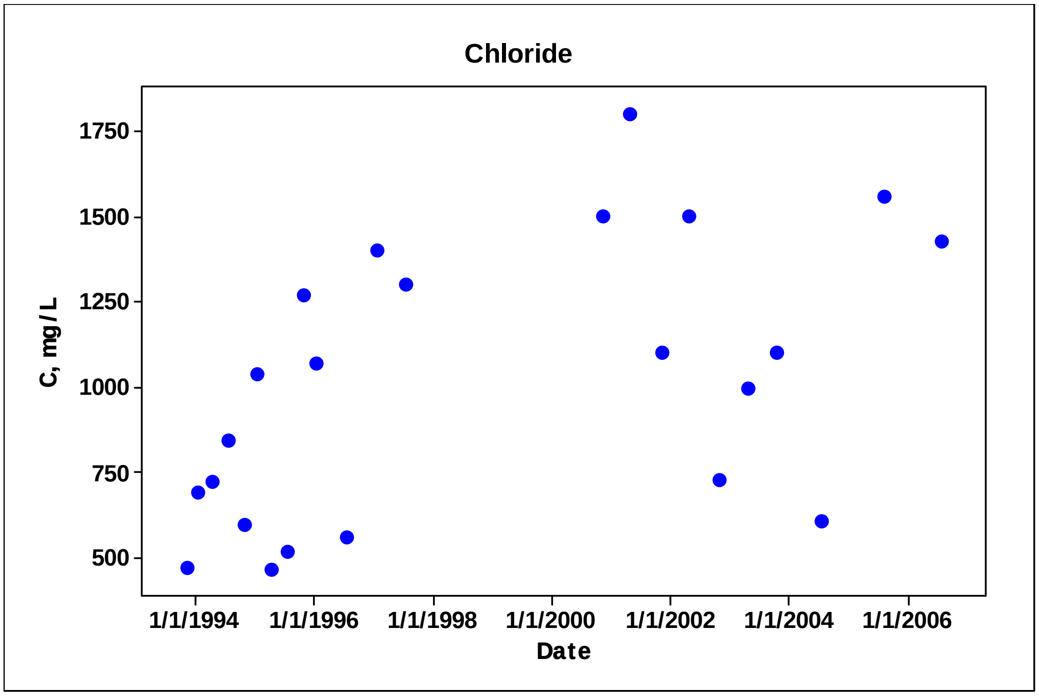

Figure A-24: Chloride concentration Vs Time

IV. VOCs Detected in Groundwater Monitoring Wells at ACSWLF

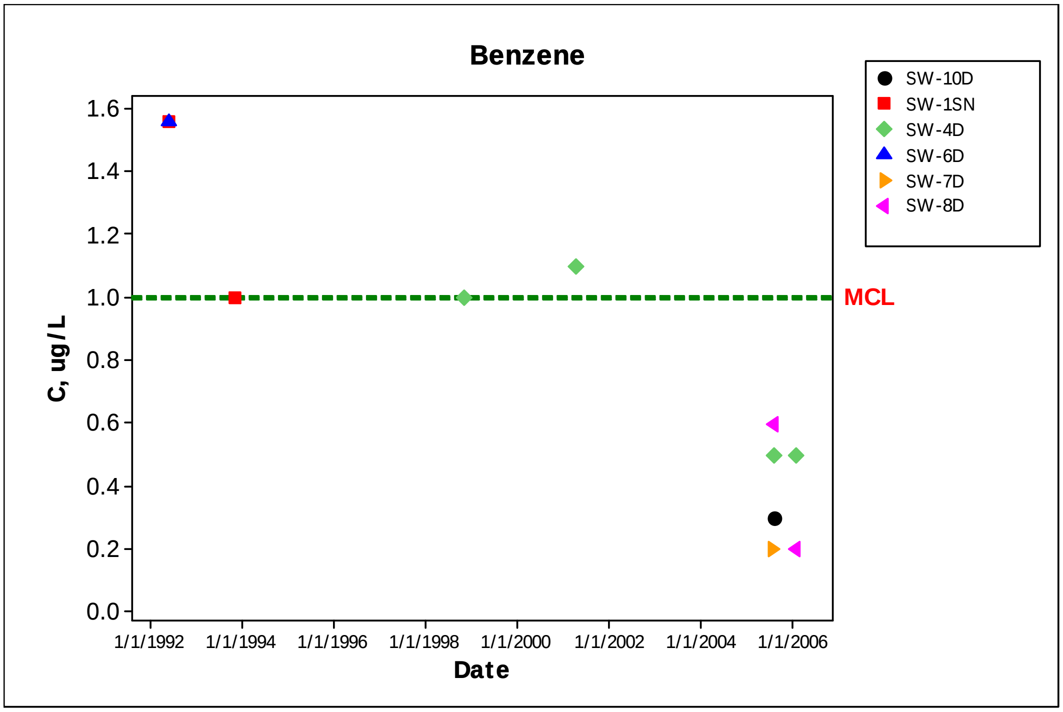

Figure A-25: Comparison of Benzene concentrations at GWMW at ACSWLF

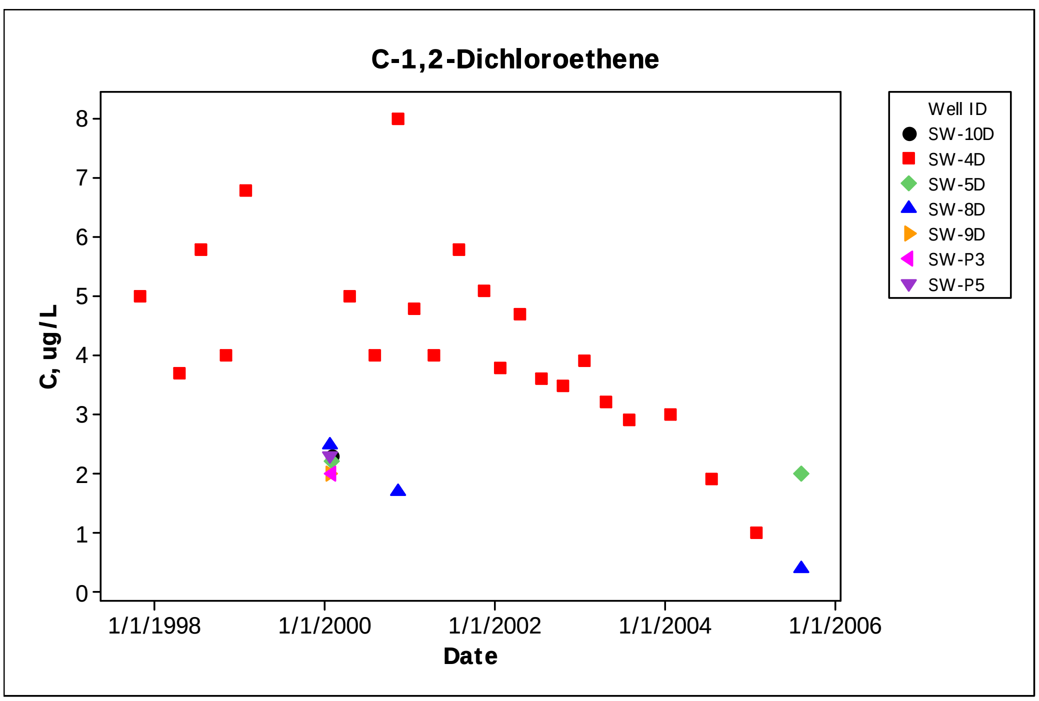

Figure A-26: C-1,2 dichloroethene concentration at GWMW at ACSWLF

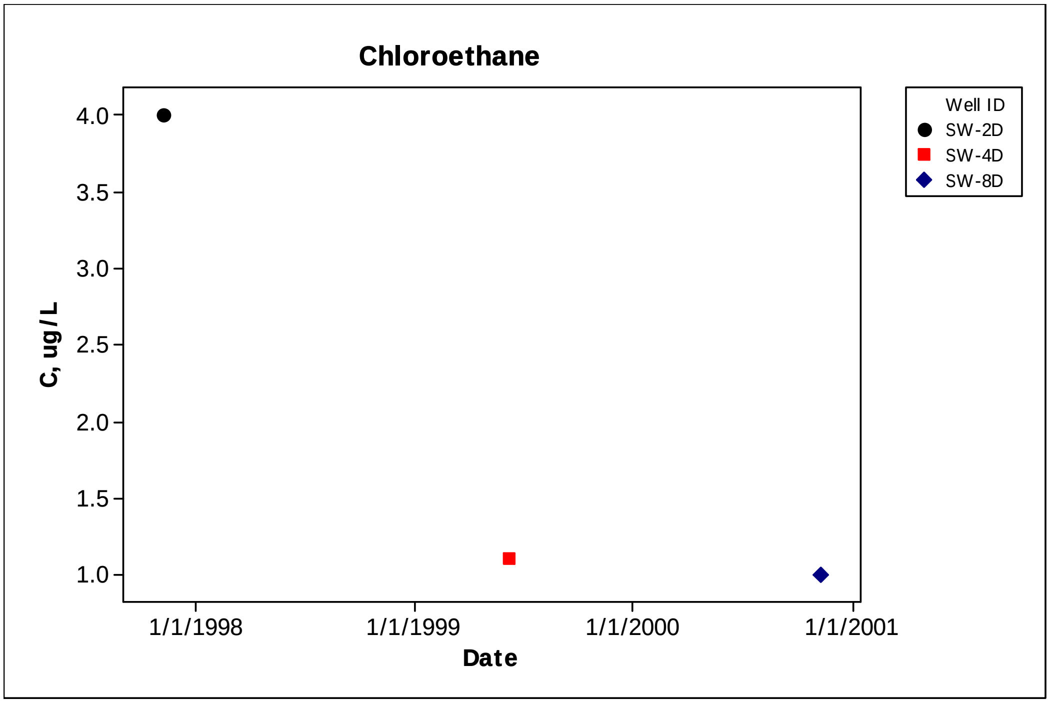

Figure A-27: Chloroethane concentration at GWMW at ACSWLF

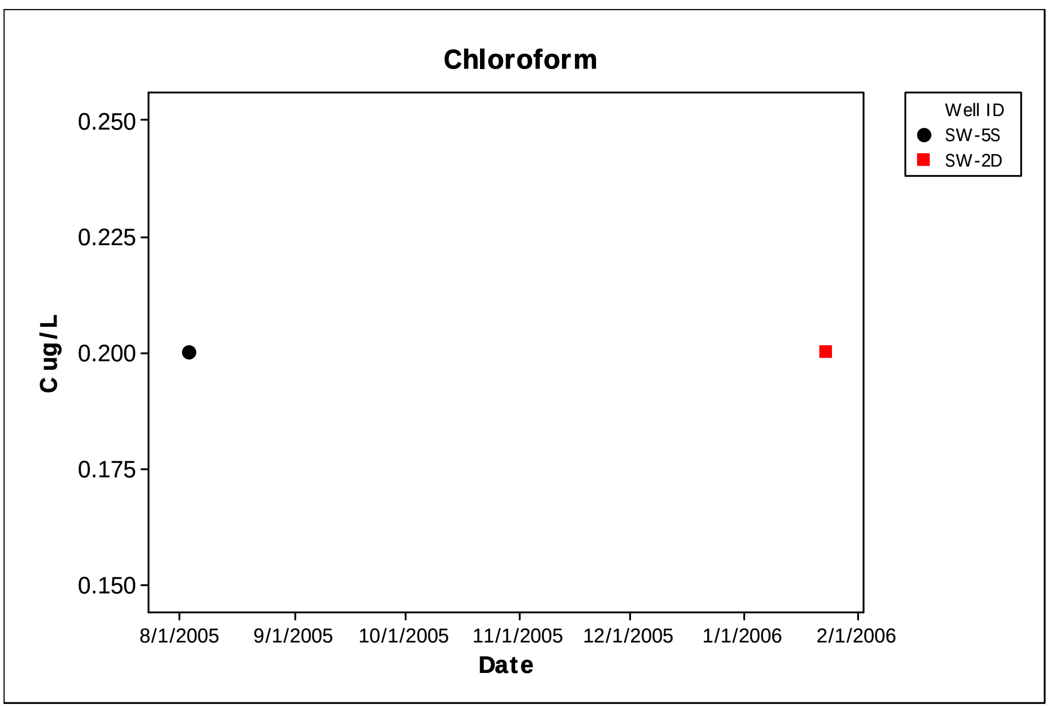

Figure A-28: Chloroform concentration at SW-5S and SW-2D GWM wells

VI. Detection of metals at GWMW at ACSWLF

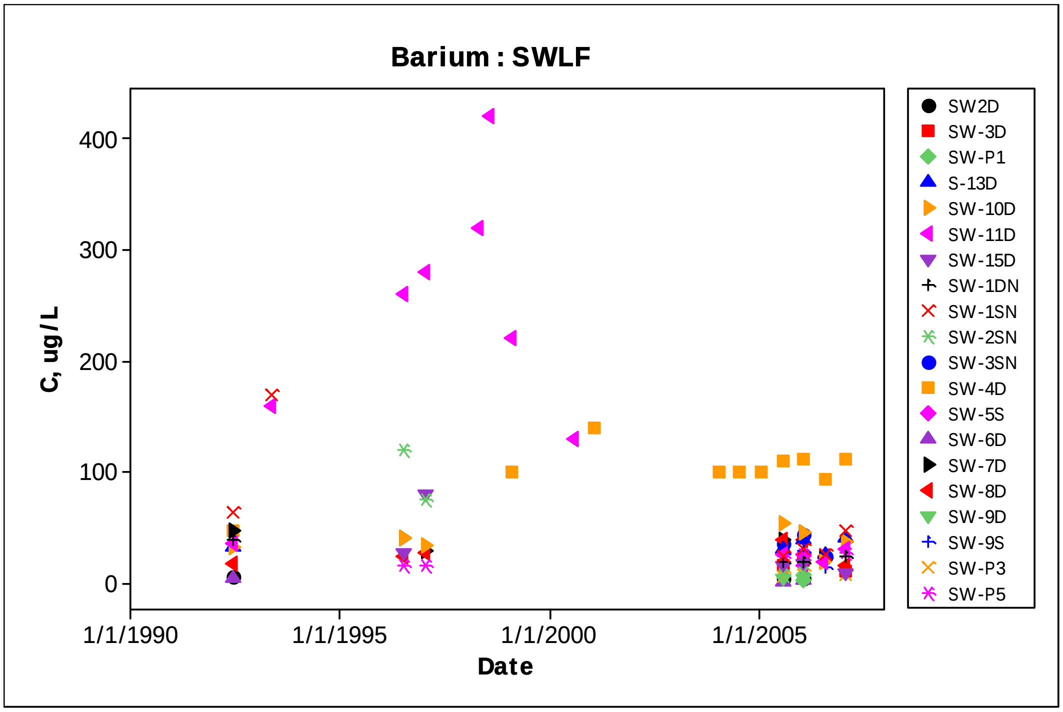

Figure A-29: Barium concentration at GWMW at ACSWLF

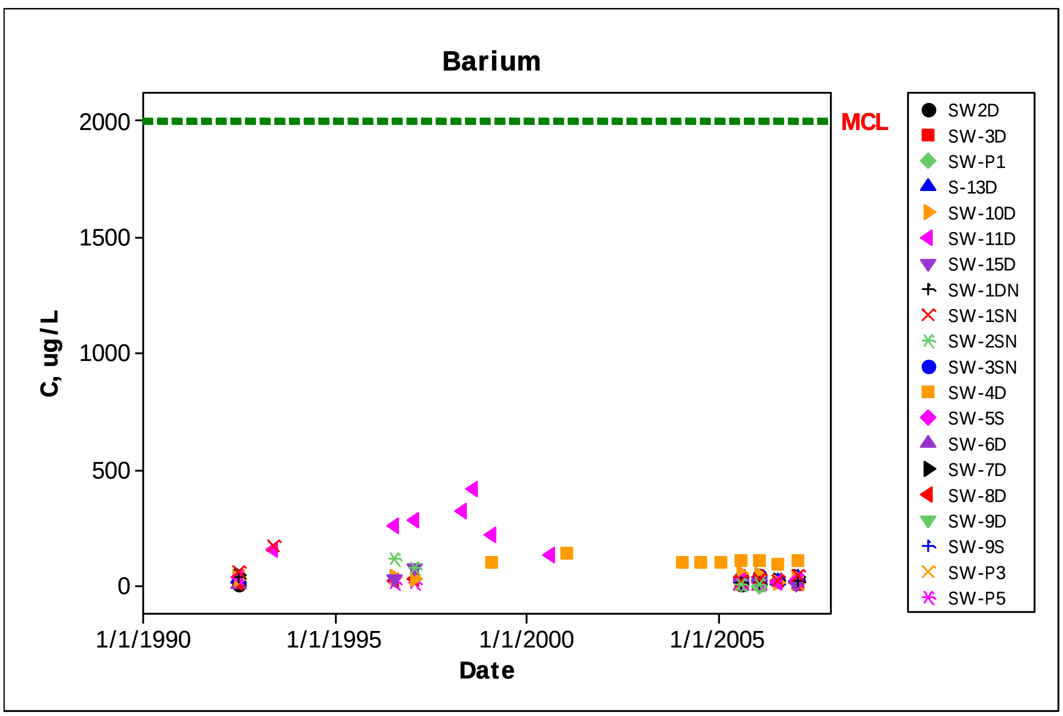

Figure A-30: Comparison of Barium concentration with MCL

APPENDIX B:
STATISTICAL ANALYSS OF GROUNDWATER CONTAMINANTS

Concentrations (µg/L)

Parameter: ANTIMONY

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 398
Total Non-Detect: 364
Percent Non-Detects: 91.4573%
Total Background Measurements: 50
There are 4 background locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-2D	26	24 (92.3077%)			
			11/17/1993	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/22/1997	ND<5	ND<5
			7/14/1997	ND<5	ND<5
			1/27/1998	ND<2	ND<2
			4/22/1998	ND<2	ND<2
			7/23/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			1/27/2000	ND<5	ND<5
			8/1/2000	ND<5	ND<5
			1/16/2001	ND<5	ND<5
			8/1/2001	ND<5	ND<5
			1/23/2002	ND<5	ND<5
			7/18/2002	ND<5	ND<5
			1/16/2003	ND<5	ND<5
			4/23/2003	ND<5	ND<5
			7/30/2003	ND<5	ND<5
			1/15/2004	ND<5	ND<5
			7/14/2004	ND<5	ND<5
			1/25/2005	ND<5	ND<5
			8/1/2005	ND<0.6	ND<0.6
			1/23/2006	1	1
			7/20/2006	ND<2	ND<2
			1/22/2007	2.44	2.44
SW-3D	6	4 (66.6667%)			
			11/16/1993	ND<5	ND<5
			1/25/2005	ND<5	ND<5
			8/2/2005	0.7	0.7
			1/23/2006	ND<1	ND<1
			7/20/2006	ND<2	ND<2
			1/22/2007	2.5	2.5
SW-P1	17	17 (100%)			
			4/25/1994	ND<5	ND<5
			1/15/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/20/1997	ND<5	ND<5
			7/14/1997	ND<5	ND<5
			4/22/1998	ND<2	ND<2
			7/23/1998	ND<5	ND<5
			2/2/1999	ND<5	ND<5
			7/29/1999	ND<5	ND<5
			2/1/2000	ND<5	ND<5

			8/3/2000	ND<5	ND<5
			8/2/2001	ND<5	ND<5
			1/25/2002	ND<5	ND<5
			8/14/2002	ND<5	ND<5
			1/20/2003	ND<5	ND<5
			7/30/2003	ND<5	ND<5
			1/24/2006	ND<1	ND<1

There are 20 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-12D	1	1 (100%)	11/9/1993	ND<5	ND<5
SW-13D	10	9 (90%)			
			11/9/1993	ND<5	ND<5
			4/23/1998	ND<2	ND<2
			4/24/2003	ND<5	ND<5
			1/20/2004	ND<5	ND<5
			7/19/2004	ND<5	ND<5
			1/26/2005	ND<5	ND<5
			8/3/2005	ND<0.6	ND<0.6
			1/24/2006	ND<1	ND<1
			7/25/2006	ND<2	ND<2
			1/23/2007	1.8	1.8
SW-10D	26	25 (96.1538%)			
			11/11/1993	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/21/1997	ND<5	ND<5
			7/14/1997	ND<5	ND<5
			1/28/1998	ND<2	ND<2
			4/22/1998	ND<2	ND<2
			7/28/1998	ND<5	ND<5
			2/2/1999	ND<5	ND<5
			7/29/1999	ND<5	ND<5
			2/1/2000	ND<5	ND<5
			8/3/2000	ND<5	ND<5
			1/19/2001	ND<5	ND<5
			8/2/2001	ND<5	ND<5
			1/24/2002	ND<5	ND<5
			7/17/2002	ND<5	ND<5
			1/20/2003	ND<5	ND<5
			4/29/2003	ND<5	ND<5
			7/31/2003	ND<5	ND<5
			1/22/2004	ND<5	ND<5
			7/19/2004	ND<5	ND<5
			1/27/2005	ND<5	ND<5
			8/3/2005	ND<0.6	ND<0.6
			1/25/2006	ND<1	ND<1
			7/19/2006	ND<2	ND<2
			1/18/2007	2.65	2.65
SW-11D	26	24 (92.3077%)			
			11/9/1993	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/15/1996	ND<5	ND<5
			1/20/1997	ND<5	ND<5

		7/14/1997	ND<5	ND<5
		1/26/1998	ND<2	ND<2
		4/23/1998	ND<2	ND<2
		7/28/1998	ND<5	ND<5
		2/2/1999	ND<5	ND<5
		7/29/1999	ND<5	ND<5
		1/27/2000	ND<5	ND<5
		8/2/2000	ND<5	ND<5
		1/17/2001	ND<5	ND<5
		8/1/2001	ND<5	ND<5
		1/23/2002	ND<5	ND<5
		7/17/2002	ND<5	ND<5
		1/20/2003	ND<5	ND<5
		4/28/2003	ND<5	ND<5
		8/1/2003	ND<5	ND<5
		1/22/2004	ND<5	ND<5
		7/19/2004	ND<5	ND<5
		1/27/2005	ND<5	ND<5
		8/2/2005	1.2	1.2
		1/25/2006	ND<1	ND<1
		7/19/2006	ND<2	ND<2
		1/23/2007	1.75	1.75
SW-15D 25	23 (92%)			
		1/25/1994	ND<5	ND<5
		1/16/1996	ND<5	ND<5
		7/15/1996	ND<5	ND<5
		1/21/1997	ND<5	ND<5
		7/15/1997	6	6
		1/28/1998	ND<2	ND<2
		4/23/1998	ND<2	ND<2
		7/23/1998	ND<5	ND<5
		2/2/1999	ND<5	ND<5
		2/1/2000	ND<5	ND<5
		8/2/2000	ND<5	ND<5
		1/17/2001	ND<5	ND<5
		8/1/2001	ND<5	ND<5
		1/24/2002	ND<5	ND<5
		8/14/2002	ND<5	ND<5
		1/20/2003	ND<5	ND<5
		4/29/2003	ND<5	ND<5
		7/31/2003	ND<5	ND<5
		1/22/2004	ND<5	ND<5
		7/19/2004	ND<5	ND<5
		1/27/2005	ND<5	ND<5
		8/3/2005	ND<0.6	ND<0.6
		1/25/2006	ND<1	ND<1
		7/25/2006	ND<2	ND<2
		1/18/2007	2.51	2.51
SW-1DN10	8 (80%)			
		11/17/1993	ND<5	ND<5
		4/22/1998	ND<2	ND<2
		4/23/2003	ND<5	ND<5
		1/15/2004	ND<5	ND<5
		7/14/2004	ND<5	ND<5
		1/25/2005	ND<5	ND<5
		8/1/20051	1	
		1/23/2006	ND<1	ND<1
		7/20/2006	ND<2	ND<2
		1/23/2007	1.63	1.63

SW-1SN	10	8 (80%)			
			11/16/1993	ND<5	ND<5
			4/22/1998	ND<2	ND<2
			4/28/2003	ND<5	ND<5
			1/22/2004	ND<5	ND<5
			7/14/2004	ND<5	ND<5
			2/8/2005	ND<5	ND<5
			8/4/2005	2.4	2.4
			1/25/2006	ND<1	ND<1
			7/25/2006	ND<2	ND<2
			1/23/2007	2.37	2.37
SW-2SN	13	13 (100%)			
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/21/1997	ND<5	ND<5
			7/15/1997	ND<5	ND<5
			1/26/1998	ND<2	ND<2
			4/22/1998	ND<2	ND<2
			7/23/1998	ND<5	ND<5
			2/2/1999	ND<5	ND<5
			7/29/1999	ND<5	ND<5
			1/27/2005	ND<5	ND<5
			8/2/2005	ND<0.6	ND<0.6
			1/25/2006	ND<1	ND<1
			7/25/2006	ND<2	ND<2
SW-3SN	6	6 (100%)			
			11/9/1993	ND<5	ND<5
			4/23/1998	ND<2	ND<2
			1/28/2005	ND<5	ND<5
			8/3/2005	ND<0.6	ND<0.6
			1/24/2006	ND<1	ND<1
			7/25/2006	ND<2	ND<2
SW-4D	20	17 (85%)			
			11/11/1993	ND<5	ND<5
			4/23/1998	ND<2	ND<2
			7/23/1998	ND<5	ND<5
			2/2/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			8/2/2000	ND<5	ND<5
			1/18/2001	ND<5	ND<5
			8/2/2001	ND<5	ND<5
			1/24/2002	ND<5	ND<5
			7/17/2002	ND<5	ND<5
			1/20/2003	ND<5	ND<5
			4/24/2003	ND<5	ND<5
			7/31/2003	ND<5	ND<5
			1/20/2004	ND<5	ND<5
			7/19/2004	ND<5	ND<5
			1/26/2005	ND<5	ND<5
			8/3/2005 1	1	
			1/24/2006	1	1
			7/25/2006	ND<2	ND<2
			1/23/2007	2.02	2.02
SW-5D	26	23 (88.4615%)			

			11/9/1993	ND<5	ND<5
			1/15/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/22/1997	ND<5	ND<5
			7/14/1997	ND<5	ND<5
			1/27/1998	ND<2	ND<2
			4/23/1998	ND<2	ND<2
			7/23/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			2/1/2000	ND<5	ND<5
			8/2/2000	ND<5	ND<5
			1/18/2001	ND<5	ND<5
			8/1/2001	ND<5	ND<5
			1/23/2002	ND<5	ND<5
			7/18/2002	ND<5	ND<5
			1/16/2003	ND<5	ND<5
			4/24/2003	ND<5	ND<5
			8/1/2003	ND<5	ND<5
			1/20/2004	ND<5	ND<5
			7/15/2004	ND<5	ND<5
			1/26/2005	ND<5	ND<5
			8/2/2005	3.1	3.1
			1/23/2006	2	2
			7/19/2006	ND<2	ND<2
			1/22/2007	2.53	2.53
SW-5S	8	8 (100%)			
			10/24/1996	ND<5	ND<5
			1/26/1998	ND<2	ND<2
			4/23/1998	ND<2	ND<2
			7/23/1998	ND<5	ND<5
			2/2/1999	ND<5	ND<5
			1/28/2005	ND<5	ND<5
			8/3/2005	ND<0.6	ND<0.6
			1/24/2006	ND<1	ND<1
SW-6D	23	22 (95.6522%)			
			11/15/1993	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/21/1997	ND<5	ND<5
			7/15/1997	ND<5	ND<5
			1/27/1998	ND<2	ND<2
			4/23/1998	ND<2	ND<2
			7/23/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			1/27/2000	ND<5	ND<5
			8/1/2000	ND<5	ND<5
			1/17/2001	ND<5	ND<5
			1/23/2002	ND<5	ND<5
			4/23/2003	ND<5	ND<5
			7/30/2003	ND<5	ND<5
			1/15/2004	ND<5	ND<5
			7/15/2004	ND<5	ND<5
			1/25/2005	ND<5	ND<5
			8/1/2005	ND<0.6	ND<0.6
			1/23/2006	ND<1	ND<1
			7/19/2006	ND<2	ND<2
			1/22/2007	2.48	2.48

SW-7D	26	23 (88.4615%)			
			11/16/1993	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/21/1997	ND<5	ND<5
			7/14/1997	9	9
			1/27/1998	ND<2	ND<2
			4/22/1998	ND<2	ND<2
			7/23/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			1/27/2000	ND<5	ND<5
			8/1/2000	ND<5	ND<5
			1/16/2001	ND<5	ND<5
			8/1/2001	ND<5	ND<5
			1/23/2002	ND<5	ND<5
			7/18/2002	ND<5	ND<5
			1/16/2003	ND<5	ND<5
			4/23/2003	ND<5	ND<5
			7/30/2003	ND<5	ND<5
			1/15/2004	ND<5	ND<5
			7/15/2004	ND<5	ND<5
			1/25/2005	ND<5	ND<5
			8/1/2005	1.1	1.1
			1/23/2006	ND<1	ND<1
			7/19/2006	ND<2	ND<2
			1/22/2007	2.42	2.42
SW-8D	26	25 (96.1538%)			
			11/17/1993	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/22/1997	ND<5	ND<5
			7/17/1997	ND<5	ND<5
			1/27/1998	ND<2	ND<2
			4/23/1998	ND<2	ND<2
			7/23/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			8/2/1999	ND<5	ND<5
			1/27/2000	ND<5	ND<5
			8/3/2000	ND<5	ND<5
			1/19/2001	ND<5	ND<5
			8/2/2001	ND<5	ND<5
			1/24/2002	ND<5	ND<5
			7/17/2002	ND<5	ND<5
			1/20/2003	ND<5	ND<5
			4/28/2003	ND<5	ND<5
			7/31/2003	ND<5	ND<5
			1/20/2004	ND<5	ND<5
			7/19/2004	ND<5	ND<5
			1/27/2005	ND<5	ND<5
			8/4/2005	ND<0.6	ND<0.6
			1/24/2006	ND<1	ND<1
			7/25/2006	ND<2	ND<2
			1/18/2007	2.68	2.68
SW-9D	26	24 (92.3077%)			
			11/16/1993	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5

			1/21/1997	ND<5	ND<5
			7/15/1997	ND<5	ND<5
			1/27/1998	ND<2	ND<2
			4/22/1998	ND<2	ND<2
			7/23/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			1/27/2000	ND<5	ND<5
			8/1/2000	ND<5	ND<5
			1/17/2001	ND<5	ND<5
			8/1/2001	ND<5	ND<5
			1/23/2002	ND<5	ND<5
			7/18/2002	ND<5	ND<5
			1/16/2003	ND<5	ND<5
			4/23/2003	ND<5	ND<5
			7/30/2003	ND<5	ND<5
			1/15/2004	ND<5	ND<5
			7/15/2004	ND<5	ND<5
			1/25/2005	ND<5	ND<5
			8/1/2005	ND<0.6	ND<0.6
			1/23/2006	2	2
			7/20/2006	ND<2	ND<2
			1/22/2007	2.84	2.84
SW-9S	14	14 (100%)			
			11/2/1994	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/21/1997	ND<5	ND<5
			7/17/1997	ND<5	ND<5
			1/26/1998	ND<2	ND<2
			4/22/1998	ND<2	ND<2
			7/28/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			7/29/1999	ND<5	ND<5
			1/28/2005	ND<5	ND<5
			8/3/2005	ND<0.6	ND<0.6
			1/25/2006	ND<1	ND<1
			7/25/2006	ND<2	ND<2
SW-P2	10	7 (70%)			
			11/17/1993	ND<5	ND<5
			4/22/1998	ND<2	ND<2
			4/23/2003	ND<5	ND<5
			1/15/2004	ND<5	ND<5
			7/15/2004	ND<5	ND<5
			1/25/2005	ND<5	ND<5
			8/2/2005	0.7	0.7
			1/23/2006	2	2
			7/20/2006	ND<2	ND<2
			1/22/2007	2.56	2.56
SW-P3	26	25 (96.1538%)			
			11/11/1993	ND<5	ND<5
			1/15/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/22/1997	ND<5	ND<5
			7/17/1997	ND<5	ND<5
			1/28/1998	ND<2	ND<2
			4/23/1998	ND<2	ND<2
			7/28/1998	ND<5	ND<5

		1/28/1999	ND<5	ND<5
		8/2/1999	ND<5	ND<5
		2/1/2000	ND<5	ND<5
		8/3/2000	ND<5	ND<5
		1/18/2001	ND<5	ND<5
		8/2/2001	ND<5	ND<5
		1/24/2002	ND<5	ND<5
		7/18/2002	ND<5	ND<5
		1/16/2003	ND<5	ND<5
		4/24/2003	ND<5	ND<5
		7/30/2003	ND<5	ND<5
		1/20/2004	ND<5	ND<5
		7/14/2004	ND<5	ND<5
		1/26/2005	ND<5	ND<5
		8/2/2005	ND<0.6	ND<0.6
		1/23/2006	ND<1	ND<1
		7/20/2006	ND<2	ND<2
		1/23/2007	1.72	1.72
SW-P5	16	13 (81.25%)		
		4/12/1994	ND<5	ND<5
		1/16/1996	ND<5	ND<5
		7/11/1996	ND<5	ND<5
		1/22/1997	ND<5	ND<5
		7/14/1997	ND<5	ND<5
		1/27/1998	ND<2	ND<2
		4/23/1998	ND<2	ND<2
		7/23/1998	ND<5	ND<5
		1/28/1999	ND<5	ND<5
		8/2/1999	ND<5	ND<5
		1/27/2000	ND<5	ND<5
		1/26/2005	ND<5	ND<5
		8/1/2005	2.1	2.1
		1/23/2006	1	1
		7/20/2006	ND<2	ND<2
		1/22/2007	2.76	2.76

Two-Sample Test of Proportions

Parameter: ANTIMONY

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Background measurements = 50
Compliance measurements = 348
Comparison Level = 6

0 background measurements exceed 6
1 compliance measurements exceed 6

p background = 0 = 0 / 50
p compliance = 0.00287356 = 1 / 348
p total = 0.00251256 = 1 / 398

nPs = 1 < 5.0
mPb = 0 < 5.0
n(1-Ps) = 347
m(1-Pb = 50

Zp = 0.379526 = 0.00287356 / 0.00757145
Z critical = 1.64485 at 95% confidence level

0.379526 < 1.64485
No Statistical Significance at 95% Confidence Level
When Compared to Compliance Limit = 6

Concentrations (µg/L)

Parameter: ARSENIC

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 764
Total Non-Detect: 671
Percent Non-Detects: 87.8272%
Total Background Measurements: 97
There are 4 background locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-2D	49	46 (93.8776%)			
			6/10/1992	ND<0.5	ND<0.5
			5/11/1993	ND<5	ND<5
			11/17/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/25/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/9/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/23/1996	ND<1	ND<1
			1/22/1997	ND<5	ND<5
			4/18/1997	ND<10	ND<10
			7/14/1997	ND<11	ND<11
			11/6/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/10/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			4/20/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			11/8/2000	ND<10	ND<10
			1/16/2001	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/8/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/17/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/14/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/1/2005	2.7	2.7
			1/23/2006	2	2

			7/20/2006	ND<2	ND<2
			1/22/2007	1.43	1.43
SW-3D	15	13 (86.6667%)			
			5/11/1993	ND<5	ND<5
			11/16/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/25/1995	ND<5	ND<5
			1/25/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/23/2006	3	3
			7/20/2006	ND<2	ND<2
			1/22/2007	1.85	1.85
SW-P1	32	30 (93.75%)			
			1/24/1994	ND<5	ND<5
			4/25/1994	ND<5	ND<5
			11/9/1994	ND<5	ND<5
			1/16/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/15/1996	ND<5	ND<5
			4/22/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/24/1996	ND<1	ND<1
			1/20/1997	ND<5	ND<5
			4/17/1997	ND<10	ND<10
			7/14/1997	ND<11	ND<11
			11/6/1997	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	27	27
			11/10/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			6/7/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/3/2000	ND<10	ND<10
			11/10/2000	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/2/2001	ND<10	ND<10
			1/25/2002	ND<10	ND<10
			4/23/2002	ND<10	ND<10
			8/14/2002	ND<10	ND<10
			1/20/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/24/2006	2	2

There are 20 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-12D	11	11 (100%)			
			6/9/1992	ND<0.5	ND<0.5
			5/10/1993	ND<5	ND<5
			11/9/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/13/1994	ND<5	ND<5
			10/27/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/11/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/30/1995	ND<5	ND<5
SW-13D	33	30 (90.9091%)			
			6/9/1992	ND<0.5	ND<0.5
			5/11/1993	ND<5	ND<5
			11/9/1993	ND<5	ND<5
			1/25/1994	ND<5	ND<5
			4/18/1994	ND<5	ND<5
			7/13/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/13/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/31/1995	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			10/23/1996	2.6	2.6
			4/18/1997	ND<10	ND<10
			11/5/1997	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			11/12/1998	ND<10	ND<10
			5/28/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			11/10/2000	ND<10	ND<10
			4/18/2001	ND<10	ND<10
			11/13/2001	ND<10	ND<10
			4/18/2002	ND<10	ND<10
			10/23/2002	ND<10	ND<10
			4/24/2003	ND<10	ND<10
			1/20/2004	ND<10	ND<10
			7/19/2004	ND<10	ND<10
			1/26/2005	ND<10	ND<10
			8/3/2005	2.2	2.2
			1/24/2006	2	2
			7/25/2006	ND<2	ND<2
			1/23/2007	ND<0.98	ND<0.98
SW-10D	50	23 (46%)			
			6/9/1992	1.38	1.38
			5/10/1993	6.6	6.6
			11/11/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/26/1994	ND<5	ND<5

			1/10/1995	13	13
			4/12/1995	23	23
			7/13/1995	32	32
			10/30/1995	ND<5	ND<5
			1/16/1996	15	15
			4/11/1996	15	15
			7/11/1996	24	24
			10/24/1996	23.9	23.9
			1/21/1997	16	16
			4/17/1997	ND<10	ND<10
			7/14/1997	15	15
			11/5/1997	10	10
			1/28/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/28/1998	26	26
			11/12/1998	ND<10	ND<10
			2/2/1999 12	12	
			5/28/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			11/11/1999	10	10
			2/1/2000	ND<10	ND<10
			4/21/2000	10	10
			8/3/2000	ND<10	ND<10
			11/9/2000	13	13
			1/19/2001	12	12
			4/18/2001	12	12
			8/2/2001	13	13
			11/12/2001	ND<10	ND<10
			1/24/2002	ND<10	ND<10
			4/18/2002	ND<10	ND<10
			7/17/2002	11	11
			10/23/2002	ND<10	ND<10
			1/20/2003	ND<10	ND<10
			4/29/2003	ND<10	ND<10
			7/31/2003	ND<10	ND<10
			1/22/2004	ND<10	ND<10
			7/19/2004	ND<10	ND<10
			1/27/2005	14	14
			3/16/2005	13	13
			7/7/2005	ND<7	ND<7
			8/3/2005	4.9	4.9
			1/25/2006	10	10
			7/19/2006	7	7
			1/18/2007	8.05	8.05
SW-11D	49	48 (97.9592%)			
			6/9/1992	ND<0.5	ND<0.5
			5/10/1993	ND<5	ND<5
			11/9/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/13/1994	ND<5	ND<5
			10/27/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/11/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/30/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/15/1996	ND<5	ND<5
			10/24/1996	ND<1	ND<1
			1/20/1997	ND<5	ND<5

			4/18/1997	ND<10	ND<10
			7/14/1997	ND<11	ND<11
			11/5/1997	ND<10	ND<10
			1/26/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/28/1998	ND<10	ND<10
			11/10/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			11/10/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/2/2000	ND<10	ND<10
			11/9/2000	ND<10	ND<10
			1/17/2001	ND<10	ND<10
			4/18/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/8/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/19/2002	ND<10	ND<10
			7/17/2002	ND<10	ND<10
			10/23/2002	ND<10	ND<10
			1/20/2003	ND<10	ND<10
			4/28/2003	ND<10	ND<10
			8/1/2003	ND<10	ND<10
			1/22/2004	ND<10	ND<10
			7/19/2004	ND<10	ND<10
			1/27/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/25/2006	2	2
			7/19/2006	ND<2	ND<2
			1/23/2007	ND<0.98	ND<0.98
SW-15D	32	29 (90.625%)			
			1/25/1994	ND<5	ND<5
			4/18/1994	ND<5	ND<5
			7/20/1994	ND<5	ND<5
			10/27/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/11/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/30/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/15/1996	ND<5	ND<5
			1/21/1997	ND<5	ND<5
			7/15/1997	ND<10	ND<10
			1/28/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			8/2/2000	ND<10	ND<10
			1/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			1/24/2002	ND<10	ND<10
			8/14/2002	ND<10	ND<10
			1/20/2003	ND<10	ND<10
			4/29/2003	ND<10	ND<10
			7/31/2003	ND<10	ND<10
			1/22/2004	ND<10	ND<10
			7/19/2004	ND<10	ND<10

		1/27/2005	ND<10	ND<10
		8/3/2005	2.8	2.8
		1/25/2006	2	2
		7/25/2006	ND<2	ND<2
		1/18/2007	2.13	2.13

SW-1DN	33	31 (93.9394%)		
		6/10/1992	ND<0.5	ND<0.5
		5/10/1993	ND<5	ND<5
		11/17/1993	ND<5	ND<5
		1/24/1994	ND<5	ND<5
		4/13/1994	ND<5	ND<5
		7/14/1994	ND<5	ND<5
		11/2/1994	ND<5	ND<5
		1/12/1995	ND<5	ND<5
		4/12/1995	ND<5	ND<5
		7/12/1995	ND<5	ND<5
		10/26/1995	ND<5	ND<5
		4/9/1996	ND<5	ND<5
		10/23/1996	3.1	3.1
		4/18/1997	ND<10	ND<10
		11/6/1997	ND<10	ND<10
		4/22/1998	ND<10	ND<10
		11/11/1998	ND<10	ND<10
		5/27/1999	ND<10	ND<10
		11/10/1999	ND<10	ND<10
		4/20/2000	ND<10	ND<10
		11/8/2000	ND<10	ND<10
		4/17/2001	ND<10	ND<10
		11/8/2001	ND<10	ND<10
		4/17/2002	ND<10	ND<10
		10/22/2002	ND<10	ND<10
		4/23/2003	ND<10	ND<10
		1/15/2004	ND<10	ND<10
		7/14/2004	ND<10	ND<10
		1/25/2005	ND<10	ND<10
		8/1/2005	ND<2	ND<2
		1/23/2006	3	3
		7/20/2006	ND<2	ND<2
		1/23/2007	ND<0.98	ND<0.98

SW-1SN	30	26 (86.6667%)		
		6/10/1992	1.93	1.93
		5/18/1993	ND<5	ND<5
		11/16/1993	ND<5	ND<5
		1/20/1994	ND<5	ND<5
		4/18/1994	ND<5	ND<5
		7/20/1994	ND<5	ND<5
		11/1/1994	ND<5	ND<5
		1/11/1995	ND<5	ND<5
		4/11/1995	ND<5	ND<5
		7/12/1995	ND<5	ND<5
		10/26/1995	ND<5	ND<5
		4/9/1996	ND<5	ND<5
		10/22/1996	ND<1	ND<1
		4/18/1997	ND<10	ND<10
		11/5/1997	ND<10	ND<10
		4/22/1998	ND<10	ND<10
		11/10/1998	ND<10	ND<10
		5/27/1999	ND<10	ND<10
		11/10/1999	ND<10	ND<10

			4/21/2000		ND<10	ND<10
			11/9/2000		ND<10	ND<10
			11/8/2001		ND<10	ND<10
			4/28/2003		ND<10	ND<10
			1/22/2004		ND<10	ND<10
			7/14/2004		ND<10	ND<10
			2/8/2005		ND<10	ND<10
			8/4/2005	4	4	
			1/25/2006		2	2
			7/25/2006		ND<2	ND<2
			1/23/2007		7.17	7.17
SW-2SN	19	17 (89.4737%)				
			4/11/1996		ND<5	ND<5
			7/11/1996		ND<5	ND<5
			10/22/1996		ND<1	ND<1
			1/21/1997		ND<5	ND<5
			4/18/1997		ND<10	ND<10
			7/15/1997		ND<11	ND<11
			11/5/1997		ND<10	ND<10
			1/26/1998		ND<10	ND<10
			4/22/1998		ND<10	ND<10
			7/23/1998		ND<10	ND<10
			11/10/1998		ND<10	ND<10
			2/2/1999		ND<10	ND<10
			5/28/1999		ND<10	ND<10
			7/29/1999		ND<10	ND<10
			11/11/1999		ND<10	ND<10
			1/27/2005		ND<10	ND<10
			8/2/2005		2.2	2.2
			1/25/2006		3	3
			7/25/2006		ND<2	ND<2
SW-3SN	21	21 (100%)				
			11/9/1993		ND<5	ND<5
			1/25/1994		ND<5	ND<5
			4/18/1994		ND<5	ND<5
			7/13/1994		ND<5	ND<5
			11/9/1994		ND<5	ND<5
			1/11/1995		ND<5	ND<5
			4/13/1995		ND<5	ND<5
			7/18/1995		ND<5	ND<5
			10/31/1995		ND<5	ND<5
			4/9/1996		ND<5	ND<5
			10/23/1996		ND<1	ND<1
			4/18/1997		ND<10	ND<10
			11/5/1997		ND<10	ND<10
			4/23/1998		ND<10	ND<10
			11/10/1998		ND<10	ND<10
			5/28/1999		ND<10	ND<10
			11/11/1999		ND<10	ND<10
			1/28/2005		ND<10	ND<10
			8/3/2005		ND<2	ND<2
			1/24/2006		ND<2	ND<2
			7/25/2006		ND<2	ND<2
SW-4D	43	40 (93.0233%)				
			6/9/1992		ND<0.5	ND<0.5
			5/11/1993		ND<5	ND<5
			11/11/1993		ND<5	ND<5
			1/20/1994		ND<5	ND<5

			4/13/1994	ND<5	ND<5
			7/20/1994	ND<5	ND<5
			11/1/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			10/23/1996	1.2	1.2
			4/17/1997	ND<10	ND<10
			11/4/1997	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/10/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			6/7/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/2/2000	ND<10	ND<10
			11/10/2000	ND<10	ND<10
			1/18/2001	ND<10	ND<10
			4/18/2001	ND<10	ND<10
			8/2/2001	ND<10	ND<10
			11/13/2001	ND<10	ND<10
			1/24/2002	ND<10	ND<10
			4/19/2002	ND<10	ND<10
			7/17/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			1/20/2003	ND<10	ND<10
			4/24/2003	ND<10	ND<10
			7/31/2003	ND<10	ND<10
			1/20/2004	ND<10	ND<10
			7/19/2004	ND<10	ND<10
			1/26/2005	ND<10	ND<10
			8/3/2005	ND<2	ND<2
			1/24/2006	ND<2	ND<2
			7/25/2006	3	3
			1/23/2007	2.84	2.84
SW-5D	49	44 (89.7959%)			
			6/10/1992	ND<0.5	ND<0.5
			5/11/1993	ND<5	ND<5
			11/9/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/26/1994	ND<5	ND<5
			11/1/1994	ND<5	ND<5
			1/10/1995	ND<5	ND<5
			4/13/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/15/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/23/1996	1.3	1.3
			1/22/1997	ND<5	ND<5
			4/18/1997	ND<10	ND<10
			7/14/1997	ND<11	ND<11
			11/4/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10

			7/23/1998	12	12
			11/11/1998	ND<10	ND<10
			1/28/1999	15	15
			5/27/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/2/2000	ND<10	ND<10
			11/8/2000	ND<10	ND<10
			1/18/2001	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/8/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/19/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/23/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/24/2003	ND<10	ND<10
			8/1/2003	ND<10	ND<10
			1/20/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/26/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/23/2006	3	3
			7/19/2006	ND<2	ND<2
			1/22/2007	1.74	1.74
SW-5S	10	9 (90%)	10/24/1996	ND<1	ND<1
			1/26/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	16	16
			11/11/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			5/28/1999	ND<10	ND<10
			1/28/2005	ND<10	ND<10
			8/3/2005	ND<2	ND<2
			1/24/2006	ND<2	ND<2
SW-6D	33	30 (90.9091%)			
			6/10/1992	ND<0.5	ND<0.5
			5/10/1993	ND<5	ND<5
			11/15/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/12/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/25/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/21/1997	ND<5	ND<5
			7/15/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			1/28/1999	12	12
			7/28/1999	ND<10	ND<10

			1/27/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			1/17/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/1/2005	ND<2	ND<2
			1/23/2006	3	3
			7/19/2006	ND<2	ND<2
			1/22/2007	2.14	2.14
SW-7D	49	42 (85.7143%)			
			6/10/1992	2.47	2.47
			5/10/1993	ND<5	ND<5
			11/16/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/24/1996	ND<1	ND<1
			1/21/1997	ND<5	ND<5
			4/18/1997	ND<10	ND<10
			7/14/1997	13	13
			11/6/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/25/1999	ND<10	ND<10
			7/28/1999	14	14
			11/10/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			4/20/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			11/8/2000	ND<10	ND<10
			1/16/2001	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/12/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/17/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/1/2005 5	5	
			1/23/2006	3	3

			7/19/2006		2	2	
			1/22/2007		4.94	4.94	
SW-8D	47	33 (70.2128%)		6/10/1992		ND<0.5	ND<0.5
			5/11/1993		ND<5	ND<5	
			11/17/1993		ND<5	ND<5	
			4/12/1994		ND<5	ND<5	
			7/14/1994		ND<5	ND<5	
			11/2/1994		ND<5	ND<5	
			1/12/1995		ND<5	ND<5	
			4/12/1995		ND<5	ND<5	
			7/13/1995		ND<5	ND<5	
			10/25/1995		ND<5	ND<5	
			1/16/1996		7.9	7.9	
			4/11/1996		ND<5	ND<5	
			7/11/1996		ND<5	ND<5	
			10/24/1996		6.5	6.5	
			1/22/1997		6.5	6.5	
			4/17/1997		ND<10	ND<10	
			7/17/1997		15	15	
			11/6/1997		ND<10	ND<10	
			1/27/1998		ND<10	ND<10	
			4/23/1998		ND<10	ND<10	
			7/23/1998		ND<10	ND<10	
			11/11/1998		10	10	
			1/28/1999		12	12	
			5/25/1999		17	17	
			8/2/1999		ND<10	ND<10	
			11/11/1999		12	12	
			1/27/2000		ND<10	ND<10	
			8/3/2000		ND<10	ND<10	
			11/10/2000		15	15	
			1/19/2001		20	20	
			4/18/2001		ND<10	ND<10	
			8/2/2001		ND<10	ND<10	
			11/13/2001		ND<10	ND<10	
			1/24/2002		ND<10	ND<10	
			4/18/2002		ND<10	ND<10	
			7/17/2002		ND<10	ND<10	
			10/23/2002		ND<10	ND<10	
			1/20/2003		ND<10	ND<10	
			4/28/2003		ND<10	ND<10	
			7/31/2003		ND<10	ND<10	
			1/20/2004		ND<10	ND<10	
			7/19/2004		ND<10	ND<10	
			1/27/2005		ND<10	ND<10	
			8/4/2005	4.1	4.1		
			1/24/2006		3	3	
			7/25/2006		4	4	
			1/18/2007		4.73	4.73	
SW-9D	48	46 (95.8333%)					
			5/11/1993		ND<5	ND<5	
			11/16/1993		ND<5	ND<5	
			1/25/1994		ND<5	ND<5	
			4/12/1994		ND<5	ND<5	
			7/14/1994		ND<5	ND<5	
			11/2/1994		ND<5	ND<5	
			1/12/1995		ND<5	ND<5	
			4/12/1995		ND<5	ND<5	
			7/18/1995		ND<5	ND<5	

			10/26/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/24/1996	ND<1	ND<1
			1/21/1997	ND<5	ND<5
			4/17/1997	ND<10	ND<10
			7/15/1997	ND<10	ND<10
			11/6/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			11/9/2000	ND<10	ND<10
			1/17/2001	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/12/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/22/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/1/2005	ND<2	ND<2
			1/23/2006	3	3
			7/20/2006	ND<2	ND<2
			1/22/2007	1.37	1.37
SW-9S	23	20 (86.9565%)			
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/30/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/9/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/23/1996	ND<1	ND<1
			1/21/1997	ND<5	ND<5
			4/17/1997	ND<10	ND<10
			7/17/1997	ND<11	ND<11
			1/26/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/28/1998	12	12
			11/10/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			1/28/2005	ND<10	ND<10
			8/3/2005 2	2	

