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Year 5 Annual Groundwater Monitoring Report for Area A Landfill

Naval Submarine Base New London Groton, Connecticut

Engineering Field Activity, Northeast
Naval Facilities Engineering Command

Contract Number N62472-02-D-0810
Contract Task Order 0002

May 2005

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YEAR 5
ANNUAL GROUNDWATER MONITORING REPORT
FOR
AREA A LANDFILL

NAVAL SUBMARINE BASE – NEW LONDON
GROTON CONNECTICUT

ENVIRONMENTAL OPERATION AND
MAINTENANCE CONTRACT

Submitted to:
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ACRONYMS

ANOVA	Analysis of Variance
AWQC	Ambient Water Quality Criteria
B&RE	Brown & Root Environmental
BEHP	Bis(2-ethylhexyl)phthalate
CEC	Cation Exchange Capacity
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLEAN	Comprehensive Long-Term Environmental Action Navy
COCs	Chemicals of Concern
COD	Chemical Oxygen Demand
COPCs	Chemicals of Potential Concern
CTDEP	Connecticut Department of Environmental Protection
CTO	Contract Task Order
FFS	Focused Feasibility Study
ft	feet
GMP	Groundwater Monitoring Plan
GMR	Groundwater Monitoring Report
gpm	gallons per minute
HHRA	Human Health Risk Assessment
HNUS	Halliburton NUS, Inc.
IAS	Initial Assessment Study
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDL	Minimum Detection Level
Navy	U.S. Department of the Navy
NSB-NLON	Naval Submarine Base New London
NTU	Nephelometric Turbidity Unit
OBDA	Over Bank Disposal Area
ORP	Oxidation Reduction Potential
OU	Operable Unit
OVA	Organic Vapor Analyzer

PAH	Polynuclear Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyls
PHREEQCI	pH-Redox Equilibrium Program, C Programming Language, Interactive Version
RA	Remedial Action
ROD	Record of Decision
SCS	Soil Conservation Service
SG	Staff Gauge
SVOC	Semivolatile Organic Compound
SWPC	Surface Water Protection Criteria
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
TPH	Total Petroleum Hydrocarbon
TSS	Total Suspended Solids
TtNUS	Tetra Tech NUS, Inc.
USDOD	United States Department of Defense
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
USNRC	United States Nuclear Regulatory Commission
VOCs	Volatile Organic Compounds
WQS	Water Quality Standard

1.0 INTRODUCTION

This Year 5 Annual Groundwater Monitoring Report (GMR) for the Area A Landfill [Site 2/Operable Unit (OU) 1] at the Naval Submarine Base New London (NSB-NLON) in Groton, Connecticut was prepared for the U.S. Department of the Navy (Navy) by Environmental Chemical Corporation (ECC) under the Comprehensive Long-Term Environmental Action Navy (CLEAN), Contract Number N62476-94-D-0888, Contract Task Order (CTO) 0816. All field activities were performed in accordance with the approved Groundwater Monitoring Plan (GMP) for the Area A Landfill (Tetra Tech NUS, Inc. [TtNUS], 1999) and the approved recommendations of previous GMRs.

1.1 REPORT ORGANIZATION

This report consists of six sections. Section 1.0 provides a brief introduction and describes the site characteristics and previous investigations. Section 2.0 provides the methodologies used to perform the groundwater sampling. Section 3.0 presents the findings of the groundwater monitoring and Section 4.0 offers a statistical evaluation of the data. Section 5.0 provides conclusions for the fifth annual monitoring period and recommendations for future monitoring. Section 6.0 includes references used in preparation of the report. Appendices B through F contain field forms and data evaluation information for the report. Tables and figures are included at the end of each section of the report. Supporting documentation is provided in Appendices A through F which are located in the rear of the report.

Regarding the appendices, the results and supporting field and laboratory documentation for the first round of monitoring performed during the fifth year (Round 14) were previously presented in the semi-annual report, ECC 2004. The results from Rounds 14 are summarized in this report; however, the supporting documentation, with the exception of the sample log sheets, is not reiterated in the appendices. The results and supporting documentation for the second round of monitoring (Round 15) are presented in this report because they were not previously presented in a separate report. A collective summary of the monitoring program's analytical results (i.e., data from Years 1, 2, 3, etc.) is also provided in this report.

1.2 SITE CHARACTERISTICS

The following subsections describe the characterisitics of the Area A site at NSB-NLON as summarized in the *Year 4 Annual Groundwater Monitoring Report for Area A Landfill, Naval Submarine Base – New London, Groton, Connecticut* (ECC, 2004) as well as other previous reports.

1.2.1 Physical Characteristics

Figure 1-1 shows the location of NSB-NLON. NSB-NLON encompasses approximately 576 acres and is located in southeastern Connecticut in the towns of Ledyard and Groton. NSB-NLON is situated on the east bank of the Thames River, approximately 6 miles north of Long Island Sound. NSB-NLON is bounded to the east by Connecticut Route 12, to the south by Crystal Lake Road, and to the west by the Thames River. Figure 1-2 illustrates NSB-NLON's main features and identifies the Area A Landfill.

The Area A Landfill site is located in the northeastern and north-central part of NSB-NLON and encompasses approximately 13 acres. The Area A Landfill is relatively flat and is bordered by a steep, wooded hillside that rises to the south, a steep wooded ravine to the west, and the Area A Wetland to the north. Access to the west end of the landfill is via a gate off Wahoo Avenue and access to the east end of the landfill is via a paved road and gate adjacent to a parking lot and the Area A recreational facilities. (TtNUS, 2003)

1.2.2 Topography and Surface Features

The topography and surface features of the Area A Landfill, with the cover system and adjacent sites including the Area A Wetland and Area A Downstream (Site 3/OU3), are described as follows. The ground surface slopes gently across the Area A Landfill toward the Area A Wetland. A steep hillside (central bedrock high) borders the southern edge of the landfill. The Construction Battalion Unit (CBU) Drum Storage Area (Site 1) was located in the central portion of the landfill along the southern (upgradient) edge. Near the northwestern edge of the landfill, the ground surface drops along a steep ravine to the Over Bank Disposal Area (OBDA). The ground surface increases in elevation to the east from the tennis courts to Route 12 and Baldwin Hill.

The ground surface elevation across the landfill cover system varies from approximately 80 to 87 feet in the eastern portion of the landfill and from 80 to 100 feet in the western portion of the landfill, such that the landfill cover slopes gently to the northeast at a grade of approximately 3 percent toward the Area A Wetland. Adjacent to the toe of the landfill, the Area A Wetland surface is at an elevation of approximately 72 feet, and the newly constructed landfill sideslope angles at a 1:4 (vertical: horizontal) grade from the surface of the wetland. Along this side slope, a layer of riprap at the higher elevations and a gabion basket system (wire-mesh containing stones) at the toe of the landfill provide slope stability and erosion protection.

A concrete structure (for salt storage) is located near the Building 460 (Hobby Shop) entrance to the landfill. The MAA Building previously located at the western end of the landfill has been demolished and replaced by a metal building located on Thresher Avenue at the entrance to the

Deployed Parking area. The Deployed Parking area is located at the eastern end of the landfill, where it can be accessed from Thresher Avenue. The Deployed Parking area is a secure area where Navy personnel who are out at-sea for an extended time can store their vehicles. A 7-foot high chain-link fence with a three-strand barbed wire around its perimeter secures the area.

A crane test platform is located within the east-central portion of the landfill. This platform consists of a 24-inch thick, 50 foot x 50 foot concrete slab, with No. 8 metal reinforcing bars used for structural reinforcement. This platform allows testing of cranes where the boom of the crane can be turned through a full 360 degree rotation.

A sand bag storage area is located in the western portion of the landfill. Several thousand sand bags are stored on wooden pallets on the completed asphalt surface and kept on hand by NSB-NLON for use in protecting structures on the Lower Base during severe storm events.

The Public Works Department at NSB-NLON stores equipment and materials on various sections of the completed landfill cover system. Typically, equipment such as trailer trucks, buses, and plows is parked on the plateau of the landfill.

1.2.3 Soil Characteristics

The Soil Conservation Service (SCS) soils map (SCS, 1983) classifies the soil across most of the Area A Landfill as Udorthents-Urban land. This soil type is defined as excessively drained to moderately drained soils that have been disturbed by cutting and filling. Along the southwestern slope of the landfill and in upgradient areas, the soil is classified as the Hollis-Charlton-Rock complex. Stones and boulders are intermingled with a dark, fine, sandy loam. Bedrock outcrops are prevalent in the area.

1.2.4 Geology

The Groundwater/Leachate Modeling Study (Brown & Root Environmental (B&RE), October 1996) describes the shallow subsurface geology within and surrounding the Area A Landfill as consisting of four units. In order of their occurrence with depth, the units are; landfill material, dredge spoil, alluvium, and competent bedrock.

The Area A Landfill contains miscellaneous fill that consists of fine- to coarse-grained sand and gravel as well as refuse including ash, wood fragments, paper, brick fragments, and asphalt. The landfill thickness generally increases from 5 to 10 feet in the western portion of the landfill to 15 to 20 feet in the far eastern portion of the landfill. The landfill material is underlain by dredge spoil within most of the landfill boundary. Where no dredge spoil is present, landfill material directly overlies a thin alluvial layer or the bedrock surface.

The dredge spoil is a fine-grained material that is easily identified by its silty texture, sulfurous odor, and the presence of shells. Dredge spoil is present beneath most of the landfill to a thickness up to 25 feet. This dredge spoil layer continues into the wetland and is present at the wetland surface. Dredge spoil is not present in the far western portion of the landfill area or along the southern hillside.

The alluvium includes native surface soils, unconsolidated fluvial and glacial deposits, colluvium, weathered bedrock, and re-worked clean sand and gravel soils (present to the east of the landfill). Upgradient of the landfill boundary along the hillside, alluvium is present at the ground surface but bedrock outcrops are prevalent. Typically, alluvium is present beneath the dredge spoil in the landfill and wetland areas.

Bedrock in the Area A Landfill vicinity has been identified as the biotite-quartz-feldspar gneiss of the Mamacoke Formation. Bedrock is located at or near the ground surface along the southern hillside and beneath the alluvium throughout the landfill and wetland areas. The bedrock surface slopes to the northeast toward the Area A Wetland from the large central bedrock high in the center of the facility. Locally, there is a bedrock high in the western portion of the landfill, a small bedrock valley in the central portion of the landfill, and a bedrock island in the Area A Wetland. In the far northeastern portion of the landfill, there is a bedrock depression that is filled with a significant thickness of weathered bedrock and large boulder-like pieces of bedrock (colluvium).

The landfill is situated along the flank of the hillside such that the depth to bedrock generally increases from west to east. Thicknesses of each of the three overlying units (alluvium, dredge spoil, and landfill material) also generally increase from west to east.

1.2.5 Hydrogeology

As stated in Section 1.2.4, there were four subsurface units identified at the Area A Landfill: landfill material, dredge spoil, alluvium, and bedrock. Except for the Groundwater/Leachate Modeling Study, previous investigations grouped the landfill material, dredge spoil, and alluvium together as overburden and most of the overburden wells were screened across some combination of these three units. During the Groundwater/Leachate Modeling Study, unit-specific wells were installed and tested. Based on the comprehensive test results, the estimated hydraulic conductivity of the landfill material and alluvium were comparable at 4.8 feet per day and 2.0 feet per day, respectively. The estimated hydraulic conductivity of the dredge spoil and bedrock were comparable at 2.0E-02 foot per day and 7.0E-02 foot per day, respectively. Also, shelby tube permeability test results indicated that the mean vertical hydraulic conductivity of the dredge spoil was 5.4E-04 foot per day. These results, in conjunction with the analysis of groundwater

potentials, support the belief that the dredge spoil, which is often present between landfill material and alluvium, is a low-permeability confining unit.

A summary of groundwater flow characteristics for the Area A Landfill, as found during the Groundwater/Leachate Modeling Study (B&RE, 1996a), is provided below.

Water Table

Groundwater flow directions generally reflect surface topography. Groundwater flows from the southern hillside, across the Area A Landfill to the northeast toward the Area A Wetland and across most of the landfill, and to the northwest toward the Area A Downstream in the far western portion of the landfill. In the western and central portions of the landfill, the hydraulic gradient is steepest along the hillside, flatter across the landfill, and nearly flat across the wetland. In these areas, groundwater elevations range from approximately 80 to 90 feet along the upgradient landfill boundary to 71 feet along the wetland boundary. In the eastern portion of the landfill, the hydraulic gradient is relatively flat across the landfill. The groundwater elevations range between 71 to 72 feet. Staff gauge measurements indicate that although the bedrock island in the wetland impedes flow, surface water in the wetland moves slowly northwest toward the dike and the Area A Downstream (B&RE, 1996a).

The saturated thickness of the landfill material typically ranges from approximately 0 to 5 feet in the western and central portions of the landfill and from 5 to 10 feet in the eastern portion of the landfill. The hydraulic gradient was estimated from the water table contour lines at seven locations across the site (TtNUS, 1999). The lowest estimated hydraulic gradients ranged from 0.0007 ft/ft to 0.0018 ft/ft. These gradients occurred in the central portion of the landfill near the wetland boundary and across the entire eastern portion of the landfill. The highest estimated hydraulic gradients ranged from 0.03 ft/ft to 0.09 ft/ft. These gradients occurred in the central portion of the landfill near the hillside boundary and across the entire western portion of the landfill. Assuming these gradient ranges, a hydraulic conductivity of 6.0 ft/day for the landfill material, and a porosity of 0.30, the seepage velocity ranges from 0.014 to 0.036 ft/day across the areas with lower gradients and from 0.6 to 1.8 ft/day across the areas with higher gradients (B&RE, 1996a).

Dredge Spoil Groundwater

As stated earlier, the dredge spoil has been characterized as a low permeability, confining unit that, where present, separates landfill material from the underlying alluvium and bedrock. During the Groundwater/Leachate Modeling Study, six monitoring wells were installed within the dredge spoil to assess the groundwater characteristics of the dredge spoil at different locations across

the landfill. There is a downward hydraulic gradient from the landfill material to the dredge spoil at all locations, except at the 2LMW31 well cluster, which is located at the central portion of the landfill near the southern hillside boundary where the alluvium and dredge spoil are thin and strong upward gradients are present from the bedrock to the overyling units. The observed downward hydraulic gradients indicate that the dredge spoil is inhibiting upward recharge from the bedrock and alluvium to the landfill material.

A groundwater contour map was not generated for the dredge spoil during the Groundwater/Leachate Modeling Study (B&RE, 1996), because of the limited number of monitoring wells and some irregular data. For example, in the eastern portion of the landfill, the measured groundwater elevation at 2LMW33DS was lower than that measured at 2LMW32DS, which is closer to the wetland but screened at a lower elevation within the dredge spoil. Also, the measured groundwater elevation at 2LMW34DS within the dredge spoil depression near the crane test pad was 57.85 feet, which is considerably lower than the measured elevations in the landfill material and bedrock at the same location. These irregular groundwater elevations confirm that the dredge spoil cannot be considered to be a continuous water-bearing unit where hydraulic gradients and seepage velocities can be estimated. Rather, the dredge spoil is a low permeability confining unit where groundwater elevations are irregular and dependent on local conditions such as the dredge spoil thickness and overlying and underlying groundwater elevations.

Alluvium Groundwater

During the Groundwater/Leachate Modeling Study (B&RE, 1996), one monitoring well was installed in the alluvium material (2LMW29A) in the western portion of the landfill where dredge spoil is thin. As stated earlier, the estimated hydraulic conductivity of the alluvium is comparable to the landfill material. There is an upward hydraulic gradient from the alluvium to the landfill material at this location, which confirms that where dredge spoil is not present, the upward hydraulic gradient from the bedrock persists to the landfill material. Previously installed monitoring wells that are screened within landfill material and alluvium include 1MW2S, 2LMW8S, and 2LMW20S, which are all located near the hillside boundary of the landfill. There is an upward hydraulic gradient from the bedrock to the alluvium/landfill material at well clusters 2LMW8 and 2LMW20 (there is no bedrock well at 1MW2S).

A groundwater contour map was not generated for the alluvium due to the limited number of monitoring wells. However, based on the observed vertical hydraulic gradients and relatively permeable nature of the alluvium, it can be concluded that bedrock groundwater is recharging the alluvium. Where dredge spoil is present, alluvium groundwater flows preferentially through

alluvium material toward the wetland and Area A Downstream. Additionally, where dredge spoil is not present, alluvium recharges the landfill material.

Bedrock Groundwater

Groundwater in the bedrock flows in similar directions as the water table. Similar to the shallow groundwater, the hydraulic gradients in the bedrock are steepest across the western and central portions of the landfill area and are flatter in the eastern portion of the landfill area where the bedrock depression is located and the overlying unconsolidated material is thickest. Between the 2LMW13D and 2LMW9D bedrock wells, there is a significant decrease in the groundwater elevation that is probably related to groundwater discharging to the OBDA groundwater seep indicated by the sampled point 3MSP01. Discharge from this seep was estimated during the Groundwater/Leachate Modeling Study at 109.5 gallons per minute (gpm).

Vertical Gradients and Hydraulic Connections

Although groundwater flow directions and gradients are similar in the water table and bedrock groundwater, an analysis of vertical flow gradients was completed to determine possible hydraulic connections. Cross-sections presented in the modeling study (B&RE, 1996a) and the GMP (TtNUS, 1999) show the water table and the direction of the vertical hydraulic gradients between the units. In all of these cases, except at the 2LMW9 well cluster, there is an upward gradient from the bedrock to the overlying unit (the reduced groundwater potential in the bedrock at the 2LMW9D well is probably due to bedrock groundwater discharging to the OBDA seep and the lack of hydraulic connection between the bedrock and the landfill material due to dredge spoil). Along the hillside near the boundary of the landfill, dredge spoil is either very thin or not present and there is an upward gradient from the bedrock and alluvium to the landfill material. Within the landfill where dredge spoil is present, there is a downward gradient from the landfill material to the dredge spoil.

Based on the analysis of vertical flow gradients, it can be concluded that bedrock groundwater from the hillside is recharging the overlying units. Along the hillside boundary of the landfill and in the western portion of the landfill where the alluvium is thin and dredge spoil is not present, bedrock groundwater recharges landfill material. Where dredge spoil is present, the dredge spoil inhibits upward recharge from the bedrock to the landfill material, and the bedrock groundwater recharges the alluvium (and possibly the deeper dredge spoil) only. Although there is a downward gradient from the landfill material to the dredge spoil, the dredge spoil is relatively impermeable and shallow groundwater flows preferentially from the landfill material toward the wetland.

1.3 PREVIOUS INVESTIGATIONS

As listed in Year 3 Report (TtNUS, 2003), a chronological list of important historical events and relevant dates for Site 2 is summarized below.

- Landfill operations – 1957 to 1973
- Final Initial Assessment Study (IAS) completed – March 1983
- Verification Step 1A Study – February 1988
- Phase I RI completed – August 1992
- Remedial Design for Area A Landfill source control OU began – 1994
- Area A Landfill Focused Feasibility Study (FFS) finalized – May 1995
- Proposed Plan for Area A Landfill source control OU issued – June 1995
- Public meeting for Area A Landfill source control OU – June 1995
- Record of Decision (ROD) for Area A Landfill source control OU signed – September 1995
- Remedial Design for Area A Landfill source control OU completed – December 1996
- Remedial Action (RA) for Area A Landfill source control OU began – December 1996
- Phase II RI finalized – March 1997
- Remedial Action for Area A Landfill source control OU completed – September 1997
- Final Report for Remedial Action at Area A Landfill issued – March 1998
- Final Groundwater Monitoring Plan for Area A Landfill issued – January 1999
- Groundwater Monitoring Program initiated – October 1999
- Final Year 1 Groundwater Monitoring Report for Area A Landfill issued – May 2001
- Final Basewide Groundwater OU RI completed – January 2002
- Final Year 2 Groundwater Monitoring Report for Area A Landfill issued – December 2002

1.3.1 Historical Investigative Reports

As listed in Year 3 Report (TtNUS, 2003), the following field investigations were conducted at the Area A Landfill and the details of the investigations are provided below.

- The field investigation performed for the Phase I RI (Atlantic, 1992).

- The supplemental field investigation performed for the Area A Landfill Focused Feasibility Study (FFS) (Atlantic, 1995a).
- The field investigation performed for the Phase II RI (B&RE, 1997).
- The Geotechnical Field Investigation and Area A East End Investigation (B&RE, 1996b) performed in support of the Area A Landfill Remedial Design (B&RE, 1996c).
- The field investigation performed for the Groundwater/Leachate Modeling Study, which supported the Area A Landfill Remedial Design (B&RE, 1996a).
- The investigations performed for Year 1 of groundwater monitoring at the Area A Landfill (TtNUS, 2001c).
- The field investigation performed for the Basewide Groundwater OU RI (TtNUS, 2002a).
- The investigations performed for Year 2 of groundwater monitoring at the Area A Landfill (TtNUS, 2002e).

1.3.2 Monitoring History

As in the Year 3 Annual Report (TtNUS, 2003), the details of the previous monitoring reports are summarized below.

Phase I RI

Atlantic conducted a field investigation at the Area A Landfill in 1992 as part of the base-wide Phase I RI. A total of 13 monitoring wells (2LMW7S, 2LMW7D, 2LMW8S, 2LMW8D, 2LMW9S, 2LMW9D, 2LMW13S, 2LMW13D, 2LMW14D, 2LMW17S, 2LMW17D, 2LMW18S, 2LMW18D) and 7 test borings were installed. A total of 12 soil and 12 groundwater samples were collected from these monitoring wells and test borings. Soil samples were analyzed for target compound list (TCL) organics, Target Analyte List (TAL) inorganics, PCBs, pesticides, and Toxicity Characteristics Leaching Procedure (TCLP) pesticides and metals. Groundwater samples were analyzed for the same parameters, except TCLP, plus radiological elements.

Area A Landfill FFS

Atlantic conducted a supplemental field investigation at the Area A Landfill in October and November 1993 to support the Area A Landfill FFS. The main purpose of these field activities was to characterize the subsurface soil in the vicinity of the bituminous concrete pad located at the southwestern end of the landfill.

Twenty-four soil borings were drilled to a depth of 16 feet or auger refusal. Based on field screening for volatile organic compounds (VOCs), with an HNu organic vapor analyzer (OVA) and for PCBs with a field gas chromatograph, 13 subsurface soil samples were selected for analysis of TCL organics, PCBs, pesticides and TAL inorganics. Selected samples were also analyzed for organic content, cation exchange capacity (CEC), Total Organic Carbon (TOC), dioxin and geotechnical parameters, including grain-size distribution, moisture content, and specific gravity. Two samples were also analyzed by the TCLP for all toxicity constituents.

Phase II RI

B&R Environmental conducted a field investigation at the Area A Landfill in 1994 as part of the base-wide Phase II RI. A total of 10 monitoring wells (2LPW1S, 2LOW1S, 2LOW1D, 2LOW2S, 2LOW3S, 2LOW4S, 2LMW19S, 2LMW19D, 2LMW20S, and 2LMW20D) were installed. Eleven soil samples were collected from two soil borings (2LTB13, 2LTB23). Two rounds of groundwater level measurements and groundwater sampling were conducted, including one in March and one in August 1994. Groundwater samples were analyzed for TCL organics, TAL inorganics, PCBs, and radiological elements.

Geotechnical Field Investigation

B&RE conducted field activities at the Area A Landfill in February and March 1995 as part of the Geotechnical Field Investigation performed in support of the Remedial Design for a landfill cover system. The purpose of the Geotechnical Field Investigation was to confirm the areal extent of the fill material and to obtain additional geotechnical field data.

Twenty test pits were excavated along the edges of the Area A Landfill to allow for visual observation of subsurface conditions. The purpose of excavating these test pits was primarily to determine the lateral extent of the fill material and, wherever practical (especially along the southern edge of the landfill), establish the depth and competence of bedrock.

Eight soil borings were drilled on the landfill plateau to establish the depth of bedrock and thickness of the fill and dredge spoil material. The soil borings were also used to collect six soil samples to be tested for geotechnical parameters (particle size, moisture content, classification, Atterberg limits, and triaxial compression) and three soil samples to be tested for analytical parameters (TCL organics, TAL inorganics, PCBs, and pesticides). Four borings were advanced through the overburden to auger refusal at the bedrock. Four borings were advanced through the overburden and approximately 5 feet into competent bedrock.

Area A East End Investigation

B&RE conducted field activities at the Area A Landfill in September 1995 as part of the Area A East End Investigation performed in support of the Remedial Design for the landfill cover system. The purpose of the Area A East End Investigation was to verify that the fill used for the construction of the recreational facilities (Racquetball Building, tennis courts, ball field) located at the extreme east end of Area A is of a different nature from that placed in the rest of the Area A Landfill, i.e., does not contain contaminated waste material, and therefore, does not need to be capped.

Six test trenches (LF-TP22 through LF-TP27) were excavated along the eastern boundary of the Area A Landfill cover system as designed to verify the eastern limit of contaminated fill material. The test trenches were field-screened for the presence of VOCs, and four soil samples were collected and analyzed for TCL organics, TAL inorganics and cyanide, PCBs, pesticides, and Total Petroleum Hydrocarbon (TPH).

Three soil borings (SB06 through SB08) were drilled in the vicinity of the Area A East End recreational facilities. These soil borings were advanced through the overburden to the bedrock to auger refusal. A total of six soil samples were collected from the fill and dredge spoil material and analyzed for TCL organics, TAL inorganics and cyanide pesticides, PCBs, and TPH. (TtNUS 2003)

Groundwater/Leachate Modeling Study

B&RE conducted field activities at the Area A Landfill in November/December 1995 as part of the Groundwater/Leachate Modeling Study performed in support of the Remedial Design for the landfill cover system. The purpose of the Groundwater/Leachate Modeling Study was to evaluate the impact of the proposed landfill cover system on the saturated thickness of landfill material and on the flow and composition of the groundwater/leachate discharge from the landfill.

The modeling field investigation activities included the performance of the following activities:

- Surface infiltration tests at 10 locations (2LT1 thru 2LT10) throughout the surface of the landfill
- Installation of 13 overburden monitoring wells, including 6 in the landfill material (2LMW28F through 2LMW33F) and 7 in the underlying dredge spoil or alluvium (2LMW28DS, 2LMW29A, 2LMW30DS through 2LMW34DS).

- Installation of three bedrock wells, including two located upgradient from the Area A Landfill (2LMW35B and 2LMW36B) and one at the northeast end of the landfill (2LMW32B).
- Installation of 10 piezometers, including 7 (2LPZ1DS thru 2LPZ7DS) along the boundary between the Area A Landfill and Area A Wetland and 3 (2LPZ1F, 2LPZ2F, and 2LMW32PZ) at the northeast end of the landfill.
- Installation of eight staff gauges (SG07 thru SG14) along the boundary between the Area A Landfill and Area A Wetland.
- Slug testing of the newly installed wells and one of the piezometers (2LMW32PZ).
- Water level measurements for all newly installed monitoring wells, piezometers, and staff gauges as well as for all previously existing monitoring wells.
- Flow measurement and sampling of the groundwater seep (3MSP01) from the western face of the Area A Landfill into the OBDA of the adjoining Area A Downstream (Site 3). This sample was analyzed for TCL organics and TAL inorganics.

The Groundwater/Leachate Modeling Study provided a comprehensive analysis of the site geology and hydrogeology. The report provided surface contour maps of the four units (landfill material, dredge spoil, alluvium and bedrock), thickness maps for the landfill material and dredge spoil, surface contour maps for the water table and bedrock groundwater, geologic cross-sections, conceptual flow nets, and an analysis of vertical flow gradients.

Additionally, the Groundwater/Leachate Modeling Study concluded that the Area A Landfill cover system would reduce the thickness of the saturated landfill material by approximately 0.1 foot along the Area A Wetland boundary, by approximately 0.5 foot at the eastern end of the landfill, by approximately 0.2 foot in the center of the landfill, and by over one foot at the western end of the landfill. The study concluded that the cover system would reduce the flux of groundwater chemicals of concern (COCs) from the Area A Landfill to the Area A Wetland by 16 to 55 percent and that none of these COCs would exceed either the Federal Ambient Water Quality Criteria (AWQC) or the Connecticut Department of Environmental Protection (CTDEP) Surface Water Protection Criteria (SWPC).

Year 1 of the Monitoring Program

The Year 1 Annual Groundwater Monitoring Report for the Area A Landfill (TtNUS, 2001c) summarized the analytical data collected during Rounds 1 through 4. Sixteen monitoring wells, seven surface water locations, and one surface seep location were sampled during Year 1 of the monitoring program. During the initial year of monitoring, samples were collected during the

months of October 1999 (Rd. 1), January 2000 (Rd. 2), April 2000 (Rd. 3), and July 2000 (Rd. 4). Soil samples were also collected and analyzed during the installation of the downgradient monitoring wells that were installed prior to the initiation of the monitoring program. Deviations to the groundwater and/or surface water sampling program occurred at the following locations during the first year of sampling.

- Monitoring well 2WMW44DS was not sampled during Round 2 due to the static water being frozen within the monitoring well.
- The seep sample and all of the surface water samples were not collected during Round 2 because the surface water within the wetland was frozen.
- The seep sample was not collected during Round 3 because no water was flowing from the seep location.
- Monitoring well 3MW12S was not sampled during Round 4 because the well was destroyed during post-remedial construction.
- Surface water samples were not collected from SG22 and SG24 during Round 4 because the locations were dry.

The analytical results were compared to primary criteria (i.e., CTDEP SWPCs) and secondary monitoring criteria [i.e., most conservative of Federal AWQC and Connecticut Water Quality Standards (WQSs)]. The results obtained for the initial four rounds of groundwater monitoring indicated that arsenic and zinc exceeded primary criteria. In addition to the above exceedances, chromium, copper, and lead exceeded secondary criteria.

Surface water sampling results for the initial four sample rounds indicated that phenanthrene and arsenic exceeded primary criteria. Chromium, copper, lead, and zinc also exceeded secondary criteria for the initial four rounds of surface water samples.

A statistical evaluation of the data indicated that upgradient and downgradient concentrations of both organic and inorganic chemicals of potential concern (COPCs) were found to be similar except for total arsenic. The average concentrations of arsenic showed a slight downward temporal trend.

The Year 1 Annual GMR recommended the following:

- Consideration should be given to reducing the frequency of VOC monitoring in groundwater because no exceedances of primary or secondary criteria for these compounds were noted.

- Consideration should be given to reducing the parameters being analyzed after the Year 2 monitoring activities are completed.
- Maintenance of monitoring well integrity (i.e., well maintenance and well development) should continue in case of extended monitoring.
- Discussion of the endpoint for groundwater monitoring should occur if current trends continue.

The Annual (Year 1) GMR was submitted as a draft document to the regulatory agencies for review and comment in February 2001. The United States Environmental Protection Agency (USEPA) provided general and specific comments on the report. The comments focused on several major topics including the application of statistical methods, the evaluation of arsenic concentrations in relation to geochemical properties of the groundwater and the need for additional geochemical analyses, and the approach for comparing upgradient / background groundwater to downgradient groundwater. No comments were received from the CTDEP. Minor revisions were made to the Year 1 GMR and the document was resubmitted as a final version in May 2001. A response to comment letter was appended to the final GMR. The USEPA responded in a follow-up letter that further discussion was needed regarding refinement of the conceptual site model for evaluation, which can be used to address well coverage, analytes, sampling frequency, and future data evaluation approaches. The letter also reiterated the need for further discussion on the use of upgradient versus background well data.

Basewide Groundwater OU RI

The Area A Landfill site was one of 10 sites investigated during the Basewide Groundwater OU RI. The groundwater media for the Area A Landfill site was the focus of the RI. Groundwater samples were collected from existing monitoring wells to further characterize the Area A Landfill site. The monitoring wells included in the GMP for the Area A Landfill were the only wells sampled and, in fact, the results presented in the RI constituted the results for Round 4 of the GMP for the site.

The results of the human health risk assessment (HHRA) performed with the groundwater data during the RI showed that Incremental Cancer Risks and Hazard Indices for construction workers exposed to groundwater at the Area A Landfill were within the EPA and CTDEP acceptable levels. The HHRA only considered exposures to construction workers. It was recommended in the report that the current groundwater monitoring program be continued to gather data to evaluate long-term trends in contaminant concentrations.

Year 2 of the Monitoring Program

The Year 2 groundwater monitoring activities continued with the completion of four rounds of quarterly sampling (Rounds 5 through 8) from the same monitoring network defined in the GMP. However, several deviations in the sampling program occurred during the second year of monitoring. Two monitoring wells sampled during the first year of monitoring (i.e., 3MW12S and 3MW12D) were not sampled during the second year of monitoring because they were destroyed during the RA at the Area A Downstream site. Surface water samples were not collected from staff gauges SG15, SG16, and SG17 during Rounds 5 through 8 because there was no surface water at these locations. Surface water samples were not collected at these staff gauges during the first year of monitoring either for the same reason. Additionally, during Round 8, surface water was not collected from staff gauges SG22, SG23, and SG24 because there was no surface water at these locations. Also during Round 8, sufficient sample volume could not be collected from monitoring well 2WMW38DS to analyze for the complete parameter list; therefore, analysis for pesticides/PCBs and a majority of the miscellaneous parameters was not completed. Finally, due to a problem with sample shipment, the samples collected from monitoring well 4MW1S and staff gauges SG22 and SG24 were not shipped on time and the holding times for the organic parameters and the miscellaneous parameters were exceeded. Subsequently, these samples were only analyzed for TAL metals (total and dissolved).

Prior to each round of sampling, one round of groundwater and surface level measurements was performed and potentiometric surface elevation maps were prepared. However, survey data for the staff gauges are considered to be suspect due to movement of some staff gauges after installation. Therefore, the surface water elevations were not used in preparing potentiometric surface maps.

The analytical results were compared to primary criteria (i.e., CTDEP SWPCs), and secondary monitoring criteria (i.e., most conservative of Federal AWQCs and Connecticut WQSs). The results obtained for the second year of groundwater sampling indicated no detections of VOCs or pesticides/PCBs in any of the sample rounds. The following constituents exceeded primary criteria during the Year 2 monitoring activities:

- Benzo(a)pyrene
- Phenanthrene
- Arsenic
- Zinc

In addition to the above exceedances, chromium, copper, and lead exceeded secondary criteria in groundwater samples.

Surface water sampling results for the second year of monitoring indicated that the following constituents exceeded primary criteria:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthrene
- Benzo(k)fluoranthrene
- Phenanthrene
- Arsenic
- Zinc

All of the exceedances of primary criteria with the exception of phenanthrene, arsenic, and zinc occurred at the seep sample location 3MSP01. Copper and lead also exceeded secondary criteria in several of the Year 2 surface water samples.

The statistical evaluation of the data indicated an increase in arsenic concentrations when comparing upgradient to downgradient concentrations. The evaluation also indicated that no temporal increase in arsenic concentration was evident over the four sample rounds.

The Year 2 Annual GMR recommended the following:

- The sampling frequency should be reduced from quarterly to bi-annually since no significant increasing contaminant trends have been observed to date.
- TCL VOCs and TCL pesticides / PCBs should be eliminated from the analytical program as these contaminants have not been identified as a concern.
- Project laboratories should continue to be warned about the presence of high total dissolved solids (TDS) and salinity to account for potential interference effects.
- Further discussion on arsenic is needed regarding the technical impracticality of meeting the primary criteria. The discussions should take place during Year 3 of the monitoring program
- Surface water sample locations at SG15, SG16, and SG17 should be eliminated since surface water was not present at these locations during the first two years of monitoring activities.

- Monitoring well 3MW12D, which was previously destroyed, should be replaced. This well was located in a revegetated area of the Area A downstream and care must be taken when reinstalling this well. If reinstallation is not possible, then well 2LMW9D can be considered as a downgradient monitoring point. Monitoring well 3MW12S was also destroyed, however this well is not recommended for reinstallation since well 3MW37S is located in the same general vicinity and monitors the same hydrogeologic zone.
- Routine maintenance of the monitoring wells should be continued.

The Annual (Year 2) GMR was submitted as a draft document to the regulatory agencies for review and comment in March 2002. No comments were received from the CTDEP. The USEPA provided general and specific comments on April 3, 2002. Several comments focused on the need for refinement of the site conceptual model primarily from a geochemistry perspective. A USEPA comment indicated that reducing the monitoring frequency from quarterly to bi-annually would be acceptable. The USEPA also agreed to eliminate VOC, pesticide, and PCB analyses in the future; however, dissolved metals analyses and miscellaneous parameter analyses should be continued to support the site conceptual model. Furthermore, the USEPA indicated that a discussion regarding arsenic criterion was needed. The USEPA agreed with recommendations to eliminate the surface water sample locations that lacked surface water, to replace well 3MW12D, and to use the data from well 3MW37S in place of groundwater data from well 3MW12S, which was destroyed.

A response-to-comment letter was prepared by the Navy and submitted on May 28, 2002. The response-to-comment letter included proposed additional wells to include in the monitoring program to support the site conceptual model refinement from a geochemistry perspective, a revised arsenic criterion based on protection of ecological receptors, and a monitoring frequency to include 3 rounds of samples during Year 3, and annual sampling starting in Year 4. A teleconference was held on June 5, 2002 to discuss these issues. Several of the recommendations were changed as a result of the teleconference. The final recommendations of the Year 2 Annual GMR are provided above. The Year 2 Annual GMR was revised to reflect the modifications. The final Year 2 Annual GMR and final response-to-comment document were prepared and issued in December 2002.

Year 3 of the Monitoring Program

Fifteen monitoring wells (4MW1S, 2LMW20S, 2WMW21S, 3MW37S, 2WMW38DS through 2WMW47DS, and 3MW12D), ten surface water locations (SG15 through SG24), and one surface seep location (3MSP01) were to be sampled as part of the groundwater monitoring program as specified in the GMP (TtNUS, 1999). However, several deviations in the sampling program occurred during the third year of monitoring.

- During Round 11, a geochemical investigation was conducted along with the routine sampling (TtNUS, 2002d).
- Monitoring well 3MW12D, which was not sampled during the second year because it was destroyed during the remedial action at the Area A Downstream site, was replaced during Round 11 and was sampled during the same round.
- Due to the low water level in monitoring well 2LMW20S during Round 9, a sample was not collected.
- Surface water samples were not collected from staff gauges SG15 and SG17 during Rounds 9 and 10 due to lack of surface water at these locations. Surface water was sampled at SG16 during the Round 9 sampling event, but not during Round 10. Staff gauges SG15 through SG17 were eliminated from the monitoring program after Round 10. No surface water samples were collected from staff gauge SG22 during Rounds 9 through 11 due to a lack of surface water.

Groundwater and surface water samples were analyzed for TCL organics, TAL inorganics, and miscellaneous water quality parameters during Rounds 9 and 10 of the third year of monitoring. TCL VOCs, pesticides, and PCBs were eliminated from the analytical program during Round 11. Overall, groundwater and surface water results were generally similar in that the same compounds were detected and the ranges of concentrations for the COPCs that exceeded criteria were similar. Some exceptions were noted for arsenic, copper, lead, and zinc.

The following conclusions were made from the monitoring results for Year 3.

- Eight COPCs were detected in the groundwater samples. A single VOC was detected once during Year 3. Similar to previous years, no pesticides or PCBs were detected in any of the groundwater samples collected during the third year of monitoring. A limited number of semi-volatile organic compounds (SVOCs) were detected and the concentrations were generally lower that those detected during Year 2. Inorganics were detected most frequently at

concentrations in excess of monitoring criteria and/or background concentrations. Some discrepancies were noted between total and dissolved inorganic concentrations.

- Statistical analyses showed that total xylenes, bis(2-ethylhexyl)phthalate (BEHP), arsenic, cadmium, chromium, copper, and zinc are present in downgradient groundwater at statistically higher concentrations than in upgradient groundwater. Further evaluation of the results for these COPCs (i.e., criteria comparisons and trend analysis) did not indicate that these COPCs pose any significant migration issues.
- The results of the seep and surface water sampling efforts generally confirmed the groundwater monitoring results and indicate that no significant contaminant migration is occurring.
- The results of the geochemical investigation provided conclusive evidence that the slightly elevated arsenic concentrations that have been detected in the downgradient monitoring wells completed in dredge spoils are related to the dredge spoils and not the landfill. Some of the other inorganics detected at elevated concentrations in downgradient dredge spoil wells are also likely related to the dredge spoils.
- Overall, the results of the first three years of monitoring for the Area A Landfill indicate that the RA action at the site is sufficiently reducing infiltration of precipitation through the landfill source material so that significant contaminant migration from the site to the surrounding area is not occurring.

The following recommendations were made for the Area A Landfill monitoring program based on the results of the third year of monitoring at the site:

- The monitoring results indicate that the RA and current ROD for the Area A Landfill are sufficient and no amendments are necessary.
- Monitoring should continue at the site to provide supporting information for the next Five-Year Review.
- The sampling frequency should remain semi-annually for Year 4. This recommendation is justified because of the limited number of detections of chemicals in excess of monitoring criteria and background concentrations and no significant increasing contaminant trends in the downgradient monitoring wells over three years. Semi-annual sampling was implemented during Year 3 (Round 11) of the program. The sampling frequency should be re-evaluated after Year 4.

- No further geochemical investigations are necessary to address the arsenic issue. The investigation conducted during Round 11 provided conclusive evidence that the arsenic is from the dredge spoils and is not migrating to downgradient locations. Continued general monitoring activities will be sufficient to confirm these results.
- The miscellaneous parameters chemical oxygen demand (COD), sulfate, and TOC should be eliminated from the analytical program. Three years of data have shown little change for these parameters. The geochemical investigation completed during Year 3 provided a good understanding of the geochemistry of the local groundwater. It also provided evidence that the dredge spoils and not the landfill are the major influence on the geochemistry of the groundwater. Continued monitoring of the remaining miscellaneous parameters (alkalinity, chloride, hardness, and TDS), in addition to the typical field water quality parameters, should provide adequate information to determine any gross changes in groundwater geochemistry in the future.
- Project laboratories should continue to be made aware of the presence of high TDS and salinity in the downgradient dredge spoil wells of the monitoring network so that potential interferences can be accounted for during the analysis of the samples.
- It is recommended that future monitoring activities at the Area A Landfill follow the final version of the new GMP that is currently under preparation as part of the O&M Manual. The new GMP provides updated monitoring criteria for COPCs and data evaluation procedures. The new GMP is being prepared to provide a "living document" that is easily adapted to address changes to criteria, potential receptors, and site conditions. The new GMP is also integrated with other site-related O&M activities.
- Routine maintenance should be conducted on the remaining monitoring wells included in the monitoring program to facilitate monitoring activities into the future.

Year 4 of the Monitoring Program

The Year 4 Annual GMR summarized Rounds 12 and 13 of groundwater and surface water analytical data collected from selected surface water locations and monitoring wells installed at the Area A landfill. The results of the monitoring program were used to evaluate the success of the RA (i.e., installation of a multi-layer, low-permeability cover system and a surface water/shallow groundwater interception and diversion system upgradient of the cover system) at minimizing contaminant migration from Area A Landfill. The evaluation during Year 4 included the following:

- Gauging of 15 monitoring wells. Sampling and analyses of groundwater from the 15 monitoring wells using low-flow purging and sampling techniques. Thirteen of the twenty COPC's were detected during analysis.

- Gauging of 11 staff gauges. Sampling and analyses of surface water from seven of surface water locations and one seep water location using the prescribed sampling techniques. Thirteen of the twenty COPC's were detected during analysis of the surface water samples.

- Completion of a general screen of analytical data to current primary and secondary monitoring criteria and background concentrations to identify exceedances in upgradient wells, downgradient wells, and surface locations. There were groundwater exceedances of the primary monitoring criterion for phenanthrene, arsenic (total and dissolved), and lead (total and dissolved). There were groundwater exceedances of the secondary monitoring criterion for copper (total and dissolved), lead (total and dissolved), and total zinc. There were background concentration exceedances for arsenic (total and dissolved) and lead (total and dissolved). There were surface water exceedances of the primary monitoring criterion for benzo(b)fluoranthene, benzo(k)fluoranthene, phenanthrene, arsenic (total and dissolved), total copper, total lead, and zinc (total and dissolved). There were surface water exceedances of the secondary monitoring criterion for total arsenic, total chromium, total copper, total lead, and zinc (total and dissolved). There were surface water excceedences for the background concentration for total arsenic, total chromium, total copper, total lead, and zinc (total and dissolved).

- The results of the seep and surface water for Year 4 were similar in magnitude as compared with the previous year of sampling. For the most part, the surface water collected during the fourth year resulted in overall concentrations less than Year 3. The Year 4 seep water sample had no detections above the reporting limit. The only staff gauge that contained concentrations greater than the previous year was Round 13 sample at SG-24.

- Performance of a statistical comparison from the complete analytical data set of downgradient and upgradient monitoring wells was performed to determine significant differences. Analysis of data indicated that eight of the 13 detected COPCs (benzo(a)anthracene, phenanthrene, arsenic (total and dissolved), chromium (total and dissolved), and lead (total and dissolved)) had downgradient results statistically higher than upgradient concentrations. Detected concentrations of benzo(a)anthracene and dissolved chromium were below primary, secondary, and background levels and were only slightly above lab reporting levels. Phenanthrene and total lead each only had one detection. Dissolved lead had two detections. The concentrations of arsenic, total and dissolved, were

below the secondary monitoring criteria but above the primary and background limits. Total chromium exceeded the secondary monitoring criterion only. Further evaluation of the results for these COPCs (i.e., criteria comparisons and trend analysis) did not indicate that these COPCs pose any significant migration issues.

- Overall, the results of the first four years of monitoring for the Area A Landfill indicate that the RA action at the site is sufficiently reducing infiltration of precipitation through the landfill source material so that significant contaminant migration from the site to the surrounding area is not occurring.

The analytical results for the fourth year of groundwater monitoring at the Area A Landfill showed five exceedances of the primary monitoring criteria, five contaminants in excess of the secondary monitoring criteria, and four contaminants in excess of the background concentration. Eight COPCs were detected in downgradient wells at concentrations that were statistically higher than concentrations in upgradient wells. The analytical results for the fourth year of surface water monitoring at the Area A Landfill showed nine exceedances of the primary monitoring criteria, six contaminants in excess of the secondary monitoring criteria, and seven contaminants in excess of the background concentration.

However, the levels and history of these COPCs do not indicate that significant concentrations of COPCs are migrating from the Area A Landfill site. These results are generally similar to the results of the first three years of groundwater monitoring although detection, frequency and values were of a smaller magnitude. These results are indicative that the interim remedial action at the site removed sufficient contaminant source material and reduced infiltration of precipitation through any remaining source material so that significant contaminant migration from the site to the Thames River, via wetland and stream, was not occurring. The RA and current ROD for the Area A Landfill are sufficient and no amendments were necessary.

- The sampling frequency should continue on a semi-annual basis with the next sample round scheduled for June 2004. This recommendation was justified because there had been no significant increasing contaminant trends noted in the downgradient wells in over four years.

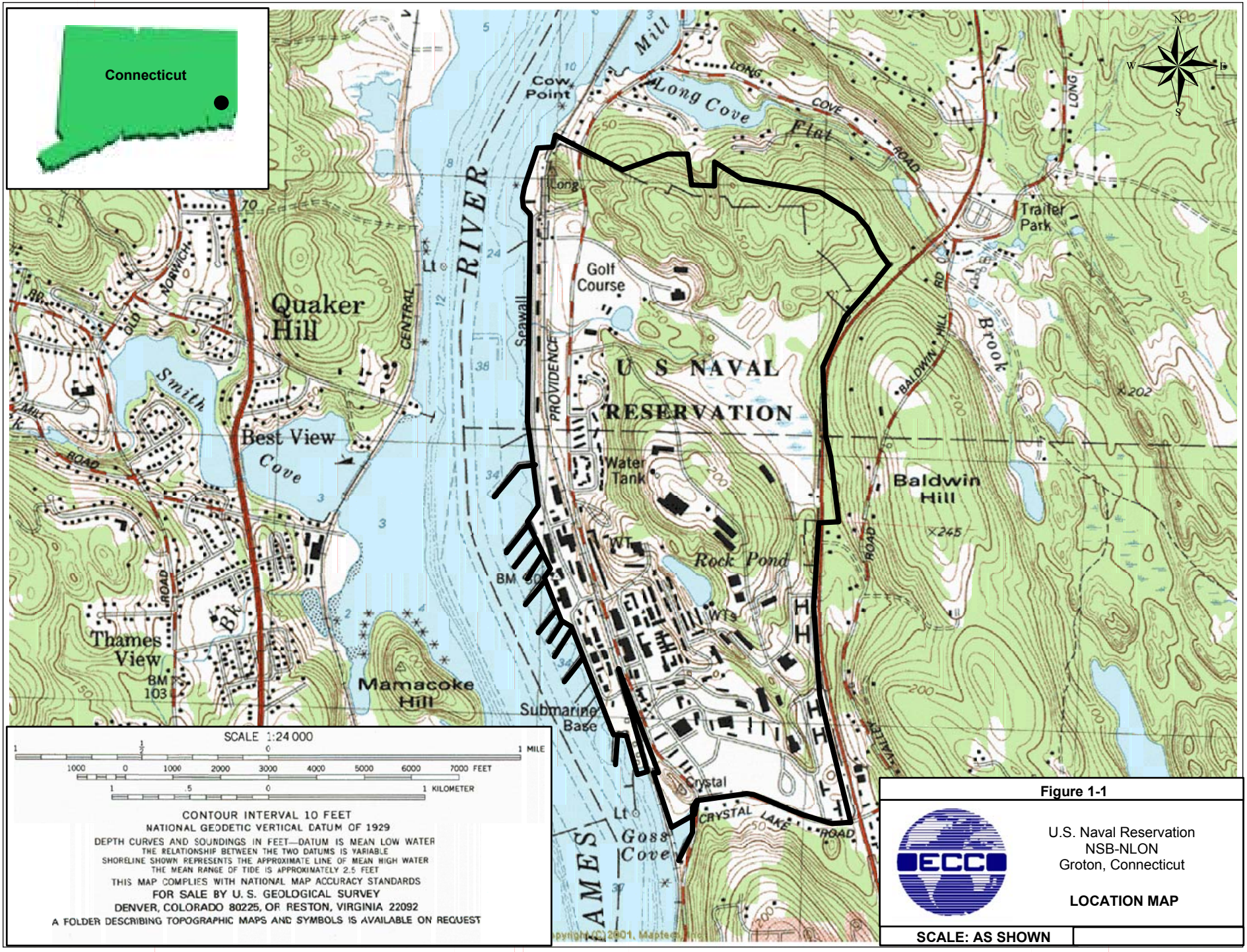


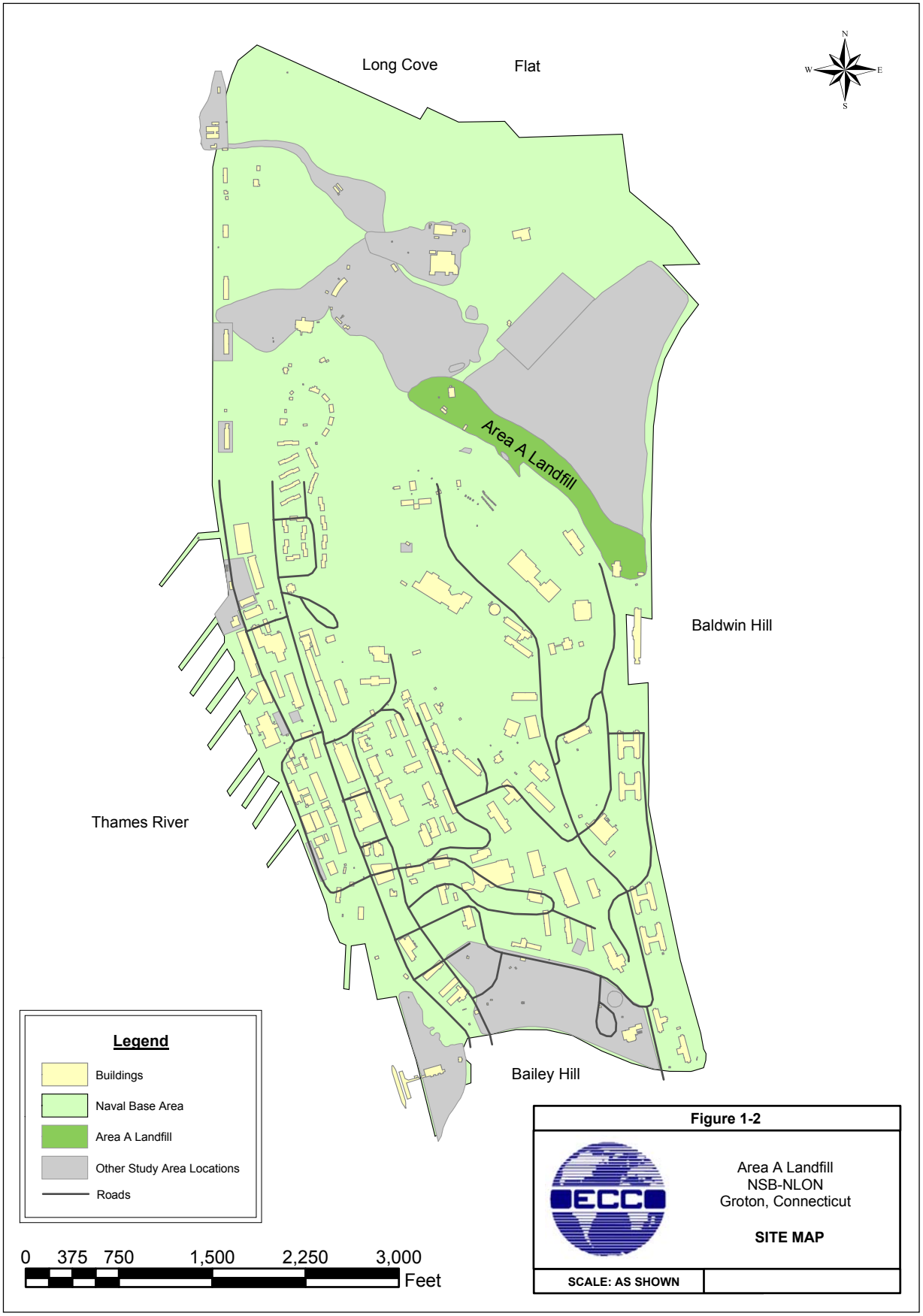
Figure 1-1

U.S. Naval Reservation
NSB-NLON
Groton, Connecticut

LOCATION MAP

SCALE: AS SHOWN

H:\NAVY\New London_NSB\Area A Annual\2004\Annual 5\Figures\Maps\Figure 1-1 (Location Map)



H:\NAVY\New London_NSB\Area A\2004\Annual 5\Figures\Maps\Figure 1-2 (Site Map)

2.0 FIELD INVESTIGATION ACTIVITIES

Field investigation activities performed as part of the fifth year groundwater monitoring at Area A Landfill included the following:

- Two rounds of water level measurements at 15 monitoring wells and 11 staff gauges
- Two rounds of collection of groundwater samples from 15 monitoring wells.
- Two rounds of collection of surface water samples from 7 surface water locations.
- Two rounds of collection of one seep sample location.