			1/25/2006	2	2
			7/25/2006	ND<2	ND<2
SW-P2	31	29 (93.5484%)			
			11/17/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/9/1994	ND<5	ND<5
			1/16/1995	ND<5	ND<5
			4/13/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			10/23/1996	ND<1	ND<1
			4/18/1997	ND<10	ND<10
			11/6/1997	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			11/10/1999	ND<10	ND<10
			4/20/2000	ND<10	ND<10
			11/9/2000	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			11/8/2001	ND<10	ND<10
			4/22/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/23/2006	3	3
			7/20/2006	ND<2	ND<2
			1/22/2007	1.93	1.93
SW-P3	34	32 (94.1176%)			
			11/11/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/14/1994	ND<5	ND<5
			7/20/1994	ND<5	ND<5
			11/1/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/11/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/15/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/22/1997	ND<5	ND<5
			7/17/1997	ND<11	ND<11
			1/28/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/28/1998	11	11
			1/28/1999	ND<10	ND<10
			8/2/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			8/3/2000	ND<10	ND<10
			1/18/2001	ND<10	ND<10
			8/2/2001	ND<10	ND<10
			1/24/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10

		1/16/2003	ND<10	ND<10
		4/24/2003	ND<10	ND<10
		7/30/2003	ND<10	ND<10
		1/20/2004	ND<10	ND<10
		7/14/2004	ND<10	ND<10
		1/26/2005	ND<10	ND<10
		8/2/2005	ND<2	ND<2
		1/23/2006	5	5
		7/20/2006	ND<2	ND<2
		1/23/2007	ND<0.98	ND<0.98

SW-P5 22	20 (90.9091%)			
		4/12/1994	ND<5	ND<5
		7/14/1994	ND<5	ND<5
		11/9/1994	ND<5	ND<5
		1/12/1995	ND<5	ND<5
		4/13/1995	ND<5	ND<5
		7/13/1995	ND<5	ND<5
		10/25/1995	ND<5	ND<5
		1/16/1996	ND<5	ND<5
		7/11/1996	ND<5	ND<5
		1/22/1997	ND<5	ND<5
		7/14/1997	ND<11	ND<11
		1/27/1998	ND<10	ND<10
		4/23/1998	ND<10	ND<10
		7/23/1998	ND<10	ND<10
		1/28/1999	ND<10	ND<10
		8/2/1999	ND<10	ND<10
		1/27/2000	ND<10	ND<10
		1/26/2005	ND<10	ND<10
		8/1/2005	ND<2	ND<2
		1/23/2006	3	3
		7/20/2006	ND<2	ND<2
		1/22/2007	2.04	2.04

Coefficient of Variation

Parameter: ARSENIC

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
CV < 1 indicates normal data

Background Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-2D	49	7.56388	3.18259	0.420761
SW-3D	15	4.59	1.97124	0.429464
SW-P1	32	8.46875	4.43581	0.523786

Compliance Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-12D	11	4.59091	1.3568	0.295541
SW-13D	33	6.82667	3.3443	0.489888
SW-10D	50	11.4566	5.76195	0.502937
SW-11D	49	7.54041	3.22484	0.427674
SW-15D	32	7.31031	3.03355	0.414969
SW-1DN	33	6.86606	3.2935	0.479678
SW-1SN	30	6.77	3.10809	0.459098

SW-2SN	19	7.58947	3.49951	0.4611
SW-3SN	21	6.04762	3.12212	0.516256
SW-4D	43	7.59395	3.1699	0.417424
SW-5D	49	7.72531	3.34673	0.433217
SW-5S	10	8.1	4.81779	0.594789
SW-6D	33	6.86788	3.23213	0.470616
SW-7D	49	7.86551	3.07225	0.390598
SW-8D	47	8.57936	3.77027	0.439458
SW-9D	48	7.69521	3.01591	0.39192
SW-9S	23	6.73913	3.42739	0.508581
SW-P2	31	7.09452	3.22195	0.454146
SW-P3	34	7.41118	3.05749	0.412551
SW-P5	22	6.36545	3.0918	0.485715

All Locations

Obs.	Mean	Std. Dev.	CV
764	7.6061	3.68262	0.484166

Confidence Interval

Parameter: ARSENIC

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

Background Locations

Location SW-2D

Mean	7.56388
Std Dev	3.18259
Degrees of Freedom	48
Comparison Level	**10**
Untransformed Comp. Level	10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[6.46971, 8.65804]	7.56388	FALSE
95%	1.67722	[6.80132, 8.32644]	7.56388	FALSE

Location SW-3D

Mean	4.59
Std Dev	1.97124
Degrees of Freedom	14
Comparison Level	**10**
Untransformed Comp. Level	10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.62449	[3.25421, 5.92579]	4.59	FALSE
95%	1.76131	[3.69354, 5.48646]	4.59	FALSE

Location SW-P1

Mean	8.46875
Std Dev	4.43581
Degrees of Freedom	31
Comparison Level	**10**
Untransformed Comp. Level	10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.45283	[6.54537, 10.3921]	8.46875	FALSE
95%	1.69552	[7.13921, 9.79829]	8.46875	FALSE

Compliance Locations

Location SW-12D

Mean	4.59091
Std Dev	1.3568
Degrees of Freedom	10
Comparison Level	**10**
Untransformed Comp. Level	10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.76377	[3.46027, 5.72154]	4.59091	FALSE
95%	1.81246	[3.84945, 5.33237]	4.59091	FALSE

Location SW-13D

Mean	6.82667
Std Dev	3.3443
Degrees of Freedom	32
Comparison Level	**10**
Untransformed Comp. Level	10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[5.40112, 8.25221]	6.82667	FALSE
95%	1.69389	[5.84054, 7.81279]	6.82667	FALSE

Location SW-10D

Mean	11.4566
Std Dev	5.76195
Degrees of Freedom	49
Comparison Level	**10**
Untransformed Comp. Level	10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40489	[9.49695, 13.4163]	11.4566	FALSE
95%	1.67655	[10.0904, 12.8228]	11.4566	**TRUE**

Location SW-11D

Mean	7.54041
Std Dev	3.22484
Degrees of Freedom	48
Comparison Level	**10**
Untransformed Comp. Level	10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[6.43172, 8.6491]	7.54041	FALSE
95%	1.67722	[6.76773, 8.31309]	7.54041	FALSE

Location SW-15D

Mean	7.31031
Std Dev	3.03355

Degrees of Freedom 31
Comparison Level **10**
Untransformed Comp. Level 10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.45283	[5.99496, 8.62567]	7.31031	FALSE
95%	1.69552	[6.40107, 8.21955]	7.31031	FALSE

Location SW-1DN

Mean 6.86606
Std Dev 3.2935
Degrees of Freedom 32
Comparison Level **10**
Untransformed Comp. Level 10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[5.46217, 8.26995]	6.86606	FALSE
95%	1.69389	[5.89491, 7.83721]	6.86606	FALSE

Location SW-1SN

Mean 6.77
Std Dev 3.10809
Degrees of Freedom 29
Comparison Level **10**
Untransformed Comp. Level 10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.46202	[5.37291, 8.16709]	6.77	FALSE
95%	1.69913	[5.80582, 7.73418]	6.77	FALSE

Location SW-2SN

Mean 7.58947
Std Dev 3.49951
Degrees of Freedom 18
Comparison Level **10**
Untransformed Comp. Level 10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.55238	[5.54032, 9.63863]	7.58947	FALSE
95%	1.73406	[6.1973, 8.98165]	7.58947	FALSE

Location SW-3SN

Mean 6.04762
Std Dev 3.12212
Degrees of Freedom 20
Comparison Level **10**
Untransformed Comp. Level 10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.52798	[4.3253, 7.76993]	6.04762	FALSE
95%	1.72472	[4.87257, 7.22267]	6.04762	FALSE

Location SW-4D

Mean 7.59395
Std Dev 3.1699
Degrees of Freedom 42
Comparison Level **10**

Untransformed Comp. Level 10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.41847	[6.42485, 8.76305]	7.59395	FALSE
95%	1.68195	[6.78089, 8.40702]	7.59395	FALSE

Location SW-5D

Mean 7.72531
Std Dev 3.34673
Degrees of Freedom 48
Comparison Level 10
Untransformed Comp. Level 10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[6.57471, 8.8759]	7.72531	FALSE
95%	1.67722	[6.92342, 8.5272]	7.72531	FALSE

Location SW-5S

Mean 8.1
Std Dev 4.81779
Degrees of Freedom 9
Comparison Level 10
Untransformed Comp. Level 10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.82143	[3.80149, 12.3985]	8.1	FALSE
95%	1.83311	[5.30722, 10.8928]	8.1	FALSE

Location SW-6D

Mean 6.86788
Std Dev 3.23213
Degrees of Freedom 32
Comparison Level 10
Untransformed Comp. Level 10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[5.49015, 8.24561]	6.86788	FALSE
95%	1.69389 [	5.91483, 7.82093]	6.86788	FALSE

Location SW-7D

Mean 7.86551
Std Dev 3.07225
Degrees of Freedom 48
Comparison Level 10
Untransformed Comp. Level 10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[6.80928, 8.92174]	7.86551	FALSE
95%	1.67722	[7.12939, 8.60163]	7.86551	FALSE

Location SW-8D

Mean 8.57936
Std Dev 3.77027
Degrees of Freedom 46
Comparison Level 10

Untransformed Comp. Level	10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.41019	[7.25388, 9.90485]	8.57936	FALSE
95%	1.67866	[7.65618, 9.50254]	8.57936	FALSE

Location SW-9D

Mean	7.69521	
Std Dev	3.01591	
Degrees of Freedom		47
Comparison Level		**10**
Untransformed Comp. Level		10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40834	[6.64684, 8.74358]	7.69521	FALSE
95%	1.67793	[6.96479, 8.42562]	7.69521	FALSE

Location SW-9S

Mean	6.73913	
Std Dev	3.42739	
Degrees of Freedom		22
Comparison Level		**10**
Untransformed Comp. Level		10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.50832	[4.94653, 8.53173]	6.73913	FALSE
95%	1.71714	[5.51195, 7.96631]	6.73913	FALSE

Location SW-P2

Mean	7.09452	
Std Dev	3.22195	
Degrees of Freedom		30
Comparison Level		**10**
Untransformed Comp. Level		10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.45726	[5.67255, 8.51648]	7.09452	FALSE
95%	1.69726	[6.11235, 8.07668]	7.09452	FALSE

Location SW-P3

Mean	7.41118	
Std Dev	3.05749	
Degrees of Freedom		33
Comparison Level		**10**
Untransformed Comp. Level		10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44479	[6.12924, 8.69312]	7.41118	FALSE
95%	1.69236	[6.52378, 8.29857]	7.41118	FALSE

Location SW-P5

Mean	6.36545	
Std Dev	3.0918	
Degrees of Freedom		21
Comparison Level		**10**
Untransformed Comp. Level		10

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.51765	[4.70589, 8.02502]	6.36545	FALSE
95%	1.72074	[5.23119, 7.49972]	6.36545	FALSE

Concentrations (µg/L)
Parameter: CADMIUM

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 761
Total Non-Detect: 733
Percent Non-Detects: 96.3206%
Total Background Measurements: 96
There are 3 background locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-2D	49	49 (100%)			
			6/10/1992	ND<1	ND<1
			5/11/1993	ND<5	ND<5
			11/17/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/25/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/9/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/23/1996	ND<0.1	ND<0.1
			1/22/1997	ND<5	ND<5
			4/18/1997	ND<5	ND<5
			7/14/1997	ND<1	ND<1
			11/6/1997	ND<1	ND<1
			1/27/1998	ND<1	ND<1
			4/22/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			11/11/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			5/27/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			11/10/1999	ND<5	ND<5
			1/27/2000	ND<5	ND<5
			4/20/2000	ND<5	ND<5
			8/1/2000	ND<5	ND<5
			11/8/2000	ND<5	ND<5
			1/16/2001	ND<5	ND<5
			4/17/2001	ND<5	ND<5
			8/1/2001	ND<5	ND<5
			11/8/2001	ND<5	ND<5
			1/23/2002	ND<5	ND<5
			4/17/2002	ND<5	ND<5
			7/18/2002	ND<5	ND<5
			10/22/2002	ND<5	ND<5
			1/16/2003	ND<5	ND<5
			4/23/2003	ND<5	ND<5
			7/30/2003	ND<5	ND<5
			1/15/2004	ND<5	ND<5
			7/14/2004	ND<5	ND<5
			1/25/2005	ND<1	ND<1
			8/1/2005	ND<0.5	ND<0.5

			1/23/2006	ND<0.5	ND<0.5
			7/20/2006	ND<2	ND<2
			1/22/2007	ND<0.3	ND<0.3
SW-3D	15	14 (93.3333%)			
			5/11/1993	ND<5	ND<5
			11/16/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/25/1995	ND<5	ND<5
			1/25/2005	ND<1	ND<1
			8/2/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/20/2006	ND<2	ND<2
			1/22/2007	0.409	0.409
SW-P1	32	32 (100%)			
			1/24/1994	ND<5	ND<5
			4/25/1994	ND<5	ND<5
			11/9/1994	ND<5	ND<5
			1/16/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/15/1996	ND<5	ND<5
			4/22/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/24/1996	ND<0.1	ND<0.1
			1/20/1997	ND<5	ND<5
			4/17/1997	ND<5	ND<5
			7/14/1997	ND<1	ND<1
			11/6/1997	ND<1	ND<1
			4/22/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			11/10/1998	ND<5	ND<5
			2/2/1999	ND<5	ND<5
			6/7/1999	ND<5	ND<5
			7/29/1999	ND<5	ND<5
			2/1/2000	ND<5	ND<5
			4/21/2000	ND<5	ND<5
			8/3/2000	ND<5	ND<5
			11/10/2000	ND<5	ND<5
			4/17/2001	ND<5	ND<5
			8/2/2001	ND<5	ND<5
			1/25/2002	ND<5	ND<5
			4/23/2002	ND<5	ND<5
			8/14/2002	ND<5	ND<5
			1/20/2003	ND<5	ND<5
			7/30/2003	ND<5	ND<5
			1/24/2006	ND<0.5	ND<0.5

There are 20 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original

SW-12D	11	11 (100%)			
			6/9/1992	ND<1	ND<1
			5/10/1993	ND<5	ND<5
			11/9/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/13/1994	ND<5	ND<5
			10/27/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/11/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/30/1995	ND<5	ND<5
SW-13D	33	33 (100%)			
			6/9/1992	ND<1	ND<1
			5/11/1993	ND<5	ND<5
			11/9/1993	ND<5	ND<5
			1/25/1994	ND<5	ND<5
			4/18/1994	ND<5	ND<5
			7/13/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/13/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/31/1995	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			10/23/1996	ND<0.1	ND<0.1
			4/18/1997	ND<5	ND<5
			11/5/1997	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			11/12/1998	ND<5	ND<5
			5/28/1999	ND<5	ND<5
			11/11/1999	ND<5	ND<5
			4/21/2000	ND<5	ND<5
			11/10/2000	ND<5	ND<5
			4/18/2001	ND<5	ND<5
			11/13/2001	ND<5	ND<5
			4/18/2002	ND<5	ND<5
			10/23/2002	ND<5	ND<5
			4/24/2003	ND<5	ND<5
			1/20/2004	ND<5	ND<5
			7/19/2004	ND<5	ND<5
			1/26/2005	ND<1	ND<1
			8/3/2005	ND<0.5	ND<0.5
			1/24/2006	ND<0.5	ND<0.5
			7/25/2006	ND<2	ND<2
			1/23/2007	ND<0.3	ND<0.3
SW-10D	48	46 (95.8333%)			
			6/9/1992	ND<1	ND<1
			5/10/1993	ND<5	ND<5
			11/11/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/26/1994	ND<5	ND<5
			1/10/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/30/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5

			7/11/1996	ND<5	ND<5
			10/24/1996	0.18	0.18
			1/21/1997	ND<5	ND<5
			4/17/1997	ND<5	ND<5
			7/14/1997	ND<1	ND<1
			11/5/1997	ND<1	ND<1
			1/28/1998	ND<1	ND<1
			4/22/1998	ND<1	ND<1
			7/28/1998	ND<1	ND<1
			11/12/1998	ND<5	ND<5
			2/2/1999	ND<5	ND<5
			5/28/1999	ND<5	ND<5
			7/29/1999	ND<5	ND<5
			11/11/1999	ND<5	ND<5
			2/1/2000	ND<5	ND<5
			4/21/2000	ND<5	ND<5
			8/3/2000	ND<5	ND<5
			11/9/2000	13	13
			1/19/2001	ND<5	ND<5
			4/18/2001	ND<5	ND<5
			8/2/2001	ND<5	ND<5
			11/12/2001	ND<5	ND<5
			1/24/2002	ND<5	ND<5
			4/18/2002	ND<5	ND<5
			7/17/2002	ND<5	ND<5
			10/23/2002	ND<5	ND<5
			1/20/2003	ND<5	ND<5
			4/29/2003	ND<5	ND<5
			7/31/2003	ND<5	ND<5
			1/22/2004	ND<5	ND<5
			7/19/2004	ND<5	ND<5
			1/27/2005	ND<1	ND<1
			8/3/2005	ND<0.5	ND<0.5
			1/25/2006	ND<0.5	ND<0.5
			7/19/2006	ND<2	ND<2
			1/18/2007	ND<0.3	ND<0.3
SW-11D	49	47 (95.9184%)			
			6/9/1992	ND<1	ND<1
			5/10/1993	ND<5	ND<5
			11/9/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/13/1994	ND<5	ND<5
			10/27/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/11/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/30/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/15/1996	ND<5	ND<5
			10/24/1996	0.8	0.8
			1/20/1997	ND<5	ND<5
			4/18/1997	ND<5	ND<5
			7/14/1997	ND<1	ND<1
			11/5/1997	ND<1	ND<1
			1/26/1998	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			7/28/1998	1	1
			11/10/1998	ND<5	ND<5
			2/2/1999	ND<5	ND<5

			5/27/1999	ND<5	ND<5
			7/29/1999	ND<5	ND<5
			11/10/1999	ND<5	ND<5
			1/27/2000	ND<5	ND<5
			4/21/2000	ND<5	ND<5
			8/2/2000	ND<5	ND<5
			11/9/2000	ND<5	ND<5
			1/17/2001	ND<5	ND<5
			4/18/2001	ND<5	ND<5
			8/1/2001	ND<5	ND<5
			11/8/2001	ND<5	ND<5
			1/23/2002	ND<5	ND<5
			4/19/2002	ND<5	ND<5
			7/17/2002	ND<5	ND<5
			10/23/2002	ND<5	ND<5
			1/20/2003	ND<5	ND<5
			4/28/2003	ND<5	ND<5
			8/1/2003	ND<5	ND<5
			1/22/2004	ND<5	ND<5
			7/19/2004	ND<5	ND<5
			1/27/2005	ND<1	ND<1
			8/2/2005	ND<0.5	ND<0.5
			1/25/2006	ND<0.5	ND<0.5
			7/19/2006	ND<2	ND<2
			1/23/2007	ND<0.3	ND<0.3
SW-15D	32	31 (96.875%)			
			1/25/1994	ND<5	ND<5
			4/18/1994	ND<5	ND<5
			7/20/1994	ND<5	ND<5
			10/27/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/11/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/30/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/15/1996	ND<5	ND<5
			1/21/1997	ND<5	ND<5
			7/15/1997	1	1
			1/28/1998	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			2/2/1999	ND<5	ND<5
			2/1/2000	ND<5	ND<5
			8/2/2000	ND<5	ND<5
			1/17/2001	ND<5	ND<5
			8/1/2001	ND<5	ND<5
			1/24/2002	ND<5	ND<5
			8/14/2002	ND<5	ND<5
			1/20/2003	ND<5	ND<5
			4/29/2003	ND<5	ND<5
			7/31/2003	ND<5	ND<5
			1/22/2004	ND<5	ND<5
			7/19/2004	ND<5	ND<5
			1/27/2005	ND<1	ND<1
			8/3/2005	ND<0.5	ND<0.5
			1/25/2006	ND<0.5	ND<0.5
			7/25/2006	ND<2	ND<2
			1/18/2007	ND<0.3	ND<0.3
SW-1DN	33	31 (93.9394%)	6/10/1992	ND<1	ND<1

			5/10/1993	ND<5	ND<5
			11/17/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			4/9/1996	ND<5	ND<5
			10/23/1996	0.25	0.25
			4/18/1997	ND<5	ND<5
			11/6/1997	1	1
			4/22/1998	ND<1	ND<1
			11/11/1998	ND<5	ND<5
			5/27/1999	ND<5	ND<5
			11/10/1999	ND<5	ND<5
			4/20/2000	ND<5	ND<5
			11/8/2000	ND<5	ND<5
			4/17/2001	ND<5	ND<5
			11/8/2001	ND<5	ND<5
			4/17/2002	ND<5	ND<5
			10/22/2002	ND<5	ND<5
			4/23/2003	ND<5	ND<5
			1/15/2004	ND<5	ND<5
			7/14/2004	ND<5	ND<5
			1/25/2005	ND<1	ND<1
			8/1/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/20/2006	ND<2	ND<2
			1/23/2007	ND<0.3	ND<0.3
SW-1SN	30	27 (90%)			
			6/10/1992	ND<1	ND<1
			5/18/1993	ND<5	ND<5
			11/16/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/18/1994	ND<5	ND<5
			7/20/1994	ND<5	ND<5
			11/1/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/11/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			4/9/1996 ND<5	ND<5	
			10/22/1996	0.87	0.87
			4/18/1997	ND<5	ND<5
			11/5/1997	2	2
			4/22/1998	ND<1	ND<1
			11/10/1998	ND<5	ND<5
			5/27/1999	ND<5	ND<5
			11/10/1999	ND<5	ND<5
			4/21/2000	ND<5	ND<5
			11/9/2000	ND<5	ND<5
			11/8/2001	ND<5	ND<5
			4/28/2003	ND<5	ND<5
			1/22/2004	ND<5	ND<5
			7/14/2004	ND<5	ND<5
			2/8/2005	ND<1	ND<1
			8/4/2005	ND<0.5	ND<0.5
			1/25/2006	ND<0.5	ND<0.5

			7/25/2006	ND<2	ND<2
			1/23/2007	0.66	0.66
SW-2SN	19	19 (100%)			
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/22/1996	ND<0.1	ND<0.1
			1/21/1997	ND<5	ND<5
			4/18/1997	ND<5	ND<5
			7/15/1997	ND<1	ND<1
			11/5/1997	ND<1	ND<1
			1/26/1998	ND<1	ND<1
			4/22/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			11/10/1998	ND<5	ND<5
			2/2/1999	ND<5	ND<5
			5/28/1999	ND<5	ND<5
			7/29/1999	ND<5	ND<5
			11/11/1999	ND<5	ND<5
			1/27/2005	ND<1	ND<1
			8/2/2005	ND<0.5	ND<0.5
			1/25/2006	ND<0.5	ND<0.5
			7/25/2006	ND<2	ND<2
SW-3SN	21	21 (100%)			
			11/9/1993	ND<5	ND<5
			1/25/1994	ND<5	ND<5
			4/18/1994	ND<5	ND<5
			7/13/1994	ND<5	ND<5
			11/9/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/13/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/31/1995	ND<5	ND<5
			4/9/1996	ND<5	ND<5
			10/23/1996	ND<0.1	ND<0.1
			4/18/1997	ND<5	ND<5
			11/5/1997	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			11/10/1998	ND<5	ND<5
			5/28/1999	ND<5	ND<5
			11/11/1999	ND<5	ND<5
			1/28/2005	ND<1	ND<1
			8/3/2005	ND<0.5	ND<0.5
			1/24/2006	ND<0.5	ND<0.5
			7/25/2006	ND<2	ND<2
SW-4D	43	41 (95.3488%)			
			6/9/1992	ND<1	ND<1
			5/11/1993	ND<5	ND<5
			11/11/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/20/1994	ND<5	ND<5
			11/1/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			10/23/1996	ND<0.1	ND<0.1

			4/17/1997	ND<5	ND<5
			11/4/1997	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			11/10/1998	ND<5	ND<5
			2/2/1999	ND<5	ND<5
			6/7/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			11/11/1999	ND<5	ND<5
			4/21/2000	ND<5	ND<5
			8/2/2000	ND<5	ND<5
			11/10/2000	5	5
			1/18/2001	5	5
			4/18/2001	ND<5	ND<5
			8/2/2001	ND<5	ND<5
			11/13/2001	ND<5	ND<5
			1/24/2002	ND<5	ND<5
			4/19/2002	ND<5	ND<5
			7/17/2002	ND<5	ND<5
			10/22/2002	ND<5	ND<5
			1/20/2003	ND<5	ND<5
			4/24/2003	ND<5	ND<5
			7/31/2003	ND<5	ND<5
			1/20/2004	ND<5	ND<5
			7/19/2004	ND<5	ND<5
			1/26/2005	ND<1	ND<1
			8/3/2005	ND<0.5	ND<0.5
			1/24/2006	ND<0.5	ND<0.5
			7/25/2006	ND<2	ND<2
			1/23/2007	ND<0.3	ND<0.3
SW-5D	49	49 (100%)			
			6/10/1992	ND<1	ND<1
			5/11/1993	ND<5	ND<5
			11/9/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/26/1994	ND<5	ND<5
			11/1/1994	ND<5	ND<5
			1/10/1995	ND<5	ND<5
			4/13/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/15/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/23/1996	ND<0.1	ND<0.1
			1/22/1997	ND<5	ND<5
			4/18/1997	ND<5	ND<5
			7/14/1997	ND<1	ND<1
			11/4/1997	ND<1	ND<1
			1/27/1998	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			11/11/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			5/27/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			11/11/1999	ND<5	ND<5
			2/1/2000	ND<5	ND<5
			4/21/2000	ND<5	ND<5
			8/2/2000	ND<5	ND<5

			11/8/2000	ND<5	ND<5
			1/18/2001	ND<5	ND<5
			4/17/2001	ND<5	ND<5
			8/1/2001	ND<5	ND<5
			11/8/2001	ND<5	ND<5
			1/23/2002	ND<5	ND<5
			4/19/2002	ND<5	ND<5
			7/18/2002	ND<5	ND<5
			10/23/2002	ND<5	ND<5
			1/16/2003	ND<5	ND<5
			4/24/2003	ND<5	ND<5
			8/1/2003	ND<5	ND<5
			1/20/2004	ND<5	ND<5
			7/15/2004	ND<5	ND<5
			1/26/2005	ND<1	ND<1
			8/2/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/19/2006	ND<2	ND<2
			1/22/2007	ND<0.3	ND<0.3
SW-5S	10	7 (70%)	10/24/1996	1.22	1.22
			1/26/1998	1	1
			4/23/1998	ND<1	ND<1
			7/23/1998	1	1
			11/11/1998	ND<5	ND<5
			2/2/1999	ND<5	ND<5
			5/28/1999	ND<5	ND<5
			1/28/2005	ND<1	ND<1
			8/3/2005	ND<0.5	ND<0.5
			1/24/2006	ND<0.5	ND<0.5
SW-6D	33	33 (100%)			
			6/10/1992	ND<1	ND<1
			5/10/1993	ND<5	ND<5
			11/15/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/12/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/25/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/21/1997	ND<5	ND<5
			7/15/1997	ND<1	ND<1
			1/27/1998	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			1/28/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			1/27/2000	ND<5	ND<5
			8/1/2000	ND<5	ND<5
			1/17/2001	ND<5	ND<5
			1/23/2002	ND<5	ND<5
			4/23/2003	ND<5	ND<5
			7/30/2003	ND<5	ND<5
			1/15/2004	ND<5	ND<5
			7/15/2004	ND<5	ND<5
			1/25/2005	ND<1	ND<1

			8/1/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/19/2006	ND<2	ND<2
			1/22/2007	ND<0.3	ND<0.3
SW-7D	49	44 (89.7959%)			
			6/10/1992	ND<1	ND<1
			5/10/1993	ND<5	ND<5
			11/16/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/24/1996	1.17	1.17
			1/21/1997	ND<5	ND<5
			4/18/1997	ND<5	ND<5
			7/14/1997	2	2
			11/6/1997	2	2
			1/27/1998	2	2
			4/22/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			11/11/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			5/25/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			11/10/1999	ND<5	ND<5
			1/27/2000	ND<5	ND<5
			4/20/2000	ND<5	ND<5
			8/1/2000	ND<5	ND<5
			11/8/2000	ND<5	ND<5
			1/16/2001	ND<5	ND<5
			4/17/2001	ND<5	ND<5
			8/1/2001	ND<5	ND<5
			11/12/2001	ND<5	ND<5
			1/23/2002	ND<5	ND<5
			4/17/2002	ND<5	ND<5
			7/18/2002	ND<5	ND<5
			10/22/2002	ND<5	ND<5
			1/16/2003	ND<5	ND<5
			4/23/2003	ND<5	ND<5
			7/30/2003	ND<5	ND<5
			1/15/2004	ND<5	ND<5
			7/15/2004	ND<5	ND<5
			1/25/2005	ND<1	ND<1
			8/1/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/19/2006	ND<2	ND<2
			1/22/2007	0.306	0.306
SW-8D	47	45 (95.7447%)			
			6/10/1992	ND<1	ND<1
			5/11/1993	ND<5	ND<5
			11/17/1993	ND<5	ND<5
			4/12/1994	ND<5	ND<5

			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/25/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/24/1996	ND<0.1	ND<0.1
			1/22/1997	ND<5	ND<5
			4/17/1997	ND<5	ND<5
			7/17/1997	2	2
			11/6/1997	ND<1	ND<1
			1/27/1998	1	1
			4/23/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			11/11/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			5/25/1999	ND<5	ND<5
			8/2/1999	ND<5	ND<5
			11/11/1999	ND<5	ND<5
			1/27/2000	ND<5	ND<5
			8/3/2000	ND<5	ND<5
			11/10/2000	ND<5	ND<5
			1/19/2001	ND<5	ND<5
			4/18/2001	ND<5	ND<5
			8/2/2001	ND<5	ND<5
			11/13/2001	ND<5	ND<5
			1/24/2002	ND<5	ND<5
			4/18/2002	ND<5	ND<5
			7/17/2002	ND<5	ND<5
			10/23/2002	ND<5	ND<5
			1/20/2003	ND<5	ND<5
			4/28/2003	ND<5	ND<5
			7/31/2003	ND<5	ND<5
			1/20/2004	ND<5	ND<5
			7/19/2004	ND<5	ND<5
			1/27/2005	ND<1	ND<1
			8/4/2005	ND<0.5	ND<0.5
			1/24/2006	ND<0.5	ND<0.5
			7/25/2006	ND<2	ND<2
			1/18/2007	ND<0.3	ND<0.3
SW-9D	48	47 (97.9167%)			
			5/11/1993	ND<5	ND<5
			11/16/1993	ND<5	ND<5
			1/25/1994	ND<5	ND<5
			4/12/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/24/1996	ND<0.1	ND<0.1
			1/21/1997	ND<5	ND<5
			4/17/1997	ND<5	ND<5
			7/15/1997	ND<1	ND<1

			11/6/1997	ND<1	ND<1
			1/27/1998	ND<1	ND<1
			4/22/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			11/11/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			5/27/1999	ND<5	ND<5
			7/28/1999	ND<5	ND<5
			11/11/1999	10	10
			1/27/2000	ND<5	ND<5
			4/21/2000	ND<5	ND<5
			8/1/2000	ND<5	ND<5
			11/9/2000	ND<5	ND<5
			1/17/2001	ND<5	ND<5
			4/17/2001	ND<5	ND<5
			8/1/2001	ND<5	ND<5
			11/12/2001	ND<5	ND<5
			1/23/2002	ND<5	ND<5
			4/22/2002	ND<5	ND<5
			7/18/2002	ND<5	ND<5
			10/22/2002	ND<5	ND<5
			1/16/2003	ND<5	ND<5
			4/23/2003	ND<5	ND<5
			7/30/2003	ND<5	ND<5
			1/15/2004	ND<5	ND<5
			7/15/2004	ND<5	ND<5
			1/25/2005	ND<1	ND<1
			8/1/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/20/2006	ND<2	ND<2
			1/22/2007	ND<0.3	ND<0.3
SW-9S	23	22 (95.6522%)			
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/30/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/9/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/23/1996	ND<0.1	ND<0.1
			1/21/1997	ND<5	ND<5
			4/17/1997	ND<5	ND<5
			7/17/1997	ND<1	ND<1
			1/26/1998	ND<1	ND<1
			4/22/1998	ND<1	ND<1
			7/28/1998	ND<1	ND<1
			11/10/1998	ND<5	ND<5
			1/28/1999	ND<5	ND<5
			5/27/1999	ND<5	ND<5
			7/29/1999	ND<5	ND<5
			1/28/2005	ND<1	ND<1
			8/3/2005	1.2	1.2
			1/25/2006	ND<0.5	ND<0.5
			7/25/2006	ND<2	ND<2
SW-P2	31	30 (96.7742%)			
			11/17/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5

			7/14/1994	ND<5	ND<5
			11/9/1994	ND<5	ND<5
			1/16/1995	ND<5	ND<5
			4/13/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			10/23/1996	ND<0.1	ND<0.1
			4/18/1997	ND<5	ND<5
			11/6/1997	ND<1	ND<1
			4/22/1998	ND<1	ND<1
			11/11/1998	ND<5	ND<5
			5/27/1999	ND<5	ND<5
			11/10/1999	ND<5	ND<5
			4/20/2000	ND<5	ND<5
			11/9/2000	ND<5	ND<5
			4/17/2001	ND<5	ND<5
			11/8/2001	ND<5	ND<5
			4/22/2002	ND<5	ND<5
			10/22/2002	ND<5	ND<5
			4/23/2003	ND<5	ND<5
			1/15/2004	ND<5	ND<5
			7/15/2004	ND<5	ND<5
			1/25/2005	ND<1	ND<1
			8/2/2005	ND<0.5	ND<0.5
			1/23/2006	2	2
			7/20/2006	ND<2	ND<2
			1/22/2007	ND<0.3	ND<0.3
SW-P3	34	34 (100%)			
			11/11/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/14/1994	ND<5	ND<5
			7/20/1994	ND<5	ND<5
			11/1/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/11/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/15/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/22/1997	ND<5	ND<5
			7/17/1997	ND<1	ND<1
			1/28/1998	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			7/28/1998	ND<1	ND<1
			1/28/1999	ND<5	ND<5
			8/2/1999	ND<5	ND<5
			2/1/2000	ND<5	ND<5
			8/3/2000	ND<5	ND<5
			1/18/2001	ND<5	ND<5
			8/2/2001	ND<5	ND<5
			1/24/2002	ND<5	ND<5
			7/18/2002	ND<5	ND<5
			1/16/2003	ND<5	ND<5
			4/24/2003	ND<5	ND<5
			7/30/2003	ND<5	ND<5
			1/20/2004	ND<5	ND<5
			7/14/2004	ND<5	ND<5
			1/26/2005	ND<1	ND<1
			8/2/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5

		7/20/2006	ND<2	ND<2
		1/23/2007	ND<0.3	ND<0.3

SW-P5	22	20 (90.9091%)		
		4/12/1994	ND<5	ND<5
		7/14/1994	ND<5	ND<5
		11/9/1994	ND<5	ND<5
		1/12/1995	ND<5	ND<5
		4/13/1995	ND<5	ND<5
		7/13/1995	ND<5	ND<5
		10/25/1995	ND<5	ND<5
		1/16/1996	ND<5	ND<5
		7/11/1996	ND<5	ND<5
		1/22/1997	ND<5	ND<5
		7/14/1997	ND<1	ND<1
		1/27/1998	1	1
		4/23/1998	ND<1	ND<1
		7/23/1998	ND<1	ND<1
		1/28/1999	ND<5	ND<5
		8/2/1999	ND<5	ND<5
		1/27/2000	ND<5	ND<5
		1/26/2005	ND<1	ND<1
		8/1/2005	ND<0.5	ND<0.5
		1/23/2006	ND<0.5	ND<0.5
		7/20/2006	ND<2	ND<2
		1/22/2007	0.345	0.345

Two-Sample Test of Proportions

Parameter: CADMIUM

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Background measurements = 96
Compliance measurements = 665
Comparison Level = 5

0 background measurements exceed 5
2 compliance measurements exceed 5

p background = 0 = 0 / 96
p compliance = 0.00300752 = 2 / 665
p total = 0.00262812 = 2 / 761

nPs = 2 < 5.0
mPb = 0 < 5.0
n(1-Ps) = 663
m(1-Pb = 96

Zp = 0.538036 = 0.00300752 / 0.00558981
Z critical = 1.64485 at 95% confidence level

0.538036 < 1.64485
No Statistical Significance at 95% Confidence Level
When Compared to Compliance Limit = 5

Concentrations (µg/L)

Parameter: CHROMIUM

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

Total Measurements: 761
Total Non-Detect: 708
Percent Non-Detects: 93.0355%
Total Background Measurements: 96
There are 3 background locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-2D	49	47 (95.9184%)			
			6/10/1992	ND<2	ND<2
			5/11/1993	ND<10	ND<10
			11/17/1993	ND<10	ND<10
			1/24/1994	ND<10	ND<10
			4/13/1994	ND<10	ND<10
			7/14/1994	ND<10	ND<10
			11/2/1994	ND<10	ND<10
			1/11/1995	ND<10	ND<10
			4/12/1995	ND<10	ND<10
			7/12/1995	ND<10	ND<10
			10/25/1995	ND<10	ND<10
			1/16/1996	ND<10	ND<10
			4/9/1996	ND<10	ND<10
			7/11/1996	ND<10	ND<10
			10/23/1996	ND<14	ND<14
			1/22/1997	ND<10	ND<10
			4/18/1997	ND<5	ND<5
			7/14/1997	ND<11	ND<11
			11/6/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/10/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			4/20/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			11/8/2000	ND<10	ND<10
			1/16/2001	ND<10	ND<10
			4/17/2001	18	18
			8/1/2001	16	16
			11/8/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/17/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/14/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/1/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2

			7/20/2006	ND<6	ND<6
			1/22/2007	ND<1.2	ND<1.2
SW-3D	15	15 (100%)			
			5/11/1993	ND<10	ND<10
			11/16/1993	ND<10	ND<10
			1/24/1994	ND<10	ND<10
			4/13/1994	ND<10	ND<10
			7/14/1994	ND<10	ND<10
			11/2/1994	ND<10	ND<10
			1/11/1995	ND<10	ND<10
			4/12/1995	ND<10	ND<10
			7/12/1995	ND<10	ND<10
			10/25/1995	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/20/2006	ND<6	ND<6
			1/22/2007	ND<1.2	ND<1.2
SW-P1	32	32 (100%)			
			1/24/1994	ND<10	ND<10
			4/25/1994	ND<10	ND<10
			11/9/1994	ND<10	ND<10
			1/16/1995	ND<10	ND<10
			7/13/1995	ND<10	ND<10
			10/26/1995	ND<10	ND<10
			1/15/1996	ND<10	ND<10
			4/22/1996	ND<10	ND<10
			7/11/1996	ND<10	ND<10
			10/24/1996	ND<14	ND<14
			1/20/1997	ND<10	ND<10
			4/17/1997	ND<5	ND<5
			7/14/1997	ND<11	ND<11
			11/6/1997	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/10/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			6/7/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/3/2000	ND<10	ND<10
			11/10/2000	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/2/2001	ND<10	ND<10
			1/25/2002	ND<10	ND<10
			4/23/2002	ND<10	ND<10
			8/14/2002	ND<10	ND<10
			1/20/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/24/2006	ND<2	ND<2

There are 20 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-12D	11	11 (100%)	6/9/1992	ND<2	ND<2

		5/10/1993	ND<10	ND<10
		11/9/1993	ND<10	ND<10
		1/20/1994	ND<10	ND<10
		4/13/1994	ND<10	ND<10
		7/13/1994	ND<10	ND<10
		10/27/1994	ND<10	ND<10
		1/11/1995	ND<10	ND<10
		4/11/1995	ND<10	ND<10
		7/12/1995	ND<10	ND<10
		10/30/1995	ND<10	ND<10
SW-13D 33	32 (96.9697%)			
		6/9/1992	ND<2	ND<2
		5/11/1993	ND<10	ND<10
		11/9/1993	ND<10	ND<10
		1/25/1994	ND<10	ND<10
		4/18/1994	ND<10	ND<10
		7/13/1994	ND<10	ND<10
		11/2/1994	ND<10	ND<10
		1/11/1995	ND<10	ND<10
		4/13/1995	ND<10	ND<10
		7/13/1995	ND<10	ND<10
		10/31/1995	ND<10	ND<10
		4/11/1996	ND<10	ND<10
		10/23/1996	17.2	17.2
		4/18/1997	ND<5	ND<5
		11/5/1997	ND<10	ND<10
		4/23/1998	ND<10	ND<10
		11/12/1998	ND<10	ND<10
		5/28/1999	ND<10	ND<10
		11/11/1999	ND<10	ND<10
		4/21/2000	ND<10	ND<10
		11/10/2000	ND<10	ND<10
		4/18/2001	ND<10	ND<10
		11/13/2001	ND<10	ND<10
		4/18/2002	ND<10	ND<10
		10/23/2002	ND<10	ND<10
		4/24/2003	ND<10	ND<10
		1/20/2004	ND<10	ND<10
		7/19/2004	ND<10	ND<10
		1/26/2005	ND<10	ND<10
		8/3/2005	ND<2	ND<2
		1/24/2006	ND<2	ND<2
		7/25/2006	ND<6	ND<6
		1/23/2007	ND<1.2	ND<1.2
SW-10D 48	48 (100%)			
		6/9/1992	ND<2	ND<2
		5/10/1993	ND<10	ND<10
		11/11/1993	ND<10	ND<10
		1/20/1994	ND<10	ND<10
		4/13/1994	ND<10	ND<10
		7/26/1994	ND<10	ND<10
		1/10/1995	ND<10	ND<10
		4/12/1995	ND<10	ND<10
		7/13/1995	ND<10	ND<10
		10/30/1995	ND<10	ND<10
		1/16/1996	ND<10	ND<10
		4/11/1996	ND<10	ND<10
		7/11/1996	ND<10	ND<10
		10/24/1996	ND<14	ND<14

			1/21/1997	ND<10	ND<10
			4/17/1997	ND<5	ND<5
			7/14/1997	ND<10	ND<10
			11/5/1997	ND<10	ND<10
			1/28/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/28/1998	ND<10	ND<10
			11/12/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			5/28/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/3/2000	ND<10	ND<10
			11/9/2000	ND<10	ND<10
			1/19/2001	ND<10	ND<10
			4/18/2001	ND<10	ND<10
			8/2/2001	ND<10	ND<10
			11/12/2001	ND<10	ND<10
			1/24/2002	ND<10	ND<10
			4/18/2002	ND<10	ND<10
			7/17/2002	ND<10	ND<10
			10/23/2002	ND<10	ND<10
			1/20/2003	ND<10	ND<10
			4/29/2003	ND<10	ND<10
			7/31/2003	ND<10	ND<10
			1/22/2004	ND<10	ND<10
			7/19/2004	ND<10	ND<10
			1/27/2005	ND<10	ND<10
			8/3/2005	ND<2	ND<2
			1/25/2006	ND<2	ND<2
			7/19/2006	ND<6	ND<6
			1/18/2007	ND<1.2	ND<1.2

SW-11D	49	25 (51.0204%)			
			6/9/1992	3.68	3.68
			5/10/1993	20	20
			11/9/1993	ND<10	ND<10
			1/20/1994	ND<10	ND<10
			4/13/1994	16	16
			7/13/1994	16	16
			10/27/1994	ND<10	ND<10
			1/11/1995	ND<10	ND<10
			4/11/1995	ND<10	ND<10
			7/12/1995	12	12
			10/30/1995	12	12
			1/16/1996	ND<10	ND<10
			4/11/1996	ND<10	ND<10
			7/15/1996	26	26
			10/24/1996	52.7	52.7
			1/20/1997	26	26
			4/18/1997	5.7	5.7
			7/14/1997	13	13
			11/5/1997	ND<10	ND<10
			1/26/1998	10	10
			4/23/1998	35	35
			7/28/1998	44	44
			11/10/1998	17	17
			2/2/1999 25	25	
			5/27/1999	ND<10	ND<10
			7/29/1999	12	12

		11/10/1999	35	35
		1/27/2000	12	12
		4/21/2000	21	21
		8/2/2000 16	16	
		11/9/2000	ND<10	ND<10
		1/17/2001	ND<10	ND<10
		4/18/2001	ND<10	ND<10
		8/1/2001	ND<10	ND<10
		11/8/2001	ND<10	ND<10
		1/23/2002	ND<10	ND<10
		4/19/2002	ND<10	ND<10
		7/17/2002	ND<10	ND<10
		10/23/2002	ND<10	ND<10
		1/20/2003	ND<10	ND<10
		4/28/2003	ND<10	ND<10
		8/1/2003	ND<10	ND<10
		1/22/2004	ND<10	ND<10
		7/19/2004	ND<10	ND<10
		1/27/2005	ND<10	ND<10
		8/2/2005	4.1	4.1
		1/25/2006	5	5
		7/19/2006	ND<6	ND<6
		1/23/2007	6.46	6.46
SW-15D 32	24 (75%)			
		1/25/1994	ND<10	ND<10
		4/18/1994	16	16
		7/20/1994	ND<10	ND<10
		10/27/1994	28	28
		1/11/1995	ND<10	ND<10
		4/11/1995	15	15
		7/18/1995	ND<10	ND<10
		10/30/1995	ND<10	ND<10
		1/16/1996	12	12
		7/15/1996	15	15
		1/21/1997	40	40
		7/15/1997	ND<10	ND<10
		1/28/1998	ND<10	ND<10
		4/23/1998	ND<10	ND<10
		7/23/1998	ND<10	ND<10
		2/2/1999 4	8	48
		2/1/2000	27	27
		8/2/2000	ND<10	ND<10
		1/17/2001	ND<10	ND<10
		8/1/2001	ND<10	ND<10
		1/24/2002	ND<10	ND<10
		8/14/2002	ND<10	ND<10
		1/20/2003	ND<10	ND<10
		4/29/2003	ND<10	ND<10
		7/31/2003	ND<10	ND<10
		1/22/2004	ND<10	ND<10
		7/19/2004	ND<10	ND<10
		1/27/2005	ND<10	ND<10
		8/3/2005	ND<2	ND<2
		1/25/2006	ND<2	ND<2
		7/25/2006	ND<6	ND<6
		1/18/2007	ND<1.2	ND<1.2
SW-1DN33	31 (93.9394%)			
		6/10/1992	ND<2	ND<2
		5/10/1993	ND<10	ND<10

		11/17/1993	ND<10	ND<10
		1/24/1994	ND<10	ND<10
		4/13/1994	ND<10	ND<10
		7/14/1994	ND<10	ND<10
		11/2/1994	ND<10	ND<10
		1/12/1995	ND<10	ND<10
		4/12/1995	ND<10	ND<10
		7/12/1995	ND<10	ND<10
		10/26/1995	ND<10	ND<10
		4/9/1996	ND<10	ND<10
		10/23/1996	22.6	22.6
		4/18/1997	ND<5	ND<5
		11/6/1997	ND<10	ND<10
		4/22/1998	ND<10	ND<10
		11/11/1998	ND<10	ND<10
		5/27/1999	ND<10	ND<10
		11/10/1999	ND<10	ND<10
		4/20/2000	ND<10	ND<10
		11/8/2000	ND<10	ND<10
		4/17/2001	ND<10	ND<10
		11/8/2001	ND<10	ND<10
		4/17/2002	ND<10	ND<10
		10/22/2002	ND<10	ND<10
		4/23/2003	ND<10	ND<10
		1/15/2004	ND<10	ND<10
		7/14/2004	ND<10	ND<10
		1/25/2005	ND<10	ND<10
		8/1/2005	ND<2	ND<2
		1/23/2006	ND<2	ND<2
		7/20/2006	ND<6	ND<6
		1/23/2007	1.25	1.25
SW-1SN	30	25 (83.3333%)		
		6/10/1992	4.04	4.04
		5/18/1993	53	53
		11/16/1993	ND<10	ND<10
		1/20/1994	ND<10	ND<10
		4/18/1994	ND<10	ND<10
		7/20/1994	14	14
		11/1/1994	ND<10	ND<10
		1/11/1995	ND<10	ND<10
		4/11/1995	ND<10	ND<10
		7/12/1995	ND<10	ND<10
		10/26/1995	ND<10	ND<10
		4/9/1996	ND<10	ND<10
		10/22/1996	21.8	21.8
		4/18/1997	ND<5	ND<5
		11/5/1997	ND<10	ND<10
		4/22/1998	ND<10	ND<10
		11/10/1998	ND<10	ND<10
		5/27/1999	ND<10	ND<10
		11/10/1999	ND<10	ND<10
		4/21/2000	ND<10	ND<10
		11/9/2000	ND<10	ND<10
		11/8/2001	ND<10	ND<10
		4/28/2003	ND<10	ND<10
		1/22/2004	ND<10	ND<10
		7/14/2004	ND<10	ND<10
		2/8/2005	ND<10	ND<10
		8/4/2005	ND<2	ND<2
		1/25/2006	ND<2	ND<2
		7/25/2006	ND<6	ND<6

		1/23/2007	2	2
SW-2SN	19	18 (94.7368%)		
		4/11/1996	29	29
		7/11/1996	ND<10	ND<10
		10/22/1996	ND<14	ND<14
		1/21/1997	ND<10	ND<10
		4/18/1997	ND<5	ND<5
		7/15/1997	ND<11	ND<11
		11/5/1997	ND<10	ND<10
		1/26/1998	ND<10	ND<10
		4/22/1998	ND<10	ND<10
		7/23/1998	ND<10	ND<10
		11/10/1998	ND<10	ND<10
		2/2/1999	ND<10	ND<10
		5/28/1999	ND<10	ND<10
		7/29/1999	ND<10	ND<10
		11/11/1999	ND<10	ND<10
		1/27/2005	ND<10	ND<10
		8/2/2005	ND<2	ND<2
		1/25/2006	ND<2	ND<2
		7/25/2006	ND<6	ND<6
SW-3SN	21	20 (95.2381%)		
		11/9/1993	ND<10	ND<10
		1/25/1994	ND<10	ND<10
		4/18/1994	12	12
		7/13/1994	ND<10	ND<10
		11/9/1994	ND<10	ND<10
		1/11/1995	ND<10	ND<10
		4/13/1995	ND<10	ND<10
		7/18/1995	ND<10	ND<10
		10/31/1995	ND<10	ND<10
		4/9/1996	ND<10	ND<10
		10/23/1996	ND<14	ND<14
		4/18/1997	ND<5	ND<5
		11/5/1997	ND<10	ND<10
		4/23/1998	ND<10	ND<10
		11/10/1998	ND<10	ND<10
		5/28/1999	ND<10	ND<10
		11/11/1999	ND<10	ND<10
		1/28/2005	ND<10	ND<10
		8/3/2005	ND<2	ND<2
		1/24/2006	ND<2	ND<2
		7/25/2006	ND<6	ND<6
SW-4D	43	40 (93.0233%)		
		6/9/1992	ND<2	ND<2
		5/11/1993	ND<10	ND<10
		11/11/1993	ND<10	ND<10
		1/20/1994	ND<10	ND<10
		4/13/1994	ND<10	ND<10
		7/20/1994	ND<10	ND<10
		11/1/1994	ND<10	ND<10
		1/11/1995	ND<10	ND<10
		4/12/1995	ND<10	ND<10
		7/12/1995	ND<10	ND<10
		10/26/1995	ND<10	ND<10
		4/11/1996	ND<10	ND<10
		10/23/1996	ND<14	ND<14
		4/17/1997	ND<5	ND<5

		11/4/1997	ND<10	ND<10
		4/23/1998	ND<10	ND<10
		7/23/1998	ND<10	ND<10
		11/10/1998	ND<10	ND<10
		2/2/1999	ND<10	ND<10
		6/7/1999	ND<10	ND<10
		7/28/1999	ND<10	ND<10
		11/11/1999	ND<10	ND<10
		4/21/2000	ND<10	ND<10
		8/2/2000	ND<10	ND<10
		11/10/2000	10	10
		1/18/2001	13	13
		4/18/2001	ND<10	ND<10
		8/2/2001	ND<10	ND<10
		11/13/2001	ND<10	ND<10
		1/24/2002	ND<10	ND<10
		4/19/2002	ND<10	ND<10
		7/17/2002	ND<10	ND<10
		10/22/2002	ND<10	ND<10
		1/20/2003	ND<10	ND<10
		4/24/2003	ND<10	ND<10
		7/31/2003	ND<10	ND<10
		1/20/2004	ND<10	ND<10
		7/19/2004	ND<10	ND<10
		1/26/2005	ND<10	ND<10
		8/3/2005	ND<2	ND<2
		1/24/2006	ND<2	ND<2
		7/25/2006	ND<6	ND<6
		1/23/2007	1.32	1.32
SW-5D 49	49 (100%)			
		6/10/1992	ND<2	ND<2
		5/11/1993	ND<10	ND<10
		11/9/1993	ND<10	ND<10
		1/20/1994	ND<10	ND<10
		4/13/1994	ND<10	ND<10
		7/26/1994	ND<10	ND<10
		11/1/1994	ND<10	ND<10
		1/10/1995	ND<10	ND<10
		4/13/1995	ND<10	ND<10
		7/18/1995	ND<10	ND<10
		10/26/1995	ND<10	ND<10
		1/15/1996	ND<10	ND<10
		4/11/1996	ND<10	ND<10
		7/11/1996	ND<10	ND<10
		10/23/1996	ND<14	ND<14
		1/22/1997	ND<10	ND<10
		4/18/1997	ND<5	ND<5
		7/14/1997	ND<11	ND<11
		11/4/1997	ND<10	ND<10
		1/27/1998	ND<10	ND<10
		4/23/1998	ND<10	ND<10
		7/23/1998	ND<10	ND<10
		11/11/1998	ND<10	ND<10
		1/28/1999	ND<10	ND<10
		5/27/1999	ND<10	ND<10
		7/28/1999	ND<10	ND<10
		11/11/1999	ND<10	ND<10
		2/1/2000	ND<10	ND<10
		4/21/2000	ND<10	ND<10
		8/2/2000	ND<10	ND<10
		11/8/2000	ND<10	ND<10

			1/18/2001	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/8/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/19/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/23/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/24/2003	ND<10	ND<10
			8/1/2003	ND<10	ND<10
			1/20/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/26/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/19/2006	ND<6	ND<6
			1/22/2007	ND<1.2	ND<1.2
SW-5S	10	8 (80%)			
			10/24/1996	16	16
			1/26/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			5/28/1999	16	16
			1/28/2005	ND<10	ND<10
			8/3/2005	ND<2	ND<2
			1/24/2006	ND<2	ND<2
SW-6D	33	33 (100%)			
			6/10/1992	ND<2	ND<2
			5/10/1993	ND<10	ND<10
			11/15/1993	ND<10	ND<10
			1/24/1994	ND<10	ND<10
			4/12/1994	ND<10	ND<10
			7/14/1994	ND<10	ND<10
			11/2/1994	ND<10	ND<10
			1/12/1995	ND<10	ND<10
			4/12/1995	ND<10	ND<10
			7/13/1995	ND<10	ND<10
			10/25/1995	ND<10	ND<10
			1/16/1996	ND<10	ND<10
			7/11/1996	ND<10	ND<10
			1/21/1997	ND<10	ND<10
			7/15/1997	ND<11	ND<11
			1/27/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			1/17/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10

			8/1/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/19/2006	ND<6	ND<6
			1/22/2007	ND<1.2	ND<1.2
SW-7D	49	49 (100%)			
			6/10/1992	ND<2	ND<2
			5/10/1993	ND<10	ND<10
			11/16/1993	ND<10	ND<10
			1/24/1994	ND<10	ND<10
			4/13/1994	ND<10	ND<10
			7/14/1994	ND<10	ND<10
			11/2/1994	ND<10	ND<10
			1/12/1995	ND<10	ND<10
			4/12/1995	ND<10	ND<10
			7/12/1995	ND<10	ND<10
			10/26/1995	ND<10	ND<10
			1/16/1996	ND<10	ND<10
			4/11/1996	ND<10	ND<10
			7/11/1996	ND<10	ND<10
			10/24/1996	ND<14	ND<14
			1/21/1997	ND<10	ND<10
			4/18/1997	ND<5	ND<5
			7/14/1997	ND<11	ND<11
			11/6/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/25/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/10/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			4/20/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			11/8/2000	ND<10	ND<10
			1/16/2001	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/12/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/17/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/1/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/19/2006	ND<6	ND<6
			1/22/2007	ND<1.2	ND<1.2
SW-8D	47	47 (100%)			
			6/10/1992	ND<2	ND<2
			5/11/1993	ND<10	ND<10
			11/17/1993	ND<10	ND<10
			4/12/1994	ND<10	ND<10

			7/14/1994	ND<10	ND<10
			11/2/1994	ND<10	ND<10
			1/12/1995	ND<10	ND<10
			4/12/1995	ND<10	ND<10
			7/13/1995	ND<10	ND<10
			10/25/1995	ND<10	ND<10
			1/16/1996	ND<10	ND<10
			4/11/1996	ND<10	ND<10
			7/11/1996	ND<10	ND<10
			10/24/1996	ND<14	ND<14
			1/22/1997	ND<10	ND<10
			4/17/1997	ND<5	ND<5
			7/17/1997	ND<11	ND<11
			11/6/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/25/1999	ND<10	ND<10
			8/2/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			8/3/2000	ND<10	ND<10
			11/10/2000	ND<10	ND<10
			1/19/2001	ND<10	ND<10
			4/18/2001	ND<10	ND<10
			8/2/2001	ND<10	ND<10
			11/13/2001	ND<10	ND<10
			1/24/2002	ND<10	ND<10
			4/18/2002	ND<10	ND<10
			7/17/2002	ND<10	ND<10
			10/23/2002	ND<10	ND<10
			1/20/2003	ND<10	ND<10
			4/28/2003	ND<10	ND<10
			7/31/2003	ND<10	ND<10
			1/20/2004	ND<10	ND<10
			7/19/2004	ND<10	ND<10
			1/27/2005	ND<10	ND<10
			8/4/2005	ND<2	ND<2
			1/24/2006	ND<2	ND<2
			7/25/2006	ND<6	ND<6
			1/18/2007	ND<1.2	ND<1.2
SW-9D	48	48 (100%)			
			5/11/1993	ND<10	ND<10
			11/16/1993	ND<10	ND<10
			1/25/1994	ND<10	ND<10
			4/12/1994	ND<10	ND<10
			7/14/1994	ND<10	ND<10
			11/2/1994	ND<10	ND<10
			1/12/1995	ND<10	ND<10
			4/12/1995	ND<10	ND<10
			7/18/1995	ND<10	ND<10
			10/26/1995	ND<10	ND<10
			1/16/1996	ND<10	ND<10
			4/11/1996	ND<10	ND<10
			7/11/1996	ND<10	ND<10
			10/24/1996	ND<14	ND<14
			1/21/1997	ND<10	ND<10
			4/17/1997	ND<5	ND<5
			7/15/1997	ND<10	ND<10

			11/6/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			11/9/2000	ND<10	ND<10
			1/17/2001	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/12/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/22/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/1/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/20/2006	ND<6	ND<6
			1/22/2007	ND<1.2	ND<1.2
SW-9S	23	22 (95.6522%)			
			11/2/1994	ND<10	ND<10
			1/12/1995	14	14
			4/12/1995	ND<10	ND<10
			7/13/1995	ND<10	ND<10
			10/30/1995	ND<10	ND<10
			1/16/1996	ND<10	ND<10
			4/9/1996	ND<10	ND<10
			7/11/1996	ND<10	ND<10
			10/23/1996	ND<14	ND<14
			1/21/1997	ND<10	ND<10
			4/17/1997	ND<5	ND<5
			7/17/1997	ND<11	ND<11
			1/26/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/28/1998	ND<10	ND<10
			11/10/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			1/28/2005	ND<10	ND<10
			8/3/2005	ND<2	ND<2
			1/25/2006	ND<2	ND<2
			7/25/2006	ND<6	ND<6
SW-P2	31	30 (96.7742%)			
			11/17/1993	ND<10	ND<10
			1/24/1994	ND<10	ND<10
			4/13/1994	ND<10	ND<10

			7/14/1994	ND<10	ND<10
			11/9/1994	ND<10	ND<10
			1/16/1995	ND<10	ND<10
			4/13/1995	ND<10	ND<10
			7/18/1995	ND<10	ND<10
			10/26/1995	ND<10	ND<10
			4/11/1996	ND<10	ND<10
			10/23/1996	ND<14	ND<14
			4/18/1997	ND<5	ND<5
			11/6/1997	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			11/10/1999	ND<10	ND<10
			4/20/2000	ND<10	ND<10
			11/9/2000	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			11/8/2001	ND<10	ND<10
			4/22/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/23/2006	5	5
			7/20/2006	ND<6	ND<6
			1/22/2007	ND<1.2	ND<1.2
SW-P3	34	32 (94.1176%)			
			11/11/1993	ND<10	ND<10
			1/20/1994	ND<10	ND<10
			4/14/1994	ND<10	ND<10
			7/20/1994	ND<10	ND<10
			11/1/1994	ND<10	ND<10
			1/12/1995	ND<10	ND<10
			4/11/1995	ND<10	ND<10
			7/12/1995	14	14
			10/26/1995	ND<10	ND<10
			1/15/1996	ND<10	ND<10
			7/11/1996	ND<10	ND<10
			1/22/1997	ND<10	ND<10
			7/17/1997	ND<11	ND<11
			1/28/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/28/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			8/2/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			8/3/2000	ND<10	ND<10
			1/18/2001	ND<10	ND<10
			8/2/2001	ND<10	ND<10
			1/24/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/24/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/20/2004	ND<10	ND<10
			7/14/2004	ND<10	ND<10
			1/26/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2

			7/20/2006	ND<6	ND<6
			1/23/2007	1.59	1.59

SW-P5	22	22 (100%)			
			4/12/1994	ND<10	ND<10
			7/14/1994	ND<10	ND<10
			11/9/1994	ND<10	ND<10
			1/12/1995	ND<10	ND<10
			4/13/1995	ND<10	ND<10
			7/13/1995	ND<10	ND<10
			10/25/1995	ND<10	ND<10
			1/16/1996	ND<10	ND<10
			7/11/1996	ND<10	ND<10
			1/22/1997	ND<10	ND<10
			7/14/1997	ND<11	ND<11
			1/27/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			8/2/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			1/26/2005	ND<10	ND<10
			8/1/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/20/2006	ND<6	ND<6
			1/22/2007	ND<1.2	ND<1.2

Coefficient of Variation

Parameter: CHROMIUM

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

CV < 1 indicates normal data

Background Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-2D	49	9.53469	2.94686	0.309067
SW-3D	15	8.08	3.44491	0.426351
SW-P1	32	9.75	1.83162	0.187859

Compliance Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-12D	11	9.27273	2.41209	0.260127
SW-13D	33	8.95152	3.1918	0.356565
SW-10D	48	9.2125	2.51241	0.272717
SW-11D	49	14.1151	9.88085	0.70002
SW-15D	32	12.8813	9.84196	0.764053
SW-1DN	33	9.11667	3.71893	0.407926
SW-1SN	30	10.6613	8.82715	0.82796
SW-2SN	19	9.94737	5.51235	0.554151
SW-3SN	21	9.09524	2.93095	0.322251
SW-4D	43	9.19349	2.69644	0.293299
SW-5D	49	9.24898	2.49918	0.270211
SW-5S	10	9.6	4.69515	0.489078
SW-6D	33	8.91515	2.78165	0.312014
SW-7D	49	9.24898	2.49918	0.270211
SW-8D	47	9.21702	2.54792	0.276436

SW-9D	48	9.37917	2.2782	0.2429
SW-9S	23	9.30435	2.94549	0.316571
SW-P2	31	9.13548	2.58374	0.282824
SW-P3	34	9.31147	2.5561	0.27451
SW-P5	22	8.73636	2.98656	0.341854

All Locations

Obs.	Mean	Std. Dev.	CV
761	9.758	4.68322	0.479937

Parametric Tolerance Interval Analysis
Action Limit Comparison
Parameter: CHROMIUM
USEPA 1992 Guidance Tolerance Limit Formula
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Location	Date	Conc.
SW-12D		
	6/9/1992	ND<2
	5/10/1993	ND<10
	11/9/1993	ND<10
	1/20/1994	ND<10
	4/13/1994	ND<10
	7/13/1994	ND<10
	10/27/1994	ND<10
	1/11/1995	ND<10
	4/11/1995	ND<10
	7/12/1995	ND<10
	10/30/1995	ND<10

Obs. 11
Mean 9.27273
Std Dev. 2.41209
Tolerance Factor (K) 1.89305
Comparison Level 100
Untransformed Comp. Level 100
Upper Tolerance Limit = 13.8389

Location	Date	Conc.
SW-13D	6/9/1992	ND<2
	5/11/1993	ND<10
	11/9/1993	ND<10
	1/25/1994	ND<10
	4/18/1994	ND<10
	7/13/1994	ND<10
	11/2/1994	ND<10
	1/11/1995	ND<10
	4/13/1995	ND<10
	7/13/1995	ND<10
	10/31/1995	ND<10
	4/11/1996	ND<10
	10/23/1996	17.2
	4/18/1997	ND<5

	11/5/1997	ND<10
	4/23/1998	ND<10
	11/12/1998	ND<10
	5/28/1999	ND<10
	11/11/1999	ND<10
	4/21/2000	ND<10
	11/10/2000	ND<10
	4/18/2001	ND<10
	11/13/2001	ND<10
	4/18/2002	ND<10
	10/23/2002	ND<10
	4/24/2003	ND<10
	1/20/2004	ND<10
	7/19/2004	ND<10
	1/26/2005	ND<10
	8/3/2005	ND<2
	1/24/2006	ND<2
	7/25/2006	ND<6
	1/23/2007	ND<1.2

Obs. 33
Mean 8.95152
Std Dev. 3.1918
Tolerance Factor (K) 1.71936
Comparison Level 100
Untransformed Comp. Level 100
Upper Tolerance Limit = 14.4394

Location	**Date**	**Conc.**
SW-10D	6/9/1992	ND<2
	5/10/1993	ND<10
	11/11/1993	ND<10
	1/20/1994	ND<10
	4/13/1994	ND<10
	7/26/1994	ND<10
	1/10/1995	ND<10
	4/12/1995	ND<10
	7/13/1995	ND<10
	10/30/1995	ND<10
	1/16/1996	ND<10
	4/11/1996	ND<10
	7/11/1996	ND<10
	10/24/1996	ND<14
	1/21/1997	ND<10
	4/17/1997	ND<5
	7/14/1997	ND<10
	11/5/1997	ND<10
	1/28/1998	ND<10
	4/22/1998	ND<10
	7/28/1998	ND<10
	11/12/1998	ND<10
	2/2/1999	ND<10
	5/28/1999	ND<10
	7/29/1999	ND<10
	11/11/1999	ND<10
	2/1/2000	ND<10
	4/21/2000	ND<10
	8/3/2000	ND<10
	11/9/2000	ND<10
	1/19/2001	ND<10

	4/18/2001	ND<10
	8/2/2001	ND<10
	11/12/2001	ND<10
	1/24/2002	ND<10
	4/18/2002	ND<10
	7/17/2002	ND<10
	10/23/2002	ND<10
	1/20/2003	ND<10
	4/29/2003	ND<10
	7/31/2003	ND<10
	1/22/2004	ND<10
	7/19/2004	ND<10
	1/27/2005	ND<10
	8/3/2005	ND<2
	1/25/2006	ND<2
	7/19/2006	ND<6
	1/18/2007	ND<1.2

Obs.	48		
Mean	9.2125		
Std Dev.	2.51241		
Tolerance Factor (K)		1.69532	
Comparison Level		**100**	
Untransformed Comp. Level			100

Upper Tolerance Limit = 13.4718

Location	**Date**	**Conc.**
SW-11D	6/9/1992	3.68
	5/10/1993	20
	11/9/1993	ND<10
	1/20/1994	ND<10
	4/13/1994	16
	7/13/1994	16
	10/27/1994	ND<10
	1/11/1995	ND<10
	4/11/1995	ND<10
	7/12/1995	12
	10/30/1995	12
	1/16/1996	ND<10
	4/11/1996	ND<10
	7/15/1996	26
	10/24/1996	52.7
	1/20/1997	26
	4/18/1997	5.7
	7/14/1997	13
	11/5/1997	ND<10
	1/26/1998	10
	4/23/1998	35
	7/28/1998	44
	11/10/1998	17
	2/2/1999	25
	5/27/1999	ND<10
	7/29/1999	12
	11/10/1999	35
	1/27/2000	12
	4/21/2000	21
	8/2/20001	6
	11/9/2000	ND<10
	1/17/2001	ND<10
	4/18/2001	ND<10

	8/1/2001	ND<10
	11/8/2001	ND<10
	1/23/2002	ND<10
	4/19/2002	ND<10
	7/17/2002	ND<10
	10/23/2002	ND<10
	1/20/2003	ND<10
	4/28/2003	ND<10
	8/1/2003	ND<10
	1/22/2004	ND<10
	7/19/2004	ND<10
	1/27/2005	ND<10
	8/2/2005	4.1
	1/25/2006	5
	7/19/2006	ND<6
	1/23/2007	6.46

Obs.	49		
Mean	14.1151		
Std Dev.	9.88085		
Tolerance Factor (K)		1.69425	
Comparison Level		**100**	
Untransformed Comp. Level			100

Upper Tolerance Limit = 30.8558

Location	**Date**	**Conc.**
SW-15D	1/25/1994	ND<10
	4/18/1994	16
	7/20/1994	ND<10
	10/27/1994	28
	1/11/1995	ND<10
	4/11/1995	15
	7/18/1995	ND<10
	10/30/1995	ND<10
	1/16/1996	12
	7/15/1996	15
	1/21/1997	40
	7/15/1997	ND<10
	1/28/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	2/2/1999	48
	2/1/2000	27
	8/2/2000	ND<10
	1/17/2001	ND<10
	8/1/2001	ND<10
	1/24/2002	ND<10
	8/14/2002	ND<10
	1/20/2003	ND<10
	4/29/2003	ND<10
	7/31/2003	ND<10
	1/22/2004	ND<10
	7/19/2004	ND<10
	1/27/2005	ND<10
	8/3/2005	ND<2
	1/25/2006	ND<2
	7/25/2006	ND<6
	1/18/2007	ND<1.2

Obs.	32
Mean	12.8813
Std Dev.	9.84196
Tolerance Factor (K)	1.72181
Comparison Level	**100**
Untransformed Comp. Level	100

Upper Tolerance Limit = 29.8272

Location	Date	Conc.
SW-1DN	6/10/1992	ND<2
	5/10/1993	ND<10
	11/17/1993	ND<10
	1/24/1994	ND<10
	4/13/1994	ND<10
	7/14/1994	ND<10
	11/2/1994	ND<10
	1/12/1995	ND<10
	4/12/1995	ND<10
	7/12/1995	ND<10
	10/26/1995	ND<10
	4/9/1996	ND<10
	10/23/1996	22.6
	4/18/1997	ND<5
	11/6/1997	ND<10
	4/22/1998	ND<10
	11/11/1998	ND<10
	5/27/1999	ND<10
	11/10/1999	ND<10
	4/20/2000	ND<10
	11/8/2000	ND<10
	4/17/2001	ND<10
	11/8/2001	ND<10
	4/17/2002	ND<10
	10/22/2002	ND<10
	4/23/2003	ND<10
	1/15/2004	ND<10
	7/14/2004	ND<10
	1/25/2005	ND<10
	8/1/2005	ND<2
	1/23/2006	ND<2
	7/20/2006	ND<6
	1/23/2007	1.25

Obs.	33
Mean	9.11667
Std Dev.	3.71893
Tolerance Factor (K)	1.71936
Comparison Level	**100**
Untransformed Comp. Level	100

Upper Tolerance Limit = 15.5108

Location	Date	Conc.
SW-1SN	6/10/1992	4.04
	5/18/1993	53
	11/16/1993	ND<10
	1/20/1994	ND<10
	4/18/1994	ND<10
	7/20/1994	14

	11/1/1994	ND<10
	1/11/1995	ND<10
	4/11/1995	ND<10
	7/12/1995	ND<10
	10/26/1995	ND<10
	4/9/1996	ND<10
	10/22/1996	21.8
	4/18/1997	ND<5
	11/5/1997	ND<10
	4/22/1998	ND<10
	11/10/1998	ND<10
	5/27/1999	ND<10
	11/10/1999	ND<10
	4/21/2000	ND<10
	11/9/2000	ND<10
	11/8/2001	ND<10
	4/28/2003	ND<10
	1/22/2004	ND<10
	7/14/2004	ND<10
	2/8/2005	ND<10
	8/4/2005	ND<2
	1/25/2006	ND<2
	7/25/2006	ND<6
	1/23/2007	2

Obs. 30
Mean 10.6613
Std Dev. 8.82715
Tolerance Factor (K) 1.72721
Comparison Level 100
Untransformed Comp. Level 100
Upper Tolerance Limit = 25.9077

Location	**Date**	**Conc.**
SW-2SN	4/11/1996	29
	7/11/1996	ND<10
	10/22/1996	ND<14
	1/21/1997	ND<10
	4/18/1997	ND<5
	7/15/1997	ND<11
	11/5/1997	ND<10
	1/26/1998	ND<10
	4/22/1998	ND<10
	7/23/1998	ND<10
	11/10/1998	ND<10
	2/2/1999	ND<10
	5/28/1999	ND<10
	7/29/1999	ND<10
	11/11/1999	ND<10
	1/27/2005	ND<10
	8/2/2005	ND<2
	1/25/2006	ND<2
	7/25/2006	ND<6

Obs. 19
Mean 9.94737
Std Dev. 5.51235
Tolerance Factor (K) 1.77911
Comparison Level 100

Untransformed Comp. Level 100
Upper Tolerance Limit = 19.7544

Location	Date	Conc.
SW-3SN	11/9/1993	ND<10
	1/25/1994	ND<10
	4/18/1994	12
	7/13/1994	ND<10
	11/9/1994	ND<10
	1/11/1995	ND<10
	4/13/1995	ND<10
	7/18/1995	ND<10
	10/31/1995	ND<10
	4/9/1996	ND<10
	10/23/1996	ND<14
	4/18/1997	ND<5
	11/5/1997	ND<10
	4/23/1998	ND<10
	11/10/1998	ND<10
	5/28/1999	ND<10
	11/11/1999	ND<10
	1/28/2005	ND<10
	8/3/2005	ND<2
	1/24/2006	ND<2
	7/25/2006	ND<6

Obs. 21
Mean 9.09524
Std Dev. 2.93095
Tolerance Factor (K) 1.76531
Comparison Level 100
Untransformed Comp. Level 100
Upper Tolerance Limit = 14.2693

Location	Date	Conc.
SW-4D		
	6/9/1992	ND<2
	5/11/1993	ND<10
	11/11/1993	ND<10
	1/20/1994	ND<10
	4/13/1994	ND<10
	7/20/1994	ND<10
	11/1/1994	ND<10
	1/11/1995	ND<10
	4/12/1995	ND<10
	7/12/1995	ND<10
	10/26/1995	ND<10
	4/11/1996	ND<10
	10/23/1996	ND<14
	4/17/1997	ND<5
	11/4/1997	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	11/10/1998	ND<10
	2/2/1999	ND<10
	6/7/1999	ND<10
	7/28/1999	ND<10
	11/11/1999	ND<10

4/21/2000	ND<10
8/2/2000	ND<10
11/10/2000	10
1/18/2001	13
4/18/2001	ND<10
8/2/2001	ND<10
11/13/2001	ND<10
1/24/2002	ND<10
4/19/2002	ND<10
7/17/2002	ND<10
10/22/2002	ND<10
1/20/2003	ND<10
4/24/2003	ND<10
7/31/2003	ND<10
1/20/2004	ND<10
7/19/2004	ND<10
1/26/2005	ND<10
8/3/2005	ND<2
1/24/2006	ND<2
7/25/2006	ND<6
1/23/2007	1.32

Obs. 43
Mean 9.19349
Std Dev. 2.69644
Tolerance Factor (K) 1.7014
Comparison Level 100
Untransformed Comp. Level 100
Upper Tolerance Limit = 13.7812

Location	Date	Conc.
SW-5D	6/10/1992	ND<2
	5/11/1993	ND<10
	11/9/1993	ND<10
	1/20/1994	ND<10
	4/13/1994	ND<10
	7/26/1994	ND<10
	11/1/1994	ND<10
	1/10/1995	ND<10
	4/13/1995	ND<10
	7/18/1995	ND<10
	10/26/1995	ND<10
	1/15/1996	ND<10
	4/11/1996	ND<10
	7/11/1996	ND<10
	10/23/1996	ND<14
	1/22/1997	ND<10
	4/18/1997	ND<5
	7/14/1997	ND<11
	11/4/1997	ND<10
	1/27/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	11/11/1998	ND<10
	1/28/1999	ND<10
	5/27/1999	ND<10
	7/28/1999	ND<10
	11/11/1999	ND<10
	2/1/2000	ND<10
	4/21/2000	ND<10

8/2/2000	ND<10
11/8/2000	ND<10
1/18/2001	ND<10
4/17/2001	ND<10
8/1/2001	ND<10
11/8/2001	ND<10
1/23/2002	ND<10
4/19/2002	ND<10
7/18/2002	ND<10
10/23/2002	ND<10
1/16/2003	ND<10
4/24/2003	ND<10
8/1/2003	ND<10
1/20/2004	ND<10
7/15/2004	ND<10
1/26/2005	ND<10
8/2/2005	ND<2
1/23/2006	ND<2
7/19/2006	ND<6
1/22/2007	ND<1.2

Obs. 49
Mean 9.24898
Std Dev. 2.49918
Tolerance Factor (K) 1.69425
Comparison Level 100
Untransformed Comp. Level 100
Upper Tolerance Limit = 13.4832

Location	Date	Conc.
SW-5S		
	10/24/1996	16
	1/26/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	11/11/1998	ND<10
	2/2/1999	ND<10
	5/28/1999	16
	1/28/2005	ND<10
	8/3/2005	ND<2
	1/24/2006	ND<2

Obs. 10
Mean 9.6
Std Dev. 4.69515
Tolerance Factor (K) 1.92259
Comparison Level 100
Untransformed Comp. Level 100
Upper Tolerance Limit = 18.6268

Location	Date	Conc.
SW-6D	6/10/1992	ND<2
	5/10/1993	ND<10
	11/15/1993	ND<10
	1/24/1994	ND<10
	4/12/1994	ND<10
	7/14/1994	ND<10

	11/2/1994	ND<10
	1/12/1995	ND<10
	4/12/1995	ND<10
	7/13/1995	ND<10
	10/25/1995	ND<10
	1/16/1996	ND<10
	7/11/1996	ND<10
	1/21/1997	ND<10
	7/15/1997	ND<11
	1/27/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	1/28/1999	ND<10
	7/28/1999	ND<10
	1/27/2000	ND<10
	8/1/2000	ND<10
	1/17/2001	ND<10
	1/23/2002	ND<10
	4/23/2003	ND<10
	7/30/2003	ND<10
	1/15/2004	ND<10
	7/15/2004	ND<10
	1/25/2005	ND<10
	8/1/2005	ND<2
	1/23/2006	ND<2
	7/19/2006	ND<6
	1/22/2007	ND<1.2

Obs.	33		
Mean	8.91515		
Std Dev.	2.78165		
Tolerance Factor (K)		1.71936	
Comparison Level		**100**	
Untransformed Comp. Level			100
Upper Tolerance Limit = 13.6978			

Location	**Date**	**Conc.**
SW-7D	6/10/1992	ND<2
	5/10/1993	ND<10
	11/16/1993	ND<10
	1/24/1994	ND<10
	4/13/1994	ND<10
	7/14/1994	ND<10
	11/2/1994	ND<10
	1/12/1995	ND<10
	4/12/1995	ND<10
	7/12/1995	ND<10
	10/26/1995	ND<10
	1/16/1996	ND<10
	4/11/1996	ND<10
	7/11/1996	ND<10
	10/24/1996	ND<14
	1/21/1997	ND<10
	4/18/1997	ND<5
	7/14/1997	ND<11
	11/6/1997	ND<10
	1/27/1998	ND<10
	4/22/1998	ND<10
	7/23/1998	ND<10
	11/11/1998	ND<10

	1/28/1999	ND<10
	5/25/1999	ND<10
	7/28/1999	ND<10
	11/10/1999	ND<10
	1/27/2000	ND<10
	4/20/2000	ND<10
	8/1/2000	ND<10
	11/8/2000	ND<10
	1/16/2001	ND<10
	4/17/2001	ND<10
	8/1/2001	ND<10
	11/12/2001	ND<10
	1/23/2002	ND<10
	4/17/2002	ND<10
	7/18/2002	ND<10
	10/22/2002	ND<10
	1/16/2003	ND<10
	4/23/2003	ND<10
	7/30/2003	ND<10
	1/15/2004	ND<10
	7/15/2004	ND<10
	1/25/2005	ND<10
	8/1/2005	ND<2
	1/23/2006	ND<2
	7/19/2006	ND<6
	1/22/2007	ND<1.2

Obs.	49		
Mean	9.24898		
Std Dev.	2.49918		
Tolerance Factor (K)		1.69425	
Comparison Level		**100**	
Untransformed Comp. Level			100

Upper Tolerance Limit = 13.4832

Location	**Date**	**Conc.**
SW-8D	6/10/1992	ND<2
	5/11/1993	ND<10
	11/17/1993	ND<10
	4/12/1994	ND<10
	7/14/1994	ND<10
	11/2/1994	ND<10
	1/12/1995	ND<10
	4/12/1995	ND<10
	7/13/1995	ND<10
	10/25/1995	ND<10
	1/16/1996	ND<10
	4/11/1996	ND<10
	7/11/1996	ND<10
	10/24/1996	ND<14
	1/22/1997	ND<10
	4/17/1997	ND<5
	7/17/1997	ND<11
	11/6/1997	ND<10
	1/27/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	11/11/1998	ND<10
	1/28/1999	ND<10
	5/25/1999	ND<10

	8/2/1999 ND	<10
	11/11/1999	ND<10
	1/27/2000	ND<10
	8/3/2000	ND<10
	11/10/2000	ND<10
	1/19/2001	ND<10
	4/18/2001	ND<10
	8/2/2001	ND<10
	11/13/2001	ND<10
	1/24/2002	ND<10
	4/18/2002	ND<10
	7/17/2002	ND<10
	10/23/2002	ND<10
	1/20/2003	ND<10
	4/28/2003	ND<10
	7/31/2003	ND<10
	1/20/2004	ND<10
	7/19/2004	ND<10
	1/27/2005	ND<10
	8/4/2005	ND<2
	1/24/2006	ND<2
	7/25/2006	ND<6
	1/18/2007	ND<1.2

Obs.	47		
Mean	9.21702		
Std Dev.	2.54792		
Tolerance Factor (K)		1.69642	
Comparison Level		**100**	
Untransformed Comp. Level			100

Upper Tolerance Limit = 13.5394

Location	**Date**	**Conc.**
SW-9D	5/11/1993	ND<10
	11/16/1993	ND<10
	1/25/1994	ND<10
	4/12/1994	ND<10
	7/14/1994	ND<10
	11/2/1994	ND<10
	1/12/1995	ND<10
	4/12/1995	ND<10
	7/18/1995	ND<10
	10/26/1995	ND<10
	1/16/1996	ND<10
	4/11/1996	ND<10
	7/11/1996	ND<10
	10/24/1996	ND<14
	1/21/1997	ND<10
	4/17/1997	ND<5
	7/15/1997	ND<10
	11/6/1997	ND<10
	1/27/1998	ND<10
	4/22/1998	ND<10
	7/23/1998	ND<10
	11/11/1998	ND<10
	1/28/1999	ND<10
	5/27/1999	ND<10
	7/28/1999	ND<10
	11/11/1999	ND<10
	1/27/2000	ND<10

	4/21/2000	ND<10
	8/1/2000	ND<10
	11/9/2000	ND<10
	1/17/2001	ND<10
	4/17/2001	ND<10
	8/1/2001	ND<10
	11/12/2001	ND<10
	1/23/2002	ND<10
	4/22/2002	ND<10
	7/18/2002	ND<10
	10/22/2002	ND<10
	1/16/2003	ND<10
	4/23/2003	ND<10
	7/30/2003	ND<10
	1/15/2004	ND<10
	7/15/2004	ND<10
	1/25/2005	ND<10
	8/1/2005	ND<2
	1/23/2006	ND<2
	7/20/2006	ND<6
	1/22/2007	ND<1.2

Obs. 48
Mean 9.37917
Std Dev. 2.2782
Tolerance Factor (K) 1.69532
Comparison Level 100
Untransformed Comp. Level 100
Upper Tolerance Limit = 13.2414

Location	**Date**	**Conc.**
SW-9S	11/2/1994	ND<10
	1/12/1995	14
	4/12/1995	ND<10
	7/13/1995	ND<10
	10/30/1995	ND<10
	1/16/1996	ND<10
	4/9/1996	ND<10
	7/11/1996	ND<10
	10/23/1996	ND<14
	1/21/1997	ND<10
	4/17/1997	ND<5
	7/17/1997	ND<11
	1/26/1998	ND<10
	4/22/1998	ND<10
	7/28/1998	ND<10
	11/10/1998	ND<10
	1/28/1999	ND<10
	5/27/1999	ND<10
	7/29/1999	ND<10
	1/28/2005	ND<10
	8/3/2005	ND<2
	1/25/2006	ND<2
	7/25/2006	ND<6

Obs. 23
Mean 9.30435
Std Dev. 2.94549
Tolerance Factor (K) 1.75408

Comparison Level **100**
Untransformed Comp. Level 100
Upper Tolerance Limit = 14.471

Location	Date	Conc.
SW-P2	11/17/1993	ND<10
	1/24/1994	ND<10
	4/13/1994	ND<10
	7/14/1994	ND<10
	11/9/1994	ND<10
	1/16/1995	ND<10
	4/13/1995	ND<10
	7/18/1995	ND<10
	10/26/1995	ND<10
	4/11/1996	ND<10
	10/23/1996	ND<14
	4/18/1997	ND<5
	11/6/1997	ND<10
	4/22/1998	ND<10
	11/11/1998	ND<10
	5/27/1999	ND<10
	11/10/1999	ND<10
	4/20/2000	ND<10
	11/9/2000	ND<10
	4/17/2001	ND<10
	11/8/2001	ND<10
	4/22/2002	ND<10
	10/22/2002	ND<10
	4/23/2003	ND<10
	1/15/2004	ND<10
	7/15/2004	ND<10
	1/25/2005	ND<10
	8/2/2005	ND<2
	1/23/2006	5
	7/20/2006	ND<6
	1/22/2007	ND<1.2

Obs.	31	
Mean	9.13548	
Std Dev.	2.58374	
Tolerance Factor (K)		1.72442
Comparison Level		**100**
Untransformed Comp. Level		100

Upper Tolerance Limit = 13.5909

Location	Date	Conc.
SW-P3	11/11/1993	ND<10
	1/20/1994	ND<10
	4/14/1994	ND<10
	7/20/1994	ND<10
	11/1/1994	ND<10
	1/12/1995	ND<10
	4/11/1995	ND<10
	7/12/1995	14
	10/26/1995	ND<10
	1/15/1996	ND<10
	7/11/1996	ND<10
	1/22/1997	ND<10

7/17/1997	ND<11
1/28/1998	ND<10
4/23/1998	ND<10
7/28/1998	ND<10
1/28/1999	ND<10
8/2/1999	ND<10
2/1/2000	ND<10
8/3/2000	ND<10
1/18/2001	ND<10
8/2/2001	ND<10
1/24/2002	ND<10
7/18/2002	ND<10
1/16/2003	ND<10
4/24/2003	ND<10
7/30/2003	ND<10
1/20/2004	ND<10
7/14/2004	ND<10
1/26/2005	ND<10
8/2/2005	ND<2
1/23/2006	ND<2
7/20/2006	ND<6
1/23/2007	1.59

Obs. 34
Mean 9.31147
Std Dev. 2.5561
Tolerance Factor (K) 1.71707
Comparison Level 100
Untransformed Comp. Level 100
Upper Tolerance Limit = 13.7005

Location	Date	Conc.
SW-P5	4/12/1994	ND<10
	7/14/1994	ND<10
	11/9/1994	ND<10
	1/12/1995	ND<10
	4/13/1995	ND<10
	7/13/1995	ND<10
	10/25/1995	ND<10
	1/16/1996	ND<10
	7/11/1996	ND<10
	1/22/1997	ND<10
	7/14/1997	ND<11
	1/27/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	1/28/1999	ND<10
	8/2/1999	ND<10
	1/27/2000	ND<10
	1/26/2005	ND<10
	8/1/2005	ND<2
	1/23/2006	ND<2
	7/20/2006	ND<6
	1/22/2007	ND<1.2

Obs. 22
Mean 8.73636
Std Dev. 2.98656
Tolerance Factor (K) 1.75942

Comparison Level **100**
Untransformed Comp. Level 100
Upper Tolerance Limit = 13.991

Concentrations (µg/L)

Parameter: IRON

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 763
Total Non-Detect: 166
Percent Non-Detects: 21.7562%
Total Background Measurements: 96
There are 3 background locations

Loc.	Meas.	ND	Date	Conc.	Original	
SW-2D	49	13 (26.5306%)				
			6/10/1992		4900	4900
			5/11/1993		450	450
			11/17/1993		390	390
			1/24/1994		300	300
			4/13/1994		1000	1000
			7/14/1994		600	600
			11/2/1994		560	560
			1/11/1995		480	480
			4/12/1995		ND<100	ND<100
			7/12/1995		ND<100	ND<100
			10/25/1995		1000	1000
			1/16/1996		1200	1200
			4/9/1996	100	100	
			7/11/1996		300	300
			10/23/1996		699	699
			1/22/1997		800	800
			4/18/1997		ND<100	ND<100
			7/14/1997		980	980
			11/6/1997		280	280
			1/27/1998		410	410
			4/22/1998		1100	1100
			7/23/1998		170	170
			11/11/1998		ND<100	ND<100
			1/28/1999		110	110
			5/27/1999		120	120
			7/28/1999		120	120
			11/10/1999		ND<100	ND<100
			1/27/2000		ND<100	ND<100
			4/20/2000		230	230
			8/1/2000	210	210	
			11/8/2000		260	260
			1/16/2001		300	300
			4/17/2001		2200	2200
			8/1/2001	1300	1300	
			11/8/2001		190	190
			1/23/2002		100	100
			4/17/2002		110	110
			7/18/2002		150	150
			10/22/2002		ND<100	ND<100
			1/16/2003		100	100
			4/23/2003		110	110
			7/30/2003		ND<100	ND<100
			1/15/2004		ND<100	ND<100
			7/14/2004		ND<100	ND<100

			1/25/2005	51	51
			8/1/2005	ND<20	ND<20
			1/23/2006	32	32
			7/20/2006	ND<54	ND<54
			1/22/2007	ND<6.7	ND<6.7
SW-3D	15	1 (6.66667%)			
			5/11/1993	380	380
			11/16/1993	190	190
			1/24/1994	ND<100	ND<100
			4/13/1994	190	190
			7/14/1994	270	270
			11/2/1994	2300	2300
			1/11/1995	1400	1400
			4/12/1995	1400	1400
			7/12/1995	770	770
			10/25/1995	620	620
			1/25/2005	230	230
			8/2/2005	590	590
			1/23/2006	5190	5190
			7/20/2006	632	632
			1/22/2007	808	808
SW-P1	32	16 (50%)			
			1/24/1994	ND<100	ND<100
			4/25/1994	140	140
			11/9/1994	ND<100	ND<100
			1/16/1995	200	200
			7/13/1995	ND<100	ND<100
			10/26/1995	ND<100	ND<100
			1/15/1996	470	470
			4/22/1996	ND<100	ND<100
			7/11/1996	470	470
			10/24/1996	116	116
			1/20/1997	120	120
			4/17/1997	130	130
			7/14/1997	ND<56	ND<56
			11/6/1997	230	230
			4/22/1998	110	110
			7/23/1998	80	80
			11/10/1998	ND<100	ND<100
			2/2/1999 110	110	
			6/7/1999	ND<100	ND<100
			7/29/1999	4400	4400
			2/1/2000	ND<100	ND<100
			4/21/2000	ND<100	ND<100
			8/3/2000	ND<100	ND<100
			11/10/2000	ND<100	ND<100
			4/17/2001	ND<100	ND<100
			8/2/2001	ND<100	ND<100
			1/25/2002	100	100
			4/23/2002	410	410
			8/14/2002	100	100
			1/20/2003	ND<100	ND<100
			7/30/2003	ND<100	ND<100
			1/24/2006	114	114

There are 20 compliance locations

Loc.	**Meas.**	**ND**	**Date**	**Conc.**	**Original**

SW-12D	11	3 (27.2727%)			
			6/9/1992	190	190
			5/10/1993	800	800
			11/9/1993	240	240
			1/20/1994	270	270
			4/13/1994	180	180
			7/13/1994	170	170
			10/27/1994	ND<100	ND<100
			1/11/1995	ND<100	ND<100
			4/11/1995	ND<100	ND<100
			7/12/1995	160	160
			10/30/1995	220	220
SW-13D	33	20 (60.6061%)			
			6/9/1992	191	191
			5/11/1993	ND<100	ND<100
			11/9/1993	ND<100	ND<100
			1/25/1994	ND<100	ND<100
			4/18/1994	ND<100	ND<100
			7/13/1994	ND<100	ND<100
			11/2/1994	ND<100	ND<100
			1/11/1995	ND<100	ND<100
			4/13/1995	ND<100	ND<100
			7/13/1995	ND<100	ND<100
			10/31/1995	230	230
			4/11/1996	ND<100	ND<100
			10/23/1996	24	24
			4/18/1997	ND<100	ND<100
			11/5/1997	140	140
			4/23/1998	ND<50	ND<50
			11/12/1998	ND<100	ND<100
			5/28/1999	100	100
			11/11/1999	220	220
			4/21/2000	230	230
			11/10/2000	440	440
			4/18/2001	100	100
			11/13/2001	130	130
			4/18/2002	ND<100	ND<100
			10/23/2002	ND<100	ND<100
			4/24/2003	ND<100	ND<100
			1/20/2004	ND<100	ND<100
			7/19/2004	ND<100	ND<100
			1/26/2005	ND<50	ND<50
			8/3/2005 25	25	
			1/24/2006	ND<20	ND<20
			7/25/2006	71	71
			1/23/2007	48.4	48.4
SW-10D	48	0 (0%)			
			6/9/1992	1120	1120
			5/10/1993	3500	3500
			11/11/1993	2400	2400
			1/20/1994	2200	2200
			4/13/1994	1600	1600
			7/26/1994	1600	1600
			1/10/1995	5900	5900
			4/12/1995	7800	7800
			7/13/1995	10000	10000
			10/30/1995	12000	12000
			1/16/1996	7500	7500

			4/11/1996	6700	6700
			7/11/1996	13000	13000
			10/24/1996	7520	7520
			1/21/1997	5000	5000
			4/17/1997	2800	2800
			7/14/1997	3900	3900
			11/5/1997	3800	3800
			1/28/1998	4400	4400
			4/22/1998	3500	3500
			7/28/1998	4400	4400
			11/12/1998	3500	3500
			2/2/1999 4	200	4200
			5/28/1999	4900	4900
			7/29/1999	2500	2500
			11/11/1999	6000	6000
			2/1/2000	5800	5800
			4/21/2000	5400	5400
			8/3/2000 6	800	6800
			11/9/2000	8500	8500
			1/19/2001	8200	8200
			4/18/2001	5400	5400
			8/2/2001	10000	10000
			11/12/2001	2200	2200
			1/24/2002	3100	3100
			4/18/2002	3600	3600
			7/17/2002	4400	4400
			10/23/2002	3400	3400
			1/20/2003	480	480
			4/29/2003	1100	1100
			7/31/2003	4300	4300
			1/22/2004	4700	4700
			7/19/2004	2600	2600
			1/27/2005	9200	9200
			8/3/2005	8300	8300
			1/25/2006	9270	9270
			7/19/2006	9750	9750
			1/18/2007	7710	7710
SW-11D	49	10 (20.4082%)			
			6/9/1992	388	388
			5/10/1993	1800	1800
			11/9/1993	810	810
			1/20/1994	ND<100	ND<100
			4/13/1994	440	440
			7/13/1994	780	780
			10/27/1994	780	780
			1/11/1995	140	140
			4/11/1995	390	390
			7/12/1995	690	690
			10/30/1995	840	840
			1/16/1996	400	400
			4/11/1996	ND<100	ND<100
			7/15/1996	3900	3900
			10/24/1996	8610	8610
			1/20/1997	3500	3500
			4/18/1997	310	310
			7/14/1997	1500	1500
			11/5/1997	470	470
			1/26/1998	700	700
			4/23/1998	4100	4100
			7/28/1998	5200	5200
			11/10/1998	1300	1300

		2/2/1999	3200	3200
		5/27/1999	140	140
		7/29/1999	950	950
		11/10/1999	3700	3700
		1/27/2000	860	860
		4/21/2000	3100	3100
		8/2/2000 1	300	1300
		11/9/2000	410	410
		1/17/2001	220	220
		4/18/2001	100	100
		8/1/2001	280	280
		11/8/2001	ND<100	ND<100
		1/23/2002	130	130
		4/19/2002	ND<100	ND<100
		7/17/2002	180	180
		10/23/2002	ND<100	ND<100
		1/20/2003	ND<100	ND<100
		4/28/2003	ND<100	ND<100
		8/1/2003	ND<100	ND<100
		1/22/2004	ND<100	ND<100
		7/19/2004	ND<100	ND<100
		1/27/2005	180	180
		8/2/2005	270	270
		1/25/2006	213	213
		7/19/2006	517	517
		1/23/2007	251	251
SW-15D 32	11 (34.375%)			
		1/25/1994	3700	3700
		4/18/1994	1800	1800
		7/20/1994	1100	1100
		10/27/1994	4800	4800
		1/11/1995	1000	1000
		4/11/1995	2100	2100
		7/18/1995	480	480
		10/30/1995	1400	1400
		1/16/1996	1800	1800
		7/15/1996	1900	1900
		1/21/1997	6000	6000
		7/15/1997	870	870
		1/28/1998	310	310
		4/23/1998	110	110
		7/23/1998	860	860
		2/2/1999 1	700	1700
		2/1/2000	3800	3800
		8/2/2000	930	930
		1/17/2001	750	750
		8/1/2001	540	540
		1/24/2002	ND<100	ND<100
		8/14/2002	ND<100	ND<100
		1/20/2003	ND<100	ND<100
		4/29/2003	ND<100	ND<100
		7/31/2003	ND<100	ND<100
		1/22/2004	ND<100	ND<100
		7/19/2004	ND<100	ND<100
		1/27/2005	ND<50	ND<50
		8/3/2005	ND<20	ND<20
		1/25/2006	ND<20	ND<20
		7/25/2006	ND<54	ND<54
		1/18/2007	10.7	10.7

SW-1DN 33	0 (0%)	6/10/1992	5530	5530
		5/10/1993	1100	1100
		11/17/1993	1700	1700
		1/24/1994	1500	1500
		4/13/1994	780	780
		7/14/1994	1200	1200
		11/2/1994	3100	3100
		1/12/1995	790	790
		4/12/1995	330	330
		7/12/1995	380	380
		10/26/1995	310	310
		4/9/1996 300	300	
		10/23/1996	606	606
		4/18/1997	1700	1700
		11/6/1997	500	500
		4/22/1998	2100	2100
		11/11/1998	160	160
		5/27/1999	300	300
		11/10/1999	800	800
		4/20/2000	720	720
		11/8/2000	370	370
		4/17/2001	910	910
		11/8/2001	310	310
		4/17/2002	700	700
		10/22/2002	360	360
		4/23/2003	620	620
		1/15/2004	620	620
		7/14/2004	560	560
		1/25/2005	410	410
		8/1/2005	370	370
		1/23/2006	400	400
		7/20/2006	294	294
		1/23/2007	1430	1430
SW-1SN 30	2 (6.66667%)			
		6/10/1992	20900	20900
		5/18/1993	6900	6900
		11/16/1993	16000	16000
		1/20/1994	11000	11000
		4/18/1994	3800	3800
		7/20/1994	1300	1300
		11/1/1994	310	310
		1/11/1995	250	250
		4/11/1995	320	320
		7/12/1995	860	860
		10/26/1995	830	830
		4/9/1996	140	140
		10/22/1996	198	198
		4/18/1997	1100	1100
		11/5/1997	3600	3600
		4/22/1998	100	100
		11/10/1998	340	340
		5/27/1999	4000	4000
		11/10/1999	2800	2800
		4/21/2000	7500	7500
		11/9/2000	4600	4600
		11/8/2001	260	260
		4/28/2003	110	110
		1/22/2004	110	110
		7/14/2004	ND<100	ND<100
		2/8/2005	ND<50	ND<50
		8/4/2005	350	350

			1/25/2006	35	35
			7/25/2006	190	190
			1/23/2007	9390	9390
SW-2SN	19	7 (36.8421%)			
			4/11/1996	140	140
			7/11/1996	140	140
			10/22/1996	138	138
			1/21/1997	160	160
			4/18/1997	ND<100	ND<100
			7/15/1997	1500	1500
			11/5/1997	180	180
			1/26/1998	1800	1800
			4/22/1998	130	130
			7/23/1998	110	110
			11/10/1998	ND<100	ND<100
			2/2/1999	ND<50	ND<50
			5/28/1999	210	210
			7/29/1999	460	460
			11/11/1999	170	170
			1/27/2005	ND<50	ND<50
			8/2/2005	ND<20	ND<20
			1/25/2006	ND<20	ND<20
			7/25/2006	ND<54	ND<54
SW-3SN	21	15 (71.4286%)			
			11/9/1993	ND<100	ND<100
			1/25/1994	180	180
			4/18/1994	480	480
			7/13/1994	ND<100	ND<100
			11/9/1994	ND<100	ND<100
			1/11/1995	ND<100	ND<100
			4/13/1995	ND<100	ND<100
			7/18/1995	130	130
			10/31/1995	ND<100	ND<100
			4/9/1996	ND<100	ND<100
			10/23/1996	38.3	38.3
			4/18/1997	ND<100	ND<100
			11/5/1997	180	180
			4/23/1998	150	150
			11/10/1998	ND<100	ND<100
			5/28/1999	ND<100	ND<100
			11/11/1999	ND<100	ND<100
			1/28/2005	ND<50	ND<50
			8/3/2005	ND<20	ND<20
			1/24/2006	ND<20	ND<20
			7/25/2006	ND<54	ND<54
SW-4D	43	1 (2.32558%)			
			6/9/1992	563	563
			5/11/1993	300	300
			11/11/1993	490	490
			1/20/1994	610	610
			4/13/1994	2400	2400
			7/20/1994	1400	1400
			11/1/1994	11000	11000
			1/11/1995	6700	6700
			4/12/1995	12000	12000
			7/12/1995	5300	5300
			10/26/1995	9100	9100
			4/11/1996	22000	22000