During the fifth year of monitoring, field activities were performed during the months of June 2004 (Round 14) and October 2004 (Round 15). Figure 2-1 shows the locations monitored during this event.

2.1 MONITORING WELL INSPECTION

Prior to water level measurements, all 15 monitoring wells were inspected. In general, groundwater wells were in good condition and well inspection sheets are included in Appendix B. The Round 14 inspections yield similar comments as listed below for Round 15. Otherwise, the monitoring wells were in good condition.

Round 15 inspections uncovered the following information:

- Monitoring well 2LMW20S: did not have a well tag (only a painted well ID); the pad cover was cracked where the screw fastens, the concrete pad was cracked and was located in a depressed area, and the rubber seal was missing from the well.
- Monitoring wells 2WMW41DS, 2WMW42DS, 2WMW43DS, 2WMW44DS, 2WMW46DS, 2WMW47DS, and 3MW37S: had standing water around the well in inside the wooden box.
- Monitoring wells 2WMW42DS, 2WMW44DS, and 3MW37S: had gravel missing from the well pad due to erosion
- Monitoring well 4MW1S: the outer casing of the well had rust and dents and the PVC riser was rubbing against the outer casing.

All the other wells were in satisfactory condition. Inspections will continue in upcoming sampling events.

2.2 WATER LEVEL MEASUREMENT

On 1 June 2004 (Round 14) and 4 October 2004 (Round 15), water levels were measured at 15 monitoring wells and 11 staff gauges. Groundwater measurements are presented in Table 2-1. Figures 2-2 illustrates the Round 15 potentiometric surface map of shallow groundwater at the Area A Landfill. Groundwater level measurement sheets are provided in Appendix C.

2.3 GROUNDWATER SAMPLING

A total of 15 monitoring wells; (3MW12D, 2LMW20S, 2WMW21S, 4MW1S, 2WMW38DS through 2WMW47DS, and 3MW37S), were sampled during the fifth year of groundwater monitoring (Figure 2-1). All wells were sampled in accordance with *Low-Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells* (EPA 1996).

The wells were purged using a peristaltic pump with disposable Teflon® tubing. Prior to purging, the initial static water level was measured in the well using a water-level indicator. During purging, the water level was measured every 5 to 10 minutes. The pumping rate was initially set at less than 0.3 liters per minute and reduced to 0.1 to 0.2 liters per minute. The pumping rate was adjusted in order to prevent exceeding 0.3 foot drawdown limit during purging.

During purging, water quality parameters pH, turbidity, specific conductance (SpC), temperature, oxidation-reduction potential (ORP) and dissolved oxygen (DO)) were measured and recorded every 5 to 10 minutes using a water quality meter and flow-through cell until all of the parameters stabilized and the minimum purge volume (equal to the stabilized drawdown volume plus the tubing volume) was removed. A summary of groundwater water quality data for Round 15 is provided in Table 2-2. Stabilization of the above parameters was generally defined as follows:

- pH $\pm$ 0.1 standard units
- turbidity $\pm$ 10 % for values greater than 1 nephelometric turbidity unit (NTU)
- SPC $\pm$ 3 %
- temperature $\pm$ 3 %
- ORP $\pm$ 10 (mV)
- DO $\pm$ 10 %

Following purging, tubing was disconnected from the YSI flow through cell and samples were collected directly from the discharge end of the tubing. All sample containers were filled by allowing the discharge to flow gently down the inside of the container with minimal turbulence.

For filtered inorganic samples, an in-line 0.45-micron filter was used. Equipment calibration logs are provided in Appendix D along with the groundwater sampling field forms. The Chain of custody records are provided in Appendix E with the data validation and laboratory analytical results for Round 15.

Groundwater samples were sent to the project laboratory (Alpha Analytical Labs) for analysis for select TCL SVOCs without polynuclear aromatic hydrocarbons (PAHs), PAHs, total analyte list (TAL) metals (total and dissolved); TOC; chemical oxygen demand (COD); and water chemistry parameters (TDS, total suspended solids (TSS), alkalinity, chloride, sulfate, and hardness) as presented in the GMP (TtNUS 2002b). Analytical results for the groundwater samples are discussed in Section 3.0.

2.4 SURFACE WATER SAMPLING

Surface water samples were collected by directly filling a clean unpreserved sample container and transferring the water to the appropriate sample containers. Dissolved metal samples were collected using a clean unpreserved sample container and using a peristaltic pump to filter the water from the collection container, through a 0.45-micron filter, to the sample container. Surface water field forms and chain of custody are provided in Appendices D and E, respectively. A summary of surface water quality data for Round 15 is provided in Table 2-3.

The surface water samples were sent to the project laboratory for analysis for the same parameters as the groundwater samples. Analytical results for surface water samples are discussed in Section 3.0.

TABLE 2-1
ROUND 15 GROUNDWATER MEASUREMENTS AND ELEVATIONS
YEAR 5 ANNUAL GROUNDWATER MONITORING REPORT -
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

Location	Date	Screened Unit	Measuring Point Elevation (ft msl)	Depth to Water[1] (feet)	Groundwater Elevation (ft msl)	Location	Date	Screened Unit	Measuring Point Elevation (ft msl)	Depth to Water[1] (feet)	Groundwater Elevation (ft msl)
2LMW20S	10/4/2004	F/A	86.83	15.43	71.40	3MW37S	10/4/2004	A	47.26	3.63	43.63
2WMW21S	10/4/2004	DS	76.31	4.45	71.86	4MW1S	10/4/2004	BR	129.55	7.78	121.77
2WMW38DS	10/4/2004	DS	74.06	7.79	66.27	SG06	10/4/2004	NA	NA	18.79	NA
2WMW39DS	10/4/2004	SS/DS	73.54	2.84	70.70	SG15	10/4/2004	NA	74.03	dry	NA
2WMW40DS	10/4/2004	DS	73.21	3.44	69.77	SG16	10/4/2004	NA	73.50	dry	NA
2WMW41DS	10/4/2004	DS	73.39	2.50	70.89	SG17	10/4/2004	NA	73.57	dry	NA
2WMW42DS	10/4/2004	DS	73.65	2.18	71.47	SG18	10/4/2004	NA	75.92	4.13	71.79
2WMW43DS	10/4/2004	DS	74.36	2.62	71.74	SG19	10/4/2004	NA	75.83	3.98	71.85
2WMW44DS	10/4/2004	DS	73.72	1.71	72.01	SG20	10/4/2004	NA	75.19	3.32	71.87
2WMW45DS	10/4/2004	DS	74.24	2.33	71.91	SG21	10/4/2004	NA	75.32	3.38	71.94
2WMW46DS	10/4/2004	DS	73.53	1.69	71.84	SG22	10/4/2004	NA	76.13	4.29	71.84
2WMW47DS	10/4/2004	SS/DS	73.39	1.52	71.87	SG23	10/4/2004	NA	75.83	3.98	71.85
3MW12D	10/4/2004	BR	47.22	4.86	42.36	SG24	10/4/2004	NA	76.68	4.80	71.88

Notes:
(1) Depth to water is the distance in feet from the measuring point (top of well casing) to the water.

A = alluvium
BR = bedrock
DS = dredge spoil
F = fill
ft = feet
MSL = mean sea level (Base 1982 Vertical Datum = NAVD 88 + 2.39 ft), (TtNUS 2003)
NA = not applicable
SS = surficial sand

TABLE 2-2
ROUND 15 GROUNDWATER QUALITY DATA
YEAR 5 ANNUAL GROUNDWATER MONITORING REPORT -
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

WELL	DATE	TIME (24hr)	Cumulative Volume Purged (liters)	Temp (ºC)	pH (std)	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Purge Rate (ml/min)
2LMW20S	10/06/04	0910	3.7	14.36	5.99	0.48	0.53	-33.0	2.0	100
2WMW21S	10/06/04	1447	6.1	16.43	6.95	43.96	3.83	-363.3	4.0	100
2WMW38DS	10/05/04	0946	4.3	13.91	6.85	1.077	4.57	-60.0	9.0	100
2WMW39DS	10/05/04	0946	4.1	12.56	6.84	2.45	0.80	-90.2	2.0	100
2WMW40DS	10/05/04	1012	10.8	11.33	6.90	27.89	1.01	-320.0	1.7	150
2WMW41DS	10/05/04	1256	6.1	12.83	6.92	20.00	0.32	-336.9	6.0	100
2WMW42DS	10/06/04	0929	9.6	11.15	6.64	13.81	6.17	-305.4	13.8	100
2WMW43DS	10/06/04	1239	9.9	13.06	6.80	33.84	3.70	-360.1	6.0	100
2WMW44DS	10/06/04	1450	12.0	13.13	7.04	19.84	1.01	-355.1	25.1	100
2WMW45DS	10/06/04	1147	6.1	15.01	6.97	47.51	2.58	-383.2	5.0	100
2WMW46DS	10/06/04	0949	6.1	11.29	7.07	53.22	0.48	-368.6	8.0	100
2WMW47DS	10/05/04	1311	7.8	15.17	6.60	6.08	3.96	-219.0	21.0	100
3MW12D	10/05/04	1453	15.3	12.79	6.05	3.489	3.27	-106.6	0.8	100
3MW37S	10/05/04	1306	5.0	13.78	6.07	1.405	0.98	-225.5	1.0	100
4MW1S	10/06/04	1140	7.7	15.56	5.74	0.33	5.86	230.0	0.0	120

ºC = degrees Celcius
DO = dissolved oxygen
mg/L = milligrams per liter
ml/min = milliliters per minute
mS/cm = millisiemens per centimeter
mV = millivolts
NTU = nephelometric turbidity units
ORP = oxidation-reduction potential
ppt = parts per thousand
Spec. Cond. = specific conductivity
std = standard units
Temp = temperature

TABLE 2-3
ROUND 15 SURFACE WATER AND SEEP WATER QUALITY MEASUREMENTS
YEAR 5 ANNUAL GROUNDWATER MONITORING REPORT -
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

LOCATION	DATE	TIME (24hr)	Temp (ºC)	pH (std)	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
SG18	10/05/04	1300	13.88	6.47	0.851	1.65	168.3	70
SG19	10/06/04	0955	8.27	6.31	0.583	1.33	-202.2	17.5
SG20	10/06/04	1200	11.76	6.24	0.634	1.50	-239.1	3.2
SG21	10/06/04	1415	13.25	6.06	0.550	1.06	-10.3	7.6
SG22	10/06/04	1212	11.98	6.32	0.861	6.11	-213.7	39
SG23	10/06/04	1002	8.99	6.21	0.345	4.95	-220.7	31
SG24	10/05/04	1410	13.25	5.95	0.280	5.11	-180	5.00
3MSP01	10/05/04	1300	14.08	6.15	1.376	2.28	-8.8	12

ºC = degrees Celcius
DO = dissolved oxygen
mg/L = milligrams per liter
mS/cm = millisiemens per centimeter
mV = millivolts
ORP = oxidation-reduction potential
ppt = parts per thousand
Spec. Cond. = specific conductivity
std = standard units
Temp = temperature

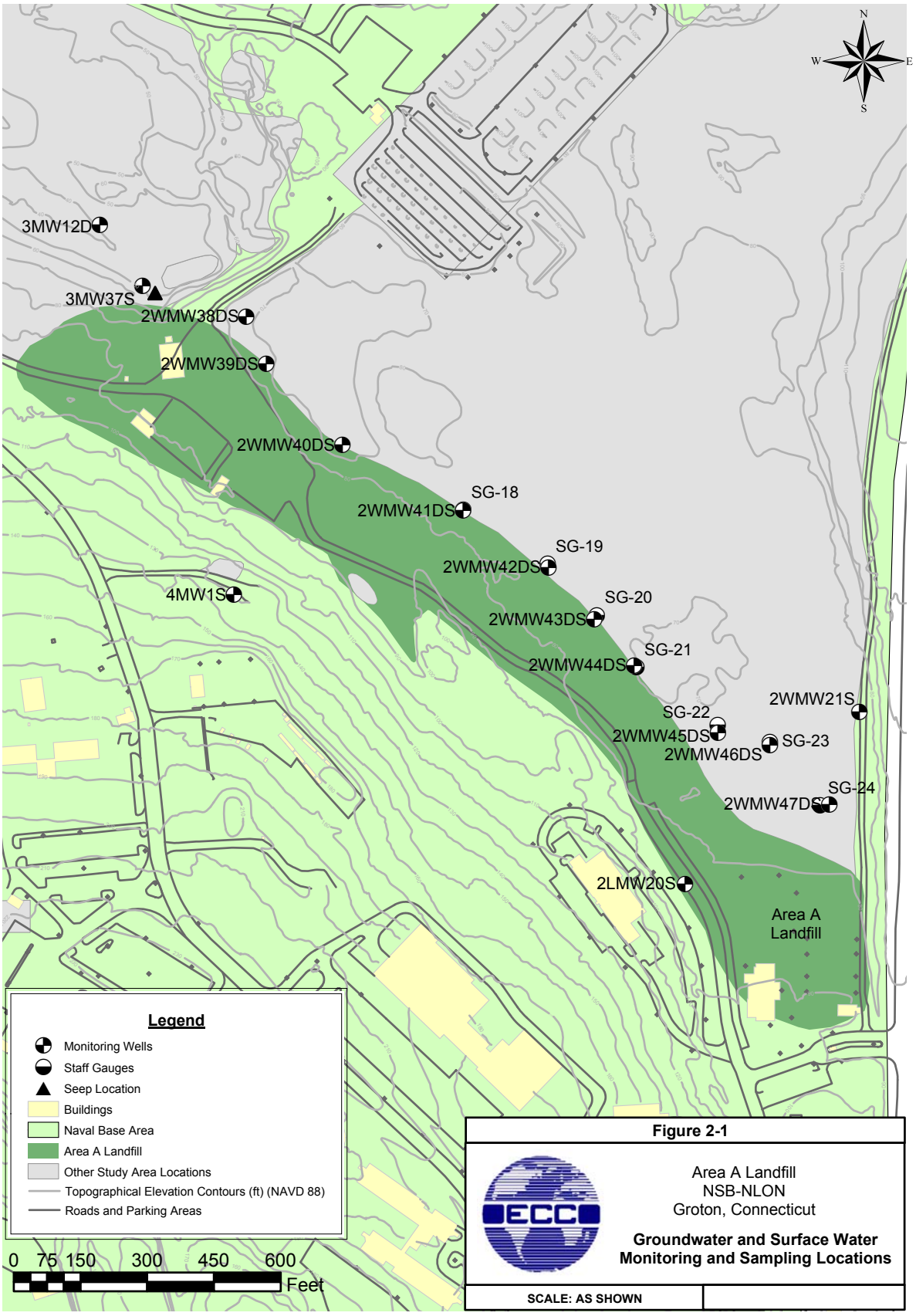


Figure 2-1

Area A Landfill
NSB-NLON
Groton, Connecticut

Groundwater and Surface Water Monitoring and Sampling Locations

SCALE: AS SHOWN

H:\NAVY\New London_NSB\Area A\2004\Annual 5\Figures\Maps\Figure 2-1 (GW Mon.)

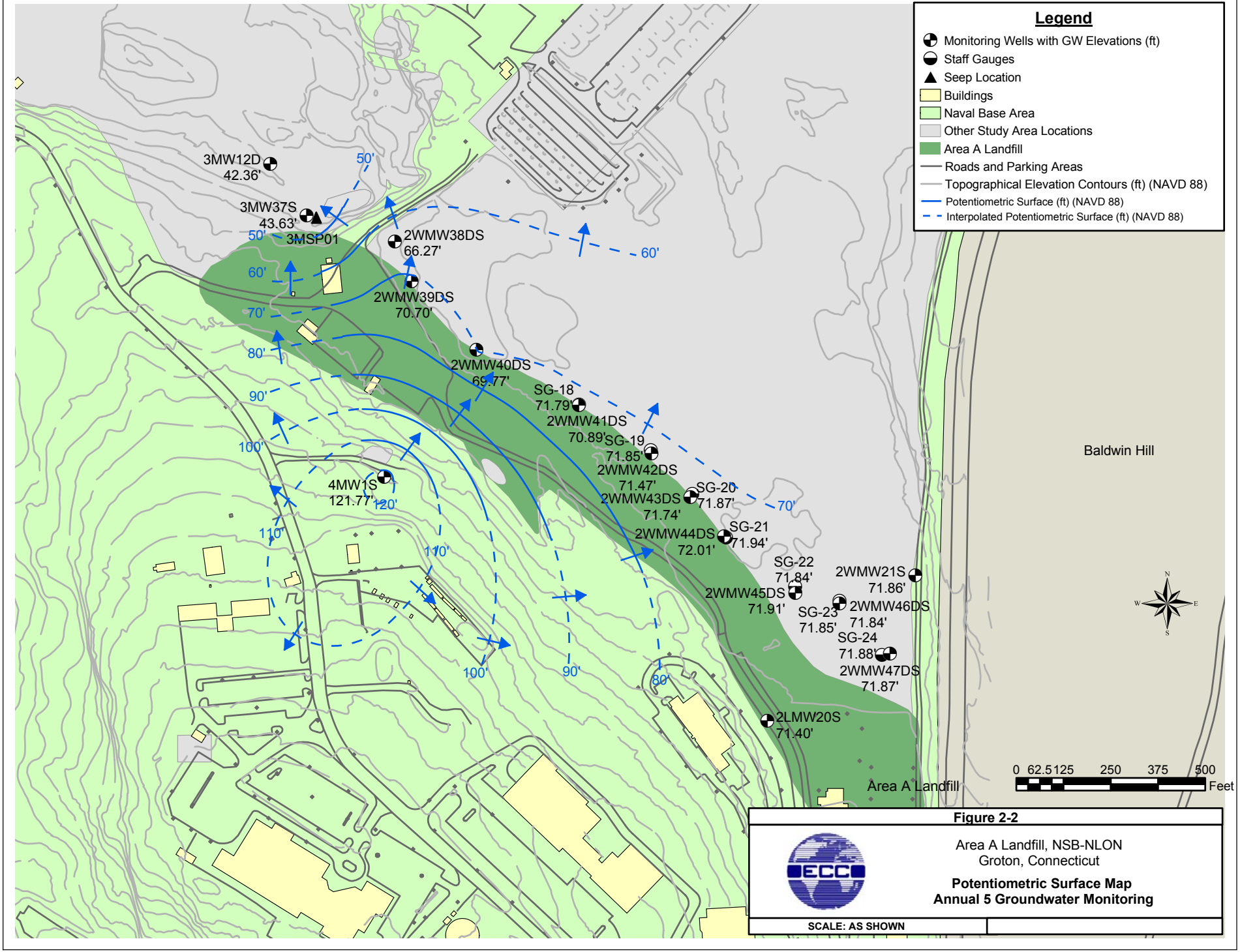


Figure 2-2

Area A Landfill, NSB-NLON
Groton, Connecticut

Potentiometric Surface Map
Annual 5 Groundwater Monitoring

SCALE: AS SHOWN

H:\NAVY\New London_NSB\Area A\2004\Annual 5\Figures\Maps\Figure 2-2 (Surface Map)

3.0 MONITORING RESULTS

During the fifth year of monitoring, field activities were performed during the months of June 2004 (Round 14) and October 2004 (Round 15). Monitoring well locations are shown on Figure 2-1. Monitoring well construction details are shown on Table 3-1. Appendices B through D contain the pertinent field forms for the Round 15 sampling activities. Field forms for activities completed for Rounds 14 were previously provided in the semi-annual report (ECC 2004a). The only exception is the groundwater sample log sheets, low-flow purge data sheets and surface water sample log sheets. Copies of these field forms for Rounds 14 are included in Appendix D.

Copies of the monitoring well inspection sheets, water level field forms, calibration logs along with groundwater and surface water field forms, and data validation memos and laboratory analytical results for Round 15 are provided in Appendices B through E, respectively.

Samples collected from 15 monitoring wells, seven surface water locations, and one seep location were analyzed for select TCL SVOCs, TAL metals (total and dissolved), PAHs, TOC, COD, TDS, TSS, alkalinity, chloride, sulfate, and hardness. Monitoring focused on the following organic and inorganic chemicals of potential concern (COPC), as identified in the GMP (TtNUS, 2002b) and in the update Operations and Maintenance Manual (TtNUS, 2003a) These COPCs include:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Bis(2-ethylhexyl)phthalate (BEHP)
- Phenanthrene
- Arsenic
- Beryllium
- Cadmium
- Chromium
- Copper
- Lead
- Zinc

A complete set of analytical results and data valadation for Round 15 can be found in Appendix E, Round 14 analytical results and data valadation were supplied in the semi-annual report (ECC 2004a).

The Year 5 groundwater and surface water analytical results for COPCs and miscellaneous parameters are summarized in Tables 3-2 and 3-3, respectively. These tables also provide side by side comparisons with the previous round of sample results for the year. The primary and secondary monitoring criteria are presented in the tables, as well as the basewide background concentrations for inorganics. A bolded number and shaded cell in Tables 3-2 and 3-3 denotes an exceedance of monitoring criteria or background concentrations. Figures 3-1 and 3-2 depict the compounds that were detected in excess of either monitoring criteria at the groundwater and

surface water monitoring locations, respectively. Figures and tables of exceedances in Round 14 were included in the semi-annual report (ECC 2004a).

A total of 15 monitoring wells (3MW12D, 2LMW20S, 2WMW21S, 4MW1S, 2WMW38DS through 2WMW47DS, and 3MW37S) were sampled during two quarters of the fifth year of groundwater monitoring (Rounds 14 and 15). As directed in the GMP (TtNUS, 2002b), seven staff gauge locations (SG18 through SG24) and one seep sampling location (3MSP01) were also sampled as part of the fifth year sampling program.

The recharge for monitoring well 2WMW38DS was not sufficient to collect enough sample volume to analyze metals or VOCs.

The analytical results were compared to the primary and secondary monitoring criteria, as established in Table 2-4 and Table 2-5 of the O&M Manual (TtNUS, 2003a). Inorganic results are also compared to NSB-NLON background groundwater concentrations as established in the Basewide Groundwater OU RI (TtNUS 2002a).

The results of this comparison for Round 15 can be summarized as follows:

- **Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, and Phenanthrene** were not detected at concentrations exceeding the primary monitoring criteria for any of the Round 15 samples. The sample for well 2WMW38DS was diluted twofold and that caused the reporting limits to exceed the primary monitoring criteria of 0.3 µg/L. However, the MDL was well below the primary criteria.
- **Bis(2-ethylhexyl)phthalate** was detected in three samples (two monitoring well samples and one surface water). The concentrations did not exceed the primary monitoring criteria of 59 µg/L.
- **Total arsenic** was detected in concentrations above the background concentration. Wells 2LMW20S, 2WMW21S, 2WMW40DS thru 2WMW43DS, and 2WMW44DS thru 2WMW47DS exceeded the background criterion of 1.92 µg/L. There were detections in all of the surface water samples, however there were no exceedances of the primary monitoring criteria of 150 µg/L.
- **Dissolved arsenic** was detected in concentrations above the background concentration. Wells 2LMW20S, 2WMW21S, 2WMW40DS thru 2WMW43DS, and 2WMW44DS thru 2WMW47DS exceeded the background criterion of 2.55 µg/L. There were detections in five of the surface water samples, however there were no exceedances of the primary monitoring criteria of 150 µg/L.

- **Total beryllium** was not detected in any of the monitoring well samples. It was however detected in three of the surface water samples but all detections were below the reporting limit of 1 µg/L.
- **Dissolved beryllium** was not detected in any of the monitoring well or surface water samples.
- **Total cadmium** was detected in four monitoring well samples and five surface water samples. None of the monitoring well concentrations exceeded the primary monitoring criteria of 0.25 µg/L. Three of the surface water samples exceeded the primary criteria: 3MSP01 (0.3 µg/L), SG-22 (0.7 µg/L), and SG-23 (1 µg/L). The reporting limit for the monitoring wells exceeded the primary monitoring criteria. However the MDLs were below the primary criteria.
- **Dissolved cadmium** not detected in any monitoring well. The one surface water detection, SG-24 (0.27 J µg/L), exceeded the primary monitoring criteria of 0.25 µg/L. The reporting limit for the monitoring wells exceeded the primary monitoring criteria. However the MDLs were below the primary criteria.
- **Total chromium** was detected in 12 monitoring wells (plus two duplicate samples), only monitoring well 2WMW41DS (13.5 µg/L) exceeded the primary criterion of 11 µg/L. All of the surface water samples had detect concentrations, but none exceeded the primary criterion.
- **Dissolved chromium** was detected in both the monitoring well and the surface water samples. However, no concentration exceeded the primary criterion of 11 µg/L.
- **Total copper** was detected in samples all of the monitoring well samples except 2WMW44DS, the concentrations were less than the primary monitoring criterion of 4.8 µg/L. Detections in the surface water samples exceeded the primary monitoring criterion: 3MSP01 (19.4 µg/L), SG-18 (6.8 µg/L), SG-19 (13.6 µg/L), SG-19 DUP (8.6 µg/L), SG-22 (52.1 µg/L), SG-23 (39.3 µg/L), and SG-24 (24.2 µg/L).
- **Dissolved copper** was detected in samples all of the monitoring well samples except 2WMW44DS, the concentrations were less than the primary monitoring criterion of 4.8 µg/L. There were detections in all of the surface water samples, but only three samples exceeded the monitoring criteria: SG-22 (5.9 µg/L), SG-23 (5.1 µg/L), and SG-24 (10.2 µg/L).
- **Total lead** was detected in 11 of the monitoring wells and both duplicates at concentrations below both the primary monitoring criterion of 1.2 µg/L. Every surface water sample had a detect concentration above the primary criteria: 3MSP01 (35.6 µg/L), SG-18 (2.6 µg/L), SG-19 (4.1 µg/L), SG-19 DUP (3.2 µg/L), SG-20 (1.4 µg/L), SG-21(1.9 µg/L), SG-22 (24.8 µg/L), SG-23 (20.2 µg/L), and SG-24 (2.5 µg/L).

- **Dissolved lead** was detected in nine monitoring well samples at concentrations below the reporting limit (0.5 µg/L) and the primary monitoring criteria (1.2 µg/L). Six of the surface water samples had detect concentrations and three of those exceeded the primary monitoring criteria: SG-22 (1.4 µg/L), SG-23 (1.7 µg/L), and SG-24 (1.3 µg/L).
- **Total Zinc** was detected in 12 monitoring wells (and the two duplicate samples) at concentrations below the primary monitoring criteria of 65 µg/L. The concentrations at all the surface water locations except SG-21 exceeded the primary monitoring criteria: 3MSP01 (105.2 J µg/L), SG-18 (153.6 J µg/L), SG-19 (109.4 µg/L), SG-19 DUP (83.9 J µg/L), SG-20 (77.2 µg/L), SG-22 (808 J µg/L), SG-23 (2274 µg/L), and SG-24 (150.5 J µg/L).
- **Dissolved zinc** was detected in 12 monitoring wells (and one duplicate sample) at concentrations below the primary monitoring criteria of 65 µg/L. It was detected in all of the surface water samples, however, only three of the detections exceeded the primary criteria: SG-22 (323.8 µg/L), SG-23 (643.2 µg/L), and SG-24 (123.6 J µg/L).

3.1 COMPARISON BETWEEN ROUNDS 14 AND 15

Overall, the groundwater analytical results were of similar magnitudes for Rounds 14 and 15.

Besides SG-24, the COPCs in the rest of the surface waters samples were detected more often and in higher concentrations during Round 15. SG-24 had higher concentrations in Round 14 than Round 15. However, when looking at the Round 14 concentrations of total and dissolved metals in comparison to the turbidity of the sample, it appears that the elevated turbidity (195 NTU) was a major cause of the elevated total metal concentrations. A similar occurrence happened in the Round 15 sample for SG-18, which had a turbidity of 70 NTUs.

While most of the surface water samples were within an order of magnitude from Round 14 to 15, there was a larger difference in locations SG-22 and SG-23 where the Round 15 samples were more than an order of magnitude greater than the Round 14 values.

TABLE 3-1

MONITORING WELL CONSTRUCTION DETAILS
YEAR 5 ANNUAL GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

Well Location	Well Construction Material	Top of Riser/ Ground Surface Elevation (1,2) (feet)	Top/Bottom of Screen (feet BGS)	Elevation of Top/Bottom of Screen (1,2) (feet)	Screened Formation	Total Depth (feet BGS)	Depth to Bedrock (feet BGS)
4MW1S	PVC	129.55/127.98	8.5-18.5	119.48/109.48	Bedrock	18.5	2.5
3MW12D	PVC	47.22/44.89	20.0-25.0	24.89/19.89	Bedrock	25.5	12
2LMW20S	PVC	86.83/87.23	9.0-19.0	78.23/68.23	Fill/Alluvium	19.0	NA
2WMW21S	PVC	76.31/74.62	5.0-15.0	69.62/59.62	Dredge Spoil	15.0	NA
3MW37S	PVC	47.26/44.09	4.5-5.5	39.59/38.59	Alluvium	5.5	NA
2WMW38DS	PVC	74.06/72.28	4.0-9.0	68.28/63.28	Dredge Spoil	12.0	NA
2WMW39DS	PVC	73.53/71.60	4.0-14.0	67.60/57.60	Surficial Sand/ Dredge Spoil	15.0	NA
2WMW40DS	PVC	73.21/71.46	4.0-14.0	67.46/57.46	Dredge Spoil	15.0	NA
2WMW41DS	PVC	73.39/71.04	4.5-14.5	66.54/56.54	Dredge Spoil	15.5	NA
2WMW42DS	PVC	73.65/71.24	6.0-16.0	65.24/55.24	Dredge Spoil	17.0	NA
2WMW43DS	PVC	74.36/71.39	4.0-14.0	67.39/57.39	Dredge Spoil	15.0	NA
2WMW44DS	PVC	73.72/70.95	4.0-14.0	66.95/56.95	Dredge Spoil	15.0	NA
2WMW45DS	PVC	74.24/72.24	4.0-14.0	68.24/58.24	Dredge Spoil	15.0	NA
2WMW46DS	PVC	73.53/71.76	4.0-14.0	67.76/57.76	Dredge Spoil	15.0	NA
2WMW47DS	PVC	73.39/71.98	4.0-14.0	67.98/ 57.98	Surficial Sand/ Dredge Spoil	15.0	NA

1 Datum for elevations is the Base 1982 Vertical Datum.
2 All elevations are post-cap construction conditions.

Notes:
Base 1982 Vertical Datum = NAVD 88 + 2.39 feet.
BGS means below ground surface.
NA means information is not available or not applicable.

TABLE 3-2
ROUNDS 14 AND 15 GROUNDWATER ANALYTICAL RESULTS SUMMARY
YEAR 5 ANNUAL GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

Chemical	Primary Monitoring Criterion [1]	Secondary Monitoring Criterion	NSB-NLON Background Concentration[5]	2LMW20S Round 14 6/3/2004	2LMW20S Round 15 10/6/2004	2WMW21S Round 14 6/3/2004	2WMW21S Round 15 10/6/2004	2WMW38DS Round 14 6/3/2004	2WMW38DS Round 15 10/5/2004	2WMW39DS Round 14 6/1/2004	2WMW39DS Round 15 10/5/2004	2WMW40DS Round 14 6/1/2004
SVOCs (µg/L)												
BENZO(A)ANTHRACENE	0.3	NA	--	0.2 UJ	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.39 U	0.2 UJ	0.2 U	0.2 UJ
BENZO(A)PYRENE	0.3	NA	--	0.2 UJ	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.39 U	0.2 U	0.2 U	0.2 U
BENZO(B)FLUORANTHENE	0.3	NA	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.39 U	0.2 UJ	0.2 U	0.2 UJ
BENZO(K)FLUORANTHENE	0.3	NA	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.39 U	0.2 UJ	0.2 U	0.2 UJ
BIS(2-ETHYLHEXYL)PHTHALATE	59	NA	--	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	10 U
PHENANTHRENE	0.3	NA	--	0.2 U	0.2 U	0.2 U	0.2 U	**0.16 J**	0.39 U	0.2 UJ	0.2 U	0.2 UJ
Inorganics (Total) (µg/L)												
ARSENIC	150 [2]	NA	1.92	**2.9**	**9.3**	**3.3**	**5.3**	**1.6**	N A	1 U	**0.75 J**	**14.1**
BERYLLIUM	4	NA	NA	1 U	1 U	1 U	1 U	1 U	N A	1 U	1 U	5 U
CADMIUM	0.25 [3]	NA	NA	**0.2**	1 U	2 U	2 U	**0.08 J**	N A	0.1 U	**0.12 J**	0.5 U
CHROMIUM	11 [2]	NA	49.9	**1.4**	**1.1**	**6.8**	**9.2**	**3.1**	N A	**0.94 J**	**0.94 J**	**29.1**
COPPER	4.8 [4]	NA	107	**3.5**	**2.5**	**8.3**	**5.2**	**2.6**	N A	**0.29 J**	**1.2**	**3.06 J**
LEAD	1.2 [4]	NA	6.63	**1.1**	**0.5**	**1**	**0.6**	**1**	N A	0.5 U	**0.49 J**	2.5 U
ZINC	65 [4]	NA	131	**43.4**	**58.5 J**	**60.5**	**40 J**	**46.5**	N A	**2.89 J**	**11.3 J**	**32.6**
Inorganics (Dissolved) (µg/L)												
ARSENIC	150 [2]	NA	2.55	**2.2**	**7.3 J**	**6.7**	**6.4 J**	**2.7**	N A	1 U	1 U	**10.7**
BERYLLIUM	4	NA	NA	1 U	1 U	1 U	1 U	1 U	N A	1 U	1 U	5 U
CADMIUM	0.25 [3]	NA	NA	0.1 U	1 U	0.1 U	1 U	0.1 U	N A	0.1 U	1 U	0.5 U
CHROMIUM	11 [2]	NA	16	**0.56 J**	1 U	**6.5**	**7.3**	**1.2**	N A	**0.38 J**	1 U	**3.77 J**
COPPER	4.8 [4]	NA	39.4	**0.27 J**	**0.21 J**	**0.97 J**	**2.6**	**0.81 J**	N A	**0.2 J**	**0.19 J**	5 U
LEAD	1.2 [4]	NA	2.52	0.5 U	**0.33 J**	0.5 U	**0.27 J**	**0.7**	N A	0.5 U	**0.29 J**	2.5 U
ZINC	65 [4]	NA	109	**26.7 J**	**58.7**	**3.44 J**	**11.5**	**3.24 J**	N A	5 U	**6.5 J**	25 U

NOTES:
DUP = Field duplicate sample, J = Estimated Value, U = Undetected Value, NA = Not available, ND = Not Detected in background samples, -- = Not analyzed for in background samples.
Bold type denotes analyte detection.
Shaded boxes denote exceedances of primary or secondary monitoring criterion and/or background groundwater concentrations.
Primary and Secondary Monitoring Criteria shown in table are from the New London O&M plan dated March 2003.

1 SWPC for substances in groundwater. (CTDEP, January 1996)
2 Federal AWQC for protection of aquatic life (chronic, freshwater). (USEPA, 1999)
3 Ambient Water Quality Criteria update for Cadmium (USEPA, 2001).
4 Connecticut WQS for protection of aquatic life (chronic, freshwater) (CTDEP, 2002).
5 Background concentrations taken from Basewide Groundwater Operable Unit Remedial Investigation Report (TtNUS, 2001)

TABLE 3-2
ROUNDS 14 AND 15 GROUNDWATER ANALYTICAL RESULTS SUMMARY
YEAR 5 ANNUAL GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

Chemical	Primary Monitoring Criterion [1]	Secondary Monitoring Criterion	NSB-NLON Background Concentration[5]	2WMW40DS Round 15 10/5/2004	2WMW41DS Round 14 6/2/2004	2WMW41DS Round 15 10/5/2004	2WMW42DS Round 14 6/2/2004	2WMW42DS (DUP) Round 14 6/2/2004	2WMW42DS Round 15 10/6/2004	2WMW43DS Round 14 6/3/2004	2WMW43DS Round 15 10/6/2004	2WMW44DS Round 14 6/2/2004
SVOCs (µg/L)												
BENZO(A)ANTHRACENE	0.3	NA	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U
BENZO(A)PYRENE	0.3	NA	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U
BENZO(B)FLUORANTHENE	0.3	NA	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BENZO(K)FLUORANTHENE	0.3	NA	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BIS(2-ETHYLHEXYL)PHTHALATE	59	NA	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**2.4 J**	10 U
PHENANTHRENE	0.3	NA	--	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 UJ
Inorganics (Total) (µg/L)												
ARSENIC	150 [2]	NA	1.92	**13.8**	**4.1**	**6.1**	**4.7**	**4.1**	**4**	**7**	**7.9**	**4.2**
BERYLLIUM	4	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	0.25 [3]	NA	NA	1 U	0.5 U	**0.11 J**	0.5 U	0.5 U	1 U	1 U	1 U	1 U
CHROMIUM	11 [2]	NA	49.9	**7.5**	**16.2**	**13.5**	**17.6**	**15.2**	**5.8**	**6.9**	**7.5**	**6.4**
COPPER	4.8 [4]	NA	107	**3.3**	**3.7**	**2.1**	**3.2**	**3.2**	**1.4**	**5.5**	**2.8**	**6.8**
LEAD	1.2 [4]	NA	6.63	**0.4 J**	**0.8**	**0.5**	**0.32 J**	**0.32 J**	**0.35 J**	0.5 U	**0.26 J**	**0.9**
ZINC	65 [4]	NA	131	**19.5 J**	**28.5**	**14.9 J**	**14.5**	**14.6**	**7.2**	**21.1**	**10.5 J**	**42**
Inorganics (Dissolved) (µg/L)												
ARSENIC	150 [2]	NA	2.55	**10.3 J**	**2.5**	**5.3**	**5.5**	**4.3**	**3.5**	**7.9**	**10.2 J**	**1.8**
BERYLLIUM	4	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	0.25 [3]	NA	NA	1 U	0.1 U	1 U	0.1 U	0.1 U	1 U	1 U	1 U	0.1 U
CHROMIUM	11 [2]	NA	16	**5**	**9.1**	**10.8**	**7.6**	**7.6**	**5**	**6.3**	**6.9**	**1.9**
COPPER	4.8 [4]	NA	39.4	**2.7**	**3.2**	**1.3**	**0.46 J**	**0.4 J**	**1.1**	**0.76 J**	**2.8**	**0.3 J**
LEAD	1.2 [4]	NA	2.52	**0.27 J**	0.5 U	**0.37 J**	0.5 U	0.5 U	**0.31 J**	0.5 UJ	0.5 U	0.5 U
ZINC	65 [4]	NA	109	**7.7**	**3.48 J**	**4.84 J**	**3.49 J**	**4.8 J**	**4.49 J**	**2.29 J**	**18.2**	**1.4 J**

NOTES:
DUP = Field duplicate sample, J = Estimated Value, U = Undetected Value, NA = Not available, ND = Not De
Bold type denotes analyte detection.
Shaded boxes denote exceedances of primary or secondary monitoring criterion and/or background grounc
Primary and Secondary Monitoring Criteria shown in table are from the New London O&M plan dated March

1 SWPC for substances in groundwater. (CTDEP, January 1996)
2 Federal AWQC for protection of aquatic life (chronic, freshwater). (USEPA, 1999)
3 Ambient Water Quality Criteria update for Cadmium (USEPA, 2001).
4 Connecticut WQS for protection of aquatic life (chronic, freshwater) (CTDEP, 2002).
5 Background concentrations taken from Basewide Groundwater Operable Unit Remedial Investigation F

TABLE 3-2
ROUNDS 14 AND 15 GROUNDWATER ANALYTICAL RESULTS SUMMARY
YEAR 5 ANNUAL GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

Chemical	Primary Monitoring Criterion (1)	Secondary Monitoring Criterion	NSB-NLON Background Concentration(5)	2WMW44DS Round 15 10/6/2004	2WMW45DS Round 14 6/2/2004	2WMW45DS Round 15 10/6/2004	2WMW45DS (DUP) Round 15 10/6/2004	2WMW46DS Round 14 6/2/2004	2WMW46DS Round 15 10/6/2004	2WMW47DS Round 14 6/3/2004	2WMW47DS (DUP) Round 14 6/3/2004
SVOCs (µg/L)											
BENZO(A)ANTHRACENE	0.3	NA	--	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.2 UJ
BENZO(A)PYRENE	0.3	NA	--	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ	0.2 UJ
BENZO(B)FLUORANTHENE	0.3	NA	--	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U
BENZO(K)FLUORANTHENE	0.3	NA	--	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U
BIS(2-ETHYLHEXYL)PHTHALATE	59	NA	--	**2.4 J**	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PHENANTHRENE	0.3	NA	--	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U
Inorganics (Total) (µg/L)											
ARSENIC	150 (2)	NA	1.92	**3.55 J**	**8.8**	**8**	**12.9**	**25.2**	**22.1**	**34.7**	**35.2**
BERYLLIUM	4	NA	NA	4 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U
CADMIUM	0.25 (3)	NA	NA	5 U	0.5 U	1 U	2 U	0.5 U	2 U	0.5 U	0.5 U
CHROMIUM	11 (2)	NA	49.9	**5 J**	**8**	**5.5**	**5.4**	**10.6**	**8.7**	**2.3**	**2.7**
COPPER	4.8 (4)	NA	107	10 U	**1.08 J**	**2.6**	**2.8**	**2.2 J**	**4.3**	**1.2**	**1.3**
LEAD	1.2 (4)	NA	6.63	10 U	2.5 U	**0.5**	**0.45 J**	2.5 U	**0.35 J**	**0.28 J**	**0.9 J**
ZINC	65 (4)	NA	131	**21 J**	**15.14 J**	**24.9 J**	**16.8**	**33.3**	**20.2**	**3.77 J**	**43.1 J**
Inorganics (Dissolved) (µg/L)											
ARSENIC	150 (2)	NA	2.55	4 U	**9.9**	**6.5 J**	**7**	**22.6**	**21.4 J**	**34.5**	**32.6**
BERYLLIUM	4	NA	NA	4 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U
CADMIUM	0.25 (3)	NA	NA	5 U	0.5 U	1 U	1 U	0.5 U	1 U	0.1 U	0.1 U
CHROMIUM	11 (2)	NA	16	10 U	**4.54 J**	**4.8**	**4.7**	**8.2**	**8.1**	**0.82 J**	**0.78 J**
COPPER	4.8 (4)	NA	39.4	10 U	5 U	**1.6**	**1.6**	**1.11 J**	**3.8 J**	1 U	1 U
LEAD	1.2 (4)	NA	2.52	10 U	2.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 UJ
ZINC	65 (4)	NA	109	**5 J**	**4.74 J**	**7.7**	**4.78 J**	25 U	**12.5**	**4.87 J**	**1.41 J**

NOTES:
DUP = Field duplicate sample, J = Estimated Value, U = Undetected Value, NA = Not available, ND = Not De
Bold type denotes analyte detection.
Shaded boxes denote exceedances of primary or secondary monitoring criterion and/or background ground
Primary and Secondary Monitoring Criteria shown in table are from the New London O&M plan dated March

1 SWPC for substances in groundwater. (CTDEP, January 1996)
2 Federal AWQC for protection of aquatic life (chronic, freshwater). (USEPA, 1999)
3 Ambient Water Quality Criteria update for Cadmium (USEPA, 2001).
4 Connecticut WQS for protection of aquatic life (chronic, freshwater) (CTDEP, 2002).
5 Background concentrations taken from Basewide Groundwater Operable Unit Remedial Investigation F

TABLE 3-2
ROUNDS 14 AND 15 GROUNDWATER ANALYTICAL RESULTS SUMMARY
YEAR 5 ANNUAL GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

Chemical	Primary Monitoring Criterion [1]	Secondary Monitoring Criterion	NSB-NLON Background Concentration[5]	2WMW47DS Round 15 10/5/2004	2WMW47DS (DUP) Round 15 10/5/2004	3MW12D Round 14 6/2/2004	3MW12D Round 15 10/5/2004	3MW37S Round 14 6/2/2004	3MW37S Round 15 10/5/2004	4MW1S Round 14 6/2/2004	4MW1S Round 15 10/6/2004
SVOCs (µg/L)											
BENZO(A)ANTHRACENE	0.3	NA	--	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.2 U
BENZO(A)PYRENE	0.3	NA	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ	0.2 U
BENZO(B)FLUORANTHENE	0.3	NA	--	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U
BENZO(K)FLUORANTHENE	0.3	NA	--	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U
BIS(2-ETHYLHEXYL)PHTHALATE	59	NA	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PHENANTHRENE	0.3	NA	--	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U
Inorganics (Total) (µg/L)											
ARSENIC	150 [2]	NA	1.92	**37**	**39.8**	**0.8 J**	**0.85 J**	1 U	1 U	1 U	1 U
BERYLLIUM	4	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	0.25 [3]	NA	NA	1 U	1 U	0.1 U	**0.09 J**	**0.2**	**0.09 J**	**0.1**	1 U
CHROMIUM	11 [2]	NA	49.9	**2.8**	**3**	1 U	1 U	0.1 U	1 U	1 U	**0.3 J**
COPPER	4.8 [4]	NA	107	**1.2**	**1.5**	**0.55 J**	**0.73 J**	**2.2**	**1.7**	**0.68 J**	**1.4**
LEAD	1.2 [4]	NA	6.63	**0.42 J**	**0.6**	0.5 U	0.5 U	0.5 U	**0.22 J**	0.5 U	0.5 U
ZINC	65 [4]	NA	131	**5.2 J**	**5.2 J**	**3.26 J**	5 U	**2.69 J**	5 U	**5.3**	**3.65 J**
Inorganics (Dissolved) (µg/L)											
ARSENIC	150 [2]	NA	2.55	**39.7**	**33.9**	**0.78 J**	**0.72 J**	1 U	1 U	**0.04 J**	1 U
BERYLLIUM	4	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	0.25 [3]	NA	NA	1 U	1 U	0.1 U	1 U	0.1 U	1 U	0.1 U	1 U
CHROMIUM	11 [2]	NA	16	**1.6**	**1.5**	1 U	1 U	**0.31 J**	1 U	1 U	1 U
COPPER	4.8 [4]	NA	39.4	**0.42 J**	**0.36 J**	**0.26 J**	**0.81 J**	**1.6**	**0.84 J**	**0.68 J**	**0.78 J**
LEAD	1.2 [4]	NA	2.52	**0.41 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.36 J**	0.5 U	**0.37 J**
ZINC	65 [4]	NA	109	**5 J**	5 U	**3.91 J**	5 U	5 U	5 U	**5.6 J**	**4.05 J**

NOTES:
DUP = Field duplicate sample, J = Estimated Value, U = Undetected Value, NA = Not available, ND = Not De
Bold type denotes analyte detection.
Shaded boxes denote exceedances of primary or secondary monitoring criterion and/or background grounc
Primary and Secondary Monitoring Criteria shown in table are from the New London O&M plan dated March

1 SWPC for substances in groundwater. (CTDEP, January 1996)
2 Federal AWQC for protection of aquatic life (chronic, freshwater). (USEPA, 1999)
3 Ambient Water Quality Criteria update for Cadmium (USEPA, 2001).
4 Connecticut WQS for protection of aquatic life (chronic, freshwater) (CTDEP, 2002).
5 Background concentrations taken from Basewide Groundwater Operable Unit Remedial Investigation F

TABLE 3-3
ROUNDS 14 AND 15 SURFACE WATER ANALYTICAL RESULTS SUMMARY
YEAR 5 ANNUAL GROUNDWATER MONITORING REPORT -
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

Chemical	Primary Monitoring Criterion [1]	Secondary Monitoring Criterion	NSB-NLON Background Concentration[4]	3MSP01 Round 14 6/2/2004	3MSP01 Round 15 10/5/2004	SG-18 Round 14 6/2/2004	SG-18 Round 15 10/5/2004	SG-19 Round 14 6/2/2004	SG-19 (DUP) Round 14 6/2/2004	SG-19 Round 15 10/6/2004	SG-19 (DUP) Round 15 10/6/2004	SG-20 Round 14 6/3/2004
SVOCs (µg/L)												
BENZO(A)ANTHRACENE	NA	NA	--	**0.35 J**	**0.22**	0.2 UJ	**0.15 J**	**0.065 J**	0.2 UJ	**0.052 J**	**0.06 J**	0.2 UJ
BENZO(A)PYRENE	NA	NA	--	**0.23**	**0.22**	0.2 U	**0.16 J**	0.2 U	0.2 U	0.2 UJ	**0.064 J**	0.2 UJ
BENZO(B)FLUORANTHENE	NA	NA	--	**0.14 J**	**0.28**	0.2 UJ	**0.17 J**	0.2 UJ	0.2 UJ	**0.1 J**	**0.12 J**	0.2 U
BENZO(K)FLUORANTHENE	NA	NA	--	**0.14 J**	**0.21**	0.2 UJ	**0.16 J**	**0.11 J**	0.2 UJ	**0.074 J**	**0.086 J**	0.2 U
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PHENANTHRENE	NA	NA	--	**0.27 J**	**0.17 J**	0.2 UJ	**0.15 J**	**0.081 J**	0.2 UJ	**0.2**	**0.21**	0.2 U
Inorganics (Total) (µg/L)												
ARSENIC	150	NA	NA	**2.1**	**3**	**0.77 J**	**2.9**	**2.9 J**	**1.6 J**	**2.3**	**2.1**	**0.51 J**
BERYLLIUM	NA	NA	NA	1 U	1 U	1 U	**0.16 J**	1 U	1 U	1 U	1 U	1 U
CADMIUM	0.25 [2]	NA	NA	**0.3**	**0.3**	0.1 U	**0.15 J**	**0.2 J**	0.1 UJ	0.2 U	0.2 U	0.1 U
CHROMIUM	11	NA	NA	**3.6**	**4.3**	**0.72 J**	**1.5**	**2**	**1.3**	**1.8**	**2.3**	**0.6 J**
COPPER	4.8 [3]	NA	NA	**14.2**	**19.4**	**2**	**6.8**	**12.7 J**	**5.7 J**	**13.6**	**8.6**	**1.3**
LEAD	1.2 [3]	NA	NA	**24**	**35.6**	**0.4 J**	**2.6**	**5.5 J**	**2.2 J**	**4.1**	**3.2**	**0.6**
ZINC	65 [3]	NA	NA	**81.7**	**105.2 J**	**23.4**	**153.6 J**	**90.9**	**38.7 J**	**109.4**	**83.9 J**	**24.1**
Inorganics (Dissolved) (µg/L)												
ARSENIC	150	NA	NA	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	**0.26 J**
BERYLLIUM	NA	NA	NA	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	0.25 [2]	NA	NA	0.1 U	0.2 U	0.5 U	0.2 U	0.1 U	0.1 U	0.2 U	0.2 U	0.1 U
CHROMIUM	11	NA	NA	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
COPPER	4.8 [3]	NA	NA	**1.3**	**1.2**	5 U	**0.36 J**	**0.39 J**	**0.28 J**	**0.64 J**	**0.54 J**	**0.37 J**
LEAD	1.2 [3]	NA	NA	0.5 U	**0.2 J**	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ZINC	65 [3]	NA	NA	**27.9**	**38.5 J**	**3.93 J**	**27.8 J**	**6.9**	**5.9**	**14.3**	**10.5**	**6.6 J**

NOTES:
DUP = Field duplicate sample, J = Estimated Value, U = Undetected Value, NA = Not available, ND = Not Detected in background samples, -- = Not analyzed for in background samples.
Bold type denotes analyte detection.
Shaded boxes denote exceedances of primary or secondary monitoring criterion and/or background groundwater concentrations.
Primary and Secondary Monitoring Criteria shown in table are from the New London O&M plan dated March 2003.