			10/23/1996	32	32
			4/17/1997	15000	15000
			11/4/1997	40000	40000
			4/23/1998	20000	20000
			7/23/1998	25000	25000
			11/10/1998	14000	14000
			2/2/19993	2000	32000
			6/7/1999	430	430
			7/28/1999	140	140
			11/11/1999	ND<100	ND<100
			4/21/2000	12000	12000
			8/2/20001	2000	12000
			11/10/2000	38000	38000
			1/18/2001	38000	38000
			4/18/2001	24000	24000
			8/2/2001	28000	28000
			11/13/2001	14000	14000
			1/24/2002	11000	11000
			4/19/2002	13000	13000
			7/17/2002	12000	12000
			10/22/2002	11000	11000
			1/20/2003	11000	11000
			4/24/2003	11000	11000
			7/31/2003	12000	12000
			1/20/2004	11000	11000
			7/19/2004	13000	13000
			1/26/2005	12000	12000
			8/3/2005	14700	14700
			1/24/2006	17300	17300
			7/25/2006	20500	20500
			1/23/2007	16800	16800
SW-5D	49	25 (51.0204%)	6/10/1992	256	256
			5/11/1993	ND<100	ND<100
			11/9/1993	ND<100	ND<100
			1/20/1994	ND<100	ND<100
			4/13/1994	ND<100	ND<100
			7/26/1994	ND<100	ND<100
			11/1/1994	ND<100	ND<100
			1/10/1995	ND<100	ND<100
			4/13/1995	140	140
			7/18/1995	ND<100	ND<100
			10/26/1995	ND<100	ND<100
			1/15/1996	270	270
			4/11/1996	ND<100	ND<100
			7/11/1996	ND<100	ND<100
			10/23/1996	32.9	32.9
			1/22/1997	ND<100	ND<100
			4/18/1997	ND<100	ND<100
			7/14/1997	ND<56	ND<56
			11/4/1997	80	80
			1/27/1998	110	110
			4/23/1998	99	99
			7/23/1998	120	120
			11/11/1998	ND<100	ND<100
			1/28/1999	ND<50	ND<50
			5/27/1999	ND<100	ND<100
			7/28/1999	ND<50	ND<50
			11/11/1999	ND<100	ND<100
			2/1/2000	ND<100	ND<100
			4/21/2000	ND<100	ND<100
			8/2/2000	ND<100	ND<100

			11/8/2000	ND<100	ND<100
			1/18/2001	250	250
			4/17/2001	ND<100	ND<100
			8/1/2001	1900	1900
			11/8/2001	300	300
			1/23/2002	470	470
			4/19/2002	290	290
			7/18/2002	740	740
			10/23/2002	840	840
			1/16/2003	640	640
			4/24/2003	550	550
			8/1/2003	130	130
			1/20/2004	440	440
			7/15/2004	150	150
			1/26/2005	73	73
			8/2/2005	65	65
			1/23/2006	45	45
			7/19/2006	ND<54	ND<54
			1/22/2007	10.8	10.8
SW-5S	10	2 (20%)	10/24/1996	696	696
			1/26/1998	62	62
			4/23/1998	ND<50	ND<50
			7/23/1998	57	57
			11/11/1998	ND<100	ND<100
			2/2/1999 1	40	140
			5/28/1999	340	340
			1/28/2005	12000	12000
			8/3/2005 36	36	
			1/24/2006	2300	2300
SW-6D	33	0 (0%)	6/10/1992	1040	1040
			5/10/1993	880	880
			11/15/1993	460	460
			1/24/1994	350	350
			4/12/1994	1400	1400
			7/14/1994	330	330
			11/2/1994	560	560
			1/12/1995	460	460
			4/12/1995	370	370
			7/13/1995	240	240
			10/25/1995	600	600
			1/16/1996	2200	2200
			7/11/1996	2000	2000
			1/21/1997	1300	1300
			7/15/1997	210	210
			1/27/1998	1300	1300
			4/23/1998	1300	1300
			7/23/1998	1500	1500
			1/28/1999	1400	1400
			7/28/1999	1600	1600
			1/27/2000	1500	1500
			8/1/2000	800	800
			1/17/2001	390	390
			1/23/2002	340	340
			4/23/2003	670	670
			7/30/2003	200	200
			1/15/2004	270	270
			7/15/2004	260	260
			1/25/2005	260	260
			8/1/2005	170	170

			1/23/2006	256	256
			7/19/2006	288	288
			1/22/2007	178	178
SW-7D	50	0 (0%)	6/10/1992	7680	7680
			5/10/1993	6100	6100
			11/16/1993	9100	9100
			1/24/1994	8000	8000
			4/13/1994	7000	7000
			7/14/1994	7900	7900
			11/2/1994	1300	1300
			1/12/1995	4800	4800
			4/12/1995	1400	1400
			7/12/1995	2200	2200
			10/26/1995	450	450
			1/16/1996	7800	7800
			4/11/1996	1900	1900
			7/11/1996	770	770
			10/24/1996	1690	1690
			1/21/1997	750	750
			4/18/1997	600	600
			7/14/1997	2000	2000
			11/6/1997	1200	1200
			1/27/1998	420	420
			4/22/1998	2000	2000
			7/23/1998	1800	1800
			11/11/1998	1000	1000
			1/28/1999	640	640
			5/25/1999	1000	1000
			7/28/1999	940	940
			11/10/1999	470	470
			1/27/2000	730	730
			4/20/2000	1200	1200
			8/1/2000	210	210
			11/8/2000	500	500
			1/16/2001	180	180
			4/17/2001	850	850
			8/1/2001	610	610
			11/12/2001	400	400
			1/23/2002	370	370
			4/17/2002	510	510
			7/18/2002	350	350
			10/22/2002	420	420
			1/16/2003	460	460
			4/23/2003	680	680
			7/30/2003	790	790
			1/15/2004	790	790
			7/15/2004	2000	2000
			1/25/2005	4100	4100
			3/16/2005	7100	7100
			8/1/2005	6000	6000
			1/23/2006	6630	6630
			7/19/2006	11600	11600
			1/22/2007	8410	8410
SW-8D	47	0 (0%)	6/10/1992	655	655
			5/11/1993	1300	1300
			11/17/1993	900	900
			4/12/1994	780	780
			7/14/1994	720	720
			11/2/1994	1200	1200

		1/12/1995	1700	1700
		4/12/1995	2100	2100
		7/13/1995	1000	1000
		10/25/1995	740	740
		1/16/1996	2300	2300
		4/11/1996	920	920
		7/11/1996	1700	1700
		10/24/1996	1980	1980
		1/22/1997	1900	1900
		4/17/1997	1300	1300
		7/17/1997	2800	2800
		11/6/1997	1500	1500
		1/27/1998	900	900
		4/23/1998	1200	1200
		7/23/1998	3200	3200
		11/11/1998	2700	2700
		1/28/1999	3600	3600
		5/25/1999	5600	5600
		8/2/1999	2000	2000
		11/11/1999	3500	3500
		1/27/2000	3100	3100
		8/3/2000	1300	1300
		11/10/2000	3400	3400
		1/19/2001	6200	6200
		4/18/2001	1300	1300
		8/2/2001	3900	3900
		11/13/2001	1300	1300
		1/24/2002	7400	7400
		4/18/2002	520	520
		7/17/2002	570	570
		10/23/2002	580	580
		1/20/2003	540	540
		4/28/2003	290	290
		7/31/2003	560	560
		1/20/2004	1900	1900
		7/19/2004	1700	1700
		1/27/2005	3200	3200
		8/4/2005	6500	6500
		1/24/2006	5940	5940
		7/25/2006	7840	7840
		1/18/2007	2460	2460

SW-9D	48	13 (27.0833%)		
		5/11/1993	590	590
		11/16/1993	ND<100	ND<100
		1/25/1994	210	210
		4/12/1994	390	390
		7/14/1994	180	180
		11/2/1994	280	280
		1/12/1995	450	450
		4/12/1995	840	840
		7/18/1995	180	180
		10/26/1995	480	480
		1/16/1996	500	500
		4/11/1996	520	520
		7/11/1996	1300	1300
		10/24/1996	2110	2110
		1/21/1997	400	400
		4/17/1997	2300	2300
		7/15/1997	540	540
		11/6/1997	108	108
		1/27/1998	210	210

			4/22/1998	360	360
			7/23/1998	660	660
			11/11/1998	220	220
			1/28/1999	170	170
			5/27/1999	150	150
			7/28/1999	140	140
			11/11/1999	ND<100	ND<100
			1/27/2000	260	260
			4/21/2000	270	270
			8/1/2000	140	140
			11/9/2000	ND<100	ND<100
			1/17/2001	ND<100	ND<100
			4/17/2001	130	130
			8/1/2001	140	140
			11/12/2001	ND<100	ND<100
			1/23/2002	ND<100	ND<100
			4/22/2002	ND<100	ND<100
			7/18/2002	ND<100	ND<100
			10/22/2002	ND<100	ND<100
			1/16/2003	ND<100	ND<100
			4/23/2003	ND<100	ND<100
			7/30/2003	ND<100	ND<100
			1/15/2004	140	140
			7/15/2004	ND<100	ND<100
			1/25/2005	230	230
			8/1/2005	140	140
			1/23/2006	222	222
			7/20/2006	113	113
			1/22/2007	53.7	53.7
SW-9S	24	0 (0%)	11/2/1994	3400	3400
			1/12/1995	3900	3900
			4/12/1995	2100	2100
			7/13/1995	390	390
			10/30/1995	220	220
			1/16/1996	2500	2500
			4/9/1996	160	160
			7/11/1996	700	700
			10/23/1996	460	460
			1/21/1997	1000	1000
			4/17/1997	690	690
			7/17/1997	350	350
			1/26/1998	120	120
			4/22/1998	240	240
			7/28/1998	420	420
			11/10/1998	120	120
			1/28/1999	300	300
			5/27/1999	140	140
			7/29/1999	1400	1400
			1/28/2005	12000	12000
			3/16/2005	5400	5400
			8/3/2005	530	530
			1/25/2006	4590	4590
			7/25/2006	1230	1230
SW-P2	31	4 (12.9032%)			
			11/17/1993	490	490
			1/24/1994	130	130
			4/13/1994	430	430
			7/14/1994	ND<100	ND<100
			11/9/1994	220	220

		1/16/1995	420	420
		4/13/1995	290	290
		7/18/1995	310	310
		10/26/1995	180	180
		4/11/1996	ND<100	ND<100
		10/23/1996	748	748
		4/18/1997	370	370
		11/6/1997	560	560
		4/22/1998	320	320
		11/11/1998	420	420
		5/27/1999	280	280
		11/10/1999	340	340
		4/20/2000	910	910
		11/9/2000	820	820
		4/17/2001	1500	1500
		11/8/2001	370	370
		4/22/2002	300	300
		10/22/2002	280	280
		4/23/2003	220	220
		1/15/2004	210	210
		7/15/2004	ND<100	ND<100
		1/25/2005	85	85
		8/2/2005	370	370
		1/23/2006	163	163
		7/20/2006	ND<54	ND<54
		1/22/2007	27.1	27.1

SW-P3	34	23 (67.6471%)		
		11/11/1993	ND<100	ND<100
		1/20/1994	ND<100	ND<100
		4/14/1994	ND<100	ND<100
		7/20/1994	ND<100	ND<100
		11/1/1994	ND<100	ND<100
		1/12/1995	ND<100	ND<100
		4/11/1995	ND<100	ND<100
		7/12/1995	ND<100	ND<100
		10/26/1995	ND<100	ND<100
		1/15/1996	ND<100	ND<100
		7/11/1996	140	140
		1/22/1997	ND<100	ND<100
		7/17/1997	ND<56	ND<56
		1/28/1998	ND<50	ND<50
		4/23/1998	61	61
		7/28/1998	530	530
		1/28/1999	170	170
		8/2/1999	ND<50	ND<50
		2/1/2000	ND<100	ND<100
		8/3/2000	120	120
		1/18/2001	240	240
		8/2/2001	170	170
		1/24/2002	ND<100	ND<100
		7/18/2002	ND<100	ND<100
		1/16/2003	ND<100	ND<100
		4/24/2003	ND<100	ND<100
		7/30/2003	ND<100	ND<100
		1/20/2004	ND<100	ND<100
		7/14/2004	ND<100	ND<100
		1/26/2005	130	130
		8/2/2005 23	23	
		1/23/2006	44	44
		7/20/2006	ND<54	ND<54
		1/23/2007	60.9	60.9

SW-P5	22	0 (0%)	4/12/1994	860	860
			7/14/1994	860	860
			11/9/1994	1500	1500
			1/12/1995	650	650
			4/13/1995	3300	3300
			7/13/1995	1000	1000
			10/25/1995	3300	3300
			1/16/1996	1100	1100
			7/11/1996	770	770
			1/22/1997	1900	1900
			7/14/1997	2100	2100
			1/27/1998	550	550
			4/23/1998	9200	9200
			7/23/1998	1600	1600
			1/28/1999	2300	2300
			8/2/1999	250	250
			1/27/2000	520	520
			1/26/2005	140	140
			8/1/2005	160	160
			1/23/2006	34	34
			7/20/2006	895	895
			1/22/2007	899	899

Coefficient of Variation

Parameter: IRON

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

CV < 1 indicates normal data

Background Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-2D	49	459.035	779.735	**1.69864**
SW-3D	15	1004.67	1302.08	**1.29603**
SW-P1	32	276.75	759.732	**2.74519**

Compliance Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-12D	11	230	197.484	0.858627
SW-13D	33	114.224	77.9039	0.682026
SW-10D	48	5332.29	2986.3	0.56004
SW-11D	49	1103.04	1679.34	**1.52246**
SW-15D	32	1150.15	1503	**1.30679**
SW-1DN	33	947.273	1039.71	**1.09758**
SW-1SN	30	3248.1	5142.04	**1.58309**
SW-2SN	19	291.158	490.91	**1.68606**
SW-3SN	21	114.395	94.1996	0.823457
SW-4D	43	13275.9	10612	0.799345
SW-5D	49	210.443	307.217	**1.45986**
SW-5S	10	1578.1	3727.18	**2.36181**
SW-6D	33	760.061	587.971	0.773585
SW-7D	50	2716	3081.02	**1.1344**
SW-8D	47	2312.66	1920.81	0.830563
SW-9D	48	342.223	457.386	**1.33652**
SW-9S	24	1765	2666.58	**1.51081**

SW-P2	31	358.616	301.55	0.840872
SW-P3	34	111.732	84.1512	0.753149
SW-P5	22	1540.36	1943.68	**1.26183**

All Locations

Obs.	Mean	Std. Dev.	CV
763	1979.4	4362.08	**2.20374**

Parametric Tolerance Interval Analysis
Action Limit Comparison
Parameter: IRON
USEPA 1992 Guidance Tolerance Limit Formula
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Location	Date	Conc.
SW-12D		
	6/9/1992	190
	5/10/1993	800
	11/9/1993	240
	1/20/1994	270
	4/13/1994	180
	7/13/1994	170
	10/27/1994	ND<100
	1/11/1995	ND<100
	4/11/1995	ND<100
	7/12/1995	160
	10/30/1995	220

Obs.	11		
Mean	230		
Std Dev.	197.484		
Tolerance Factor (K)		1.89305	
Comparison Level		**300**	
Untransformed Comp. Level			300

Upper Tolerance Limit = 603.848

Location	Date	Conc.
SW-13D		
	6/9/1992 191	
	5/11/1993	ND<100
	11/9/1993	ND<100
	1/25/1994	ND<100
	4/18/1994	ND<100
	7/13/1994	ND<100
	11/2/1994	ND<100
	1/11/1995	ND<100
	4/13/1995	ND<100
	7/13/1995	ND<100
	10/31/1995	230
	4/11/1996	ND<100
	10/23/1996	24
	4/18/1997	ND<100
	11/5/1997	140
	4/23/1998	ND<50
	11/12/1998	ND<100
	5/28/1999	100
	11/11/1999	220
	4/21/2000	230
	11/10/2000	440
	4/18/2001	100
	11/13/2001	130
	4/18/2002	ND<100
	10/23/2002	ND<100
	4/24/2003	ND<100

	1/20/2004	ND<100
	7/19/2004	ND<100
	1/26/2005	ND<50
	8/3/2005 25	
	1/24/2006	ND<20
	7/25/2006	71
	1/23/2007	48.4

Obs. 33
Mean 114.224
Std Dev. 77.9039
Tolerance Factor (K) 1.71936
Comparison Level **300**
Untransformed Comp. Level 300
Upper Tolerance Limit = 248.169

Location	**Date**	**Conc.**
SW-10D		
	6/9/1992	1120
	5/10/1993	3500
	11/11/1993	2400
	1/20/1994	2200
	4/13/1994	1600
	7/26/1994	1600
	1/10/1995	5900
	4/12/1995	7800
	7/13/1995	10000
	10/30/1995	12000
	1/16/1996	7500
	4/11/1996	6700
	7/11/1996	13000
	10/24/1996	7520
	1/21/1997	5000
	4/17/1997	2800
	7/14/1997	3900
	11/5/1997	3800
	1/28/1998	4400
	4/22/1998	3500
	7/28/1998	4400
	11/12/1998	3500
	2/2/1999	4200
	5/28/1999	4900
	7/29/1999	2500
	11/11/1999	6000
	2/1/20005	800
	4/21/2000	5400
	8/3/20006	800
	11/9/2000	8500
	1/19/2001	8200
	4/18/2001	5400
	8/2/2001	10000
	11/12/2001	2200
	1/24/2002	3100
	4/18/2002	3600
	7/17/2002	4400
	10/23/2002	3400
	1/20/2003	480
	4/29/2003	1100
	7/31/2003	4300
	1/22/2004	4700

	7/19/2004	2600
	1/27/2005	9200
	8/3/2005	8300
	1/25/2006	9270
	7/19/2006	9750
	1/18/2007	7710

Obs. 48
Mean 5332.29
Std Dev. 2986.3
Tolerance Factor (K) 1.69532
Comparison Level 300
Untransformed Comp. Level 300
Upper Tolerance Limit = 10395

Location	Date	Conc.
SW-11D		
	6/9/1992	388
	5/10/1993	1800
	11/9/1993	810
	1/20/1994	ND<100
	4/13/1994	440
	7/13/1994	780
	10/27/1994	780
	1/11/1995	140
	4/11/1995	390
	7/12/1995	690
	10/30/1995	840
	1/16/1996	400
	4/11/1996	ND<100
	7/15/1996	3900
	10/24/1996	8610
	1/20/1997	3500
	4/18/1997	310
	7/14/1997	1500
	11/5/1997	470
	1/26/1998	700
	4/23/1998	4100
	7/28/1998	5200
	11/10/1998	1300
	2/2/19993	200
	5/27/1999	140
	7/29/1999	950
	11/10/1999	3700
	1/27/2000	860
	4/21/2000	3100
	8/2/2000	1300
	11/9/2000	410
	1/17/2001	220
	4/18/2001	100
	8/1/2001	280
	11/8/2001	ND<100
	1/23/2002	130
	4/19/2002	ND<100
	7/17/2002	180
	10/23/2002	ND<100
	1/20/2003	ND<100
	4/28/2003	ND<100
	8/1/2003	ND<100
	1/22/2004	ND<100

	7/19/2004	ND<100
	1/27/2005	180
	8/2/2005	270
	1/25/2006	213
	7/19/2006	517
	1/23/2007	251

Obs.	49		
Mean	1103.04		
Std Dev.	1679.34		
Tolerance Factor (K)		1.69425	
Comparison Level		**300**	
Untransformed Comp. Level			300

Upper Tolerance Limit = 3948.26

Location	**Date**	**Conc.**
SW-15D		
	1/25/1994	3700
	4/18/1994	1800
	7/20/1994	1100
	10/27/1994	4800
	1/11/1995	1000
	4/11/1995	2100
	7/18/1995	480
	10/30/1995	1400
	1/16/1996	1800
	7/15/1996	1900
	1/21/1997	6000
	7/15/1997	870
	1/28/1998	310
	4/23/1998	110
	7/23/1998	860
	2/2/19991	700
	2/1/2000	3800
	8/2/2000	930
	1/17/2001	750
	8/1/2001	540
	1/24/2002	ND<100
	8/14/2002	ND<100
	1/20/2003	ND<100
	4/29/2003	ND<100
	7/31/2003	ND<100
	1/22/2004	ND<100
	7/19/2004	ND<100
	1/27/2005	ND<50
	8/3/2005	ND<20
	1/25/2006	ND<20
	7/25/2006	ND<54
	1/18/2007	10.7

Obs.	32		
Mean	1150.15		
Std Dev.	1503		
Tolerance Factor (K)		1.72181	
Comparison Level		**300**	
Untransformed Comp. Level			300

Upper Tolerance Limit = 3738.03

Location	Date	Conc.
SW-1DN		
	6/10/1992	5530
	5/10/1993	1100
	11/17/1993	1700
	1/24/1994	1500
	4/13/1994	780
	7/14/1994	1200
	11/2/1994	3100
	1/12/1995	790
	4/12/1995	330
	7/12/1995	380
	10/26/1995	310
	4/9/1996	300
	10/23/1996	606
	4/18/1997	1700
	11/6/1997	500
	4/22/1998	2100
	11/11/1998	160
	5/27/1999	300
	11/10/1999	800
	4/20/2000	720
	11/8/2000	370
	4/17/2001	910
	11/8/2001	310
	4/17/2002	700
	10/22/2002	360
	4/23/2003	620
	1/15/2004	620
	7/14/2004	560
	1/25/2005	410
	8/1/2005	370
	1/23/2006	400
	7/20/2006	294
	1/23/2007	1430

Obs. 33
Mean 947.273
Std Dev. 1039.71
Tolerance Factor (K) 1.71936
Comparison Level 300
Untransformed Comp. Level 300
Upper Tolerance Limit = 2734.91

Location	Date	Conc.
SW-1SN		
	6/10/1992	20900
	5/18/1993	6900
	11/16/1993	16000
	1/20/1994	11000
	4/18/1994	3800
	7/20/1994	1300
	11/1/1994	310
	1/11/1995	250
	4/11/1995	320
	7/12/1995	860
	10/26/1995	830
	4/9/1996	140
	10/22/1996	198

	4/18/1997	1100
	11/5/1997	3600
	4/22/1998	100
	11/10/1998	340
	5/27/1999	4000
	11/10/1999	2800
	4/21/2000	7500
	11/9/2000	4600
	11/8/2001	260
	4/28/2003	110
	1/22/2004	110
	7/14/2004	ND<100
	2/8/2005	ND<50
	8/4/2005	350
	1/25/2006	35
	7/25/2006	190
	1/23/2007	9390

Obs. 30
Mean 3248.1
Std Dev. 5142.04
Tolerance Factor (K) 1.72721
Comparison Level 300
Untransformed Comp. Level 300
Upper Tolerance Limit = 12129.5

Location	Date	Conc.
SW-2SN		
	4/11/1996	140
	7/11/1996	140
	10/22/1996	138
	1/21/1997	160
	4/18/1997	ND<100
	7/15/1997	1500
	11/5/1997	180
	1/26/1998	1800
	4/22/1998	130
	7/23/1998	110
	11/10/1998	ND<100
	2/2/1999	ND<50
	5/28/1999	210
	7/29/1999	460
	11/11/1999	170
	1/27/2005	ND<50
	8/2/2005	ND<20
	1/25/2006	ND<20
	7/25/2006	ND<54

Obs. 19
Mean 291.158
Std Dev. 490.91
Tolerance Factor (K) 1.77911
Comparison Level 300
Untransformed Comp. Level 300
Upper Tolerance Limit = 1164.54

Location	Date	Conc.
SW-3SN		
	11/9/1993	ND<100
	1/25/1994	180
	4/18/1994	480
	7/13/1994	ND<100
	11/9/1994	ND<100
	1/11/1995	ND<100
	4/13/1995	ND<100
	7/18/1995	130
	10/31/1995	ND<100
	4/9/1996	ND<100
	10/23/1996	38.3
	4/18/1997	ND<100
	11/5/1997	180
	4/23/1998	150
	11/10/1998	ND<100
	5/28/1999	ND<100
	11/11/1999	ND<100
	1/28/2005	ND<50
	8/3/2005	ND<20
	1/24/2006	ND<20
	7/25/2006	ND<54

Obs. 21
Mean 114.395
Std Dev. 94.1996
Tolerance Factor (K) 1.76531
Comparison Level 300
Untransformed Comp. Level 300
Upper Tolerance Limit = 280.686

Location	Date	Conc.
SW-4D		
	6/9/1992	563
	5/11/1993	300
	11/11/1993	490
	1/20/1994	610
	4/13/1994	2400
	7/20/1994	1400
	11/1/1994	11000
	1/11/1995	6700
	4/12/1995	12000
	7/12/1995	5300
	10/26/1995	9100
	4/11/1996	22000
	10/23/1996	32
	4/17/1997	15000
	11/4/1997	40000
	4/23/1998	20000
	7/23/1998	25000
	11/10/1998	14000
	2/2/1999	32000
	6/7/1999	430
	7/28/1999	140
	11/11/1999	ND<100
	4/21/2000	12000
	8/2/2000	12000
	11/10/2000	38000

1/18/2001	38000
4/18/2001	24000
8/2/2001	28000
11/13/2001	14000
1/24/2002	11000
4/19/2002	13000
7/17/2002	12000
10/22/2002	11000
1/20/2003	11000
4/24/2003	11000
7/31/2003	12000
1/20/2004	11000
7/19/2004	13000
1/26/2005	12000
8/3/2005	14700
1/24/2006	17300
7/25/2006	20500
1/23/2007	16800

Obs.	43		
Mean	13275.9		
Std Dev.	10612		
Tolerance Factor (K)		1.7014	
Comparison Level		**300**	
Untransformed Comp. Level			300

Upper Tolerance Limit = 31331.2

Location	Date	Conc.
SW-5D	6/10/1992	256
	5/11/1993	ND<100
	11/9/1993	ND<100
	1/20/1994	ND<100
	4/13/1994	ND<100
	7/26/1994	ND<100
	11/1/1994	ND<100
	1/10/1995	ND<100
	4/13/1995	140
	7/18/1995	ND<100
	10/26/1995	ND<100
	1/15/1996	270
	4/11/1996	ND<100
	7/11/1996	ND<100
	10/23/1996	32.9
	1/22/1997	ND<100
	4/18/1997	ND<100
	7/14/1997	ND<56
	11/4/1997	80
	1/27/1998	110
	4/23/1998	99
	7/23/1998	120
	11/11/1998	ND<100
	1/28/1999	ND<50
	5/27/1999	ND<100
	7/28/1999	ND<50
	11/11/1999	ND<100
	2/1/2000	ND<100
	4/21/2000	ND<100
	8/2/2000	ND<100
	11/8/2000	ND<100
	1/18/2001	250

	4/17/2001	ND<100
	8/1/2001	1900
	11/8/2001	300
	1/23/2002	470
	4/19/2002	290
	7/18/2002	740
	10/23/2002	840
	1/16/2003	640
	4/24/2003	550
	8/1/2003	130
	1/20/2004	440
	7/15/2004	150
	1/26/2005	73
	8/2/2005	65
	1/23/2006	45
	7/19/2006	ND<54
	1/22/2007	10.8

Obs. 49
Mean 210.443
Std Dev. 307.217
Tolerance Factor (K) 1.69425
Comparison Level 300
Untransformed Comp. Level 300
Upper Tolerance Limit = 730.946

Location	Date	Conc.
SW-5S	10/24/1996	696
	1/26/1998	62
	4/23/1998	ND<50
	7/23/1998	57
	11/11/1998	ND<100
	2/2/1999 140	
	5/28/1999	340
	1/28/2005	12000
	8/3/2005 36	
	1/24/2006	2300

Obs. 10
Mean 1578.1
Std Dev. 3727.18
Tolerance Factor (K) 1.92259
Comparison Level 300
Untransformed Comp. Level 300
Upper Tolerance Limit = 8743.91

Location	Date	Conc.
SW-6D	6/10/1992	1040
	5/10/1993	880
	11/15/1993	460
	1/24/1994	350
	4/12/1994	1400
	7/14/1994	330
	11/2/1994	560
	1/12/1995	460
	4/12/1995	370
	7/13/1995	240

	10/25/1995	600
	1/16/1996	2200
	7/11/1996	2000
	1/21/1997	1300
	7/15/1997	210
	1/27/1998	1300
	4/23/1998	1300
	7/23/1998	1500
	1/28/1999	1400
	7/28/1999	1600
	1/27/2000	1500
	8/1/2000	800
	1/17/2001	390
	1/23/2002	340
	4/23/2003	670
	7/30/2003	200
	1/15/2004	270
	7/15/2004	260
	1/25/2005	260
	8/1/2005	170
	1/23/2006	256
	7/19/2006	288
	1/22/2007	178

Obs.	33		
Mean	760.061		
Std Dev.	587.971		
Tolerance Factor (K)		1.71936	
Comparison Level		**300**	
Untransformed Comp. Level			300
Upper Tolerance Limit = 1771			

Location	Date	Conc.
SW-7D	6/10/1992	7680
	5/10/1993	6100
	11/16/1993	9100
	1/24/1994	8000
	4/13/1994	7000
	7/14/1994	7900
	11/2/1994	1300
	1/12/1995	4800
	4/12/1995	1400
	7/12/1995	2200
	10/26/1995	450
	1/16/1996	7800
	4/11/1996	1900
	7/11/1996	770
	10/24/1996	1690
	1/21/1997	750
	4/18/1997	600
	7/14/1997	2000
	11/6/1997	1200
	1/27/1998	420
	4/22/1998	2000
	7/23/1998	1800
	11/11/1998	1000
	1/28/1999	640
	5/25/1999	1000
	7/28/1999	940
	11/10/1999	470

	1/27/2000	730
	4/20/2000	1200
	8/1/2000	210
	11/8/2000	500
	1/16/2001	180
	4/17/2001	850
	8/1/2001	610
	11/12/2001	400
	1/23/2002	370
	4/17/2002	510
	7/18/2002	350
	10/22/2002	420
	1/16/2003	460
	4/23/2003	680
	7/30/2003	790
	1/15/2004	790
	7/15/2004	2000
	1/25/2005	4100
	3/16/2005	7100
	8/1/2005	6000
	1/23/2006	6630
	7/19/2006	11600
	1/22/2007	8410

Obs.	50		
Mean	2716		
Std Dev.	3081.02		
Tolerance Factor (K)		1.69323	
Comparison Level		**300**	
Untransformed Comp. Level			300

Upper Tolerance Limit = 7932.88

Location	**Date**	**Conc.**
SW-8D	6/10/1992	655
	5/11/1993	1300
	11/17/1993	900
	4/12/1994	780
	7/14/1994	720
	11/2/1994	1200
	1/12/1995	1700
	4/12/1995	2100
	7/13/1995	1000
	10/25/1995	740
	1/16/1996	2300
	4/11/1996	920
	7/11/1996	1700
	10/24/1996	1980
	1/22/1997	1900
	4/17/1997	1300
	7/17/1997	2800
	11/6/1997	1500
	1/27/1998	900
	4/23/1998	1200
	7/23/1998	3200
	11/11/1998	2700
	1/28/1999	3600
	5/25/1999	5600
	8/2/1999	2000
	11/11/1999	3500
	1/27/2000	3100

	8/3/2000	1300
	11/10/2000	3400
	1/19/2001	6200
	4/18/2001	1300
	8/2/2001	3900
	11/13/2001	1300
	1/24/2002	7400
	4/18/2002	520
	7/17/2002	570
	10/23/2002	580
	1/20/2003	540
	4/28/2003	290
	7/31/2003	560
	1/20/2004	1900
	7/19/2004	1700
	1/27/2005	3200
	8/4/2005	6500
	1/24/2006	5940
	7/25/2006	7840
	1/18/2007	2460

Obs. 47
Mean 2312.66
Std Dev. 1920.81
Tolerance Factor (K) 1.69642
Comparison Level 300
Untransformed Comp. Level 300
Upper Tolerance Limit = 5571.17

Location	Date	Conc.
SW-9D	5/11/1993	590
	11/16/1993	ND<100
	1/25/1994	210
	4/12/1994	390
	7/14/1994	180
	11/2/1994	280
	1/12/1995	450
	4/12/1995	840
	7/18/1995	180
	10/26/1995	480
	1/16/1996	500
	4/11/1996	520
	7/11/1996	1300
	10/24/1996	2110
	1/21/1997	400
	4/17/1997	2300
	7/15/1997	540
	11/6/1997	108
	1/27/1998	210
	4/22/1998	360
	7/23/1998	660
	11/11/1998	220
	1/28/1999	170
	5/27/1999	150
	7/28/1999	140
	11/11/1999	ND<100
	1/27/2000	260
	4/21/2000	270
	8/1/2000	140
	11/9/2000	ND<100

	1/17/2001	ND<100
	4/17/2001	130
	8/1/2001	140
	11/12/2001	ND<100
	1/23/2002	ND<100
	4/22/2002	ND<100
	7/18/2002	ND<100
	10/22/2002	ND<100
	1/16/2003	ND<100
	4/23/2003	ND<100
	7/30/2003	ND<100
	1/15/2004	140
	7/15/2004	ND<100
	1/25/2005	230
	8/1/2005	140
	1/23/2006	222
	7/20/2006	113
	1/22/2007	53.7

Obs.	48		
Mean	342.223		
Std Dev.	457.386		
Tolerance Factor (K)		1.69532	
Comparison Level		**300**	
Untransformed Comp. Level			300

Upper Tolerance Limit = 1117.64

Location	Date	Conc.
SW-9S	11/2/1994	3400
	1/12/1995	3900
	4/12/1995	2100
	7/13/1995	390
	10/30/1995	220
	1/16/1996	2500
	4/9/1996	160
	7/11/1996	700
	10/23/1996	460
	1/21/1997	1000
	4/17/1997	690
	7/17/1997	350
	1/26/1998	120
	4/22/1998	240
	7/28/1998	420
	11/10/1998	120
	1/28/1999	300
	5/27/1999	140
	7/29/1999	1400
	1/28/2005	12000
	3/16/2005	5400
	8/3/2005	530
	1/25/2006	4590
	7/25/2006	1230

Obs.	24		
Mean	1765		
Std Dev.	2666.58		
Tolerance Factor (K)		1.74921	
Comparison Level		**300**	
Untransformed Comp. Level			300

Upper Tolerance Limit = 6429.42

Location	Date	Conc.
SW-P2	11/17/1993	490
	1/24/1994	130
	4/13/1994	430
	7/14/1994	ND<100
	11/9/1994	220
	1/16/1995	420
	4/13/1995	290
	7/18/1995	310
	10/26/1995	180
	4/11/1996	ND<100
	10/23/1996	748
	4/18/1997	370
	11/6/1997	560
	4/22/1998	320
	11/11/1998	420
	5/27/1999	280
	11/10/1999	340
	4/20/2000	910
	11/9/2000	820
	4/17/2001	1500
	11/8/2001	370
	4/22/2002	300
	10/22/2002	280
	4/23/2003	220
	1/15/2004	210
	7/15/2004	ND<100
	1/25/2005	85
	8/2/2005	370
	1/23/2006	163
	7/20/2006	ND<54
	1/22/2007	27.1

Obs.	31		
Mean	358.616		
Std Dev.	301.55		
Tolerance Factor (K)		1.72442	
Comparison Level		**300**	
Untransformed Comp. Level			300

Upper Tolerance Limit = 878.615

Location	Date	Conc.
SW-P3	11/11/1993	ND<100
	1/20/1994	ND<100
	4/14/1994	ND<100
	7/20/1994	ND<100
	11/1/1994	ND<100
	1/12/1995	ND<100
	4/11/1995	ND<100
	7/12/1995	ND<100
	10/26/1995	ND<100
	1/15/1996	ND<100
	7/11/1996	140
	1/22/1997	ND<100
	7/17/1997	ND<56
	1/28/1998	ND<50

	4/23/1998	61
	7/28/1998	530
	1/28/1999	170
	8/2/1999	ND<50
	2/1/2000	ND<100
	8/3/2000	120
	1/18/2001	240
	8/2/2001	170
	1/24/2002	ND<100
	7/18/2002	ND<100
	1/16/2003	ND<100
	4/24/2003	ND<100
	7/30/2003	ND<100
	1/20/2004	ND<100
	7/14/2004	ND<100
	1/26/2005	130
	8/2/2005	23
	1/23/2006	44
	7/20/2006	ND<54
	1/23/2007	60.9

Obs.	34		
Mean	111.732		
Std Dev.	84.1512		
Tolerance Factor (K)		1.71707	
Comparison Level		**300**	
Untransformed Comp. Level			300

Upper Tolerance Limit = 256.226

Location	Date	Conc.
SW-P5	4/12/1994	860
	7/14/1994	860
	11/9/1994	1500
	1/12/1995	650
	4/13/1995	3300
	7/13/1995	1000
	10/25/1995	3300
	1/16/1996	1100
	7/11/1996	770
	1/22/1997	1900
	7/14/1997	2100
	1/27/1998	550
	4/23/1998	9200
	7/23/1998	1600
	1/28/1999	2300
	8/2/1999	250
	1/27/2000	520
	1/26/2005	140
	8/1/2005	160
	1/23/2006	34
	7/20/2006	895
	1/22/2007	899

Obs.	22	
Mean	1540.36	
Std Dev.	1943.68	
Tolerance Factor (K)		1.75942
Comparison Level		**300**
Untransformed Comp. Level		300

Upper Tolerance Limit = 4960.11

Non-Parametric Confidence Interval
Parameter: IRON
Well: SW-2D
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 49

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-2D	1/22/2007	ND<6.7	1	TRUE
SW-2D	8/1/2005	ND<20	2	TRUE
SW-2D	1/23/2006	32	3	TRUE
SW-2D	1/25/2005	51	4	TRUE
SW-2D	7/20/2006	ND<54	5	TRUE
SW-2D	7/30/2003	ND<100	12	TRUE
SW-2D	1/15/2004	ND<100	12	TRUE
SW-2D	7/14/2004	ND<100	12	TRUE
SW-2D	11/10/1999	ND<100	12	TRUE
SW-2D	7/12/1995	ND<100	12	TRUE
SW-2D	1/27/2000	ND<100	12	TRUE
SW-2D	1/23/2002	100	12	TRUE
SW-2D	4/9/1996	100	12	TRUE
SW-2D	1/16/2003	100	12	TRUE
SW-2D	11/11/1998	ND<100	12	TRUE
SW-2D	4/18/1997	ND<100	12	TRUE
SW-2D	10/22/2002	ND<100	12	TRUE
SW-2D	4/12/1995	ND<100	12	TRUE
SW-2D	4/17/2002	110	20	TRUE
SW-2D	1/28/1999	110	20	TRUE
SW-2D	4/23/2003	110	20	TRUE
SW-2D	5/27/1999	120	22.5	TRUE
SW-2D	7/28/1999	120	22.5	TRUE
SW-2D	7/18/2002	150	24	TRUE
SW-2D	7/23/1998	170	25	TRUE
SW-2D	11/8/2001	190	26	TRUE
SW-2D	8/1/2000	210	27	TRUE
SW-2D	4/20/2000	230	28	TRUE
SW-2D	11/8/2000	260	29	TRUE
SW-2D	11/6/1997	280	30	TRUE
SW-2D	1/16/2001	300	32	TRUE
SW-2D	7/11/1996	300	32	TRUE
SW-2D	1/24/1994	300	32	TRUE
SW-2D	11/17/1993	390	34	TRUE
SW-2D	1/27/1998	410	35	TRUE
SW-2D	5/11/1993	450	36	TRUE
SW-2D	1/11/1995	480	37	TRUE
SW-2D	11/2/1994	560	38	TRUE
SW-2D	7/14/1994	600	39	TRUE
SW-2D	10/23/1996	699	40	TRUE
SW-2D	1/22/1997	800	41	TRUE
SW-2D	7/14/1997	980	42	TRUE
SW-2D	10/25/1995	1000	43.5	TRUE
SW-2D	4/13/1994	1000	43.5	TRUE
SW-2D	4/22/1998	1100	45	TRUE
SW-2D	1/16/1996	1200	46	TRUE
SW-2D	8/1/2001	1300	47	TRUE

SW-2D	4/17/2001	2200	48	TRUE
SW-2D	6/10/1992	4900	49	TRUE

Z = 1.64485
Sqrt(49/4) = 3.5
M = 49/2 + 1 + (1.64485 * 3.5)
M = 31.257 = 31
M = 31
n + 1 - M = 19
Two Sided Confidence Level = 95%

Upper Confidence Interval X(31) = 300
Lower Confidence Inverval X(19) = 110
110 <= 300 Indicating No Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-3D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 15

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-3D	1/24/1994	ND<100	1	TRUE
SW-3D	11/16/1993	190	2.5	TRUE
SW-3D	4/13/1994	190	2.5	TRUE
SW-3D	1/25/2005	230	4	TRUE
SW-3D	7/14/1994	270	5	TRUE
SW-3D	5/11/1993	380	6	TRUE
SW-3D	8/2/2005	590	7	TRUE
SW-3D	10/25/1995	620	8	TRUE
SW-3D	7/20/2006	632	9	TRUE
SW-3D	7/12/1995	770	10	TRUE
SW-3D	1/22/2007	808	11	TRUE
SW-3D	4/12/1995	1400	12.5	TRUE
SW-3D	1/11/1995	1400	12.5	TRUE
SW-3D	11/2/1994	2300	14	TRUE
SW-3D	1/23/2006	5190	15	TRUE

Z = 1.64485
Sqrt(15/4) = 1.93649
M = 15/2 + 1 + (1.64485 * 1.93649)
M = 11.6852 = 12
M = 12
n + 1 - M = 4
Two Sided Confidence Level = 95%

Upper Confidence Interval X(12) = 1400
Lower Confidence Inverval X(4) = 230
230 <= 300 Indicating No Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-P1

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 32

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-P1	7/14/1997	ND<56	1	TRUE
SW-P1	7/23/1998	80	2	TRUE
SW-P1	10/26/1995	ND<100	11	TRUE
SW-P1	11/10/1998	ND<100	11	TRUE
SW-P1	1/24/1994	ND<100	11	TRUE
SW-P1	8/3/2000	ND<100	11	TRUE
SW-P1	11/10/2000	ND<100	11	TRUE
SW-P1	4/22/1996	ND<100	11	TRUE
SW-P1	7/13/1995	ND<100	11	TRUE
SW-P1	1/25/2002	100	11	TRUE
SW-P1	6/7/1999	ND<100	11	TRUE
SW-P1	4/17/2001	ND<100	11	TRUE
SW-P1	4/21/2000	ND<100	11	TRUE
SW-P1	7/30/2003	ND<100	11	TRUE
SW-P1	11/9/1994	ND<100	11	TRUE
SW-P1	1/20/2003	ND<100	11	TRUE
SW-P1	8/2/2001	ND<100	11	TRUE
SW-P1	2/1/2000	ND<100	11	TRUE
SW-P1	8/14/2002	100	11	TRUE
SW-P1	2/2/1999	110	20.5	TRUE
SW-P1	4/22/1998	110	20.5	TRUE
SW-P1	1/24/2006	114	22	TRUE
SW-P1	10/24/1996	116	23	TRUE
SW-P1	1/20/1997	120	24	TRUE
SW-P1	4/17/1997	130	25	TRUE
SW-P1	4/25/1994	140	26	TRUE
SW-P1	1/16/1995	200	27	TRUE
SW-P1	11/6/1997	230	28	TRUE
SW-P1	4/23/2002	410	29	TRUE
SW-P1	7/11/1996	470	30.5	TRUE
SW-P1	1/15/1996	470	30.5	TRUE
SW-P1	7/29/1999	4400	32	TRUE

Z = 1.64485
Sqrt(32/4) = 2.82843
M = 32/2 + 1 + (1.64485 * 2.82843)
M = 21.6523 = 22
M = 22
n + 1 - M = 11
Two Sided Confidence Level = 95%

Upper Confidence Interval X(22) = 114
Lower Confidence Inverval X(11) = 100
100 <= 300 Indicating No Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-1DN

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level

Total measurements = 33

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-1DN	11/11/1998	160	1	TRUE
SW-1DN	7/20/2006	294	2	TRUE
SW-1DN	5/27/1999	300	3.5	TRUE
SW-1DN	4/9/1996	300	3.5	TRUE
SW-1DN	10/26/1995	310	5.5	TRUE
SW-1DN	11/8/2001	310	5.5	TRUE
SW-1DN	4/12/1995	330	7	TRUE
SW-1DN	10/22/2002	360	8	TRUE
SW-1DN	11/8/2000	370	9.5	TRUE
SW-1DN	8/1/2005	370	9.5	TRUE
SW-1DN	7/12/1995	380	11	TRUE
SW-1DN	1/23/2006	400	12	TRUE
SW-1DN	1/25/2005	410	13	TRUE
SW-1DN	11/6/1997	500	14	TRUE
SW-1DN	7/14/2004	560	15	TRUE
SW-1DN	10/23/1996	606	16	TRUE
SW-1DN	4/23/2003	620	17.5	TRUE
SW-1DN	1/15/2004	620	17.5	TRUE
SW-1DN	4/17/2002	700	19	TRUE
SW-1DN	4/20/2000	720	20	TRUE
SW-1DN	4/13/1994	780	21	TRUE
SW-1DN	1/12/1995	790	22	TRUE
SW-1DN	11/10/1999	800	23	TRUE
SW-1DN	4/17/2001	910	24	TRUE
SW-1DN	5/10/1993	1100	25	TRUE
SW-1DN	7/14/1994	1200	26	TRUE
SW-1DN	1/23/2007	1430	27	TRUE
SW-1DN	1/24/1994	1500	28	TRUE
SW-1DN	4/18/1997	1700	29.5	TRUE
SW-1DN	11/17/1993	1700	29.5	TRUE
SW-1DN	4/22/1998	2100	31	TRUE
SW-1DN	11/2/1994	3100	32	TRUE
SW-1DN	6/10/1992	5530	33	TRUE

Z = 1.64485
Sqrt(33/4) = 2.87228
M = 33/2 + 1 + (1.64485 * 2.87228)
M = 22.2245 = 22
M = 22
n + 1 - M = 12
Two Sided Confidence Level = 95%

Upper Confidence Interval X(22) = 790
Lower Confidence Inverval X(12) = 400
400 > 300 Indicating Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-1SN

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 30

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-1SN	1/25/2006	35	1	TRUE
SW-1SN	2/8/2005	ND<50	2	TRUE
SW-1SN	4/22/1998	100	3.5	TRUE
SW-1SN	7/14/2004	ND<100	3.5	TRUE
SW-1SN	4/28/2003	110	5.5	TRUE
SW-1SN	1/22/2004	110	5.5	TRUE
SW-1SN	4/9/1996	140	7	TRUE
SW-1SN	7/25/2006	190	8	TRUE
SW-1SN	10/22/1996	198	9	TRUE
SW-1SN	1/11/1995	250	10	TRUE
SW-1SN	11/8/2001	260	11	TRUE
SW-1SN	11/1/1994	310	12	TRUE
SW-1SN	4/11/1995	320	13	TRUE
SW-1SN	11/10/1998	340	14	TRUE
SW-1SN	8/4/2005	350	15	TRUE
SW-1SN	10/26/1995	830	16	TRUE
SW-1SN	7/12/1995	860	17	TRUE
SW-1SN	4/18/1997	1100	18	TRUE
SW-1SN	7/20/1994	1300	19	TRUE
SW-1SN	11/10/1999	2800	20	TRUE
SW-1SN	11/5/1997	3600	21	TRUE
SW-1SN	4/18/1994	3800	22	TRUE
SW-1SN	5/27/1999	4000	23	TRUE
SW-1SN	11/9/2000	4600	24	TRUE
SW-1SN	5/18/1993	6900	25	TRUE
SW-1SN	4/21/2000	7500	26	TRUE
SW-1SN	1/23/2007	9390	27	TRUE
SW-1SN	1/20/1994	11000	28	TRUE
SW-1SN	11/16/1993	16000	29	TRUE
SW-1SN	6/10/1992	20900	30	TRUE

Z = 1.64485
Sqrt(30/4) = 2.73861
M = 30/2 + 1 + (1.64485 * 2.73861)
M = 20.5046 = 21
M = 21
n + 1 - M = 10
Two Sided Confidence Level = 95%

Upper Confidence Interval X(21) = 3600
Lower Confidence Inverval X(10) = 250
250 <= 300 Indicating No Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-2SN

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 19

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-2SN	1/25/2006	ND<20	1.5	TRUE
SW-2SN	8/2/2005	ND<20	1.5	TRUE
SW-2SN	1/27/2005	ND<50	3.5	TRUE
SW-2SN	2/2/1999	ND<50	3.5	TRUE
SW-2SN	7/25/2006	ND<54	5	TRUE
SW-2SN	4/18/1997	ND<100	6.5	TRUE
SW-2SN	11/10/1998	ND<100	6.5	TRUE
SW-2SN	7/23/1998	110	8	TRUE
SW-2SN	4/22/1998	130	9	TRUE
SW-2SN	10/22/1996	138	10	TRUE
SW-2SN	4/11/1996	140	11.5	TRUE
SW-2SN	7/11/1996	140	11.5	TRUE
SW-2SN	1/21/1997	160	13	TRUE
SW-2SN	11/11/1999	170	14	TRUE
SW-2SN	11/5/1997	180	15	TRUE
SW-2SN	5/28/1999	210	16	TRUE
SW-2SN	7/29/1999	460	17	TRUE
SW-2SN	7/15/1997	1500	18	TRUE
SW-2SN	1/26/1998	1800	19	TRUE

Z = 1.64485
Sqrt(19/4) = 2.17945
M = 19/2 + 1 + (1.64485 * 2.17945)
M = 14.0849 = 14
M = 14
n + 1 - M = 6
Two Sided Confidence Level = 95%

Upper Confidence Interval X(14) = 170
Lower Confidence Inverval X(6) = 100
100 <= 300 Indicating No Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-3SN

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 21

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-3SN	8/3/2005	ND<20	1.5	TRUE
SW-3SN	1/24/2006	ND<20	1.5	TRUE
SW-3SN	10/23/1996	38.3	3	TRUE
SW-3SN	1/28/2005	ND<50	4	TRUE
SW-3SN	7/25/2006	ND<54	5	TRUE
SW-3SN	11/9/1993	ND<100	11	TRUE
SW-3SN	11/10/1998	ND<100	11	TRUE
SW-3SN	7/13/1994	ND<100	11	TRUE
SW-3SN	10/31/1995	ND<100	11	TRUE
SW-3SN	4/9/1996	ND<100	11	TRUE
SW-3SN	5/28/1999	ND<100	11	TRUE
SW-3SN	4/18/1997	ND<100	11	TRUE
SW-3SN	11/11/1999	ND<100	11	TRUE
SW-3SN	11/9/1994	ND<100	11	TRUE
SW-3SN	1/11/1995	ND<100	11	TRUE
SW-3SN	4/13/1995	ND<100	11	TRUE
SW-3SN	7/18/1995	130	17	TRUE
SW-3SN	4/23/1998	150	18	TRUE
SW-3SN	1/25/1994	180	19.5	TRUE
SW-3SN	11/5/1997	180	19.5	TRUE
SW-3SN	4/18/1994	480	21	TRUE

Z = 1.64485
Sqrt(21/4) = 2.29129
M = 21/2 + 1 + (1.64485 * 2.29129)
M = 15.2688 = 15
M = 15
n + 1 - M = 7
Two Sided Confidence Level = 95%

Upper Confidence Interval X(15) = 100
Lower Confidence Inverval X(7) = 100
100 <= 300 Indicating No Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-5D

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

95% Comparion Level

Total measurements = 49

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-5D	1/22/2007	10.8	1	TRUE
SW-5D	10/23/1996	32.9	2	TRUE
SW-5D	1/23/2006	45	3	TRUE
SW-5D	7/28/1999	ND<50	4.5	TRUE
SW-5D	1/28/1999	ND<50	4.5	TRUE
SW-5D	7/19/2006	ND<54	6	TRUE
SW-5D	7/14/1997	ND<56	7	TRUE
SW-5D	8/2/2005 65	8	TRUE	
SW-5D	1/26/2005	73	9	TRUE
SW-5D	11/4/1997	80	10	TRUE
SW-5D	4/23/1998	99	11	TRUE
SW-5D	1/20/1994	ND<100	22	TRUE
SW-5D	5/27/1999	ND<100	22	TRUE
SW-5D	7/18/1995	ND<100	22	TRUE
SW-5D	11/9/1993	ND<100	22	TRUE
SW-5D	1/22/1997	ND<100	22	TRUE
SW-5D	7/11/1996	ND<100	22	TRUE
SW-5D	11/11/1999	ND<100	22	TRUE
SW-5D	5/11/1993	ND<100	22	TRUE
SW-5D	4/17/2001	ND<100	22	TRUE
SW-5D	4/18/1997	ND<100	22	TRUE
SW-5D	1/10/1995	ND<100	22	TRUE
SW-5D	11/11/1998	ND<100	22	TRUE
SW-5D	10/26/1995	ND<100	22	TRUE
SW-5D	4/21/2000	ND<100	22	TRUE
SW-5D	4/11/1996	ND<100	22	TRUE
SW-5D	11/8/2000	ND<100	22	TRUE
SW-5D	2/1/2000	ND<100	22	TRUE
SW-5D	7/26/1994	ND<100	22	TRUE
SW-5D	8/2/2000	ND<100	22	TRUE
SW-5D	4/13/1994	ND<100	22	TRUE
SW-5D	11/1/1994	ND<100	22	TRUE
SW-5D	1/27/1998	110	33	TRUE
SW-5D	7/23/1998	120	34	TRUE
SW-5D	8/1/2003	130	35	TRUE
SW-5D	4/13/1995	140	36	TRUE
SW-5D	7/15/2004	150	37	TRUE
SW-5D	1/18/2001	250	38	TRUE
SW-5D	6/10/1992	256	39	TRUE
SW-5D	1/15/1996	270	40	TRUE
SW-5D	4/19/2002	290	41	TRUE
SW-5D	11/8/2001	300	42	TRUE
SW-5D	1/20/2004	440	43	TRUE
SW-5D	1/23/2002	470	44	TRUE
SW-5D	4/24/2003	550	45	TRUE
SW-5D	1/16/2003	640	46	TRUE
SW-5D	7/18/2002	740	47	TRUE
SW-5D	10/23/2002	840	48	TRUE
SW-5D	8/1/2001	1900	49	TRUE