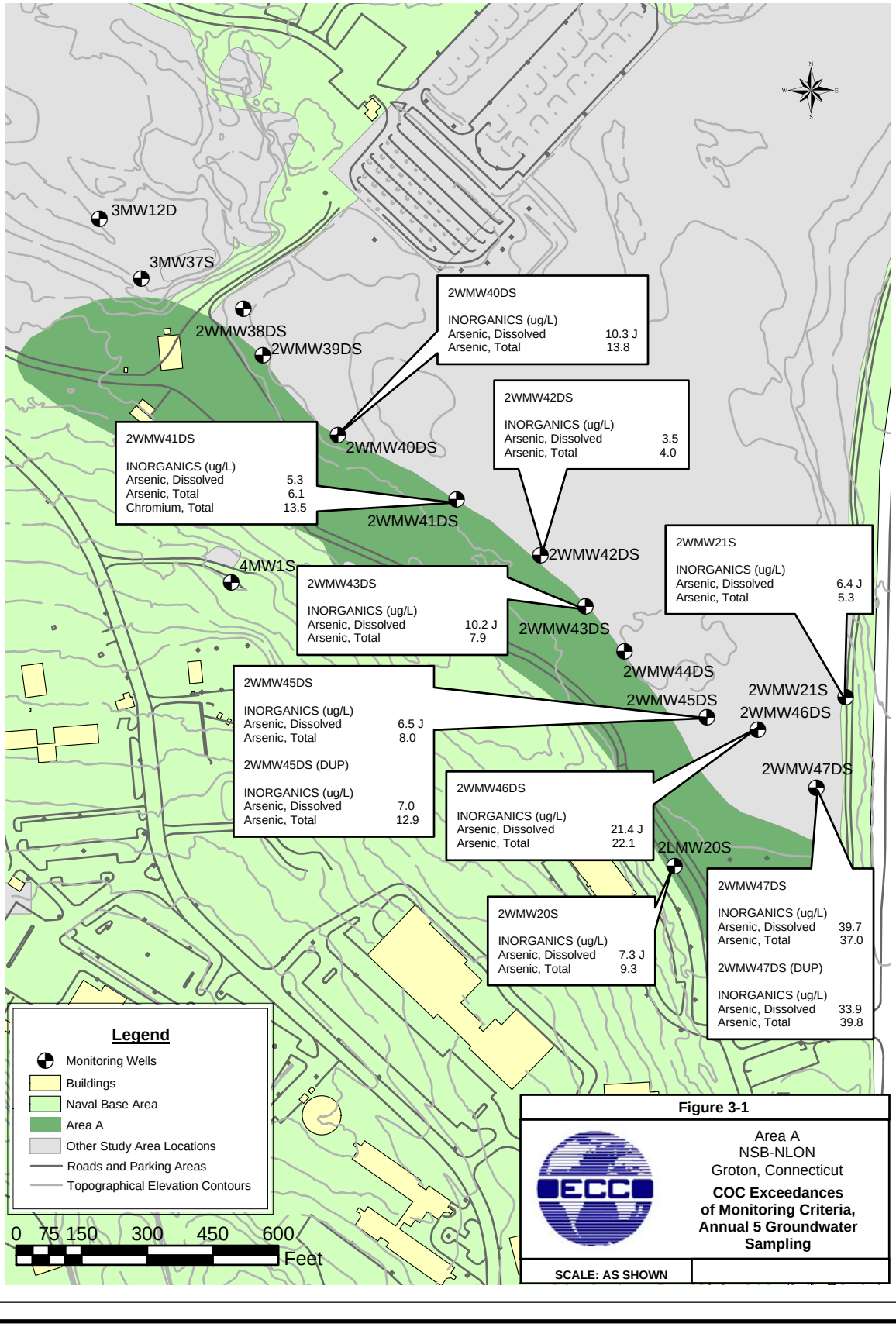
1 Federal AWQC for protection of aquatic life (chronic, freshwater). (USEPA, 1999)
2 Ambient Water Quality Criteria update for Cadmium (USEPA, 2001).
3 Connecticut WQS for protection of aquatic life (chronic, freshwater) (CTDEP, 2002).
4 Background concentrations taken from Basewide Groundwater Operable Unit Remedial Investigation Report (TtNUS, 2002f)

TABLE 3-3
ROUNDS 14 AND 15 SURFACE WATER ANALYTICAL RESULTS SUMMARY
YEAR 5 ANNUAL GROUNDWATER MONITORING REPORT -
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

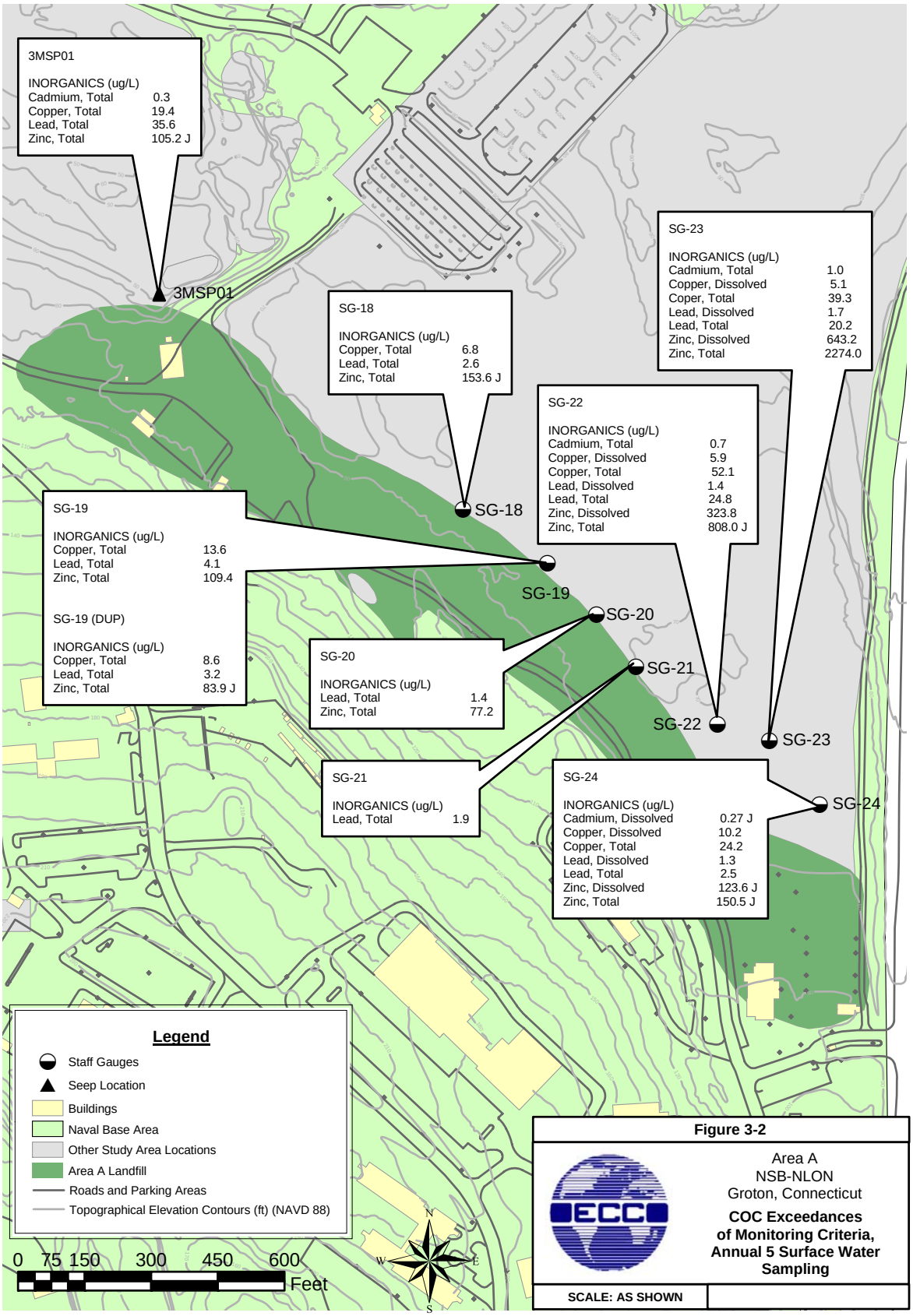
Chemical	Primary Monitoring Criterion [1]	Secondary Monitoring Criterion	NSB-NLON Background Concentration[4]	SG-20 Round 15 10/6/2004	SG-21 Round 14 6/2/2004	SG-21 Round 15 10/6/2004	SG-22 Round 14 6/2/2004	SG-22 Round 15 10/6/2004	SG-23 Round 14 6/2/2004	SG-23 Round 15 10/6/2004	SG-24 Round 14 6/3/2004	SG-24 Round 15 10/5/2004
SVOCs (µg/L)												
BENZO(A)ANTHRACENE	NA	NA	--	0.2 U	0.2 UJ	0.2 U	**0.094 J**	**0.076 J**	0.2 UJ	0.2 U	**0.12 J**	0.2 U
BENZO(A)PYRENE	NA	NA	--	0.2 U	0.2 U	0.2 U	**0.089 J**	**0.08 J**	0.2 U	0.2 U	**0.084 J**	0.2 U
BENZO(B)FLUORANTHENE	NA	NA	--	0.2 U	0.2 UJ	0.2 U	0.2 UJ	**0.1 J**	0.2 UJ	0.2 U	**0.1 J**	0.2 U
BENZO(K)FLUORANTHENE	NA	NA	--	0.2 U	0.2 UJ	0.2 U	**0.1 J**	**0.083 J**	0.2 UJ	0.2 U	**0.19 J**	0.2 U
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	--	10 U	10 U	**2.2 J**	10 U	10 U	10 U	10 U	10 U	10 U
PHENANTHRENE	NA	NA	--	0.2 U	**0.11 J**	**0.06 J**	**0.08 J**	**0.068 J**	**0.2 UJ**	**0.031 J**	**0.095 J**	0.2 U
Inorganics (Total) (µg/L)												
ARSENIC	150	NA	NA	**2.2**	**0.88 J**	**1.4**	**5.3**	**49.5**	1 U	**12**	**44.9**	**3.1**
BERYLLIUM	NA	NA	NA	1 U	1 U	1 U	1 U	**0.23 J**	1 U	**0.4 J**	**1.1 J**	1 U
CADMIUM	0.25 [2]	NA	NA	0.2 U	0.1 U	0.2 U	0.2	**0.7**	0.1 U	**1**	**0.5**	**0.19 J**
CHROMIUM	11	NA	NA	**0.89 J**	**0.92 J**	**1.2**	**5.3**	**7.7**	**0.39 J**	**6.9**	**34**	**1**
COPPER	4.8 [3]	NA	NA	**3.8**	**2**	**2.9**	**25.9**	**52.1**	**1.5**	**39.3**	**109.9**	**24.2**
LEAD	1.2 [3]	NA	NA	**1.4**	**3.4**	**1.9**	**14.5**	**24.8**	**0.44 J**	**20.2**	**70.7**	**2.5**
ZINC	65 [3]	NA	NA	**77.2**	**29.3**	**43.6**	**216.3**	**808 J**	**134.5**	**2274**	**506.8**	**150.5 J**
Inorganics (Dissolved) (µg/L)												
ARSENIC	150	NA	NA	**0.66 J**	1 U	**0.82 J**	1 U	**8.9 J**	1 U	**3.6 J**	**4.7**	**0.86 J**
BERYLLIUM	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	0.25 [2]	NA	NA	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	**0.27 J**
CHROMIUM	11	NA	NA	1 U	1 U	1 U	1 U	**0.87 J**	1 U	**1**	1 U	1 U
COPPER	4.8 [3]	NA	NA	**0.72 J**	**0.4 J**	**1**	**0.43 J**	**5.9**	**0.34 J**	**5.1**	**0.4 J**	**10.2**
LEAD	1.2 [3]	NA	NA	**0.27 J**	0.5 U	**0.37 J**	0.5 U	**1.4**	0.5 U	**1.7**	0.5 UJ	**1.3**
ZINC	65 [3]	NA	NA	**29**	**6.3**	**15.6**	**18.6**	**323.8**	**82.5**	**643.2**	**9.3 J**	**123.6 J**

NOTES:
DUP = Field duplicate sample, J = Estimated Value, U = Undetected Value, NA = Not available, ND = Not
Bold type denotes analyte detection.
Shaded boxes denote exceedances of primary or secondary monitoring criterion and/or background grou
Primary and Secondary Monitoring Criteria shown in table are from the New London O&M plan dated Mar

1 Federal AWQC for protection of aquatic life (chronic, freshwater). (USEPA, 1999)
2 Ambient Water Quality Criteria update for Cadmium (USEPA, 2001).
3 Connecticut WQS for protection of aquatic life (chronic, freshwater) (CTDEP, 2002).
4 Background concentrations taken from Basewide Groundwater Operable Unit Remedial Investigatio



H:\NAVY\New London_NSB\Area A\2004\Annual 5\Figures\Maps\Figure 3-1 (COC Exc. MWs)



H:\NAVY\New London_NSB\Area A\2004\Annual 5\Figures\Maps\Figure 3-2 (COC Exc. SGs)

4.0 STATISTICAL ANALYSIS

A statistical analysis was performed on the results presented in Section 3.0 in an effort to determine whether COPCs are having an impact on groundwater at the Site. In the analysis, 12 downgradient wells (2WMW38DS, 2WMW39DS, 2WMW40DS, 2WMW41DS, 2WMW42DS, 2WMW43DS, 2WMW44DS, 2WMW45DS, 2WMW46DS, 2WMW47DS, 3MW12D and 2MW37S) and two upgradient wells (2LMW20S and 4MW1S) were compared using various statistical methods. Analysis is summarized in the following sections and detailed in Appendix F.

4.1 STATISTICAL ANALYSIS METHODOLOGY

Statistical analysis of the data was performed in order to:

- Summarize contaminant concentrations for each COPC with detection frequency, range and average values; and
- Compare COPC detections in downgradient wells to detections in upgradient wells.

4.1.1 Summary Statistics

For each COPC the frequency of detection was tabulated for both upgradient and downgradient wells. Analytes which were identified but the associated numerical value was an approximate concentration, denoted with "J" during validation, were include as a positive detection. The range of data and average values were tabulated for all detected analytes. Averaging for detected analytes was performed using two different methods. The first method averaged detected and estimated "J" values only and did not account for non-detects. The second method replaced non-detects with a value equal to half of the laboratory reporting limit prior to averaging all results.

4.1.2 Comparison of Downgradient Wells to Upgradient Wells

The comparison of downgradient and upgradient data sets for the Area A Landfill site is summarized in Table 4-1. The statistical method employed for each COPC, determined by the number of detections, distribution and variance for each of the data sets, are summarized below.

The number of detections was determined for both the downgradient and upgradient data sets for each analyte. If there were no detections in either data set, no statistical analysis was performed and downgradient and upgradient concentrations were considered statistically similar. In cases where there were detections in the downgradient wells but none in the upgradient wells, no statistical analysis was performed and downgradient results were considered statistically higher than upgradient concentrations for that analyte. However, in cases were the detections in the downgradient wells were below the reporting limit for the upgradient wells, no statistical analysis

was performed and downgradient and upgradient concentrations were considered statistically similar. In cases where there were detections in the upgradient wells but none in the downgradient wells, no statistical analysis was performed and downgradient results were not considered statistically higher than upgradient concentrations for that analyte. When non-detects exceeded 50% of either data set a Two-Sample Test of Proportions was used in accordance with USEPA guidance (USEPA, 1992).

The Analysis of Variance (ANOVA) technique is the preferred method to compare data from upgradient and downgradient monitoring well locations. The ANOVA technique is used to test whether there is statistically significant evidence of contamination. There are parametric and non-parametric ANOVA techniques. The parametric ANOVA method assumes that the upgradient and downgradient data sets are both normally (or lognormally) distributed and that group variances of the upgradient and downgradient data sets are homogeneous. These two assumptions can be checked by performing the Shapiro-Wilk Test of Normality and Levene's Test of Homogeneity of Variance, respectively. If the results of the two tests indicated that either of these assumptions were violated a non-parametric ANOVA technique was conducted. This technique compares ranks of the observations rather than the observations themselves.

Figure 4-1 illustrates the decision process employed for selecting the appropriate statistical method to compare downgradient and upgradient data for each COPC at the Area A Landfill site. Once the appropriate method was determined, it was performed in accordance with USEPA guidance and the Year 3 Annual Monitoring Report (TtNUS 2003). Details of computation are included in Appendix F for all of the tests employed:

- Two-Sample Test of Proportions
- Shapiro-Wilk Test of Normality
- Levene's Test of Homogeneity of Variance
- Parametric ANOVA
- Modified Wilcoxon Rank-Sum Test

4.2 STATISTICAL ANALYSIS RESULTS

Results of downgradient and upgradient data set comparisons are summarized in Table 4-1. A total of 13 COPCs were detected. For each of these 13 COPCs the number of detections, distribution and variance were evaluated for both upgradient and downgradient data sets. No statistical analysis was required for two of the 13 COPCs because the upgradient well data set consisted entirely of non-detects. Two-Sample Test of Proportions was performed on two

COPCs and Non-Parametric ANOVA in the form of the modified WIlcoxon Rank-Sum Test was performed on the remaining nine COPCs.

Results of these statistical analyses are summarized in Table 4-1 and each test is detailed in Appendix F.

In cases where there were detections in the downgradient wells that were less than or equal to the reporting limit for upgradient wells, no statistical analysis was performed and downgradient results were normally not considered statistically higher than upgradient concentrations for that analyte. These COPC included BEHP and phenanthrene. BEHP had two detections, both 2.4 J µg/L, which were less than the reporting limit of 10 µg/L. Phenanthrene had one detection of 0.16 J µg/L which was below the reporting limit of 0.2 µg/L. As a result downgradient and upgradient data sets for these COPCs were considered statistically similar.

Seven COPCs upgradient and downgradient well data sets consisted entirely of non-detects. These COPCs included benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, total beryllium, dissolved beryllium, and dissolved cadmium. As a result downgradient and upgradient data sets for these COPCs were considered statistically similar.

The Two-Sample Test of Proportions was used on two COPCs because greater than half the samples were non-detect values. Total cadmium and dissolved lead were both analyzed using the Two-Sample Test. Both were determined to have downgradient and upgradient data sets that were statistically similar.

Non-parametric ANOVA analyses were utilized for the remaining nine COPCs: arsenic (total and dissolved), chromium (total and dissolved), copper (total and dissolved), total lead, and zinc (total and dissolved). Since there were only two data sets, a modified Wilcoxon Rank-Sum test was used to analyze the difference between the downgradient and upgradient concentrations. Six COPCs analyzed with the WIlcoxon Rank-Sum test were determined to have downgradient and upgradient data sets that were statistically similar. These COPCs were arsenic (total and dissolved), total copper, total lead, and zinc (total and dissolved).

Analyses showed that the downgradient concentrations were in excess of the upgradient for the remaining three COPCs: total chromium, dissolved chromium and dissolved copper.

Total chromium was detected in nineteen out of twenty-three downgradient samples (average 8.03 µg/L) and three upgradient sample (average 0.93 µg/L). All the concentrations of the downgradient wells were below the background concentration of 49.9 µg/L. Dections in wells

2WMW40DS, 2WMW41DS and 2WMW42DS exceeded the primary monitoring criteria of 4.8 µg/L.

Dissolved chromium was detect in eightteen out of twenty-three downgradient samples (average 4.59 µg/L) and one upgradient sample (0.56 µg/L). All of the detections and the average in downgradient wells were below the primary monitoring criterion of 11 µg/L and the background conentration of 16 µg/L.

Dissolved copper was detect in nineteen out of twenty-three downgradient samples (average 1.21 µg/L) and four upgradient sample (average 0.49 µg/L). All of the detections and the average in downgradient wells were below the primary monitoring criterion of 4.8 µg/L and the background conentration of 39.4 µg/L.

As detailed above, statistical analysis of the data indicated that downgradient results were statistically higher than upgradient results for three COPCs (total and dissolved chromium and dissolved copper). Of these, two COPCs (dissolved chromium and dissolved copper) were below both their respective primary monitoring criteria and background concentration. Total chromium exceeded the primary monitoring criteria but was below the background concentration.

Downgradient wells with detections of total chromium were plotted against time to determine whether concentrations appear to be increasing and are described in further detail below. During Year 5, the total chromium maximum concentration of 29.1 µg/L was reported during the Round 14 sampling event on 1 June 2004. During Year 4, the total chromium maximum concentration of 20 µg/L was reported during the Round 12 sampling event on 8 April 2003. During Year 3, the total chromium maximum concentration of 12.8 µg/L was reported during the Round 11 sampling event on 2 October 2002. The concentrations appear to be increaseing slightly from Year 3 to Year 5 as shown in the plot in Appendix F.

CHART 4-1
DECISION CHART FOR APPROPIATE STATISTICAL METHOD
TO COMPARE ANALYTE UPGRADIENT AND DOWNGRADIENT RESULTS

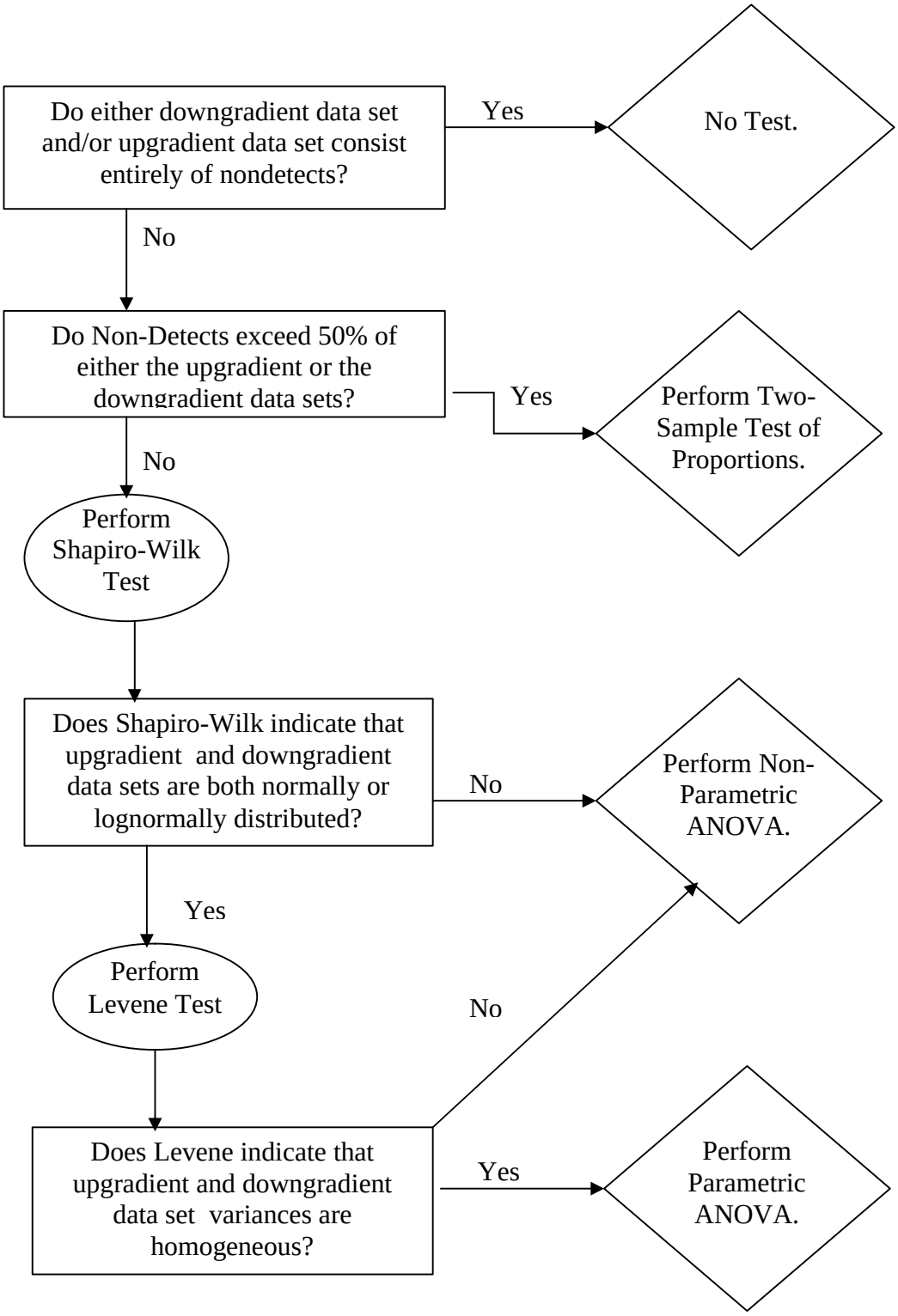


TABLE 4-1
YEAR 5 STATISTICAL ANALYSIS SUMMARY
YEAR 5 ANNUAL GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

	DOWNGRADIENT WELLS				UPGRADIENT WELLS					
Chemical	**Frequency of Detection**	**Range of Detections**	**Average of Detections**	**Average of All Results [1]**	**Frequency of Detection**	**Range of Detections**	**Average of Detections**	**Average of All Results [1]**	**Statistical Analysis Method**	**Result of Analysis downgradient higher than upgradient?**
SVOCs (µg/L)										
BENZO(A)ANTHRACENE	0 / 24	-	-	0.1	0 / 4	-	-	0.1	None	**NO[4]**
BENZO(A)PYRENE	0 / 24	-	-	0.1	0 / 4	-	-	0.1	None	**NO[4]**
BENZO(B)FLUORANTHENE	0 / 24	-	-	0.1	0 / 4	-	-	0.1	None	**NO[4]**
BENZO(K)FLUORANTHENE	0 / 24	-	-	0.1	0 / 4	-	-	0.1	None	**NO[4]**
BIS(2-ETHYLHEXYL)PHTHALATE	2 / 24	2.4 - 2.4	2.4	4.99	0 / 4	-	-	5	None	**NO[5]**
PHENANTHRENE	1 / 24	0.16 -	0.16	0.11	0 / 4	-	-	0.1	None	**NO[5]**
Inorganics (Total) (µg/L)										
ARSENIC	20 / 23	0.75 - 38.4	12.6	9.33	2 / 4	2.9 - 9.3	6.1	3.3	Non-Parametric[3]	**NO**
BERYLLIUM	0 / 23	-	-	0.83	0 / 4	-	-	0.5	None	**NO[4]**
CADMIUM	6 / 23	0.08 - 0.2	0.12	0.41	2 / 4	0.1 - 0.2	0.15	0.33	Two-Sample Test	**NO**
CHROMIUM	19 / 23	0.94 - 29.1	8.03	6.91	3 / 4	0.3 - 1.4	0.93	0.83	Non-Parametric[3]	**YES**
COPPER	22 / 23	0.29 - 8.3	2.40	2.57	4 / 4	0.68 - 3.5	2.02	2.02	Non-Parametric[3]	**NO**
LEAD	14 / 23	0.22 - 1	0.50	0.75	2 / 4	0.5 - 1.1	0.8	0.53	Non-Parametric[3]	**NO**
ZINC	21 / 23	2.69 - 46.5	18.4	17.46	4 / 4	3.65 - 58.5	27.7	27.7	Non-Parametric[3]	**NO**
Inorganics (Dissolved) (µg/L)										
ARSENIC	18 / 23	0.72 - 36.8	12.5	8.53	3 / 4	0.04 - 7.3	3.18	2.51	Non-Parametric[3]	**NO**
BERYLLIUM	0 / 23	-	-	0.83	0 / 4	-	-	0.5	None	**NO[4]**
CADMIUM	0 / 23	-	-	0.40	0 / 4	-	-	0.28	None	**NO[4]**
CHROMIUM	18 / 23	0.31 - 10.8	4.59	4.05	1 / 4	0.56 -	0.56	0.52	Non-Parametric[3]	**YES**
COPPER	19 / 23	0.19 - 3.8	1.21	1.51	4 / 4	0.21 - 0.78	0.49	0.49	Non-Parametric[3]	**YES**
LEAD	7 / 23	0.27 - 0.7	0.39	0.63	2 / 4	0.33 - 0.37	0.35	0.3	Two-Sample Test	**NO**
ZINC	17 / 23	1.4 - 18.2	5.52	5.68	4 / 4	4.05 - 58.7	23.8	23.8	Non-Parametric[3]	**NO**

NOTES:
1 For non-detect occurances, half of the reporting limit was used in calculating the average.
2 Gray highlighting denotes detection in upgradient and downgradient wells. These wells were evaluated with statistical analysis.
3 Modified Wilcoxon Rank Sum Test used for Non-Parametric ANOVA because sample data set < 12
4 When there were no detections in downgradient wells, downgradient results were autmatically declared not statistically higher..
5 Detections in downgradient wells were less than or equal to the reporting limit for upgradient wells, not declared statistically higher.

5.0 CONCLUSIONS AND RECOMMENDATIONS

This Year 5 Annual GMR summarizes Rounds 14 and 15 of groundwater and surface water analytical data collected from selected surface water locations and monitoring wells installed at the Area A landfill. The results of the monitoring program are being used to evaluate the success of the RA (i.e., installation of a multi-layer, low-permeability cover system and a surface water/shallow groundwater interception and diversion system upgradient of the cover system) at minimizing contaminant migration from Area A Landfill. The evaluation included the following:

- Gauging of 15 monitoring wells. Sampling and analyses of groundwater from the 15 monitoring wells using low-flow purging and sampling techniques. Thirteen of the twenty COPC's were detected during analysis.

- Gauging of 11 staff gauges. Sampling and analyses of surface water from seven of surface water locations and one seep water location using the prescribed sampling techniques. Nineteen of the twenty COPC's were detected during analysis of the surface water samples.

- Completion of a general screen of analytical data to current primary monitoring criteria and background concentrations to identify exceedances in upgradient wells, downgradient wells, and surface locations. There were groundwater exceedances of the primary monitoring criterion for total chromium and total copper. There were surface water exceedances of the primary monitoring criterion for cadmium (total and dissolved), total chromium, copper (total and dissolved), lead (total and dissolved), and zinc (total and dissolved). There were groundwater background concentration exceedances for total and dissolved arsenic.

- Performance of a statistical comparison from the complete analytical data set of downgradient and upgradient monitoring wells was performed to determine significant differences. Analysis of data indicated that three of the 13 detected COPCs (total and dissolved chromium and dissolved copper) had downgradient results statistically higher than upgradient concentrations. Detected concentrations of dissolved chromium and dissolved copper were below primary monitoring criterion and background levels. Total chromium exceeded the primary monitoring criterion only.

- Overall, the results of the first five years of monitoring for the Area A Landfill indicate that the RA action at the site is sufficiently reducing infiltration of precipitation through the landfill source material so that significant contaminant migration from the site to the surrounding area is not occurring.

The analytical results for the fifth year of groundwater monitoring at the Area A Landfill showed two exceedances of the primary monitoring criteria and two contaminants in excess of the background concentration. Three COPCs were detected in downgradient wells at concentrations that were statistically higher than concentrations in upgradient wells. The analytical results for the fifth year of surface water monitoring at the Area A Landfill showed nine exceedances of the primary monitoring criteria.

However, the levels and history of these COPCs do not indicate that significant concentrations of COPCs are migrating from the Area A Landfill site. These results are generally similar to the results of the first four years of groundwater monitoring although detection, frequency and values were of a smaller magnitude. These results are indicative that the interim remedial action at the site removed sufficient contaminant source material and reduced infiltration of precipitation through any remaining source material so that significant contaminant migration from the site to the Thames River, via wetland and stream, is not occurring. Therefore, as was recommended in the Year 4 report, the RA and current ROD for the Area A Landfill are sufficient and no amendments are necessary.

- The sampling frequency should continue on a semi-annual basis with the next sample round tentatively scheduled for spring 2005. This recommendation is justified because there have been no significant increasing contaminant trends have been noted in the downgradient wells in over five years. The recommendation to maintain the sampling frequency on a semi-annual basis was also made in the Year 4 GMR and was agreed to by the USEPA. The sampling frequency should be re-evaluated after Year 6.

- The future monitoring program should include the same fifteen monitoring wells that were sampled in Rounds 14 and 15. Those wells include downgradient wells 2LMW20S and 4MW1S as upgradient monitoring wells and 2WMW38DS, 2WMW39DS, 2WMW40DS, 2WMW41DS, 2WMW42DS, 2WMW43DS, 2WMW44DS, 2WMW45DS, 2WMW46DS, 2WMW47DS, 3MW12D and 2MW37S as downgradient monitoring wells.

- Routine maintenance should be conducted on the remaining monitoring wells included in the monitoring program to facilitate monitoring activities into the future.

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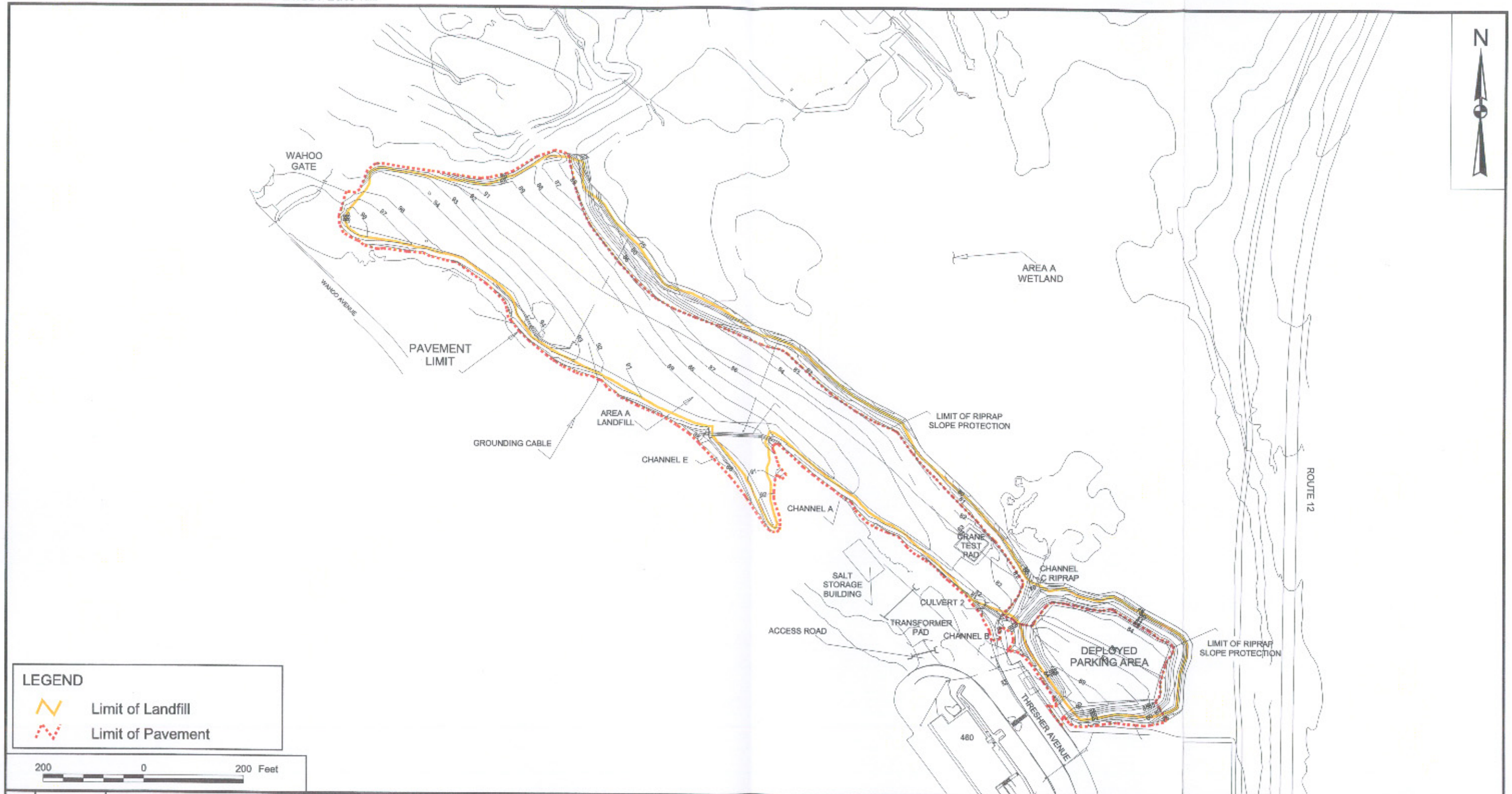
APPENDIX A

Site Figures: Copies from Year 3 Annual Report

P:\GIS\NLON\50820370.APR\AREA A LANDFILL - SITE MAP LAYOUT 2/3/03 KMP



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

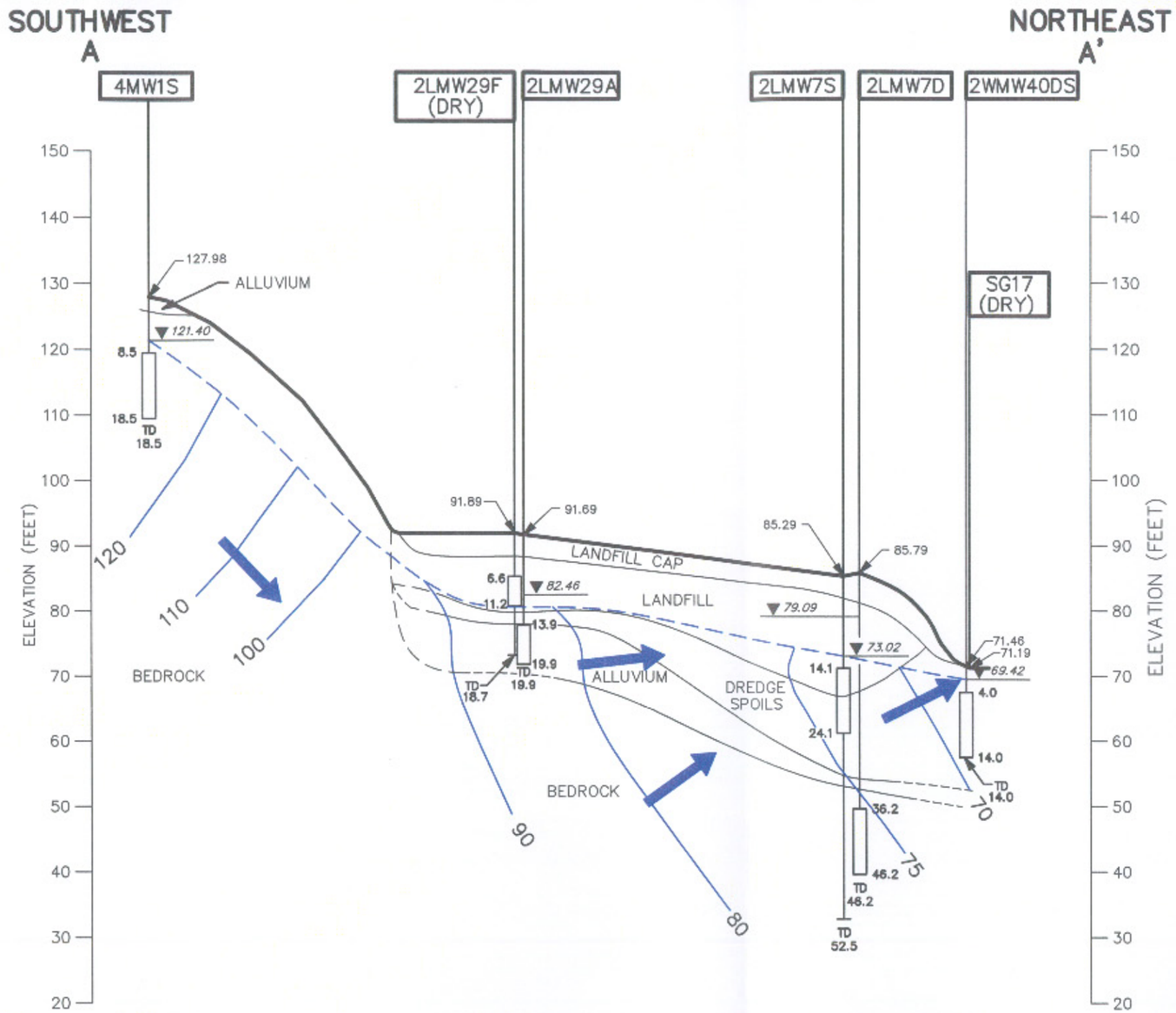
DRAWN BY J. BELLONE DATE 1/12/00
CHECKED BY MAR DATE 2-12-03
COST/SCHEDULE-AREA
SCALE AS NOTED

Tetra Tech NUS, Inc.

SITE MAP
AREA A LANDFILL
NSB-NEW LONDON, GROTON, CONNECTICUT

CONTRACT NUMBER 2863
OWNER NUMBER CTO 816
APPROVED BY CAR DATE 2/11/03
APPROVED BY DATE
DRAWING NO. FIGURE 2-3
REV 0

ACAD: 2863GX27.dwg 01/28/03 HJB PIT



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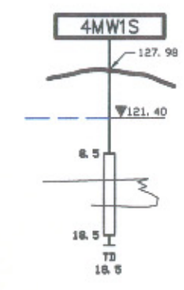

- MONITORING WELL OR BORING NUMBER
- GROUND SURFACE ELEVATION GROUND SURFACE
- POTENTIOMETRIC SURFACE ELEV.
- TOP OF MONITORED INTERVAL (FT BGS)
- LITHOLOGIC CONTACT (DASHED WHERE INFERRED)
- BOTTOM OF MONITORED INTERVAL (FT BGS)
- TOTAL DEPTH OF WELL OR BORING (FT BGS)
- GROUNDWATER FLOW DIRECTION
- EQUIPOTENTIAL LINES
- 120 GROUNDWATER ELEVATION

NOTES:

1. HYDRAULIC CONDUCTIVITIES REFERENCE GW/LEACHATE MODELING STUDY–MARCH 1996, PHASE II RI–MARCH 1997 AND PHASE I RI–AUGUST 1992
   LANDFILL = 4.8 FT/DAY
   ALLUVIUM = 2.0 FT/DAY
   BEDROCK = 0.07 FT/DAY
   DREDGE SPOIL = 0.02 FT/DAY
2. WATER LEVEL MEASUREMENTS TAKEN ON 9/20/02.
3. VERTICAL DATUM =1982 BASE DATUM.

0 80 160
HORIZONTAL SCALE IN FEET

0 20 40
VERTICAL SCALE IN FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY HJB DATE 1/15/03
CHECKED BY DATE 2-12-03
COST/SCHED–AREA
SCALE AS NOTED

Tetra Tech NUS, Inc.

FLOW NET A–A'
SITE 2
NSB–NLON
GROTON, CONNECTICUT

CONTRACT NO. 2863
OWNER NO. ———
APPROVED BY CAR
DATE 2/11/03
APPROVED BY
DATE
DRAWING NO. FIGURE 4–7
REV. 0

FORM CADD NO. TtNUS_94.DGN – REV 0 – 1/28/98

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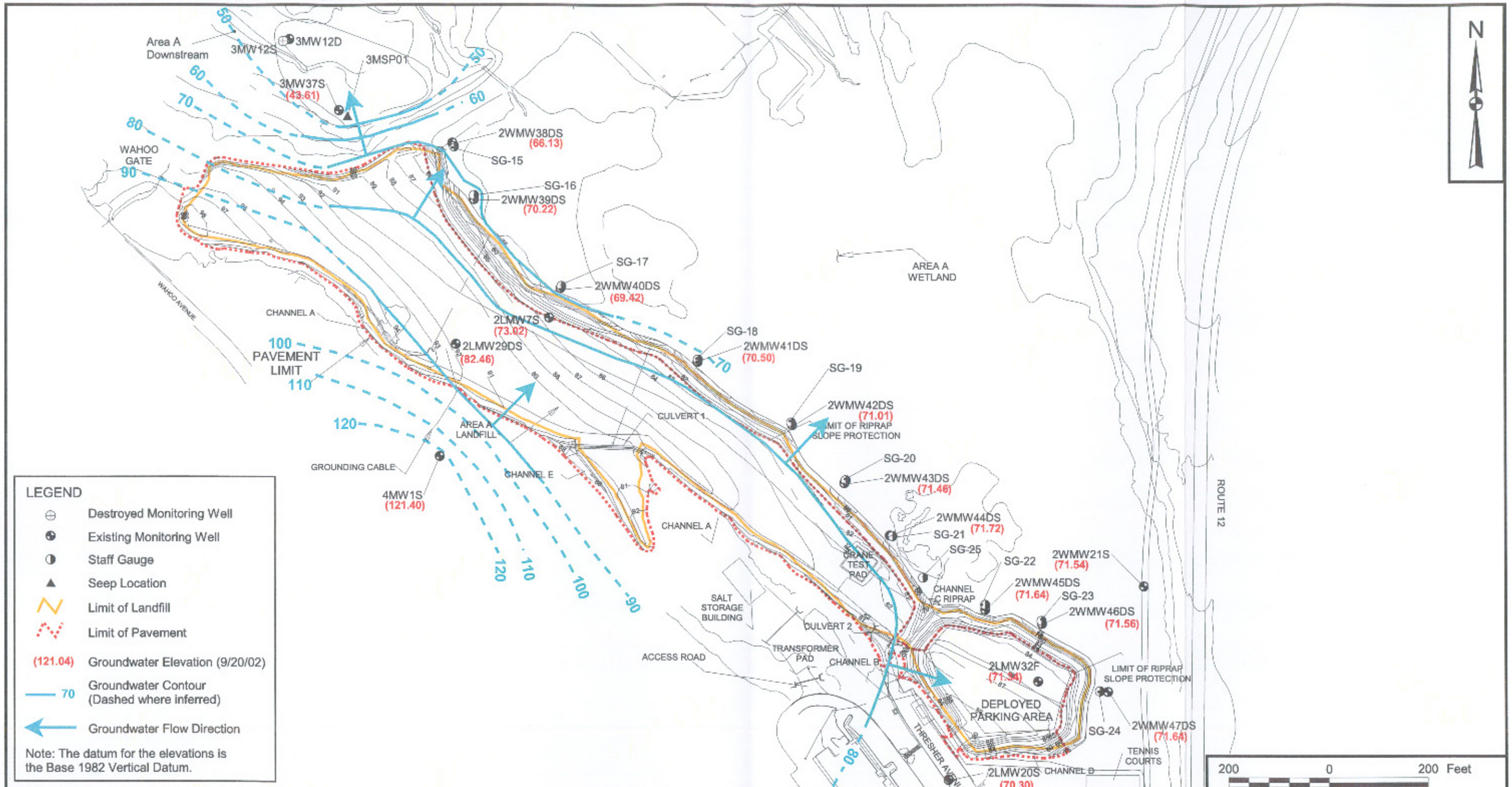

LEGEND

- Destroyed Monitoring Well
- Existing Monitoring Well
- Staff Gauge
- Seep Location
- Limit of Landfill
- Limit of Pavement
- (121.04) Groundwater Elevation (9/20/02)
- 70 Groundwater Contour (Dashed where inferred)
- Groundwater Flow Direction

Note: The datum for the elevations is the Base 1982 Vertical Datum.

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY K. PEILA	DATE 2/11/03
CHECKED BY MJL	DATE 2-12-03
COST/SCHEDULE-AREA	
SCALE AS NOTED	

Tetra Tech NUS, Inc.

POTENTIOMETRIC SURFACE MAP
ROUND 11 GROUNDWATER MONITORING
AREA A LANDFILL
NSB-NEW LONDON, GROTON, CONNECTICUT

CONTRACT NUMBER 2863	OWNER NUMBER CTO 816
APPROVED BY CAR	DATE 2/11/03
APPROVED BY —	DATE —
DRAWING NO. FIGURE 4 - 6	REV 0

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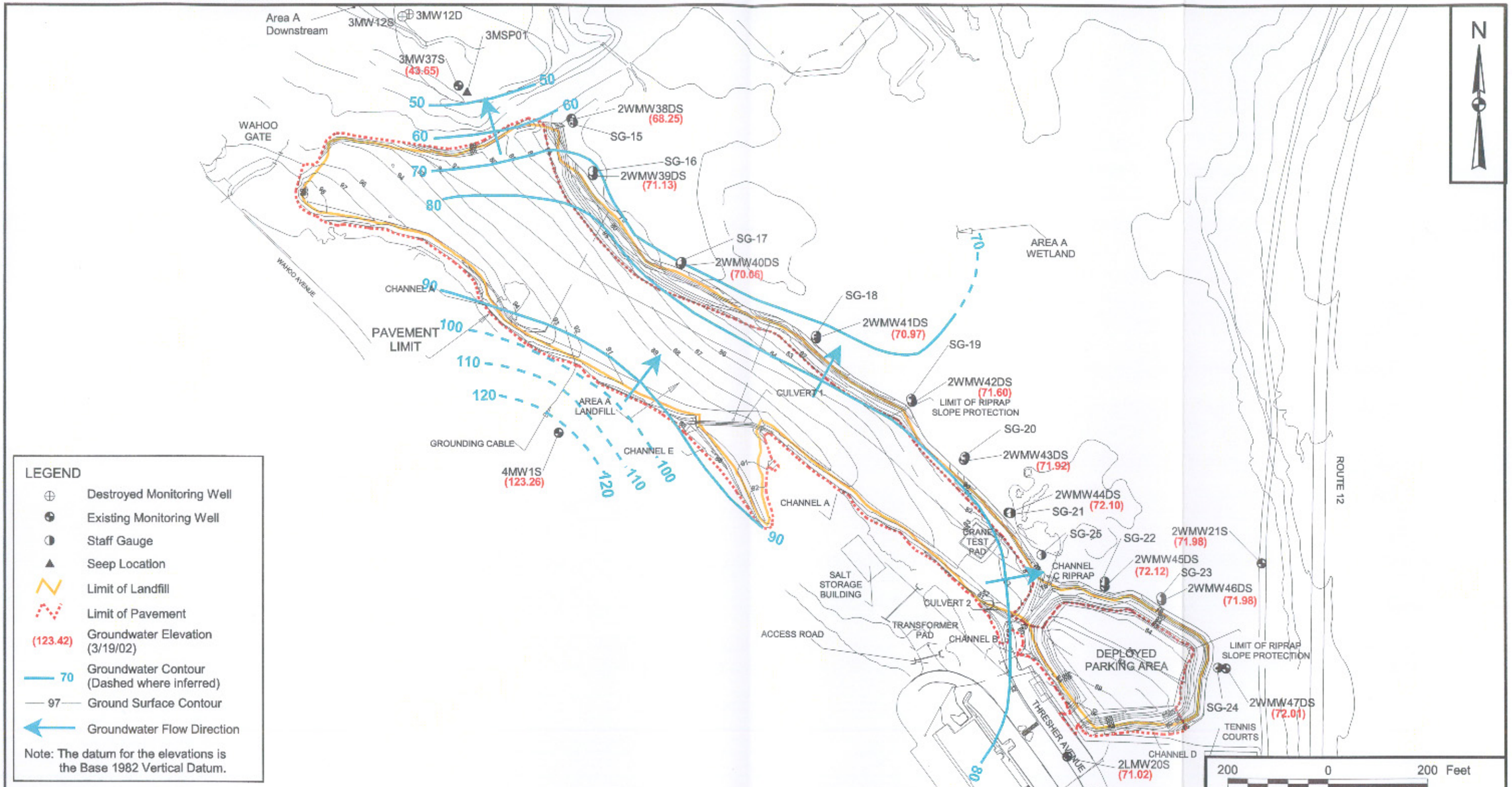

LEGEND

- Destroyed Monitoring Well
- Existing Monitoring Well
- Staff Gauge
- Seep Location
- Limit of Landfill
- Limit of Pavement
- (123.42) Groundwater Elevation (3/19/02)
- 70 Groundwater Contour (Dashed where inferred)
- 97 Ground Surface Contour
- Groundwater Flow Direction

Note: The datum for the elevations is the Base 1982 Vertical Datum.