Z = 1.64485
Sqrt(49/4) = 3.5
M = 49/2 + 1 + (1.64485 * 3.5)
M = 31.257 = 31
M = 31
n + 1 - M = 19
Two Sided Confidence Level = 95%

Upper Confidence Interval X(31) = 100
Lower Confidence Inverval X(19) = 100
100 <= 300 Indicating No Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-5S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 10

Ranks

Point	Date	Value	Rank	Bkgrnd	
SW-5S	8/3/2005	36	1	TRUE	
SW-5S	4/23/1998		ND<50	2	TRUE
SW-5S	7/23/1998		57	3	TRUE
SW-5S	1/26/1998		62	4	TRUE
SW-5S	11/11/1998		ND<100	5	TRUE
SW-5S	2/2/1999	140	6	TRUE	
SW-5S	5/28/1999		340	7	TRUE
SW-5S	10/24/1996		696	8	TRUE
SW-5S	1/24/2006		2300	9	TRUE
SW-5S	1/28/2005		12000	10	TRUE

Z = 1.64485
Sqrt(10/4) = 1.58114
M = 10/2 + 1 + (1.64485 * 1.58114)
M = 8.60074 = 9
M = 9
n + 1 - M = 2
Two Sided Confidence Level = 95%

Upper Confidence Interval X(9) = 2300
Lower Confidence Inverval X(2) = 50
50 <= 300 Indicating No Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-7D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 50

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-7D	1/16/2001	180	1	TRUE
SW-7D	8/1/2000	210	2	TRUE
SW-7D	7/18/2002	350	3	TRUE
SW-7D	1/23/2002	370	4	TRUE
SW-7D	11/12/2001	400	5	TRUE
SW-7D	1/27/1998	420	6.5	TRUE
SW-7D	10/22/2002	420	6.5	TRUE
SW-7D	10/26/1995	450	8	TRUE
SW-7D	1/16/2003	460	9	TRUE
SW-7D	11/10/1999	470	10	TRUE
SW-7D	11/8/2000	500	11	TRUE
SW-7D	4/17/2002	510	12	TRUE
SW-7D	4/18/1997	600	13	TRUE
SW-7D	8/1/2001	610	14	TRUE
SW-7D	1/28/1999	640	15	TRUE
SW-7D	4/23/2003	680	16	TRUE
SW-7D	1/27/2000	730	17	TRUE
SW-7D	1/21/1997	750	18	TRUE
SW-7D	7/11/1996	770	19	TRUE
SW-7D	7/30/2003	790	20.5	TRUE
SW-7D	1/15/2004	790	20.5	TRUE
SW-7D	4/17/2001	850	22	TRUE
SW-7D	7/28/1999	940	23	TRUE
SW-7D	11/11/1998	1000	24.5	TRUE
SW-7D	5/25/1999	1000	24.5	TRUE
SW-7D	11/6/1997	1200	26.5	TRUE
SW-7D	4/20/2000	1200	26.5	TRUE
SW-7D	11/2/1994	1300	28	TRUE
SW-7D	4/12/1995	1400	29	TRUE
SW-7D	10/24/1996	1690	30	TRUE
SW-7D	7/23/1998	1800	31	TRUE
SW-7D	4/11/1996	1900	32	TRUE
SW-7D	7/14/1997	2000	34	TRUE
SW-7D	7/15/2004	2000	34	TRUE
SW-7D	4/22/1998	2000	34	TRUE
SW-7D	7/12/1995	2200	36	TRUE
SW-7D	1/25/2005	4100	37	TRUE
SW-7D	1/12/1995	4800	38	TRUE
SW-7D	8/1/2005	6000	39	TRUE
SW-7D	5/10/1993	6100	40	TRUE
SW-7D	1/23/2006	6630	41	TRUE
SW-7D	4/13/1994	7000	42	TRUE
SW-7D	3/16/2005	7100	43	TRUE
SW-7D	6/10/1992	7680	44	TRUE
SW-7D	1/16/1996	7800	45	TRUE
SW-7D	7/14/1994	7900	46	TRUE
SW-7D	1/24/1994	8000	47	TRUE
SW-7D	1/22/2007	8410	48	TRUE
SW-7D	11/16/1993	9100	49	TRUE

SW-7D	7/19/2006	11600	50	TRUE

Z = 1.64485
Sqrt(50/4) = 3.53553
M = 50/2 + 1 + (1.64485 * 3.53553)
M = 31.8154 = 32
M = 32
n + 1 - M = 19
Two Sided Confidence Level = 95%

Upper Confidence Interval X(32) = 1900
Lower Confidence Inverval X(19) = 770
770 > 300 Indicating Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-9D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 48

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-9D	1/22/2007	53.7	1	TRUE
SW-9D	7/30/2003	ND<100	8	TRUE
SW-9D	11/16/1993	ND<100	8	TRUE
SW-9D	7/15/2004	ND<100	8	TRUE
SW-9D	1/17/2001	ND<100	8	TRUE
SW-9D	4/22/2002	ND<100	8	TRUE
SW-9D	7/18/2002	ND<100	8	TRUE
SW-9D	11/9/2000	ND<100	8	TRUE
SW-9D	1/23/2002	ND<100	8	TRUE
SW-9D	4/23/2003	ND<100	8	TRUE
SW-9D	10/22/2002	ND<100	8	TRUE
SW-9D	11/11/1999	ND<100	8	TRUE
SW-9D	1/16/2003	ND<100	8	TRUE
SW-9D	11/12/2001	ND<100	8	TRUE
SW-9D	11/6/1997	108	15	TRUE
SW-9D	7/20/2006	113	16	TRUE
SW-9D	4/17/2001	130	17	TRUE
SW-9D	8/1/2005	140	20	TRUE
SW-9D	8/1/2000	140	20	TRUE
SW-9D	8/1/2001	140	20	TRUE
SW-9D	7/28/1999	140	20	TRUE
SW-9D	1/15/2004	140	20	TRUE
SW-9D	5/27/1999	150	23	TRUE
SW-9D	1/28/1999	170	24	TRUE
SW-9D	7/14/1994	180	25.5	TRUE
SW-9D	7/18/1995	180	25.5	TRUE
SW-9D	1/27/1998	210	27.5	TRUE
SW-9D	1/25/1994	210	27.5	TRUE
SW-9D	11/11/1998	220	29	TRUE
SW-9D	1/23/2006	222	30	TRUE
SW-9D	1/25/2005	230	31	TRUE
SW-9D	1/27/2000	260	32	TRUE
SW-9D	4/21/2000	270	33	TRUE
SW-9D	11/2/1994	280	34	TRUE
SW-9D	4/22/1998	360	35	TRUE

SW-9D	4/12/1994	390	36	TRUE
SW-9D	1/21/1997	400	37	TRUE
SW-9D	1/12/1995	450	38	TRUE
SW-9D	10/26/1995	480	39	TRUE
SW-9D	1/16/1996	500	40	TRUE
SW-9D	4/11/1996	520	41	TRUE
SW-9D	7/15/1997	540	42	TRUE
SW-9D	5/11/1993	590	43	TRUE
SW-9D	7/23/1998	660	44	TRUE
SW-9D	4/12/1995	840	45	TRUE
SW-9D	7/11/1996	1300	46	TRUE
SW-9D	10/24/1996	2110	47	TRUE
SW-9D	4/17/1997	2300	48	TRUE

Z = 1.64485
Sqrt(48/4) = 3.4641
M = 48/2 + 1 + (1.64485 * 3.4641)
M = 30.6979 = 31
M = 31
n + 1 - M = 18
Two Sided Confidence Level = 95%

Upper Confidence Interval X(31) = 230
Lower Confidence Inverval X(18) = 140
140 <= 300 Indicating No Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-9S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 24

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-9S	1/26/1998	120	1.5	TRUE
SW-9S	11/10/1998	120	1.5	TRUE
SW-9S	5/27/1999	140	3	TRUE
SW-9S	4/9/1996	160	4	TRUE
SW-9S	10/30/1995	220	5	TRUE
SW-9S	4/22/1998	240	6	TRUE
SW-9S	1/28/1999	300	7	TRUE
SW-9S	7/17/1997	350	8	TRUE
SW-9S	7/13/1995	390	9	TRUE
SW-9S	7/28/1998	420	10	TRUE
SW-9S	10/23/1996	460	11	TRUE
SW-9S	8/3/2005	530	12	TRUE
SW-9S	4/17/1997	690	13	TRUE
SW-9S	7/11/1996	700	14	TRUE
SW-9S	1/21/1997	1000	15	TRUE
SW-9S	7/25/2006	1230	16	TRUE
SW-9S	7/29/1999	1400	17	TRUE
SW-9S	4/12/1995	2100	18	TRUE
SW-9S	1/16/1996	2500	19	TRUE
SW-9S	11/2/1994	3400	20	TRUE
SW-9S	1/12/1995	3900	21	TRUE
SW-9S	1/25/2006	4590	22	TRUE
SW-9S	3/16/2005	5400	23	TRUE

SW-9S	1/28/2005	12000	24	TRUE

Z = 1.64485
Sqrt(24/4) = 2.44949
M = 24/2 + 1 + (1.64485 * 2.44949)
M = 17.0291 = 17
M = 17
n + 1 - M = 8
Two Sided Confidence Level = 95%

Upper Confidence Interval X(17) = 1400
Lower Confidence Inverval X(8) = 350
350 > 300 Indicating Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-11D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 49

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-11D	4/28/2003	ND<100	6	TRUE
SW-11D	8/1/2003	ND<100	6	TRUE
SW-11D	1/22/2004	ND<100	6	TRUE
SW-11D	1/20/1994	ND<100	6	TRUE
SW-11D	7/19/2004	ND<100	6	TRUE
SW-11D	1/20/2003	ND<100	6	TRUE
SW-11D	4/18/2001	100	6	TRUE
SW-11D	11/8/2001	ND<100	6	TRUE
SW-11D	10/23/2002	ND<100	6	TRUE
SW-11D	4/19/2002	ND<100	6	TRUE
SW-11D	4/11/1996	ND<100	6	TRUE
SW-11D	1/23/2002	130	12	TRUE
SW-11D	1/11/1995	140	13.5	TRUE
SW-11D	5/27/1999	140	13.5	TRUE
SW-11D	7/17/2002	180	15.5	TRUE
SW-11D	1/27/2005	180	15.5	TRUE
SW-11D	1/25/2006	213	17	TRUE
SW-11D	1/17/2001	220	18	TRUE
SW-11D	1/23/2007	251	19	TRUE
SW-11D	8/2/2005	270	20	TRUE
SW-11D	8/1/2001	280	21	TRUE
SW-11D	4/18/1997	310	22	TRUE
SW-11D	6/9/1992	388	23	TRUE
SW-11D	4/11/1995	390	24	TRUE
SW-11D	1/16/1996	400	25	TRUE
SW-11D	11/9/2000	410	26	TRUE
SW-11D	4/13/1994	440	27	TRUE
SW-11D	11/5/1997	470	28	TRUE
SW-11D	7/19/2006	517	29	TRUE
SW-11D	7/12/1995	690	30	TRUE
SW-11D	1/26/1998	700	31	TRUE
SW-11D	10/27/1994	780	32.5	TRUE
SW-11D	7/13/1994	780	32.5	TRUE
SW-11D	11/9/1993	810	34	TRUE
SW-11D	10/30/1995	840	35	TRUE

SW-11D	1/27/2000	860	36	TRUE
SW-11D	7/29/1999	950	37	TRUE
SW-11D	11/10/1998	1300	38.5	TRUE
SW-11D	8/2/2000	1300	38.5	TRUE
SW-11D	7/14/1997	1500	40	TRUE
SW-11D	5/10/1993	1800	41	TRUE
SW-11D	4/21/2000	3100	42	TRUE
SW-11D	2/2/1999	3200	43	TRUE
SW-11D	1/20/1997	3500	44	TRUE
SW-11D	11/10/1999	3700	45	TRUE
SW-11D	7/15/1996	3900	46	TRUE
SW-11D	4/23/1998	4100	47	TRUE
SW-11D	7/28/1998	5200	48	TRUE
SW-11D	10/24/1996	8610	49	TRUE

Z = 1.64485
Sqrt(49/4) = 3.5
M = 49/2 + 1 + (1.64485 * 3.5)
M = 31.257 = 31
M = 31
n + 1 - M = 19
Two Sided Confidence Level = 95%

Upper Confidence Interval X(31) = 700
Lower Confidence Inverval X(19) = 251
251 <= 300 Indicating No Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-15D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 32

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-15D	1/18/2007	10.7	1	TRUE
SW-15D	8/3/2005	ND<20	2.5	TRUE
SW-15D	1/25/2006	ND<20	2.5	TRUE
SW-15D	1/27/2005	ND<50	4	TRUE
SW-15D	7/25/2006	ND<54	5	TRUE
SW-15D	7/19/2004	ND<100	9	TRUE
SW-15D	4/29/2003	ND<100	9	TRUE
SW-15D	1/24/2002	ND<100	9	TRUE
SW-15D	8/14/2002	ND<100	9	TRUE
SW-15D	1/20/2003	ND<100	9	TRUE
SW-15D	7/31/2003	ND<100	9	TRUE
SW-15D	1/22/2004	ND<100	9	TRUE
SW-15D	4/23/1998	110	13	TRUE
SW-15D	1/28/1998	310	14	TRUE
SW-15D	7/18/1995	480	15	TRUE
SW-15D	8/1/2001	540	16	TRUE
SW-15D	1/17/2001	750	17	TRUE
SW-15D	7/23/1998	860	18	TRUE
SW-15D	7/15/1997	870	19	TRUE
SW-15D	8/2/2000	930	20	TRUE
SW-15D	1/11/1995	1000	21	TRUE
SW-15D	7/20/1994	1100	22	TRUE

SW-15D	10/30/1995	1400	23	TRUE
SW-15D	2/2/1999	1700	24	TRUE
SW-15D	4/18/1994	1800	25.5	TRUE
SW-15D	1/16/1996	1800	25.5	TRUE
SW-15D	7/15/1996	1900	27	TRUE
SW-15D	4/11/1995	2100	28	TRUE
SW-15D	1/25/1994	3700	29	TRUE
SW-15D	2/1/2000	3800	30	TRUE
SW-15D	10/27/1994	4800	31	TRUE
SW-15D	1/21/1997	6000	32	TRUE

Z = 1.64485
Sqrt(32/4) = 2.82843
M = 32/2 + 1 + (1.64485 * 2.82843)
M = 21.6523 = 22
M = 22
n + 1 - M = 11
Two Sided Confidence Level = 95%

Upper Confidence Interval X(22) = 1100
Lower Confidence Inverval X(11) = 100
100 <= 300 Indicating No Statistical Significance

Non-Parametric Confidence Interval

Parameter: IRON

Well: SW-P5

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
95% Comparion Level
Total measurements = 22

Ranks

Point	Date	Value	Rank	Bkgrnd
SW-P5	1/23/2006	34	1	TRUE
SW-P5	1/26/2005	140	2	TRUE
SW-P5	8/1/2005	160	3	TRUE
SW-P5	8/2/1999	250	4	TRUE
SW-P5	1/27/2000	520	5	TRUE
SW-P5	1/27/1998	550	6	TRUE
SW-P5	1/12/1995	650	7	TRUE
SW-P5	7/11/1996	770	8	TRUE
SW-P5	7/14/1994	860	9.5	TRUE
SW-P5	4/12/1994	860	9.5	TRUE
SW-P5	7/20/2006	895	11	TRUE
SW-P5	1/22/2007	899	12	TRUE
SW-P5	7/13/1995	1000	13	TRUE
SW-P5	1/16/1996	1100	14	TRUE
SW-P5	11/9/1994	1500	15	TRUE
SW-P5	7/23/1998	1600	16	TRUE
SW-P5	1/22/1997	1900	17	TRUE
SW-P5	7/14/1997	2100	18	TRUE
SW-P5	1/28/1999	2300	19	TRUE
SW-P5	10/25/1995	3300	20.5	TRUE
SW-P5	4/13/1995	3300	20.5	TRUE
SW-P5	4/23/1998	9200	22	TRUE

Z = 1.64485

Sqrt(22/4) = 2.34521
M = 22/2 + 1 + (1.64485 * 2.34521)
M = 15.8575 = 16
M = 16
n + 1 - M = 7
Two Sided Confidence Level = 95%

Upper Confidence Interval X(16) = 1600
Lower Confidence Inverval X(7) = 650
650 > 300 Indicating Statistical Significance

Confidence Interval

Parameter: IRON

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

Compliance Locations

Location **SW-12D**

Mean	230
Std Dev	197.484
Degrees of Freedom	10
Comparison Level	**300**
Untransformed Comp. Level	300

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.76377	[65.4347, 394.565]	230	FALSE
95%	1.81246	[122.079, 337.921]	230	FALSE

Location **SW-13D**

Mean	114.224
Std Dev	77.9039
Degrees of Freedom	32
Comparison Level	**300**
Untransformed Comp. Level	300

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[81.0169, 147.432]	114.224	FALSE
95%	1.69389	[91.2529, 137.196]	114.224	FALSE

Location **SW-10D**

Mean	5332.29
Std Dev	2986.3
Degrees of Freedom	47
Comparison Level	**300**
Untransformed Comp. Level	300

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40834	[4294.21, 6370.37]	5332.29	**TRUE**
95%	1.67793	[4609.05, 6055.54]	5332.29	**TRUE**

Location SW-3SN

Mean	114.395		
Std Dev	94.1996		
Degrees of Freedom		20	
Comparison Level		**300**	
Untransformed Comp. Level			300

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.52798	[62.4301, 166.36]	114.395	FALSE
95%	1.72472	[78.9419, 149.849]	114.395	FALSE

Location SW-4D

Mean	13275.9		
Std Dev	10612		
Degrees of Freedom		42	
Comparison Level		**300**	
Untransformed Comp. Level			300

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.41847	[9362.06, 17189.8]	13275.9	TRUE
95%	1.68195	[10554, 15997.9]	13275.9	TRUE

Location SW-6D

Mean	760.061		
Std Dev	587.971		
Degrees of Freedom		32	
Comparison Level		**300**	
Untransformed Comp. Level			300

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[509.432, 1010.69]	760.061	TRUE
95%	1.69389	[586.687, 933.435]	760.061	TRUE

Location SW-8D

Mean	2312.66		
Std Dev	1920.81		
Degrees of Freedom		46	
Comparison Level		**300**	
Untransformed Comp. Level			300

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.41019	[1637.38, 2987.94]	2312.66	TRUE
95%	1.67866	[1842.33, 2782.98]	2312.66	TRUE

Location SW-P2

Mean	358.616		
Std Dev	301.55		
Degrees of Freedom		30	
Comparison Level		**300**	
Untransformed Comp. Level			300

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.45726	[225.531, 491.702]	358.616	FALSE
95%	1.69726	[266.692, 450.54]	358.616	FALSE

Location SW-P3

Mean	111.732		
Std Dev	84.1512		
Degrees of Freedom		33	
Comparison Level		**300**	
Untransformed Comp. Level			300

Confidence	**t-Stat**	**Interval**	**Mid-Point**	**Significant**
99%	2.44479	[76.4496, 147.015]	111.732	FALSE
95%	1.69236	[87.3085, 136.156]	111.732	FALSE

Concentrations (µg/L)
Parameter: LEAD
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements: 761
Total Non-Detect: 711
Percent Non-Detects: 93.4297%
Total Background Measurements: 96
There are 3 background locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-2D	49	48 (97.9592%)			
			4/21/2000	ND<10	ND<10
			6/10/1992	**3.6**	**3.6**
			5/11/1993	ND<5	ND<5
			11/17/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/25/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/9/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/23/1996	ND<1	ND<1
			1/22/1997	ND<5	ND<5
			4/18/1997	ND<5	ND<5
			7/14/1997	ND<10	ND<10
			11/6/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/10/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			4/20/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			11/8/2000	ND<10	ND<10
			1/16/2001	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/8/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/17/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/14/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10

			8/1/2005	ND<2	ND<2	
			1/23/2006	ND<2	ND<2	
			7/20/2006	ND<3	ND<3	
			1/22/2007	ND<0.17	ND<0.17	
SW-3D	15	14 (93.3333%)				
			5/11/1993	ND<5	ND<5	
			11/16/1993	ND<5	ND<5	
			1/24/1994	ND<5	ND<5	
			4/13/1994	ND<5	ND<5	
			7/14/1994	ND<5	ND<5	
			11/2/1994	ND<5	ND<5	
			1/11/1995	ND<5	ND<5	
			4/12/1995	ND<5	ND<5	
			7/12/1995	ND<5	ND<5	
			10/25/1995	ND<5	ND<5	
			1/25/2005	ND<10	ND<10	
			8/2/2005	ND<2	ND<2	
			1/23/2006	**5**	**5**	
			7/20/2006	ND<3	ND<3	
			1/22/2007	ND<0.17		ND<0.17
SW-P1	32	31 (96.875%)				
			1/24/1994	ND<5	ND<5	
			4/25/1994	ND<5	ND<5	
			11/9/1994	ND<5	ND<5	
			1/16/1995	ND<5	ND<5	
			7/13/1995	**5.8**	**5.8**	
			10/26/1995	ND<5	ND<5	
			1/15/1996	ND<5	ND<5	
			4/22/1996	ND<5	ND<5	
			7/11/1996	ND<5	ND<5	
			10/24/1996	ND<1	ND<1	
			1/20/1997	ND<5	ND<5	
			4/17/1997	ND<5	ND<5	
			7/14/1997	ND<10	ND<10	
			11/6/1997	ND<10	ND<10	
			4/22/1998	ND<10	ND<10	
			7/23/1998	ND<10	ND<10	
			11/10/1998	ND<10	ND<10	
			2/2/1999	ND<10	ND<10	
			6/7/1999	ND<10	ND<10	
			7/29/1999	ND<10	ND<10	
			2/1/2000	ND<10	ND<10	
			8/3/2000	ND<10	ND<10	
			11/10/2000	ND<10	ND<10	
			4/17/2001	ND<10	ND<10	
			8/2/2001	ND<10	ND<10	
			1/25/2002	ND<10	ND<10	
			4/23/2002	ND<10	ND<10	
			8/14/2002	ND<10	ND<10	
			1/20/2003	ND<10	ND<10	
			7/30/2003	ND<10	ND<10	
			1/24/2006	ND<2	ND<2	

There are 20 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original

SW-12D 11	10 (90.9091%)			
		6/9/1992	1	1
		5/10/1993	ND<5	ND<5
		11/9/1993	ND<5	ND<5
		1/20/1994	ND<5	ND<5
		4/13/1994	ND<5	ND<5
		7/13/1994	ND<5	ND<5
		10/27/1994	ND<5	ND<5
		1/11/1995	ND<5	ND<5
		4/11/1995	ND<5	ND<5
		7/12/1995	ND<5	ND<5
		10/30/1995	ND<5	ND<5

SW-13D 33	32 (96.9697%)			
		6/9/1992	10.1	10.1
		5/11/1993	ND<5	ND<5
		11/9/1993	ND<5	ND<5
		1/25/1994	ND<5	ND<5
		4/18/1994	ND<5	ND<5
		7/13/1994	ND<5	ND<5
		11/2/1994	ND<10	ND<10
		1/11/1995	ND<5	ND<5
		4/13/1995	ND<5	ND<5
		7/13/1995	ND<5	ND<5
		10/31/1995	ND<5	ND<5
		4/11/1996	ND<5	ND<5
		10/23/1996	ND<1	ND<1
		4/18/1997	ND<5	ND<5
		11/5/1997	ND<10	ND<10
		4/23/1998	ND<10	ND<10
		11/12/1998	ND<10	ND<10
		5/28/1999	ND<10	ND<10
		11/11/1999	ND<10	ND<10
		4/21/2000	ND<10	ND<10
		11/10/2000	ND<10	ND<10
		4/18/2001	ND<10	ND<10
		11/13/2001	ND<10	ND<10
		4/18/2002	ND<10	ND<10
		10/23/2002	ND<10	ND<10
		4/24/2003	ND<10	ND<10
		1/20/2004	ND<10	ND<10
		7/19/2004	ND<10	ND<10
		1/26/2005	ND<10	ND<10
		8/3/2005	ND<2	ND<2
		1/24/2006	ND<2	ND<2
		7/25/2006	ND<3	ND<3
		1/23/2007	ND<0.17	ND<0.17

SW-10D 48	46 (95.8333%)			
		6/9/1992	1.8	1.8
		5/10/1993	ND<5	ND<5
		11/11/1993	ND<5	ND<5
		1/20/1994	ND<5	ND<5
		4/13/1994	ND<5	ND<5
		7/26/1994	ND<5	ND<5
		1/10/1995	ND<5	ND<5
		4/12/1995	ND<5	ND<5
		7/13/1995	ND<5	ND<5
		10/30/1995	ND<5	ND<5
		1/16/1996	ND<5	ND<5
		4/11/1996	ND<5	ND<5

			7/11/1996	ND<5	ND<5
			10/24/1996	ND<1	ND<1
			1/21/1997	ND<5	ND<5
			4/17/1997	ND<5	ND<5
			7/14/1997	ND<10	ND<10
			11/5/1997	ND<10	ND<10
			1/28/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/28/1998	ND<10	ND<10
			11/12/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			5/28/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/3/2000	ND<10	ND<10
			11/9/2000	ND<10	ND<10
			1/19/2001	ND<10	ND<10
			4/18/2001	ND<10	ND<10
			8/2/2001	ND<10	ND<10
			11/12/2001	ND<10	ND<10
			1/24/2002	ND<10	ND<10
			4/18/2002	ND<10	ND<10
			7/17/2002	ND<10	ND<10
			10/23/2002	ND<10	ND<10
			1/20/2003	ND<10	ND<10
			4/29/2003	ND<10	ND<10
			7/31/2003	ND<10	ND<10
			1/22/2004	ND<10	ND<10
			7/19/2004	ND<10	ND<10
			1/27/2005	ND<10	ND<10
			8/3/2005	2.6	2.6
			1/25/2006	ND<2	ND<2
			7/19/2006	ND<3	ND<3
			1/18/2007	ND<0.17	ND<0.17
SW-11D	49	37 (75.5102%)			
			6/9/1992	**1.1**	**1.1**
			5/10/1993	ND<5	ND<5
			11/9/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	**5.7**	**5.7**
			7/13/1994	ND<5	ND<5
			10/27/1994	**7.2**	**7.2**
			1/11/1995	ND<5	ND<5
			4/11/1995	ND<5	ND<5
			7/12/1995	**6.2**	**6.2**
			10/30/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/15/1996	**16**	**16**
			10/24/1996	**49.2**	**49.2**
			1/20/1997	**18**	**18**
			4/18/1997	ND<5	ND<5
			7/14/1997	ND<10	ND<10
			11/5/1997	ND<10	ND<10
			1/26/1998	ND<10	ND<10
			4/23/1998	**10**	**10**
			7/28/1998	**26**	**26**
			11/10/1998	**12**	**12**
			2/2/1999	ND<10	ND<10

		5/27/1999	ND<10	ND<10
		7/29/1999	ND<10	ND<10
		11/10/1999	**21**	**21**
		1/27/2000	ND<10	ND<10
		4/21/2000	ND<10	ND<10
		8/2/2000	ND<10	ND<10
		11/9/2000	ND<10	ND<10
		1/17/2001	ND<10	ND<10
		4/18/2001	ND<10	ND<10
		8/1/2001	ND<10	ND<10
		11/8/2001	ND<10	ND<10
		1/23/2002	ND<10	ND<10
		4/19/2002	ND<10	ND<10
		7/17/2002	ND<10	ND<10
		10/23/2002	ND<10	ND<10
		1/20/2003	ND<10	ND<10
		4/28/2003	ND<10	ND<10
		8/1/2003	ND<10	ND<10
		1/22/2004	ND<10	ND<10
		7/19/2004	ND<10	ND<10
		1/27/2005	ND<10	ND<10
		8/2/2005	ND<2	ND<2
		1/25/2006	ND<2	ND<2
		7/19/2006	ND<3	ND<3
		1/23/2007	**1.47**	**1.47**
SW-15D 32	29 (90.625%)			
		1/25/1994	**5.5**	**5.5**
		4/18/1994	ND<5	ND<5
		7/20/1994	ND<5	ND<5
		10/27/1994	ND<5	ND<5
		1/11/1995	ND<10	ND<10
		4/11/1995	5.6	5.6
		7/18/1995	ND<5	ND<5
		10/30/1995	ND<5	ND<5
		1/16/1996	ND<5	ND<5
		7/15/1996	ND<5	ND<5
		1/21/1997	15	15
		7/15/1997	ND<5	ND<5
		1/28/1998	ND<10	ND<10
		4/23/1998	ND<10	ND<10
		7/23/1998	ND<10	ND<10
		2/2/1999	ND<10	ND<10
		2/1/2000	ND<10	ND<10
		8/2/2000	ND<10	ND<10
		1/17/2001	ND<10	ND<10
		8/1/2001	ND<10	ND<10
		1/24/2002	ND<10	ND<10
		8/14/2002	ND<10	ND<10
		1/20/2003	ND<10	ND<10
		4/29/2003	ND<10	ND<10
		7/31/2003	ND<10	ND<10
		1/22/2004	ND<10	ND<10
		7/19/2004	ND<10	ND<10
		1/27/2005	ND<10	ND<10
		8/3/2005	ND<2	ND<2
		1/25/2006	ND<2	ND<2
		7/25/2006	ND<3	ND<3
		1/18/2007	ND<0.17	ND<0.17
SW-1DN33	30 (90.9091%)	6/10/1992	1.1	1.1

			5/10/1993	ND<5	ND<5	
			11/17/1993	ND<5	ND<5	
			1/24/1994	ND<5	ND<5	
			4/13/1994	ND<5	ND<5	
			7/14/1994	ND<5	ND<5	
			11/2/1994	ND<10	ND<10	
			1/12/1995	ND<5	ND<5	
			4/12/1995	7.1	7.1	
			7/12/1995	ND<5	ND<5	
			10/26/1995	ND<5	ND<5	
			4/9/1996	ND<5	ND<5	
			10/23/1996	1	1	
			4/18/1997	ND<5	ND<5	
			11/6/1997	ND<10	ND<10	
			4/22/1998	ND<10	ND<10	
			11/11/1998	ND<10	ND<10	
			5/27/1999	ND<10	ND<10	
			11/10/1999	ND<10	ND<10	
			4/20/2000	ND<10	ND<10	
			11/8/2000	ND<10	ND<10	
			4/17/2001	ND<10	ND<10	
			11/8/2001	ND<10	ND<10	
			4/17/2002	ND<10	ND<10	
			10/22/2002	ND<10	ND<10	
			4/23/2003	ND<10	ND<10	
			1/15/2004	ND<10	ND<10	
			7/14/2004	ND<10	ND<10	
			1/25/2005	ND<10	ND<10	
			8/1/2005	ND<2	ND<2	
			1/23/2006	ND<2	ND<2	
			7/20/2006	ND<3	ND<3	
			1/23/2007	ND<0.17		ND<0.17
SW-1SN	30	27 (90%)				
			6/10/1992	2.2	2.2	
			5/18/1993	9.3	9.3	
			11/16/1993	ND<5	ND<5	
			1/20/1994	ND<5	ND<5	
			4/18/1994	ND<5	ND<5	
			7/20/1994	ND<5	ND<5	
			11/1/1994	ND<10	ND<10	
			1/11/1995	ND<10	ND<10	
			4/11/1995	ND<5	ND<5	
			7/12/1995	ND<5	ND<5	
			10/26/1995	ND<5	ND<5	
			4/9/1996	ND<5	ND<5	
			10/22/1996	1.2	1.2	
			4/18/1997	ND<5	ND<5	
			11/5/1997	ND<10	ND<10	
			4/22/1998	ND<10	ND<10	
			11/10/1998	ND<10	ND<10	
			5/27/1999	ND<10	ND<10	
			11/10/1999	ND<10	ND<10	
			4/21/2000	ND<10	ND<10	
			11/9/2000	ND<10	ND<10	
			11/8/2001	ND<10	ND<10	
			4/28/2003	ND<10	ND<10	
			1/22/2004	ND<10	ND<10	
			7/14/2004	ND<10	ND<10	
			2/8/2005	ND<10	ND<10	
			8/4/2005	ND<2	ND<2	
			1/25/2006	ND<2	ND<2	

			7/25/2006	ND<3	ND<3
			1/23/2007	ND<0.17	ND<0.17
SW-2SN	19	18 (94.7368%)			
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/22/1996	1	1
			1/21/1997	ND<5	ND<5
			4/18/1997	ND<5	ND<5
			7/15/1997	ND<6	ND<6
			11/5/1997	ND<10	ND<10
			1/26/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/10/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			5/28/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			1/27/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/25/2006	ND<2	ND<2
			7/25/2006	ND<3	ND<3
SW-3SN	21	20 (95.2381%)			
			11/9/1993	ND<5	ND<5
			1/25/1994	ND<5	ND<5
			4/18/1994	ND<5	ND<5
			7/13/1994	ND<5	ND<5
			11/9/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/13/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/31/1995	ND<5	ND<5
			4/9/1996	ND<5	ND<5
			10/23/1996	ND<1	ND<1
			4/18/1997	ND<5	ND<5
			11/5/1997	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			11/10/1998	ND<10	ND<10
			5/28/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			1/28/2005	ND<10	ND<10
			8/3/2005	3.9	3.9
			1/24/2006	ND<2	ND<2
			7/25/2006	ND<3	ND<3
SW-4D	43	38 (88.3721%)			
			6/9/1992	2.6	2.6
			5/11/1993	ND<5	ND<5
			11/11/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/20/1994	ND<5	ND<5
			11/1/1994	ND<5	ND<5
			1/11/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			10/23/1996	ND<1	ND<1

			4/17/1997	5.7	5.7
			11/4/1997	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/10/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			6/7/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/2/2000	ND<10	ND<10
			11/10/2000	17	17
			1/18/2001	20	20
			4/18/2001	ND<10	ND<10
			8/2/2001	ND<10	ND<10
			11/13/2001	ND<10	ND<10
			1/24/2002	ND<10	ND<10
			4/19/2002	ND<10	ND<10
			7/17/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			1/20/2003	ND<10	ND<10
			4/24/2003	ND<10	ND<10
			7/31/2003	ND<10	ND<10
			1/20/2004	ND<10	ND<10
			7/19/2004	ND<10	ND<10
			1/26/2005	ND<10	ND<10
			8/3/2005	3.5	3.5
			1/24/2006	ND<2	ND<2
			7/25/2006	ND<3	ND<3
			1/23/2007	ND<0.17	ND<0.17
SW-5D	49	46 (93.8776%)			
			6/10/1992	2.9	2.9
			5/11/1993	ND<5	ND<5
			11/9/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/26/1994	ND<5	ND<5
			11/1/1994	ND<5	ND<5
			1/10/1995	ND<5	ND<5
			4/13/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/15/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/23/1996	2.8	2.8
			1/22/1997	ND<5	ND<5
			4/18/1997	ND<5	ND<5
			7/14/1997	ND<10	ND<10
			11/4/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/2/2000	ND<10	ND<10

			11/8/2000	ND<10	ND<10
			1/18/2001	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/8/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/19/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/23/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/24/2003	ND<10	ND<10
			8/1/2003	ND<10	ND<10
			1/20/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/26/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/19/2006	ND<3	ND<3
			1/22/2007	0.579	0.579
SW-5S	10	7 (70%)	10/24/1996	4.3	4.3
			1/26/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			5/28/1999	ND<10	ND<10
			1/28/2005	ND<10	ND<10
			8/3/2005 2	2	
			1/24/2006	2	2
SW-6D	33	31 (93.9394%)			
			6/10/1992	1.7	1.7
			5/10/1993	ND<5	ND<5
			11/15/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/12/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/25/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/21/1997	ND<5	ND<5
			7/15/1997	ND<6	ND<6
			1/27/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			1/28/1999	11	11
			7/28/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			1/17/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10

			8/1/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/19/2006	ND<3	ND<3
			1/22/2007	ND<0.17	ND<0.17
SW-7D	49	49 (100%)			
			6/10/1992	ND<1	ND<1
			5/10/1993	ND<5	ND<5
			11/16/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<10	ND<10
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/24/1996	ND<1	ND<1
			1/21/1997	ND<5	ND<5
			4/18/1997	ND<5	ND<5
			7/14/1997	ND<10	ND<10
			11/6/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/25/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/10/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			4/20/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			11/8/2000	ND<10	ND<10
			1/16/2001	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/12/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/17/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/1/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/19/2006	ND<3	ND<3
			1/22/2007	ND<0.17	ND<0.17
SW-8D	47	46 (97.8723%)			
			6/10/1992	1.4	1.4
			5/11/1993	ND<5	ND<5
			11/17/1993	ND<5	ND<5
			4/12/1994	ND<5	ND<5

			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/25/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/24/1996	ND<1	ND<1
			1/22/1997	ND<5	ND<5
			4/17/1997	ND<5	ND<5
			7/17/1997	ND<10	ND<10
			11/6/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/25/1999	ND<10	ND<10
			8/2/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			8/3/2000	ND<10	ND<10
			11/10/2000	ND<10	ND<10
			1/19/2001	ND<10	ND<10
			4/18/2001	ND<10	ND<10
			8/2/2001	ND<10	ND<10
			11/13/2001	ND<10	ND<10
			1/24/2002	ND<10	ND<10
			4/18/2002	ND<10	ND<10
			7/17/2002	ND<10	ND<10
			10/23/2002	ND<10	ND<10
			1/20/2003	ND<10	ND<10
			4/28/2003	ND<10	ND<10
			7/31/2003	ND<10	ND<10
			1/20/2004	ND<10	ND<10
			7/19/2004	ND<10	ND<10
			1/27/2005	ND<10	ND<10
			8/4/2005	ND<2	ND<2
			1/24/2006	ND<2	ND<2
			7/25/2006	ND<3	ND<3
			1/18/2007	ND<0.17	ND<0.17
SW-9D	48	46 (95.8333%)			
			5/11/1993	ND<5	ND<5
			11/16/1993	ND<5	ND<5
			1/25/1994	ND<5	ND<5
			4/12/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/24/1996	2.7	2.7
			1/21/1997	8	8
			4/17/1997	ND<5	ND<5
			7/15/1997	ND<5	ND<5

			11/6/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			11/11/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10
			4/21/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			11/9/2000	ND<10	ND<10
			1/17/2001	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			8/1/2001	ND<10	ND<10
			11/12/2001	ND<10	ND<10
			1/23/2002	ND<10	ND<10
			4/22/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/1/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/20/2006	ND<3	ND<3
			1/22/2007	ND<0.17	ND<0.17

SW-9S	23	21 (91.3043%)			
			11/2/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/12/1995	ND<5	ND<5
			7/13/1995	ND<5	ND<5
			10/30/1995	ND<5	ND<5
			1/16/1996	ND<5	ND<5
			4/9/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			10/23/1996	1.9	1.9
			1/21/1997	ND<5	ND<5
			4/17/1997	ND<5	ND<5
			7/17/1997	ND<10	ND<10
			1/26/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/28/1998	ND<10	ND<10
			11/10/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			1/28/2005	ND<10	ND<10
			8/3/2005	2.8	2.8
			1/25/2006	ND<2	ND<2
			7/25/2006	ND<3	ND<3

SW-P2	31	29 (93.5484%)	11/17/1993	ND<5	ND<5
			1/24/1994	ND<5	ND<5
			4/13/1994	ND<5	ND<5
			7/14/1994	ND<5	ND<5

			11/9/1994	ND<5	ND<5
			1/16/1995	ND<5	ND<5
			4/13/1995	ND<5	ND<5
			7/18/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			4/11/1996	ND<5	ND<5
			10/23/1996	1.9	1.9
			4/18/1997	ND<5	ND<5
			11/6/1997	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			11/11/1998	ND<10	ND<10
			5/27/1999	ND<10	ND<10
			11/10/1999	ND<10	ND<10
			4/20/2000	ND<10	ND<10
			11/9/2000	ND<10	ND<10
			4/17/2001	ND<10	ND<10
			11/8/2001	ND<10	ND<10
			4/22/2002	ND<10	ND<10
			10/22/2002	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			1/15/2004	ND<10	ND<10
			7/15/2004	ND<10	ND<10
			1/25/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/23/2006	3	3
			7/20/2006	ND<3	ND<3
			1/22/2007	ND<0.17	ND<0.17
SW-P3	34	34 (100%)			
			11/11/1993	ND<5	ND<5
			1/20/1994	ND<5	ND<5
			4/14/1994	ND<5	ND<5
			7/20/1994	ND<5	ND<5
			11/1/1994	ND<5	ND<5
			1/12/1995	ND<5	ND<5
			4/11/1995	ND<5	ND<5
			7/12/1995	ND<5	ND<5
			10/26/1995	ND<5	ND<5
			1/15/1996	ND<5	ND<5
			7/11/1996	ND<5	ND<5
			1/22/1997	ND<5	ND<5
			7/17/1997	ND<10	ND<10
			1/28/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10
			7/28/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			8/2/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			8/3/2000	ND<10	ND<10
			1/18/2001	ND<10	ND<10
			8/2/2001	ND<10	ND<10
			1/24/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/24/2003	ND<10	ND<10
			7/30/2003	ND<10	ND<10
			1/20/2004	ND<10	ND<10
			7/14/2004	ND<10	ND<10
			1/26/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/20/2006	ND<3	ND<3

	1/23/2007	ND<0.17	ND<0.17

SW-P5 22	22 (100%)			
		4/12/1994	ND<5	ND<5
		7/14/1994	ND<5	ND<5
		11/9/1994	ND<5	ND<5
		1/12/1995	ND<5	ND<5
		4/13/1995	ND<5	ND<5
		7/13/1995	ND<5	ND<5
		10/25/1995	ND<5	ND<5
		1/16/1996	ND<5	ND<5
		7/11/1996	ND<5	ND<5
		1/22/1997	ND<5	ND<5
		7/14/1997	ND<10	ND<10
		1/27/1998	ND<10	ND<10
		4/23/1998	ND<10	ND<10
		7/23/1998	ND<10	ND<10
		1/28/1999	ND<10	ND<10
		8/2/1999	ND<10	ND<10
		1/27/2000	ND<10	ND<10
		1/26/2005	ND<10	ND<10
		8/1/2005	ND<2	ND<2
		1/23/2006	ND<2	ND<2
		7/20/2006	ND<3	ND<3
		1/22/2007	ND<0.17	ND<0.17

Coefficient of Variation
Parameter: LEAD
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
CV < 1 indicates normal data

Background Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-2D	49	7.4851	3.09798	0.413886
SW-3D	15	4.678	2.06629	0.441703
SW-P1	32	7.775	2.86368	0.368319

Compliance Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-12D	11	4.63636	1.20605	0.260127
SW-13D	33	7.06879	3.28872	0.465246
SW-10D	48	7.51188	3.14701	0.418938
SW-11D	49	9.60959	7.40202	0.770274
SW-15D	32	7.60219	3.38047	0.444671
SW-1DN	33	6.8597	3.38572	0.493567
SW-1SN	30	6.829	3.40254	0.498249
SW-2SN	19	7.05263	3.40708	0.483093
SW-3SN	21	5.94762	2.84036	0.477562
SW-4D	43	7.90628	3.90857	0.494363
SW-5D	49	7.5159	3.02984	0.403125
SW-5S	10	7.83	3.54966	0.453341
SW-6D	33	6.69303	3.18016	0.475145
SW-7D	49	7.53408	3.18745	0.423071
SW-8D	47	7.43766	3.19649	0.42977
SW-9D	48	7.55979	2.98969	0.395472

SW-9S	23	6.5087	3.01585	0.463358
SW-P2	31	6.93774	3.20697	0.462249
SW-P3	34	7.26971	3.11485	0.42847
SW-P5	22	6.235	3.17561	0.509319

All Locations

Obs.	Mean	Std. Dev.	CV
761	7.32326	3.66155	0.49999

Parametric Tolerance Interval Analysis

Action Limit Comparison

Parameter: LEAD

USEPA 1992 Guidance Tolerance Limit Formula
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Location	Date	Conc.
SW-12D	6/9/1992	1
	5/10/1993	ND<5
	11/9/1993	ND<5
	1/20/1994	ND<5
	4/13/1994	ND<5
	7/13/1994	ND<5
	10/27/1994	ND<5
	1/11/1995	ND<5
	4/11/1995	ND<5
	7/12/1995	ND<5
	10/30/1995	ND<5

Obs. 11
Mean 4.63636
Std Dev. 1.20605
Tolerance Factor (K) 1.89305
Comparison Level **15**
Untransformed Comp. Level 15
Upper Tolerance Limit = 6.91947

Location	Date	Conc.
SW-13D		
	6/9/1992	10.1
	5/11/1993	ND<5
	11/9/1993	ND<5
	1/25/1994	ND<5
	4/18/1994	ND<5
	7/13/1994	ND<5
	11/2/1994	ND<10
	1/11/1995	ND<5
	4/13/1995	ND<5
	7/13/1995	ND<5
	10/31/1995	ND<5
	4/11/1996	ND<5
	10/23/1996	ND<1
	4/18/1997	ND<5
	11/5/1997	ND<10
	4/23/1998	ND<10
	11/12/1998	ND<10

5/28/1999	ND<10
11/11/1999	ND<10
4/21/2000	ND<10
11/10/2000	ND<10
4/18/2001	ND<10
11/13/2001	ND<10
4/18/2002	ND<10
10/23/2002	ND<10
4/24/2003	ND<10
1/20/2004	ND<10
7/19/2004	ND<10
1/26/2005	ND<10
8/3/2005	ND<2
1/24/2006	ND<2
7/25/2006	ND<3
1/23/2007	ND<0.17

Obs. 33
Mean 7.06879
Std Dev. 3.28872
Tolerance Factor (K) 1.71936
Comparison Level 15
Untransformed Comp. Level 15
Upper Tolerance Limit = 12.7233

Location	Date	Conc.
SW-10D	6/9/1992	1.8
	5/10/1993	ND<5
	11/11/1993	ND<5
	1/20/1994	ND<5
	4/13/1994	ND<5
	7/26/1994	ND<5
	1/10/1995	ND<5
	4/12/1995	ND<5
	7/13/1995	ND<5
	10/30/1995	ND<5
	1/16/1996	ND<5
	4/11/1996	ND<5
	7/11/1996	ND<5
	10/24/1996	ND<1
	1/21/1997	ND<5
	4/17/1997	ND<5
	7/14/1997	ND<10
	11/5/1997	ND<10
	1/28/1998	ND<10
	4/22/1998	ND<10
	7/28/1998	ND<10
	11/12/1998	ND<10
	2/2/1999	ND<10
	5/28/1999	ND<10
	7/29/1999	ND<10
	11/11/1999	ND<10
	2/1/2000	ND<10
	4/21/2000	ND<10
	8/3/2000	ND<10
	11/9/2000	ND<10
	1/19/2001	ND<10
	4/18/2001	ND<10
	8/2/2001	ND<10
	11/12/2001	ND<10

1/24/2002	ND<10
4/18/2002	ND<10
7/17/2002	ND<10
10/23/2002	ND<10
1/20/2003	ND<10
4/29/2003	ND<10
7/31/2003	ND<10
1/22/2004	ND<10
7/19/2004	ND<10
1/27/2005	ND<10
8/3/2005	2.6
1/25/2006	ND<2
7/19/2006	ND<3
1/18/2007	ND<0.17

Obs.	48	
Mean	7.51188	
Std Dev.	3.14701	
Tolerance Factor (K)		1.69532
Comparison Level		**15**
Untransformed Comp. Level		15

Upper Tolerance Limit = 12.847

Location	**Date**	**Conc.**
SW-11D		
	6/9/1992	1.1
	5/10/1993	ND<5
	11/9/1993	ND<5
	1/20/1994	ND<5
	4/13/1994	5.7
	7/13/1994	ND<5
	10/27/1994	7.2
	1/11/1995	ND<5
	4/11/1995	ND<5
	7/12/1995	6.2
	10/30/1995	ND<5
	1/16/1996	ND<5
	4/11/1996	ND<5
	7/15/1996	16
	10/24/1996	49.2
	1/20/1997	18
	4/18/1997	ND<5
	7/14/1997	ND<10
	11/5/1997	ND<10
	1/26/1998	ND<10
	4/23/1998	10
	7/28/1998	26
	11/10/1998	12
	2/2/1999	ND<10
	5/27/1999	ND<10
	7/29/1999	ND<10
	11/10/1999	21
	1/27/2000	ND<10
	4/21/2000	ND<10
	8/2/2000	ND<10
	11/9/2000	ND<10
	1/17/2001	ND<10
	4/18/2001	ND<10
	8/1/2001	ND<10
	11/8/2001	ND<10

	1/23/2002	ND<10
	4/19/2002	ND<10
	7/17/2002	ND<10
	10/23/2002	ND<10
	1/20/2003	ND<10
	4/28/2003	ND<10
	8/1/2003	ND<10
	1/22/2004	ND<10
	7/19/2004	ND<10
	1/27/2005	ND<10
	8/2/2005	ND<2
	1/25/2006	ND<2
	7/19/2006	ND<3
	1/23/2007	1.47

Obs. 49
Mean 9.60959
Std Dev. 7.40202
Tolerance Factor (K) 1.69425
Comparison Level 15
Untransformed Comp. Level 15
Upper Tolerance Limit = 22.1505

Location	**Date**	**Conc.**
SW-15D		
	1/25/1994	5.5
	4/18/1994	ND<5
	7/20/1994	ND<5
	10/27/1994	ND<5
	1/11/1995	ND<10
	4/11/1995	5.6
	7/18/1995	ND<5
	10/30/1995	ND<5
	1/16/1996	ND<5
	7/15/1996	ND<5
	1/21/1997	15
	7/15/1997	ND<5
	1/28/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	2/2/1999	ND<10
	2/1/2000	ND<10
	8/2/2000	ND<10
	1/17/2001	ND<10
	8/1/2001	ND<10
	1/24/2002	ND<10
	8/14/2002	ND<10
	1/20/2003	ND<10
	4/29/2003	ND<10
	7/31/2003	ND<10
	1/22/2004	ND<10
	7/19/2004	ND<10
	1/27/2005	ND<10
	8/3/2005	ND<2
	1/25/2006	ND<2
	7/25/2006	ND<3
	1/18/2007	ND<0.17

Obs. 32

Mean	7.60219	
Std Dev.	3.38047	
Tolerance Factor (K)		1.72181
Comparison Level		**15**
Untransformed Comp. Level		15
Upper Tolerance Limit = 13.4227		

Location	**Date**	**Conc.**
SW-1DN		
	6/10/1992	1.1
	5/10/1993	ND<5
	11/17/1993	ND<5
	1/24/1994	ND<5
	4/13/1994	ND<5
	7/14/1994	ND<5
	11/2/1994	ND<10
	1/12/1995	ND<5
	4/12/1995	7.1
	7/12/1995	ND<5
	10/26/1995	ND<5
	4/9/1996	ND<5
	10/23/1996	1
	4/18/1997	ND<5
	11/6/1997	ND<10
	4/22/1998	ND<10
	11/11/1998	ND<10
	5/27/1999	ND<10
	11/10/1999	ND<10
	4/20/2000	ND<10
	11/8/2000	ND<10
	4/17/2001	ND<10
	11/8/2001	ND<10
	4/17/2002	ND<10
	10/22/2002	ND<10
	4/23/2003	ND<10
	1/15/2004	ND<10
	7/14/2004	ND<10
	1/25/2005	ND<10
	8/1/2005	ND<2
	1/23/2006	ND<2
	7/20/2006	ND<3
	1/23/2007	ND<0.17