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY K. PEILA DATE 2/11/03

CHECKED BY MJC DATE 2-12-03

COST/SCHEDULE-AREA

SCALE AS NOTED

Tetra Tech NUS, Inc.

POTENTIOMETRIC SURFACE MAP
ROUND 10 GROUNDWATER MONITORING
AREA A LANDFILL
NSB-NLON, GROTON, CONNECTICUT

CONTRACT NUMBER 2863

OWNER NUMBER CTO 816

APPROVED BY CAR DATE 2/12/03

APPROVED BY — DATE —

DRAWING NO. FIGURE 4 - 5

REV 0

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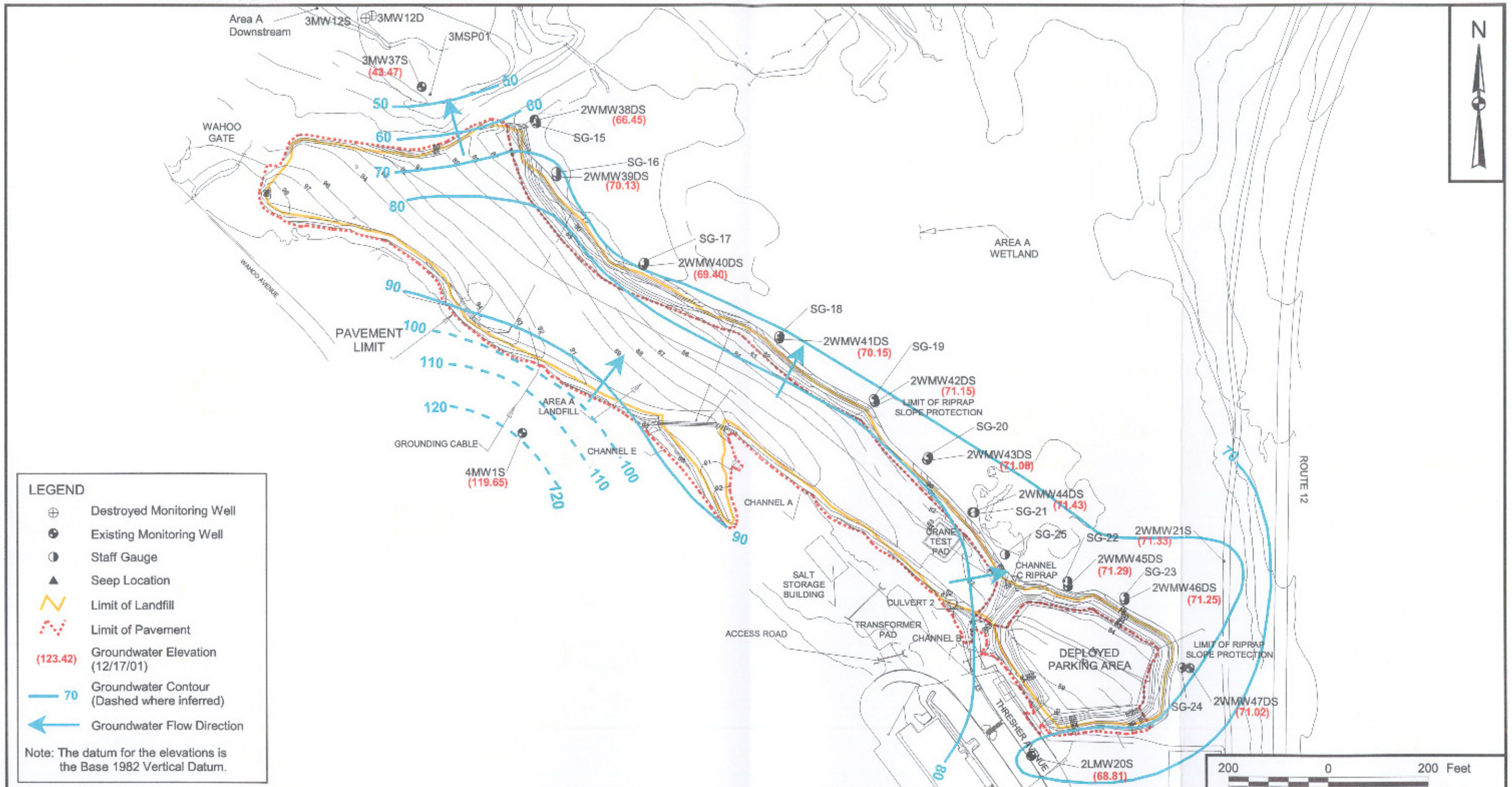


LEGEND

- Destroyed Monitoring Well
- Existing Monitoring Well
- Staff Gauge
- Seep Location
- Limit of Landfill
- Limit of Pavement
- (123.42) Groundwater Elevation (12/17/01)
- 70 Groundwater Contour (Dashed where inferred)
- Groundwater Flow Direction

Note: The datum for the elevations is the Base 1982 Vertical Datum.

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

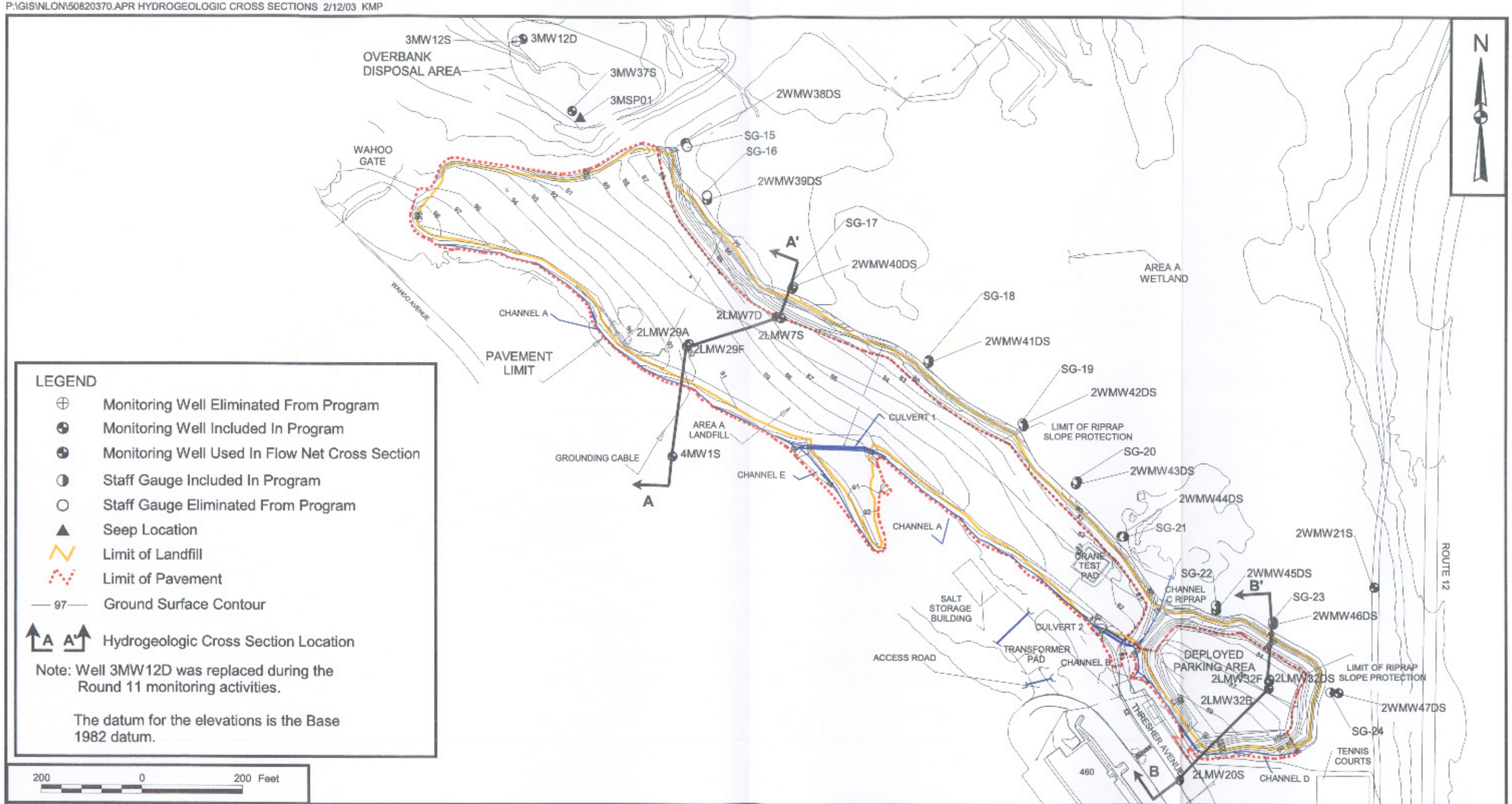
DRAWN BY K. PEILA	DATE 2/11/03
CHECKED BY MKL	DATE 2-12-03
COST/SCHEDULE-AREA	
SCALE AS NOTED	

Tetra Tech NUS, Inc.

POTENTIOMETRIC SURFACE MAP
ROUND 9 GROUNDWATER MONITORING
AREA A LANDFILL
NSB-NEW LONDON, GROTON, CONNECTICUT

CONTRACT NUMBER 2863	OWNER NUMBER CTO 816
APPROVED BY CAR	DATE 2/12/03
APPROVED BY —	DATE —
DRAWING NO. FIGURE 4 - 4	REV 0

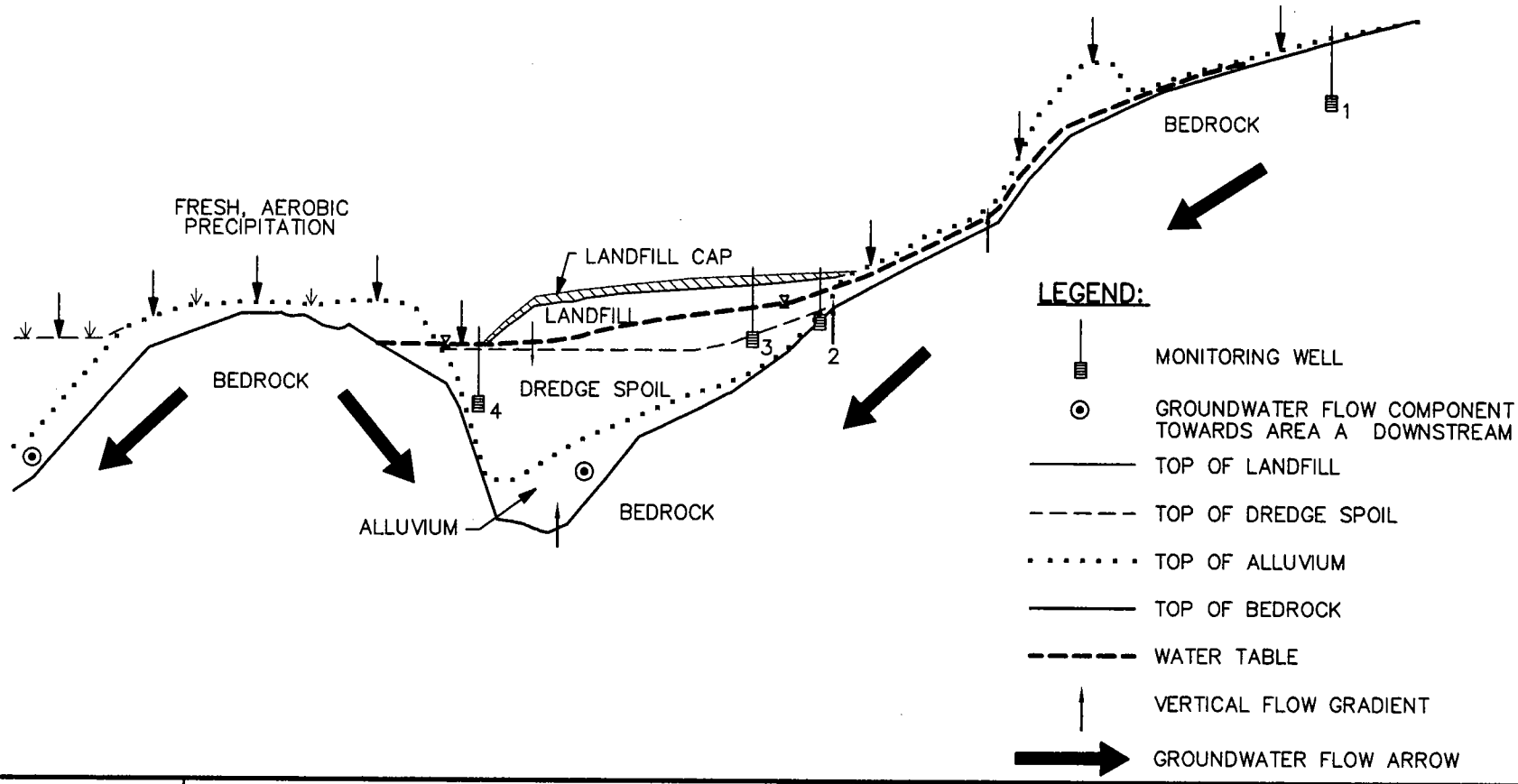
P:\GIS\NLON\50820370.APR HYDROGEOLOGIC CROSS SECTIONS 2/12/03 KMP



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY K. PEILA	DATE 2/11/03	Tetra Tech NUS, Inc.	CONTRACT NUMBER 2863 / OWNER NUMBER CTO 816
CHECKED BY MRL	DATE 2-12-03	SAMPLING LOCATIONS FOR GROUNDWATER AND SURFACE WATER MONITORING AND GEOCHEMICAL INVESTIGATION AREA A LANDFILL NSB-NLON, GROTON, CONNECTICUT	APPROVED BY CAR / DATE 2/12/03
COST/SCHEDULE-AREA			APPROVED BY — / DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 3 - 1 / REV 0

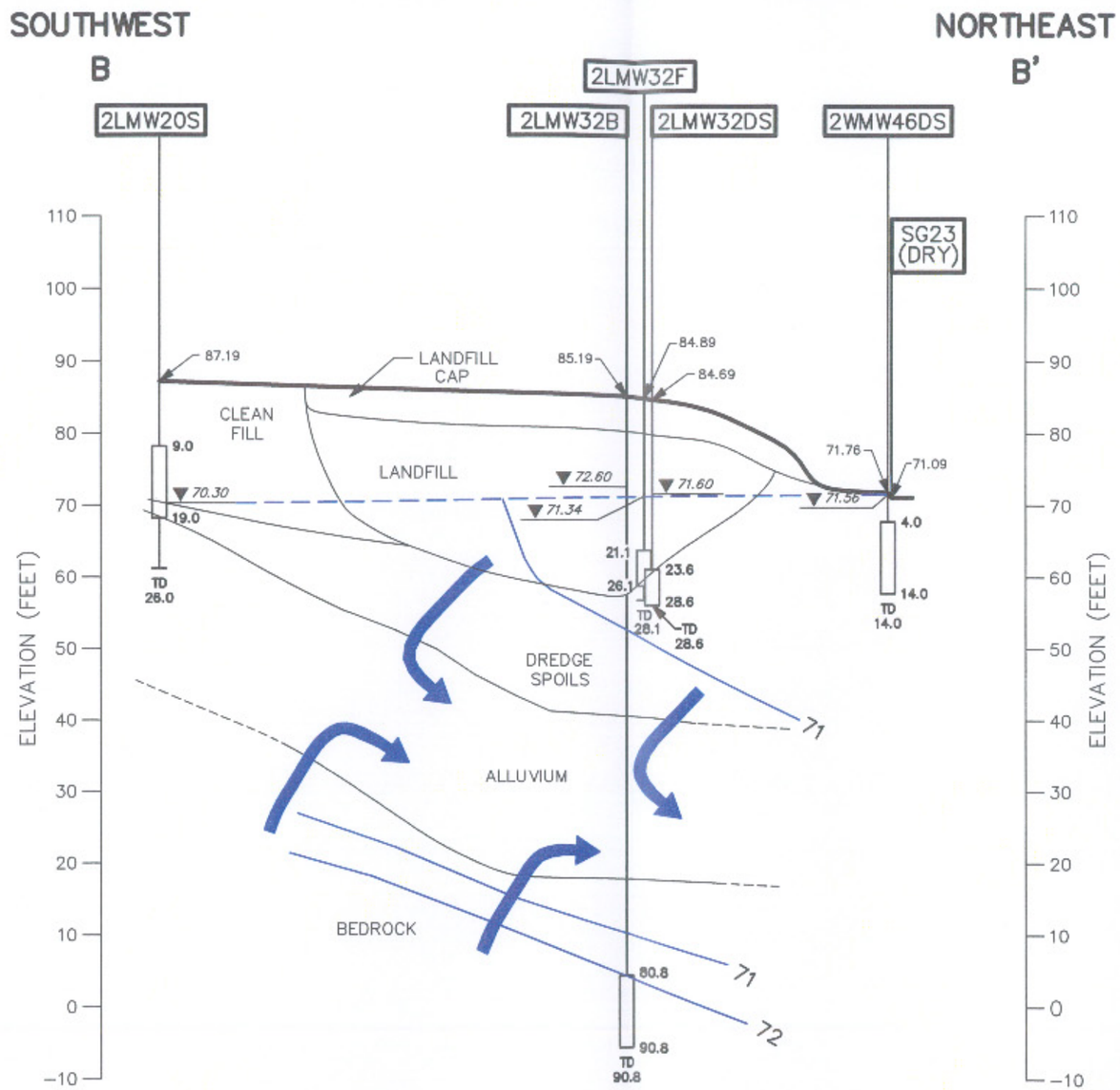
ACAD: 2863GX21.dwg 02/11/03 HJB PIT



DRAWN BY DM DATE 12/17/02	Tetra Tech NUS, Inc.	CONTRACT NO. 2863	OWNER NO. 0816
CHECKED BY MRC DATE 2-12-03	AREA A LANDFILL GROUNDWATER CONCEPTUAL MODEL NSB-NLON, GROTON, CT	APPROVED BY CAR	DATE 2/11/03
COST/SCHED-AREA		APPROVED BY	DATE
SCALE NOT TO SCALE		DRAWING NO. FIGURE 2-4	REV. 0

FORM CADD NO. TtNUS_AH.DWG - REV 0 - 1/22/98

ACAD: 2863GX26.dwg 02/06/03 DM PIT



LEGEND:

MONITORING WELL OR BORING NUMBER — 2LMW20S

GROUND SURFACE ELEVATION GROUND SURFACE — 87.19

POTENTIOMETRIC SURFACE ELEV. — 70.30

TOP OF MONITORED INTERVAL (FT BGS) — 9.0

LITHOLOGIC CONTACT (DASHED WHERE INFERRED)

BOTTOM OF MONITORED INTERVAL (FT BGS) — 19.0

TOTAL DEPTH OF WELL OR BORING (FT BGS) — TD 26.0

GROUNDWATER FLOW DIRECTION

EQUIPOTENTIAL LINES

70 GROUNDWATER ELEVATION

NOTES:

1. HYDRAULIC CONDUCTIVITIES REFERENCE GW/LEACHATE MODELING STUDY–MARCH 1996, PHASE II RI–MARCH 1997 AND PHASE I RI–AUGUST 1992
   LANDFILL = 4.8 FT/DAY
   ALLUVIUM = 2.0 FT/DAY
   BEDROCK = 0.07 FT/DAY
   DREDGE SPOIL = 0.02 FT/DAY
2. WATER LEVEL MEASUREMENTS TAKEN ON 9/20/02.
3. VERTICAL DATUM =1982 BASE DATUM.

0 80 160
HORIZONTAL SCALE IN FEET

0 20 40
VERTICAL SCALE IN FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY HJB DATE 1/15/03
CHECKED BY MSC DATE 2-12-03
COST/SCHED–AREA
SCALE AS NOTED

Tetra Tech NUS, Inc.

FLOW NET B–B'
SITE 2
NSB–NLON
GROTON, CONNECTICUT

CONTRACT NO. 2863
OWNER NO. ———
APPROVED BY CAR DATE 2/11/03
APPROVED BY DATE
DRAWING NO. FIGURE 4–8
REV. 0

APPENDIX B

Monitoring Well Inspections Sheets

MONITORING WELL INSPECTION SHEET

WELL ID: 2LMW20S

DATE: 10/4/04

INSPECTOR'S NAME: David C.

TIME: 16:10

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.		✓	flushmount - does not seal - in road
Well Pad	Concrete or ~~gravel~~ & condition		✓	cracked & depressed
Well Seal	Condition of…..		✓	
Area immediately around well pad.	Record any evidence of /or standing water in area of well		✓	
Dedicated sampling equipment	Condition……	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature:

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 2WMW21S

DATE: 10/4/04

INSPECTOR'S NAME: David C.

TIME: 16:25

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	Concrete or ~~gravel~~ & condition	✓		
Well Seal	Condition of…..	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well	✓		
Dedicated sampling equipment	Condition……	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature:

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 2WMW38DS

DATE: 10/4/04

INSPECTOR'S NAME: David C.

TIME: 14:54

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	~~Concrete~~ or gravel & condition	✓		
Well Seal	Condition of…..	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well	✓		
Dedicated sampling equipment	Condition……	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature:

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 2WMW39DS

DATE: 10/4/04

INSPECTOR'S NAME: David C.

TIME: 15:00

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	~~Concrete~~ or gravel & condition	✓		
Well Seal	Condition of…..	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well	✓		
Dedicated sampling equipment	Condition……	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature: David J Conner

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 2WMW40DS

DATE: 10/4/04

INSPECTOR'S NAME: David C.

TIME: 15:05

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	~~Concrete~~ or gravel & condition	✓		
Well Seal	Condition of…..	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well	✓		
Dedicated sampling equipment	Condition……	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature:

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 2WMW41DS **DATE:** 10/4/04

INSPECTOR'S NAME: David C. **TIME:** 15:10

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	~~Concrete~~ or gravel & condition	✓		
Well Seal	Condition of…..	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well			standing water
Dedicated sampling equipment	Condition……	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature: [signature]

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 2WMW42DS

DATE: 10/4/04

INSPECTOR'S NAME: David C.

TIME: 15:20

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	~~Concrete~~ or gravel & condition			gravel missing (some)
Well Seal	Condition of…..	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well			standing water
Dedicated sampling equipment	Condition……	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature: [signature]

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 2WMW43DS **DATE:** 10/4/04

INSPECTOR'S NAME: David C. **TIME:** 15:25

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	~~Concrete~~ or gravel & condition	✓		
Well Seal	Condition of.....	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well			standing water around pad
Dedicated sampling equipment	Condition.....	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature:

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 2WMW44DS **DATE:** 10/4/04

INSPECTOR'S NAME: David C. **TIME:** 15:30

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	Concrete or gravel & condition		✓	eroded away
Well Seal	Condition of.....	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well			standing water
Dedicated sampling equipment	Condition.....	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature:

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 2WMW45DS **DATE:** 10/4/04

INSPECTOR'S NAME: David C. **TIME:** 15:35

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	~~Concrete~~ or gravel & condition	✓		
Well Seal	Condition of…..	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well	✓		
Dedicated sampling equipment	Condition……	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature: [illegible]

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 2WMW46DS

DATE: 10/4/04

INSPECTOR'S NAME: David C.

TIME: 15:40

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?			
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	~~Concrete~~ or gravel & condition	✓		
Well Seal	Condition of…..			
Area immediately around well pad.	Record any evidence of /or standing water in area of well	✓		standing water around pad
Dedicated sampling equipment	Condition……	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature: [signature]

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 2WMW47DS

DATE: 10/4/04

INSPECTOR'S NAME: David C.

TIME: ~~14:46~~ 16:15

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	~~Concrete~~ or gravel & condition	✓		
Well Seal	Condition of…..	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well			Standing water near pad
Dedicated sampling equipment	Condition……	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature: [signature]

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 3MW12D **DATE:** 10/4/04

INSPECTOR'S NAME: David C. **TIME:** 14:50

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	Concrete or ~~gravel~~ & condition	✓		
Well Seal	Condition of…..	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well	✓		Grassy
Dedicated sampling equipment	Condition……	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature:

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 3MW37S **DATE:** 10/4/04

INSPECTOR'S NAME: David C. **TIME:** 14:46

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	~~Concrete~~ or gravel & condition			slight erosion
Well Seal	Condition of.....	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well			marshy area w/stream
Dedicated sampling equipment	Condition.....	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature:

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

MONITORING WELL INSPECTION SHEET

WELL ID: 4MW1S

DATE: 10/4/04

INSPECTOR'S NAME: David C.

TIME: 16:25

INSPECTION ITEM	TYPES OF PROBLEMS	STATUS		OBSERVATION
		S	U	
Well Tag	Is it in place, legible?	✓		
Well Security	Condition of protective case, cap and lock.	✓		
Well Pad	Concrete or gravel & condition		✓	well pad damaged
Well Seal	Condition of.....	✓		
Area immediately around well pad.	Record any evidence of /or standing water in area of well	✓		
Dedicated sampling equipment	Condition.....	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature:

S = satisfactory, U = unsatisfactory
Check one, if unsatisfactory please explain

APPENDIX C

Groundwater Level Measurements

Groundwater Level Measurement Sheet

Project Site: NSB-NLON
Location: AREA A - SITE 2
Date: 10/4/04
High Tide: NA

Water Level Meter: #1790
Weather: 70s Partly Cloudy
Field Crew: David C., Sue W.
Low Tide: NA

Well ID	Time	Depth to Water (FT)	PID Reading (ppm)	Comments
2LMW20S	16:10	15.43	0.0	
2WMW21S	16:25	4.45	0.0	
2WMW38DS	14:54	7.79'	0.0	
2WMW39DS	15:00	2.84'	0.0	
2WMW40DS	15:05	3.44'	0.0	
2WMW41DS	15:10	2.50'	0.0	standing water
2WMW42DS	15:20	2.18'	0.0	
2WMW43DS	15:25	2.62'	0.0	
2WMW44DS	15:30	1.71'	0.0	
2WMW45DS	15:35	2.33'	0.0	
2WMW46DS	15:40	1.69'	0.0	
2WMW47DS	16:15	1.52'	0.0	
3MW12D	14:50	4.86'	0.0	
3MW37S	14:46	3.63'	0.0	
4MW1S	16:25	7.78'	0.0	
SG06	16:30	18.79		
SG15	14:55	dry		
SG16	15:01	dry		
SG17	15:06	dry		
SG18	15:11	4.13'		
SG19	15:21	3.98'		
SG20	15:26	3.32'		
SG21	15:31	3.38'		
SG22	15:36	4.29'		
SG23	15:41	3.98'		
SG24	16:16	4.80'		broken staff gauge

APPENDIX D

Groundwater & Surface Water Field Forms

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 2LMW20S

Date: 10/6/04
Sampler: David C.
PID Reading: 0.0ppm

Start Time: 8:33 **End Time:** 9:10
Well Construction: 2" PVC peristaltic
Depth to water: 16.21'
Well Depth: 18.02'
Water Column: 1.81'
Total Volume Removed (L) 3.7

Field Testing Equipment

Make	Model	Serial #
YSI	650MDS	04J15729 AG
YSI	600XL	04J15999 AB
Lamotte	Turbidimeter	0967-4598
Geopump²	peristaltic	05640

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
8:35	0.2	100	16.76	13.90	6.11	0.39	1.33	-14	80	cloudy
8:45	1	100	16.78	13.88	5.99	0.38	0.70	-17	37	cloudy
8:50	0.5	100	16.81	14.01	5.98	0.38	0.72	-20	22	clear
8:55	0.5	100	16.84	14.13	5.97	0.40	0.67	-19	11	clear
9:00	0.5	100	16.86	14.24	5.98	0.45	0.56	-25	6	clear
9:05	0.5	100	16.89	14.31	5.98	0.47	0.54	-29	3	clear
9:10	0.5	100	16.91	14.36	5.99	0.48	0.53	-33	2	clear
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
9:10	2-GW20S-04	40ml vial	2	H_2SO_4	TOC
9:10	2-GW20S-04	250ml Poly	1	H_2SO_4	COD
9:10	2-GW20S-04	500ml Poly	2	HNO_3	inorganics, hardness, dissolved metals (FF)
9:10	2-GW20S-04	500ml Poly	1	None	Alk, SO4, TDS, Cl
9:10	2-GW20S-04	1000ml Poly	1	None	TSS
9:10	2-GW20S-04	1L amber	2	None	PAH, SVOC

Comments

Signature

10/6/04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 2WMW 21S

Date: 10-6-04
Sampler: Suzanne W.
PID Reading: 0.0

Start Time: 13:46 **End Time:** 14:48
Well Construction: 2" PVC
Depth to water: 4.54
Well Depth: 17.03
Water Column: 12.49
Total Volume Removed (L) 6.1

Field Testing Equipment

Make	Model	Serial #
YSI	650 MDS	04J15729 AF
YSI	600 XLM	04J15999 AC
LaMotte	turbidimeter	5296-3504
Geopump 2	peristaltic	05277
Solinst	water level	33251

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
13:47	.1	100	5.21	16.14	7.09	50.42	5.10	-348.8	12	clear
13:57	1	100	5.93	15.86	7.03	50.27	3.90	-383.2	5	clear
14:07	1	100	6.36	16.48	7.01	47.90	3.89	-378.5	4	clear
14:17	1	100	6.56	16.46	7.01	47.39	3.88	-377.5	4	clear
14:27	1	100	6.56	16.50	6.98	45.64	3.87	-370.2	4	clear
14:37	1	100	6.57	16.46	6.96	44.75	3.86	-366.4	4	clear
14:43	.5	100	6.57	16.48	6.96	44.42	3.85	-365.3	4	clear
14:47	.5	100	6.56	16.43	6.95	43.96	3.83	-363.3	4	clear
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
14:48	2-GW21S-04	40 ml vial	2	H_2SO_4	TOC
14:48	2-GW21S-04	250 ml poly	1	H_2SO_4	COD
14:48	2-GW21S-04	500 ml poly	2	HNO_3	Metals tot & dis (FF)
14:48	2-GW21S-04	500 ml poly	1	None	Alk, SO4, TDS, Cl
14:48	2-GW21S-04	950 ml poly	1	None	TSS
14:48	2-GW21S-04	1 L Amber	2	None	SVOC, PAH, SIM

Comments

Suzanne Whiteside
Signature

10-6-04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 2-GW38DS-04

Date: 10/5/04
Sampler: David C.
PID Reading: 0.0ppm

Start Time: 9:03 **End Time:** 9:46
Well Construction: 2" PVC Peristaltic
Depth to water: 7.86'
Well Depth: 11.63'
Water Column: 3.77'
Total Volume Removed (L) 4.3

Field Testing Equipment

Make	Model	Serial #
YSI	650MDS	04J15729 AG
YSI	600XL	04J15999 AB
Lamotte	Turbidimeter	5297-3504
Geopump2	Peristaltic	05640

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm C	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
9:05	0.2	100	8.45	13.70	6.56	1.247	4.46	-114	6	clear
9:15	1	100	9.31	13.77	6.60	1.116	2.98	-101	9	clear
9:25	1	100	9.96	13.85	6.62	1.064	3.55	-77	7	clear
9:30	0.5	100	10.41	13.92	6.66	1.062	4.03	-77	7	clear
9:35	0.5	100	10.85	13.89	6.81	1.072	4.21	-69	8	clear
9:40	0.5	100	11.36	13.90	6.84	1.076	4.44	-69	7	clear
9:43	0.3	100	11.50	13.90	6.84	1.076	4.50	-64	8	clear
9:46	0.3	100	11.63	13.91	6.85	1.077	4.57	-60	9	clear
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
9:46	2-GW38DS-04	500ml Poly	1	HNO_3	inorganics & hardness
9:46	2-GW38DS-04	500ml Poly	1	HNO_3 ~~None~~ DTC	Dissolved metals ~~GFB~~ DAC Filter Field
9:46	2-GW38DS-04	40ml vial	2	H_2SO_4	TOC
9:46	2-GW38DS-04	250ml Poly	1	H_2SO_4	COD
9:46	2-GW38DS-04	500ml Poly	1	None	Alk, SO4, TDS, CL
9:46	2-GW38DS-04	1000ml Poly	1	None	TSS
9:46	2-GW38DS-04	1L amber	2	None	PAH, SVOC

Comments

well stabilized, ran dry. sampling recharge

Signature

10/5/04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 2WMW39DS

Date: 10·5·04
Sampler: Suzanne W.
PID Reading: 0.0

Start Time: 9:05 **End Time:** 9:47
Well Construction: 2" PVC
Depth to water: 2.83
Well Depth: 16.67
Water Column: 13.84
Total Volume Removed (L) 4.1

Field Testing Equipment

Make	Model	Serial #
YSI	650 MDS	04J15729 AF
YSI	600 XLM	04J15999 AC
LaMotte turbidimeter		0967-4598
Geopump 2		05277

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
9:06	.1	100	3.87	12.57	6.92	2.852	2.26	-121.4	65	clear
9:16	1	100	4.85	12.57	6.89	2.605	1.15	-102.9	8.5	clear
9:26	1	100	5.33	12.54	6.87	2.543	0.98	-93.3	5	clear
9:36	1	100	5.72	12.54	6.86	2.501	0.88	-88.2	3	clear
9:41	.5	100	5.49	12.55	6.85	2.486	0.84	87.4	2	clear
9:46	.5	100	5.51	12.56	6.84	2.450	0.80	90.2	2	clear
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
9:47	2-GW-39DS-04	40 ml vial	2	H_2SO_4	TOC
9:47	2-GW-39DS-04	250 ml poly	1	H_2SO_4	COD
9:47	2-GW-39DS-04	500 ml poly	2	HNO_3	Metals Tot & Dis (FT)
9:47	2-GW-39DS-04	500 ml poly	1	None	Alk, SO4, TDS, Cl
9:47	2-GW-39DS-04	950 ml poly	1	None	TSS
9:47	2-GW-39DS-04	1 L Ambers	2	None	SVOC, PAH, SIM

Comments

Suzanne Whiteside
Signature

10·5·04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: MW-40DS

Date: 10/5/04
Sampler: Fred Santos
PID Reading: 0

Start Time: 0910 **End Time:**
Well Construction: 2" PVC
Depth to water: 3.45
Well Depth: 16.40
Water Column: 12.95
Total Volume Removed (L)

Field Testing Equipment

Make	Model	Serial #
YSI	650	5771
YSI	600	5772
Lamotte	Turbidimeter	5502
GeoTech	Geopump 2	3740

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
0915	1.5	300	6.70	11.70	6.93	36.29	1.56	-301	2.8	Clear
0920	1.5	150	7.31	11.86	6.95	31.68	0.42	-350	61	Grayish
0930	1.5	150	9.81	12.34	6.97	20.83	0.98	-340	2.4	Clear
0940	1.5	150	11.29	12.22	7.03	23.94	0.24	-338	2.1	Clear
0950	1.5	150	13.79	11.98	6.95	24.91	1.58	-309	1.8	Clear
1000	1.5	150	14.11	11.29	6.90	26.39	1.05	-319	1.7	Clear
1003	0.45	150	14.13	11.30	6.91	27.22	1.06	-318	1.5	Clear
1006	0.45	150	14.15	11.31	6.90	27.71	1.04	-319	1.2	Clear
1009	0.45	150	14.18	11.32	6.90	27.80	1.02	-317	1.1	Clear
1012	0.45	150	14.22	11.33	6.90	27.89	1.01	-320	1.7	Clear
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
1015	2-GW40DS-04	500 ml poly	2	HNO_3	Total/Dissolved Metals
		40 ml vial	2	H_2SO_4	TOC
		250 ml poly	1	H_2SO_4	COD
		250 ml poly	1	None	Alk, SO4, TDS, CL
		1000 ml poly	1	None	TSS

Comments

Signature

10/5/04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 2WMW 41DS

Date: 10-5-04
Sampler: Suzanne W.
PID Reading: 0.0

Start Time: 11:55 **End Time:** 12:57
Well Construction: 2" PVC
Depth to water: 2.58
Well Depth: 16.32'
Water Column: 13.74'
Total Volume Removed (L) 6.1

Field Testing Equipment

Make	Model	Serial #
YSI	65D MDS	04J15729AF
YSI	600 XLM	04J15999AC
LaMotte turbidimeter		0967-4598
Geopump 2		
Solinst water level ind		

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
11:56	.1	100	3.03	15.02	6.98	31.99	2.25	-245.3	39	clear
12:06	1	100	4.28	13.55	7.00	30.46	0.13	-355.9	17	clear
12:16	1	100	5.23	13.15	6.97	27.22	0.38	-351.9	12	clear
12:26	1	100	6.29	12.91	6.96	25.79	0.39	-345.6	9	clear
12:36	1	100	6.94	12.83	6.95	23.58	0.35	-343.1	7	clear
12:46	1	100	7.24	12.83	6.92	20.52	0.33	-336.4	7	clear
12:51	.5	100	7.64	12.83	6.92	20.46	0.31	-336.7	7	clear
12:56	.5	100	7.93	12.83	6.92	20.	0.32	-336.9	6	clear
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
12:57	2-GW41DS-04	40 ml vial	2	H_2SO_4	TOC
12:57	2-GW41DS-04	250 ml poly	1	H_2SO_4	COD
12:57	2-GW41DS-04	500 ml poly	2	HNO_3	Metals, Tot & dis (FF)
12:57	2-GW41DS-04	500 ml poly	1	None	Alk, SO4, TDS, Cl
12:57	2-GW41DS-04	950 ml poly	1	None	TSS
12:57	2-GW41DS-04	1 L Amber	2	None	SVOC, PAH, SIM

Comments

Suzanne Whitbeck
Signature

10-5-04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 2W2MW42DS

Date: 10-6-04
Sampler: M. Martin
PID Reading:

Start Time: 0823 **End Time:** 0930
Well Construction: 2" PVC
Depth to water: 2.27
Well Depth: 16.02
Water Column: 13.75
Total Volume Removed (L) 9.6

Field Testing Equipment

Make	Model	Serial #
YSI		04B002AD
Sonde		04E8624AB
GeoPump2	Peristaltic	01741
Lamotte	Turbidimeter	5297-3504

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
0833	3	200	4.5	11.17	7.0	30.12	0.14	-308.9	18.4	clear w/black flakes
0843	2	200	5.65	11.24	6.85	21.11	0.16	-298.3	15.1	
0853	1	100	6.71	11.29	6.77	18.54	0.87	-291.3	13.05	
0903	1	100	8.03	11.24	6.72	17.16	3.74	-286.4	12.7	
0913	1	100	9.54	11.17	6.67	14.81	4.92	-308.6	13.1	
0923	1	100	10.21	11.18	6.65	14.96	5.8	-310.6	14.2	
0926	0.3	100	10.5	11.19	6.65	14.06	5.99	-307.9	14.5	
0929	0.3	100	10.61	11.15	6.64	13.81	6.17	-305.4	13.8	
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
0930	2GW42DS-04	40 mL voa	2	H_2SO_4	TOC
		1L amber	2	—	SVOC, PAH
		500 mL poly	2	HNO_3	T&D Metals
		500 mL poly	1	—	Alk, SO_4, Cl, TDS
		250 mL poly	1	H_2SO_4	COD
		1L poly	1	—	TSS

Comments ~~field duplicate same as above~~ ~~2-GW1006-04~~
~~NO FD collected~~ b/c well almost ran dry

M. M.
Signature

10-6-04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 2WMW43DS

Date: 10-6-04
Sampler: M. Murphy
PID Reading:

Start Time: 1100 **End Time:** 1240
Well Construction: 2"PVC
Depth to water: 2.7
Well Depth: 15.58
Water Column: 12.88
Total Volume Removed (L) 9.9

Field Testing Equipment

Make	Model	Serial #
YSI		~~04E80~~ 01K0981AB
Sonde		01K0643AD
GeoPump	Peristaltic	01741
Lamotte	Turbidimeter	5297-3504

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
1110	1	100	4.95	11.95	6.67	48.57	3.7	-344.7	20.3	clear w/ black flks
1125	1.5	|	7.05	12.85	6.68	42.14	9.81	-358.5	8	|
1135	1	|	7.65	13	6.72	36.71	10.67	-354.7	8	|
1150	1.5	|	8.93	13.04	6.79	31.27	11.73	-361.5	7	|
1200	1	|	9.75	12.98	6.79	33.19	12.21	-362.1	8	|
1205	0.5	|	9.99	13.04	6.81	33.29	12.9	-367.3	9	|
1210	0.5	|	10.39	13	6.82	33.14	10.42	-366.7	9	|
1220	1	|	10.71	13.04	6.82	33.21	7.67	-365.1	8	|
1230	1	|	11.4	13.02	6.81	33.3	4.56	-365.7	6	|
1233	0.3	|	11.62	13.02	6.8	33.46	4.01	-363.1	6	|
1236	0.3	|	12.09	13.04	6.8	33.55	3.86	-362.3	6	|
1239	0.3	|	12.6	13.06	6.8	33.84	3.7	-360.1	6	|
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
1240	2-GW43DS-04	40 mL voa	2	H_2SO_4	TOC
|	|	1 L amber	2	–	SVOC, PAH
|	|	500 mL poly	2	HNO_3	T&D Metals
|	|	500 mL |	1	–	TDS, Alk, Cl, SO_4
|	|	250 mL |	1	H_2SO_4	COD
|	|	1 L |	1	–	TSS

Comments checked DO w/ extra YSI (04D8002 AD / 04E8824 AB), conc. were in agreement
well ran dry during sampling, there was
enough recharge to collect all sample by day's end

Signature

10-6-04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: ~~Site 07 - Calf Pasture Point~~ Area A
Date: 10-6-04
Location: ~~North Kingstown, RI~~ New London, NSB
Sampler: [illegible]
Well ID: 2GMW44DS
PID Reading:

Start Time: 1250 End Time: 1451
Well Construction: 2" PVC
Depth to water: 1.77
Well Depth: 16.58
Water Column: 14.81
Total Volume Removed (L) 12

Field Testing Equipment

Make	Model	Serial #
YSI		01K0981 AB
Sonde		01K0643 AB
GeoPump	Peristaltic	01741
Lamotte	Turbidimeter	5297-3504

Time	volume removed (liters)	Flow Rate (ml/min)	~~drawdown~~ Depth to H2O (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Salinity (ppt)	color
1310	2	100	4.1	13.41	6.97	49.3	1.21	-379.5	17.4		hazy
1320	1		6.3	13.15	6.98	46.24	1.73	-377.5	11		clear
1330	1		7.15	13.9	6.97	39.39	0.15	-377.9	9		"
1340	1		8.33	13.98	6.97	28.47	0.07	-374.1	8		"
1350	1		9.3	13.92	6.91	19.07	0.11	-366.6	10.9		"
1400	1		10.35	13.81	6.96	13.33	1.1	-364.0	13.1		"
1410	1		12.1	13.72	6.98	15.35	1.5	-359.7	15.4		"
1420	1		13.2	13.47	6.99	26.52	1.66	-357.6	25.6		hazy
1430	1		13.8	13.39	7.04	21.0	0.54	-362.7	30		hazy
1440	1		14.5	13.23	7.05	20.93	1.2	-353.4	22.2		"
1450	1		15.21	13.13	7.04	19.84	1.01	-355.1	25.1		"
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%		

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
1451	2-GW44DS-04	40 mL vom	2	H_2SO_4	TOC
		1 L amber	2	—	SVOC, PAH
		500 mL poly	2	HNO_3	TAL Metals
		500 mL	1	—	Alk, SO_4, Cl, TDS
		250 mL	1	H_2SO_4	COD
		1 L	1	—	TSS

Comments

sampled metals, SVOC & PAH on 10-6-04

Signature

10-6-04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 45 DS

Date: 10-6-04
Sampler: Suzanne W.
PID Reading: 0.0

Start Time: 10:46 **End Time:** 11:48
Well Construction: 2" PVC
Depth to water: 2.45
Well Depth: 16.67
Water Column: 14.22
Total Volume Removed (L) 6.1

Field Testing Equipment

Make	Model	Serial #
YSI	650 MDS	04J15729AF
YSI	600 XLM	04J15999AC
LaMotte turbidimeter		5296-3504
Geopump 2		05277

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
10:47	.1	100	3.15	12.73	6.94	48.90	5.67	-327.2	45	clear
10:57	1	100	4.14	13.95	6.94	51.33	2.58	-366.4	12	clear
11:07	1	100	5.02	14.14	6.94	50.65	2.57	-377.3	7	clear
11:17	1	100	5.61	14.91	6.97	48.13	2.59	-384.7	6	clear
11:27	1	100	5.84	14.95	6.97	47.71	2.58	-384.1	5	clear
11:37	1	100	5.91	14.97	6.97	47.36	2.59	-383.2	5	clear
11:42	.5	100	5.95	15.00	6.97	47.33	2.58	-383.1	5	clear
11:47	.5	100	5.99	15.01	6.97	47.51	2.58	-383.2	5	clear
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
11:48	2-GW-45DS-04	40 ml vial	2	H_2SO_4	TOC
11:48	2-GW-45DS-04	250 ml poly	1	H_2SO_4	COD
11:48	2-GW-45DS-04	500 ml poly	2	HNO_3	Metals, tot & dis (F F)
11:48	2-GW-45DS-04	500 ml poly	1	None	Alk, SO4, TDS, Cl
11:48	2-GW-45DS-04	950 ml poly	1	None	TSS
11:48	2-GW-45DS-04	1 L Amber	2	None	SVOC, PAH, SIM

00:00 2-GW1006-04 — same bottles as above

Comments

sulphur-like odor

Suzanne Whiteside
Signature

10-6-04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 46DS

Date: 10-6-04
Sampler: Suzanne W.
PID Reading: 0.0

Start Time: 8:48 **End Time:** 9:50
Well Construction: 2" PVC
Depth to water: 1.82
Well Depth: 16.57
Water Column: 14.75
Total Volume Removed (L) 6.1

Field Testing Equipment

Make	Model	Serial #
YSI	650 MDS	04J15729AF
YSI	606 XLM	04J15999AC
LaMotte turbidimeter		5296-3504
Geopump 2		05277
Solinst water level		1790

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
8:49	.1	100	2.80	10.33	7.10	52.43	6.36	-295.9	210	clear
8:59	1	100	3.69	10.75	7.17	54.06	0.41	-364.4	34	clear
9:09	1	100	4.52	10.98	7.15	53.87	0.52	-364.2	15	clear
9:19	1	100	4.93	11.10	7.14	53.89	0.51	-362.9	15	clear
9:29	1	100	5.09	11.20	7.11	53.62	0.50	-379.9	10	clear
9:39	1	100	5.16	11.23	7.09	53.52	0.49	-373.0	9	clear
9:44	.5	100	5.22	11.28	7.07	53.25	0.48	-368.8	9	clear
9:49	.5	100	5.25	11.29	7.07	53.22	0.48	-368.6	8	clear
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
9:50	2-GW46DS-04	40 ml vial	2	H_2SO_4	TOC
9:50	2-GW46DS-04	250 ml poly	1	H_2SO_4	COD
9:50	2-GW46DS-04	500 ml poly	2	HNO_3	Metals Tot & dis (FF)
9:50	2-GW46DS-04	500 ml poly	1	None	Alk, SO4, TDS, Cl
9:50	2-GW46DS-04	950 ml poly	1	None	TSS
9:50	2-GW46DS-04	1 L Amber	2	None	SVOC, PAH, SIM

Comments

sulphur like odor -

Suzanne Whiteside
Signature

10-6-04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 2-GW47DS-04

Date: 10/5/04
Sampler: David C.
PID Reading: 0.0 ppm

Start Time: 11:53 **End Time:** 13:11
Well Construction: 2" PVC peristaltic
Depth to water: 1.59'
Well Depth: 16.28'
Water Column: 14.69'
Total Volume Removed (L) 7.8

Field Testing Equipment

Make	Model	Serial #
YSI	650MDS	04J15729 AG
YSI	600XL	04J15999 AB
Lamotte	Turbidimeter	5297-3504
Geopump²	Peristaltic	05640

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm C	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
11:55	0.2	100	2.19	13.86	6.75	30.47	4.72	-264	19	clear
12:05	1	100	3.09	14.25	6.74	26.93	5.55	-251	16	clear
12:15	1	100	3.72	14.26	6.68	21.43	5.05	-225	11	clear
12:25	1	100	4.20	14.38	6.62	15.44	4.80	-223	17	clear
12:35	1	100	4.53	14.61	6.56	11.01	4.72	-226	19	clear
12:45	1	100	4.82	14.87	6.55	7.44	4.69	-224	18	clear
12:50	0.5	100	4.93	14.97	6.58	6.86	4.58	-222	18	clear
12:55	0.5	100	5.04	15.06	6.60	6.50	4.59	-235	19	clear
13:00	0.5	100	5.09	15.22	6.61	6.21	4.39	-218	19	clear
13:05	0.5	100	5.16	15.16	6.60	6.24	4.17	-217	20	clear
13:08	0.3	100	5.18	15.14	6.60	6.13	4.15	-217	20	clear
13:11	0.3	100	5.23	15.17	6.60	6.08	3.96	-219	21	clear
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
13:11	2-GW47DS-04	500ml Poly	2	HNO_3	metals ; Hardness, Dissolved metals (FF)
13:11	2-GW47DS-04	40ml vial	2	H_2SO_4	TOC
13:11	2-GW47DS-04	250ml poly	1	H_2SO_4	COD
13:11	2-GW47DS-04	500ml Poly	1	None	Alk, SO4, ~~None~~ NO3 TDS, Cl
13:11	2-GW47DS-04	1000ml Poly	1	None	TSS
13:11	2-GW47DS-04	1 L amber	2	None	PAH, SVOC
00:00	2-100504	same containers & analyses as above (Field Duplicate)			

Comments

13:11 2-GW47DS-04-MS/MSD same containers & analyses as above X2

Signature

10/5/04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 3MW12D

Date: 10-5-04
Sampler: M. Martin
PID Reading:

Start Time: 1340 **End Time:** 1454
Well Construction: 2" PVC
Depth to water: 4.91
Well Depth: 27.27
Water Column: 22.36
Total Volume Removed (L) 15.3

Field Testing Equipment

Make	Model	Serial #
YSI		04D8002 MD
Solo		04E8624 MB
GeoPump 2	Peristaltic	01741
Lamotte	Turbidimeter	5296-3504

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
1350	2.5	250	4.96	13.01	6.09	3.538	1.35	-93.2	3.7	clear
1400	2.5	250	4.96	12.98	6.07	3.526	1.34	-99.5	2	"
1410	2.5	250	4.96	13.27	6.07	3.523	1.75	-104.3	3.0	"
1420	2.5	250	4.96	13.04	6.07	3.509	2.07	-105.9	3.0	"
1430	2	200	4.96	12.57	6.04	3.499	2.34	-107.2	1	"
1440	2	200	4.96	12.52	6.04	3.493	2.8	-107.9	1	"
1445	0.5	100	4.95	12.66	6.05	3.482	2.99	-107.9	0.8	"
1450	0.5	100	4.95	12.77	6.04	3.487	3.1	-107.2	0.9	"
1453	0.3	100	4.95	12.79	6.05	3.489	3.27	-106.6	0.8	"
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
1454	3-GW12D-04	40mL vom	2	H_2SO_4	TOC
		1 L amber	2	–	SVOC, PCB
		500mL poly	2	HNO_3	TRD Metals
		500mL poly	1	–	Alk, SO4, TDS, Cl
		250mL poly	1	H_2SO_4	COD
		1 L poly	1	–	TSS

Comments

Signature

10-5-04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 3MW37S

Date: 10-5-04
Sampler: M. Marden
PID Reading:

Start Time: 1225 **End Time:** 1307
Well Construction: 2" PVC
Depth to water: 3.73
Well Depth: 8.02
Water Column: 4.29
Total Volume Removed (L) 4.95

Field Testing Equipment

Make	Model	Serial #
YSI		04D8002 AD
Solinst		0458624 AB
GeoPump2	Peristaltic	01741
Lamotte	Turbidimeter	5296-3504

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
1230	0.85	170	4.13	15.51	6.47	9.048	1.73	-273.3	120	hazy brown
1240	1.5	150	4.12	14.46	6.2	1.897	1.14	-237.9	13	clear
1250	1.0	100	4.08	14.14	6.12	1.55	1.2	-230.0	6	"
1255	0.5	100	4.08	14.09	6.12	1.515	1.17	-228.2	3	"
1300	0.5	100	4.1	13.9	6.1	1.433	1.04	-228.3	1	"
1303	0.3	100	4.1	13.84	6.08	1.420	1.03	-228.2	1	"
1306	0.3	100	4.1	13.78	6.07	1.405	0.98	-225.5	1	"
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
1307	3-GW37S-04	40 mL vom	2	H_2SO_4	TOC
		1L amber	2	–	SVOC, PAH
		500mL poly	2	HNO_3	T&D metals
		500mL poly	1	–	Alk, SO_4, TDS, Cl
		250mL poly	1	H_2SO_4	COD
		1L poly	1	–	TSS

Comments

M. M
Signature

10-5-04
Date

Environmental Chemical Corporation

Low Flow/Low Stress Groundwater Sampling Log

Project: Area A Landfill
Location: New London, CT
Well ID: 4MW15

Date: 10/6/04
Sampler: David C.
PID Reading: 0.0ppm

Start Time: 10:37 **End Time:** 11:40
Well Construction: 2" PVC Peristaltic
Depth to water: 8.55'
Well Depth: 20.01'
Water Column: 11.46'
Total Volume Removed (L) 7.71

Field Testing Equipment

Make	Model	Serial #
YSI	650MDS	04J15729 AG
YSI	600XL	04J15999 AB
Lamotte	Turbidimeter	0967-4598
Geopump²	Peristaltic	05640

Time	volume removed (liters)	Flow Rate (ml/min)	Depth To Water (ft)	Temp (celsius)	pH (STD)	SPC mS/cm[c]	DO (mg/L)	ORP (mV)	Turbidity (NTU)	color
10:40	0.51	170	8.60	15.65	5.77	0.35	6.07	172	1	clear
10:50	1.2	120	8.61	15.66	5.76	0.33	5.95	190	0	clear
11:00	1.2	120	8.62	15.68	5.75	0.33	5.84	208	0	clear
11:10	1.2	120	8.63	15.75	5.75	0.33	5.89	217	0	clear
11:20	1.2	120	8.65	15.65	5.75	0.33	5.86	223	0	clear
11:30	1.2	120	8.67	15.59	5.74	0.33	5.80	227	0	clear
11:35	0.6	120	8.68	15.59	5.74	0.33	5.82	229	0	clear
11:40	0.6	120	8.69	15.56	5.74	0.33	5.86	230	0	clear
Acceptance Criteria:			< 0.3 ft	3%	± 0.1	3%	10%	±10mv	10%	

2" screen volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
11:40	4-GW15-04	40ml vial	2	H_2SO_4	TOC
11:40	4-GW15-04	250ml Poly	1	H_2SO_4	COD
11:40	4-GW15-04	500ml Poly	2	HNO_3	inorganics & hardness, dissolved metals (FF)
11:40	4-GW15-04	500ml Poly	1	None	Alk, SO4, TDS, Cl
11:40	4-GW15-04	1000ml Poly	1	None	TSS
11:40	4-GW15-04	1L amber	2	None	PAH, SVOC

Comments

Signature

10/6/04
Date

Environmental Chemical Corporation

Seep/Surface Water Sampling Log

Project: Area A Landfill
Location: New London, CT
Sample Location ID: 2-SW18-04

Date: 10-5-04
Sampler: Suzanne W.

Field Testing Equipment

Make	Model	Serial #
YSI	650 MDS	04J15729AF
YSI	600 XLM	04J15999AC
LaMotte	turbidimeter	0967-4598

Time	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Color
13:00	13.88	6.47	0.851	1.65	168.30	70	

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
13:05	2-SW18-04	40 ml vial	2	H_2SO_4	TOC
13:05	2-SW18-04	250 ml poly	1	H_2SO_4	COD
13:05	2-SW18-04	500 ml poly	2	None	Alk, SO4, TDS, CL, Di-Nit
13:05	2-SW18-04	500 ml poly	1	HNO_3	Total Metals
13:05	2-SW18-04	950 ml poly	1	None	TSS
13:05	2-SW18-04	1 L Amber	2	None	SVOC, PAH, SIM

Comments

Suzanne Whiteside
Signature

10-5-04
Date

Environmental Chemical Corporation

Seep/Surface Water Sampling Log

Project: Area A Landfill

Location: New London, CT

Sample Location ID: SW-19

Date: 10-6-04

Sampler: M. [illegible]

Field Testing Equipment

Make	Model	Serial #
YSI		04D8002 AD
Solinst		04E8041 AB
~~Geotump~~	~~Peristaltic~~	~~01741~~
Lamotte	Turbidimeter	5247-3504

Time	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Color
0955	8.27	6.31	0.583	1.33	-202.2	17.5	~~[illegible]~~ clear

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
1000	2-SW19-04	40 mL voa	2	H_2SO_4	TOC
		1L amber	2	-	SVOC, PAH
		500 mL poly	2	HNO_3	T&D Metals
		500 mL poly	1	-	Alk, SO_4, Cl, TDS
		250 mL	1	H_2SO_4	COD
		1 L	1	-	TSS

Comments

MS same as above

MSD same as above

FD same as above 2-SW1006-04

M. M[illegible]

Signature

10-6-04

Date

Environmental Chemical Corporation

Seep/Surface Water Sampling Log

Project: Area A Landfill
Location: New London, CT
Sample Location ID: SW-20

Date: 10-6-04
Sampler: M. Marsden

Field Testing Equipment

Make	Model	Serial #
YSI		01K0981 AB
Solinst		01K0643 AB
Lamotte Turbidimeter		5297-3504

Time	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Color
1200	11.76	6.24	0.634	1.5	-239.1	3.2	clear

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
1205	2-SW20-04	40 mL vial	2	H_2SO_4	TOC
		1L amber	2	—	SVOC, PAH
		500 mL poly	2	HNO_3	T&D Metals
		500 mL	1	—	Alk, SO_4, Cl, TDS
		250 mL	1	H_2SO_4	COD
		1 L	1	—	TSS

Comments

M. Marsden
Signature

10-6-04
Date

Environmental Chemical Corporation

Seep/Surface Water Sampling Log

Project: Area A Landfill

Location: New London, CT

Sample Location ID: SW-~~20~~ 21 ~~24~~

Date: 10-6-04

Sampler: M. Marden

Field Testing Equipment

Make	Model	Serial #
YSI		04D8002 AD
Sonde		04E8624 AB
Lamotte	Turbidimeter	5297-3504

Time	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Color
1415	13.25	6.06	0.550	1.06	-10.3	7.57	clear

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
1420	2-SW~~20~~-04 21/24	40mL voa	2	H_2SO_4	TOC
		1L amber	2	—	SVOC, PAH
		500mL poly	2	HNO_3	T&D Metals
		500mL	1	—	Alk, Cl, SO_4, TDS
		250mL	1	H_2SO_4	COD
		1L	1	—	TSS

Comments

Signature

10-6-04
Date

Environmental Chemical Corporation

Seep/Surface Water Sampling Log

Project: Area A Landfill
Location: New London, CT
Sample Location ID: SW 23

Date: 10-6-04
Sampler: Suzanne W.

Field Testing Equipment

Make	Model	Serial #
YSI	650 MDS	04J15729 AF
YSI	600 XLM	04J15999 AC
LaMotte turbidimeter		5296-3504

Time	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Color
10:02	8.99	6.21	0.345	4.95	-220.7	31	clear

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
10:00	2-SW23-04	40 ml vial	2	H_2SO_4	TOC
10:00	2-SW23-04	250 ml poly	1	H_2SO_4	COD
10:00	2-SW23-04	500 ml poly	2	None	DisMet, Alk, SO4, TDS, Cl
10:00	2-SW23-04	500 ml poly	1	HNO_3	Total Metals
10:00	2-SW23-04	950 ml poly	1	None	TSS
10:00	2-SW23-04	1 L Amber	2	None	SVOC, PAH, SIM

Comments

Suzanne Whiteside
Signature

10-6-04
Date

Environmental Chemical Corporation

Seep/Surface Water Sampling Log

Project: Area A Landfill
Location: New London, CT
Sample Location ID: SW 22

Date: 10-6-04
Sampler: Suzanne W.

Field Testing Equipment

Make	Model	Serial #
YSI	650 MDS	04J15729AF
YSI	600 XLM	04J15999AC
LaMotte	turbidimeter	5296-3504

Time	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Color
12:12	11.98	6.32	0.861	6.11	-213.7	39	clear

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
12:10	2-SW22-04	40 ml vial	2	H_2SO_4	TOC
12:10	2-SW22-04	250 ml poly	1	H_2SO_4	COD
12:10	2-SW22-04	500 ml poly	2	None	Dis Met, Alk, SO_4, TDS, Cl
12:10	2-SW22-04	500 ml poly	1	HNO_3	Total Metals
12:10	2-SW22-04	950 ml poly	1	None	TSS
12:10	2-SW22-04	1 L Amber	2	None	SVOC, PAH, SIM

Comments

Suzanne Whiteside
Signature

10-6-04
Date

Environmental Chemical Corporation

Seep/Surface Water Sampling Log

Project: Area A Landfill
Location: New London, CT
Sample Location ID: SG-24

Date: 10/5/04
Sampler: David C.

Field Testing Equipment

Make	Model	Serial #
YSI	650MDS	04J15729 AG
YSI	600XL	04J15999 AB
Lamotte	Turbidimeter	5297-3504

Time	Temp (celsius)	pH (STD)	SPC mS/cm C	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Color
1410	13.25	5.95	0.28	5.11	-180	5	clear

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
1430	2-SW24-04	500ml poly	2	HNO_3	Metals ; Hardness, Diss Metals (Lab Filter)
1430	2-SW24-04	40ml vial	2	H_2SO_4	TOC
1430	2-SW24-04	250ml Poly	1	H_2SO_4	COD
1430	2-SW24-04	500ml Poly	1	NONE	Alk, SO4, TDS, Cl
1430	2-SW24-04	1000ml Poly	1	NONE	TSS
1430	2-SW24-04	1L amber	2	NONE	PAH, SVOC

Comments

Signature

10/5/04
Date

Environmental Chemical Corporation

Seep/Surface Water Sampling Log

Project: Area A Landfill
Location: New London, CT
Sample Location ID: SP-01

Date: 10/5/04
Sampler: Fred S

Field Testing Equipment

Make	Model	Serial #
YSI	650	
YSI	600	
Lamotte	Turbidimeter	5296-3504

Time	Temp (celsius)	pH (STD)	SPC mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Color
1300	14.08	6.15	1.376	2.28	-8.8	12	clear

Sample Collection

Time	Sample ID	Container	# of Bottles	Preservative	Analyses
1315	3-SP01-04	40 mL voa	2	H_2SO_4	TOC
↓	↓	1L amber	2	–	SVOC, PAH
		500 mL poly	2	HNO_3	TAD Metals
		500 mL poly	1	–	Alk, SO_4, Cl, TDS
		250 mL poly	1	H_2SO_4	COD
		1L poly	1	–	TSS

Comments

Signature

10/5/04
Date

INSTRUMENT CALIBRATION LOG

Project/Site Name Area A Landfill **Date** 10-6-04 **Weather** _____

Calibrated By Suzanne W. **Instrument** YSI 650 / YSI 600 XLM **Serial Number** 04J15729AF / 04J15999AC

Parameters	Pre-calibration Reading	Post-calibration Reading	Temperature °C	Comments
Conductivity 1.413	1.389	1.426	14.41	
pH (7)	7.01	7.11	14.22	
pH (4)	4.00	3.98	14.32	
pH (10)	9.95	9.83	14.18	
ORP 240	240.9	231.5	14.20	
Dissolved Oxygen	99.4%	105.6%	14.24	
Barometric Pressure	760.	760		

INSTRUMENT CALIBRATION LOG

Project/Site Name Area A Landfill **Date** 10-6-04 **Weather** Sunny 65°

Calibrated By Suzanne **Instrument** YSI 650 MDS, YSI 600XLM **Serial Number** 01K0981AB, 01K0643AB

Parameters	Pre-calibration Reading	Post-calibration Reading	Temperature °C	Comments
Conductivity 1.413	1.266	1.459	14.69	
pH (7)	7.05	6.95	14.58	
pH (4)	3.86	3.99	14.69	
pH (10)	10.01	9.95	14.62	
ORP 240.	241.2	238.5	14.88	
Dissolved Oxygen	102.6%	100.2%	15.03	
Barometric Pressure	758.0	772.0		

INSTRUMENT CALIBRATION LOG

Project/Site Name Area A Landfill **Date** 10·6·04 **Weather** 60°, Sunny

Calibrated By Suzanne **Instrument** YSI sonde **Serial Number** 04J015729 AG 04J15999 AB

Parameters	Pre-calibration Reading	Post-calibration Reading	Temperature °C	Comments
Conductivity 1.413	1.375	1.376	14.36	
pH (7)	7.04	8.99	14.23	
pH (4)	3.86	3.96	14.37	
pH (10)	9.83	9.93	14.22	
ORP 240.	241.9	238.9	14.44	
Dissolved Oxygen	92.3%	110.4	15.03	
Barometric Pressure	760	760		

INSTRUMENT CALIBRATION LOG

Project/Site Name Area A Landfill **Date** 10-6-04 **Weather** 60's Sunny

Calibrated By Suzanne **Instrument** YSI / YSI Sonde **Serial Number** 04D8002AP / 04E8624AB

Parameters	Pre-calibration Reading	Post-calibration Reading	Temperature °C	Comments
Conductivity 1.413	1.455	1.3	14.45	
pH (7)	6.90	7.05	14.42	
pH (4)	4.0	3.94	14.49	
pH (10)	9.92	9.93	14.36	
ORP	246.9	336.5	14.64	
Dissolved Oxygen	94.0	97.0%	14.19	
Barometric Pressure	758.6	760.6		

INSTRUMENT CALIBRATION LOG

Project/Site Name Area A Landfill **Date** 10-5-04 **Weather** sun, mild 65°

Calibrated By Suzanne **Instrument** YSI Sonde **Serial Number** 04J15729 AG 04J15999 AB

Parameters	Pre-calibration Reading	Post-calibration Reading	Temperature °C	Comments
Conductivity 1.413	1.448	1.375	14.78	
pH (7)	7.04	7.04	14.70	
pH (4)	3.96	3.86	14.77	
pH (10)	9.95	9.83	15.08	
ORP 240	246.5	241.9	14.80	
Dissolved Oxygen	97.3%	92.3%	14.81	new membrane
Barometric Pressure	760.			

INSTRUMENT CALIBRATION LOG

Project/Site Name Area A Landfill **Date** 10-5-04 **Weather** sun, mild 65°

Calibrated By Suzanne **Instrument** YSI Sonde **Serial Number** 04J15729AF 04J15999AC

Parameters	Pre-calibration Reading	Post-calibration Reading	Temperature °C	Comments
Conductivity 1.413	1.042	1.389	15.10	
pH (7)	7.03	7.01	15.03	
pH (4)	3.87	4.00	15.09	
pH (10)	9.94	9.95	15.30	
ORP 240.	242.2	240.9	15.23	
Dissolved Oxygen	110.4%	99.4%	14.58	
Barometric Pressure	760.			

INSTRUMENT CALIBRATION LOG

Project/Site Name Area A Landfill **Date** Oct 5, 2004 **Weather** Sun, mild 45°

Calibrated By Suzanne **Instrument** YSI Sonde **Serial Number** 04D8002AD 04E8624AB

Parameters	Pre-calibration Reading	Post-calibration Reading	Temperature °C	Comments
Conductivity 1.413	1.278	1.44	14.66	
pH (7)	7.10	6.99	14.99	
pH (4)	3.85	4.02	15.00	
pH (10)	9.88	9.95	15.20	
ORP 240.	240.	246	15.19	
Dissolved Oxygen	99.8%	94.6%	14.80	new membrane
Barometric Pressure	758.3	758.6		

APPENDIX E

Data Validation Memos and Laboratory Analytical Results

DATA VALIDATION MEMORANDUM – AREA A LANDFILL
O&M MONITORING SITES – NEW LONDON NSB
OCTOBER 2004 SAMPLING ROUND 15 (SDG 0410992 ALPHA LAB)

TO: ENGINEERING FIELD ACTIVITY NORTHEAST

FROM: JACKSON KIKER, ECC SENIOR CHEMIST, MARLBOROUGH, MA.

SUBJECT: NEW LONDON NSB – IRP O&M MONITORING SITES - SAMPLING ROUND-15, OCTOBER '04

DATE: 1/20/2005

Project data were validated using the following Validation Functional Guideline, as modified for non-CLP methods.

1. Region I, EPA-NE Data Validation Functional Guidelines for Evaluation of Environmental Analyses (Dec, 1996).

2. Operations and Maintenance Manual for Installation Restoration Program at Naval Submarine Base New London (Nov, 2002).

The validation guideline exceedences are assessed and documented on the method specific data validation worksheet. On the data validation worksheet, the data quality acceptance criteria are presented, analytes requiring qualification based on laboratory historical control limits and/or validation guidance criteria exceedences are listed, assigned qualifiers, qualifying rationale is documented, and any potential bias noted. The overall evaluation of the data generated is presented in the data validation worksheet.

Standard EPA Region I data qualifiers are used to denote the assessment of data quality. The final and ranking assigned data qualifier for an analyte is presented in the data summary table. Ancillary qualifiers are noted on the data validation worksheets.

As an exception to the USEPA Region I data validation guidance, non-target ketone VOC data with response factors (RFs) less than the 0.05 were not qualified, as the Tier guidance allows for exceptions to the RF guidance.

The USEPA Region I Organic Regional Data Assessment (ORDA) sheet displays the summarized results of the data validation assessment for all analytical methods reported in the SDG.

Region I, EPA-NE ORGANIC REGIONAL DATA ASSESSMENT

LAB NAME: Alpha Lab
SDG #:__0410992_____
EPA-NE DV TIER LEVEL:___II___
SITE NAME: Area A New London NSB – O&M

# of SAMPLES/MATRIX:___6-GW, 3-SW, 1FD/aqueous
VALIDATION CONTRACTOR:__ECC
VALIDATOR'S NAME Guru Ranganathan
DV Completion Date:_January 14, 2004.
Date Sampled__October 05, 2004 _____

ANALYTICAL DATA QUALITY SUMMARY

		SVOC	PAH	Metals
1	Preservation and HT	O	O	O
2	Instrument Performance Check	O	O	O
3	Initial Calibration:	M	O	O
4	Continuing Calibration:	O	O	O
5	Blanks:	O	M	M
6	Surrogate Compounds:	O	O	-
7	Internal Standards	O	O	-
8	Matrix Spike/Matrix Spike Duplicate:	O	O	M
9	Sensitivity Check:	O	O	O
10	PE Samples- Accuracy Check	O	O	O
11	Target Compound Identification:	O	O	O
12	Compound Quantitation and Reported QLs	O	O	O
13	Tentatively Identified Compounds:	-	-	-
14	Semivolatile/Pesticide/PCB Cleanup:	-	-	-
15	Data Completeness	O	O	O
16	Overall Evaluation of Data:	O	O	O

O = Data had no problems or were qualified due to minor contractual problems; M = Data were qualified due to major/systemic MPC exceedences: Z = Data were rejected as unusable due to major contractual problems.

ACTION ITEMS: (Z items): _

AREAS OF CONCERN: (M items): _.

SVOC: ICV %D outside MPC limits for 2, 4, 5-trichlorophenol and 2, 4-dinitrophenol.

PAH: Method blank was detected with naphthalene – sample 03 result for naphthalene was qualified U due to method blank detection.

Metals: Sample results were qualified due to ICB and Preparation blank contaminations - please refer to the data review worksheets for the results that were qualified. MS %R's within limits for total and dissolved analyses except for Hg. Serial dilution: outside MPC limits for Al, Mn, Ca, Na & K in total and dissolved metals, total Mg and total Fe results. Total and dissolved Zn results were qualified J due to high lab duplicate RPD's (except the ones qualified U due to blank contamination).

ECC Region I Data Review Worksheet (rv 2) **SVOCs 8270C**
Project: New London Area A – ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual (2002)**

Data Validation Level	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
Tier II	**Aqueous**	**-**	**4-coolers 3.4, 2.7, 1.6 & 0.7 °C**	**Alpha Laboratory Westborough, MA**	**0410992**

Field Identification of Samples Evaluated:

Field Sample ID	Lab Sample ID
3-GW37S-04	L0410992-01
2-GW39DS-04	L0410992-02
2-SW18-04	L0410992-03
3-SP01-04	L0410992-04
2-GW41DS-04	L0410992-05
3-GW12D-04	L0410992-06
2-GW40DS-04	L0410992-07
2-GW47DS-04	L0410992-08
2-SW24-04	L0410992-09
2-100504	L0410992-10 (field duplicate for sample 08)

Note: Samples are described below in the data worksheets by reference to the last two digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
COC, Sample Delivery Group Form.	1)Unbroken custody (accept or if broken R) 2) Temp≤6° (Soil-J detects, R -nondetects 3) preserved per method (amber bottles, temperature, HCl (aq), MeOH/NAHSO4 (soils) (J, UJ, or R (function of HT and compound)	Cooler temperatures < 6 °C in all the coolers. Sample preservation using ice adequate. Sample custody transferred from Field Team Leader to lab sample courier in person. Unbroken Chain of Custody. No samples qualified.	X	-	
Holding Time	1) 7 Days aqueous – 14 days soil (extract 40 days) 2) J –detects, UJ or R –nondetects (function of time)	Sample Date: October 5, 2004. Extraction Date: October 6, 2004. Analysis Date: October 7, 2004. Samples prepared and analyzed within holding times. No samples qualified.	X	-	
% Solids Check (SOLIDS)	30%<Solids: if no sample weight adjustment made (no USACE) 1) <10% R entire sample 2) 10%.> and <30%; J-detects, NDs -R	Not applicable	-	-	
Results > Cal Range or <Cal Range	1) >Upper Cal Range J-detects - ensure instrument blank performed 2) <PQL but >MDL – J –detects (estimated)	Data reported between the MDL and the MRL or exceeding upper calibration range qualified as estimated (J). Di-n-octyl phthalate result for sample 03 detected at a value less than MRL – qualified J.	X	Di-n-octyl phthalate result for sample 03 qualified J.	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIA S
TICs (if reported)	1) *verify library search for samples and blanks 2) verify TICs were not misreported compounds (different fraction or miss in search) 3) All TICs – J estimated 4) * verify blanks do not contain TIC peaks 5) * check TIC assignment spectra to STD spectra 6) *review blank and Samples for common lab contaminants	None Reported	X	-	
Internal Stds	1) IS are –50% to 200% of CCV 1) RRT<0.06 (30 sec) 2) IS>100% J-detects 3) IS<20%CCV NDs – R 4) IS>20%CCV <50%CCV NDs – UJ 5) *check for IS transcription errors	Internal standards were within MPC limits. No samples qualified.	X	-	
Equip Blank	< 5x (<10x common) contaminants for aq samples – for soil indicate EB (X rules don't apply)	Dedicated equipment – hence not collected/analyzed with this SDG	X	-	
Surrogates	Within historical laboratory limits Qualification: >UCL J –detects, %R<10% J –detects, R –NDs, %R >10% but <LCL% J-detects, UJ NDs	All surrogate recoveries within MPC limits for all samples – no sample qualifications.	X	-	
Lab Blanks (method blanks)	1) < 5x (<10x common) contaminants – U 2) analytes <lab PQL (contract lab) 3) no phthalates >5X QL (QAPP)	Lab blank was detected with diethyl phthalate at 2.8µg/L. All sample results for this compound were non-detects. No samples qualified.	X	-	
LCS Recovery	1) Within historical laboratory limits listed in (QAPP) 10% and <LCL% J detects, UJ –NDs >UCL% J detects <10% R NDs, J-detects	All LCS recoveries were within MPC limits. No sample qualified.	X	-	
MS/MSD Recovery	1) Within historical laboratory limits (QAPP) (if MS > 4X native levels) Qualification of MS sample: <10% J detects, R NDs >10% and <70% J detects, UJ -NDs >130% J detects	Native sample - sample 08. All MS recoveries were within MPC limits. High MSD recoveries for 2, 6-dinitrotoluene and butyl benzyl phthalate. All sample results for these two compounds were non-detects. No samples qualified.	X	-	
Cleanup Performance Check (if performed)	%R< 10% NDs-R detections J %R>10% <LCL (80%GPC) –detections J, NDs UJ %R>UCL (120%) – detections J Retention Time shift <5%, symmetrical peakshape. GPC check with interferants. Good surrogate recovery, GPC blank check – no carryover.(VOA/SV-IX-I6). Sulfur and High MW compounds removed. Symetrical peaks for all compounds,	NA	-	-	
MS/MSD RPD	RPD =30% aq, <50% (S) J –detects in MS sample UJ-non detects	All MS/MSD RPD's were within MPC limits for all compounds. No samples qualified.	X	-	
Tune Check	Tune check within method parameters for DFTPP	The raw data sheets were used for validation. CCV tune check within limits.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
DDT degradation Instrument performance check	1) Breakdown <20% DDT 2) benzidine and pentachlorophenol at normal response - no peak trailing (<3.0 benz. , <5.0 penta.) Detections – J	Degradation checks performed with associated tune checks were all within MPC limits.	X	-	
Field Dup RPD	1) RPD = 100% water; = 100% soil for Results > PQL (FD pair only) J-detects (both > PQL) 2) If one > PQL, other ND, J-detections, UJ non-detect Other conditions use judgement	Field duplicate pair: 08-10. All results non-detects in both pairs. Similar results for both the native sample and the field duplicate sample. No sample qualifications.	X	-	
Initial Cal (Linearity)	Correct calibration stds %RSD < 15% use average RF for calibration %RSD> 15% use least squares COD (r2) > 0.990 or correlation coefficient r> 0.995 or alternatively mean %RSD <15% for all target analytes, with no analyte %RSD>30% or %RSD<30% each target analyte 1) CCCs %RSD: <30% (acenatphthene, 1,4 dichlorobenzene, hexachlorobutadiene, dipheynlamin, di-n-octyl phthalate, fluoranthene, benzo(a)pyrene, 4-chloro-3-methylphenol, 2,4, dichlorophenol, 2-nitrophenol, phenol, pentachlorophenol, 2,4,6 trichlorophenol) J –detects, R or UJ NDs all samples associated with Ical) 2) SPCCs Average RRF > 0.05: SPCCs n-nitroso-di-n-propylamine, hexachlorcyclopentdiene, 2,4 dinitrophenol, 4-nitrophenol. (J –detects, R NDs) 3) RRF>0.05 all target compounds RRT < 0.06 units (all stds within 30 sec) 4) *verify that instrument parameters met method and that Ical and analysis used the same parameters 5) *recalculate RRF one tgt compound associated with each IS. Recalculated values within 10% of lab values. 6) *recalculate one tgt compound associated with each IS. Recalculated values within 10% 7) *option-review preparation logs to ensure cal stds are traceable to NIST stds. 8) *option-recalculate cal std concentration of one std. Must agree within 10% of lab (option if information is in data package)	Instrument: Buffy End date: October 01 at 11:04 (end time). RRF>0.05 all SVOCs. RSD<15% and/or COD>0.99 criteria used for linearity of SVOC Ical. Acceptable linearity. No samples qualified based on ICAL.	X	-	
2nd Source ICV	%R (between ICV and Ical) analytes 80%--120% (USACE) %D ≤ 25%, (+ or -) once per 5 pt cal Qualification: J detects, R or UJ NDs	Instrument: Buffy End date: October 01 at 02:19. All %D's within MPC limits for all compounds of concern except 2, 4, 5-trichlorophenol and 2, 4-dinitrophenol. The results for these 2 compounds – all non-detects – were qualified UJ.	X	2, 4, 5-trichlorophenol and 2, 4-dinitrophenol results qualified UJ.	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
CCV	1) SPCCs Average RRF: SPCCs n-nitroso-di-n-propylamine, hexachlorcyclopentdiene, 2,4 dinitrophenol, 4-nitrophenol. 2) RRF all compounds > 0.05 3) CCC: (acenatphthene, 1,4 dichlorobenzene, hexachlorobutadiene, dipheynlamin, di-n-octyl phthalate, fluoranthene, benzo(a)pyrene, 4-chloro-3-methylphenol, 2,4, dichlorophenol, 2-nitrophenol, phenol, pentachlorophenol, 2,4,6 trichlorophenol) 4) %D<20%. CCCs (QAPP -except surrogates). 5) Qualification-J detects, R or UJ Nods 6) %D<25% all compounds (Tier I). 7) RRF exclusions: surrogates, 8) *verify same instrument and parameters 9) *Recalculate RRF for one tgt cmpd associated with each IS. (within 10%) 10) *Recalculate %D for one tgt cmpd associated with each IS (within 10%) 11) *IS RRT<0.06 units (30 sec) 12) * IS area -50 % to 100 % of last ICAL 13) *option-review preparation logs to ensure cal stds are traceable to NIST stds. 14) *option-recalculate cal std concentration of one std. Must agree within 10% of lab (option if information is in data package)	Instrument: Buffy Date: October 07, 2004. %D within MPC limits for all compounds of concern – no sample qualifications.	X	-	
Compound Quantitation	1) Check sensitivy (MDL< 1/3 PQL or per QAPP)	For target SVOCs the MDL< 1/3 PQL. Analytical sensitivity is adequate. Reporting limits are below the monitoring criteria for all compounds.	X	-	
Overall Evaluation of Data	1) Appropriate method 2) Evaluate any analytical problems 3) Evaluate sampling errors – field contamination, sample hold times	The laboratory accuracy and precision were acceptable. No apparent sample bias. Results are usable for making project decisions as qualified. Method blank was detected with diethyl phthalate but all sample results for this compound were non-detects. LCS, MS/MSD and surrogate recoveries within MPC limits for all SVOC's analyzed. MS/MSD RPD's were within MPC limits. ICAL; linear. ICV: within MPC limits for all SVOC's except 2, 4, 5-trichlorophenol and 2, 4-dinitrophenol. CCV: within MPC limits. Di-n-octyl phthalate result for sample 03 was qualified J as it was less than RDL but greater than MDL. Sampling error – 1 FD pair – 08-10. All results non-detects in both pairs. Acceptable sampling precision.	X	-	

*Tier III criteria.

Completeness Check: Inventory Check Sheet_____X__ Sample Quantitation Calculations (TIER III ONLY):

ECC Region I Data Review Worksheet (rv 2) **PAH 8270C - SIM**
Project: New London Area A ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

Data Validation Level	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
Tier II	Aqueous	-	4-coolers 3.4, 2.7, 1.6 & 0.7 °C	Alpha Laboratory Westborough, MA	0410992

Field Identification of Samples Evaluated:

Field Sample ID	Lab Sample ID
3-GW37S-04	L0410992-01
2-GW39DS-04	L0410992-02
2-SW18-04	L0410992-03
3-SP01-04	L0410992-04
2-GW41DS-04	L0410992-05
3-GW12D-04	L0410992-06
2-GW40DS-04	L0410992-07
2-GW47DS-04	L0410992-08
2-SW24-04	L0410992-09
2-100504	L0410992-10 (field duplicate for sample 08)

Note: Samples are described below in the data worksheets by reference to the last two digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inven-tory	QUAL	BIAS
COC, Sample Delivery Group Form.	1)Unbroken custody (accept or if broken R) 2) Temp≤6° (Soil-J detects, R -nondetects preserved per method (amber bottles, temperature, HCl (aq), MeOH/NAHSO4 (soils) (J, UJ, or R (function of HT and compound)	Cooler temperatures < 6 °C in all the coolers. Sample preservation using ice adequate. Sample custody transferred from Field Team Leader to lab sample courier in person. Unbroken Chain of Custody. No samples qualified.	X	-	
Holding Time	1) 7 Days water, 40 to analysis 2) J –detects, UJ or R –nondetects (function of time)	Sample Date: October 5, 2004. Extraction Date: October 6, 2004. Analysis Date: October 11 & 12, 2004. Samples prepared and analyzed within holding times. No samples qualified.	X	-	
% Solids Check (SOLIDS)	30%<Solids: if no sample weight adjustment made (no USACE) 1) <10% R entire sample 2) 10%.> and <30%; J-detects, NDs -R	Not applicable	-	-	
Results > Cal Range or <Cal Range	1) >Upper Cal Range J-detects - ensure instrument blank performed 2) <PQL but >MDL – J –detects (estimated)	Results > MDL but < MRL were qualified J. Please see attached data summary table for all such results. No results exceeding upper calibration range.	X	Results < MRL but > MDL were qualified UJ.	
Equip Blank	< 5x (<10x common) contaminants for aq samples – for soil indicate EB (X rules don't apply)	Not applicable. Equipment blank not collected/analyzed with this SDG as all the equipment were dedicated.	-	-	
Surrogates	1) Surrogate acceptance limits Nitrobenzene-d5, 2-Fluorobiphenyl & p-Terphenly-d14 within QAPP limits. Qualification: >UCL J –detects, %R<10% J –detects, R –NDs, %R >10% but <60% J-detects, UJ NDs	All surrogate recoveries within MPC limits. No samples qualified.	X	-	

ECC Region I Data Review Worksheet (rv 2) **PAH 8270C - SIM**
Project: New London Area A ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inven-tory	QUAL	BIAS
Lab Blanks (method blanks)	1) < 5x (<10x common) contaminants – U 2) analytes <lab PQL (contract lab)	Method blank detected with naphthalene at 0.06µg/L. All results < 0.3µg/L were qualified U. Sample 03 – the only detected result - was qualified U.	X	Sample 03 result for naphthalene was qualified U.	
LCS Recovery	1) QAPP limits 10% and <LCL% J detects, UJ -NDs >UCL% J detects <10% R NDs, J-detects	LCS %R's were within MPC limits. No samples qualified	X	-	
MS/MSD Recovery	1) QAPP limits (if MS > 4X native levels) Qualification of MS sample: <10% J detects, R NDs >10% and <70% J detects, UJ -NDs >130% J detects	Native sample – sample 08. MS/MSD %R's within MPC limits. No samples qualified.	X	-	
MS/MSD RPD	RPD =30% solid, 30%. J –detects in MS sample UJ-non detects	MS/MSD RPD's were within MPC limits. Laboratory precision acceptable. No samples qualified.	X		
Cleanup Performance Check (if performed)	%R< 10% NDs-R detections J %R>10% <LCL (80%GPC) –detections J, NDs UJ %R>UCL (120%) – detections J Retention Time shift <5%, symmetrical peakshape. GPC check with interferants. Good surrogate recovery, GPC blank check – no carryover.(VOA/SV-IX-I6). Sulfur and High MW compounds removed. SW-846 clean-up not required	NA	-	-	
Retention times	Within 3X standard deviation for each analyte from 72-hour study Exceeds: R qualify data	Retention times within limits.	X	-	
Field Dup RPD	1) RPD = 100% water & soil for Results > X PQL (FD pair only) J-detects (both > X PQL) 2) If one >X PQL, other ND, J-detections, UJ non-detect 3) Other conditions use judgement	Field duplicate pair: 08-10. All results non-detects in the both samples. Sampling precision acceptable as the results were similar.	X	-	
Initial Cal (Linearity)	Correct calibration stds %RSD < 15% use average RF for calibration %RSD> 15% use least squares COD (r2) > 0.990 or correlation coefficient r> 0.995 or alternatively mean %RSD <20% for all target analytes, with no analyte %RSD>40% Resolution check mix –valley 60% hgt of shortest peak (CLP criteria only) Performance check mix - >90% (PEM) (CLP criteria only) SW-846 PEM – endrin/DDT breakdown evaluation. Blank and Performance Evaluation Mix (PEM) at start, and blank and midpoint Individual Standard Mix A (ISMA) and ISMB at end or samples (CLP only)	October 9, 2004 at 05:13 (end time). Instrument – Mindy %RSD < 20% ICAl linear. No samples qualified RRF>0.05	X	-	
2nd Source ICV	%R (between ICV and Ical) analytes %D ≤ 20%, (+ or -) once per 5 pt cal Qualification: J detects, R or UJ NDs	October 9, 2004 at 05:59 (inj. time). Instrument – Mindy ICV %D within MPC limits for all compounds. No samples qualified.	X	-	

ECC Region I Data Review Worksheet (rv 2) **PAH 8270C - SIM**
Project: New London Area A ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inven-tory	QUAL	BIAS
CCV	1) 15% of initial calib. Curve (85%-115%) If low re-calibrate per method. If high no recalibration needed. J qualify data. 2) 15% D Qualification-J detects, R or UJ NDs	Date: October 11, 2004. Instrument – Mindy All %D values within MPC limits – no samples qualified.	X	-	
Tune Check	Tune check within method parameters for DFTPP	Ical tune check within limits. And CCV tune check within limits. Raw data was used to check the tunes. No samples qualified. Degradation checks associated with sample analysis and ICAL tune checks with limits.	X	-	
Internal Stds	1) IS are –50% to 200% of CCV 1) RRT<0.06 (30 sec) 2) IS>100% J-detects 3) IS<20%CCV NDs – R 4) IS>20%CCV <50%CCV NDs – UJ 5) *check for IS transcription errors	Internal standards were within MPC limits. No samples qualified.	X	-	
Sensitivity	1) MDL study – 7 replicates (40 CFR) 2) Surrogates %R 80-120%, 2) %R <10 ND- (R) , J- detects 3) 10%> but <80% , judgement 4) %R>120% J-detects 5) QC, RRT meet criteria, 6) %RSD < 20% 7) MDL< MQL (3x less ideal) 8) Lab fortified blank (see VOA/SV Part II –section X). *Check and recalculate %RSDs and %R for three compounds (with 10% of lab)	Reporting limits were less than the primary monitoring criteria for all compounds.	X	-	
Compound Quantitation	1) Check sensitivy (MDL< 1/3 PQL or per QAPP	RDL > Project Reporting Limit but well below the groundwater criterion for all compounds. Acceptable sensitivity for all compounds. No samples qualified.	X	-	
Overall Evaluation of Data	1) Appropriate method 2) Evaluate any analytical problems 3) Evaluate sampling errors – field contamination, sample hold times	The laboratory accuracy and precision were acceptable. No apparent sample bias. Data are usable for project decisions, as qualified. Method blank was detected with naphthalene – sample 03 result for naphthalene was qualified U due to method blank detection. All results below RL but > MDL were qualified as estimated (J). Please see attached Data Summary Table for all such results. All surrogate, LCS and MS/MSD recoveries within MPC limits. MS/MSD RPD's within MPC limits. ICAL is linear. ICV: within MPC limits. CCV; within MPC limits. Sampling error – 1 FD pair – 08-10; all results non-detects in both samples. Acceptable sampling precision.	X	-	

(*Tier III criteria)

Completeness Check: Inventory Check Sheet_____X__ Sample Quantitation Calculations (TIER III ONLY):

ECC Region I Data Review Worksheet (rv 2) **Metals 6010B/7000**
Project: New London Area ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

Data Validation Level	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
Tier II	**Aqueous**	**HNO3**	**4-coolers 3.4, 2.7, 1.6 & 0.7 °C**	**Alpha Laboratory Westborough, MA**	**0410992**

Field Identification of Samples Evaluated:

Field Sample ID	Lab Sample ID
3-GW37S-04	L0410992-01
2-GW39DS-04	L0410992-02
2-SW18-04	L0410992-03
3-SP01-04	L0410992-04
2-GW41DS-04	L0410992-05
3-GW12D-04	L0410992-06
2-GW40DS-04	L0410992-07
2-GW47DS-04	L0410992-08
2-SW24-04	L0410992-09
2-100504	L0410992-10 (field duplicate for sample 08)

Al, Ca, Mg, Mn, Fe, Na & K were analyzed by 6010B, Hg by 7470A and all other metals were analyzed by 6020A.

Note: Samples are described below in the data worksheets by reference to the last two digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inven-tory	QUAL	BIAS
COC, Sample Delivery Group Form.	1)Unbroken custody (accept or if broken R) 2) Temp≤6° (Soil-J detects, R -nondetects 3) preserved per method (amber bottles, temperature, HCl (aq), MeOH/NAHSO4 (soils) (J, UJ, or R (function of HT and compound)	Cooler temperatures < 6 °C in all the coolers. Sample preservation using ice adequate. Sample custody transferred from Field Team Leader to lab sample courier in person. Unbroken Chain of Custody. pH > 2 for sample 07 but preserved with HNO_3 as soon as the lab received. No samples qualified.	X	-	
Holding Time	1) 180 days (6010), Hg 28 Days to analysis 2) J –detects, UJ or R –nondetects (function of time)	Sample Date: October 5, 2004. Extraction Date: October 7, 2004. Analysis Dates: October 12 & 14, 2004. Samples prepared and analyzed within holding times. No samples qualified.	X	-	
Lab Duplicate	1) RPD < 20% 1) If both values > PQL 2) Qualify samples in batch: detects J, NDs UJ	Native sample – sample 08 for total metals and dissolved metals. Total metals: Lab duplicate RPD's outside MPC limits for Be, Ag & Zn. Results < 5X blank levels for Be & Ag – so results for these metals were not qualified. Results for Zn qualified J (except the ones qualified U due to blank contamination). Dissolved metals: Lab duplicate RPD's outside MPC limits for Be and Zn. Be results were< 5X blank levels, so Be results were not qualified. Zn results were qualified J (except the ones qualified U due to blank contamination). Adequate laboratory precision for all metals other than Zn.	X	Total and dissolved Zn results were qualified J (except the ones qualified U due to blank contamination).	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inven-tory	QUAL	BIAS
LCS Recovery	1) once per sample batch 2) 75-125% water, soil, QAPP limits. 3) <LCL% Reject 4) >UCL% detects J	LCS %R's acceptable. No samples qualified.	X	-	
Field Dup RPD	1) RPD = 50% water & soil for Results > X PQL (FD pair only) J-detects (both > X PQL) 2) If one >X PQL, other ND, J-detections, UJ non-detect	Field duplicate sample 10 was collected and analyzed for sample 08. Method 6010B – all RPD's within MPC limits. Method 6020A: RPD's outside MPC limits for dissolved Pb and dissolved Zn – these results were detections in both samples of the sample-duplicate pair, but were qualified U in duplicate sample 10 due to blank contamination. Results for dissolved Pb and Zn qualified J in sample 08.	X	Dissolved Pb and dissolved Zn results in sample 08 qualified J.	
% Solids Check (SOLIDS)	30%<Solids: if no sample weight adjustment made 1) <10% R entire sample 2) 10%.> and <30%; J-detects, NDs -R	Not applicable	-	-	
Results > Cal Range or <Cal Range	1) >Upper Cal Range J-detects - ensure instrument blank performed 2) <PQL but >MDL – J –detects (estimated)	Results < MRL but > MDL that were not qualified U due to blank contamination were qualified J. Please see attached Data summary table for all such results.	X	J qualify results < PQL and > MDL.	
Lab Blanks (method blank or p reparation blank)	1) Once per sample batch 2) Results> QL; sample results <5X ; sample result U (nd) 3) Sample results >5X blank level; no action	(all results below in mg/L) Method 6010B – no prep blank detections for both total and dissolved metals – no sample qualifications. Method 7470A: No Hg detections. Method 6020A Total metals: Be – 0.00003, < 0.00015 qualified U. All detections except sample 03 were qualified U. Pb – 0.00003, < 0.00015 qualified U – sample 06 qualified U. Mo – 0.00098, < 0.0049 qualified U – all detections qualified U. Ag – 0.00005, < 0.00025 qualified U – all detections qualified U. Zn – 0.00067, < 0.00335 qualified U – samples 01 & 06 qualified U. Co, Ni & V had detections in prep blank but all sample detections were > 5X blank detections. All other metals in prep blank were either non-detect or had detection levels less than ICB/CCB. Dissolved metals: Zn – 0.00073, < 0.00365 qualified U. Detections in samples 01, 06 & 10 were qualified U. All other prep blank detections were < ICB/CCB detections.	X	Total metals: All Be detections except sample 03, Pb in sample 06, all Mo & Ag detections and Zn results in samples 01 & 06 were qualified U. Dissolved metals: Zn detections in samples 01, 06 & 10 were qualified U.	
MS Recovery	1) 75-125% GFAA/ICP if MS > 4X native levels) Qualification of MS sample: 2) <30% J detects, R NDs 3) 30%--74%, detects J, NDs UJ >125% J detects	Native sample – sample 08 for total metals and dissolved metals. Method 6010B: MS %R's outside MPC limits only in cases where the spike added was << 4X native levels. Method 6020A: All MS recoveries within MPC limits. Method 7470A: Low MS recoveries for both total and dissolved metals. Results	X	All Hg results qualified J for detects and UJ for non-detects.	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inven-tory	QUAL	BIAS
		qualified J for detects and UJ for non-detects in all samples.			
Sensitivity*	1) MDL study – 7 replicates (40 CFR) 2) Surrogates %R 80-120%, 1) %R <10 ND- (R) , J- detects 2) 10%> but <80% , judgement 3) %R>120% J-detects 4) %RSD < 20% 5) MDL< MQL (3x less ideal) 6) Lab fortitied blank (see VOA/SV Part II – section X). *Check and recalculate %RSDs and %R fir three compounds (with 10% of lab)	Lab RL < OM RL for all metals of concern. Acceptable sensitivity.	X	-	
Equip Blank	< 5x contaminants for aq samples – for soil indicate EB (X rules don't apply)	Equipment blank not collected/analyzed with this SDG as all the equipment were dedicated.	-	-	
Negative blanks	If negative values are reported for an analyte with absolute value >DL and sample value is <5X the absolute value of the blank or is nondetect Qualify detects as estimated (J) Nondetects as estimated (UJ)	No analyte detections for target metals All negative blanks < DL. No samples qualified.	X	-	
Initial Cal Multipoint	1) 6010: 1 std and blank and low-level check at MQL – check std 20% 3 stds and a blank- R = 0.995	ICAL performed according to method. Two point calibration and check standards. The pre-analysis check standard was within limits.	X	-	
Initial Calibration Blanks	1) Ical blank after Ical 2) Results > QL; sample results <5X ; sample result U (nd) 3) Sample results >5X blank level; no action	(All results below in mg/L) Method 6010B: No ICB detections for both total and dissolved metals – no sample qualifications. Method 7470A: No Hg detections. Method 6020A Total metals: Sb – 0.00003, < 0.00015 qualified U – samples 01 & 06 qualified U. Tl – 0.00003, < 0.00015 qualified U – all detections except sample 01 qualified U. All other ICB detections were less than (or equal to) prep blank/CCB detection levels. Dissolved metals: Sb – 0.00004, < 0.0002 qualified U – samples 01, 02, 03, 06 & 09 qualified U. Be – 0.00004, < 0.0002 qualified U – all detections qualified U. Cd – 0.00003, < 0.00015 qualified U – all detections except sample 09 qualified U. Co – 0.00004, < 0.0002 qualified U – sample 02 qualified U. Pb – 0.00003, < 0.00015 qualified U – detections in samples 03, 06 & 10 qualified U. Ag – 0.00004, < 0.0002 qualified U – sample 09 qualified U. Tl – 0.00004, < 0.0002 qualified U – detections in samples 04 & 09 qualified U. ICB detections for Ni were < 1/5X sample detections. All other metals' ICB detections were less than (or equal to) prep blank/CCB detection levels.	X	Total metals: Sb in samples 01 & 06 and all Tl detections except sample 01 were qualified U. Dissolved metals: Sb in samples 01, 02, 03, 06 & 09, all Be detections, all Cd detections except sample 09, Co in sample 02, Pb detections in samples 03, 06 & 10, Ag in sample 09 and Tl detections in samples 04 & 09 were qualified U.	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inven-tory	QUAL	BIAS
Continuing Calibration Blanks	1) CCB every 10 samples end of run 2) Results > QL; sample results <5X ; sample result U (nd) 3) Sample results >5X blank level; no action	(All results below in mg/L) Method 6010B: CCB detections of Fe, Mg and Na. No applicable Fe analyses to the CCB detections. All detections for Na and Mg in the applicable samples were > 5X blank levels with dilution factors taken into account. No sample qualifications. Method 7470A: No Hg detections. Method 6020A. Total metals: As – 0.00014, < 0.0007 qualified U – detection in sample 01 qualified U. Cr – 0.00009, < 0.00045 qualified U – detections in samples 01 & 06 qualified U. Se – 0.00725, < 0.03625 qualified U – all detections qualified U. All other CCB detections were less than (or equal to) prep blank/ICB detections. Dissolved metals: As – 0.00011, < 0.00055 qualified U – samples 01, 02, 03 & 04 qualified U. Cr – 0.00016, < 0.00080 qualified U – sample 01, 02, 03, 04, 06 & 09 qualified U. Mo – 0.00009, < 0.00045 qualified U – sample 01 qualified U. Se – 0.024, < 0.12 qualified U – all sample detections qualified U. V – 0.00006, < 0.0003 qualified U – samples 01, 03, 04 & 06 qualified U. CCB detections in Ba were <1/5X sample detections. All other CCB detections were less than (or equal to) ICB/prep blank detections.	X	Total metals: As detections in sample 01, Cr detections in samples 01 & 06 and all Se detections were qualified U. Dissolved metals: As in samples 01, 02, 03 & 04, Cr in samples 01, 02, 03, 04, 06 & 09, Mo in sample 01, all Se detections and V in samples 01, 03, 04 & 06 were qualified U.	
Serial Dilution	1) once per digestion batch 2) Meets method limits (RPD 10%). 3) Metal results >50X MDL levels.	SD on native sample 08: Method 6010B: All metals except dissolved Fe and dissolved Mg had RPD's outside MPC limits for serial dilution. All results > 50X MDL. All results in sample 08 except those for dissolved Fe and dissolved Mg were qualified J. Method 6020A: Analyzed only for total As & Co and dissolved As & Ba.	X	All Al, Mn, Ca, Na & K results for total and dissolved metals, total Mg and total Fe results qualified J in sample 08.	
Interelement checks ICS-A, ICS-AB Instrument performance check	1) start of sequence 2) 80-120% target analytes 3) >120% ; detects J (ICS-AB) 4) 50%-79% R ICS-AB; detects J, NDs – UJ 5) <50% R – reject data 6) ICS-A response > DL and samples have <5X ICS-A response: detects J 7) Absolute value of negative ICS-A response>DL and sample detects <5X ICS-A response: detects J, NDs as UJ 8) If the ICS-A is within limits, the ICS-AB may not be analyzed (USACE Shell)	ICS's %R's within MPC limits for COC elements. No samples qualified.	X	-	
2nd Source ICV	1) following calibration 2) 90- 110% Recovery (6010/7000) 3) 75%-89% R – detects J, NDs – UJ 4) 111-125% R – detects J outside 75-125% R – reject data (R)	Within limits of MPC. No samples qualified.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inven-tory	QUAL	BIAS
CCV	1) every 10 samples and end of run 2) 90- 110% Recovery (6010) Hg; 80-120% 3) 6010: 75%-89% R Hg, 65-79% R; – detects J, NDs – UJ. 4) 6010: 111-125%, Hg: 121-135% detects J 6010: outside 75-125%, Hg; outside 65-135%; R – reject data (R)	Within limits of MPC. No samples qualified.	X	-	
Post Digestion Spike	1) 75- 125% R	PDS not performed as MS %R's within MPC limits for Site COCs analyzed.	X	-	
*MDL Study	1) *In accordance with 40CFR – seven replicates %RSD < 20% 2) * IS and retention times within method requirements 3) * performed annually 4) *MDL is at least ½ of PQL *tgt and surrogate 80-120% R	NA	-	-	
*System Performance	1)* evaluate PES, MS//MSD, cal STDs, MDS study, and surrogates for systemic bias – high or low and access system accuracy 3) *Matrix effects- MS/MSD, surrogated, PDS. 4) *overall system contamination-review all blanks for systemic or sporadic contamination	NA	-	-	
*Single Blind PE	1) Qualify associated samples in PES batch PES = ND, Detects J – ND PE analytes in samples, NDs – R 5) PES > acceptance criteria – Detects in samples J, 6) PES<acceptance criteria – Detects J, NDs –R 7) VOA/SV-XI14 other criteria 8) *% of PES sample above and below criteria *Recalculate concentrations for one tgt compound per PES (10% of lab)	NA	-	-	
Overall Evaluation of Data	1) Appropriate method 2) Evaluate any analytical problems 3) Evaluate sampling errors – field contamination, sample hold times	Laboratory accuracy and precision were acceptable. Accuracy was shown by the LCS being within MPC limits. The ICS-A, and ICS-AB were within limits for all elements. Total and dissolved Zn results were qualified J due to high lab duplicate RPD's (except the ones qualified U due to blank contamination). Prep blank, ICB and CCB contamination necessitated U qualifiers to be assigned to some of the results – the list of results and the qualifiers can be obtained from the above tables or from the data summary tables. ICAL; 2-point calibration. ICV: within MPC limits. CCV: within MPC limits. MS %R's within limits for total and dissolved analyses except for Hg. All Al, Mn, Ca, Na & K results for total and dissolved metals, total Mg and total Fe	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inven-tory	QUAL	BIAS
		results qualified J in sample 08 due to high RPD's in serial dilution. No apparent matrix bias for all other metals. Field duplicate sample 10 was collected and analyzed for sample 08. Method 6010B – all RPD's within MPC limits. Method 6020A: RPD's outside MPC limits for dissolved Pb and dissolved Zn – these results were detections in both samples of the sample-duplicate pair, but were qualified U in duplicate sample 10 due to blank contamination. Results for dissolved Pb and Zn qualified J in sample 08. Acceptable sampling precision for all other metals.			