Obs.	33	
Mean	6.8597	
Std Dev.	3.38572	
Tolerance Factor (K)		1.71936
Comparison Level		**15**
Untransformed Comp. Level		15
Upper Tolerance Limit = 12.681		

Location	**Date**	**Conc.**
SW-1SN		
	6/10/1992	2.2
	5/18/1993	9.3
	11/16/1993	ND<5
	1/20/1994	ND<5
	4/18/1994	ND<5

	7/20/1994	ND<5
	11/1/1994	ND<10
	1/11/1995	ND<10
	4/11/1995	ND<5
	7/12/1995	ND<5
	10/26/1995	ND<5
	4/9/1996	ND<5
	10/22/1996	1.2
	4/18/1997	ND<5
	11/5/1997	ND<10
	4/22/1998	ND<10
	11/10/1998	ND<10
	5/27/1999	ND<10
	11/10/1999	ND<10
	4/21/2000	ND<10
	11/9/2000	ND<10
	11/8/2001	ND<10
	4/28/2003	ND<10
	1/22/2004	ND<10
	7/14/2004	ND<10
	2/8/2005	ND<10
	8/4/2005	ND<2
	1/25/2006	ND<2
	7/25/2006	ND<3
	1/23/2007	ND<0.17

Obs. 30
Mean 6.829
Std Dev. 3.40254
Tolerance Factor (K) 1.72721
Comparison Level 15
Untransformed Comp. Level 15
Upper Tolerance Limit = 12.7059

Location	**Date**	**Conc.**
SW-2SN		
	4/11/1996	ND<5
	7/11/1996	ND<5
	10/22/1996	1
	1/21/1997	ND<5
	4/18/1997	ND<5
	7/15/1997	ND<6
	11/5/1997	ND<10
	1/26/1998	ND<10
	4/22/1998	ND<10
	7/23/1998	ND<10
	11/10/1998	ND<10
	2/2/1999	ND<10
	5/28/1999	ND<10
	7/29/1999	ND<10
	11/11/1999	ND<10
	1/27/2005	ND<10
	8/2/2005	ND<2
	1/25/2006	ND<2
	7/25/2006	ND<3

Obs. 19
Mean 7.05263
Std Dev. 3.40708

Tolerance Factor (K)	1.77911
Comparison Level	**15**
Untransformed Comp. Level	15
Upper Tolerance Limit = 13.1142	

Location	Date	Conc.
SW-3SN		
	11/9/1993	ND<5
	1/25/1994	ND<5
	4/18/1994	ND<5
	7/13/1994	ND<5
	11/9/1994	ND<5
	1/11/1995	ND<5
	4/13/1995	ND<5
	7/18/1995	ND<5
	10/31/1995	ND<5
	4/9/1996	ND<5
	10/23/1996	ND<1
	4/18/1997	ND<5
	11/5/1997	ND<10
	4/23/1998	ND<10
	11/10/1998	ND<10
	5/28/1999	ND<10
	11/11/1999	ND<10
	1/28/2005	ND<10
	8/3/2005	3.9
	1/24/2006	ND<2
	7/25/2006	ND<3

Obs.	21	
Mean	5.94762	
Std Dev.	2.84036	
Tolerance Factor (K)		1.76531
Comparison Level		**15**
Untransformed Comp. Level		15
Upper Tolerance Limit = 10.9617		

Location	Date	Conc.
SW-4D		
	6/9/1992	2.6
	5/11/1993	ND<5
	11/11/1993	ND<5
	1/20/1994	ND<5
	4/13/1994	ND<5
	7/20/1994	ND<5
	11/1/1994	ND<5
	1/11/1995	ND<5
	4/12/1995	ND<5
	7/12/1995	ND<5
	10/26/1995	ND<5
	4/11/1996	ND<5
	10/23/1996	ND<1
	4/17/1997	5.7
	11/4/1997	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	11/10/1998	ND<10
	2/2/1999	ND<10

	6/7/1999	ND<10
	7/28/1999	ND<10
	11/11/1999	ND<10
	4/21/2000	ND<10
	8/2/2000	ND<10
	11/10/2000	17
	1/18/2001	20
	4/18/2001	ND<10
	8/2/2001	ND<10
	11/13/2001	ND<10
	1/24/2002	ND<10
	4/19/2002	ND<10
	7/17/2002	ND<10
	10/22/2002	ND<10
	1/20/2003	ND<10
	4/24/2003	ND<10
	7/31/2003	ND<10
	1/20/2004	ND<10
	7/19/2004	ND<10
	1/26/2005	ND<10
	8/3/2005	3.5
	1/24/2006	ND<2
	7/25/2006	ND<3
	1/23/2007	ND<0.17

Obs.	43		
Mean	7.90628		
Std Dev.	3.90857		
Tolerance Factor (K)		1.7014	
Comparison Level		**15**	
Untransformed Comp. Level			15

Upper Tolerance Limit = 14.5563

Location	**Date**	**Conc.**
SW-5D	6/10/1992	2.9
	5/11/1993	ND<5
	11/9/1993	ND<5
	1/20/1994	ND<5
	4/13/1994	ND<5
	7/26/1994	ND<5
	11/1/1994	ND<5
	1/10/1995	ND<5
	4/13/1995	ND<5
	7/18/1995	ND<5
	10/26/1995	ND<5
	1/15/1996	ND<5
	4/11/1996	ND<5
	7/11/1996	ND<5
	10/23/1996	2.8
	1/22/1997	ND<5
	4/18/1997	ND<5
	7/14/1997	ND<10
	11/4/1997	ND<10
	1/27/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	11/11/1998	ND<10
	1/28/1999	ND<10
	5/27/1999	ND<10
	7/28/1999	ND<10

11/11/1999	ND<10
2/1/2000	ND<10
4/21/2000	ND<10
8/2/2000	ND<10
11/8/2000	ND<10
1/18/2001	ND<10
4/17/2001	ND<10
8/1/2001	ND<10
11/8/2001	ND<10
1/23/2002	ND<10
4/19/2002	ND<10
7/18/2002	ND<10
10/23/2002	ND<10
1/16/2003	ND<10
4/24/2003	ND<10
8/1/2003	ND<10
1/20/2004	ND<10
7/15/2004	ND<10
1/26/2005	ND<10
8/2/2005	ND<2
1/23/2006	ND<2
7/19/2006	ND<3
1/22/2007	0.579

Obs.	49		
Mean	7.5159		
Std Dev.	3.02984		
Tolerance Factor (K)		1.69425	
Comparison Level		**15**	
Untransformed Comp. Level			15

Upper Tolerance Limit = 12.6492

Location	**Date**	**Conc.**
SW-5S	10/24/1996	4.3
	1/26/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	11/11/1998	ND<10
	2/2/1999	ND<10
	5/28/1999	ND<10
	1/28/2005	ND<10
	8/3/2005	2
	1/24/2006	2

Obs.	10		
Mean	7.83		
Std Dev.	3.54966		
Tolerance Factor (K)		1.92259	
Comparison Level		**15**	
Untransformed Comp. Level			15

Upper Tolerance Limit = 14.6545

Location	**Date**	**Conc.**
SW-6D	6/10/1992	1.7
	5/10/1993	ND<5
	11/15/1993	ND<5
	1/24/1994	ND<5

	4/12/1994	ND<5
	7/14/1994	ND<5
	11/2/1994	ND<5
	1/12/1995	ND<5
	4/12/1995	ND<5
	7/13/1995	ND<5
	10/25/1995	ND<5
	1/16/1996	ND<5
	7/11/1996	ND<5
	1/21/1997	ND<5
	7/15/1997	ND<6
	1/27/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	1/28/1999	11
	7/28/1999	ND<10
	1/27/2000	ND<10
	8/1/2000	ND<10
	1/17/2001	ND<10
	1/23/2002	ND<10
	4/23/2003	ND<10
	7/30/2003	ND<10
	1/15/2004	ND<10
	7/15/2004	ND<10
	1/25/2005	ND<10
	8/1/2005	ND<2
	1/23/2006	ND<2
	7/19/2006	ND<3
	1/22/2007	ND<0.17

Obs.	33		
Mean	6.69303		
Std Dev.	3.18016		
Tolerance Factor (K)		1.71936	
Comparison Level		**15**	
Untransformed Comp. Level			15
Upper Tolerance Limit = 12.1609			

Location	**Date**	**Conc.**
SW-7D	6/10/1992	ND<1
	5/10/1993	ND<5
	11/16/1993	ND<5
	1/24/1994	ND<5
	4/13/1994	ND<5
	7/14/1994	ND<5
	11/2/1994	ND<10
	1/12/1995	ND<5
	4/12/1995	ND<5
	7/12/1995	ND<5
	10/26/1995	ND<5
	1/16/1996	ND<5
	4/11/1996	ND<5
	7/11/1996	ND<5
	10/24/1996	ND<1
	1/21/1997	ND<5
	4/18/1997	ND<5
	7/14/1997	ND<10
	11/6/1997	ND<10
	1/27/1998	ND<10
	4/22/1998	ND<10

7/23/1998	ND<10
11/11/1998	ND<10
1/28/1999	ND<10
5/25/1999	ND<10
7/28/1999	ND<10
11/10/1999	ND<10
1/27/2000	ND<10
4/20/2000	ND<10
8/1/2000	ND<10
11/8/2000	ND<10
1/16/2001	ND<10
4/17/2001	ND<10
8/1/2001	ND<10
11/12/2001	ND<10
1/23/2002	ND<10
4/17/2002	ND<10
7/18/2002	ND<10
10/22/2002	ND<10
1/16/2003	ND<10
4/23/2003	ND<10
7/30/2003	ND<10
1/15/2004	ND<10
7/15/2004	ND<10
1/25/2005	ND<10
8/1/2005	ND<2
1/23/2006	ND<2
7/19/2006	ND<3
1/22/2007	ND<0.17

Obs. 49
Mean 7.53408
Std Dev. 3.18745
Tolerance Factor (K) 1.69425
Comparison Level 15
Untransformed Comp. Level 15
Upper Tolerance Limit = 12.9344

Location	**Date**	**Conc.**
SW-8D	6/10/1992	1.4
	5/11/1993	ND<5
	11/17/1993	ND<5
	4/12/1994	ND<5
	7/14/1994	ND<5
	11/2/1994	ND<5
	1/12/1995	ND<5
	4/12/1995	ND<5
	7/13/1995	ND<5
	10/25/1995	ND<5
	1/16/1996	ND<5
	4/11/1996	ND<5
	7/11/1996	ND<5
	10/24/1996	ND<1
	1/22/1997	ND<5
	4/17/1997	ND<5
	7/17/1997	ND<10
	11/6/1997	ND<10
	1/27/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	11/11/1998	ND<10

	1/28/1999	ND<10
	5/25/1999	ND<10
	8/2/1999	ND<10
	11/11/1999	ND<10
	1/27/2000	ND<10
	8/3/2000	ND<10
	11/10/2000	ND<10
	1/19/2001	ND<10
	4/18/2001	ND<10
	8/2/2001	ND<10
	11/13/2001	ND<10
	1/24/2002	ND<10
	4/18/2002	ND<10
	7/17/2002	ND<10
	10/23/2002	ND<10
	1/20/2003	ND<10
	4/28/2003	ND<10
	7/31/2003	ND<10
	1/20/2004	ND<10
	7/19/2004	ND<10
	1/27/2005	ND<10
	8/4/2005	ND<2
	1/24/2006	ND<2
	7/25/2006	ND<3
	1/18/2007	ND<0.17

Obs. 47
Mean 7.43766
Std Dev. 3.19649
Tolerance Factor (K) 1.69642
Comparison Level 15
Untransformed Comp. Level 15
Upper Tolerance Limit = 12.8603

Location	Date	Conc.
SW-9D	5/11/1993	ND<5
	11/16/1993	ND<5
	1/25/1994	ND<5
	4/12/1994	ND<5
	7/14/1994	ND<5
	11/2/1994	ND<5
	1/12/1995	ND<5
	4/12/1995	ND<5
	7/18/1995	ND<5
	10/26/1995	ND<5
	1/16/1996	ND<5
	4/11/1996	ND<5
	7/11/1996	ND<5
	10/24/1996	2.7
	1/21/1997	8
	4/17/1997	ND<5
	7/15/1997	ND<5
	11/6/1997	ND<10
	1/27/1998	ND<10
	4/22/1998	ND<10
	7/23/1998	ND<10
	11/11/1998	ND<10
	1/28/1999	ND<10
	5/27/1999	ND<10
	7/28/1999	ND<10

11/11/1999	ND<10
1/27/2000	ND<10
4/21/2000	ND<10
8/1/2000	ND<10
11/9/2000	ND<10
1/17/2001	ND<10
4/17/2001	ND<10
8/1/2001	ND<10
11/12/2001	ND<10
1/23/2002	ND<10
4/22/2002	ND<10
7/18/2002	ND<10
10/22/2002	ND<10
1/16/2003	ND<10
4/23/2003	ND<10
7/30/2003	ND<10
1/15/2004	ND<10
7/15/2004	ND<10
1/25/2005	ND<10
8/1/2005	ND<2
1/23/2006	ND<2
7/20/2006	ND<3
1/22/2007	ND<0.17

Obs.	48	
Mean	7.55979	
Std Dev.	2.98969	
Tolerance Factor (K)		1.69532
Comparison Level		**15**
Untransformed Comp. Level		15

Upper Tolerance Limit = 12.6283

Location	**Date**	**Conc.**
SW-9S	11/2/1994	ND<5
	1/12/1995	ND<5
	4/12/1995	ND<5
	7/13/1995	ND<5
	10/30/1995	ND<5
	1/16/1996	ND<5
	4/9/1996	ND<5
	7/11/1996	ND<5
	10/23/1996	1.9
	1/21/1997	ND<5
	4/17/1997	ND<5
	7/17/1997	ND<10
	1/26/1998	ND<10
	4/22/1998	ND<10
	7/28/1998	ND<10
	11/10/1998	ND<10
	1/28/1999	ND<10
	5/27/1999	ND<10
	7/29/1999	ND<10
	1/28/2005	ND<10
	8/3/2005	2.8
	1/25/2006	ND<2
	7/25/2006	ND<3

Obs.	23
Mean	6.5087

Std Dev. 3.01585
Tolerance Factor (K) 1.75408
Comparison Level **15**
Untransformed Comp. Level 15
Upper Tolerance Limit = 11.7987

Location	Date	Conc.
SW-P2	11/17/1993	ND<5
	1/24/1994	ND<5
	4/13/1994	ND<5
	7/14/1994	ND<5
	11/9/1994	ND<5
	1/16/1995	ND<5
	4/13/1995	ND<5
	7/18/1995	ND<5
	10/26/1995	ND<5
	4/11/1996	ND<5
	10/23/1996	1.9
	4/18/1997	ND<5
	11/6/1997	ND<10
	4/22/1998	ND<10
	11/11/1998	ND<10
	5/27/1999	ND<10
	11/10/1999	ND<10
	4/20/2000	ND<10
	11/9/2000	ND<10
	4/17/2001	ND<10
	11/8/2001	ND<10
	4/22/2002	ND<10
	10/22/2002	ND<10
	4/23/2003	ND<10
	1/15/2004	ND<10
	7/15/2004	ND<10
	1/25/2005	ND<10
	8/2/2005	ND<2
	1/23/2006	3
	7/20/2006	ND<3
	1/22/2007	ND<0.17

Obs. 31
Mean 6.93774
Std Dev. 3.20697
Tolerance Factor (K) 1.72442
Comparison Level **15**
Untransformed Comp. Level 15
Upper Tolerance Limit = 12.4679

Location	Date	Conc.
SW-P3	11/11/1993	ND<5
	1/20/1994	ND<5
	4/14/1994	ND<5
	7/20/1994	ND<5
	11/1/1994	ND<5
	1/12/1995	ND<5
	4/11/1995	ND<5
	7/12/1995	ND<5
	10/26/1995	ND<5
	1/15/1996	ND<5

7/11/1996	ND<5
1/22/1997	ND<5
7/17/1997	ND<10
1/28/1998	ND<10
4/23/1998	ND<10
7/28/1998	ND<10
1/28/1999	ND<10
8/2/1999	ND<10
2/1/2000	ND<10
8/3/2000	ND<10
1/18/2001	ND<10
8/2/2001	ND<10
1/24/2002	ND<10
7/18/2002	ND<10
1/16/2003	ND<10
4/24/2003	ND<10
7/30/2003	ND<10
1/20/2004	ND<10
7/14/2004	ND<10
1/26/2005	ND<10
8/2/2005	ND<2
1/23/2006	ND<2
7/20/2006	ND<3
1/23/2007	ND<0.17

Obs. 34
Mean 7.26971
Std Dev. 3.11485
Tolerance Factor (K) 1.71707
Comparison Level 15
Untransformed Comp. Level 15
Upper Tolerance Limit = 12.6181

Location	**Date**	**Conc.**
SW-P5	4/12/1994	ND<5
	7/14/1994	ND<5
	11/9/1994	ND<5
	1/12/1995	ND<5
	4/13/1995	ND<5
	7/13/1995	ND<5
	10/25/1995	ND<5
	1/16/1996	ND<5
	7/11/1996	ND<5
	1/22/1997	ND<5
	7/14/1997	ND<10
	1/27/1998	ND<10
	4/23/1998	ND<10
	7/23/1998	ND<10
	1/28/1999	ND<10
	8/2/1999	ND<10
	1/27/2000	ND<10
	1/26/2005	ND<10
	8/1/2005	ND<2
	1/23/2006	ND<2
	7/20/2006	ND<3
	1/22/2007	ND<0.17

Obs. 22
Mean 6.235

Std Dev.	3.17561	
Tolerance Factor (K)	1.75942	
Comparison Level	**15**	
Untransformed Comp. Level		15

Upper Tolerance Limit = 11.8222

Concentrations (µg/L)

Parameter: NICKEL

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

Total Measurements: 397
Total Non-Detect: 301
Percent Non-Detects: 75.8186%
Total Background Measurements: 49
There are 3 background locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-2D	26	25 (96.1538%)			
			11/17/1993	ND<40	ND<40
			1/16/1996	ND<40	ND<40
			7/11/1996	ND<10	ND<10
			1/22/1997	ND<10	ND<10
			7/14/1997	ND<11	ND<11
			1/27/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			1/27/2000	14	14
			8/1/2000	ND<10	ND<10
			1/16/2001	ND<10	ND<10
			8/1/2001	ND<50	ND<50
			1/23/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<50	ND<50
			1/15/2004	ND<50	ND<50
			7/14/2004	ND<50	ND<50
			1/25/2005	ND<10	ND<10
			8/1/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/20/2006	ND<3	ND<3
			1/22/2007	ND<0.47	ND<0.47
SW-3D	6	3 (50%)	11/16/1993	ND<40	ND<40
			1/25/2005	ND<10	ND<10
			8/2/2005	7.4	7.4
			1/23/2006	4	4
			7/20/2006	ND<3	ND<3
			1/22/2007	4.4	4.4
SW-P1	17	17 (100%)			
			4/25/1994	ND<40	ND<40
			1/15/1996	ND<40	ND<40
			7/11/1996	ND<10	ND<10
			1/20/1997	ND<10	ND<10
			7/14/1997	ND<11	ND<11
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			8/3/2000	ND<10	ND<10

			8/2/2001		ND<50	ND<50	
			1/25/2002		ND<10	ND<10	
			8/14/2002		ND<10	ND<10	
			1/20/2003		ND<10	ND<10	
			7/30/2003		ND<50	ND<50	
			1/24/2006		ND<2	ND<2	

There are 20 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original		
SW-12D	1	1 (100%)		11/9/1993		ND<40	ND<40
SW-13D	10	7 (70%)	11/9/1993		ND<40	ND<40	
			4/23/1998		ND<20	ND<20	
			4/24/2003		ND<10	ND<10	
			1/20/2004		ND<50	ND<50	
			7/19/2004		ND<50	ND<50	
			1/26/2005		ND<10	ND<10	
			8/3/2005		3.7	3.7	
			1/24/2006		4	4	
			7/25/2006		ND<3	ND<3	
			1/23/2007		4.92	4.92	
SW-10D	26	9 (34.6154%)					
			11/11/1993		ND<40	ND<40	
			1/16/1996		ND<40	ND<40	
			7/11/1996		38	38	
			1/21/1997		27	27	
			7/14/1997		26	26	
			1/28/1998		15	15	
			4/22/1998		ND<10	ND<10	
			7/28/1998		22	22	
			2/2/1999	13	13		
			7/29/1999		18	18	
			2/1/2000	30	30		
			8/3/2000	23	23		
			1/19/2001		26	26	
			8/2/2001		ND<50	ND<50	
			1/24/2002		24	24	
			7/17/2002		31	31	
			1/20/2003		32	32	
			4/29/2003		ND<50	ND<50	
			7/31/2003		ND<50	ND<50	
			1/22/2004		ND<50	ND<50	
			7/19/2004		ND<50	ND<50	
			1/27/2005		25	25	
			8/3/2005		20	20	
			1/25/2006		25	25	
			7/19/2006		ND<3	ND<3	
			1/18/2007		27.5	27.5	
SW-11D	26	16 (61.5385%)					
			11/9/1993		ND<40	ND<40	
			1/16/1996		ND<40	ND<40	
			7/15/1996		15	15	
			1/20/1997		14	14	
			7/14/1997		ND<11	ND<11	
			1/26/1998		10	10	

			4/23/1998	ND<10	ND<10	
			7/28/1998	17	17	
			2/2/1999	ND<10	ND<10	
			7/29/1999	ND<10	ND<10	
			1/27/2000	21	21	
			8/2/2000	11	11	
			1/17/2001	ND<10	ND<10	
			8/1/2001	ND<50	ND<50	
			1/23/2002	ND<10	ND<10	
			7/17/2002	11	11	
			1/20/2003	ND<10	ND<10	
			4/28/2003	ND<50	ND<50	
			8/1/2003	ND<50	ND<50	
			1/22/2004	ND<50	ND<50	
			7/19/2004	ND<50	ND<50	
			1/27/2005	ND<10	ND<10	
			8/2/2005	3.8	3.8	
			1/25/2006	2	2	
			7/19/2006	ND<3	ND<3	
			1/23/2007	1.4	1.4	
SW-15D	25	20 (80%)		1/25/1994	ND<40	ND<40
			1/16/1996	ND<40	ND<40	
			7/15/1996	ND<10	ND<10	
			1/21/1997	12	12	
			7/15/1997	ND<10	ND<10	
			1/28/1998	ND<10	ND<10	
			4/23/1998	ND<10	ND<10	
			7/23/1998	ND<10	ND<10	
			2/2/1999	72	72	
			2/1/2000	ND<10	ND<10	
			8/2/2000	ND<10	ND<10	
			1/17/2001	ND<10	ND<10	
			8/1/2001	ND<50	ND<50	
			1/24/2002	ND<10	ND<10	
			8/14/2002	ND<10	ND<10	
			1/20/2003	ND<10	ND<10	
			4/29/2003	ND<50	ND<50	
			7/31/2003	ND<50	ND<50	
			1/22/2004	ND<50	ND<50	
			7/19/2004	ND<50	ND<50	
			1/27/2005	ND<10	ND<10	
			8/3/2005	6.3	6.3	
			1/25/2006	8	8	
			7/25/2006	ND<3	ND<3	
			1/18/2007	7.33	7.33	
SW-1DN	10	9 (90%)	11/17/1993	ND<40	ND<40	
			4/22/1998	ND<10	ND<10	
			4/23/2003	ND<10	ND<10	
			1/15/2004	ND<50	ND<50	
			7/14/2004	ND<50	ND<50	
			1/25/2005	ND<10	ND<10	
			8/1/2005	ND<2	ND<2	
			1/23/2006	ND<2	ND<2	
			7/20/2006	ND<3	ND<3	
			1/23/2007	3.11	3.11	
SW-1SN	10	8 (80%)	11/16/1993	ND<40	ND<40	
			4/22/1998	ND<10	ND<10	
			4/28/2003	ND<50	ND<50	

			1/22/2004	ND<50	ND<50
			7/14/2004	ND<50	ND<50
			2/8/2005	ND<10	ND<10
			8/4/2005	ND<2	ND<2
			1/25/2006	3	3
			7/25/2006	ND<3	ND<3
			1/23/2007	8.4	8.4
SW-2SN	13	12 (92.3077%)			
			4/11/1996	ND<40	ND<40
			7/11/1996	ND<10	ND<10
			1/21/1997	ND<10	ND<10
			7/15/1997	ND<11	ND<11
			1/26/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			2/2/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			1/27/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/25/2006	2	2
			7/25/2006	ND<3	ND<3
SW-3SN	6	5 (83.3333%)			
			11/9/1993	ND<40	ND<40
			4/23/1998	ND<10	ND<10
			1/28/2005	ND<10	ND<10
			8/3/2005	ND<2	ND<2
			1/24/2006	2	2
			7/25/2006	ND<3	ND<3
SW-4D	20	8 (40%)	11/11/1993	ND<40	ND<40
			4/23/1998	ND<10	ND<10
			7/23/1998	21	21
			2/2/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			8/2/2000 38	38	
			1/18/2001	43	43
			8/2/2001	ND<50	ND<50
			1/24/2002	37	37
			7/17/2002	42	42
			1/20/2003	40	40
			4/24/2003	40	40
			7/31/2003	ND<50	ND<50
			1/20/2004	ND<50	ND<50
			7/19/2004	ND<50	ND<50
			1/26/2005	38	38
			8/3/2005	45	45
			1/24/2006	50	50
			7/25/2006	38	38
			1/23/2007	49.5	49.5
SW-5D	26	24 (92.3077%)			
			11/9/1993	ND<40	ND<40
			1/15/1996	ND<40	ND<40
			7/11/1996	ND<10	ND<10
			1/22/1997	ND<10	ND<10
			7/14/1997	ND<11	ND<11
			1/27/1998	ND<10	ND<10
			4/23/1998	ND<10	ND<10

			7/23/1998	ND<10	ND<10	
			1/28/1999	ND<10	ND<10	
			7/28/1999	ND<10	ND<10	
			2/1/2000	ND<10	ND<10	
			8/2/2000	ND<10	ND<10	
			1/18/2001	ND<10	ND<10	
			8/1/2001	ND<50	ND<50	
			1/23/2002	ND<10	ND<10	
			7/18/2002	ND<10	ND<10	
			1/16/2003	ND<10	ND<10	
			4/24/2003	ND<10	ND<10	
			8/1/2003	ND<50	ND<50	
			1/20/2004	ND<50	ND<50	
			7/15/2004	ND<50	ND<50	
			1/26/2005	ND<10	ND<10	
			8/2/2005	5.2	5.2	
			1/23/2006	ND<2	ND<2	
			7/19/2006	ND<3	ND<3	
			1/22/2007	3.3	3.3	
SW-5S	8	4 (50%)	10/24/1996	6	6	
			1/26/1998	ND<10	ND<10	
			4/23/1998	ND<10	ND<10	
			7/23/1998	ND<10	ND<10	
			2/2/1999	ND<10	ND<10	
			1/28/2005	34	34	
			8/3/2005	17	17	
			1/24/2006	16	16	
SW-6D	23	22 (95.6522%)				
			11/15/1993	ND<40	ND<40	
			1/16/1996	ND<40	ND<40	
			7/11/1996	ND<10	ND<10	
			1/21/1997	ND<10	ND<10	
			7/15/1997	19	19	
			1/27/1998	ND<10	ND<10	
			4/23/1998	ND<10	ND<10	
			7/23/1998	ND<10	ND<10	
			1/28/1999	ND<10	ND<10	
			7/28/1999	ND<10	ND<10	
			1/27/2000	ND<10	ND<10	
			8/1/2000	ND<10	ND<10	
			1/17/2001	ND<10	ND<10	
			1/23/2002	ND<10	ND<10	
			4/23/2003	ND<10	ND<10	
			7/30/2003	ND<50	ND<50	
			1/15/2004	ND<50	ND<50	
			7/15/2004	ND<50	ND<50	
			1/25/2005	ND<10	ND<10	
			8/1/2005	ND<2	ND<2	
			1/23/2006	ND<2	ND<2	
			7/19/2006	ND<3	ND<3	
			1/22/2007	ND<0.47		ND<0.47
SW-7D	26	16 (61.5385%)				
			11/16/1993	ND<40	ND<40	
			1/16/1996	ND<40	ND<40	
			7/11/1996	ND<10	ND<10	
			1/21/1997	ND<10	ND<10	
			7/14/1997	ND<11	ND<11	
			1/27/1998	ND<10	ND<10	

			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			7/28/1999	12	12
			1/27/2000	ND<10	ND<10
			8/1/2000	ND<10	ND<10
			1/16/2001	10	10
			8/1/2001	ND<50	ND<50
			1/23/2002	15	15
			7/18/2002	14	14
			1/16/2003	16	16
			4/23/2003	18	18
			7/30/2003	ND<50	ND<50
			1/15/2004	ND<50	ND<50
			7/15/2004	ND<50	ND<50
			1/25/2005	22	22
			8/1/2005	7.3	7.3
			1/23/2006	22	22
			7/19/2006	ND<3	ND<3
			1/22/2007	20.6	20.6
SW-8D	26	13 (50%)			
			11/17/1993	ND<40	ND<40
			1/16/1996	ND<40	ND<40
			7/11/1996	14	14
			1/22/1997	16	16
			7/17/1997	11	11
			1/27/1998	ND<10	ND<10
			4/23/1998	ND<20	ND<20
			7/23/1998	18	18
			1/28/1999	10	10
			8/2/1999 18	18	
			1/27/2000	27	27
			8/3/2000	ND<10	ND<10
			1/19/2001	29	29
			8/2/2001	ND<50	ND<50
			1/24/2002	ND<10	ND<10
			7/17/2002	ND<10	ND<10
			1/20/2003	12	12
			4/28/2003	10	10
			7/31/2003	ND<50	ND<50
			1/20/2004	ND<50	ND<50
			7/19/2004	ND<50	ND<50
			1/27/2005	ND<10	ND<10
			8/4/2005	5.5	5.5
			1/24/2006	8	8
			7/25/2006	ND<3	ND<3
			1/18/2007	9.72	9.72
SW-9D	26	26 (100%)			
			11/16/1993	ND<40	ND<40
			1/16/1996	ND<40	ND<40
			7/11/1996	ND<10	ND<10
			1/21/1997	ND<10	ND<10
			7/15/1997	ND<10	ND<10
			1/27/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/23/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			7/28/1999	ND<10	ND<10
			1/27/2000	ND<10	ND<10

			8/1/2000	ND<10	ND<10
			1/17/2001	ND<10	ND<10
			8/1/2001	ND<50	ND<50
			1/23/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			7/30/2003	ND<50	ND<50
			1/15/2004	ND<50	ND<50
			7/15/2004	ND<50	ND<50
			1/25/2005	ND<10	ND<10
			8/1/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/20/2006	ND<3	ND<3
			1/22/2007	ND<0.47	ND<0.47
SW-9S	14	10 (71.4286%)			
			11/2/1994	ND<40	ND<40
			1/16/1996	ND<40	ND<40
			7/11/1996	ND<10	ND<10
			1/21/1997	ND<10	ND<10
			7/17/1997	ND<11	ND<11
			1/26/1998	ND<10	ND<10
			4/22/1998	ND<10	ND<10
			7/28/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			7/29/1999	ND<10	ND<10
			1/28/2005	27	27
			8/3/2005 16	16	
			1/25/2006	21	21
			7/25/2006	7	7
SW-P2	10	8 (80%)	11/17/1993	ND<40	ND<40
			4/22/1998	ND<10	ND<10
			4/23/2003	ND<10	ND<10
			1/15/2004	ND<50	ND<50
			7/15/2004	ND<50	ND<50
			1/25/2005	ND<10	ND<10
			8/2/2005 5	5	
			1/23/2006	4	4
			7/20/2006	ND<3	ND<3
			1/22/2007	ND<0.47	ND<0.47
SW-P3	26	25 (96.1538%)			
			11/11/1993	ND<40	ND<40
			1/15/1996	ND<40	ND<40
			7/11/1996	ND<10	ND<10
			1/22/1997	ND<10	ND<10
			7/17/1997	ND<11	ND<11
			1/28/1998	ND<10	ND<10
			4/23/1998	ND<20	ND<20
			7/28/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			8/2/1999	ND<10	ND<10
			2/1/2000	ND<10	ND<10
			8/3/2000	ND<10	ND<10
			1/18/2001	ND<10	ND<10
			8/2/2001	ND<50	ND<50
			1/24/2002	ND<10	ND<10
			7/18/2002	ND<10	ND<10
			1/16/2003	ND<10	ND<10

			4/24/2003	ND<10	ND<10
			7/30/2003	ND<50	ND<50
			1/20/2004	ND<50	ND<50
			7/14/2004	ND<50	ND<50
			1/26/2005	ND<10	ND<10
			8/2/2005	ND<2	ND<2
			1/23/2006	ND<2	ND<2
			7/20/2006	ND<3	ND<3
			1/23/2007	0.698	0.698
SW-P5	16	13 (81.25%)			
			4/12/1994	ND<40	ND<40
			1/16/1996	ND<40	ND<40
			7/11/1996	ND<10	ND<10
			1/22/1997	ND<10	ND<10
			7/14/1997	ND<11	ND<11
			1/27/1998	ND<10	ND<10
			4/23/1998	ND<20	ND<20
			7/23/1998	ND<10	ND<10
			1/28/1999	ND<10	ND<10
			8/2/1999	ND<10	ND<10
			1/27/2000	20	20
			1/26/2005	ND<10	ND<10
			8/1/2005	ND<2	ND<2
			1/23/2006	8	8
			7/20/2006	ND<3	ND<3
			1/22/2007	23.4	23.4

Coefficient of Variation

Parameter: NICKEL

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

CV < 1 indicates normal data

Background Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-2D	26	17.4027	16.8048	0.965643
SW-3D	6	11.4667	14.2142	**1.23961**
SW-P1	17	17.8235	15.8597	0.889817

Compliance Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-12D	1	40	Div 0	0
SW-13D	10	19.562	19.5396	0.998857
SW-10D	26	29.4423	13.2577	0.450294
SW-11D	26	20.0077	17.4762	0.873472
SW-15D	25	22.3452	20.3221	0.909462
SW-1DN	10	18.011	20.2284	**1.12312**
SW-1SN	10	22.64	21.7737	0.961738
SW-2SN	13	10.6154	9.45638	0.890818
SW-3SN	6	11.1667	14.6208	**1.30932**
SW-4D	20	37.575	13.7509	0.365958
SW-5D	26	17.4808	16.6456	0.952225
SW-5S	8	14.125	8.79021	0.622316
SW-6D	23	16.803	16.3545	0.973307
SW-7D	26	20.4192	15.4662	0.757433

SW-8D	26	20.8162	15.7056	0.754489
SW-9D	26	17.2104	16.8714	0.980303
SW-9S	14	16.5714	11.2709	0.68014
SW-P2	26	17.6422	16.7881	0.951588
SW-P5	16	14.8375	11.3229	0.76313

All Locations

Obs.	Mean	Std. Dev.	CV
397	19.7767	16.7505	0.846982

Concentrations (µg/L)

Parameter: VINYL CHLORIDE

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

Total Measurements: 748
Total Non-Detect: 707
Percent Non-Detects: 94.5187%
Total Background Measurements: 98
There are 3 background locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-2D	49	49 (100%)			
			6/10/1992	ND<0.5	ND<0.5
			5/11/1993	ND<1	ND<1
			11/17/1993	ND<1	ND<1
			1/24/1994	ND<1	ND<1
			4/13/1994	ND<1	ND<1
			7/14/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			1/16/1996	ND<1	ND<1
			4/9/1996	ND<1	ND<1
			7/11/1996	ND<1	ND<1
			10/23/1996	ND<1	ND<1
			1/22/1997	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			7/14/1997	ND<2	ND<2
			11/6/1997	ND<1	ND<1
			1/27/1998	ND<2	ND<2
			4/22/1998	ND<2	ND<2
			7/23/1998	ND<1	ND<1
			11/11/1998	ND<1	ND<1
			1/28/1999	ND<1	ND<1
			5/27/1999	ND<1	ND<1
			7/28/1999	ND<1	ND<1
			11/10/1999	ND<1	ND<1
			1/27/2000	ND<1	ND<1
			4/20/2000	ND<1	ND<1
			8/1/2000	ND<1	ND<1
			11/8/2000	ND<1	ND<1
			1/16/2001	ND<1	ND<1
			4/17/2001	ND<1	ND<1
			8/1/2001	ND<1	ND<1

			11/8/2001	ND<1	ND<1
			1/23/2002	ND<1	ND<1
			4/17/2002	ND<1	ND<1
			7/18/2002	ND<1	ND<1
			10/22/2002	ND<1	ND<1
			1/16/2003	ND<1	ND<1
			4/23/2003	ND<1	ND<1
			7/30/2003	ND<1	ND<1
			1/15/2004	ND<1	ND<1
			7/14/2004	ND<1	ND<1
			1/25/2005	ND<1	ND<1
			8/1/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/20/2006	ND<0.5	ND<0.5
			1/22/2007	ND<0.52	ND<0.52
SW-3D	15	15 (100%)			
			5/11/1993	ND<1	ND<1
			11/16/1993	ND<1	ND<1
			1/24/1994	ND<1	ND<1
			4/13/1994	ND<1	ND<1
			7/14/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			1/25/2005	ND<1	ND<1
			8/2/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/20/2006	ND<0.5	ND<0.5
			1/22/2007	ND<0.52	ND<0.52
SW-P1	34	34 (100%)			
			5/11/1993	ND<1	ND<1
			1/24/1994	ND<1	ND<1
			4/25/1994	ND<1	ND<1
			11/9/1994	ND<1	ND<1
			1/16/1995	ND<1	ND<1
			7/13/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			1/15/1996	ND<1	ND<1
			4/22/1996	ND<1	ND<1
			7/11/1996	ND<1	ND<1
			10/24/1996	ND<1	ND<1
			1/20/1997	ND<1	ND<1
			4/17/1997	ND<1	ND<1
			7/14/1997	ND<2	ND<2
			11/6/1997	ND<1	ND<1
			4/22/1998	ND<2	ND<2
			7/23/1998	ND<1	ND<1
			11/10/1998	ND<1	ND<1
			2/2/1999	ND<1	ND<1
			6/7/1999	ND<1	ND<1
			7/29/1999	ND<1	ND<1
			2/1/2000	ND<1	ND<1
			4/21/2000	ND<1	ND<1
			8/3/2000	ND<1	ND<1
			11/10/2000	ND<1	ND<1
			4/17/2001	ND<1	ND<1
			8/2/2001	ND<1	ND<1

			1/25/2002	ND<1	ND<1
			4/23/2002	ND<1	ND<1
			8/14/2002	ND<1	ND<1
			1/20/2003	ND<1	ND<1
			4/24/2003	ND<1	ND<1
			7/30/2003	ND<1	ND<1
			1/24/2006	ND<0.5	ND<0.5

There are 19 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-12D	11	11 (100%)			
			6/9/1992	ND<0.5	ND<0.5
			5/10/1993	ND<1	ND<1
			11/9/1993	ND<1	ND<1
			1/20/1994	ND<1	ND<1
			4/13/1994	ND<1	ND<1
			7/13/1994	ND<1	ND<1
			10/27/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/11/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/30/1995	ND<1	ND<1
SW-13D	33	31 (93.9394%)			
			6/9/1992	ND<0.5	ND<0.5
			5/11/1993	2	2
			11/9/1993	ND<1	ND<1
			1/25/1994	ND<1	ND<1
			4/18/1994	ND<1	ND<1
			7/13/1994	1	1
			11/2/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/13/1995	ND<1	ND<1
			7/13/1995	ND<1	ND<1
			10/31/1995	ND<1	ND<1
			4/11/1996	ND<1	ND<1
			10/23/1996	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			11/5/1997	ND<1	ND<1
			4/23/1998	ND<2	ND<2
			11/12/1998	ND<1	ND<1
			5/28/1999	ND<1	ND<1
			11/11/1999	ND<1	ND<1
			4/21/2000	ND<1	ND<1
			11/10/2000	ND<1	ND<1
			4/18/2001	ND<1	ND<1
			11/13/2001	ND<1	ND<1
			4/18/2002	ND<1	ND<1
			10/23/2002	ND<1	ND<1
			4/24/2003	ND<1	ND<1
			1/20/2004	ND<1	ND<1
			7/19/2004	ND<1	ND<1
			1/26/2005	ND<1	ND<1
			8/3/2005	ND<0.5	ND<0.5
			1/24/2006	ND<0.5	ND<0.5
			7/25/2006	ND<0.5	ND<0.5
			1/23/2007	ND<0.52	ND<0.52

SW-10D	47	47 (100%)			
			6/9/1992	ND<0.5	ND<0.5
			5/10/1993	ND<1	ND<1
			11/11/1993	ND<1	ND<1
			1/20/1994	ND<1	ND<1
			4/13/1994	ND<1	ND<1
			7/26/1994	ND<1	ND<1
			1/10/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/13/1995	ND<1	ND<1
			10/30/1995	ND<1	ND<1
			1/16/1996	ND<1	ND<1
			4/11/1996	ND<1	ND<1
			7/11/1996	ND<1	ND<1
			10/24/1996	ND<1	ND<1
			1/21/1997	ND<1	ND<1
			4/17/1997	ND<1	ND<1
			7/14/1997	ND<2	ND<2
			11/5/1997	ND<1	ND<1
			1/28/1998	ND<2	ND<2
			4/22/1998	ND<2	ND<2
			7/28/1998	ND<1	ND<1
			11/12/1998	ND<1	ND<1
			2/2/1999	ND<1	ND<1
			5/28/1999	ND<1	ND<1
			7/29/1999	ND<1	ND<1
			11/11/1999	ND<1	ND<1
			2/1/2000	ND<1	ND<1
			4/21/2000	ND<1	ND<1
			8/3/2000	ND<1	ND<1
			11/9/2000	ND<1	ND<1
			1/19/2001	ND<1	ND<1
			4/18/2001	ND<1	ND<1
			8/2/2001	ND<1	ND<1
			11/12/2001	ND<1	ND<1
			1/24/2002	ND<1	ND<1
			4/18/2002	ND<1	ND<1
			7/17/2002	ND<1	ND<1
			10/23/2002	ND<1	ND<1
			1/20/2003	ND<1	ND<1
			4/29/2003	ND<1	ND<1
			7/31/2003	ND<1	ND<1
			1/22/2004	ND<1	ND<1
			7/19/2004	ND<1	ND<1
			1/27/2005	ND<1	ND<1
			8/3/2005	ND<0.5	ND<0.5
			1/25/2006	ND<0.5	ND<0.5
			7/19/2006	ND<0.5	ND<0.5
SW-11D	49	49 (100%)			
			6/9/1992	ND<0.5	ND<0.5
			5/10/1993	ND<1	ND<1
			11/9/1993	ND<1	ND<1
			1/20/1994	ND<1	ND<1
			4/13/1994	ND<1	ND<1
			7/13/1994	ND<1	ND<1
			10/27/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/11/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1

		10/30/1995	ND<1	ND<1
		1/16/1996	ND<1	ND<1
		4/11/1996	ND<1	ND<1
		7/15/1996	ND<1	ND<1
		10/24/1996	ND<1	ND<1
		1/20/1997	ND<1	ND<1
		4/18/1997	ND<1	ND<1
		7/14/1997	ND<2	ND<2
		11/5/1997	ND<1	ND<1
		1/26/1998	ND<2	ND<2
		4/23/1998	ND<2	ND<2
		7/28/1998	ND<1	ND<1
		11/10/1998	ND<1	ND<1
		2/2/1999	ND<1	ND<1
		5/27/1999	ND<1	ND<1
		7/29/1999	ND<1	ND<1
		11/10/1999	ND<1	ND<1
		1/27/2000	ND<1	ND<1
		4/21/2000	ND<1	ND<1
		8/2/2000	ND<1	ND<1
		11/9/2000	ND<1	ND<1
		1/17/2001	ND<1	ND<1
		4/18/2001	ND<1	ND<1
		8/1/2001	ND<1	ND<1
		11/8/2001	ND<1	ND<1
		1/23/2002	ND<1	ND<1
		4/19/2002	ND<1	ND<1
		7/17/2002	ND<1	ND<1
		10/23/2002	ND<1	ND<1
		1/20/2003	ND<1	ND<1
		4/28/2003	ND<1	ND<1
		8/1/2003	ND<1	ND<1
		1/22/2004	ND<1	ND<1
		7/19/2004	ND<1	ND<1
		1/27/2005	ND<1	ND<1
		8/2/2005	ND<0.5	ND<0.5
		1/25/2006	ND<0.5	ND<0.5
		7/19/2006	ND<0.5	ND<0.5
		1/23/2007	ND<0.52	ND<0.52
SW-15D 32	32 (100%)			
		1/25/1994	ND<1	ND<1
		4/18/1994	ND<1	ND<1
		7/20/1994	ND<1	ND<1
		10/27/1994	ND<1	ND<1
		1/11/1995	ND<1	ND<1
		4/11/1995	ND<1	ND<1
		7/18/1995	ND<1	ND<1
		10/30/1995	ND<1	ND<1
		1/16/1996	ND<1	ND<1
		7/15/1996	ND<1	ND<1
		1/21/1997	ND<1	ND<1
		7/15/1997	ND<2	ND<2
		1/28/1998	ND<2	ND<2
		4/23/1998	ND<2	ND<2
		7/23/1998	ND<1	ND<1
		2/2/1999	ND<1	ND<1
		2/1/2000	ND<1	ND<1
		8/2/2000	ND<1	ND<1
		1/17/2001	ND<1	ND<1
		8/1/2001	ND<1	ND<1
		1/24/2002	ND<1	ND<1

			8/14/2002	ND<1	ND<1
			1/20/2003	ND<1	ND<1
			4/29/2003	ND<1	ND<1
			7/31/2003	ND<1	ND<1
			1/22/2004	ND<1	ND<1
			7/19/2004	ND<1	ND<1
			1/27/2005	ND<1	ND<1
			8/3/2005	ND<0.5	ND<0.5
			1/25/2006	ND<0.5	ND<0.5
			7/25/2006	ND<0.5	ND<0.5
			1/18/2007	ND<0.52	ND<0.52
SW-1DN	33	33 (100%)			
			6/10/1992	ND<0.5	ND<0.5
			5/10/1993	ND<1	ND<1
			11/17/1993	ND<10	ND<10
			1/24/1994	ND<20	ND<20
			4/13/1994	ND<20	ND<20
			7/14/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			4/9/1996	ND<1	ND<1
			10/23/1996	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			11/6/1997	ND<1	ND<1
			4/22/1998	ND<2	ND<2
			11/11/1998	ND<1	ND<1
			5/27/1999	ND<1	ND<1
			11/10/1999	ND<1	ND<1
			4/20/2000	ND<1	ND<1
			11/8/2000	ND<1	ND<1
			4/17/2001	ND<1	ND<1
			11/8/2001	ND<1	ND<1
			4/17/2002	ND<1	ND<1
			10/22/2002	ND<1	ND<1
			4/23/2003	ND<1	ND<1
			1/15/2004	ND<1	ND<1
			7/14/2004	ND<1	ND<1
			1/25/2005	ND<1	ND<1
			8/1/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/20/2006	ND<0.5	ND<0.5
			1/23/2007	ND<0.52	ND<0.52
SW-1SN	30	30 (100%)			
			6/10/1992	ND<0.5	ND<0.5
			5/18/1993	ND<1	ND<1
			11/16/1993	ND<1	ND<1
			1/20/1994	ND<1	ND<1
			4/18/1994	ND<1	ND<1
			7/20/1994	ND<1	ND<1
			11/1/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/11/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			4/9/1996	ND<1	ND<1
			10/22/1996	ND<1	ND<1

		4/18/1997	ND<1	ND<1
		11/5/1997	ND<1	ND<1
		4/22/1998	ND<2	ND<2
		11/10/1998	ND<1	ND<1
		5/27/1999	ND<1	ND<1
		11/10/1999	ND<1	ND<1
		4/21/2000	ND<1	ND<1
		11/9/2000	ND<1	ND<1
		11/8/2001	ND<1	ND<1
		4/28/2003	ND<1	ND<1
		1/22/2004	ND<1	ND<1
		7/14/2004	ND<1	ND<1
		2/8/2005	ND<1	ND<1
		8/4/2005	ND<0.5	ND<0.5
		1/25/2006	ND<0.5	ND<0.5
		7/25/2006	ND<0.5	ND<0.5
		1/23/2007	ND<0.52	ND<0.52
SW-3SN	21	21 (100%)		
		11/9/1993	ND<1	ND<1
		1/25/1994	ND<1	ND<1
		4/18/1994	ND<1	ND<1
		7/13/1994	ND<1	ND<1
		11/9/1994	ND<1	ND<1
		1/11/1995	ND<1	ND<1
		4/13/1995	ND<1	ND<1
		7/18/1995	ND<1	ND<1
		10/31/1995	ND<1	ND<1
		4/9/1996	ND<1	ND<1
		10/23/1996	ND<1	ND<1
		4/18/1997	ND<1	ND<1
		11/5/1997	ND<1	ND<1
		4/23/1998	ND<2	ND<2
		11/10/1998	ND<1	ND<1
		5/28/1999	ND<1	ND<1
		11/11/1999	ND<1	ND<1
		1/28/2005	ND<1	ND<1
		8/3/2005	ND<0.5	ND<0.5
		1/24/2006	ND<0.5	ND<0.5
		7/25/2006	ND<0.5	ND<0.5
SW-4D	43	10 (23.2558%)		
		6/9/1992	ND<0.5	ND<0.5
		5/11/1993	**3**	**3**
		11/11/1993	**2**	**2**
		1/20/1994	ND<1	ND<1
		4/13/1994	**3**	**3**
		7/20/1994	**3**	**3**
		11/1/1994	**2**	**2**
		1/11/1995	ND<1	ND<1
		4/12/1995	ND<1	ND<1
		7/12/1995	**1**	**1**
		10/26/1995	**3**	**3**
		4/11/1996	**2**	**2**
		10/23/1996	ND<1	ND<1
		4/17/1997	**3.4**	**3.4**
		11/4/1997	**3**	**3**
		4/23/1998	**3**	**3**
		7/23/1998	**3**	**3**
		11/10/1998	ND<1	ND<1
		2/2/1999	**3**	**3**

			6/7/1999	ND<1	ND<1	
			7/28/1999		ND<1	ND<1
			11/11/1999		ND<1	ND<1
			4/21/2000		**2**	**2**
			8/2/2000	**2**	**2**	
			11/10/2000		**2.9**	**2.9**
			1/18/2001		**4.2**	**4.2**
			4/18/2001		**3**	**3**
			8/2/2001	**4.5**	**4.5**	
			11/13/2001		**3.1**	**3.1**
			1/24/2002		ND<1	ND<1
			4/19/2002		**4.9**	**4.9**
			7/17/2002		**4.2**	**4.2**
			10/22/2002		**1.8**	**1.8**
			1/20/2003		**2.9**	**2.9**
			4/24/2003		**1.9**	**1.9**
			7/31/2003		**1.9**	**1.9**
			1/20/2004		**2.4**	**2.4**
			7/19/2004		**2**	**2**
			1/26/2005		**1**	**1**
			8/3/2005	**1**	**1**	
			1/24/2006		**2**	**2**
			7/25/2006		**3**	**3**
			1/23/2007		**1.1**	**1.1**
SW-5D	49	49 (100%)				
			6/10/1992		ND<0.5	ND<0.5
			5/11/1993		ND<1	ND<1
			11/9/1993		ND<1	ND<1
			1/20/1994		ND<1	ND<1
			4/13/1994		ND<1	ND<1
			7/26/1994		ND<1	ND<1
			11/1/1994		ND<1	ND<1
			1/10/1995		ND<1	ND<1
			4/13/1995		ND<1	ND<1
			7/18/1995		ND<1	ND<1
			10/26/1995		ND<1	ND<1
			1/15/1996		ND<1	ND<1
			4/11/1996		ND<1	ND<1
			7/11/1996		ND<1	ND<1
			10/23/1996		ND<1	ND<1
			1/22/1997		ND<1	ND<1
			4/18/1997		ND<1	ND<1
			7/14/1997		ND<2	ND<2
			11/4/1997		ND<1	ND<1
			1/27/1998		ND<2	ND<2
			4/23/1998		ND<2	ND<2
			7/23/1998		ND<1	ND<1
			11/11/1998		ND<1	ND<1
			1/28/1999		ND<1	ND<1
			5/27/1999		ND<1	ND<1
			7/28/1999		ND<1	ND<1
			11/11/1999		ND<1	ND<1
			2/1/2000		ND<1	ND<1
			4/21/2000		ND<1	ND<1
			8/2/2000		ND<1	ND<1
			11/8/2000		ND<1	ND<1
			1/18/2001		ND<1	ND<1
			4/17/2001		ND<1	ND<1
			8/1/2001		ND<1	ND<1
			11/8/2001		ND<1	ND<1
			1/23/2002		ND<1	ND<1