*TIER III DATA VALIDATION ONLY Completeness Check: Inventory Check Sheet___X_Sample Quantitation Calculations (TIER III DATA VALIDATION ONLY):

Data Summary Table - Round 15 - October 2004 - Area A - SDG 0410992

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
3-GW37S-04	5-Oct-04	L0410992-01	2320B	ALKALINITY, TOTAL	130		mg CaCO3	y	2	0.4	1
3-GW37S-04	5-Oct-04	L0410992-01	2540C	SOLIDS, TOTAL DISSOLVED	590		mg/l	y	10	2.8	1
3-GW37S-04	5-Oct-04	L0410992-01	2540D	SOLIDS, TOTAL SUSPENDED		U	mg/l	n	5		1
3-GW37S-04	5-Oct-04	L0410992-01	9251	CHLORIDE	270		mg/l	y	10	0.36	10
3-GW37S-04	5-Oct-04	L0410992-01	9038	SULFATE	12		mg/l	y	10	1.4	1
3-GW37S-04	5-Oct-04	L0410992-01	5220D	CHEMICAL OXYGEN DEMAND	46		mg/l	y	20	4.2	1
3-GW37S-04	5-Oct-04	L0410992-01	9060	TOTAL ORGANIC CARBON	4.2		mg/l	y	2	0.17	4
3-GW37S-04	5-Oct-04	L0410992-01	2340B	HARDNESS	130		mg/l	y	1.7		1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	ALUMINUM, TOTAL	0.055	J	mg/l	y	0.1	0.019	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	ANTIMONY, TOTAL	0.00008	U	mg/l	n	0.001	0.000022	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	ARSENIC, TOTAL	0.00038	U	mg/l	n	0.001	0.000034	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	CADMIUM, TOTAL	0.00009	J	mg/l	y	0.001	0.000034	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	BARIUM, TOTAL	0.0968		mg/l	y	0.001	0.000038	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	BERYLLIUM, TOTAL		U	mg/l	n	0.001	0.000015	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	CALCIUM, TOTAL	31		mg/l	y	0.1	0.015	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	CHROMIUM, TOTAL	0.00026	U	mg/l	n	0.001	0.000031	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	COBALT, TOTAL	0.0082		mg/l	y	0.001	0.000017	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	COPPER, TOTAL	0.0017		mg/l	y	0.001	0.000172	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	IRON, TOTAL	2.8		mg/l	y	0.05	0.013	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	LEAD, TOTAL	0.00022	J	mg/l	y	0.0005	0.000028	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	MAGNESIUM, TOTAL	14		mg/l	y	0.1	0.014	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	MANGANESE, TOTAL	2.2		mg/l	y	0.01	0.0006	1
3-GW37S-04	5-Oct-04	L0410992-01	7470A	MERCURY, TOTAL		UJ	mg/l	n	0.0002	0.000012	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	MOLYBDENUM, TOTAL	0.00062	U	mg/l	n	0.001	0.00003	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	NICKEL, TOTAL	0.00059	J	mg/l	y	0.001	0.000024	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	POTASSIUM, TOTAL	11		mg/l	y	2.5	0.094	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	SELENIUM, TOTAL	0.00052	U	mg/l	n	0.002	0.000298	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	SILVER, TOTAL		U	mg/l	n	0.001	0.000025	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	SODIUM, TOTAL	170		mg/l	y	40	6.3	20
3-GW37S-04	5-Oct-04	L0410992-01	6020A	THALLIUM, TOTAL	0.0003	J	mg/l	y	0.001	0.000026	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	VANADIUM, TOTAL	0.00022	J	mg/l	y	0.001	0.00003	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	ZINC, TOTAL	0.0031	U	mg/l	n	0.005	0.000298	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	ANTIMONY, DISSOLVED	0.00005	U	mg/l	n	0.001	0.000022	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	ARSENIC, DISSOLVED	0.0002	U	mg/l	n	0.001	0.000034	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	BARIUM, DISSOLVED	0.0982		mg/l	y	0.001	0.000038	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	BERYLLIUM, DISSOLVED		U	mg/l	n	0.001	0.000015	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	CADMIUM, DISSOLVED	0.00007	U	mg/l	n	0.001	0.000034	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	CALCIUM, DISSOLVED	31		mg/l	y	0.1	0.015	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	CHROMIUM, DISSOLVED	0.00026	U	mg/l	n	0.001	0.000031	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	COBALT, DISSOLVED	0.0081		mg/l	y	0.001	0.000017	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	COPPER, DISSOLVED	0.00084	J	mg/l	y	0.001	0.000172	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	IRON, DISSOLVED	2.4		mg/l	y	0.05	0.013	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	LEAD, DISSOLVED	0.00036	J	mg/l	y	0.0005	0.000028	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	MAGNESIUM, DISSOLVED	14		mg/l	y	0.1	0.014	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	MANGANESE, DISSOLVED	2.2		mg/l	y	0.01	0.0006	1
3-GW37S-04	5-Oct-04	L0410992-01	7470A	MERCURY, DISSOLVED		UJ	mg/l	n	0.0002	0.000012	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	MOLYBDENUM, DISSOLVED	0.00033	U	mg/l	n	0.001	0.00003	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	NICKEL, DISSOLVED	0.0015		mg/l	y	0.001	0.000024	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
3-GW37S-04	5-Oct-04	L0410992-01	6010B	POTASSIUM, DISSOLVED	11		mg/l	y	2.5	0.094	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	SELENIUM, DISSOLVED	0.00173	U	mg/l	n	0.002	0.000298	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
3-GW37S-04	5-Oct-04	L0410992-01	6010B	SODIUM, DISSOLVED	190		mg/l	y	40	6.3	20
3-GW37S-04	5-Oct-04	L0410992-01	6020A	THALLIUM, DISSOLVED	0.00023	J	mg/l	y	0.001	0.000026	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	VANADIUM, DISSOLVED	0.00015	U	mg/l	n	0.001	0.00003	1
3-GW37S-04	5-Oct-04	L0410992-01	6020A	ZINC, DISSOLVED	0.0022	U	mg/l	n	0.005	0.000298	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	50	2.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	10	3.1	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	PHENOL		U	ug/l	n	7	1.2	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
3-GW37S-04	5-Oct-04	L0410992-01	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-GW39DS-04	5-Oct-04	L0410992-02	2320B	ALKALINITY, TOTAL	100		mg CaCO3	y	2	0.4	1
2-GW39DS-04	5-Oct-04	L0410992-02	2540C	SOLIDS, TOTAL DISSOLVED	640		mg/l	y	10	2.8	1
2-GW39DS-04	5-Oct-04	L0410992-02	2540D	SOLIDS, TOTAL SUSPENDED	39		mg/l	y	5		1
2-GW39DS-04	5-Oct-04	L0410992-02	9251	CHLORIDE	330		mg/l	y	10	0.36	10
2-GW39DS-04	5-Oct-04	L0410992-02	9038	SULFATE		U	mg/l	n	10	1.4	1
2-GW39DS-04	5-Oct-04	L0410992-02	5220D	CHEMICAL OXYGEN DEMAND	25		mg/l	y	20	4.2	1
2-GW39DS-04	5-Oct-04	L0410992-02	9060	TOTAL ORGANIC CARBON	4.1		mg/l	y	2	0.17	4
2-GW39DS-04	5-Oct-04	L0410992-02	2340B	HARDNESS	120		mg/l	y	1.7		1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	ALUMINUM, TOTAL	0.13		mg/l	y	0.1	0.019	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	ANTIMONY, TOTAL	0.00024	J	mg/l	y	0.001	0.000022	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	ARSENIC, TOTAL	0.00075	J	mg/l	y	0.001	0.000034	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	BARIUM, TOTAL	0.114		mg/l	y	0.001	0.000038	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	BERYLLIUM, TOTAL	0.00002	U	mg/l	n	0.001	0.000015	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	CADMIUM, TOTAL	0.00012	J	mg/l	y	0.001	0.000034	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	CALCIUM, TOTAL	37		mg/l	y	0.1	0.015	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	CHROMIUM, TOTAL	0.00094	J	mg/l	y	0.001	0.000031	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	COBALT, TOTAL	0.00022	J	mg/l	y	0.001	0.000017	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	COPPER, TOTAL	0.0012		mg/l	y	0.001	0.000172	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	IRON, TOTAL	31		mg/l	y	0.05	0.013	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	LEAD, TOTAL	0.00049	J	mg/l	y	0.0005	0.000028	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	MAGNESIUM, TOTAL	7.5		mg/l	y	0.1	0.014	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	MANGANESE, TOTAL	0.65		mg/l	y	0.01	0.0006	1
2-GW39DS-04	5-Oct-04	L0410992-02	7470A	MERCURY, TOTAL		UJ	mg/l	n	0.0002	0.000012	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	NICKEL, TOTAL	0.0011		mg/l	y	0.001	0.000024	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	POTASSIUM, TOTAL	15		mg/l	y	2.5	0.094	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	SELENIUM, TOTAL	0.0004	U	mg/l	n	0.002	0.000298	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	SILVER, TOTAL		U	mg/l	n	0.001	0.000025	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	SODIUM, TOTAL	210		mg/l	y	40	6.3	20
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	VANADIUM, TOTAL	0.0029		mg/l	y	0.001	0.00003	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	ZINC, TOTAL	0.0113	J	mg/l	y	0.005	0.000298	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	ANTIMONY, DISSOLVED	0.00011	U	mg/l	n	0.001	0.000022	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	ARSENIC, DISSOLVED	0.00044	U	mg/l	n	0.001	0.000034	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	BARIUM, DISSOLVED	0.1017		mg/l	y	0.001	0.000038	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	BERYLLIUM, DISSOLVED		U	mg/l	n	0.001	0.000015	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	CALCIUM, DISSOLVED	37		mg/l	y	0.1	0.015	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	CHROMIUM, DISSOLVED	0.0006	U	mg/l	n	0.001	0.000031	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	COBALT, DISSOLVED	0.00011	U	mg/l	n	0.001	0.000017	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	COPPER, DISSOLVED	0.00019	J	mg/l	y	0.001	0.000172	1

Data Summary Table - Round 15 - October 2004 - Area A - SDG 0410992

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	IRON, DISSOLVED	29		mg/l	y	0.05	0.013	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	LEAD, DISSOLVED	0.00029	J	mg/l	y	0.0005	0.000028	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	MAGNESIUM, DISSOLVED	8.8		mg/l	y	0.1	0.014	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	MANGANESE, DISSOLVED	0.63		mg/l	y	0.01	0.0006	1
2-GW39DS-04	5-Oct-04	L0410992-02	7470A	MERCURY, DISSOLVED		UJ	mg/l	n	0.0002	0.000012	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	NICKEL, DISSOLVED	0.0011		mg/l	y	0.001	0.000024	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	POTASSIUM, DISSOLVED	19		mg/l	y	2.5	0.094	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	SELENIUM, DISSOLVED	0.00078	U	mg/l	n	0.002	0.000298	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-GW39DS-04	5-Oct-04	L0410992-02	6010B	SODIUM, DISSOLVED	240		mg/l	y	40	6.3	20
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	VANADIUM, DISSOLVED	0.0016		mg/l	y	0.001	0.00003	1
2-GW39DS-04	5-Oct-04	L0410992-02	6020A	ZINC, DISSOLVED	0.0065	J	mg/l	y	0.005	0.000298	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	50	2.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	10	3.1	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	FLUORENE	0.028	J	ug/l	y	0.2	0.024	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW39DS-04	5-Oct-04	L0410992-02	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-SW18-04	5-Oct-04	L0410992-03	2320B	ALKALINITY, TOTAL	46		mg CaCO3	y	2	0.4	1
2-SW18-04	5-Oct-04	L0410992-03	2540C	SOLIDS, TOTAL DISSOLVED	230		mg/l	y	10	2.8	1
2-SW18-04	5-Oct-04	L0410992-03	2540D	SOLIDS, TOTAL SUSPENDED	220		mg/l	y	10		2
2-SW18-04	5-Oct-04	L0410992-03	9251	CHLORIDE	98		mg/l	y	5	0.36	5
2-SW18-04	5-Oct-04	L0410992-03	9038	SULFATE		U	mg/l	n	10	1.4	1
2-SW18-04	5-Oct-04	L0410992-03	5220D	CHEMICAL OXYGEN DEMAND	100		mg/l	y	20	4.2	1
2-SW18-04	5-Oct-04	L0410992-03	9060	TOTAL ORGANIC CARBON	11		mg/l	y	2	0.17	4
2-SW18-04	5-Oct-04	L0410992-03	2340B	HARDNESS	63		mg/l	y	1.7		1
2-SW18-04	5-Oct-04	L0410992-03	6010B	ALUMINUM, TOTAL	0.51		mg/l	y	0.1	0.019	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	ANTIMONY, TOTAL	0.0004	J	mg/l	y	0.001	0.000022	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	ARSENIC, TOTAL	0.0029		mg/l	y	0.001	0.000034	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	BARIUM, TOTAL	0.0993		mg/l	y	0.001	0.000038	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	BERYLLIUM, TOTAL	0.00016	J	mg/l	y	0.001	0.000015	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	CADMIUM, TOTAL	0.00015	J	mg/l	y	0.0002	0.000034	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	CALCIUM, TOTAL	19		mg/l	y	0.1	0.015	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	CHROMIUM, TOTAL	0.0015		mg/l	y	0.001	0.000031	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	COBALT, TOTAL	0.0011		mg/l	y	0.001	0.000017	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	COPPER, TOTAL	0.0068		mg/l	y	0.001	0.000172	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	IRON, TOTAL	28		mg/l	y	0.05	0.013	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	LEAD, TOTAL	0.0026		mg/l	y	0.0005	0.000028	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	MAGNESIUM, TOTAL	3.5		mg/l	y	0.1	0.014	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	MANGANESE, TOTAL	0.44		mg/l	y	0.01	0.0006	1
2-SW18-04	5-Oct-04	L0410992-03	7470A	MERCURY, TOTAL		UJ	mg/l	n	0.0002	0.000012	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	MOLYBDENUM, TOTAL	0.00026	U	mg/l	n	0.001	0.00003	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	NICKEL, TOTAL	0.0049		mg/l	y	0.001	0.000024	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	POTASSIUM, TOTAL	2.8		mg/l	y	2.5	0.094	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	SELENIUM, TOTAL	0.00031	U	mg/l	n	0.002	0.000298	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	SILVER, TOTAL	0.00004	U	mg/l	n	0.001	0.000025	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	SODIUM, TOTAL	58		mg/l	y	10	1.6	5
2-SW18-04	5-Oct-04	L0410992-03	6020A	THALLIUM, TOTAL	0.00003	U	mg/l	n	0.001	0.000026	1

Data Summary Table - Round 15 - October 2004 - Area A - SDG 0410992

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW18-04	5-Oct-04	L0410992-03	6020A	VANADIUM, TOTAL	0.0097		mg/l	y	0.001	0.00003	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	ZINC, TOTAL	0.1536	J	mg/l	y	0.005	0.000298	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	ALUMINUM, DISSOLVED	0.019	J	mg/l	y	0.1	0.019	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	ANTIMONY, DISSOLVED	0.00009	U	mg/l	n	0.001	0.000022	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	ARSENIC, DISSOLVED	0.00021	U	mg/l	n	0.001	0.000034	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	BARIUM, DISSOLVED	0.0683		mg/l	y	0.001	0.000038	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	BERYLLIUM, DISSOLVED	0.00002	U	mg/l	n	0.001	0.000015	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	CADMIUM, DISSOLVED	0.00004	U	mg/l	n	0.0002	0.000034	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	CALCIUM, DISSOLVED	17		mg/l	y	0.1	0.015	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	CHROMIUM, DISSOLVED	0.00044	U	mg/l	n	0.001	0.000031	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	COBALT, DISSOLVED	0.00054	J	mg/l	y	0.001	0.000017	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	COPPER, DISSOLVED	0.00036	J	mg/l	y	0.001	0.000172	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	IRON, DISSOLVED	0.07		mg/l	y	0.05	0.013	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	LEAD, DISSOLVED	0.00008	U	mg/l	n	0.0005	0.000028	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	MAGNESIUM, DISSOLVED	3.2		mg/l	y	0.1	0.014	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	MANGANESE, DISSOLVED	0.37		mg/l	y	0.01	0.0006	1
2-SW18-04	5-Oct-04	L0410992-03	7470A	MERCURY, DISSOLVED		UJ	mg/l	n	0.0002	0.000012	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	NICKEL, DISSOLVED	0.0017		mg/l	y	0.001	0.000024	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	POTASSIUM, DISSOLVED	2.3	J	mg/l	y	2.5	0.094	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	SELENIUM, DISSOLVED	0.00096	U	mg/l	n	0.002	0.000298	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	SILVER, DISSOLVED	0.00094	J	mg/l	y	0.001	0.000025	1
2-SW18-04	5-Oct-04	L0410992-03	6010B	SODIUM, DISSOLVED	56		mg/l	y	10	1.6	5
2-SW18-04	5-Oct-04	L0410992-03	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	VANADIUM, DISSOLVED	0.00015	U	mg/l	n	0.001	0.00003	1
2-SW18-04	5-Oct-04	L0410992-03	6020A	ZINC, DISSOLVED	0.0278	J	mg/l	y	0.005	0.000298	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	50	2.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	DI-N-OCTYLPHTHALATE	1.2	J	ug/l	y	5	0.54	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW18-04	5-Oct-04	L0410992-03	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	10	3.1	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-SW18-04	5-Oct-04	L0410992-03	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	ACENAPHTHENE	0.23		ug/l	y	0.2	0.036	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	FLUORANTHENE	0.18	J	ug/l	y	0.2	0.04	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	NAPHTHALENE	0.27	U	ug/l	n	0.2	0.031	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	BENZO(A)ANTHRACENE	0.15	J	ug/l	y	0.2	0.038	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	BENZO(A)PYRENE	0.16	J	ug/l	y	0.2	0.04	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	BENZO(B)FLUORANTHENE	0.17	J	ug/l	y	0.2	0.05	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	BENZO(K)FLUORANTHENE	0.16	J	ug/l	y	0.2	0.036	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	CHRYSENE	0.16	J	ug/l	y	0.2	0.024	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	ACENAPHTHYLENE	0.093	J	ug/l	y	0.2	0.03	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	ANTHRACENE	0.09	J	ug/l	y	0.2	0.049	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	BENZO(GHI)PERYLENE	0.18	J	ug/l	y	0.25	0.025	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	FLUORENE	0.16	J	ug/l	y	0.2	0.024	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	PHENANTHRENE	0.15	J	ug/l	y	0.2	0.031	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	DIBENZO(A,H)ANTHRACENE	0.15	J	ug/l	y	0.2	0.017	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	INDENO(1,2,3-CD)PYRENE	0.17	J	ug/l	y	0.2	0.026	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	PYRENE	0.19	J	ug/l	y	0.2	0.046	1
2-SW18-04	5-Oct-04	L0410992-03	8270C-SIM	2-METHYLNAPHTHALENE	0.24		ug/l	y	0.2	0.036	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	10	3.1	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
3-SP01-04	5-Oct-04	L0410992-04	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	PHENOL		U	ug/l	n	7	1.2	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	FLUORANTHENE	0.46		ug/l	y	0.2	0.04	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	BENZO(A)ANTHRACENE	0.22		ug/l	y	0.2	0.038	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	BENZO(A)PYRENE	0.22		ug/l	y	0.2	0.04	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	BENZO(B)FLUORANTHENE	0.28		ug/l	y	0.2	0.05	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	BENZO(K)FLUORANTHENE	0.21		ug/l	y	0.2	0.036	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	CHRYSENE	0.22		ug/l	y	0.2	0.024	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	ANTHRACENE	0.11	J	ug/l	y	0.2	0.049	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	BENZO(GHI)PERYLENE	0.15	J	ug/l	y	0.25	0.025	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	PHENANTHRENE	0.17	J	ug/l	y	0.2	0.031	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	INDENO(1,2,3-CD)PYRENE	0.14	J	ug/l	y	0.2	0.026	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	PYRENE	0.44		ug/l	y	0.2	0.046	1
3-SP01-04	5-Oct-04	L0410992-04	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
3-SP01-04	5-Oct-04	L0410992-04	2320B	ALKALINITY, TOTAL	130		mg CaCO3	y	2	0.4	1
3-SP01-04	5-Oct-04	L0410992-04	2540C	SOLIDS, TOTAL DISSOLVED	330		mg/l	y	10	2.8	1
3-SP01-04	5-Oct-04	L0410992-04	2540D	SOLIDS, TOTAL SUSPENDED	110		mg/l	y	5		1
3-SP01-04	5-Oct-04	L0410992-04	9251	CHLORIDE	95		mg/l	y	1	0.36	1
3-SP01-04	5-Oct-04	L0410992-04	9038	SULFATE	16		mg/l	y	10	1.4	1
3-SP01-04	5-Oct-04	L0410992-04	5220D	CHEMICAL OXYGEN DEMAND	67		mg/l	y	20	4.2	1
3-SP01-04	5-Oct-04	L0410992-04	9060	TOTAL ORGANIC CARBON	6.7		mg/l	y	2	0.17	4
3-SP01-04	5-Oct-04	L0410992-04	2340B	HARDNESS	140		mg/l	y	1.7		1
3-SP01-04	5-Oct-04	L0410992-04	6010B	ALUMINUM, TOTAL	2.8		mg/l	y	0.1	0.019	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	ANTIMONY, TOTAL	0.0027		mg/l	y	0.001	0.000022	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	ARSENIC, TOTAL	0.003		mg/l	y	0.001	0.000034	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	BARIUM, TOTAL	0.0693		mg/l	y	0.001	0.000038	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	BERYLLIUM, TOTAL	0.00011	U	mg/l	n	0.001	0.000015	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	CADMIUM, TOTAL	0.0003		mg/l	y	0.0002	0.000034	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	CALCIUM, TOTAL	43		mg/l	y	0.1	0.015	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	CHROMIUM, TOTAL	0.0043		mg/l	y	0.001	0.000031	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	COBALT, TOTAL	0.0028		mg/l	y	0.001	0.000017	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	COPPER, TOTAL	0.0194		mg/l	y	0.001	0.000172	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	IRON, TOTAL	12		mg/l	y	0.05	0.013	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	LEAD, TOTAL	0.0356		mg/l	y	0.0005	0.000028	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	MAGNESIUM, TOTAL	8.2		mg/l	y	0.1	0.014	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	MANGANESE, TOTAL	0.77		mg/l	y	0.01	0.0006	1
3-SP01-04	5-Oct-04	L0410992-04	7470A	MERCURY, TOTAL	1.32E-05	J	mg/l	y	0.0002	0.000012	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	MOLYBDENUM, TOTAL	0.00015	U	mg/l	n	0.001	0.00003	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	NICKEL, TOTAL	0.0034		mg/l	y	0.001	0.000024	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	POTASSIUM, TOTAL	8.5		mg/l	y	2.5	0.094	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	SELENIUM, TOTAL	0.00075	U	mg/l	n	0.002	0.000298	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	SILVER, TOTAL	0.00015	U	mg/l	n	0.001	0.000025	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	SODIUM, TOTAL	78		mg/l	y	10	1.6	5

Data Summary Table - Round 15 - October 2004 - Area A - SDG 0410992

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
3-SP01-04	5-Oct-04	L0410992-04	6020A	THALLIUM, TOTAL	0.00007	U	mg/l	n	0.001	0.000026	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	VANADIUM, TOTAL	0.0089		mg/l	y	0.001	0.00003	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	ZINC, TOTAL	0.1052	J	mg/l	y	0.005	0.000298	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	ALUMINUM, DISSOLVED	0.021	J	mg/l	y	0.1	0.019	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	ANTIMONY, DISSOLVED	0.0013		mg/l	y	0.001	0.000022	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	ARSENIC, DISSOLVED	0.00032	U	mg/l	n	0.001	0.000034	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	BARIUM, DISSOLVED	0.0486		mg/l	y	0.001	0.000038	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	BERYLLIUM, DISSOLVED		U	mg/l	n	0.001	0.000015	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	CADMIUM, DISSOLVED	0.0001	U	mg/l	n	0.0002	0.000034	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	CALCIUM, DISSOLVED	39		mg/l	y	0.1	0.015	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	CHROMIUM, DISSOLVED	0.0005	U	mg/l	n	0.001	0.000031	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	COBALT, DISSOLVED	0.0012		mg/l	y	0.001	0.000017	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	COPPER, DISSOLVED	0.0012		mg/l	y	0.001	0.000172	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	IRON, DISSOLVED	0.73		mg/l	y	0.05	0.013	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	LEAD, DISSOLVED	0.0002	J	mg/l	y	0.0005	0.000028	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	MAGNESIUM, DISSOLVED	7.3		mg/l	y	0.1	0.014	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	MANGANESE, DISSOLVED	0.64		mg/l	y	0.01	0.0006	1
3-SP01-04	5-Oct-04	L0410992-04	7470A	MERCURY, DISSOLVED		UJ	mg/l	n	0.0002	0.000012	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	NICKEL, DISSOLVED	0.00083	J	mg/l	y	0.001	0.000024	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	POTASSIUM, DISSOLVED	7.6		mg/l	y	2.5	0.094	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	SELENIUM, DISSOLVED	0.00139	U	mg/l	n	0.002	0.000298	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
3-SP01-04	5-Oct-04	L0410992-04	6010B	SODIUM, DISSOLVED	73		mg/l	y	10	1.6	5
3-SP01-04	5-Oct-04	L0410992-04	6020A	THALLIUM, DISSOLVED	0.00003	U	mg/l	n	0.001	0.000026	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	VANADIUM, DISSOLVED	0.00018	U	mg/l	n	0.001	0.00003	1
3-SP01-04	5-Oct-04	L0410992-04	6020A	ZINC, DISSOLVED	0.0385	J	mg/l	y	0.005	0.000298	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	50	2.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
3-SP01-04	5-Oct-04	L0410992-04	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW41DS-04	5-Oct-04	L0410992-05	2320B	ALKALINITY, TOTAL	1500		mg CaCO3	y	10	2	5
2-GW41DS-04	5-Oct-04	L0410992-05	2540C	SOLIDS, TOTAL DISSOLVED	8800		mg/l	y	10	2.8	1
2-GW41DS-04	5-Oct-04	L0410992-05	2540D	SOLIDS, TOTAL SUSPENDED	18		mg/l	y	5		1
2-GW41DS-04	5-Oct-04	L0410992-05	9251	CHLORIDE	4600		mg/l	y	100	0.36	100
2-GW41DS-04	5-Oct-04	L0410992-05	9038	SULFATE		U	mg/l	n	10	1.4	1
2-GW41DS-04	5-Oct-04	L0410992-05	5220D	CHEMICAL OXYGEN DEMAND	370		mg/l	y	20	4.2	1

Data Summary Table - Round 15 - October 2004 - Area A - SDG 0410992

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW41DS-04	5-Oct-04	L0410992-05	9060	TOTAL ORGANIC CARBON	64		mg/l	y	20	1.7	40
2-GW41DS-04	5-Oct-04	L0410992-05	2340B	HARDNESS	1500		mg/l	y	17		10
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	ALUMINUM, TOTAL	0.26		mg/l	y	0.1	0.019	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	ANTIMONY, TOTAL	0.0012		mg/l	y	0.001	0.000022	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	ARSENIC, TOTAL	0.0061		mg/l	y	0.001	0.000034	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	BARIUM, TOTAL	0.0358		mg/l	y	0.001	0.000038	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	BERYLLIUM, TOTAL	0.00003	U	mg/l	n	0.001	0.000015	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	CADMIUM, TOTAL	0.00011	J	mg/l	y	0.001	0.000034	1
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	CALCIUM, TOTAL	110		mg/l	y	1	0.15	10
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	CHROMIUM, TOTAL	0.0135		mg/l	y	0.001	0.000031	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	COBALT, TOTAL	0.0012		mg/l	y	0.001	0.000017	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	COPPER, TOTAL	0.0021		mg/l	y	0.001	0.000172	1
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	IRON, TOTAL	2.1		mg/l	y	0.05	0.013	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	LEAD, TOTAL	0.0005		mg/l	y	0.0005	0.000028	1
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	MAGNESIUM, TOTAL	300		mg/l	y	1	0.14	10
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	MANGANESE, TOTAL	0.14		mg/l	y	0.01	0.0006	1
2-GW41DS-04	5-Oct-04	L0410992-05	7470A	MERCURY, TOTAL		UJ	mg/l	n	0.0002	0.000012	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	MOLYBDENUM, TOTAL	0.00031	U	mg/l	n	0.001	0.00003	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	NICKEL, TOTAL	0.0048		mg/l	y	0.001	0.000024	1
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	POTASSIUM, TOTAL	190		mg/l	y	25	0.94	10
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	SELENIUM, TOTAL	0.01	U	mg/l	n	0.002	0.000298	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	SILVER, TOTAL	0.00005	U	mg/l	n	0.001	0.000025	1
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	SODIUM, TOTAL	2800		mg/l	y	400	63	200
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	VANADIUM, TOTAL	0.0103		mg/l	y	0.001	0.00003	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	ZINC, TOTAL	0.0149	J	mg/l	y	0.005	0.000298	1
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	ANTIMONY, DISSOLVED	0.0012		mg/l	y	0.001	0.000022	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	ARSENIC, DISSOLVED	0.0053		mg/l	y	0.001	0.000034	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	BARIUM, DISSOLVED	0.0326		mg/l	y	0.001	0.000038	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	BERYLLIUM, DISSOLVED	0.00002	U	mg/l	n	0.001	0.000015	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	CALCIUM, DISSOLVED	100		mg/l	y	1	0.15	10
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	CHROMIUM, DISSOLVED	0.0108		mg/l	y	0.001	0.000031	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	COBALT, DISSOLVED	0.0011		mg/l	y	0.001	0.000017	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	COPPER, DISSOLVED	0.0013		mg/l	y	0.001	0.000172	1
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	IRON, DISSOLVED	0.53		mg/l	y	0.05	0.013	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	LEAD, DISSOLVED	0.00037	J	mg/l	y	0.0005	0.000028	1
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	MAGNESIUM, DISSOLVED	280		mg/l	y	1	0.14	10
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	MANGANESE, DISSOLVED	0.13		mg/l	y	0.01	0.0006	1
2-GW41DS-04	5-Oct-04	L0410992-05	7470A	MERCURY, DISSOLVED		UJ	mg/l	n	0.0002	0.000012	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	NICKEL, DISSOLVED	0.0062		mg/l	y	0.001	0.000024	1
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	POTASSIUM, DISSOLVED	180		mg/l	y	25	0.94	10
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	SELENIUM, DISSOLVED	0.009	U	mg/l	n	0.002	0.000298	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-GW41DS-04	5-Oct-04	L0410992-05	6010B	SODIUM, DISSOLVED	2800		mg/l	y	1000	160	500
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	VANADIUM, DISSOLVED	0.0096		mg/l	y	0.001	0.00003	1
2-GW41DS-04	5-Oct-04	L0410992-05	6020A	ZINC, DISSOLVED	0.00484	J	mg/l	y	0.005	0.000298	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	50	2.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	10	3.1	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-GW41DS-04	5-Oct-04	L0410992-05	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
3-GW12D-04	5-Oct-04	L0410992-06	2320B	ALKALINITY, TOTAL	200		mg CaCO3	y	2	0.4	1
3-GW12D-04	5-Oct-04	L0410992-06	2540C	SOLIDS, TOTAL DISSOLVED	1500		mg/l	y	10	2.8	1
3-GW12D-04	5-Oct-04	L0410992-06	2540D	SOLIDS, TOTAL SUSPENDED	5		mg/l	y	5		1
3-GW12D-04	5-Oct-04	L0410992-06	9251	CHLORIDE	760		mg/l	y	10	0.36	10
3-GW12D-04	5-Oct-04	L0410992-06	9038	SULFATE	74		mg/l	y	25	3.6	2.5
3-GW12D-04	5-Oct-04	L0410992-06	5220D	CHEMICAL OXYGEN DEMAND	50		mg/l	y	20	4.2	1
3-GW12D-04	5-Oct-04	L0410992-06	9060	TOTAL ORGANIC CARBON	4.6		mg/l	y	2	0.17	4
3-GW12D-04	5-Oct-04	L0410992-06	2340B	HARDNESS	320		mg/l	y	1.7		1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	ALUMINUM, TOTAL	0.031	J	mg/l	y	0.1	0.019	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	ANTIMONY, TOTAL	0.00003	U	mg/l	n	0.001	0.000022	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	ARSENIC, TOTAL	0.00085	J	mg/l	y	0.001	0.000034	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	BARIUM, TOTAL	0.0718		mg/l	y	0.001	0.000038	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	BERYLLIUM, TOTAL		U	mg/l	n	0.001	0.000015	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	CADMIUM, TOTAL	0.00009	J	mg/l	y	0.001	0.000034	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	CALCIUM, TOTAL	52		mg/l	y	0.1	0.015	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	CHROMIUM, TOTAL	0.00021	U	mg/l	n	0.001	0.000031	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	COBALT, TOTAL	0.0106		mg/l	y	0.001	0.000017	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	COPPER, TOTAL	0.00073	J	mg/l	y	0.001	0.000172	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	IRON, TOTAL	11		mg/l	y	0.05	0.013	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	LEAD, TOTAL	0.00006	U	mg/l	n	0.0005	0.000028	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	MAGNESIUM, TOTAL	45		mg/l	y	0.1	0.014	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	MANGANESE, TOTAL	5		mg/l	y	0.01	0.0006	1
3-GW12D-04	5-Oct-04	L0410992-06	7470A	MERCURY, TOTAL		UJ	mg/l	n	0.0002	0.000012	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	NICKEL, TOTAL	0.0029		mg/l	y	0.001	0.000024	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	POTASSIUM, TOTAL	30		mg/l	y	2.5	0.094	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	SELENIUM, TOTAL	0.002	U	mg/l	n	0.002	0.000298	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	SILVER, TOTAL		U	mg/l	n	0.001	0.000025	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	SODIUM, TOTAL	460		mg/l	y	100	16	50
3-GW12D-04	5-Oct-04	L0410992-06	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	VANADIUM, TOTAL	0.00022	J	mg/l	y	0.001	0.00003	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	ZINC, TOTAL	0.0033	U	mg/l	n	0.005	0.000298	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	ANTIMONY, DISSOLVED	0.00003	U	mg/l	n	0.001	0.000022	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	ARSENIC, DISSOLVED	0.00072	J	mg/l	y	0.001	0.000034	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	BARIUM, DISSOLVED	0.073		mg/l	y	0.001	0.000038	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	BERYLLIUM, DISSOLVED	0.00002	U	mg/l	n	0.001	0.000015	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	CALCIUM, DISSOLVED	51		mg/l	y	0.1	0.015	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	CHROMIUM, DISSOLVED	0.00023	U	mg/l	n	0.001	0.000031	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	COBALT, DISSOLVED	0.0106		mg/l	y	0.001	0.000017	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	COPPER, DISSOLVED	0.00081	J	mg/l	y	0.001	0.000172	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	IRON, DISSOLVED	10		mg/l	y	0.05	0.013	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	LEAD, DISSOLVED	0.00003	U	mg/l	n	0.0005	0.000028	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	MAGNESIUM, DISSOLVED	45		mg/l	y	0.1	0.014	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	MANGANESE, DISSOLVED	5		mg/l	y	0.01	0.0006	1
3-GW12D-04	5-Oct-04	L0410992-06	7470A	MERCURY, DISSOLVED		UJ	mg/l	n	0.0002	0.000012	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
3-GW12D-04	5-Oct-04	L0410992-06	6020A	NICKEL, DISSOLVED	0.0029		mg/l	y	0.001	0.000024	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	POTASSIUM, DISSOLVED	30		mg/l	y	2.5	0.094	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	SELENIUM, DISSOLVED	0.003	U	mg/l	n	0.002	0.000298	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
3-GW12D-04	5-Oct-04	L0410992-06	6010B	SODIUM, DISSOLVED	480		mg/l	y	100	16	50
3-GW12D-04	5-Oct-04	L0410992-06	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	VANADIUM, DISSOLVED	0.00021	U	mg/l	n	0.001	0.00003	1
3-GW12D-04	5-Oct-04	L0410992-06	6020A	ZINC, DISSOLVED	0.00322	U	mg/l	n	0.005	0.000298	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	50	2.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	10	3.1	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	PHENOL		U	ug/l	n	7	1.2	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
3-GW12D-04	5-Oct-04	L0410992-06	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	10	3.1	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-GW40DS-04	5-Oct-04	L0410992-07	2320B	ALKALINITY, TOTAL	1700		mg CaCO3	y	5	1	2.5
2-GW40DS-04	5-Oct-04	L0410992-07	2540C	SOLIDS, TOTAL DISSOLVED	20000		mg/l	y	10	2.8	1
2-GW40DS-04	5-Oct-04	L0410992-07	9251	CHLORIDE	12000		mg/l	y	200	0.36	200
2-GW40DS-04	5-Oct-04	L0410992-07	9038	SULFATE	430		mg/l	y	200	28	20
2-GW40DS-04	5-Oct-04	L0410992-07	5220D	CHEMICAL OXYGEN DEMAND	990		mg/l	y	40	8.3	2
2-GW40DS-04	5-Oct-04	L0410992-07	9060	TOTAL ORGANIC CARBON	32		mg/l	y	20	1.7	40
2-GW40DS-04	5-Oct-04	L0410992-07	2340B	HARDNESS	3500		mg/l	y	17		10
2-GW40DS-04	5-Oct-04	L0410992-07	6010B	ALUMINUM, TOTAL	0.39		mg/l	y	0.1	0.019	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	ANTIMONY, TOTAL	0.00078	J	mg/l	y	0.001	0.000022	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	ARSENIC, TOTAL	0.0138		mg/l	y	0.001	0.000034	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	BARIUM, TOTAL	0.0702		mg/l	y	0.001	0.000038	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	BERYLLIUM, TOTAL	0.00004	U	mg/l	n	0.001	0.000015	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	CADMIUM, TOTAL		U	mg/l	n	0.001	0.000034	1
2-GW40DS-04	5-Oct-04	L0410992-07	6010B	CALCIUM, TOTAL	210		mg/l	y	1	0.15	10
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	CHROMIUM, TOTAL	0.0075		mg/l	y	0.001	0.000031	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	COBALT, TOTAL	0.001		mg/l	y	0.001	0.000017	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	COPPER, TOTAL	0.0033		mg/l	y	0.001	0.000172	1
2-GW40DS-04	5-Oct-04	L0410992-07	6010B	IRON, TOTAL	0.86		mg/l	y	0.05	0.013	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	LEAD, TOTAL	0.0004	J	mg/l	y	0.0005	0.000028	1
2-GW40DS-04	5-Oct-04	L0410992-07	6010B	MAGNESIUM, TOTAL	720		mg/l	y	1	0.14	10
2-GW40DS-04	5-Oct-04	L0410992-07	6010B	MANGANESE, TOTAL	0.03		mg/l	y	0.01	0.0006	1
2-GW40DS-04	5-Oct-04	L0410992-07	7470A	MERCURY, TOTAL		UJ	mg/l	n	0.0002	0.000012	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	MOLYBDENUM, TOTAL	0.00042	U	mg/l	n	0.001	0.00003	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	NICKEL, TOTAL	0.0027		mg/l	y	0.001	0.000024	1
2-GW40DS-04	5-Oct-04	L0410992-07	6010B	POTASSIUM, TOTAL	520		mg/l	y	25	0.94	10
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	SELENIUM, TOTAL	0.024	U	mg/l	n	0.002	0.000298	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	SILVER, TOTAL	0.00007	U	mg/l	n	0.001	0.000025	1
2-GW40DS-04	5-Oct-04	L0410992-07	6010B	SODIUM, TOTAL	6700		mg/l	y	1000	160	500
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	VANADIUM, TOTAL	0.008		mg/l	y	0.001	0.00003	1
2-GW40DS-04	5-Oct-04	L0410992-07	6020A	ZINC, TOTAL	0.0195	J	mg/l	y	0.005	0.000298	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	50	2.6	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW40DS-04	5-Oct-04	L0410992-07	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	2320B	ALKALINITY, TOTAL	380		mg CaCO3	y	2	0.4	1
2-GW47DS-04	5-Oct-04	L0410992-08	2540C	SOLIDS, TOTAL DISSOLVED	2600		mg/l	y	10	2.8	1
2-GW47DS-04	5-Oct-04	L0410992-08	2540D	SOLIDS, TOTAL SUSPENDED	150		mg/l	y	10		2
2-GW47DS-04	5-Oct-04	L0410992-08	9251	CHLORIDE	1500		mg/l	y	50	0.36	50
2-GW47DS-04	5-Oct-04	L0410992-08	9038	SULFATE		U	mg/l	n	10	1.4	1
2-GW47DS-04	5-Oct-04	L0410992-08	5220D	CHEMICAL OXYGEN DEMAND	100		mg/l	y	20	4.2	1
2-GW47DS-04	5-Oct-04	L0410992-08	9060	TOTAL ORGANIC CARBON	15		mg/l	y	5	0.43	10
2-GW47DS-04	5-Oct-04	L0410992-08	2340B	HARDNESS	310		mg/l	y	1.7		1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	ALUMINUM, TOTAL	0.3	J	mg/l	y	0.1	0.019	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	ANTIMONY, TOTAL	0.00045	J	mg/l	y	0.001	0.000022	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	ARSENIC, TOTAL	0.037		mg/l	y	0.001	0.000034	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	BARIUM, TOTAL	0.3647		mg/l	y	0.005	0.00019	5
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	BERYLLIUM, TOTAL	0.00005	U	mg/l	n	0.001	0.000015	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	CADMIUM, TOTAL		U	mg/l	n	0.001	0.000034	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	CALCIUM, TOTAL	37	J	mg/l	y	0.1	0.015	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	CHROMIUM, TOTAL	0.0028		mg/l	y	0.001	0.000031	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	COBALT, TOTAL	0.0054		mg/l	y	0.001	0.000017	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	COPPER, TOTAL	0.0012		mg/l	y	0.001	0.000172	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	IRON, TOTAL	81	J	mg/l	y	0.05	0.013	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	LEAD, TOTAL	0.00042	J	mg/l	y	0.0005	0.000028	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	MAGNESIUM, TOTAL	53	J	mg/l	y	0.1	0.014	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	MANGANESE, TOTAL	3.1	J	mg/l	y	0.01	0.0006	1
2-GW47DS-04	5-Oct-04	L0410992-08	7470A	MERCURY, TOTAL		UJ	mg/l	n	0.0002	0.000012	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	MOLYBDENUM, TOTAL	0.0036	U	mg/l	n	0.001	0.00003	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	NICKEL, TOTAL	0.003		mg/l	y	0.001	0.000024	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	POTASSIUM, TOTAL	72	J	mg/l	y	25	0.94	10
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	SELENIUM, TOTAL	0.004	U	mg/l	n	0.002	0.000298	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	SILVER, TOTAL	0.00004	U	mg/l	n	0.001	0.000025	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	SODIUM, TOTAL	890	J	mg/l	y	200	31	100
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	THALLIUM, TOTAL	0.00003	U	mg/l	n	0.001	0.000026	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	VANADIUM, TOTAL	0.0015		mg/l	y	0.001	0.00003	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	ZINC, TOTAL	0.0052	J	mg/l	y	0.005	0.000298	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	ALUMINUM, DISSOLVED	0.022	J	mg/l	y	0.1	0.019	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	ANTIMONY, DISSOLVED	0.00053	J	mg/l	y	0.001	0.000022	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	ARSENIC, DISSOLVED	0.0397		mg/l	y	0.001	0.000034	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	BARIUM, DISSOLVED	0.272		mg/l	y	0.005	0.00019	5
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	BERYLLIUM, DISSOLVED	0.00002	U	mg/l	n	0.001	0.000015	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	CALCIUM, DISSOLVED	37	J	mg/l	y	0.1	0.015	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	CHROMIUM, DISSOLVED	0.0016		mg/l	y	0.001	0.000031	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	COBALT, DISSOLVED	0.0046		mg/l	y	0.001	0.000017	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	COPPER, DISSOLVED	0.00042	J	mg/l	y	0.001	0.000172	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	IRON, DISSOLVED	85	J	mg/l	y	0.05	0.013	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	LEAD, DISSOLVED	0.00041	J	mg/l	y	0.0005	0.000028	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	MAGNESIUM, DISSOLVED	55	J	mg/l	y	0.1	0.014	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	MANGANESE, DISSOLVED	3.2	J	mg/l	y	0.01	0.0006	1
2-GW47DS-04	5-Oct-04	L0410992-08	7470A	MERCURY, DISSOLVED		UJ	mg/l	n	0.0002	0.000012	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	MOLYBDENUM, DISSOLVED	0.0027		mg/l	y	0.001	0.00003	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	NICKEL, DISSOLVED	0.0019		mg/l	y	0.001	0.000024	1

Data Summary Table - Round 15 - October 2004 - Area A - SDG 0410992

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	POTASSIUM, DISSOLVED	78	J	mg/l	y	25	0.94	10
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	SELENIUM, DISSOLVED	0.004	U	mg/l	n	0.002	0.000298	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-GW47DS-04	5-Oct-04	L0410992-08	6010B	SODIUM, DISSOLVED	950	J	mg/l	y	200	31	100
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	VANADIUM, DISSOLVED	0.0015		mg/l	y	0.001	0.00003	1
2-GW47DS-04	5-Oct-04	L0410992-08	6020A	ZINC, DISSOLVED	0.005	J	mg/l	y	0.005	0.000298	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	50	2.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	10	3.1	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-GW47DS-04	5-Oct-04	L0410992-08	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-SW24-04	5-Oct-04	L0410992-09	2320B	ALKALINITY, TOTAL	8.6		mg CaCO3	y	2	0.4	1
2-SW24-04	5-Oct-04	L0410992-09	2540C	SOLIDS, TOTAL DISSOLVED	130		mg/l	y	10	2.8	1
2-SW24-04	5-Oct-04	L0410992-09	2540D	SOLIDS, TOTAL SUSPENDED	23		mg/l	y	5		1
2-SW24-04	5-Oct-04	L0410992-09	9251	CHLORIDE	59		mg/l	y	1	0.36	1
2-SW24-04	5-Oct-04	L0410992-09	9038	SULFATE		U	mg/l	n	10	1.4	1
2-SW24-04	5-Oct-04	L0410992-09	5220D	CHEMICAL OXYGEN DEMAND	27		mg/l	y	20	4.2	1
2-SW24-04	5-Oct-04	L0410992-09	9060	TOTAL ORGANIC CARBON	6.6		mg/l	y	2	0.17	4
2-SW24-04	5-Oct-04	L0410992-09	2340B	HARDNESS	22		mg/l	y	1.7		1
2-SW24-04	5-Oct-04	L0410992-09	6010B	ALUMINUM, TOTAL	0.25		mg/l	y	0.1	0.019	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	ANTIMONY, TOTAL	0.00027	J	mg/l	y	0.001	0.000022	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	ARSENIC, TOTAL	0.0031		mg/l	y	0.001	0.000034	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	BARIUM, TOTAL	0.0513		mg/l	y	0.001	0.000038	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	BERYLLIUM, TOTAL	0.00003	U	mg/l	n	0.001	0.000015	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	CADMIUM, TOTAL	0.00019	J	mg/l	y	0.001	0.000034	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	CALCIUM, TOTAL	5.4		mg/l	y	0.1	0.015	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	CHROMIUM, TOTAL	0.001		mg/l	y	0.001	0.000031	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	COBALT, TOTAL	0.0041		mg/l	y	0.001	0.000017	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	COPPER, TOTAL	0.0242		mg/l	y	0.001	0.000172	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	IRON, TOTAL	4.6		mg/l	y	0.05	0.013	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	LEAD, TOTAL	0.0025		mg/l	y	0.0005	0.000028	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	MAGNESIUM, TOTAL	2.2		mg/l	y	0.1	0.014	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	MANGANESE, TOTAL	0.33		mg/l	y	0.01	0.0006	1
2-SW24-04	5-Oct-04	L0410992-09	7470A	MERCURY, TOTAL		UJ	mg/l	n	0.0002	0.000012	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	NICKEL, TOTAL	0.0064		mg/l	y	0.001	0.000024	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	POTASSIUM, TOTAL	2.8		mg/l	y	2.5	0.094	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	SELENIUM, TOTAL	0.0005	U	mg/l	n	0.002	0.000298	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	SILVER, TOTAL	0.0001	U	mg/l	n	0.001	0.000025	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	SODIUM, TOTAL	31		mg/l	y	10	1.6	5
2-SW24-04	5-Oct-04	L0410992-09	6020A	THALLIUM, TOTAL	0.00003	U	mg/l	n	0.001	0.000026	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	VANADIUM, TOTAL	0.0016		mg/l	y	0.001	0.00003	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	ZINC, TOTAL	0.1505	J	mg/l	y	0.005	0.000298	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	ALUMINUM, DISSOLVED	0.047	J	mg/l	y	0.1	0.019	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	ANTIMONY, DISSOLVED	0.00012	U	mg/l	n	0.001	0.000022	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	ARSENIC, DISSOLVED	0.00086	J	mg/l	y	0.001	0.000034	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	BARIUM, DISSOLVED	0.0454		mg/l	y	0.001	0.000038	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	BERYLLIUM, DISSOLVED	0.00002	U	mg/l	n	0.001	0.000015	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW24-04	5-Oct-04	L0410992-09	6020A	CADMIUM, DISSOLVED	0.00027	J	mg/l	y	0.001	0.000034	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	CALCIUM, DISSOLVED	4.8		mg/l	y	0.1	0.015	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	CHROMIUM, DISSOLVED	0.00047	U	mg/l	n	0.001	0.000031	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	COBALT, DISSOLVED	0.0036		mg/l	y	0.001	0.000017	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	COPPER, DISSOLVED	0.0102		mg/l	y	0.001	0.000172	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	IRON, DISSOLVED	1		mg/l	y	0.05	0.013	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	LEAD, DISSOLVED	0.0013		mg/l	y	0.0005	0.000028	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	MAGNESIUM, DISSOLVED	2		mg/l	y	0.1	0.014	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	MANGANESE, DISSOLVED	0.31		mg/l	y	0.01	0.0006	1
2-SW24-04	5-Oct-04	L0410992-09	7470A	MERCURY, DISSOLVED		UJ	mg/l	n	0.0002	0.000012	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	NICKEL, DISSOLVED	0.0048		mg/l	y	0.001	0.000024	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	POTASSIUM, DISSOLVED	2.6		mg/l	y	2.5	0.094	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	SELENIUM, DISSOLVED	0.00044	U	mg/l	n	0.002	0.000298	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	SILVER, DISSOLVED	0.00005	U	mg/l	n	0.001	0.000025	1
2-SW24-04	5-Oct-04	L0410992-09	6010B	SODIUM, DISSOLVED	30		mg/l	y	10	1.6	5
2-SW24-04	5-Oct-04	L0410992-09	6020A	THALLIUM, DISSOLVED	0.00003	U	mg/l	n	0.001	0.000026	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	VANADIUM, DISSOLVED	0.00033	J	mg/l	y	0.001	0.00003	1
2-SW24-04	5-Oct-04	L0410992-09	6020A	ZINC, DISSOLVED	0.1236	J	mg/l	y	0.005	0.000298	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	50	2.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	10	3.1	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW24-04	5-Oct-04	L0410992-09	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-SW24-04	5-Oct-04	L0410992-09	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	FLUORANTHENE	0.044	J	ug/l	y	0.2	0.04	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	CHRYSENE	0.026	J	ug/l	y	0.2	0.024	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-SW24-04	5-Oct-04	L0410992-09	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-100504	5-Oct-04	L0410992-10	6020A	ARSENIC, DISSOLVED	0.0339		mg/l	y	0.001	0.000034	1
2-100504	5-Oct-04	L0410992-10	6020A	BARIUM, DISSOLVED	0.1786		mg/l	y	0.001	0.000038	1
2-100504	5-Oct-04	L0410992-10	6020A	BERYLLIUM, DISSOLVED	0.00002	U	mg/l	n	0.001	0.000015	1
2-100504	5-Oct-04	L0410992-10	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-100504	5-Oct-04	L0410992-10	6010B	CALCIUM, DISSOLVED	38		mg/l	y	0.1	0.015	1
2-100504	5-Oct-04	L0410992-10	6020A	CHROMIUM, DISSOLVED	0.0015		mg/l	y	0.001	0.000031	1
2-100504	5-Oct-04	L0410992-10	6020A	COBALT, DISSOLVED	0.0039		mg/l	y	0.001	0.000017	1
2-100504	5-Oct-04	L0410992-10	6020A	COPPER, DISSOLVED	0.00036	J	mg/l	y	0.001	0.000172	1
2-100504	5-Oct-04	L0410992-10	6010B	IRON, DISSOLVED	73		mg/l	y	0.05	0.013	1
2-100504	5-Oct-04	L0410992-10	6020A	LEAD, DISSOLVED	0.00005	U	mg/l	n	0.0005	0.000028	1
2-100504	5-Oct-04	L0410992-10	6010B	MAGNESIUM, DISSOLVED	59		mg/l	y	0.1	0.014	1
2-100504	5-Oct-04	L0410992-10	6010B	MANGANESE, DISSOLVED	3		mg/l	y	0.01	0.0006	1
2-100504	5-Oct-04	L0410992-10	7470A	MERCURY, DISSOLVED		UJ	mg/l	n	0.0002	0.000012	1
2-100504	5-Oct-04	L0410992-10	6020A	MOLYBDENUM, DISSOLVED	0.0027		mg/l	y	0.001	0.00003	1
2-100504	5-Oct-04	L0410992-10	6020A	NICKEL, DISSOLVED	0.0015		mg/l	y	0.001	0.000024	1
2-100504	5-Oct-04	L0410992-10	6010B	POTASSIUM, DISSOLVED	86		mg/l	y	25	0.94	10
2-100504	5-Oct-04	L0410992-10	6020A	SELENIUM, DISSOLVED	0.004	U	mg/l	n	0.002	0.000298	1
2-100504	5-Oct-04	L0410992-10	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-100504	5-Oct-04	L0410992-10	6010B	SODIUM, DISSOLVED	1000		mg/l	y	200	31	100
2-100504	5-Oct-04	L0410992-10	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-100504	5-Oct-04	L0410992-10	6020A	VANADIUM, DISSOLVED	0.0015		mg/l	y	0.001	0.00003	1
2-100504	5-Oct-04	L0410992-10	6020A	ZINC, DISSOLVED	0.00334	U	mg/l	n	0.005	0.000298	1
2-100504	5-Oct-04	L0410992-10	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-100504	5-Oct-04	L0410992-10	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1

Data Summary Table - Round 15 - October 2004 - Area A - SDG 0410992

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-100504	5-Oct-04	L0410992-10	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-100504	5-Oct-04	L0410992-10	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-100504	5-Oct-04	L0410992-10	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-100504	5-Oct-04	L0410992-10	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	50	2.6	1
2-100504	5-Oct-04	L0410992-10	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-100504	5-Oct-04	L0410992-10	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-100504	5-Oct-04	L0410992-10	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-100504	5-Oct-04	L0410992-10	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-100504	5-Oct-04	L0410992-10	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-100504	5-Oct-04	L0410992-10	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-100504	5-Oct-04	L0410992-10	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-100504	5-Oct-04	L0410992-10	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-100504	5-Oct-04	L0410992-10	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-100504	5-Oct-04	L0410992-10	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-100504	5-Oct-04	L0410992-10	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-100504	5-Oct-04	L0410992-10	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-100504	5-Oct-04	L0410992-10	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-100504	5-Oct-04	L0410992-10	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-100504	5-Oct-04	L0410992-10	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-100504	5-Oct-04	L0410992-10	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-100504	5-Oct-04	L0410992-10	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-100504	5-Oct-04	L0410992-10	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-100504	5-Oct-04	L0410992-10	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-100504	5-Oct-04	L0410992-10	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-100504	5-Oct-04	L0410992-10	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	10	3.1	1
2-100504	5-Oct-04	L0410992-10	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-100504	5-Oct-04	L0410992-10	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-100504	5-Oct-04	L0410992-10	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-100504	5-Oct-04	L0410992-10	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-100504	5-Oct-04	L0410992-10	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-100504	5-Oct-04	L0410992-10	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-100504	5-Oct-04	L0410992-10	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-100504	5-Oct-04	L0410992-10	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1

Data Summary Table - Round 15 - October 2004 - Area A - SDG 0410992

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-100504	5-Oct-04	L0410992-10	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-100504	5-Oct-04	L0410992-10	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-100504	5-Oct-04	L0410992-10	2320B	ALKALINITY, TOTAL	370		mg CaCO3	y	2	0.4	1
2-100504	5-Oct-04	L0410992-10	2540C	SOLIDS, TOTAL DISSOLVED	2600		mg/l	y	10	2.8	1
2-100504	5-Oct-04	L0410992-10	2540D	SOLIDS, TOTAL SUSPENDED	140		mg/l	y	10		2
2-100504	5-Oct-04	L0410992-10	9251	CHLORIDE	1500		mg/l	y	20	0.36	20
2-100504	5-Oct-04	L0410992-10	9038	SULFATE	2.1	J	mg/l	y	10	1.4	1
2-100504	5-Oct-04	L0410992-10	5220D	CHEMICAL OXYGEN DEMAND	100		mg/l	y	20	4.2	1
2-100504	5-Oct-04	L0410992-10	9060	TOTAL ORGANIC CARBON	15		mg/l	y	5	0.43	10
2-100504	5-Oct-04	L0410992-10	2340B	HARDNESS	290		mg/l	y	1.7		1
2-100504	5-Oct-04	L0410992-10	6010B	ALUMINUM, TOTAL	0.3		mg/l	y	0.1	0.019	1
2-100504	5-Oct-04	L0410992-10	6020A	ANTIMONY, TOTAL	0.00049	J	mg/l	y	0.001	0.000022	1
2-100504	5-Oct-04	L0410992-10	6020A	ARSENIC, TOTAL	0.0398		mg/l	y	0.001	0.000034	1
2-100504	5-Oct-04	L0410992-10	6020A	BARIUM, TOTAL	0.345		mg/l	y	0.005	0.00019	5
2-100504	5-Oct-04	L0410992-10	6020A	BERYLLIUM, TOTAL	0.00004	U	mg/l	n	0.001	0.000015	1
2-100504	5-Oct-04	L0410992-10	6020A	CADMIUM, TOTAL		U	mg/l	n	0.001	0.000034	1
2-100504	5-Oct-04	L0410992-10	6010B	CALCIUM, TOTAL	36		mg/l	y	0.1	0.015	1
2-100504	5-Oct-04	L0410992-10	6020A	CHROMIUM, TOTAL	0.003		mg/l	y	0.001	0.000031	1
2-100504	5-Oct-04	L0410992-10	6020A	COBALT, TOTAL	0.0053		mg/l	y	0.001	0.000017	1
2-100504	5-Oct-04	L0410992-10	6020A	COPPER, TOTAL	0.0015		mg/l	y	0.001	0.000172	1
2-100504	5-Oct-04	L0410992-10	6010B	IRON, TOTAL	84		mg/l	y	0.05	0.013	1
2-100504	5-Oct-04	L0410992-10	6020A	LEAD, TOTAL	0.0006		mg/l	y	0.0005	0.000028	1
2-100504	5-Oct-04	L0410992-10	6010B	MAGNESIUM, TOTAL	48		mg/l	y	0.1	0.014	1
2-100504	5-Oct-04	L0410992-10	6010B	MANGANESE, TOTAL	3.1		mg/l	y	0.01	0.0006	1
2-100504	5-Oct-04	L0410992-10	7470A	MERCURY, TOTAL		UJ	mg/l	n	0.0002	0.000012	1
2-100504	5-Oct-04	L0410992-10	6020A	MOLYBDENUM, TOTAL	0.0039	U	mg/l	n	0.001	0.00003	1
2-100504	5-Oct-04	L0410992-10	6020A	NICKEL, TOTAL	0.003		mg/l	y	0.001	0.000024	1
2-100504	5-Oct-04	L0410992-10	6010B	POTASSIUM, TOTAL	81		mg/l	y	2.5	0.094	1
2-100504	5-Oct-04	L0410992-10	6020A	SELENIUM, TOTAL	0.003	U	mg/l	n	0.002	0.000298	1
2-100504	5-Oct-04	L0410992-10	6020A	SILVER, TOTAL		U	mg/l	n	0.001	0.000025	1
2-100504	5-Oct-04	L0410992-10	6010B	SODIUM, TOTAL	750		mg/l	y	200	31	100
2-100504	5-Oct-04	L0410992-10	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-100504	5-Oct-04	L0410992-10	6020A	VANADIUM, TOTAL	0.0015		mg/l	y	0.001	0.00003	1
2-100504	5-Oct-04	L0410992-10	6020A	ZINC, TOTAL	0.0052	J	mg/l	y	0.005	0.000298	1
2-100504	5-Oct-04	L0410992-10	6010B	ALUMINUM, DISSOLVED	0.031	J	mg/l	y	0.1	0.019	1
2-100504	5-Oct-04	L0410992-10	6020A	ANTIMONY, DISSOLVED	0.00065	J	mg/l	y	0.001	0.000022	1

Field Duplicate Worksheet - Round 15 - October 2004 - Area A - SDG 0410992

Field Sample	Analyte	Analytical Method	Result	Units	Qualifier	Field Duplicate	Analyte	Result	Units	Qualifier	Field Duplicate RPD
2-GW47DS-04	ALUMINUM, TOTAL	6010B	0.3	mg/l	J	2-100504	ALUMINUM, TOTAL	0.3	mg/l		0.0
2-GW47DS-04	CALCIUM, TOTAL	6010B	37	mg/l	J	2-100504	CALCIUM, TOTAL	36	mg/l		2.7
2-GW47DS-04	IRON, TOTAL	6010B	81	mg/l	J	2-100504	IRON, TOTAL	84	mg/l		3.6
2-GW47DS-04	MAGNESIUM, TOTAL	6010B	53	mg/l	J	2-100504	MAGNESIUM, TOTAL	48	mg/l		9.9
2-GW47DS-04	MANGANESE, TOTAL	6010B	3.1	mg/l	J	2-100504	MANGANESE, TOTAL	3.1	mg/l		0.0
2-GW47DS-04	POTASSIUM, TOTAL	6010B	72	mg/l	J	2-100504	POTASSIUM, TOTAL	81	mg/l		11.8
2-GW47DS-04	SODIUM, TOTAL	6010B	890	mg/l	J	2-100504	SODIUM, TOTAL	750	mg/l		17.1
2-GW47DS-04	ALUMINUM, DISSOLVED	6010B	0.022	mg/l	J	2-100504	ALUMINUM, DISSOLVED	0.031	mg/l	J	34.0
2-GW47DS-04	CALCIUM, DISSOLVED	6010B	37	mg/l	J	2-100504	CALCIUM, DISSOLVED	38	mg/l		2.7
2-GW47DS-04	IRON, DISSOLVED	6010B	85	mg/l	J	2-100504	IRON, DISSOLVED	73	mg/l		15.2
2-GW47DS-04	MAGNESIUM, DISSOLVED	6010B	55	mg/l	J	2-100504	MAGNESIUM, DISSOLVED	59	mg/l		7.0
2-GW47DS-04	MANGANESE, DISSOLVED	6010B	3.2	mg/l	J	2-100504	MANGANESE, DISSOLVED	3	mg/l		6.5
2-GW47DS-04	POTASSIUM, DISSOLVED	6010B	78	mg/l	J	2-100504	POTASSIUM, DISSOLVED	86	mg/l		9.8
2-GW47DS-04	SODIUM, DISSOLVED	6010B	950	mg/l	J	2-100504	SODIUM, DISSOLVED	1000	mg/l		5.1
2-GW47DS-04	ARSENIC, TOTAL	6020A	0.037	mg/l		2-100504	ARSENIC, TOTAL	0.0398	mg/l		7.3
2-GW47DS-04	BARIUM, TOTAL	6020A	0.3647	mg/l		2-100504	BARIUM, TOTAL	0.345	mg/l		5.6
2-GW47DS-04	CHROMIUM, TOTAL	6020A	0.0028	mg/l		2-100504	CHROMIUM, TOTAL	0.003	mg/l		6.9
2-GW47DS-04	COBALT, TOTAL	6020A	0.0054	mg/l		2-100504	COBALT, TOTAL	0.0053	mg/l		1.9
2-GW47DS-04	COPPER, TOTAL	6020A	0.0012	mg/l		2-100504	COPPER, TOTAL	0.0015	mg/l		22.2
2-GW47DS-04	LEAD, TOTAL	6020A	0.00042	mg/l	J	2-100504	LEAD, TOTAL	0.0006	mg/l		35.3
2-GW47DS-04	NICKEL, TOTAL	6020A	0.003	mg/l		2-100504	NICKEL, TOTAL	0.003	mg/l		0.0
2-GW47DS-04	VANADIUM, TOTAL	6020A	0.0015	mg/l		2-100504	VANADIUM, TOTAL	0.0015	mg/l		0.0
2-GW47DS-04	ARSENIC, DISSOLVED	6020A	0.0397	mg/l		2-100504	ARSENIC, DISSOLVED	0.0339	mg/l		15.8
2-GW47DS-04	BARIUM, DISSOLVED	6020A	0.272	mg/l		2-100504	BARIUM, DISSOLVED	0.1786	mg/l		41.5
2-GW47DS-04	CHROMIUM, DISSOLVED	6020A	0.0016	mg/l		2-100504	CHROMIUM, DISSOLVED	0.0015	mg/l		6.5
2-GW47DS-04	COBALT, DISSOLVED	6020A	0.0046	mg/l		2-100504	COBALT, DISSOLVED	0.0039	mg/l		16.5
2-GW47DS-04	MOLYBDENUM, DISSOLVED	6020A	0.0027	mg/l		2-100504	MOLYBDENUM, DISSOLVED	0.0027	mg/l		0.0
2-GW47DS-04	NICKEL, DISSOLVED	6020A	0.0019	mg/l		2-100504	NICKEL, DISSOLVED	0.0015	mg/l		23.5
2-GW47DS-04	VANADIUM, DISSOLVED	6020A	0.0015	mg/l		2-100504	VANADIUM, DISSOLVED	0.0015	mg/l		0.0
2-GW47DS-04	ANTIMONY, TOTAL	6020A	0.00045	mg/l	J	2-100504	ANTIMONY, TOTAL	0.00049	mg/l	J	8.5
2-GW47DS-04	ZINC, TOTAL	6020A	0.0052	mg/l	J	2-100504	ZINC, TOTAL	0.0052	mg/l	J	0.0
2-GW47DS-04	ANTIMONY, DISSOLVED	6020A	0.00053	mg/l	J	2-100504	ANTIMONY, DISSOLVED	0.00065	mg/l	J	20.3
2-GW47DS-04	COPPER, DISSOLVED	6020A	0.00042	mg/l	J	2-100504	COPPER, DISSOLVED	0.00036	mg/l	J	15.4
2-GW47DS-04	LEAD, DISSOLVED	6020A	0.00041	mg/l	J	2-100504	LEAD, DISSOLVED	0.00005	mg/l	U	NC
2-GW47DS-04	ZINC, DISSOLVED	6020A	0.005	mg/l	J	2-100504	ZINC, DISSOLVED	0.00334	mg/l	U	NC

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL LABS

Eight Walk Up Drive Westborough, MA 01581
TEL: 508-898-9220 FAX: 508-898-9193

Date Rec'd in Lab: 10/5/04

ALPHA Job #: L0410992

Client Information

Client: Environmental Chemical Corporation
Address: 50 D'ANGELO DRIVE
MARLBOROUGH, MA 01752
Phone: 508-229-2270
Fax:
Email:

☒ These samples have been Previously analyzed by Alpha

Project Information

Project Name: AREA A LANDFILL
Project Location: NEW LONDON, CT
Project #:
Project Manager:
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: 10/12/04 Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MCP PRESUMPTIVE CERTAINTY-THESE QUESTIONS MUST BE ANSWERED

☐ Yes	☐ No	Are MCP Analytical Methods Required?
☐ Yes	☐ No	Are Drinking Water Samples Submitted?
☐ Yes	☐ No	Have you met minimum field QC requirements?

Other Project Specific Requirements/Comments/Detection Limits:
Groundwater (GW) Dissolved Metals are field filtered.
Surface Water (SW) and Seep (SP) Dissolved Metals are to be lab filtered.

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	SVOC-8270C	PAH-8270C SIM	TOTAL METALS	DISSOLVED METALS	HARDNESS, TDS, Alk	TOC	TSS	COD	Cl, SO4				Sample Specific Comments
10992.1	3-GW37S-04	10/5/04	1307	GW		X	X	X	X	X	X	X	X	X				FF
2	2-GW39DS-04	10/5/04	0947	GW		X	X	X	X	X	X	X	X	X				FF
3	2-SW18-04	10/5/04	1305	SW		X	X	X	X	X	X	X	X	X				LF
4	3-SP01-04	10/5/04	1315	SW		X	X	X	X	X	X	X	X	X				LF
5	2-GW41DS-04	10/5/04	1257	GW		X	X	X	X	X	X	X	X	X				FF
6	3-GW12D-04	10/5/04	1454	GW		X	X	X	X	X	X	X	X	X				FF
7	2-GW40DS-04	10/5/04	1015	GW		X		X		X	X		X	X				FF
8	2-GW47DS-04	10/5/04	1311	GW		X	X	X	X	X	X	X	X	X				FF MSMSD
9	2-SW24-04	10/5/04	1430	GW		X	X	X	X	X	X	X	X	X				LF
10	2-100504	10/5/04	0000	GW		X	X	X	X	X	X	X	X	X				FF
					Container Type	-	-	-	-	-	-	-	-	-	-	-	-	
					Preservation	-	-	-	-	-	-	-	-	-	-	-	-	

QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

IS YOUR PROJECT MCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	10/5/04 1630	[illegible]	10/5/04 16:5
[illegible]	10/5/04 1850	Dennis Ladwig	10/5/04 1850

Please print clearly, legi and completely. Sampl not be logged in and turnaround time clock w start until any ambiguitie resolved. All samples submitted are subject to Alpha's Payment Terms

FORM NO: 01-01 Internal

DATA VALIDATION MEMORANDUM – AREA A LANDFILL
O&M MONITORING SITES – NEW LONDON NSB
OCTOBER 2004 SAMPLING ROUND 15 (SDG 0411063 ALPHA LAB)

TO: ENGINEERING FIELD ACTIVITY NORTHEAST

FROM: JACKSON KIKER, ECC SENIOR CHEMIST, MARLBOROUGH, MA.

SUBJECT: NEW LONDON NSB – IRP O&M MONITORING SITES - SAMPLING ROUND-15, OCTOBER '04

DATE: DECEMBER 14, 2004

Project data were validated using the following Validation Functional Guideline, as modified for non-CLP methods.

1. Region I, EPA-NE Data Validation Functional Guidelines for Evaluation of Environmental Analyses (Dec, 1996).

2. Operations and Maintenance Manual for Installation Restoration Program at Naval Submarine Base New London (Nov, 2002).

The validation guideline exceedences are assessed and documented on the method specific data validation worksheet. On the data validation worksheet, the data quality acceptance criteria are presented, analytes requiring qualification based on laboratory historical control limits and/or validation guidance criteria exceedences are listed, assigned qualifiers, qualifying rationale is documented, and any potential bias noted. The overall evaluation of the data generated is presented in the data validation worksheet.

Standard EPA Region I data qualifiers are used to denote the assessment of data quality. The final and ranking assigned data qualifier for an analyte is presented in the data summary table. Ancillary qualifiers are noted on the data validation worksheets.

As an exception to the USEPA Region I data validation guidance, non-target ketone VOC data with response factors (RFs) less than the 0.05 were not qualified, as the Tier guidance allows for exceptions to the RF guidance.

The USEPA Region I Organic Regional Data Assessment (ORDA) sheet displays the summarized results of the data validation assessment for all analytical methods reported in the SDG.

Region I, EPA-NE ORGANIC REGIONAL DATA ASSESSMENT

LAB NAME: Alpha Lab
SDG #:__0411063_____
EPA-NE DV TIER LEVEL:___II___
SITE NAME: Area A New London NSB – O&M

# of SAMPLES/MATRIX:___8-GW, 1 FD (GW), 5 SW, 1 FD (SW)/ all samples aqueous
VALIDATION CONTRACTOR:__ECC
VALIDATOR'S NAME: Guru Ranganathan
DV Completion Date:_January 19, 2004
Date Sampled__October 6, 2004 _____

ANALYTICAL DATA QUALITY SUMMARY

		SVOC	PAH	Metals
1	Preservation and HT	O	O	O
2	Instrument Performance Check	O	O	O
3	Initial Calibration:	M	O	O
4	Continuing Calibration:	O	O	O
5	Blanks:	M	O	M
6	Surrogate Compounds:	O	O	-
7	Internal Standards	O	O	-
8	Matrix Spike/Matrix Spike Duplicate:	M	O	M
9	Sensitivity Check:	O	O	O
10	PE Samples- Accuracy Check	M	O	O
11	Target Compound Identification:	O	O	O
12	Compound Quantitation and Reported QLs	O	O	O
13	Tentatively Identified Compounds:	-	-	-
14	Semivolatile/Pesticide/PCB Cleanup:	-	-	-
15	Data Completeness	O	O	O
16	Overall Evaluation of Data:	O	O	O

O = Data had no problems or were qualified due to minor contractual problems; M = Data were qualified due to major/systemic MPC exceedences: Z = Data were rejected as unusable due to major contractual problems.

ACTION ITEMS: (Z items): _

AREAS OF CONCERN: (M items): _.

SVOC: High LCS recovery for butyl benzyl phthalate, but all results for the compound were non-detects. Low LCS recovery for 2, 4-dimethyl phenol – results qualified UJ. MS recovery and MS/MSD RPD were outside MPC limits for 3, 3-dichlorobenzidine – results for this compound qualified UJ. Method blank – detected with diethyl phthalate; all detections for this compound were qualified U. ICV %D outside MPC limits for 2, 4, 5-trichlorophenol and 2, 4-dinitrophenol.

PAH: None.

Metals: Several sample results were qualified due to ICB, CCB and preparation blank contaminations - please refer to the data review worksheets for the results that were qualified. Total Zn results in samples 01-08, 10, 11 & 12 and all dissolved As results were qualified J (except the ones qualified U due to blank contamination) due to high lab duplicate RPD's. Total Hg in samples 03 & 13 and dissolved Se in samples 01, 02, 05, 07, 08, 11 & 12 were qualified J due to high MS recoveries. All total Al and total K results qualified J due to high RPD's in serial dilution.

ECC Region I Data Review Worksheet (rv 2) **SVOCs 8270C**
Project: New London Area A – ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual (2002)**

Data Validation Level	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
Tier II	**Aqueous**	**-**	**8-coolers 1.1, 1.6, 1.7, 0.7, 1.2, 5.2, 1.1 & 2.2 ^{o}C**	**Alpha Laboratory Westborough, MA**	**0411063**

Field Identification of Samples Evaluated:

Field Sample ID	Lab Sample ID
2-GW100604	L0411063-01 (field duplicate for sample 02)
2-GW45DS-04	L0411063-02
2-SW22-04	L0411063-03
2-GW20S-04	L0411063-04
2-GW46DS-04	L0411063-05
4-GW1S-04	L0411063-06
2-GW40DS-04	L0411063-07
2-GW42DS-04	L0411063-08
2-SW19-04	L0411063-09
2-SW100604	L0411063-10 (field duplicate for sample 09)
2-GW21S-04	L0411063-11
2-GW43DS-04	L0411063-12
2-SW23-04	L0411063-13
2-SW20-04	L0411063-14
2-SW21-04	L0411063-15

Note: Samples are described below in the data worksheets by reference to the last two digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
COC, Sample Delivery Group Form.	1)Unbroken custody (accept or if broken R) 2) Temp≤6° (Soil-J detects, R -nondetects preserved per method (amber bottles, temperature, HCl (aq), MeOH/NAHSO4 (soils) (J, UJ, or R (function of HT and compound)	Cooler temperatures < 6 ^{o}C in all the coolers. Sample preservation using ice adequate. Sample custody transferred from Field Team Leader to lab sample courier in person. Unbroken Chain of Custody. No samples qualified.	X	-	
Holding Time	1) 7 Days aqueous – 14 days soil (extract 40 days) 2) J –detects, UJ or R –nondetects (function of time)	Sample Date: October 6, 2004. Extraction Date: October 7, 2004. Analysis Date: October 11, 2004. Samples prepared and analyzed within holding times. No samples qualified.	X	-	
% Solids Check (SOLIDS)	30%<Solids: if no sample weight adjustment made (no USACE) 1) <10% R entire sample 2) 10%.> and <30%; J-detects, NDs -R	Not applicable	-	-	
Results > Cal Range or <Cal Range	1) >Upper Cal Range J-detects - ensure instrument blank performed 2) <PQL but >MDL – J –detects (estimated)	Data reported between the MDL and the MRL or exceeding upper calibration range were qualified as estimated (J). Please see attached data summary sheet for all such results.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
TICs (if reported)	1) *verify library search for samples and blanks 2) verify TICs were not misreported compounds (different fraction or miss in search) 3) All TICs – J estimated 4) * verify blanks do not contain TIC peaks 5) * check TIC assignment spectra to STD spectra 6) *review blank and Samples for common lab contaminants	None Reported	X	-	
Internal Stds	1) IS are –50% to 200% of CCV 1) RRT<0.06 (30 sec) 2) IS>100% J-detects 3) IS<20%CCV NDs – R 4) IS>20%CCV <50%CCV NDs – UJ 5) *check for IS transcription errors	Internal standards were within MPC limits. No samples qualified.	X	-	
Equip Blank	< 5x (<10x common) contaminants for aq samples – for soil indicate EB (X rules don't apply)	Dedicated equipment – so not collected/analyzed with this SDG	-	-	
Surrogates	Within historical laboratory limits Qualification: >UCL J –detects, %R<10% J –detects, R –NDs, %R >10% but <LCL% J-detects, UJ ND's	All surrogates were within MPC limits for all samples – no sample qualifications.	X	-	
Lab Blanks (method blanks)	1) < 5x (<10x common) contaminants – U 2) analytes <lab PQL (contract lab) 3) no phthalates >5X QL (QAPP)	Lab blank was detected with diethyl phthalate at 4.9µg/L. All detections for this compound (samples 01, 02, 03 & 04) were qualified U.	X	All diethyl phthalate detections qualified U.	
LCS Recovery	1) Within historical laboratory limits listed in (QAPP) 10% and <LCL% J detects, UJ –NDs >UCL% J detects <10% R NDs, J-detects	All LCS recoveries within MPC limits except butyl benzyl phthalate (high) and 2, 4-dimethylphenol (low). All results for butyl benzyl phthalate were non-detects – so no qualifications for this compound. Results for 2, 4-dimethylphenol - all non-detects – were qualified UJ.	X	2, 4-dimethylphenol results qualified UJ.	
MS/MSD Recovery	1) Within historical laboratory limits (QAPP) (if MS > 4X native levels) Qualification of MS sample: <10% J detects, R NDs >10% and <70% J detects, UJ -NDs >130% J detects	Native sample - sample 09. All MS/MSD recoveries within MPC limits except the MS recovery for 3, 3-dichlorobenzidine. Results for this compound – all non-detects – were qualified UJ.	X	3, 3-dichlorobenzidine results qualified UJ.	
Cleanup Performance Check (if performed)	%R< 10% NDs-R detections J %R>10% <LCL (80%GPC) –detections J, NDs UJ %R>UCL (120%) – detections J Retention Time shift <5%, symmetrical peakshape. GPC check with interferants. Good surrogate recovery, GPC blank check – no carryover.(VOA/SV-IX-I6). Sulfur and High MW compounds removed. Symmetrical peaks for all compounds,	NA	-	-	
MS/MSD RPD	RPD =30% aq, <50% (S) J –detects in MS sample UJ-non detects	Native sample - sample 10. All MS/MSD RPD's were within MPC limits for all compounds except for 3, 3-dichlorobenzidine. Results for this compound – all non-detects – were qualified UJ.	X	3, 3-dichlorobenzidine results qualified UJ.	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIA S
Tune Check	Tune check within method parameters for DFTPP	The raw data sheets were used for validation. CCV tune check within limits.	X	-	
DDT degradation Instrument performance check	1) Breakdown <20% DDT 2) benzidine and pentachlorophenol at normal response - no peak trailing (<3.0 benz. , <5.0 penta.) Detections – J	Degradation checks performed with associated tune checks were all within limits.	X	-	
Field Dup RPD	1) RPD = 100% water; = 100% soil for Results > PQL (FD pair only) J-detects (both > PQL) 2) If one > PQL, other ND, J-detections, UJ non-detect Other conditions use judgement	Field duplicate pairs: 02-01 & 09-10. All results non-detects in both pairs. Similar results for both the native samples and their field duplicates. No sample qualifications.	X	-	
Initial Cal (Linearity)	Correct calibration stds %RSD < 15% use average RF for calibration %RSD> 15% use least squares COD (r2) > 0.990 or correlation coefficient r> 0.995 or alternatively mean %RSD <15% for all target analytes, with no analyte %RSD>30% or %RSD<30% each target analyte 1) CCCs %RSD: <30% (acenatphthene, 1,4 dichlorobenzene, hexachlorobutadiene, dipheynlamin, di-n-octyl phthalate, fluoranthene, benzo(a)pyrene, 4-chloro-3-methylphenol, 2,4, dichlorophenol, 2-nitrophenol, phenol, pentachlorophenol, 2,4,6 trichlorophenol) J –detects, R or UJ NDs all samples associated with Ical) 2) SPCCs Average RRF > 0.05: SPCCs n-nitroso-di-n-propylamine, hexachlorcyclopentdiene, 2,4 dinitrophenol, 4-nitrophenol. (J –detects, R NDs) 3) RRF>0.05 all target compounds RRT < 0.06 units (all stds within 30 sec) 4) *verify that instrument parameters met method and that Ical and analysis used the same parameters 5) *recalculate RRF one tgt compound associated with each IS. Recalculated values within 10% of lab values. 6) *recalculate one tgt compound associated with each IS. Recalculated values within 10% 7) *option-review preparation logs to ensure cal stds are traceable to NIST stds. 8) *option-recalculate cal std concentration of one std. Must agree within 10% of lab (option if information is in data package)	Instrument: Buffy End date: October 01 at 11:04 (end time). RRF>0.05 all SVOCs. RSD<15% and/or COD>0.99 criteria used for linearity of SVOC Ical. Acceptable linearity. No samples qualified based on ICAL.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
2nd Source ICV	%R (between ICV and Ical) analytes 80%--120% (USACE) %D ≤ 25%, (+ or -) once per 5 pt cal Qualification: J detects, R or UJ NDs	Instrument: Buffy Inj. date: October 01 at 02:19. All %D's within MPC limits for all compounds of concern except 2, 4, 5-trichlorophenol and 2, 4-dinitrophenol. The results for these 2 compounds – all non-detects – were qualified UJ.	X	2, 4, 5-trichlorophenol and 2, 4-dinitrophenol results qualified UJ.	
CCV	1) SPCCs Average RRF: SPCCs n-nitroso-di-n-propylamine, hexachlorcyclopentdiene, 2,4 dinitrophenol, 4-nitrophenol. 2) RRF all compounds > 0.05 3) CCC: (acenatphthene, 1,4 dichlorobenzene, hexachlorobutadiene, dipheynlamin, di-n-octyl phthalate, fluoranthene, benzo(a)pyrene, 4-chloro-3-methylphenol, 2,4, dichlorophenol, 2-nitrophenol, phenol, pentachlorophenol, 2,4,6 trichlorophenol) 4) %D<20%. CCCs (QAPP -except surrogates). 5) Qualification-J detects, R or UJ Nods 6) %D<25% all compounds (Tier I). 7) RRF exclusions: surrogates, 8) *verify same instrument and parameters 9) *Recalculate RRF for one tgt cmpd associated with each IS. (within 10%) 10) *Recalculate %D for one tgt cmpd associated with each IS (within 10%) 11) *IS RRT<0.06 units (30 sec) 12) * IS area -50 % to 100 % of last ICAL 13) *option-review preparation logs to ensure cal stds are traceable to NIST stds. 14) *option-recalculate cal std concentration of one std. Must agree within 10% of lab (option if information is in data package)	Instrument: Buffy Date: 11 October, 2004. %D within MPC limits for all compounds – no sample qualifications.	X	-	
Compound Quantitation	1) Check sensitivy (MDL< 1/3 PQL or per QAPP)	For target SVOCs the MDL< 1/3 PQL. Analytical sensitivity was adequate. Reporting limits were below the monitoring criteria for all compounds.	X	-	
Overall Evaluation of Data	1) Appropriate method 2) Evaluate any analytical problems 3) Evaluate sampling errors – field contamination, sample hold times	The laboratory accuracy and precision acceptable. No apparent sample bias. Results are usable for making project decisions, as qualified. High LCS recovery for butyl benzyl phthalate, but all results for the compound were non-detects. Low LCS recovery for 2, 4-dimethyl phenol – results qualifiedUJ. MS recovery and MS/MSD RPD were outside MPC limits for 3, 3-dichlorobenzidine – results for this compound qualified UJ. Method blank – detected with diethyl phthalate; all detections for this compound were qualified U. All surrogate recoveries within MPC limits. ICAL; linear.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIA S
		ICV: within MPC limits for all SVOC's except for 2, 4, 5-trichlorophenol and 2, 4-dinitrophenol. CCV: within MPC limits. Sample results < MRL but > MDL were qualified J. Please see attached Data Summary Table for all such results. Sample 07 was also analyzed as part of 0410992-07 (part of another SDG). The results were similar. The results in this SDG for sample 07 were qualified ZZZ and discarded as the sample 0410992-07 had better QC. Sampling error – 2 FD pairs – 02-01 & 09-10. All results non-detects in both pairs. Acceptable sampling precision.			

*Tier III criteria.

Completeness Check: Inventory Check Sheet_____X__ Sample Quantitation Calculations (TIER III ONLY):

ECC Region I Data Review Worksheet (rv 2) **PAH 8270C - SIM**
Project: New London Area A ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

Data Validation Level	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
Tier II	**Aqueous**	**-**	**8-coolers 1.1, 1.6, 1.7, 0.7, 1.2, 5.2, 1.1 & 2.2 °C**	**Alpha Laboratory Westborough, MA**	**0411063**

Field Identification of Samples Evaluated:

Field Sample ID	Lab Sample ID
2-GW100604	L0411063-01 (field duplicate for sample 02)
2-GW45DS-04	L0411063-02
2-SW22-04	L0411063-03
2-GW20S-04	L0411063-04
2-GW46DS-04	L0411063-05
4-GW1S-04	L0411063-06
2-GW40DS-04	L0411063-07
2-GW42DS-04	L0411063-08
2-SW19-04	L0411063-09
2-SW100604	L0411063-10 (field duplicate for sample 09)
2-GW21S-04	L0411063-11
2-GW43DS-04	L0411063-12
2-SW23-04	L0411063-13
2-SW20-04	L0411063-14
2-SW21-04	L0411063-15

Note: Samples are described below in the data worksheets by reference to the last two digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inven-tory	QUAL	BIAS
COC, Sample Delivery Group Form.	1)Unbroken custody (accept or if broken R) 2) Temp≤6° (Soil-J detects, R -nondetects preserved per method (amber bottles, temperature, HCl (aq), MeOH/NAHSO4 (soils) (J, UJ, or R (function of HT and compound)	Cooler temperatures < 6 °C in all the coolers. Sample preservation using ice adequate. Sample custody transferred from Field Team Leader to lab sample courier in person. Unbroken Chain of Custody. No samples qualified.	X	-	
Holding Time	1) 7 Days water, 40 to analysis 2) J –detects, UJ or R –nondetects (function of time)	Sample Date: October 6, 2004. Extraction Date: October 7, 2004. Analysis Date: October 12, 2004. Samples prepared and analyzed within holding times. No samples qualified.	X	-	
% Solids Check (SOLIDS)	30%<Solids: if no sample weight adjustment made (no USACE) 1) <10% R entire sample 2) 10%.> and <30%; J-detects, NDs -R	Not applicable	-	-	
Results > Cal Range or <Cal Range	1) >Upper Cal Range J-detects - ensure instrument blank performed 2) <PQL but >MDL – J –detects (estimated)	Results > MDL but < MRL were qualified J. Please see attached data summary table for all such results. No results exceeding upper calibration range.	X	Results < MRL but > MDL are qualified UJ.	
Equip Blank	< 5x (<10x common) contaminants for aq samples – for soil indicate EB (X rules don't apply)	Not applicable. Equipment blank not collected/analyzed with this SDG as all the equipment were dedicated.	-	-	

ECC Region I Data Review Worksheet (rv 2) **PAH 8270C - SIM**
Project: New London Area A ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inven-tory	QUAL	BIAS
Surrogates	1) Surrogate acceptance limits Nitrobenzene-d5, 2-Fluorobiphenyl & p-Terphenly-d14 within QAPP limits. Qualification: >UCL J –detects, %R<10% J –detects, R –NDs, %R >10% but <60% J-detects, UJ NDs	All surrogate recoveries within MPC limits. No samples qualified.	X	-	
Lab Blanks (method blanks)	1) < 5x (<10x common) contaminants – U 2) analytes <lab PQL (contract lab)	All method blanks were non-detects for PAH's. No samples qualified.	X	-	
LCS Recovery	1) QAPP limits 10% and <LCL% J detects, UJ -NDs >UCL% J detects <10% R NDs, J-detects	LCS %R within MPC limits. No samples qualified.	X	-	
MS/MSD Recovery	1) QAPP limits (if MS > 4X native levels) Qualification of MS sample: <10% J detects, R NDs >10% and <70% J detects, UJ -NDs >130% J detects	Native sample – sample 09. MS/MSD %R's within limits. No samples qualified.	X	-	
MS/MSD RPD	RPD =30% solid, 30%. J –detects in MS sample UJ-non detects	MS/MSD RPD's within MPC limits. Laboratory precision acceptable. No samples qualified.	X		
Cleanup Performance Check (if performed)	%R< 10% NDs-R detections J %R>10% <LCL (80%GPC) –detections J, NDs UJ %R>UCL (120%) – detections J Retention Time shift <5%, symmetrical peakshape. GPC check with interferants. Good surrogate recovery, GPC blank check – no carryover.(VOA/SV-IX-I6). Sulfur and High MW compounds removed. SW-846 clean-up not required	NA	-	-	
Retention times	Within 3X standard deviation for each analyte from 72-hour study Exceeds: R qualify data	Retention times within limits.	X	-	
Field Dup RPD	1) RPD = 100% water & soil for Results > X PQL (FD pair only) J-detects (both > X PQL) 2) If one >X PQL, other ND, J-detections, UJ non-detect Other conditions use judgement	Field duplicate pairs: 02-01 & 09-10. For the 02-01 pair, all results were non-detects in both samples. For the 09-10 pair, there were several detections. All RPD's were within MPC limits except for benzo(a)pyrene and anthracene, which were detected in the field duplicate sample (10) but not in the field sample (09). The results for these 2 compounds were qualified J in the field duplicate sample (10) and UJ in the native field sample (09).	X	Benzo (a)pyrene and anthracene results were qualified J in sample 10 and UJ in sample 09.	

ECC Region I Data Review Worksheet (rv 2) **PAH 8270C - SIM**
Project: New London Area A ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inven-tory	QUAL	BIAS
Initial Cal (Linearity)	Correct calibration stds %RSD < 15% use average RF for calibration %RSD> 15% use least squares COD (r2) > 0.990 or correlation coefficient r> 0.995 or alternatively mean %RSD <20% for all target analytes, with no analyte %RSD>40% Resolution check mix –valley 60% hgt of shortest peak (CLP criteria only) Performance check mix - >90% (PEM) (CLP criteria only) SW-846 PEM –endirn/DDT breakdown evaluation. Blank and Performance Evaluation Mix (PEM) at start, and blank and midpoint Individual Standard Mix A (ISMA) and ISMB at end or samples(CLP only)	October 9, 2004 at 05:13 (end time). Instrument – Mindy %RSD < 20% ICAl linear. No samples qualified RRF>0.05	X	-	
2nd Source ICV	%R (between ICV and Ical) analytes %D ≤ 20%, (+ or -) once per 5 pt cal Qualification: J detects, R or UJ NDs	October 9, 2004 at 05:59 (inj. time). Instrument – Mindy ICV %D within MPC limits for all compounds. No samples qualified.	X	-	
CCV	1) 15% of initial calib. Curve (85%-115%) If low re-calibrate per method. If high no recalibration needed. J qualify data. 2) 15% D Qualification-J detects, R or UJ NDs	Date: October 11, 2004. Instrument – Mindy All %D values within MPC limits – no samples qualified.	X	-	
Tune Check	Tune check within method parameters for DFTPP	Ical tune check within limits. And CCV tune check within limits. Raw data was used to check the tunes. No samples qualified. Degradation checks associated with sample analysis and ICAL tune checks with limits.	X	-	
Internal Stds	1) IS are –50% to 200% of CCV 1) RRT<0.06 (30 sec) 2) IS>100% J-detects 3) IS<20%CCV NDs – R 4) IS>20%CCV <50%CCV NDs – UJ 5) *check for IS transcription errors	Internal standards within MPC limits. No samples qualified.	X	-	
Sensitivity	1) MDL study – 7 replicates (40 CFR) 2) Surrogates %R 80-120%, 2) %R <10 ND- (R) , J- detects 3) 10%> but <80% , judgement 4) %R>120% J-detects 5) QC, RRT meet criteria, 6) %RSD < 20% 7) MDL< MQL (3x less ideal) 8) Lab fortified blank (see VOA/SV Part II –section X). *Check and recalculate %RSDs and %R for three compounds (with 10% of lab)	Reporting limits were less than the primary monitoring criteria for all compounds.	X	-	
Compound Quantitation	1) Check sensitivy (MDL< 1/3 PQL or per QAPP	RDL > Project Reporting Limit but well below the groundwater criterion for all compounds. All MDL's < PRL. Acceptable sensitivity for all compounds. No samples qualified.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inven-tory	QUAL	BIAS
Overall Evaluation of Data	1) Appropriate method 2) Evaluate any analytical problems 3) Evaluate sampling errors – field contamination, sample hold times	The laboratory accuracy and precision were acceptable. No apparent sample bias. Data are usable for project decisions as qualified. All results below RL but > MDL were qualified as estimated (J). All surrogate, LCS and MS/MSD recoveries within MPC limits. MS/MSD RPD's within MPC limits. ICAL: Linear. ICV: within MPC limits. CCV; within MPC limits. Sample 07 was also analyzed as part of 0410992-07 (part of another SDG). The results were similar. The results in this SDG for sample 07 were qualified ZZZ and discarded. Sampling error – 2 FD pairs – 08-01 & 09-10; All resuls non-detects in the 08-01 pair, For the 09-10 pair, benzo(a)pyrene and anthracene were detected in the field duplicate sample (10) but not in the field sample (09). Acceptable sampling precision.	X	-	

(*Tier III criteria)

Completeness Check: Inventory Check Sheet_____X__ Sample Quantitation Calculations (TIER III ONLY):

ECC Region I Data Review Worksheet (rv 2) **Metals 6010B/7000**
Project: New London Area ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

Data Validation Level	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
Tier II	**Aqueous**	**HNO3**	**8-coolers 1.1, 1.6, 1.7, 0.7, 1.2, 5.2, 1.1 & 2.2 ^{o}C**	**Alpha Laboratory Westborough, MA**	**0411063**

Field Identification of Samples Evaluated:

Field Sample ID	Lab Sample ID
2-GW100604	L0411063-01 (field duplicate for sample 02)
2-GW45DS-04	L0411063-02
2-SW22-04	L0411063-03
2-GW20S-04	L0411063-04
2-GW46DS-04	L0411063-05
4-GW1S-04	L0411063-06
2-GW40DS-04	L0411063-07
2-GW42DS-04	L0411063-08
2-SW19-04	L0411063-09
2-SW100604	L0411063-10 (field duplicate for sample 09)
2-GW21S-04	L0411063-11
2-GW43DS-04	L0411063-12
2-SW23-04	L0411063-13
2-SW20-04	L0411063-14
2-SW21-04	L0411063-15