			4/19/2002	ND<1	ND<1	
			7/18/2002	ND<1	ND<1	
			10/23/2002	ND<1	ND<1	
			1/16/2003	ND<1	ND<1	
			4/24/2003	ND<1	ND<1	
			8/1/2003	ND<1	ND<1	
			1/20/2004	ND<1	ND<1	
			7/15/2004	ND<1	ND<1	
			1/26/2005	ND<1	ND<1	
			8/2/2005	ND<0.5	ND<0.5	
			1/23/2006	ND<0.5	ND<0.5	
			7/19/2006	ND<0.5	ND<0.5	
			1/22/2007	ND<0.52		ND<0.52
SW-5S	10	10 (100%)				
			10/24/1996	ND<1	ND<1	
			1/26/1998	ND<2	ND<2	
			4/23/1998	ND<2	ND<2	
			7/23/1998	ND<1	ND<1	
			11/11/1998	ND<1	ND<1	
			2/2/1999	ND<1	ND<1	
			5/28/1999	ND<1	ND<1	
			1/28/2005	ND<1	ND<1	
			8/3/2005	ND<0.5	ND<0.5	
			1/24/2006	ND<0.5	ND<0.5	
SW-6D	33	33 (100%)				
			6/10/1992	ND<0.5	ND<0.5	
			5/10/1993	ND<1	ND<1	
			11/15/1993	ND<1	ND<1	
			1/24/1994	ND<1	ND<1	
			4/12/1994	ND<1	ND<1	
			7/14/1994	ND<1	ND<1	
			11/2/1994	ND<1	ND<1	
			1/12/1995	ND<1	ND<1	
			4/12/1995	ND<1	ND<1	
			7/13/1995	ND<1	ND<1	
			10/25/1995	ND<1	ND<1	
			1/16/1996	ND<1	ND<1	
			7/11/1996	ND<1	ND<1	
			1/21/1997	ND<1	ND<1	
			7/15/1997	ND<2	ND<2	
			1/27/1998	ND<2	ND<2	
			4/23/1998	ND<2	ND<2	
			7/23/1998	ND<1	ND<1	
			1/28/1999	ND<2	ND<2	
			7/28/1999	ND<1	ND<1	
			1/27/2000	ND<1	ND<1	
			8/1/2000	ND<1	ND<1	
			1/17/2001	ND<1	ND<1	
			1/23/2002	ND<1	ND<1	
			4/23/2003	ND<1	ND<1	
			7/30/2003	ND<1	ND<1	
			1/15/2004	ND<1	ND<1	
			7/15/2004	ND<1	ND<1	
			1/25/2005	ND<1	ND<1	
			8/1/2005	ND<0.5	ND<0.5	
			1/23/2006	ND<0.5	ND<0.5	
			7/19/2006	ND<0.5	ND<0.5	
			1/22/2007	ND<0.52	ND<0.52	

SW-7D	49	45 (91.8367%)			
			6/10/1992	ND<0.5	ND<0.5
			5/10/1993	**3**	**3**
			11/16/1993	**2**	**2**
			1/24/1994	**1**	**1**
			4/13/1994	**1**	**1**
			7/14/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			1/16/1996	ND<1	ND<1
			4/11/1996	ND<1	ND<1
			7/11/1996	ND<1	ND<1
			10/24/1996	ND<1	ND<1
			1/21/1997	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			7/14/1997	ND<2	ND<2
			11/6/1997	ND<1	ND<1
			1/27/1998	ND<2	ND<2
			4/22/1998	ND<2	ND<2
			7/23/1998	ND<1	ND<1
			11/11/1998	ND<1	ND<1
			1/28/1999	ND<1	ND<1
			5/25/1999	ND<1	ND<1
			7/28/1999	ND<1	ND<1
			11/10/1999	ND<1	ND<1
			1/27/2000	ND<1	ND<1
			4/20/2000	ND<1	ND<1
			8/1/2000	ND<1	ND<1
			11/8/2000	ND<1	ND<1
			1/16/2001	ND<1	ND<1
			4/17/2001	ND<1	ND<1
			8/1/2001	ND<1	ND<1
			11/12/2001	ND<1	ND<1
			1/23/2002	ND<1	ND<1
			4/17/2002	ND<1	ND<1
			7/18/2002	ND<1	ND<1
			10/22/2002	ND<1	ND<1
			1/16/2003	ND<1	ND<1
			4/23/2003	ND<1	ND<1
			7/30/2003	ND<1	ND<1
			1/15/2004	ND<1	ND<1
			7/15/2004	ND<1	ND<1
			1/25/2005	ND<1	ND<1
			8/1/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/19/2006	ND<0.5	ND<0.5
			1/22/2007	ND<0.52	ND<0.52

SW-8D	47	45 (95.7447%)			
			6/10/1992	ND<0.5	ND<0.5
			5/11/1993	ND<1	ND<1
			11/17/1993	ND<1	ND<1
			4/12/1994	ND<1	ND<1
			7/14/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/13/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1

		1/16/1996	ND<1	ND<1
		4/11/1996	ND<1	ND<1
		7/11/1996	ND<1	ND<1
		10/24/1996	ND<1	ND<1
		1/22/1997	ND<1	ND<1
		4/17/1997	ND<1	ND<1
		7/17/1997	ND<2	ND<2
		11/6/1997	ND<1	ND<1
		1/27/1998	ND<2	ND<2
		4/23/1998	ND<2	ND<2
		7/23/1998	ND<1	ND<1
		11/11/1998	ND<1	ND<1
		1/28/1999	ND<1	ND<1
		5/25/1999	ND<1	ND<1
		8/2/1999	ND<1	ND<1
		11/11/1999	ND<1	ND<1
		1/27/2000	ND<1	ND<1
		8/3/2000	ND<1	ND<1
		11/10/2000	**1.5**	**1.5**
		1/19/2001	**1.3**	**1.3**
		4/18/2001	ND<1	ND<1
		8/2/2001	ND<1	ND<1
		11/13/2001	ND<1	ND<1
		1/24/2002	ND<1	ND<1
		4/18/2002	ND<1	ND<1
		7/17/2002	ND<1	ND<1
		10/23/2002	ND<1	ND<1
		1/20/2003	ND<1	ND<1
		4/28/2003	ND<1	ND<1
		7/31/2003	ND<1	ND<1
		1/20/2004	ND<1	ND<1
		7/19/2004	ND<1	ND<1
		1/27/2005	ND<1	ND<1
		8/4/2005	ND<0.5	ND<0.5
		1/24/2006	ND<0.5	ND<0.5
		7/25/2006	ND<0.5	ND<0.5
		1/18/2007	ND<0.52	ND<0.52
SW-9D 48	48 (100%)			
		5/11/1993	ND<1	ND<1
		11/16/1993	ND<1	ND<1
		1/25/1994	ND<1	ND<1
		4/12/1994	ND<1	ND<1
		7/14/1994	ND<1	ND<1
		11/2/1994	ND<1	ND<1
		1/12/1995	ND<1	ND<1
		4/12/1995	ND<1	ND<1
		7/18/1995	ND<1	ND<1
		10/26/1995	ND<1	ND<1
		1/16/1996	ND<1	ND<1
		4/11/1996	ND<1	ND<1
		7/11/1996	ND<1	ND<1
		10/24/1996	ND<1	ND<1
		1/21/1997	ND<1	ND<1
		4/17/1997	ND<1	ND<1
		7/15/1997	ND<2	ND<2
		11/6/1997	ND<1	ND<1
		1/27/1998	ND<2	ND<2
		4/22/1998	ND<2	ND<2
		7/23/1998	ND<1	ND<1
		11/11/1998	ND<1	ND<1
		1/28/1999	ND<1	ND<1

			5/27/1999	ND<1	ND<1	
			7/28/1999	ND<1	ND<1	
			11/11/1999	ND<1	ND<1	
			1/27/2000	ND<1	ND<1	
			4/21/2000	ND<1	ND<1	
			8/1/2000	ND<1	ND<1	
			11/9/2000	ND<1	ND<1	
			1/17/2001	ND<1	ND<1	
			4/17/2001	ND<1	ND<1	
			8/1/2001	ND<1	ND<1	
			11/12/2001	ND<1	ND<1	
			1/23/2002	ND<1	ND<1	
			4/22/2002	ND<1	ND<1	
			7/18/2002	ND<1	ND<1	
			10/22/2002	ND<1	ND<1	
			1/16/2003	ND<1	ND<1	
			4/23/2003	ND<1	ND<1	
			7/30/2003	ND<1	ND<1	
			1/15/2004	ND<1	ND<1	
			7/15/2004	ND<1	ND<1	
			1/25/2005	ND<1	ND<1	
			8/1/2005	ND<0.5	ND<0.5	
			1/23/2006	ND<0.5	ND<0.5	
			7/20/2006	ND<0.5	ND<0.5	
			1/22/2007	ND<0.52		ND<0.52
SW-9S	23	23 (100%)				
			11/2/1994	ND<1	ND<1	
			1/12/1995	ND<1	ND<1	
			4/12/1995	ND<1	ND<1	
			7/13/1995	ND<1	ND<1	
			10/30/1995	ND<1	ND<1	
			1/16/1996	ND<1	ND<1	
			4/9/1996	ND<1	ND<1	
			7/11/1996	ND<1	ND<1	
			10/23/1996	ND<1	ND<1	
			1/21/1997	ND<1	ND<1	
			4/17/1997	ND<1	ND<1	
			7/17/1997	ND<2	ND<2	
			1/26/1998	ND<2	ND<2	
			4/22/1998	ND<2	ND<2	
			7/28/1998	ND<1	ND<1	
			11/10/1998	ND<1	ND<1	
			1/28/1999	ND<1	ND<1	
			5/27/1999	ND<1	ND<1	
			7/29/1999	ND<1	ND<1	
			1/28/2005	ND<1	ND<1	
			8/3/2005	ND<0.5	ND<0.5	
			1/25/2006	ND<0.5	ND<0.5	
			7/25/2006	ND<0.5	ND<0.5	
SW-P2	32	32 (100%)				
			5/11/1993	ND<1	ND<1	
			11/17/1993	ND<1	ND<1	
			1/24/1994	ND<1	ND<1	
			4/13/1994	ND<1	ND<1	
			7/14/1994	ND<1	ND<1	
			11/9/1994	ND<1	ND<1	
			1/16/1995	ND<1	ND<1	
			4/13/1995	ND<1	ND<1	
			7/18/1995	ND<1	ND<1	

			10/26/1995	ND<1	ND<1
			4/11/1996	ND<1	ND<1
			10/23/1996	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			11/6/1997	ND<1	ND<1
			4/22/1998	ND<2	ND<2
			11/11/1998	ND<1	ND<1
			5/27/1999	ND<1	ND<1
			11/10/1999	ND<1	ND<1
			4/20/2000	ND<1	ND<1
			11/9/2000	ND<1	ND<1
			4/17/2001	ND<1	ND<1
			11/8/2001	ND<1	ND<1
			4/22/2002	ND<1	ND<1
			10/22/2002	ND<1	ND<1
			4/23/2003	ND<1	ND<1
			1/15/2004	ND<1	ND<1
			7/15/2004	ND<1	ND<1
			1/25/2005	ND<1	ND<1
			8/2/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/20/2006	ND<0.5	ND<0.5
			1/22/2007	ND<0.52	ND<0.52
SW-P3	36	36 (100%)			
			6/9/1992	ND<0.5	ND<0.5
			5/11/1993	ND<1	ND<1
			11/11/1993	ND<1	ND<1
			1/20/1994	ND<1	ND<1
			4/14/1994	ND<1	ND<1
			7/20/1994	ND<1	ND<1
			11/1/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/11/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			1/15/1996	ND<1	ND<1
			7/11/1996	ND<1	ND<1
			1/22/1997	ND<1	ND<1
			7/17/1997	ND<2	ND<2
			1/28/1998	ND<2	ND<2
			4/23/1998	ND<2	ND<2
			7/28/1998	ND<1	ND<1
			1/28/1999	ND<1	ND<1
			8/2/1999	ND<1	ND<1
			2/1/2000	ND<1	ND<1
			8/3/2000	ND<1	ND<1
			1/18/2001	ND<1	ND<1
			8/2/2001	ND<1	ND<1
			1/24/2002	ND<1	ND<1
			7/18/2002	ND<1	ND<1
			1/16/2003	ND<1	ND<1
			4/24/2003	ND<1	ND<1
			7/30/2003	ND<1	ND<1
			1/20/2004	ND<1	ND<1
			7/14/2004	ND<1	ND<1
			1/26/2005	ND<1	ND<1
			8/2/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/20/2006	ND<0.5	ND<0.5
			1/23/2007	ND<0.52	ND<0.52

SW-P5	24	24 (100%)			
			6/10/1992	ND<0.5	ND<0.5
			5/11/1993	ND<1	ND<1
			4/12/1994	ND<1	ND<1
			7/14/1994	ND<1	ND<1
			11/9/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/13/1995	ND<1	ND<1
			7/13/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			1/16/1996	ND<1	ND<1
			7/11/1996	ND<1	ND<1
			1/22/1997	ND<1	ND<1
			7/14/1997	ND<2	ND<2
			1/27/1998	ND<2	ND<2
			4/23/1998	ND<2	ND<2
			7/23/1998	ND<1	ND<1
			1/28/1999	ND<1	ND<1
			8/2/1999	ND<1	ND<1
			1/27/2000	ND<1	ND<1
			1/26/2005	ND<1	ND<1
			8/1/2005	ND<0.5	ND<0.5
			1/23/2006	ND<0.5	ND<0.5
			7/20/2006	ND<0.5	ND<0.5
			1/22/2007	ND<0.52	ND<0.52

There are 9 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-2SN	19	19 (100%)			
			4/11/1996	ND<1	ND<1
			7/11/1996	ND<1	ND<1
			10/22/1996	ND<1	ND<1
			1/21/1997	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			7/15/1997	ND<2	ND<2
			11/5/1997	ND<1	ND<1
			1/26/1998	ND<2	ND<2
			4/22/1998	ND<2	ND<2
			7/23/1998	ND<1	ND<1
			11/10/1998	ND<1	ND<1
			2/2/1999	ND<1	ND<1
			5/28/1999	ND<1	ND<1
			7/29/1999	ND<1	ND<1
			11/11/1999	ND<1	ND<1
			1/27/2005	ND<1	ND<1
			8/2/2005	ND<0.5	ND<0.5
			1/25/2006	ND<0.5	ND<0.5
			7/25/2006	ND<0.5	ND<0.5

Coefficient of Variation

Parameter: VINYL CHLORIDE

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
CV < 1 indicates normal data

Background Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-2D	49	1.01061	0.296679	0.293564
SW-3D	15	0.868	0.226627	0.261092
SW-P1	34	1.04412	0.257248	0.246378

Compliance Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-12D	11	0.954545	0.150756	0.157935
SW-13D	33	0.985455	0.317383	0.322067
SW-10D	47	1.02128	0.294099	0.287972
SW-11D	49	1.01061	0.296679	0.293564
SW-15D	32	1.03188	0.356863	0.345839
SW-1DN	33	2.37939	4.81677	**2.02437**
SW-1SN	30	0.950667	0.27275	0.286904
SW-3SN	21	0.97619	0.294796	0.301986
SW-4D	43	2.22558	1.11507	0.501023
SW-5D	49	1.01061	0.296679	0.293564
SW-5S	10	1.1	0.516398	0.469453
SW-6D	33	1.04606	0.401575	0.383892
SW-7D	49	1.07184	0.432472	0.403487
SW-8D	47	1.02809	0.313928	0.305352
SW-9D	48	1.02125	0.290221	0.284182
SW-9S	23	1.06522	0.407441	0.382495
SW-P2	32	0.969375	0.25083	0.258754
SW-P3	36	1.01444	0.347353	0.342407
SW-P5	24	1.02167	0.4283	0.419217

All Locations

Obs.	Mean	Std. Dev.	CV
748	1.14479	1.14388	0.999211

Confidence Interval

Parameter: VINYL CHLORIDE

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

Background Locations

Location	SW-2D	
Mean	1.01061	
Std Dev	0.296679	
Degrees of Freedom	48	
Comparison Level	**1**	
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[0.908615, 1.11261]	1.01061	FALSE
95%	1.67722	[0.939527, 1.0817]	1.01061	FALSE

Location **SW-3D**

Mean	0.868	
Std Dev	0.226627	
Degrees of Freedom		14
Comparison Level		**1**
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.62449	[0.714428, 1.02157]	0.868	FALSE
95%	1.76131	[0.764937, 0.971063]	0.868	FALSE

Location **SW-P1**

Mean	1.04412	
Std Dev	0.257248	
Degrees of Freedom		33
Comparison Level		**1**
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44479	[0.936259, 1.15198]	1.04412	FALSE
95%	1.69236	[0.969455, 1.11878]	1.04412	FALSE

Compliance Locations

Location **SW-12D**

Mean	0.954545	
Std Dev	0.150756	
Degrees of Freedom		10
Comparison Level		**1**
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.76377	[0.828919, 1.08017]	0.954545	FALSE
95%	1.81246	[0.872161, 1.03693]	0.954545	FALSE

Location **SW-13D**

Mean	0.985455	
Std Dev	0.317383	
Degrees of Freedom		32
Comparison Level		**1**
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[0.850167, 1.12074]	0.985455	FALSE
95%	1.69389	[0.891868, 1.07904]	0.985455	FALSE

Location **SW-10D**

Mean	1.02128	
Std Dev	0.294099	
Degrees of Freedom		46
Comparison Level		**1**
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.41019	[0.917883, 1.12467]	1.02128	FALSE
95%	1.67866	[0.949264, 1.09329]	1.02128	FALSE

Location **SW-11D**

Mean	1.01061	
Std Dev	0.296679	
Degrees of Freedom	48	
Comparison Level	**1**	
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[0.908615, 1.11261]	1.01061	FALSE
95%	1.67722	[0.939527, 1.0817]	1.01061	FALSE

Location **SW-15D**

Mean	1.03188	
Std Dev	0.356863	
Degrees of Freedom	31	
Comparison Level	**1**	
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.45283	[0.877138, 1.18661]	1.03188	FALSE
95%	1.69552	[0.924913, 1.13884]	1.03188	FALSE

Location **SW-1DN**

Mean	2.37939	
Std Dev	4.81677	
Degrees of Freedom	32	
Comparison Level	**1**	
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[0.326197, 4.43259]	2.37939	FALSE
95%	1.69389	[0.959082, 3.79971]	2.37939	FALSE

Location **SW-1SN**

Mean	0.950667	
Std Dev	0.27275	
Degrees of Freedom	29	
Comparison Level	**1**	
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.46202	[0.828065, 1.07327]	0.950667	FALSE
95%	1.69913	[0.866055, 1.03528]	0.950667	FALSE

Location **SW-3SN**

Mean	0.97619
Std Dev	0.294796
Degrees of Freedom	20
Comparison Level	**1**

Untransformed Comp. Level 1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.52798	[0.813566, 1.13881]	0.97619	FALSE
95%	1.72472	[0.86524, 1.08714]	0.97619	FALSE

Location SW-4D

Mean 2.22558
Std Dev 1.11507
Degrees of Freedom 42
Comparison Level 1
Untransformed Comp. Level 1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.41847	[1.81433, 2.63683]	2.22558	TRUE
95%	1.68195	[1.93957, 2.51159]	2.22558	TRUE

Location SW-5D

Mean 1.01061
Std Dev 0.296679
Degrees of Freedom 48
Comparison Level 1
Untransformed Comp. Level 1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[0.908615, 1.11261]	1.01061	FALSE
95%	1.67722	[0.939527, 1.0817]	1.01061	FALSE

Location SW-5S

Mean 1.1
Std Dev 0.516398
Degrees of Freedom 9
Comparison Level 1
Untransformed Comp. Level 1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.82143	[0.639262, 1.56074]	1.1	FALSE
95%	1.83311	[0.800654, 1.39935]	1.1	FALSE

Location SW-6D

Mean 1.04606
Std Dev 0.401575
Degrees of Freedom 32
Comparison Level 1
Untransformed Comp. Level 1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[0.874885, 1.21724]	1.04606	FALSE
95%	1.69389	[0.927649, 1.16447]	1.04606	FALSE

Location SW-7D

Mean 1.07184
Std Dev 0.432472

Degrees of Freedom		48		
Comparison Level		**1**		
Untransformed Comp. Level		1		

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[0.923154, 1.22052]	1.07184	FALSE
95%	1.67722	[0.968215, 1.17546]	1.07184	FALSE

Location SW-8D

Mean	1.02809	
Std Dev	0.313928	
Degrees of Freedom		46
Comparison Level		**1**
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.41019	[0.91772, 1.13845]	1.02809	FALSE
95%	1.67866	[0.951218, 1.10495]	1.02809	FALSE

Location SW-9D

Mean	1.02125	
Std Dev	0.290221	
Degrees of Freedom		47
Comparison Level		**1**
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40834	[0.920365, 1.12213]	1.02125	FALSE
95%	1.67793	[0.950962, 1.09154]	1.02125	FALSE

Location SW-9S

Mean	1.06522	
Std Dev	0.407441	
Degrees of Freedom		22
Comparison Level		**1**
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.50832	[0.852117, 1.27832]	1.06522	FALSE
95%	1.71714	[0.919334, 1.2111]	1.06522	FALSE

Location SW-P2

Mean	0.969375	
Std Dev	0.25083	
Degrees of Freedom		31
Comparison Level		**1**
Untransformed Comp. Level		1

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.45283	[0.860614, 1.07814]	0.969375	FALSE
95%	1.69552	[0.894194, 1.04456]	0.969375	FALSE

Location SW-P5

Mean	1.02167

Std Dev	0.4283	
Degrees of Freedom	23	
Comparison Level	**1**	
Untransformed Comp. Level		1

Confidence	**t-Stat**	**Interval**	**Mid-Point**	**Significant**
99%	2.49987	[0.803112, 1.24022]	1.02167	FALSE
95%	1.71387	[0.871829, 1.1715]	1.02167	FALSE

Concentrations (µg/L)
Parameter: 1,1-DICHLOROETHANE
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit
Total Measurements: 775
Total Non-Detect: 664
Percent Non-Detects: 85.6774%
Total Background Measurements: 100
There are 4 background locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-2D	49	49 (100%)			
			6/10/1992	ND<1	ND<1
			5/11/1993	ND<1	ND<1
			11/17/1993	ND<1	ND<1
			1/24/1994	ND<1	ND<1
			4/13/1994	ND<1	ND<1
			7/14/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			1/16/1996	ND<2	ND<2
			4/9/1996	ND<1	ND<1
			7/11/1996	ND<2	ND<2
			10/23/1996	ND<1	ND<1
			1/22/1997	ND<2	ND<2
			4/18/1997	ND<1	ND<1
			7/14/1997	ND<4	ND<4
			11/6/1997	ND<1	ND<1
			1/27/1998	ND<4	ND<4
			4/22/1998	ND<4	ND<4
			7/23/1998	ND<4	ND<4
			11/11/1998	ND<1	ND<1
			1/28/1999	ND<4	ND<4
			5/27/1999	ND<1	ND<1
			7/28/1999	ND<4	ND<4
			11/10/1999	ND<1	ND<1
			1/27/2000	ND<4	ND<4
			4/20/2000	ND<1	ND<1
			8/1/2000	ND<4	ND<4
			11/8/2000	ND<1	ND<1
			1/16/2001	ND<4	ND<4
			4/17/2001	ND<1	ND<1
			8/1/2001	ND<4	ND<4
			11/8/2001	ND<1	ND<1
			1/23/2002	ND<4	ND<4
			4/17/2002	ND<1	ND<1
			7/18/2002	ND<4	ND<4
			10/22/2002	ND<1	ND<1
			1/16/2003	ND<4	ND<4
			4/23/2003	ND<4	ND<4
			7/30/2003	ND<4	ND<4
			1/15/2004	ND<4	ND<4
			7/14/2004	ND<4	ND<4
			1/25/2005	ND<4	ND<4
			8/1/2005	ND<0.3	ND<0.3
			1/23/2006	ND<0.3	ND<0.3

			7/20/2006	ND<0.3	ND<0.3
			1/22/2007	ND<0.6	ND<0.6
SW-3D	15	15 (100%)			
			5/11/1993	ND<1	ND<1
			11/16/1993	ND<1	ND<1
			1/24/1994	ND<1	ND<1
			4/13/1994	ND<1	ND<1
			7/14/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			1/25/2005	ND<4	ND<4
			8/2/2005	ND<0.3	ND<0.3
			1/23/2006	ND<0.3	ND<0.3
			7/20/2006	ND<0.3	ND<0.3
			1/22/2007	ND<0.6	ND<0.6
SW-P1	34	34 (100%)			
			5/11/1993	ND<1	ND<1
			1/24/1994	ND<1	ND<1
			4/25/1994	ND<1	ND<1
			11/9/1994	ND<1	ND<1
			1/16/1995	ND<1	ND<1
			7/13/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			1/15/1996	ND<2	ND<2
			4/22/1996	ND<1	ND<1
			7/11/1996	ND<2	ND<2
			10/24/1996	ND<1	ND<1
			1/20/1997	ND<2	ND<2
			4/17/1997	ND<1	ND<1
			7/14/1997	ND<4	ND<4
			11/6/1997	ND<1	ND<1
			4/22/1998	ND<4	ND<4
			7/23/1998	ND<4	ND<4
			11/10/1998	ND<1	ND<1
			2/2/1999	ND<4	ND<4
			6/7/1999	ND<1	ND<1
			7/29/1999	ND<4	ND<4
			2/1/2000	ND<4	ND<4
			4/21/2000	ND<1	ND<1
			8/3/2000	ND<4	ND<4
			11/10/2000	ND<1	ND<1
			4/17/2001	ND<1	ND<1
			8/2/2001	ND<4	ND<4
			1/25/2002	ND<4	ND<4
			4/23/2002	ND<1	ND<1
			8/14/2002	ND<4	ND<4
			1/20/2003	ND<4	ND<4
			4/24/2003	ND<4	ND<4
			7/30/2003	ND<4	ND<4
			1/24/2006	ND<0.3	ND<0.3

There are 25 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original

SW-12D 11	11 (100%)			
		6/9/1992	ND<1	ND<1
		5/10/1993	ND<1	ND<1
		11/9/1993	ND<1	ND<1
		1/20/1994	ND<1	ND<1
		4/13/1994	ND<1	ND<1
		7/13/1994	ND<1	ND<1
		10/27/1994	ND<1	ND<1
		1/11/1995	ND<1	ND<1
		4/11/1995	ND<1	ND<1
		7/12/1995	ND<1	ND<1
		10/30/1995	ND<1	ND<1
SW-13D 33	33 (100%)			
		6/9/1992	ND<1	ND<1
		5/11/1993	ND<1	ND<1
		11/9/1993	ND<1	ND<1
		1/25/1994	ND<1	ND<1
		4/18/1994	ND<1	ND<1
		7/13/1994	ND<1	ND<1
		11/2/1994	ND<1	ND<1
		1/11/1995	ND<1	ND<1
		4/13/1995	ND<1	ND<1
		7/13/1995	ND<1	ND<1
		10/31/1995	ND<1	ND<1
		4/11/1996	ND<1	ND<1
		10/23/1996	ND<1	ND<1
		4/18/1997	ND<1	ND<1
		11/5/1997	ND<1	ND<1
		4/23/1998	ND<4	ND<4
		11/12/1998	ND<1	ND<1
		5/28/1999	ND<1	ND<1
		11/11/1999	ND<1	ND<1
		4/21/2000	ND<1	ND<1
		11/10/2000	ND<1	ND<1
		4/18/2001	ND<1	ND<1
		11/13/2001	ND<1	ND<1
		4/18/2002	ND<1	ND<1
		10/23/2002	ND<1	ND<1
		4/24/2003	ND<4	ND<4
		1/20/2004	ND<4	ND<4
		7/19/2004	ND<4	ND<4
		1/26/2005	ND<4	ND<4
		8/3/2005	ND<0.3	ND<0.3
		1/24/2006	ND<0.3	ND<0.3
		7/25/2006	ND<0.3	ND<0.3
		1/23/2007	ND<0.6	ND<0.6
SW-10D 48	37 (77.0833%)			
		6/9/1992	ND<1	ND<1
		5/10/1993	**2**	**2**
		11/11/1993	**2**	**2**
		1/20/1994	ND<1	ND<1
		4/13/1994	ND<1	ND<1
		7/26/1994	ND<1	ND<1
		1/10/1995	**1**	**1**
		4/12/1995	**2**	**2**
		7/13/1995	**1**	**1**
		10/30/1995	ND<1	ND<1
		1/16/1996	**2**	**2**

		4/11/1996	ND<1	ND<1
		7/11/1996	ND<2	ND<2
		10/24/1996	**1**	**1**
		1/21/1997	ND<2	ND<2
		4/17/1997	**1.8**	**1.8**
		7/14/1997	ND<4	ND<4
		11/5/1997	ND<1	ND<1
		1/28/1998	ND<4	ND<4
		4/22/1998	ND<4	ND<4
		7/28/1998	ND<4	ND<4
		11/12/1998	**1**	**1**
		2/2/1999	ND<4	ND<4
		5/28/1999	ND<1	ND<1
		7/29/1999	ND<4	ND<4
		11/11/1999	ND<1	ND<1
		2/1/2000	ND<4	ND<4
		4/21/2000	ND<1	ND<1
		8/3/2000	ND<4	ND<4
		11/9/2000	ND<1	ND<1
		1/19/2001	ND<4	ND<4
		4/18/2001	ND<1	ND<1
		8/2/2001	ND<4	ND<4
		11/12/2001	ND<1	ND<1
		1/24/2002	ND<4	ND<4
		4/18/2002	**1.2**	**1.2**
		7/17/2002	ND<4	ND<4
		10/23/2002	ND<1	ND<1
		1/20/2003	ND<4	ND<4
		4/29/2003	ND<4	ND<4
		7/31/2003	ND<4	ND<4
		1/22/2004	ND<4	ND<4
		7/19/2004	ND<4	ND<4
		1/27/2005	ND<4	ND<4
		8/3/2005	ND<0.3	ND<0.3
		1/25/2006	**0.4**	**0.4**
		7/19/2006	ND<0.3	ND<0.3
		1/18/2007	ND<0.6	ND<0.6

SW-11D 49	49 (100%)			
		6/9/1992	ND<1	ND<1
		5/10/1993	ND<1	ND<1
		11/9/1993	ND<1	ND<1
		1/20/1994	ND<1	ND<1
		4/13/1994	ND<1	ND<1
		7/13/1994	ND<1	ND<1
		10/27/1994	ND<1	ND<1
		1/11/1995	ND<1	ND<1
		4/11/1995	ND<1	ND<1
		7/12/1995	ND<1	ND<1
		10/30/1995	ND<1	ND<1
		1/16/1996	ND<2	ND<2
		4/11/1996	ND<1	ND<1
		7/15/1996	ND<2	ND<2
		10/24/1996	ND<1	ND<1
		1/20/1997	ND<2	ND<2
		4/18/1997	ND<1	ND<1
		7/14/1997	ND<4	ND<4
		11/5/1997	ND<1	ND<1
		1/26/1998	ND<4	ND<4
		4/23/1998	ND<4	ND<4
		7/28/1998	ND<4	ND<4
		11/10/1998	ND<1	ND<1

			2/2/1999	ND<4	ND<4
			5/27/1999	ND<1	ND<1
			7/29/1999	ND<4	ND<4
			11/10/1999	ND<1	ND<1
			1/27/2000	ND<4	ND<4
			4/21/2000	ND<1	ND<1
			8/2/2000	ND<4	ND<4
			11/9/2000	ND<1	ND<1
			1/17/2001	ND<4	ND<4
			4/18/2001	ND<1	ND<1
			8/1/2001	ND<4	ND<4
			11/8/2001	ND<1	ND<1
			1/23/2002	ND<4	ND<4
			4/19/2002	ND<1	ND<1
			7/17/2002	ND<4	ND<4
			10/23/2002	ND<1	ND<1
			1/20/2003	ND<4	ND<4
			4/28/2003	ND<4	ND<4
			8/1/2003	ND<4	ND<4
			1/22/2004	ND<4	ND<4
			7/19/2004	ND<4	ND<4
			1/27/2005	ND<4	ND<4
			8/2/2005	ND<0.3	ND<0.3
			1/25/2006	ND<0.3	ND<0.3
			7/19/2006	ND<0.3	ND<0.3
			1/23/2007	ND<0.6	ND<0.6
SW-15D	32	32 (100%)			
			1/25/1994	ND<1	ND<1
			4/18/1994	ND<1	ND<1
			7/20/1994	ND<1	ND<1
			10/27/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/11/1995	ND<1	ND<1
			7/18/1995	ND<1	ND<1
			10/30/1995	ND<1	ND<1
			1/16/1996	ND<2	ND<2
			7/15/1996	ND<2	ND<2
			1/21/1997	ND<2	ND<2
			7/15/1997	ND<4	ND<4
			1/28/1998	ND<4	ND<4
			4/23/1998	ND<4	ND<4
			7/23/1998	ND<4	ND<4
			2/2/1999	ND<4	ND<4
			2/1/2000	ND<4	ND<4
			8/2/2000	ND<4	ND<4
			1/17/2001	ND<4	ND<4
			8/1/2001	ND<4	ND<4
			1/24/2002	ND<4	ND<4
			8/14/2002	ND<4	ND<4
			1/20/2003	ND<4	ND<4
			4/29/2003	ND<4	ND<4
			7/31/2003	ND<4	ND<4
			1/22/2004	ND<4	ND<4
			7/19/2004	ND<4	ND<4
			1/27/2005	ND<4	ND<4
			8/3/2005	ND<0.3	ND<0.3
			1/25/2006	ND<0.3	ND<0.3
			7/25/2006	ND<0.3	ND<0.3
			1/18/2007	ND<0.6	ND<0.6

SW-1DN	33	33 (100%)		
		6/10/1992	ND<1	ND<1
		5/10/1993	ND<1	ND<1
		11/17/1993	ND<1	ND<1
		1/24/1994	ND<1	ND<1
		4/13/1994	ND<1	ND<1
		7/14/1994	ND<1	ND<1
		11/2/1994	ND<1	ND<1
		1/12/1995	ND<1	ND<1
		4/12/1995	ND<1	ND<1
		7/12/1995	ND<1	ND<1
		10/26/1995	ND<1	ND<1
		4/9/1996	ND<1	ND<1
		10/23/1996	ND<1	ND<1
		4/18/1997	ND<1	ND<1
		11/6/1997	ND<1	ND<1
		4/22/1998	ND<4	ND<4
		11/11/1998	ND<1	ND<1
		5/27/1999	ND<1	ND<1
		11/10/1999	ND<1	ND<1
		4/20/2000	ND<1	ND<1
		11/8/2000	ND<1	ND<1
		4/17/2001	ND<1	ND<1
		11/8/2001	ND<1	ND<1
		4/17/2002	ND<1	ND<1
		10/22/2002	ND<1	ND<1
		4/23/2003	ND<4	ND<4
		1/15/2004	ND<4	ND<4
		7/14/2004	ND<4	ND<4
		1/25/2005	ND<4	ND<4
		8/1/2005	ND<0.3	ND<0.3
		1/23/2006	ND<0.3	ND<0.3
		7/20/2006	ND<0.3	ND<0.3
		1/23/2007	ND<0.6	ND<0.6

SW-1SN	30	30 (100%)		
		6/10/1992	ND<1	ND<1
		5/18/1993	ND<1	ND<1
		11/16/1993	ND<1	ND<1
		1/20/1994	ND<1	ND<1
		4/18/1994	ND<1	ND<1
		7/20/1994	ND<1	ND<1
		11/1/1994	ND<1	ND<1
		1/11/1995	ND<1	ND<1
		4/11/1995	ND<1	ND<1
		7/12/1995	ND<1	ND<1
		10/26/1995	ND<1	ND<1
		4/9/1996	ND<1	ND<1
		10/22/1996	ND<1	ND<1
		4/18/1997	ND<1	ND<1
		11/5/1997	ND<1	ND<1
		4/22/1998	ND<4	ND<4
		11/10/1998	ND<1	ND<1
		5/27/1999	ND<1	ND<1
		11/10/1999	ND<1	ND<1
		4/21/2000	ND<1	ND<1
		11/9/2000	ND<1	ND<1
		11/8/2001	ND<1	ND<1
		4/28/2003	ND<4	ND<4
		1/22/2004	ND<4	ND<4
		7/14/2004	ND<4	ND<4
		2/8/2005	ND<4	ND<4

			8/4/2005	ND<0.3	ND<0.3
			1/25/2006	ND<0.3	ND<0.3
			7/25/2006	ND<0.3	ND<0.3
			1/23/2007	ND<0.6	ND<0.6
SW-2SN	19	19 (100%)			
			4/11/1996	ND<1	ND<1
			7/11/1996	ND<2	ND<2
			10/22/1996	ND<1	ND<1
			1/21/1997	ND<2	ND<2
			4/18/1997	ND<1	ND<1
			7/15/1997	ND<4	ND<4
			11/5/1997	ND<1	ND<1
			1/26/1998	ND<4	ND<4
			4/22/1998	ND<4	ND<4
			7/23/1998	ND<4	ND<4
			11/10/1998	ND<1	ND<1
			2/2/1999	ND<4	ND<4
			5/28/1999	ND<1	ND<1
			7/29/1999	ND<4	ND<4
			11/11/1999	ND<1	ND<1
			1/27/2005	ND<4	ND<4
			8/2/2005	ND<0.3	ND<0.3
			1/25/2006	ND<0.3	ND<0.3
			7/25/2006	ND<0.3	ND<0.3
SW-3SN	21	20 (95.2381%)			
			11/9/1993	ND<1	ND<1
			1/25/1994	ND<1	ND<1
			4/18/1994	ND<1	ND<1
			7/13/1994	ND<1	ND<1
			11/9/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/13/1995	ND<1	ND<1
			7/18/1995	ND<1	ND<1
			10/31/1995	ND<1	ND<1
			4/9/1996	ND<1	ND<1
			10/23/1996	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			11/5/1997	ND<1	ND<1
			4/23/1998	ND<4	ND<4
			11/10/1998	ND<1	ND<1
			5/28/1999	ND<1	ND<1
			11/11/1999	ND<1	ND<1
			1/28/2005	ND<4	ND<4
			8/3/2005	ND<0.3	ND<0.3
			1/24/2006	ND<0.3	ND<0.3
			7/25/2006	**0.3**	**0.3**
SW-4D	43	15 (34.8837%)			
			6/9/1992 2.08	**2.08**	
			5/11/1993	**3**	**3**
			11/11/1993	**4**	**4**
			1/20/1994	**3**	**3**
			4/13/1994	**4**	**4**
			7/20/1994	**4**	**4**
			11/1/1994	**4**	**4**
			1/11/1995	ND<1	ND<1
			4/12/1995	**3**	**3**
			7/12/1995	**4**	**4**
			10/26/1995	ND<1	ND<1

			4/11/1996	3	3
			10/23/1996	ND<1	ND<1
			4/17/1997	6	6
			11/4/1997	3.4	3.4
			4/23/1998	ND<4	ND<4
			7/23/1998	4	4
			11/10/1998	3	3
			2/2/19995	5	
			6/7/19991.4	1.4	
			7/28/1999	ND<4	ND<4
			11/11/1999	ND<1	ND<1
			4/21/2000	2.9	2.9
			8/2/2000	ND<4	ND<4
			11/10/2000	4.8	4.8
			1/18/2001	4.5	4.5
			4/18/2001	2.8	2.8
			8/2/20015	5	
			11/13/2001	3.8	3.8
			1/24/2002	ND<4	ND<4
			4/19/2002	4.7	4.7
			7/17/2002	ND<4	ND<4
			10/22/2002	2.2	2.2
			1/20/2003	ND<4	ND<4
			4/24/2003	ND<4	ND<4
			7/31/2003	ND<4	ND<4
			1/20/2004	ND<4	ND<4
			7/19/2004	ND<4	ND<4
			1/26/2005	ND<4	ND<4
			8/3/20052	2	
			1/24/2006	1	1
			7/25/2006	1	1
			1/23/2007	1.4	1.4

SW-5D	49	26 (53.0612%)	6/10/1992	1.52	1.52
			5/11/1993	2	2
			11/9/1993	2	2
			1/20/1994	1	1
			4/13/1994	2	2
			7/26/1994	ND<1	ND<1
			11/1/1994	1	1
			1/10/1995	2	2
			4/13/1995	1	1
			7/18/1995	1	1
			10/26/1995	2	2
			1/15/1996	ND<2	ND<2
			4/11/1996	2	2
			7/11/1996	ND<2	ND<2
			10/23/1996	2	2
			1/22/1997	ND<2	ND<2
			4/18/1997	ND<1	ND<1
			7/14/1997	ND<4	ND<4
			11/4/1997	ND<1	ND<1
			1/27/1998	ND<4	ND<4
			4/23/1998	ND<4	ND<4
			7/23/1998	ND<4	ND<4
			11/11/1998	1	1
			1/28/1999	ND<4	ND<4
			5/27/1999	1.3	1.3
			7/28/1999	ND<4	ND<4
			11/11/1999	ND<1	ND<1
			2/1/20004	4	
			4/21/2000	1.1	1.1

			8/2/2000	ND<4	ND<4
			11/8/2000	**1.1**	**1.1**
			1/18/2001	ND<4	ND<4
			4/17/2001	**1.5**	**1.5**
			8/1/2001	ND<4	ND<4
			11/8/2001	**1.4**	**1.4**
			1/23/2002	ND<4	ND<4
			4/19/2002	**1.9**	**1.9**
			7/18/2002	ND<4	ND<4
			10/23/2002	**1.2**	**1.2**
			1/16/2003	ND<4	ND<4
			4/24/2003	ND<4	ND<4
			8/1/2003	ND<4	ND<4
			1/20/2004	ND<4	ND<4
			7/15/2004	ND<4	ND<4
			1/26/2005	ND<4	ND<4
			8/2/20051	**1**	
			1/23/2006	**0.8**	**0.8**
			7/19/2006	ND<0.3	ND<0.3
			1/22/2007	ND<0.6	ND<0.6
SW-5S	10	10 (100%)			
			10/24/1996	ND<1	ND<1
			1/26/1998	ND<4	ND<4
			4/23/1998	ND<4	ND<4
			7/23/1998	ND<4	ND<4
			11/11/1998	ND<1	ND<1
			2/2/1999	ND<4	ND<4
			5/28/1999	ND<1	ND<1
			1/28/2005	ND<4	ND<4
			8/3/2005	ND<0.3	ND<0.3
			1/24/2006	ND<0.3	ND<0.3
SW-6D	33	33 (100%)			
			6/10/1992	ND<1	ND<1
			5/10/1993	ND<1	ND<1
			11/15/1993	ND<1	ND<1
			1/24/1994	ND<1	ND<1
			4/12/1994	ND<1	ND<1
			7/14/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/13/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			1/16/1996	ND<2	ND<2
			7/11/1996	ND<2	ND<2
			1/21/1997	ND<2	ND<2
			7/15/1997	ND<4	ND<4
			1/27/1998	ND<4	ND<4
			4/23/1998	ND<4	ND<4
			7/23/1998	ND<4	ND<4
			1/28/1999	ND<4	ND<4
			7/28/1999	ND<4	ND<4
			1/27/2000	ND<4	ND<4
			8/1/2000	ND<4	ND<4
			1/17/2001	ND<4	ND<4
			1/23/2002	ND<4	ND<4
			4/23/2003	ND<4	ND<4
			7/30/2003	ND<4	ND<4
			1/15/2004	ND<4	ND<4

			7/15/2004	ND<4	ND<4
			1/25/2005	ND<4	ND<4
			8/1/2005	ND<0.3	ND<0.3
			1/23/2006	ND<0.3	ND<0.3
			7/19/2006	ND<0.3	ND<0.3
			1/22/2007	ND<0.6	ND<0.6
SW-7D	49	42 (85.7143%)			
			6/10/1992	**1.74**	**1.74**
			5/10/1993	**2**	**2**
			11/16/1993	**2**	**2**
			1/24/1994	**1**	**1**
			4/13/1994	**1**	**1**
			7/14/1994	**1**	**1**
			11/2/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			1/16/1996	ND<2	ND<2
			4/11/1996	ND<1	ND<1
			7/11/1996	ND<2	ND<2
			10/24/1996	ND<1	ND<1
			1/21/1997	ND<2	ND<2
			4/18/1997	ND<1	ND<1
			7/14/1997	ND<4	ND<4
			11/6/1997	ND<1	ND<1
			1/27/1998	ND<4	ND<4
			4/22/1998	ND<4	ND<4
			7/23/1998	ND<4	ND<4
			11/11/1998	ND<1	ND<1
			1/28/1999	ND<4	ND<4
			5/25/1999	ND<1	ND<1
			7/28/1999	ND<4	ND<4
			11/10/1999	ND<1	ND<1
			1/27/2000	ND<4	ND<4
			4/20/2000	ND<1	ND<1
			8/1/2000	ND<4	ND<4
			11/8/2000	ND<1	ND<1
			1/16/2001	ND<4	ND<4
			4/17/2001	ND<1	ND<1
			8/1/2001	ND<4	ND<4
			11/12/2001	ND<1	ND<1
			1/23/2002	ND<4	ND<4
			4/17/2002	ND<1	ND<1
			7/18/2002	ND<4	ND<4
			10/22/2002	ND<1	ND<1
			1/16/2003	ND<4	ND<4
			4/23/2003	ND<4	ND<4
			7/30/2003	ND<4	ND<4
			1/15/2004	ND<4	ND<4
			7/15/2004	ND<4	ND<4
			1/25/2005	ND<4	ND<4
			8/1/2005	**0.5**	**0.5**
			1/23/2006	ND<0.3	ND<0.3
			7/19/2006	ND<0.3	ND<0.3
			1/22/2007	ND<0.6	ND<0.6
SW-8D	47	21 (44.6809%)			
			6/10/1992	**1.96**	**1.96**
			5/11/1993	**2**	**2**

		11/17/1993	**2**	**2**
		4/12/1994	**2**	**2**
		7/14/1994	**2**	**2**
		11/2/1994	**2**	**2**
		1/12/1995	**2**	**2**
		4/12/1995	**2**	**2**
		7/13/1995	**2**	**2**
		10/25/1995	ND<1	ND<1
		1/16/1996	**3**	**3**
		4/11/1996	**2**	**2**
		7/11/1996	ND<2	ND<2
		10/24/1996	**2**	**2**
		1/22/1997	ND<2	ND<2
		4/17/1997	**2.3**	**2.3**
		7/17/1997	ND<4	ND<4
		11/6/1997	**1.2**	**1.2**
		1/27/1998	ND<4	ND<4
		4/23/1998	ND<4	ND<4
		7/23/1998	ND<4	ND<4
		11/11/1998	**1**	**1**
		1/28/1999	ND<4	ND<4
		5/25/1999	**1.2**	**1.2**
		8/2/1999	ND<4	ND<4
		11/11/1999	**1**	**1**
		1/27/2000	**5**	**5**
		8/3/2000	ND<4	ND<4
		11/10/2000	**3**	**3**
		1/19/2001	ND<4	ND<4
		4/18/2001	ND<1	ND<1
		8/2/2001	ND<4	ND<4
		11/13/2001	**1.7**	**1.7**
		1/24/2002	ND<4	ND<4
		4/18/2002	**2**	**2**
		7/17/2002	ND<4	ND<4
		10/23/2002	**1.2**	**1.2**
		1/20/2003	ND<4	ND<4
		4/28/2003	ND<4	ND<4
		7/31/2003	ND<4	ND<4
		1/20/2004	ND<4	ND<4
		7/19/2004	ND<4	ND<4
		1/27/2005	ND<4	ND<4
		8/4/2005 1	**1**	
		1/24/2006	**1**	**1**
		7/25/2006	**1**	**1**
		1/18/2007	**1.2**	**1.2**
SW-9D	48	45 (93.75%)		
		5/11/1993	ND<1	ND<1
		11/16/1993	ND<1	ND<1
		1/25/1994	ND<1	ND<1
		4/12/1994	ND<1	ND<1
		7/14/1994	ND<1	ND<1
		11/2/1994	ND<1	ND<1
		1/12/1995	ND<1	ND<1
		4/12/1995	ND<1	ND<1
		7/18/1995	ND<1	ND<1
		10/26/1995	ND<1	ND<1
		1/16/1996	ND<2	ND<2
		4/11/1996	ND<1	ND<1
		7/11/1996	ND<2	ND<2
		10/24/1996	ND<1	ND<1
		1/21/1997	ND<2	ND<2

			4/17/1997	ND<1	ND<1
			7/15/1997	ND<4	ND<4
			11/6/1997	ND<1	ND<1
			1/27/1998	ND<4	ND<4
			4/22/1998	ND<4	ND<4
			7/23/1998	ND<4	ND<4
			11/11/1998	ND<1	ND<1
			1/28/1999	ND<4	ND<4
			5/27/1999	ND<1	ND<1
			7/28/1999	ND<4	ND<4
			11/11/1999	ND<1	ND<1
			1/27/2000	ND<4	ND<4
			4/21/2000	ND<1	ND<1
			8/1/2000	ND<4	ND<4
			11/9/2000	ND<1	ND<1
			1/17/2001	ND<4	ND<4
			4/17/2001	ND<1	ND<1
			8/1/2001	ND<4	ND<4
			11/12/2001	ND<1	ND<1
			1/23/2002	ND<4	ND<4
			4/22/2002	ND<1	ND<1
			7/18/2002	ND<4	ND<4
			10/22/2002	ND<1	ND<1
			1/16/2003	ND<4	ND<4
			4/23/2003	ND<4	ND<4
			7/30/2003	ND<4	ND<4
			1/15/2004	ND<4	ND<4
			7/15/2004	ND<4	ND<4
			1/25/2005	ND<4	ND<4
			8/1/2005	**0.5**	**0.5**
			1/23/2006	**0.4**	**0.4**
			7/20/2006	**0.5**	**0.5**
			1/22/2007	ND<0.6	ND<0.6
SW-9S	23	23 (100%)			
			11/2/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/13/1995	ND<1	ND<1
			10/30/1995	ND<1	ND<1
			1/16/1996	ND<2	ND<2
			4/9/1996	ND<1	ND<1
			7/11/1996	ND<2	ND<2
			10/23/1996	ND<1	ND<1
			1/21/1997	ND<2	ND<2
			4/17/1997	ND<1	ND<1
			7/17/1997	ND<4	ND<4
			1/26/1998	ND<4	ND<4
			4/22/1998	ND<4	ND<4
			7/28/1998	ND<4	ND<4
			11/10/1998	ND<1	ND<1
			1/28/1999	ND<4	ND<4
			5/27/1999	ND<1	ND<1
			7/29/1999	ND<4	ND<4
			1/28/2005	ND<4	ND<4
			8/3/2005	ND<0.3	ND<0.3
			1/25/2006	ND<0.3	ND<0.3
			7/25/2006	ND<0.3	ND<0.3
SW-P2	32	32 (100%)			
			5/11/1993	ND<1	ND<1

			11/17/1993	ND<1	ND<1
			1/24/1994	ND<1	ND<1
			4/13/1994	ND<1	ND<1
			7/14/1994	ND<1	ND<1
			11/9/1994	ND<1	ND<1
			1/16/1995	ND<1	ND<1
			4/13/1995	ND<1	ND<1
			7/18/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			4/11/1996	ND<1	ND<1
			10/23/1996	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			11/6/1997	ND<1	ND<1
			4/22/1998	ND<4	ND<4
			11/11/1998	ND<1	ND<1
			5/27/1999	ND<1	ND<1
			11/10/1999	ND<1	ND<1
			4/20/2000	ND<1	ND<1
			11/9/2000	ND<1	ND<1
			4/17/2001	ND<1	ND<1
			11/8/2001	ND<1	ND<1
			4/22/2002	ND<1	ND<1
			10/22/2002	ND<1	ND<1
			4/23/2003	ND<4	ND<4
			1/15/2004	ND<4	ND<4
			7/15/2004	ND<4	ND<4
			1/25/2005	ND<4	ND<4
			8/2/2005	ND<0.3	ND<0.3
			1/23/2006	ND<0.3	ND<0.3
			7/20/2006	ND<0.3	ND<0.3
			1/22/2007	ND<0.6	ND<0.6
SW-P3	36	34 (94.4444%)			
			6/9/1992 ND<1	ND<1	
			5/11/1993	ND<1	ND<1
			11/11/1993	ND<1	ND<1
			1/20/1994	ND<1	ND<1
			4/14/1994	ND<1	ND<1
			7/20/1994	ND<1	ND<1
			11/1/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/11/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			1/15/1996	ND<2	ND<2
			7/11/1996	ND<2	ND<2
			1/22/1997	ND<2	ND<2
			7/17/1997	ND<4	ND<4
			1/28/1998	ND<4	ND<4
			4/23/1998	ND<4	ND<4
			7/28/1998	ND<4	ND<4
			1/28/1999	ND<4	ND<4
			8/2/1999	ND<4	ND<4
			2/1/2000	ND<4	ND<4
			8/3/2000	ND<4	ND<4
			1/18/2001	ND<4	ND<4
			8/2/2001	ND<4	ND<4
			1/24/2002	ND<4	ND<4
			7/18/2002	ND<4	ND<4
			1/16/2003	ND<4	ND<4
			4/24/2003	ND<4	ND<4
			7/30/2003	ND<4	ND<4

		1/20/2004	ND<4	ND<4
		7/14/2004	ND<4	ND<4
		1/26/2005	ND<4	ND<4
		8/2/2005 0.3	0.3	
		1/23/2006	ND<0.3	ND<0.3
		7/20/2006	**0.7**	**0.7**
		1/23/2007	ND<0.6	ND<0.6
SW-P5	24	14 (58.3333%)		
		6/10/1992	**1.32**	**1.32**
		5/11/1993	**2**	**2**
		4/12/1994	**1**	**1**
		7/14/1994	ND<1	ND<1
		11/9/1994	**1**	**1**
		1/12/1995	**1**	**1**
		4/13/1995	ND<1	ND<1
		7/13/1995	**1**	**1**
		10/25/1995	ND<1	ND<1
		1/16/1996	**2**	**2**
		7/11/1996	ND<2	ND<2
		1/22/1997	ND<2	ND<2
		7/14/1997	ND<4	ND<4
		1/27/1998	ND<4	ND<4
		4/23/1998	ND<4	ND<4
		7/23/1998	ND<4	ND<4
		1/28/1999	ND<4	ND<4
		8/2/1999	ND<4	ND<4
		1/27/2000	**4**	**4**
		1/26/2005	ND<4	ND<4
		8/1/2005 0.7	**0.7**	
		1/23/2006	**0.6**	**0.6**
		7/20/2006	ND<0.3	ND<0.3
		1/22/2007	ND<0.6	ND<0.6

Confidence Interval
Parameter: 1,1-DICHLOROETHANE
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Background Locations

Location SW-2D

Mean	2.11224
Std Dev	1.48613
Degrees of Freedom	48
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[1.60132, 2.62317]	2.11224	FALSE
95%	1.67722	[1.75616, 2.46833]	2.11224	FALSE

Location SW-3D

Mean	1.03333
Std Dev	0.870687
Degrees of Freedom	14

Comparison Level		**70**		
Untransformed Comp. Level			70	

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.62449	[0.44332, 1.62335]	1.03333	FALSE
95%	1.76131	[0.637373, 1.42929]	1.03333	FALSE

Location SW-P1

Mean	2.21471		
Std Dev	1.45979		
Degrees of Freedom		33	
Comparison Level		**70**	
Untransformed Comp. Level			70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44479	[1.60265, 2.82677]	2.21471	FALSE
95%	1.69236	[1.79102, 2.63839]	2.21471	FALSE

Compliance Locations

Location SW-12D

Mean	1		
Std Dev	0		
Degrees of Freedom		10	
Comparison Level		**70**	
Untransformed Comp. Level			70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.76377	[1, 1]	1	FALSE
95%	1.81246	[1, 1]	1	FALSE

Location SW-13D

Mean	1.37879		
Std Dev	1.14421		
Degrees of Freedom		32	
Comparison Level		**70**	
Untransformed Comp. Level			70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[0.891055, 1.86652]	1.37879	FALSE
95%	1.69389	[1.0414, 1.71618]	1.37879	FALSE

Location SW-10D

Mean	2.22083		
Std Dev	1.44869		
Degrees of Freedom		47	
Comparison Level		**70**	
Untransformed Comp. Level			70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40834	[1.71725, 2.72442]	2.22083	FALSE
95%	1.67793	[1.86998, 2.57169]	2.22083	FALSE

Location SW-11D

Mean	2.11224
Std Dev	1.48613
Degrees of Freedom	48
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[1.60132, 2.62317]	2.11224	FALSE
95%	1.67722	[1.75616, 2.46833]	2.11224	FALSE

Location SW-15D

Mean	2.60937
Std Dev	1.5528
Degrees of Freedom	31
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.45283	[1.93608, 3.28267]	2.60937	FALSE
95%	1.69552	[2.14396, 3.07479]	2.60937	FALSE

Location SW-1DN

Mean	1.37879
Std Dev	1.14421
Degrees of Freedom	32
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[0.891055, 1.86652]	1.37879	FALSE
95%	1.69389	[1.0414, 1.71618]	1.37879	FALSE

Location SW-1SN

Mean	1.41667
Std Dev	1.19513
Degrees of Freedom	29
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.46202	[0.879455, 1.95388]	1.41667	FALSE
95%	1.69913	[1.04592, 1.78742]	1.41667	FALSE

Location SW-2SN

Mean	2.1
Std Dev	1.55421
Degrees of Freedom	18
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant

99%	2.55238	[1.18993, 3.01007]	2.1	FALSE
95%	1.73406	[1.4817, 2.7183]	2.1	FALSE

Location SW-3SN

Mean	1.18571
Std Dev	0.968135
Degrees of Freedom	20
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.52798	[0.651643, 1.71979]	1.18571	FALSE
95%	1.72472	[0.821343, 1.55009]	1.18571	FALSE

Location SW-4D

Mean	3.2786
Std Dev	1.30474
Degrees of Freedom	42
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.41847	[2.7974, 3.75981]	3.2786	FALSE
95%	1.68195	[2.94394, 3.61326]	3.2786	FALSE

Location SW-5D

Mean	2.34122
Std Dev	1.33997
Degrees of Freedom	48
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[1.88055, 2.8019]	2.34122	FALSE
95%	1.67722	[2.02016, 2.66229]	2.34122	FALSE

Location SW-5S

Mean	2.36
Std Dev	1.74751
Degrees of Freedom	9
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.82143	[0.800847, 3.91915]	2.36	FALSE
95%	1.83311	[1.347, 3.373]	2.36	FALSE

Location SW-6D

Mean	2.37879
Std Dev	1.55015
Degrees of Freedom	32
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[1.71802, 3.03956]	2.37879	FALSE
95%	1.69389	[1.9217, 2.83588]	2.37879	FALSE

Location **SW-7D**

Mean	2.17224
Std Dev	1.4549
Degrees of Freedom	48
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40658	[1.67205, 2.67244]	2.17224	FALSE
95%	1.67722	[1.82364, 2.52085]	2.17224	FALSE

Location **SW-8D**

Mean	2.61191
Std Dev	1.24362
Degrees of Freedom	46
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.41019	[2.17471, 3.04912]	2.61191	FALSE
95%	1.67866	[2.30741, 2.91642]	2.61191	FALSE

Location **SW-9D**

Mean	2.14583
Std Dev	1.48036
Degrees of Freedom	47
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40834	[1.63124, 2.66043]	2.14583	FALSE
95%	1.67793	[1.78731, 2.50436]	2.14583	FALSE

Location **SW-9S**

Mean	1.95217
Std Dev	1.45567
Degrees of Freedom	22
Comparison Level	**70**
Untransformed Comp. Level	70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.50832	[1.19083, 2.71352]	1.95217	FALSE
95%	1.71714	[1.43097, 2.47338]	1.95217	FALSE

Location **SW-P2**

Mean	1.39062
Std Dev	1.16047
Degrees of Freedom	31

Comparison Level		**70**		
Untransformed Comp. Level			70	

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.45283	[0.887444, 1.89381]	1.39062	FALSE
95%	1.69552	[1.0428, 1.73845]	1.39062	FALSE

Location SW-P3

Mean	2.525		
Std Dev	1.53537		
Degrees of Freedom		35	
Comparison Level		**70**	
Untransformed Comp. Level			70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.43772	[1.9012, 3.1488]	2.525	FALSE
95%	1.68957	[2.09265, 2.95735]	2.525	FALSE

Location SW-P5

Mean	2.105		
Std Dev	1.44008		
Degrees of Freedom		23	
Comparison Level		**70**	
Untransformed Comp. Level			70

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.49987	[1.37015, 2.83985]	2.105	FALSE
95%	1.71387	[1.6012, 2.6088]	2.105	FALSE

Concentrations (µg/L)
Parameter: 1,4-DICHLOROBENZENE
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Measurements: 834
Total Non-Detect: 660
Percent Non-Detects: 79.1367%
Total Background Measurements: 110
There are 4 background locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-2D	55	55 (100%)			
			6/10/1992	ND<0.5	ND<0.5
			5/11/1993	ND<1	ND<1
			11/17/1993	ND<1	ND<1
			1/24/1994	ND<1	ND<1
			4/13/1994	ND<1	ND<1
			7/14/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			1/16/1996	ND<2	ND<2
			4/9/1996	ND<1	ND<1
			4/9/1996	ND<1	ND<1
			7/11/1996	ND<2	ND<2
			10/23/1996	ND<1	ND<1
			1/22/1997	ND<2	ND<2
			4/18/1997	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			7/14/1997	ND<1	ND<1
			11/6/1997	ND<1	ND<1
			1/27/1998	ND<1	ND<1
			4/22/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			11/11/1998	ND<1	ND<1
			1/28/1999	ND<1	ND<1
			5/27/1999	ND<1	ND<1
			7/28/1999	ND<1	ND<1
			11/10/1999	ND<1	ND<1
			1/27/2000	ND<1	ND<1
			4/20/2000	ND<1	ND<1
			8/1/2000	ND<1	ND<1
			11/8/2000	ND<1	ND<1
			1/16/2001	ND<1	ND<1
			4/17/2001	ND<1	ND<1
			8/1/2001	ND<1	ND<1
			11/8/2001	ND<1	ND<1
			1/23/2002	ND<1	ND<1
			4/17/2002	ND<1	ND<1
			7/18/2002	ND<1	ND<1
			10/22/2002	ND<1	ND<1
			1/16/2003	ND<1	ND<1

			4/23/2003	ND<1	ND<1	
			7/30/2003	ND<1	ND<1	
			1/15/2004	ND<1	ND<1	
			7/14/2004	ND<1	ND<1	
			1/25/2005	ND<1	ND<1	
			8/1/2005	ND<0.2	ND<0.2	
			1/23/2006	ND<0.2	ND<0.2	
			7/20/2006	ND<0.2	ND<0.2	
			1/22/2007	ND<0.24		ND<0.24
SW-3D	16	16 (100%)				
			5/11/1993	ND<1	ND<1	
			11/16/1993	ND<1	ND<1	
			1/24/1994	ND<1	ND<1	
			4/13/1994	ND<1	ND<1	
			7/14/1994	ND<1	ND<1	
			11/2/1994	ND<1	ND<1	
			1/11/1995	ND<1	ND<1	
			4/12/1995	ND<1	ND<1	
			7/12/1995	ND<1	ND<1	
			10/25/1995	ND<1	ND<1	
			10/25/1995	ND<1	ND<1	
			1/25/2005	ND<1	ND<1	
			8/2/2005	ND<0.2	ND<0.2	
			1/23/2006	ND<0.2	ND<0.2	
			7/20/2006	ND<0.2	ND<0.2	
			1/22/2007	ND<0.24	ND<0.24	
SW-P1	37	37 (100%)				
			5/11/1993	ND<1	ND<1	
			1/24/1994	ND<1	ND<1	
			4/25/1994	ND<1	ND<1	
			11/9/1994	ND<1	ND<1	
			1/16/1995	ND<1	ND<1	
			7/13/1995	ND<1	ND<1	
			10/26/1995	ND<1	ND<1	
			10/26/1995	ND<1	ND<1	
			1/15/1996	ND<2	ND<2	
			4/22/1996	ND<1	ND<1	
			4/22/1996	ND<1	ND<1	
			7/11/1996	ND<2	ND<2	
			10/24/1996	ND<1	ND<1	
			1/20/1997	ND<2	ND<2	
			4/17/1997	ND<1	ND<1	
			4/17/1997	ND<1	ND<1	
			7/14/1997	ND<1	ND<1	
			11/6/1997	ND<1	ND<1	
			4/22/1998	ND<1	ND<1	
			7/23/1998	ND<1	ND<1	
			11/10/1998	ND<1	ND<1	
			2/2/1999	ND<1	ND<1	
			6/7/1999	ND<1	ND<1	
			7/29/1999	ND<1	ND<1	
			2/1/2000	ND<1	ND<1	
			4/21/2000	ND<1	ND<1	
			8/3/2000	ND<1	ND<1	
			11/10/2000	ND<1	ND<1	
			4/17/2001	ND<1	ND<1	
			8/2/2001	ND<1	ND<1	
			1/25/2002	ND<1	ND<1	
			4/23/2002	ND<1	ND<1	

			8/14/2002	ND<1	ND<1
			1/20/2003	ND<1	ND<1
			4/24/2003	ND<1	ND<1
			7/30/2003	ND<1	ND<1
			1/24/2006	ND<0.2	ND<0.2

There are 26 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
SW-12D	15	15 (100%)			
			6/9/1992	ND<0.5	ND<0.5
			5/10/1993	ND<1	ND<1
			11/9/1993	ND<1	ND<1
			1/20/1994	ND<1	ND<1
			4/13/1994	ND<1	ND<1
			7/13/1994	ND<1	ND<1
			10/27/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/11/1995	ND<1	ND<1
			4/11/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/30/1995	ND<1	ND<1
			10/30/1995	ND<1	ND<1
SW-13D	36	36 (100%)	6/9/1992	ND<0.5	ND<0.5
			5/11/1993	ND<1	ND<1
			11/9/1993	ND<1	ND<1
			1/25/1994	ND<1	ND<1
			4/18/1994	ND<1	ND<1
			7/13/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/13/1995	ND<1	ND<1
			7/13/1995	ND<1	ND<1
			10/31/1995	ND<1	ND<1
			10/31/1995	ND<1	ND<1
			4/11/1996	ND<1	ND<1
			4/11/1996	ND<1	ND<1
			10/23/1996	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			11/5/1997	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			11/12/1998	ND<1	ND<1
			5/28/1999	ND<1	ND<1
			11/11/1999	ND<1	ND<1
			4/21/2000	ND<1	ND<1
			11/10/2000	ND<1	ND<1
			4/18/2001	ND<1	ND<1
			11/13/2001	ND<1	ND<1
			4/18/2002	ND<1	ND<1
			10/23/2002	ND<1	ND<1
			4/24/2003	ND<1	ND<1
			1/20/2004	ND<1	ND<1
			7/19/2004	ND<1	ND<1
			1/26/2005	ND<1	ND<1
			8/3/2005	ND<0.2	ND<0.2

		1/24/2006	ND<0.2	ND<0.2
		7/25/2006	ND<0.2	ND<0.2
		1/23/2007	ND<0.24	ND<0.24
SW-10D 50	2 (4%)			
		6/9/1992	ND<0.5	ND<0.5
		5/10/1993	2	2
		11/11/1993	2	2
		1/20/1994	1	1
		4/13/1994	2	2
		7/26/1994	2	2
		1/10/1995	1	1
		4/12/1995	2	2
		7/13/1995	2	2
		10/30/1995	2	2
		10/30/1995	2	2
		1/16/1996	3	3
		4/11/1996	2	2
		4/11/1996	2	2
		7/11/1996	3	3
		10/24/1996	2.91	2.91
		1/21/1997	2	2
		4/17/1997	2.6	2.6
		4/17/1997	2.6	2.6
		7/14/1997	2	2
		11/5/1997	2	2
		1/28/1998	2.4	2.4
		4/22/1998	2	2
		7/28/1998	2.4	2.4
		11/12/1998	2	2
		2/2/1999 2.3	2.3	
		5/28/1999	2	2
		7/29/1999	1.9	1.9
		11/11/1999	2	2
		2/1/2000 2.4	2.4	
		4/21/2000	2	2
		8/3/2000 1.1	1.1	
		11/9/2000	3.6	3.6
		1/19/2001	1.7	1.7
		4/18/2001	2.2	2.2
		8/2/2001 3	3	
		11/12/2001	ND<1	ND<1
		1/24/2002	3.3	3.3
		4/18/2002	2.2	2.2
		7/17/2002	3	3
		10/23/2002	3	3
		1/20/2003	5.4	5.4
		4/29/2003	4.3	4.3
		7/31/2003	4.5	4.5
		1/22/2004	4.1	4.1
		7/19/2004	4.1	4.1
		1/27/2005	4	4
		8/3/2005 3	3	
		1/25/2006	3	3
		7/19/2006	4	4
SW-11D 52	51 (98.0769%)			
		6/9/1992	ND<0.5	ND<0.5
		5/10/1993	ND<1	ND<1
		11/9/1993	ND<1	ND<1
		1/20/1994	ND<1	ND<1

			4/13/1994	ND<1	ND<1
			7/13/1994	ND<1	ND<1
			10/27/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/11/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/30/1995	ND<1	ND<1
			10/30/1995	ND<1	ND<1
			1/16/1996	ND<2	ND<2
			4/11/1996	ND<1	ND<1
			4/11/1996	ND<1	ND<1
			7/15/1996	ND<2	ND<2
			10/24/1996	ND<1	ND<1
			1/20/1997	ND<2	ND<2
			4/18/1997	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			7/14/1997	ND<1	ND<1
			11/5/1997	ND<1	ND<1
			1/26/1998	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			7/28/1998	ND<1	ND<1
			11/10/1998	ND<1	ND<1
			2/2/1999	ND<1	ND<1
			5/27/1999	ND<1	ND<1
			7/29/1999	ND<1	ND<1
			11/10/1999	ND<1	ND<1
			1/27/2000	ND<1	ND<1
			4/21/2000	ND<1	ND<1
			8/2/2000	ND<1	ND<1
			11/9/2000	ND<1	ND<1
			1/17/2001	ND<1	ND<1
			4/18/2001	ND<1	ND<1
			8/1/2001	ND<1	ND<1
			11/8/2001	ND<1	ND<1
			1/23/2002	ND<1	ND<1
			4/19/2002	1.3	1.3
			7/17/2002	ND<1	ND<1
			10/23/2002	ND<1	ND<1
			1/20/2003	ND<1	ND<1
			4/28/2003	ND<1	ND<1
			8/1/2003	ND<1	ND<1
			1/22/2004	ND<1	ND<1
			7/19/2004	ND<1	ND<1
			1/27/2005	ND<1	ND<1
			8/2/2005	ND<0.2	ND<0.2
			1/25/2006	ND<0.2	ND<0.2
			7/19/2006	ND<0.2	ND<0.2
			1/23/2007	ND<0.24	ND<0.24
SW-15D	33	32 (96.9697%)			
			1/25/1994	ND<1	ND<1
			4/18/1994	ND<1	ND<1
			7/20/1994	ND<1	ND<1
			10/27/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/11/1995	ND<1	ND<1
			7/18/1995	ND<1	ND<1
			10/30/1995	ND<1	ND<1
			10/30/1995	ND<1	ND<1
			1/16/1996	ND<2	ND<2
			7/15/1996	ND<2	ND<2
			1/21/1997	ND<2	ND<2

		7/15/1997	ND<1	ND<1
		1/28/1998	ND<1	ND<1
		4/23/1998	ND<1	ND<1
		7/23/1998	ND<1	ND<1
		2/2/1999	ND<1	ND<1
		2/1/2000	ND<1	ND<1
		8/2/2000	ND<1	ND<1
		1/17/2001	ND<1	ND<1
		8/1/2001 1	1	
		1/24/2002	ND<1	ND<1
		8/14/2002	ND<1	ND<1
		1/20/2003	ND<1	ND<1
		4/29/2003	ND<1	ND<1
		7/31/2003	ND<1	ND<1
		1/22/2004	ND<1	ND<1
		7/19/2004	ND<1	ND<1
		1/27/2005	ND<1	ND<1
		8/3/2005	ND<0.2	ND<0.2
		1/25/2006	ND<0.2	ND<0.2
		7/25/2006	ND<0.2	ND<0.2
		1/18/2007	ND<0.24	ND<0.24
SW-1DN36	31 (86.1111%)			
		6/10/1992	ND<0.5	ND<0.5
		5/10/1993	3	3
		11/17/1993	2	2
		1/24/1994	3	3
		4/13/1994	2	2
		7/14/1994	1	1
		11/2/1994	ND<1	ND<1
		1/12/1995	ND<1	ND<1
		4/12/1995	ND<1	ND<1
		7/12/1995	ND<1	ND<1
		10/26/1995	ND<1	ND<1
		10/26/1995	ND<1	ND<1
		4/9/1996	ND<1	ND<1
		4/9/1996	ND<1	ND<1
		10/23/1996	ND<1	ND<1
		4/18/1997	ND<1	ND<1
		4/18/1997	ND<1	ND<1
		11/6/1997	ND<1	ND<1
		4/22/1998	ND<1	ND<1
		11/11/1998	ND<1	ND<1
		5/27/1999	ND<1	ND<1
		11/10/1999	ND<1	ND<1
		4/20/2000	ND<1	ND<1
		11/8/2000	ND<1	ND<1
		4/17/2001	ND<1	ND<1
		11/8/2001	ND<1	ND<1
		4/17/2002	ND<1	ND<1
		10/22/2002	ND<1	ND<1
		4/23/2003	ND<1	ND<1
		1/15/2004	ND<1	ND<1
		7/14/2004	ND<1	ND<1
		1/25/2005	ND<1	ND<1
		8/1/2005	ND<0.2	ND<0.2
		1/23/2006	ND<0.2	ND<0.2
		7/20/2006	ND<0.2	ND<0.2
		1/23/2007	ND<0.24	ND<0.24
SW-1SN33	19 (57.5758%)	6/10/1992	ND<0.5	ND<0.5

			5/18/1993	3	3	
			11/16/1993	7	7	
			1/20/1994	5	5	
			4/18/1994	3	3	
			7/20/1994	3	3	
			11/1/1994	2	2	
			1/11/1995	3	3	
			4/11/1995	3	3	
			7/12/1995	2	2	
			10/26/1995	2	2	
			10/26/1995	2	2	
			4/9/1996	ND<1	ND<1	
			4/9/1996	ND<1	ND<1	
			10/22/1996	ND<1	ND<1	
			4/18/1997	ND<1	ND<1	
			4/18/1997	ND<1	ND<1	
			11/5/1997	ND<1	ND<1	
			4/22/1998	ND<1	ND<1	
			11/10/1998	ND<1	ND<1	
			5/27/1999	2	2	
			11/10/1999	ND<1	ND<1	
			4/21/2000	1	1	
			11/9/2000	1.6	1.6	
			11/8/2001	ND<1	ND<1	
			4/28/2003	ND<1	ND<1	
			1/22/2004	ND<1	ND<1	
			7/14/2004	ND<1	ND<1	
			2/8/2005	ND<1	ND<1	
			8/4/2005	ND<0.2	ND<0.2	
			1/25/2006	ND<0.2	ND<0.2	
			7/25/2006	ND<0.2	ND<0.2	
			1/23/2007	ND<0.24		ND<0.24
SW-2SN	21	21 (100%)				
			4/11/1996	ND<1	ND<1	
			4/11/1996	ND<1	ND<1	
			7/11/1996	ND<2	ND<2	
			10/22/1996	ND<1	ND<1	
			1/21/1997	ND<2	ND<2	
			4/18/1997	ND<1	ND<1	
			4/18/1997	ND<1	ND<1	
			7/15/1997	ND<1	ND<1	
			11/5/1997	ND<1	ND<1	
			1/26/1998	ND<1	ND<1	
			4/22/1998	ND<1	ND<1	
			7/23/1998	ND<1	ND<1	
			11/10/1998	ND<1	ND<1	
			2/2/1999	ND<1	ND<1	
			5/28/1999	ND<1	ND<1	
			7/29/1999	ND<1	ND<1	
			11/11/1999	ND<1	ND<1	
			1/27/2005	ND<1	ND<1	
			8/2/2005	ND<0.2	ND<0.2	
			1/25/2006	ND<0.2	ND<0.2	
			7/25/2006	ND<0.2	ND<0.2	
SW-3SN	24	24 (100%)				
			11/9/1993	ND<1	ND<1	
			1/25/1994	ND<1	ND<1	
			4/18/1994	ND<1	ND<1	
			7/13/1994	ND<1	ND<1	

			11/9/1994	ND<1	ND<1
			1/11/1995	ND<1	ND<1
			4/13/1995	ND<1	ND<1
			7/18/1995	ND<1	ND<1
			10/31/1995	ND<1	ND<1
			10/31/1995	ND<1	ND<1
			4/9/1996	ND<1	ND<1
			4/9/1996	ND<1	ND<1
			10/23/1996	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			11/5/1997	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			11/10/1998	ND<1	ND<1
			5/28/1999	ND<1	ND<1
			11/11/1999	ND<1	ND<1
			1/28/2005	ND<1	ND<1
			8/3/2005	ND<0.2	ND<0.2
			1/24/2006	ND<0.2	ND<0.2
			7/25/2006	ND<0.2	ND<0.2
SW-4D	46	4 (8.69565%)			
			6/9/1992 4.	35	4.35
			5/11/1993	8	8
			11/11/1993	5	5
			1/20/1994	5	5
			4/13/1994	6	6
			7/20/1994	12	12
			11/1/1994	8	8
			1/11/1995	6	6
			4/12/1995	6	6
			7/12/1995	8	8
			10/26/1995	7	7
			10/26/1995	7	7
			4/11/1996	7	7
			4/11/1996	7	7
			10/23/1996	ND<1	ND<1
			4/17/1997	14	14
			4/17/1997	14	14
			11/4/1997	15	15
			4/23/1998	8.6	8.6
			7/23/1998	15	15
			11/10/1998	12	12
			2/2/1999 14	14	
			6/7/1999	ND<1	ND<1
			7/28/1999	ND<1	ND<1
			11/11/1999	ND<1	ND<1
			4/21/2000	15	15
			8/2/2000 19	19	
			11/10/2000	12	12
			1/18/2001	18	18
			4/18/2001	15	15
			8/2/2001 19	19	
			11/13/2001	17	17
			1/24/2002	19	19
			4/19/2002	14	14
			7/17/2002	12	12
			10/22/2002	15	15
			1/20/2003	18	18
			4/24/2003	17	17
			7/31/2003	15	15
			1/20/2004	15	15

			7/19/2004	15	15	
			1/26/2005	17	17	
			8/3/2005 13	13		
			1/24/2006	11	11	
			7/25/2006	16	16	
			1/23/2007	10	10	
SW-5D	52	51 (98.0769%)				
			6/10/1992	ND<0.5	ND<0.5	
			5/11/1993	ND<1	ND<1	
			11/9/1993	ND<1	ND<1	
			1/20/1994	ND<1	ND<1	
			4/13/1994	ND<1	ND<1	
			7/26/1994	ND<1	ND<1	
			11/1/1994	ND<1	ND<1	
			1/10/1995	ND<1	ND<1	
			4/13/1995	ND<1	ND<1	
			7/18/1995	ND<1	ND<1	
			10/26/1995	ND<1	ND<1	
			10/26/1995	ND<1	ND<1	
			1/15/1996	ND<2	ND<2	
			4/11/1996	ND<1	ND<1	
			4/11/1996	ND<1	ND<1	
			7/11/1996	ND<2	ND<2	
			10/23/1996	ND<1	ND<1	
			1/22/1997	ND<2	ND<2	
			4/18/1997	ND<1	ND<1	
			4/18/1997	ND<1	ND<1	
			7/14/1997	ND<1	ND<1	
			11/4/1997	ND<1	ND<1	
			1/27/1998	ND<1	ND<1	
			4/23/1998	ND<1	ND<1	
			7/23/1998	ND<1	ND<1	
			11/11/1998	ND<1	ND<1	
			1/28/1999	ND<1	ND<1	
			5/27/1999	ND<1	ND<1	
			7/28/1999	ND<1	ND<1	
			11/11/1999	ND<1	ND<1	
			2/1/2000	ND<1	ND<1	
			4/21/2000	ND<1	ND<1	
			8/2/2000	ND<1	ND<1	
			11/8/2000	ND<1	ND<1	
			1/18/2001	ND<1	ND<1	
			4/17/2001	ND<1	ND<1	
			8/1/2001	ND<1	ND<1	
			11/8/2001	ND<1	ND<1	
			1/23/2002	ND<1	ND<1	
			4/19/2002	ND<1	ND<1	
			7/18/2002	ND<1	ND<1	
			10/23/2002	ND<1	ND<1	
			1/16/2003	ND<1	ND<1	
			4/24/2003	ND<1	ND<1	
			8/1/2003	ND<1	ND<1	
			1/20/2004	ND<1	ND<1	
			7/15/2004	ND<1	ND<1	
			1/26/2005	ND<1	ND<1	
			8/2/2005	ND<0.2	ND<0.2	
			1/23/2006	0.2	0.2	
			7/19/2006	ND<0.2	ND<0.2	
			1/22/2007	ND<0.24		ND<0.24

SW-5S	11	11 (100%)				
			10/24/1996	ND<5	ND<5	
			10/24/1996	ND<1	ND<1	
			1/26/1998	ND<1	ND<1	
			4/23/1998	ND<1	ND<1	
			7/23/1998	ND<1	ND<1	
			11/11/1998	ND<1	ND<1	
			2/2/1999	ND<1	ND<1	
			5/28/1999	ND<1	ND<1	
			1/28/2005	ND<1	ND<1	
			8/3/2005	ND<0.2	ND<0.2	
			1/24/2006	ND<0.2	ND<0.2	
SW-6D	34	34 (100%)	6/10/1992		ND<0.5	ND<0.5
			5/10/1993	ND<1	ND<1	
			11/15/1993	ND<1	ND<1	
			1/24/1994	ND<1	ND<1	
			4/12/1994	ND<1	ND<1	
			7/14/1994	ND<1	ND<1	
			11/2/1994	ND<1	ND<1	
			1/12/1995	ND<1	ND<1	
			4/12/1995	ND<1	ND<1	
			7/13/1995	ND<1	ND<1	
			10/25/1995	ND<1	ND<1	
			10/25/1995	ND<1	ND<1	
			1/16/1996	ND<2	ND<2	
			7/11/1996	ND<2	ND<2	
			1/21/1997	ND<2	ND<2	
			7/15/1997	ND<1	ND<1	
			1/27/1998	ND<1	ND<1	
			4/23/1998	ND<1	ND<1	
			7/23/1998	ND<1	ND<1	
			1/28/1999	ND<1	ND<1	
			7/28/1999	ND<1	ND<1	
			1/27/2000	ND<1	ND<1	
			8/1/2000	ND<1	ND<1	
			1/17/2001	ND<1	ND<1	
			1/23/2002	ND<1	ND<1	
			4/23/2003	ND<1	ND<1	
			7/30/2003	ND<1	ND<1	
			1/15/2004	ND<1	ND<1	
			7/15/2004	ND<1	ND<1	
			1/25/2005	ND<1	ND<1	
			8/1/2005	ND<0.2	ND<0.2	
			1/23/2006	ND<0.2	ND<0.2	
			7/19/2006	ND<0.2	ND<0.2	
			1/22/2007	ND<0.24	ND<0.24	
SW-7D	51	6 (11.7647%)				
			6/10/1992	15.3	15.3	
			5/10/1993	13	13	
			11/16/1993	16	16	
			1/24/1994	15	15	
			4/13/1994	15	15	
			7/14/1994	15	15	
			11/2/1994	14	14	
			1/12/1995	15	15	
			4/12/1995	12	12	
			7/12/1995	13	13	
			10/26/1995	11	11	
			1/16/1996	17	17	

			4/11/1996	6	6
			4/11/1996	6	6
			7/11/1996	10	10
			10/24/1996	10.8	10.8
			1/21/1997	7	7
			4/18/1997	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			7/14/1997	5	5
			11/6/1997	5	5
			1/27/1998	3.7	3.7
			4/22/1998	3	3
			7/23/1998	5.2	5.2
			11/11/1998	2	2
			1/28/1999	4	4
			5/25/1999	2	2
			7/28/1999	2.4	2.4
			11/10/1999	2	2
			1/27/2000	2.4	2.4
			4/20/2000	3	3
			8/1/2000	ND<1	ND<1
			11/8/2000	2.5	2.5
			1/16/2001	1.2	1.2
			4/17/2001	2	2
			8/1/2001	2.8	2.8
			11/12/2001	ND<1	ND<1
			1/23/2002	2.6	2.6
			4/17/2002	2.1	2.1
			7/18/2002	ND<1	ND<1
			10/22/2002	2.1	2.1
			1/16/2003	1.8	1.8
			4/23/2003	2.1	2.1
			7/30/2003	2.4	2.4
			1/15/2004	2.7	2.7
			7/15/2004	ND<1	ND<1
			1/25/2005	3	3
			8/1/2005 3	3	
			1/23/2006	3	3
			7/19/2006	5	5
			1/22/2007	2.4	2.4
SW-8D	50	39 (78%)			
			6/10/1992	ND<0.5	ND<0.5
			5/11/1993	ND<1	ND<1
			11/17/1993	ND<1	ND<1
			4/12/1994	1	1
			7/14/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/13/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			1/16/1996	ND<2	ND<2
			4/11/1996	ND<1	ND<1
			4/11/1996	ND<1	ND<1
			7/11/1996	ND<2	ND<2
			10/24/1996	ND<1	ND<1
			1/22/1997	ND<2	ND<2
			4/17/1997	ND<1	ND<1
			4/17/1997	ND<1	ND<1
			7/17/1997	ND<1	ND<1
			11/6/1997	ND<1	ND<1

			1/27/1998	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			11/11/1998	ND<1	ND<1
			1/28/1999	ND<1	ND<1
			5/25/1999	ND<1	ND<1
			8/2/1999	1.6	1.6
			11/11/1999	2	2
			1/27/2000	1.4	1.4
			8/3/2000	ND<1	ND<1
			11/10/2000	1.5	1.5
			1/19/2001	2.1	2.1
			4/18/2001	ND<1	ND<1
			8/2/2001	ND<1	ND<1
			11/13/2001	ND<1	ND<1
			1/24/2002	ND<1	ND<1
			4/18/2002	ND<1	ND<1
			7/17/2002	ND<1	ND<1
			10/23/2002	ND<1	ND<1
			1/20/2003	ND<1	ND<1
			4/28/2003	ND<1	ND<1
			7/31/2003	ND<1	ND<1
			1/20/2004	ND<1	ND<1
			7/19/2004	ND<1	ND<1
			1/27/2005	1	1
			8/4/2005 6	6	
			1/24/2006	2	2
			7/25/2006	4	4
			1/18/2007	1.7	1.7
SW-9D	51	51 (100%)			
			5/11/1993	ND<1	ND<1
			11/16/1993	ND<1	ND<1
			1/25/1994	ND<1	ND<1
			4/12/1994	ND<1	ND<1
			7/14/1994	ND<1	ND<1
			11/2/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/12/1995	ND<1	ND<1
			7/18/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			1/16/1996	ND<2	ND<2
			4/11/1996	ND<1	ND<1
			4/11/1996	ND<1	ND<1
			7/11/1996	ND<2	ND<2
			10/24/1996	ND<1	ND<1
			1/21/1997	ND<2	ND<2
			4/17/1997	ND<1	ND<1
			4/17/1997	ND<1	ND<1
			7/15/1997	ND<1	ND<1
			11/6/1997	ND<1	ND<1
			1/27/1998	ND<1	ND<1
			4/22/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			11/11/1998	ND<1	ND<1
			1/28/1999	ND<1	ND<1
			5/27/1999	ND<1	ND<1
			7/28/1999	ND<1	ND<1
			11/11/1999	ND<1	ND<1
			1/27/2000	ND<1	ND<1
			4/21/2000	ND<1	ND<1

			8/1/2000	ND<1	ND<1	
			11/9/2000	ND<1	ND<1	
			1/17/2001	ND<1	ND<1	
			4/17/2001	ND<1	ND<1	
			8/1/2001	ND<1	ND<1	
			11/12/2001	ND<1	ND<1	
			1/23/2002	ND<1	ND<1	
			4/22/2002	ND<1	ND<1	
			7/18/2002	ND<1	ND<1	
			10/22/2002	ND<1	ND<1	
			1/16/2003	ND<1	ND<1	
			4/23/2003	ND<1	ND<1	
			7/30/2003	ND<1	ND<1	
			1/15/2004	ND<1	ND<1	
			7/15/2004	ND<1	ND<1	
			1/25/2005	ND<1	ND<1	
			8/1/2005	ND<0.2	ND<0.2	
			1/23/2006	ND<0.2	ND<0.2	
			7/20/2006	ND<0.2	ND<0.2	
			1/22/2007	ND<0.24		ND<0.24
SW-9S	26	26 (100%)				
			11/2/1994	ND<1	ND<1	
			1/12/1995	ND<1	ND<1	
			4/12/1995	ND<1	ND<1	
			7/13/1995	ND<1	ND<1	
			10/30/1995	ND<1	ND<1	
			10/30/1995	ND<1	ND<1	
			1/16/1996	ND<2	ND<2	
			4/9/1996	ND<1	ND<1	
			4/9/1996	ND<1	ND<1	
			7/11/1996	ND<2	ND<2	
			10/23/1996	ND<1	ND<1	
			1/21/1997	ND<2	ND<2	
			4/17/1997	ND<1	ND<1	
			4/17/1997	ND<1	ND<1	
			7/17/1997	ND<1	ND<1	
			1/26/1998	ND<1	ND<1	
			4/22/1998	ND<1	ND<1	
			7/28/1998	ND<1	ND<1	
			11/10/1998	ND<1	ND<1	
			1/28/1999	ND<1	ND<1	
			5/27/1999	ND<1	ND<1	
			7/29/1999	ND<1	ND<1	
			1/28/2005	ND<1	ND<1	
			8/3/2005	ND<0.2	ND<0.2	
			1/25/2006	ND<0.2	ND<0.2	
			7/25/2006	ND<0.2	ND<0.2	
SW-P2	35	35 (100%)				
			5/11/1993	ND<1	ND<1	
			11/17/1993	ND<1	ND<1	
			1/24/1994	ND<1	ND<1	
			4/13/1994	ND<1	ND<1	
			7/14/1994	ND<1	ND<1	
			11/9/1994	ND<1	ND<1	
			1/16/1995	ND<1	ND<1	
			4/13/1995	ND<1	ND<1	
			7/18/1995	ND<1	ND<1	
			10/26/1995	ND<1	ND<1	
			10/26/1995	ND<1	ND<1	

			4/11/1996	ND<1	ND<1
			4/11/1996	ND<1	ND<1
			10/23/1996	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			4/18/1997	ND<1	ND<1
			11/6/1997	ND<1	ND<1
			4/22/1998	ND<1	ND<1
			11/11/1998	ND<1	ND<1
			5/27/1999	ND<1	ND<1
			11/10/1999	ND<1	ND<1
			4/20/2000	ND<1	ND<1
			11/9/2000	ND<1	ND<1
			4/17/2001	ND<1	ND<1
			11/8/2001	ND<1	ND<1
			4/22/2002	ND<1	ND<1
			10/22/2002	ND<1	ND<1
			4/23/2003	ND<1	ND<1
			1/15/2004	ND<1	ND<1
			7/15/2004	ND<1	ND<1
			1/25/2005	ND<1	ND<1
			8/2/2005	ND<0.2	ND<0.2
			1/23/2006	ND<0.2	ND<0.2
			7/20/2006	ND<0.2	ND<0.2
			1/22/2007	ND<0.24	ND<0.24
SW-P3	37	37 (100%)			
			6/9/1992	ND<0.5	ND<0.5
			5/11/1993	ND<1	ND<1
			11/11/1993	ND<1	ND<1
			1/20/1994	ND<1	ND<1
			4/14/1994	ND<1	ND<1
			7/20/1994	ND<1	ND<1
			11/1/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/11/1995	ND<1	ND<1
			7/12/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			10/26/1995	ND<1	ND<1
			1/15/1996	ND<2	ND<2
			7/11/1996	ND<2	ND<2
			1/22/1997	ND<2	ND<2
			7/17/1997	ND<1	ND<1
			1/28/1998	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			7/28/1998	ND<1	ND<1
			1/28/1999	ND<1	ND<1
			8/2/1999	ND<1	ND<1
			2/1/2000	ND<1	ND<1
			8/3/2000	ND<1	ND<1
			1/18/2001	ND<1	ND<1
			8/2/2001	ND<1	ND<1
			1/24/2002	ND<1	ND<1
			7/18/2002	ND<1	ND<1
			1/16/2003	ND<1	ND<1
			4/24/2003	ND<1	ND<1
			7/30/2003	ND<1	ND<1
			1/20/2004	ND<1	ND<1
			7/14/2004	ND<1	ND<1
			1/26/2005	ND<1	ND<1
			8/2/2005	ND<0.2	ND<0.2
			1/23/2006	ND<0.2	ND<0.2
			7/20/2006	ND<0.2	ND<0.2

			1/23/2007	ND<0.24	ND<0.24

SW-P5	25	19 (76%)			
			6/10/1992	ND<0.5	ND<0.5
			5/11/1993	ND<1	ND<1
			4/12/1994	ND<1	ND<1
			7/14/1994	ND<1	ND<1
			11/9/1994	ND<1	ND<1
			1/12/1995	ND<1	ND<1
			4/13/1995	ND<1	ND<1
			7/13/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			10/25/1995	ND<1	ND<1
			1/16/1996	ND<2	ND<2
			7/11/1996	ND<2	ND<2
			1/22/1997	ND<2	ND<2
			7/14/1997	ND<1	ND<1
			1/27/1998	ND<1	ND<1
			4/23/1998	ND<1	ND<1
			7/23/1998	ND<1	ND<1
			1/28/1999	ND<1	ND<1
			8/2/1999	ND<1	ND<1
			1/27/2000	1.2	1.2
			1/26/2005	1	1
			8/1/2005	0.7	0.7
			1/23/2006	0.9	0.9
			7/20/2006	2	2
			1/22/2007	1.5	1.5

Coefficient of Variation

Parameter: 1,4-DICHLOROBENZENE

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

CV < 1 indicates normal data

Background Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-2D	55	0.988	0.326022	0.329982
SW-3D	16	0.8025	0.353412	0.440389
SW-P1	37	1.05946	0.312214	0.294692

Compliance Locations

Location	Obs.	Mean	Std. Dev.	CV
SW-12D	15	0.966667	0.129099	0.133551
SW-13D	36	0.898333	0.260521	0.290005
SW-10D	50	2.4902	0.984713	0.395435
SW-11D	52	0.993077	0.338251	0.340609
SW-15D	33	0.995152	0.414458	0.416478
SW-1DN	36	1.065	0.599893	0.56328
SW-1SN	33	1.66485	1.43092	0.859488
SW-2SN	21	0.980952	0.442288	0.450877
SW-3SN	24	0.9	0.270266	0.300295
SW-4D	46	11.1946	5.338	0.476839
SW-5D	52	0.987308	0.335461	0.339773
SW-5S	11	1.21818	1.29446	**1.06262**
SW-6D	34	0.980588	0.416871	0.425123

SW-7D	51	5.83333	5.19256	0.890153
SW-8D	50	1.316	0.865757	0.65787
SW-9D	51	0.996863	0.331575	0.332618
SW-9S	26	1.02308	0.442997	0.433004
SW-P2	35	0.909714	0.255083	0.2804
SW-P3	37	0.982162	0.39916	0.406409
SW-P5	25	1.152	0.41142	0.357136

All Locations

Obs.	Mean	Std. Dev.	CV
834	1.99094	3.13307	1.57367

Confidence Interval

Parameter: 1,4-DICHLOROBENZENE

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

Background Locations

Location SW-2D

Mean	0.988
Std Dev	0.326022
Degrees of Freedom	54
Comparison Level	**75**
Untransformed Comp. Level	75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.39741	[0.882608, 1.09339]	0.988	FALSE
95%	1.67357	[0.914429, 1.06157]	0.988	FALSE

Location SW-3D

Mean	0.8025
Std Dev	0.353412
Degrees of Freedom	15
Comparison Level	**75**
Untransformed Comp. Level	75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.60248	[0.572563, 1.03244]	0.8025	FALSE
95%	1.75305	[0.647613, 0.957387]	0.8025	FALSE

Location SW-P1

Mean	1.05946
Std Dev	0.312214
Degrees of Freedom	36
Comparison Level	**75**
Untransformed Comp. Level	75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.4345	[0.934502, 1.18442]	1.05946	FALSE
95%	1.6883	[0.972803, 1.14612]	1.05946	FALSE

Compliance Locations

Location SW-12D

Mean	0.966667		
Std Dev	0.129099		
Degrees of Freedom		14	
Comparison Level		**75**	
Untransformed Comp. Level			75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.62449	[0.879184, 1.05415]	0.966667	FALSE
95%	1.76131	[0.907956, 1.02538]	0.966667	FALSE

Location SW-13D

Mean	0.898333		
Std Dev	0.260521		
Degrees of Freedom		35	
Comparison Level		**75**	
Untransformed Comp. Level			75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.43772	[0.792487, 1.00418]	0.898333	FALSE
95%	1.68957	[0.824972, 0.971695]	0.898333	FALSE

Location SW-10D

Mean	2.4902		
Std Dev	0.984713		
Degrees of Freedom		49	
Comparison Level		**75**	
Untransformed Comp. Level			75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40489	[2.1553, 2.8251]	2.4902	FALSE
95%	1.67655	[2.25672, 2.72368]	2.4902	FALSE

Location SW-11D

Mean	0.993077		
Std Dev	0.338251		
Degrees of Freedom		51	
Comparison Level		**75**	
Untransformed Comp. Level			75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40172	[0.880419, 1.10573]	0.993077	FALSE
95%	1.67528	[0.914494, 1.07166]	0.993077	FALSE

Location SW-15D

Mean	0.995152	
Std Dev	0.414458	
Degrees of Freedom		32
Comparison Level		**75**

Untransformed Comp. Level 75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[0.818484, 1.17182]	0.995152	FALSE
95%	1.69389	[0.872941, 1.11736]	0.995152	FALSE

Location SW-1DN

Mean	1.065
Std Dev	0.599893
Degrees of Freedom	35
Comparison Level	**75**
Untransformed Comp. Level	75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.43772	[0.821272, 1.30873]	1.065	FALSE
95%	1.68957	[0.896073, 1.23393]	1.065	FALSE

SW-1SN

Mean	1.66485
Std Dev	1.43092
Degrees of Freedom	32
Comparison Level	**75**
Untransformed Comp. Level	75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44868	[1.05491, 2.27479]	1.66485	FALSE
95%	1.69389	[1.24292, 2.08678]	1.66485	FALSE

Location SW-2SN

Mean	0.980952
Std Dev	0.442288
Degrees of Freedom	20
Comparison Level	**75**
Untransformed Comp. Level	75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.52798	[0.736964, 1.22494]	0.980952	FALSE
95%	1.72472	[0.814491, 1.14741]	0.980952	FALSE

Location SW-3SN

Mean	0.9
Std Dev	0.270266
Degrees of Freedom	23
Comparison Level	**75**
Untransformed Comp. Level	75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.49987	[0.762088, 1.03791]	0.9	FALSE
95%	1.71387	[0.80545, 0.99455]	0.9	FALSE

Location SW-3SN D

Mean	1
Std Dev	0
Degrees of Freedom	0
Comparison Level	**75**
Untransformed Comp. Level	75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	31.821	[1, 1]	1	FALSE
95%	2.91999	[1, 1]	1	FALSE

Location		**SW-4D**	
Mean	11.1946		
Std Dev	5.338		
Degrees of Freedom		45	
Comparison Level		**75**	
Untransformed Comp. Level			75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.41212	[9.29612, 13.093]	11.1946	FALSE
95%	1.67943	[9.87278, 12.5164]	11.1946	FALSE

Location		**SW-5D**	
Mean	0.987308		
Std Dev	0.335461		
Degrees of Freedom		51	
Comparison Level		**75**	
Untransformed Comp. Level			75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40172	[0.87558, 1.09904]	0.987308	FALSE
95%	1.67528	[0.909373, 1.06524]	0.987308	FALSE

Location		**SW-5S**	
Mean	1.21818		
Std Dev	1.29446		
Degrees of Freedom		10	
Comparison Level		**75**	
Untransformed Comp. Level			75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.76377	[0.139494, 2.29687]	1.21818	FALSE
95%	1.81246	[0.510786, 1.92558]	1.21818	FALSE

Location		**SW-6D**	
Mean	0.980588		
Std Dev	0.416871		
Degrees of Freedom		33	
Comparison Level		**75**	
Untransformed Comp. Level			75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44479	[0.805803, 1.15537]	0.980588	FALSE
95%	1.69236	[0.859597, 1.10158]	0.980588	FALSE

Location		**SW-7D**
Mean	5.83333	
Std Dev	5.19256	
Degrees of Freedom		50

Comparison Level 75
Untransformed Comp. Level 75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40327	[4.08591, 7.58076]	5.83333	FALSE
95%	1.67591	[4.61478, 7.05189]	5.83333	FALSE

Location SW-8D

Mean 1.316
Std Dev 0.865757
Degrees of Freedom 49
Comparison Level 75
Untransformed Comp. Level 75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40489	[1.02155, 1.61045]	1.316	FALSE
95%	1.67655	[1.11073, 1.52127]	1.316	FALSE

Location SW-9D

Mean 0.996863
Std Dev 0.331575
Degrees of Freedom 50
Comparison Level 75
Untransformed Comp. Level 75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.40327	[0.88528, 1.10845]	0.996863	FALSE
95%	1.67591	[0.919051, 1.07467]	0.996863	FALSE

Location SW-9S

Mean 1.02308
Std Dev 0.442997
Degrees of Freedom 25
Comparison Level 75
Untransformed Comp. Level 75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.4851	[0.807174, 1.23898]	1.02308	FALSE
95%	1.70814	[0.874676, 1.17148]	1.02308	FALSE

Location SW-P2

Mean 0.909714
Std Dev 0.255083
Degrees of Freedom 34
Comparison Level 75
Untransformed Comp. Level 75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.44115	[0.804459, 1.01497]	0.909714	FALSE
95%	1.69092	[0.836807, 0.982622]	0.909714	FALSE

Location SW-P3

Mean 0.982162
Std Dev 0.39916

Degrees of Freedom	36	
Comparison Level	**75**	
Untransformed Comp. Level		75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.4345	[0.822407, 1.14192]	0.982162	FALSE
95%	1.6883	[0.871374, 1.09295]	0.982162	FALSE

Location SW-P5

Mean	1.152		
Std Dev	0.41142		
Degrees of Freedom		24	
Comparison Level		**75**	
Untransformed Comp. Level			75

Confidence	t-Stat	Interval	Mid-Point	Significant
99%	2.49216	[0.946935, 1.35707]	1.152	FALSE
95%	1.71088	[1.01122, 1.29278]	1.152	FALSE

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