Al, Ca, Mg, Mn, Fe, Na & K were analyzed by 6010B, Hg by 7470A and all other metals were analyzed by 6020A.
Note: Samples are described below in the data worksheets by reference to the last two digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
COC, Sample Delivery Group Form.	1)Unbroken custody (accept or if broken R) 2) Temp≤6° (Soil-J detects, R -nondetects 3) preserved per method (amber bottles, temperature, HCl (aq), MeOH/NAHSO4 (soils) (J, UJ, or R (function of HT and compound)	Cooler temperatures < 6 ^{o}C in all the coolers. Sample preservation using ice adequate. Sample custody transferred from Field Team Leader to lab sample courier in person. Unbroken Chain of Custody. pH > 2 for 5 total metals and 5 dissolved metals samples – all preserved with HNO_3 as soon as the lab received. No samples qualified.	X	-	
Holding Time	1) 180 days (6010), Hg 28 Days to analysis 2) J –detects, UJ or R –nondetects (function of time)	Sample Date: October 6th, 2004. All samples extracted by 11th October, 2004 and analyzed by 19th October, 2004. Samples analyzed within holding time. No samples qualified.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
Lab Duplicate	1) RPD < 20% 1) If both values > PQL 2) Qualify samples in batch: detects J, NDs UJ	For methods 6010B and 7470A, all lab duplicate RPD's within MPC limits. For method 6020A, samples were analyzed in 2 batches. The first batch, analyzed on 12th October, was applicable to total metals samples 01-08, 10, 11 & 12 and lab duplicate was part of another SDG. For the other batch, analyzed on 14th October, sample 09 was the native sample and it was applicable to all other samples for total metals and dissolved metals. In the first batch, all lab duplicate RPD's within MPC limits except Zn. Total Zn results in applicable samples qualified J. In the other batch, lab duplicate RPD's outside MPC limits for dissolved As. All other exceedances were < 5X blank levels. Dissolved As results in applicable samples were qualified J (except the ones qualified U due to blank contamination). Laboratory precision adequate for all other results.	X	Total Zn results in samples 01-08, 10, 11 & 12 and all dissolved As results were qualified J (except the ones qualified U due to blank contaminatio n).	
LCS Recovery	1) once per sample batch 2) 75-125% water, soil, QAPP limits. 3) <LCL% Reject 4) >UCL% detects J	LCS %R's acceptable. No samples qualified.	X	-	
Field Dup RPD	1) RPD = 50% water & soil for Results > X PQL (FD pair only) J-detects (both > X PQL) 2) If one >X PQL, other ND, J-detections, UJ non-detect	Two field duplicate pairs – 02-01 & 09-10. Fe and Mn – both total and dissolved – had RPD's outside MPC limits in the 02-01 pair and total Cd & total Se had RPD's outside MPC limits in the 09-10 pair. The results for total Fe & Mn and dissolved Fe & Mn were qualified J for detects and UJ for non-detects in samples 01 & 02, unless they were qualified U due to blank contamination. Total Cd & total Se results were qualified J for detects and UJ for non-detects in samples 09 & 10, unless they were qualified U due to blank contamination..	X	Following results were qualified J for detects and UJ for non-detects (unless qualified U due to blank contaminatio n): Total & dissolved Fe & Mn in samples 01 & 02 and total Cd & Se in samples 09 & 10.	
% Solids Check (SOLIDS)	30%<Solids: if no sample weight adjustment made 1) <10% R entire sample 2) 10%.> and <30%; J-detects, NDs -R	Not applicable	-	-	
Results > Cal Range or <Cal Range	1) >Upper Cal Range J-detects - ensure instrument blank performed 2) <PQL but >MDL – J –detects (estimated)	Results less than the method reporting limits and greater than the method detection limit that were not qualified U due to blank contamination, were qualified J. See attached data summary table for all such results.	X	Results < PQL and > MDL were qualified J.	
Lab Blanks (method blank or p reparation blank)	1) Once per sample batch 2) Results> QL; sample results <5X ; sample result U (nd) 3) Sample results >5X blank level; no action	(all results below in mg/L) Method 6010B: Samples analyzed in 2 batches – prep blank detections for Mg, Fe, Mn & K – all sample detections > 5X blank levels – no qualifications.	X	Total metals: All Be detections in samples 01, 02, 04, 05,	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
		Method 6020A Samples were analyzed in 2 batches – the first with total metals samples 01-06, 08, 10, 11 & 12 on October 12th and the second with all other total and dissolved metals samples. The following were the prep blank detections that resulted in qualifications: Total metals: Be – 0.00003, results < 0.00015 – all detections except sample 03 in the batch 1 - were qualified U. Mo – 0.00098, results < 0.0049 – all detections in the batch 1 - were qualified U. Ag – 0.00005, results < 0.00025 – all detections in the batch 1 - were qualified U. Se – 0.00049, results < 0.00245 – samples 09, 13, 14 & 15 – were qualified U. Besides the above, Ni, V & Zn were also detected; but all applicable sample detections were > 5X blank levels. Dissolved metals: Cr – 0.00016, results < 0.008 – samples 04, 06, 09, 10, 14 & 15 – were qualified U. Se – 0.00049, results < 0.00245 – samples 03, 04, 06, 09, 10, 13, 14 & 15 – were qualified U. Besides the above, Zn was also detected; but all sample detections were > 5X blank levels. All other prep blank detections were either < ICB/CCB detections or did not lead to sample qualifications.		06, 08, 10, 11 & 12, all Mo detections in samples 01-06, 08, 10, 11 & 12, all Ag detections in samples 01-06, 08, 10, 11 & 12 and all Se detections in samples 09, 13, 14 & 15 were qualified U. Dissolved metals: Cr detections in samples 04, 06, 09, 10, 14 & 15 and Se detections in samples 03, 04, 06, 09, 10, 13, 14 & 15 were qualified U.	
MS Recovery	1) 75-125% GFAA/ICP if MS > 4X native levels) Qualification of MS sample: 2) <30% J detects, R NDs 3) 30%--74%, detects J, NDs UJ >125% J detects	Native sample – sample 09 for total metals and dissolved metals. MS %R's outside MPC limits for total Hg and dissolved Se – both high. All other exceedances of %R's had spikes < 4X native sample levels. All detections in total Hg and dissolved Se that were not qualified U due to blank contamination, were qualified J.	X	Total Hg in samples 03 & 13 and dissolved Se in samples 01, 02, 05, 07, 08, 11 & 12 were qualified J.	
Sensitivity*	1) MDL study – 7 replicates (40 CFR) 2) Surrogates %R 80-120%, 1) %R <10 ND- (R) , J- detects 2) 10%> but <80% , judgement 3) %R>120% J-detects 4) %RSD < 20% 5) MDL< MQL (3x less ideal) 6) Lab fortitied blank (see VOA/SV Part II – section X). *Check and recalculate %RSDs and %R fir three compounds (with 10% of lab)	Lab RL < OM RL for all metals of concern. Acceptable sensitivity.	X	-	
Equip Blank	< 5x contaminants for aq samples – for soil indicate EB (X rules don't apply)	Equipment blank not collected/analyzed with this SDG.	-	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
Negative blanks	If negative values are reported for an analyte with absolute value >DL and sample value is <5X the absolute value of the blank or is nondetect Qualify detects as estimated (J) Nondetects as estimated (UJ)	No analyte detections for target metals. All negative blanks < DL. No samples qualified.	X	-	
Initial Cal Multipoint	1) 6010: 1 std and blank and low-level check at MQL – check std 20% 2) 3 stds and a blank- R = 0.995	ICAL performed according to method. Two point calibration and check standards. The pre-analysis check standard was within limits.	X	-	
Initial Calibration Blanks	1) Ical blank after Ical 2) Results > QL; sample results <5X ; sample result U (nd) 3) Sample results >5X blank level; no action	(All results below in mg/L) Method 6010B: Samples analyzed in 2 batches. No ICB detections for both total and dissolved metals – no sample qualifications. Method 6020A Samples were analyzed in 2 batches – the first with total metals samples 01-06, 08, 10, 11 & 12 on October 12th and the second with all other total and dissolved metals samples. The following were the ICB detections that resulted in qualifications: Total metals: Sb – 0.00003, results < 0.00015 in batch 1 – samples 04 & 06 - were qualified U. Sb – 0.00004, results < 0.0002 in batch 2 – sample 14 - was qualified U. Be – 0.00004, results < 0.0002 in batch 2 – samples 09, 14 & 15 - were qualified U. Ag – 0.00004, results < 0.0002 in batch 2 – samples 09 & 13 - were qualified U. Tl – 0.00003, results < 0.00015 in batch 1 – all detections - were qualified U. Tl – 0.00004, results < 0.0002 in batch 2 – sample 13 - was qualified U. Dissolved metals: Sb – 0.00004, results < 0.0002 in batch 2 – samples 04, 06, 09, 10, 14 & 15 - were qualified U. Be – 0.00004, results < 0.0002 in batch 2 – all applicable dissolved metals samples - were qualified U. Co – 0.00004, results < 0.0002 in batch 2 – sample 06 - was qualified U. Pb – 0.00003, results < 0.00015 in batch 2 – samples 01, 02, 05, 09, 10 & 12 - were qualified U. Ag – 0.00004, results < 0.0002 in batch 2 – samples 03 & 09 - were qualified U. Tl – 0.00004, results < 0.0002 in batch 2 – sample 06 - was qualified U. Ni was also detected in batch 2 but all sample detections were > 5X ICB levels. All other ICB detections were either < prep blank/CCB detections or did not lead to sample qualifications.	X	Total metals: Sb in samples 04, 06 & 14, Be in samples 09, 14, & 15, Ag in samples 09 & 13 and Tl in samples 03, 06 & 13 were qualified U. Dissolved metals: Sb in samples 04, 06, 09, 10, 14 & 15, Be in all detected samples, Co in sample 06, Pb in samples 01, 02, 05, 09, 10 & 12, Ag in samples 03 & 09 and Tl in sample 06 were qualified U.	
Continuing Calibration Blanks	1) CCB every 10 samples end of run 2) Results > QL; sample results <5X ; sample result U (nd)	(All results below in mg/L) Method 6010B: Samples analyzed in 2 batches. CCB detections of Fe, Mg and Na. No applicable Fe analyses to the CCB detections. All detections for Na and Mg in	X	Total metals: As in sample 06, Cd in samples 04, 06, 10, 14 &	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
	3) Sample results >5X blank level; no action	the applicable samples were > 5X blank levels with dilution factors taken into account. No sample qualifications. Method 6020A Samples were analyzed in 2 batches – the first with total metals samples 01-06, 08, 10, 11 & 12 on October 12th and the second with all other total and dissolved metals samples. The following were the ICB detections that resulted in qualifications: Total metals: As – 0.00028, results < 0.0014 in batch 1 – sample 06 - was qualified U. Cd – 0.00006, results < 0.0003 in batch 1 – all applicable sample detections except 03 - were qualified U. Cd – 0.00004, results < 0.0002 in batch 2 – samples 14 & 15 - were qualified U. Co – 0.00004, results < 0.0002 in batch 1 – sample 06 - was qualified U. Pb – 0.00004, results < 0.0002 in batch 1 – sample 06 - was qualified U. Ba & Cr in batch 1 and As & Be in batch 2 were also detected in CCB's but all applicable detections were > 5X CCB levels. Dissolved metals: As – 0.00011, results < 0.00055 in batch 2 – samples 06, 09 & 10 - were qualified U. Cd – 0.00004, results < 0.0002 in batch 2 – all sample detections - were qualified U. Mo – 0.00009, results < 0.00045 in batch 2 – sample 13 - was qualified U. V – 0.00006, results < 0.0003 in batch 2 – sample 06 - was qualified U. Ba was also detected in CCB but all applicable sample detections were > 5X CCB levels. All other CCB detections were either < prep blank/ICB detections or did not lead to sample qualifications.		15 and Co & Pb in sample 06 were qualified U. Dissolved metals: As in samples 06, 09 & 10, all Cd detections, Mo in sample 13 and V in sample 06 were qualified U.	
Serial Dilution	1) once per digestion batch 2) Meets method limits (RPD 10%). 3) Metal results >50X MDL levels.	SD on native sample 09 performed for total As, Ba, Be, Co & Cu among the compounds analyzed by 6020A and for all the compounds analyzed by 6010B. %D's outside MPC limits for total Al and K. Total Al and total K results qualified J.	X	All total Al and total K results qualified J.	
Interelement checks ICS-A, ICS-AB Instrument performance check	1) start of sequence 2) 80-120% target analytes 3) >120% ; detects J (ICS-AB) 4) 50%-79% R ICS-AB; detects J, NDs – UJ 5) <50% R – reject data 6) ICS-A response > DL and samples have <5X ICS-A response: detects J 7) Absolute value of negative ICS-A response>DL and sample detects <5X ICS-A response: detects J, NDs as UJ 8) If the ICS-A is within limits, the ICS-AB may not be analyzed (USACE Shell)	ICS's %R's within MPC limits for COC elements. For 6020A, only Mo was analyzed for ICS-A; all metals of concern were analyzed with ICS-AB. No samples qualified.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
2nd Source ICV	1) following calibration 2) 90- 110% Recovery (6010/7000) 3) 75%-89% R – detects J, NDs – UJ 4) 111-125% R – detects J outside 75-125% R – reject data (R)	Within limits of MPC. No samples qualified.	X	-	
CCV	1) every 10 samples and end of run 2) 90- 110% Recovery (6010) Hg; 80-120% 3) 6010: 75%-89% R Hg, 65-79% R; – detects J, NDs – UJ. 4) 6010: 111-125%, Hg: 121-135% detects J 6010: outside 75-125%, Hg; outside 65-135%; R – reject data (R)	Within limits of MPC. No samples qualified.	X	-	
Post Digestion Spike	1) 75- 125% R	PDS not performed as MS %R's within MPC limits for Site COC's analyzed by ICP (except marginally high %R's for Se).	X	-	
*MDL Study	1) *In accordance with 40CFR – seven replicates %RSD < 20% 2) * IS and retention times within method requirements 3) * performed annually 4) *MDL is at least ½ of PQL *tgt and surrogate 80-120% R	NA	-	-	
*System Performance	1)* evaluate PES, MS//MSD, cal STDs, MDS study, and surrogates for systemic bias – high or low and access system accuracy 3) *Matrix effects- MS/MSD, surrogated, PDS. 4) *overall system contamination-review all blanks for systemic or sporadic contamination	NA	-	-	
*Single Blind PE	1) Qualify associated samples in PES batch PES = ND, Detects J – ND PE analytes in samples, NDs – R 5) PES > acceptance criteria – Detects in samples J, 6) PES<acceptance criteria – Detects J, NDs –R 7) VOA/SV-XI14 other criteria 8) *% of PES sample above and below criteria *Recalculate concentrations for one tgt compound per PES (10% of lab)	NA	-	-	
Overall Evaluation of Data	1) Appropriate method 2) Evaluate any analytical problems 3) Evaluate sampling errors – field contamination, sample hold times	Laboratory accuracy was acceptable. Accuracy was shown by the LCS being within MPC limits. The ICS-A, and ICS-AB were within limits for all elements. Total Zn results in samples 01-08, 10, 11 & 12 and all dissolved As results were qualified J (except the ones qualified U due to blank contamination) due to high lab duplicate RPD's. Total Hg in samples 03 & 13 and dissolved Se in samples 01, 02, 05, 07, 08, 11 & 12 were qualified J due to high MS recoveries. All total Al and total K results qualified J due to high RPD's in serial dilution. Prep blank, ICB and CCB contamination	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
		necessitated U qualifiers to be assigned to several results – the list of results and the qualifiers can be obtained from the relevant sections above or from the data summary table. ICAL; 2-point calibration. ICV: within MPC limits. CCV: within MPC limits. Results < PQL and > MDL that were not qualified U due to blank contamination, were qualified J. Two field duplicate pairs – 02-01 & 09-10. The following results were qualified J for detects and UJ for non-detects (unless qualified U due to blank contamination): Total & dissolved Fe & Mn in samples 01 & 02 and total Cd & Se in samples 09 & 10. Acceptable sampling precision for all other metals.			

*TIER III DATA VALIDATION ONLY Completeness Check: Inventory Check Sheet___X_Sample Quantitation Calculations (TIER III DATA VALIDATION ONLY):

Data Summary Table - Round 15 - October 2004, Area A - SDG 0411063

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW100604	6-Oct-04	L0411063-01	2320B	ALKALINITY, TOTAL	1600		mg CaCO3	y	10	2	5
2-GW100604	6-Oct-04	L0411063-01	2540C	SOLIDS, TOTAL DISSOLVED	17000		mg/l	y	10	2.8	1
2-GW100604	6-Oct-04	L0411063-01	2540D	SOLIDS, TOTAL SUSPENDED	9.3		mg/l	y	5		1
2-GW100604	6-Oct-04	L0411063-01	9251	CHLORIDE	10000		mg/l	y	200	0.36	200
2-GW100604	6-Oct-04	L0411063-01	9038	SULFATE	5.5	J	mg/l	y	10	1.4	1
2-GW100604	6-Oct-04	L0411063-01	5220D	CHEMICAL OXYGEN DEMAND	910		mg/l	y	20	4.2	1
2-GW100604	6-Oct-04	L0411063-01	9060	TOTAL ORGANIC CARBON	27		mg/l	y	12	1.1	25
2-GW100604	6-Oct-04	L0411063-01	2340B	HARDNESS	3300		mg/l	y	17		10
2-GW100604	6-Oct-04	L0411063-01	6010B	ALUMINUM, TOTAL	0.072	J	mg/l	y	0.1	0.019	1
2-GW100604	6-Oct-04	L0411063-01	6020A	ANTIMONY, TOTAL	0.00096	J	mg/l	y	0.001	0.000022	1
2-GW100604	6-Oct-04	L0411063-01	6020A	ARSENIC, TOTAL	0.0129		mg/l	y	0.001	0.000034	1
2-GW100604	6-Oct-04	L0411063-01	6020A	BARIUM, TOTAL	0.0847		mg/l	y	0.001	0.000038	1
2-GW100604	6-Oct-04	L0411063-01	6020A	BERYLLIUM, TOTAL	0.00003	U	mg/l	n	0.001	0.000015	1
2-GW100604	6-Oct-04	L0411063-01	6020A	CADMIUM, TOTAL		U	mg/l	n	0.002	0.000068	2
2-GW100604	6-Oct-04	L0411063-01	6010B	CALCIUM, TOTAL	210		mg/l	y	1	0.15	10
2-GW100604	6-Oct-04	L0411063-01	6020A	CHROMIUM, TOTAL	0.0054		mg/l	y	0.001	0.000031	1
2-GW100604	6-Oct-04	L0411063-01	6020A	COBALT, TOTAL	0.0008	J	mg/l	y	0.001	0.000017	1
2-GW100604	6-Oct-04	L0411063-01	6020A	CHROMIUM, DISSOLVED	0.0047		mg/l	y	0.001	0.000031	1
2-GW100604	6-Oct-04	L0411063-01	6020A	COBALT, DISSOLVED	0.00049	J	mg/l	y	0.001	0.000017	1
2-GW100604	6-Oct-04	L0411063-01	6020A	COPPER, DISSOLVED	0.0016		mg/l	y	0.001	0.000172	1
2-GW100604	6-Oct-04	L0411063-01	6010B	IRON, DISSOLVED	0.035	J	mg/l	y	0.05	0.013	1
2-GW100604	6-Oct-04	L0411063-01	6020A	LEAD, DISSOLVED	0.00014	U	mg/l	n	0.0005	0.000028	1
2-GW100604	6-Oct-04	L0411063-01	6010B	MAGNESIUM, DISSOLVED	410		mg/l	y	1	0.14	10
2-GW100604	6-Oct-04	L0411063-01	6010B	MANGANESE, DISSOLVED	0.02	J	mg/l	y	0.01	0.0006	1
2-GW100604	6-Oct-04	L0411063-01	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-GW100604	6-Oct-04	L0411063-01	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-GW100604	6-Oct-04	L0411063-01	6020A	NICKEL, DISSOLVED	0.0024		mg/l	y	0.001	0.000024	1
2-GW100604	6-Oct-04	L0411063-01	6010B	POTASSIUM, DISSOLVED	260		mg/l	y	25	0.94	10
2-GW100604	6-Oct-04	L0411063-01	6020A	SELENIUM, DISSOLVED	0.012	J	mg/l	y	0.002	0.000298	1
2-GW100604	6-Oct-04	L0411063-01	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-GW100604	6-Oct-04	L0411063-01	6010B	SODIUM, DISSOLVED	3800		mg/l	y	1000	160	500
2-GW100604	6-Oct-04	L0411063-01	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-GW100604	6-Oct-04	L0411063-01	6020A	VANADIUM, DISSOLVED	0.0071		mg/l	y	0.001	0.00003	1
2-GW100604	6-Oct-04	L0411063-01	6020A	ZINC, DISSOLVED	0.00478	J	mg/l	y	0.005	0.000298	1
2-GW100604	6-Oct-04	L0411063-01	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW100604	6-Oct-04	L0411063-01	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW100604	6-Oct-04	L0411063-01	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW100604	6-Oct-04	L0411063-01	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-GW100604	6-Oct-04	L0411063-01	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW100604	6-Oct-04	L0411063-01	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW100604	6-Oct-04	L0411063-01	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW100604	6-Oct-04	L0411063-01	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW100604	6-Oct-04	L0411063-01	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW100604	6-Oct-04	L0411063-01	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW100604	6-Oct-04	L0411063-01	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW100604	6-Oct-04	L0411063-01	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW100604	6-Oct-04	L0411063-01	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW100604	6-Oct-04	L0411063-01	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW100604	6-Oct-04	L0411063-01	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW100604	6-Oct-04	L0411063-01	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-GW100604	6-Oct-04	L0411063-01	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW100604	6-Oct-04	L0411063-01	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-GW100604	6-Oct-04	L0411063-01	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW100604	6-Oct-04	L0411063-01	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW100604	6-Oct-04	L0411063-01	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-GW100604	6-Oct-04	L0411063-01	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-GW100604	6-Oct-04	L0411063-01	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-GW100604	6-Oct-04	L0411063-01	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-GW100604	6-Oct-04	L0411063-01	6020A	COPPER, TOTAL	0.0028		mg/l	y	0.001	0.000172	1
2-GW100604	6-Oct-04	L0411063-01	6010B	IRON, TOTAL	0.4	J	mg/l	y	0.05	0.013	1
2-GW100604	6-Oct-04	L0411063-01	6020A	LEAD, TOTAL	0.00045	J	mg/l	y	0.0005	0.000028	1
2-GW100604	6-Oct-04	L0411063-01	6010B	MAGNESIUM, TOTAL	680		mg/l	y	1	0.14	10
2-GW100604	6-Oct-04	L0411063-01	6010B	MANGANESE, TOTAL	0.0076	J	mg/l	y	0.01	0.0006	1
2-GW100604	6-Oct-04	L0411063-01	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
2-GW100604	6-Oct-04	L0411063-01	6020A	MOLYBDENUM, TOTAL	0.00014	U	mg/l	n	0.001	0.00003	1
2-GW100604	6-Oct-04	L0411063-01	6020A	NICKEL, TOTAL	0.0024		mg/l	y	0.001	0.000024	1
2-GW100604	6-Oct-04	L0411063-01	6010B	POTASSIUM, TOTAL	430		mg/l	y	25	0.94	10
2-GW100604	6-Oct-04	L0411063-01	6020A	SELENIUM, TOTAL	0.02		mg/l	y	0.002	0.000298	1
2-GW100604	6-Oct-04	L0411063-01	6020A	SILVER, TOTAL	0.00004	U	mg/l	n	0.001	0.000025	1
2-GW100604	6-Oct-04	L0411063-01	6010B	SODIUM, TOTAL	6100		mg/l	y	1000	160	500
2-GW100604	6-Oct-04	L0411063-01	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-GW100604	6-Oct-04	L0411063-01	6020A	VANADIUM, TOTAL	0.0062		mg/l	y	0.001	0.00003	1
2-GW100604	6-Oct-04	L0411063-01	6020A	ZINC, TOTAL	0.0168		mg/l	y	0.005	0.000298	1
2-GW100604	6-Oct-04	L0411063-01	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
2-GW100604	6-Oct-04	L0411063-01	6020A	ANTIMONY, DISSOLVED	0.00044	J	mg/l	y	0.001	0.000022	1
2-GW100604	6-Oct-04	L0411063-01	6020A	ARSENIC, DISSOLVED	0.007		mg/l	y	0.001	0.000034	1
2-GW100604	6-Oct-04	L0411063-01	6020A	BARIUM, DISSOLVED	0.0534		mg/l	y	0.001	0.000038	1
2-GW100604	6-Oct-04	L0411063-01	6020A	BERYLLIUM, DISSOLVED	0.00002	U	mg/l	n	0.001	0.000015	1
2-GW100604	6-Oct-04	L0411063-01	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-GW100604	6-Oct-04	L0411063-01	6010B	CALCIUM, DISSOLVED	130		mg/l	y	1	0.15	10
2-GW100604	6-Oct-04	L0411063-01	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW100604	6-Oct-04	L0411063-01	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-GW100604	6-Oct-04	L0411063-01	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-GW100604	6-Oct-04	L0411063-01	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW100604	6-Oct-04	L0411063-01	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW100604	6-Oct-04	L0411063-01	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW100604	6-Oct-04	L0411063-01	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW100604	6-Oct-04	L0411063-01	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW100604	6-Oct-04	L0411063-01	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-GW100604	6-Oct-04	L0411063-01	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW100604	6-Oct-04	L0411063-01	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW100604	6-Oct-04	L0411063-01	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW100604	6-Oct-04	L0411063-01	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW100604	6-Oct-04	L0411063-01	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW100604	6-Oct-04	L0411063-01	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-GW100604	6-Oct-04	L0411063-01	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW100604	6-Oct-04	L0411063-01	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW100604	6-Oct-04	L0411063-01	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-GW100604	6-Oct-04	L0411063-01	8270C	DIETHYL PHTHALATE	3	U	ug/l	n	5	1.6	1
2-GW100604	6-Oct-04	L0411063-01	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW100604	6-Oct-04	L0411063-01	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW100604	6-Oct-04	L0411063-01	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-GW100604	6-Oct-04	L0411063-01	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	MANGANESE, TOTAL	0.02	J	mg/l	y	0.01	0.0006	1
2-GW45DS-04	6-Oct-04	L0411063-02	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	NICKEL, TOTAL	0.0033		mg/l	y	0.001	0.000024	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	POTASSIUM, TOTAL	260	J	mg/l	y	25	0.94	10

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	SELENIUM, TOTAL	0.013		mg/l	y	0.002	0.000298	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	SILVER, TOTAL		U	mg/l	n	0.001	0.000025	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	SODIUM, TOTAL	3800		mg/l	y	1000	160	500
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	VANADIUM, TOTAL	0.0078		mg/l	y	0.001	0.00003	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	ZINC, TOTAL	0.0249	J	mg/l	y	0.005	0.000298	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	ANTIMONY, DISSOLVED	0.00044	J	mg/l	y	0.001	0.000022	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	ARSENIC, DISSOLVED	0.0065	J	mg/l	y	0.001	0.000034	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	BARIUM, DISSOLVED	0.0503		mg/l	y	0.001	0.000038	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	BERYLLIUM, DISSOLVED	0.00003	U	mg/l	n	0.001	0.000015	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	CALCIUM, DISSOLVED	130		mg/l	y	1	0.15	10
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	CHROMIUM, DISSOLVED	0.0048		mg/l	y	0.001	0.000031	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	COBALT, DISSOLVED	0.00045	J	mg/l	y	0.001	0.000017	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	COPPER, DISSOLVED	0.0016		mg/l	y	0.001	0.000172	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	IRON, DISSOLVED		UJ	mg/l	n	0.05	0.013	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	DIETHYL PHTHALATE	2.8	U	ug/l	n	5	1.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW45DS-04	6-Oct-04	L0411063-02	2320B	ALKALINITY, TOTAL	1300		mg CaCO3	y	5	1	2.5
2-GW45DS-04	6-Oct-04	L0411063-02	2540C	SOLIDS, TOTAL DISSOLVED	13000		mg/l	y	10	2.8	1
2-GW45DS-04	6-Oct-04	L0411063-02	2540D	SOLIDS, TOTAL SUSPENDED	8.9		mg/l	y	5		1
2-GW45DS-04	6-Oct-04	L0411063-02	9251	CHLORIDE	7900		mg/l	y	100	0.36	100
2-GW45DS-04	6-Oct-04	L0411063-02	9038	SULFATE	3.2	J	mg/l	y	10	1.4	1
2-GW45DS-04	6-Oct-04	L0411063-02	5220D	CHEMICAL OXYGEN DEMAND	780		mg/l	y	20	4.2	1
2-GW45DS-04	6-Oct-04	L0411063-02	9060	TOTAL ORGANIC CARBON	26		mg/l	y	12	1.1	25
2-GW45DS-04	6-Oct-04	L0411063-02	2340B	HARDNESS	2000		mg/l	y	17		10

Data Summary Table - Round 15 - October 2004, Area A - SDG 0411063

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	ALUMINUM, TOTAL	0.071	J	mg/l	y	0.1	0.019	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	ANTIMONY, TOTAL	0.00075	J	mg/l	y	0.001	0.000022	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	ARSENIC, TOTAL	0.008		mg/l	y	0.001	0.000034	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	BARIUM, TOTAL	0.0527		mg/l	y	0.001	0.000038	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	BERYLLIUM, TOTAL	0.00003	U	mg/l	n	0.001	0.000015	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	CADMIUM, TOTAL		U	mg/l	n	0.001	0.000034	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	CALCIUM, TOTAL	130		mg/l	y	1	0.15	10
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	CHROMIUM, TOTAL	0.0055		mg/l	y	0.001	0.000031	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	COBALT, TOTAL	0.00052	J	mg/l	y	0.001	0.000017	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	COPPER, TOTAL	0.0026		mg/l	y	0.001	0.000172	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	IRON, TOTAL	1.1	J	mg/l	y	0.05	0.013	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	LEAD, TOTAL	0.0005		mg/l	y	0.0005	0.000028	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	MAGNESIUM, TOTAL	410		mg/l	y	1	0.14	10
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	LEAD, DISSOLVED	0.00003	U	mg/l	n	0.0005	0.000028	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	MAGNESIUM, DISSOLVED	400		mg/l	y	1	0.14	10
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	MANGANESE, DISSOLVED	0.01	J	mg/l	y	0.01	0.0006	1
2-GW45DS-04	6-Oct-04	L0411063-02	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	NICKEL, DISSOLVED	0.0019		mg/l	y	0.001	0.000024	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	POTASSIUM, DISSOLVED	260		mg/l	y	25	0.94	10
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	SELENIUM, DISSOLVED	0.012	J	mg/l	y	0.002	0.000298	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-GW45DS-04	6-Oct-04	L0411063-02	6010B	SODIUM, DISSOLVED	3900		mg/l	y	1000	160	500
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	VANADIUM, DISSOLVED	0.0066		mg/l	y	0.001	0.00003	1
2-GW45DS-04	6-Oct-04	L0411063-02	6020A	ZINC, DISSOLVED	0.0077		mg/l	y	0.005	0.000298	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-GW45DS-04	6-Oct-04	L0411063-02	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-SW22-04	6-Oct-04	L0411063-03	2320B	ALKALINITY, TOTAL	55		mg CaCO3	y	2	0.4	1
2-SW22-04	6-Oct-04	L0411063-03	2540C	SOLIDS, TOTAL DISSOLVED	260		mg/l	y	10	2.8	1
2-SW22-04	6-Oct-04	L0411063-03	2540D	SOLIDS, TOTAL SUSPENDED	190		mg/l	y	10		2
2-SW22-04	6-Oct-04	L0411063-03	9251	CHLORIDE	97		mg/l	y	1	0.36	1
2-SW22-04	6-Oct-04	L0411063-03	9038	SULFATE		U	mg/l	n	10	1.4	1
2-SW22-04	6-Oct-04	L0411063-03	5220D	CHEMICAL OXYGEN DEMAND	190		mg/l	y	20	4.2	1
2-SW22-04	6-Oct-04	L0411063-03	9060	TOTAL ORGANIC CARBON	20		mg/l	y	4	0.34	8
2-SW22-04	6-Oct-04	L0411063-03	2340B	HARDNESS	79		mg/l	y	1.7		1
2-SW22-04	6-Oct-04	L0411063-03	6010B	ALUMINUM, TOTAL	2.5	J	mg/l	y	0.1	0.019	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	ANTIMONY, TOTAL	0.0029		mg/l	y	0.001	0.000022	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	ARSENIC, TOTAL	0.0495		mg/l	y	0.001	0.000034	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	BARIUM, TOTAL	0.1069		mg/l	y	0.001	0.000038	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	BERYLLIUM, TOTAL	0.00023	J	mg/l	y	0.001	0.000015	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	CADMIUM, TOTAL	0.0007		mg/l	y	0.0002	0.000034	1
2-SW22-04	6-Oct-04	L0411063-03	6010B	CALCIUM, TOTAL	22		mg/l	y	0.1	0.015	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	CHROMIUM, TOTAL	0.0077		mg/l	y	0.001	0.000031	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	COBALT, TOTAL	0.0041		mg/l	y	0.001	0.000017	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	COPPER, TOTAL	0.0521		mg/l	y	0.001	0.000172	1
2-SW22-04	6-Oct-04	L0411063-03	6010B	IRON, TOTAL	33		mg/l	y	0.05	0.013	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	LEAD, TOTAL	0.0248		mg/l	y	0.001	0.000028	1
2-SW22-04	6-Oct-04	L0411063-03	6010B	MAGNESIUM, TOTAL	5.9		mg/l	y	0.1	0.014	1
2-SW22-04	6-Oct-04	L0411063-03	6010B	MANGANESE, TOTAL	0.69		mg/l	y	0.01	0.0006	1
2-SW22-04	6-Oct-04	L0411063-03	7470A	MERCURY, TOTAL	6.66E-05	J	mg/l	y	0.0002	0.000012	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	MOLYBDENUM, TOTAL	0.0038	U	mg/l	n	0.001	0.00003	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	NICKEL, TOTAL	0.0274		mg/l	y	0.001	0.000024	1
2-SW22-04	6-Oct-04	L0411063-03	6010B	POTASSIUM, TOTAL	4.3	J	mg/l	y	2.5	0.094	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	SELENIUM, TOTAL	0.0018	J	mg/l	y	0.002	0.000298	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	SILVER, TOTAL	0.00012	U	mg/l	n	0.001	0.000025	1
2-SW22-04	6-Oct-04	L0411063-03	6010B	SODIUM, TOTAL	56		mg/l	y	10	1.6	5
2-SW22-04	6-Oct-04	L0411063-03	6020A	THALLIUM, TOTAL	0.00011	U	mg/l	n	0.001	0.000026	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	VANADIUM, TOTAL	0.0216		mg/l	y	0.001	0.00003	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	ZINC, TOTAL	0.808	J	mg/l	y	0.025	0.00149	5
2-SW22-04	6-Oct-04	L0411063-03	6010B	ALUMINUM, DISSOLVED	0.052	J	mg/l	y	0.1	0.019	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	ANTIMONY, DISSOLVED	0.00053	J	mg/l	y	0.001	0.000022	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	ARSENIC, DISSOLVED	0.0089	J	mg/l	y	0.001	0.000034	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	BARIUM, DISSOLVED	0.0598		mg/l	y	0.001	0.000038	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	BERYLLIUM, DISSOLVED		U	mg/l	n	0.001	0.000015	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	CADMIUM, DISSOLVED	0.00009	U	mg/l	n	0.0002	0.000034	1
2-SW22-04	6-Oct-04	L0411063-03	6010B	CALCIUM, DISSOLVED	20		mg/l	y	0.1	0.015	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	CHROMIUM, DISSOLVED	0.00087	J	mg/l	y	0.001	0.000031	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	COBALT, DISSOLVED	0.0019		mg/l	y	0.001	0.000017	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	COPPER, DISSOLVED	0.0059		mg/l	y	0.001	0.000172	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW22-04	6-Oct-04	L0411063-03	6010B	IRON, DISSOLVED	3.3		mg/l	y	0.05	0.013	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	LEAD, DISSOLVED	0.0014		mg/l	y	0.0005	0.000028	1
2-SW22-04	6-Oct-04	L0411063-03	6010B	MAGNESIUM, DISSOLVED	4.8		mg/l	y	0.1	0.014	1
2-SW22-04	6-Oct-04	L0411063-03	6010B	MANGANESE, DISSOLVED	0.52		mg/l	y	0.01	0.0006	1
2-SW22-04	6-Oct-04	L0411063-03	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	MOLYBDENUM, DISSOLVED	0.00084	J	mg/l	y	0.001	0.00003	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	NICKEL, DISSOLVED	0.0084		mg/l	y	0.001	0.000024	1
2-SW22-04	6-Oct-04	L0411063-03	6010B	POTASSIUM, DISSOLVED	3.3		mg/l	y	2.5	0.094	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	SELENIUM, DISSOLVED	0.0012	U	mg/l	n	0.002	0.000298	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	SILVER, DISSOLVED	0.00003	U	mg/l	n	0.001	0.000025	1
2-SW22-04	6-Oct-04	L0411063-03	6010B	SODIUM, DISSOLVED	52		mg/l	y	10	1.6	5
2-SW22-04	6-Oct-04	L0411063-03	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	VANADIUM, DISSOLVED	0.0017		mg/l	y	0.001	0.00003	1
2-SW22-04	6-Oct-04	L0411063-03	6020A	ZINC, DISSOLVED	0.3238		mg/l	y	0.025	0.00149	5
2-SW22-04	6-Oct-04	L0411063-03	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW22-04	6-Oct-04	L0411063-03	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	DIETHYL PHTHALATE	2	U	ug/l	n	5	1.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW22-04	6-Oct-04	L0411063-03	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	FLUORANTHENE	0.17	J	ug/l	y	0.2	0.04	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	BENZO(A)ANTHRACENE	0.076	J	ug/l	y	0.2	0.038	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	BENZO(A)PYRENE	0.08	J	ug/l	y	0.2	0.04	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	BENZO(B)FLUORANTHENE	0.1	J	ug/l	y	0.2	0.05	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	BENZO(K)FLUORANTHENE	0.083	J	ug/l	y	0.2	0.036	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	CHRYSENE	0.093	J	ug/l	y	0.2	0.024	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	BENZO(GHI)PERYLENE	0.072	J	ug/l	y	0.25	0.025	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	PHENANTHRENE	0.068	J	ug/l	y	0.2	0.031	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	INDENO(1,2,3-CD)PYRENE	0.067	J	ug/l	y	0.2	0.026	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	PYRENE	0.16	J	ug/l	y	0.2	0.046	1
2-SW22-04	6-Oct-04	L0411063-03	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-GW20S-04	6-Oct-04	L0411063-04	2540C	SOLIDS, TOTAL DISSOLVED	270		mg/l	y	10	2.8	1
2-GW20S-04	6-Oct-04	L0411063-04	2540D	SOLIDS, TOTAL SUSPENDED	5.3		mg/l	y	5		1
2-GW20S-04	6-Oct-04	L0411063-04	9251	CHLORIDE	110		mg/l	y	5	0.36	5
2-GW20S-04	6-Oct-04	L0411063-04	9038	SULFATE	4	J	mg/l	y	10	1.4	1
2-GW20S-04	6-Oct-04	L0411063-04	5220D	CHEMICAL OXYGEN DEMAND	15	J	mg/l	y	20	4.2	1
2-GW20S-04	6-Oct-04	L0411063-04	9060	TOTAL ORGANIC CARBON	4.2		mg/l	y	1	0.086	2
2-GW20S-04	6-Oct-04	L0411063-04	2340B	HARDNESS	66		mg/l	y	1.7		1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	ALUMINUM, TOTAL	0.056	J	mg/l	y	0.1	0.019	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	ANTIMONY, TOTAL	0.00006	U	mg/l	n	0.001	0.000022	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	ARSENIC, TOTAL	0.0093		mg/l	y	0.001	0.000034	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	BARIUM, TOTAL	0.0625		mg/l	y	0.001	0.000038	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	BERYLLIUM, TOTAL	0.00003	U	mg/l	n	0.001	0.000015	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	CADMIUM, TOTAL	0.00004	U	mg/l	n	0.001	0.000034	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	CALCIUM, TOTAL	20		mg/l	y	0.1	0.015	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	CHROMIUM, TOTAL	0.0011		mg/l	y	0.001	0.000031	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	COBALT, TOTAL	0.0069		mg/l	y	0.001	0.000017	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW20S-04	6-Oct-04	L0411063-04	6020A	COPPER, TOTAL	0.0025		mg/l	y	0.001	0.000172	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	IRON, TOTAL	32		mg/l	y	0.05	0.013	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	LEAD, TOTAL	0.0005		mg/l	y	0.0005	0.000028	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	MAGNESIUM, TOTAL	3.7		mg/l	y	0.1	0.014	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	MANGANESE, TOTAL	0.83		mg/l	y	0.01	0.0006	1
2-GW20S-04	6-Oct-04	L0411063-04	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
2-GW20S-04	6-Oct-04	L0411063-04	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	NICKEL, DISSOLVED	0.026		mg/l	y	0.001	0.000024	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	POTASSIUM, DISSOLVED	4.7		mg/l	y	2.5	0.094	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	SELENIUM, DISSOLVED	0.00103	U	mg/l	n	0.002	0.000298	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-GW20S-04	6-Oct-04	L0411063-04	2320B	ALKALINITY, TOTAL	64		mg CaCO3	y	2	0.4	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	NICKEL, TOTAL	0.0274		mg/l	y	0.001	0.000024	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	POTASSIUM, TOTAL	3.1	J	mg/l	y	2.5	0.094	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	SELENIUM, TOTAL	0.00078	J	mg/l	y	0.002	0.000298	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	SILVER, TOTAL		U	mg/l	n	0.001	0.000025	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	SODIUM, TOTAL	43		mg/l	y	10	1.6	5
2-GW20S-04	6-Oct-04	L0411063-04	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	VANADIUM, TOTAL	0.002		mg/l	y	0.001	0.00003	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	ZINC, TOTAL	0.0585	J	mg/l	y	0.005	0.000298	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	ALUMINUM, DISSOLVED	0.03	J	mg/l	y	0.1	0.019	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	ANTIMONY, DISSOLVED	0.00004	U	mg/l	n	0.001	0.000022	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	ARSENIC, DISSOLVED	0.0073	J	mg/l	y	0.001	0.000034	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	BARIUM, DISSOLVED	0.0803		mg/l	y	0.001	0.000038	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	BERYLLIUM, DISSOLVED		U	mg/l	n	0.001	0.000015	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	CALCIUM, DISSOLVED	26		mg/l	y	0.1	0.015	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	CHROMIUM, DISSOLVED	0.00067	U	mg/l	n	0.001	0.000031	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	COBALT, DISSOLVED	0.0064		mg/l	y	0.001	0.000017	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	COPPER, DISSOLVED	0.00021	J	mg/l	y	0.001	0.000172	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	IRON, DISSOLVED	32		mg/l	y	0.05	0.013	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	LEAD, DISSOLVED	0.00033	J	mg/l	y	0.0005	0.000028	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	MAGNESIUM, DISSOLVED	5.3		mg/l	y	0.1	0.014	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	MANGANESE, DISSOLVED	0.9		mg/l	y	0.01	0.0006	1
2-GW20S-04	6-Oct-04	L0411063-04	6010B	SODIUM, DISSOLVED	66		mg/l	y	10	1.6	5
2-GW20S-04	6-Oct-04	L0411063-04	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	VANADIUM, DISSOLVED	0.0022		mg/l	y	0.001	0.00003	1
2-GW20S-04	6-Oct-04	L0411063-04	6020A	ZINC, DISSOLVED	0.0587		mg/l	y	0.005	0.000298	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW20S-04	6-Oct-04	L0411063-04	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	DIETHYL PHTHALATE	2.4	U	ug/l	n	5	1.6	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	3-METHYLPHENOL/4-METHYLPHENOL	2.4	J	ug/l	y	6	1.6	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-GW20S-04	6-Oct-04	L0411063-04	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-GW46DS-04	6-Oct-04	L0411063-05	2320B	ALKALINITY, TOTAL	2100		mg CaCO3	y	5	1	2.5
2-GW46DS-04	6-Oct-04	L0411063-05	2540C	SOLIDS, TOTAL DISSOLVED	25000		mg/l	y	10	2.8	1
2-GW46DS-04	6-Oct-04	L0411063-05	2540D	SOLIDS, TOTAL SUSPENDED	18		mg/l	y	5		1
2-GW46DS-04	6-Oct-04	L0411063-05	9251	CHLORIDE	15000		mg/l	y	200	0.36	200
2-GW46DS-04	6-Oct-04	L0411063-05	9038	SULFATE	480		mg/l	y	250	36	25
2-GW46DS-04	6-Oct-04	L0411063-05	5220D	CHEMICAL OXYGEN DEMAND	1500		mg/l	y	80	17	4
2-GW46DS-04	6-Oct-04	L0411063-05	9060	TOTAL ORGANIC CARBON	39		mg/l	y	20	1.7	40
2-GW46DS-04	6-Oct-04	L0411063-05	2340B	HARDNESS	5100		mg/l	y	17		10
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	ALUMINUM, TOTAL	0.086	J	mg/l	y	0.1	0.019	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	ANTIMONY, TOTAL	0.002		mg/l	y	0.001	0.000022	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	ARSENIC, TOTAL	0.0221		mg/l	y	0.001	0.000034	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	ANTIMONY, DISSOLVED	0.0017		mg/l	y	0.001	0.000022	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	ARSENIC, DISSOLVED	0.0214	J	mg/l	y	0.001	0.000034	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	BARIUM, DISSOLVED	0.1047		mg/l	y	0.001	0.000038	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	BERYLLIUM, DISSOLVED	0.00002	U	mg/l	n	0.001	0.000015	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	CALCIUM, DISSOLVED	300		mg/l	y	1	0.15	10
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	CHROMIUM, DISSOLVED	0.0081		mg/l	y	0.001	0.000031	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	COBALT, DISSOLVED	0.0011		mg/l	y	0.001	0.000017	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	COPPER, DISSOLVED	0.0038		mg/l	y	0.001	0.000172	1
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	IRON, DISSOLVED	0.05		mg/l	y	0.05	0.013	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	LEAD, DISSOLVED	0.00013	U	mg/l	n	0.0005	0.000028	1
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	MAGNESIUM, DISSOLVED	1000		mg/l	y	1	0.14	10
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	MANGANESE, DISSOLVED	0.01		mg/l	y	0.01	0.0006	1
2-GW46DS-04	6-Oct-04	L0411063-05	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	NICKEL, DISSOLVED	0.0041		mg/l	y	0.001	0.000024	1
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	POTASSIUM, DISSOLVED	560		mg/l	y	25	0.94	10
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	SELENIUM, DISSOLVED	0.029	J	mg/l	y	0.002	0.000298	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	SODIUM, DISSOLVED	8400		mg/l	y	1000	160	500
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	VANADIUM, DISSOLVED	0.006		mg/l	y	0.001	0.00003	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	BARIUM, TOTAL	0.107		mg/l	y	0.001	0.000038	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	BERYLLIUM, TOTAL	0.00004	U	mg/l	n	0.001	0.000015	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	CADMIUM, TOTAL		U	mg/l	n	0.002	0.000068	2
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	CALCIUM, TOTAL	310		mg/l	y	1	0.15	10
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	CHROMIUM, TOTAL	0.0087		mg/l	y	0.001	0.000031	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	COBALT, TOTAL	0.0012		mg/l	y	0.001	0.000017	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	COPPER, TOTAL	0.0043		mg/l	y	0.001	0.000172	1
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	IRON, TOTAL	1.2		mg/l	y	0.05	0.013	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	LEAD, TOTAL	0.00035	J	mg/l	y	0.0005	0.000028	1
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	MAGNESIUM, TOTAL	1000		mg/l	y	1	0.14	10
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	MANGANESE, TOTAL	0.01		mg/l	y	0.01	0.0006	1
2-GW46DS-04	6-Oct-04	L0411063-05	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	MOLYBDENUM, TOTAL	0.00006	U	mg/l	n	0.001	0.00003	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	NICKEL, TOTAL	0.0043		mg/l	y	0.001	0.000024	1
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	POTASSIUM, TOTAL	590	J	mg/l	y	25	0.94	10
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	SELENIUM, TOTAL	0.032		mg/l	y	0.002	0.000298	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	SILVER, TOTAL	0.00007	U	mg/l	n	0.001	0.000025	1
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	SODIUM, TOTAL	8800		mg/l	y	1000	160	500
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	VANADIUM, TOTAL	0.006		mg/l	y	0.001	0.00003	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	ZINC, TOTAL	0.0202	J	mg/l	y	0.005	0.000298	1
2-GW46DS-04	6-Oct-04	L0411063-05	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
2-GW46DS-04	6-Oct-04	L0411063-05	6020A	ZINC, DISSOLVED	0.0125		mg/l	y	0.005	0.000298	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-GW46DS-04	6-Oct-04	L0411063-05	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
4-GW1S-04	6-Oct-04	L0411063-06	2320B	ALKALINITY, TOTAL	33		mg CaCO3	y	2	0.4	1
4-GW1S-04	6-Oct-04	L0411063-06	2540C	SOLIDS, TOTAL DISSOLVED	170		mg/l	y	10	2.8	1
4-GW1S-04	6-Oct-04	L0411063-06	2540D	SOLIDS, TOTAL SUSPENDED		U	mg/l	n	5		1
4-GW1S-04	6-Oct-04	L0411063-06	9251	CHLORIDE	38		mg/l	y	1	0.36	1
4-GW1S-04	6-Oct-04	L0411063-06	9038	SULFATE	28		mg/l	y	10	1.4	1
4-GW1S-04	6-Oct-04	L0411063-06	5220D	CHEMICAL OXYGEN DEMAND		U	mg/l	n	20	4.2	1
4-GW1S-04	6-Oct-04	L0411063-06	9060	TOTAL ORGANIC CARBON	1.6		mg/l	y	0.5	0.043	1
4-GW1S-04	6-Oct-04	L0411063-06	2340B	HARDNESS	57		mg/l	y	1.7		1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	ALUMINUM, TOTAL	0.028	J	mg/l	y	0.1	0.019	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	ANTIMONY, TOTAL	0.00006	U	mg/l	n	0.001	0.000022	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	ARSENIC, TOTAL	0.00032	U	mg/l	n	0.001	0.000034	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
4-GW1S-04	6-Oct-04	L0411063-06	6020A	BARIUM, TOTAL	0.0355		mg/l	y	0.001	0.000038	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	BERYLLIUM, TOTAL	0.00003	U	mg/l	n	0.001	0.000015	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	CADMIUM, TOTAL	0.00004	U	mg/l	n	0.001	0.000034	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	CALCIUM, TOTAL	19		mg/l	y	0.1	0.015	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	CHROMIUM, TOTAL	0.0003	J	mg/l	y	0.001	0.000031	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	COBALT, TOTAL	0.00007	U	mg/l	n	0.001	0.000017	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	COPPER, TOTAL	0.0014		mg/l	y	0.001	0.000172	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	IRON, TOTAL		U	mg/l	n	0.05	0.013	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	LEAD, TOTAL	0.00011	U	mg/l	n	0.0005	0.000028	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	MAGNESIUM, TOTAL	2.6		mg/l	y	0.1	0.014	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	MANGANESE, TOTAL	0.0075	J	mg/l	y	0.01	0.0006	1
4-GW1S-04	6-Oct-04	L0411063-06	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	NICKEL, TOTAL	0.00079	J	mg/l	y	0.001	0.000024	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	POTASSIUM, TOTAL	3.4	J	mg/l	y	2.5	0.094	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	SELENIUM, TOTAL	0.00189	J	mg/l	y	0.002	0.000298	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	SILVER, TOTAL		U	mg/l	n	0.001	0.000025	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	SODIUM, TOTAL	32		mg/l	y	10	1.6	5
4-GW1S-04	6-Oct-04	L0411063-06	6020A	THALLIUM, TOTAL	0.00004	U	mg/l	n	0.001	0.000026	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	VANADIUM, TOTAL	0.00024	J	mg/l	y	0.001	0.00003	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	ZINC, TOTAL	0.00365	J	mg/l	y	0.005	0.000298	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	ALUMINUM, DISSOLVED	0.047	J	mg/l	y	0.1	0.019	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	ANTIMONY, DISSOLVED	0.00006	U	mg/l	n	0.001	0.000022	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	ARSENIC, DISSOLVED	0.00014	U	mg/l	n	0.001	0.000034	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	BARIUM, DISSOLVED	0.0349		mg/l	y	0.001	0.000038	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	BERYLLIUM, DISSOLVED	0.00003	U	mg/l	n	0.001	0.000015	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	CADMIUM, DISSOLVED	0.00004	U	mg/l	n	0.001	0.000034	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	CALCIUM, DISSOLVED	18		mg/l	y	0.1	0.015	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	CHROMIUM, DISSOLVED	0.00038	U	mg/l	n	0.001	0.000031	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	COBALT, DISSOLVED	0.00006	U	mg/l	n	0.001	0.000017	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	COPPER, DISSOLVED	0.00078	J	mg/l	y	0.001	0.000172	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	IRON, DISSOLVED		U	mg/l	n	0.05	0.013	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	LEAD, DISSOLVED	0.00037	J	mg/l	y	0.0005	0.000028	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	MAGNESIUM, DISSOLVED	3		mg/l	y	0.1	0.014	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	MANGANESE, DISSOLVED	0.0076	J	mg/l	y	0.01	0.0006	1
4-GW1S-04	6-Oct-04	L0411063-06	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	NICKEL, DISSOLVED	0.0015		mg/l	y	0.001	0.000024	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	POTASSIUM, DISSOLVED	3.9		mg/l	y	2.5	0.094	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	SELENIUM, DISSOLVED	0.002	U	mg/l	n	0.002	0.000298	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
4-GW1S-04	6-Oct-04	L0411063-06	6010B	SODIUM, DISSOLVED	32		mg/l	y	10	1.6	5
4-GW1S-04	6-Oct-04	L0411063-06	6020A	THALLIUM, DISSOLVED	0.00003	U	mg/l	n	0.001	0.000026	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	VANADIUM, DISSOLVED	0.00028	U	mg/l	n	0.001	0.00003	1
4-GW1S-04	6-Oct-04	L0411063-06	6020A	ZINC, DISSOLVED	0.00405	J	mg/l	y	0.005	0.000298	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
4-GW1S-04	6-Oct-04	L0411063-06	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	PHENOL		U	ug/l	n	7	1.2	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
4-GW1S-04	6-Oct-04	L0411063-06	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-GW40DS-04	6-Oct-04	L0411063-07	2540D	SOLIDS, TOTAL SUSPENDED	11		mg/l	y	5		1
2-GW40DS-04	6-Oct-04	L0411063-07	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	ANTIMONY, DISSOLVED	0.00085	J	mg/l	y	0.001	0.000022	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	ARSENIC, DISSOLVED	0.0103	J	mg/l	y	0.001	0.000034	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	BARIUM, DISSOLVED	0.0677		mg/l	y	0.001	0.000038	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	BERYLLIUM, DISSOLVED	0.00002	U	mg/l	n	0.001	0.000015	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-GW40DS-04	6-Oct-04	L0411063-07	6010B	CALCIUM, DISSOLVED	200		mg/l	y	1	0.15	10
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	CHROMIUM, DISSOLVED	0.005		mg/l	y	0.001	0.000031	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	COBALT, DISSOLVED	0.00066	J	mg/l	y	0.001	0.000017	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	COPPER, DISSOLVED	0.0027		mg/l	y	0.001	0.000172	1
2-GW40DS-04	6-Oct-04	L0411063-07	6010B	IRON, DISSOLVED	0.06		mg/l	y	0.05	0.013	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	LEAD, DISSOLVED	0.00027	J	mg/l	y	0.0005	0.000028	1
2-GW40DS-04	6-Oct-04	L0411063-07	6010B	MAGNESIUM, DISSOLVED	650		mg/l	y	1	0.14	10
2-GW40DS-04	6-Oct-04	L0411063-07	6010B	MANGANESE, DISSOLVED	0.02		mg/l	y	0.01	0.0006	1
2-GW40DS-04	6-Oct-04	L0411063-07	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	MOLYBDENUM, DISSOLVED	0.00052	J	mg/l	y	0.001	0.00003	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	NICKEL, DISSOLVED	0.0022		mg/l	y	0.001	0.000024	1
2-GW40DS-04	6-Oct-04	L0411063-07	6010B	POTASSIUM, DISSOLVED	470		mg/l	y	25	0.94	10
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	SELENIUM, DISSOLVED	0.018	J	mg/l	y	0.002	0.000298	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-GW40DS-04	6-Oct-04	L0411063-07	6010B	SODIUM, DISSOLVED	6100		mg/l	y	1000	160	500
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	VANADIUM, DISSOLVED	0.0068		mg/l	y	0.001	0.00003	1
2-GW40DS-04	6-Oct-04	L0411063-07	6020A	ZINC, DISSOLVED	0.0077		mg/l	y	0.005	0.000298	1
2-GW42DS-04	6-Oct-04	L0411063-08	2320B	ALKALINITY, TOTAL	1200		mg CaCO3	y	5	1	2.5
2-GW42DS-04	6-Oct-04	L0411063-08	2540C	SOLIDS, TOTAL DISSOLVED	11000		mg/l	y	10	2.8	1
2-GW42DS-04	6-Oct-04	L0411063-08	2540D	SOLIDS, TOTAL SUSPENDED	7.8		mg/l	y	5		1
2-GW42DS-04	6-Oct-04	L0411063-08	9251	CHLORIDE	6600		mg/l	y	100	0.36	100
2-GW42DS-04	6-Oct-04	L0411063-08	9038	SULFATE	65		mg/l	y	50	7.1	5
2-GW42DS-04	6-Oct-04	L0411063-08	5220D	CHEMICAL OXYGEN DEMAND	400		mg/l	y	20	4.2	1
2-GW42DS-04	6-Oct-04	L0411063-08	9060	TOTAL ORGANIC CARBON	23		mg/l	y	10	0.86	20

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW42DS-04	6-Oct-04	L0411063-08	2340B	HARDNESS	1500		mg/l	y	17		10
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	ALUMINUM, TOTAL	0.024	J	mg/l	y	0.1	0.019	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	ANTIMONY, TOTAL	0.00071	J	mg/l	y	0.001	0.000022	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	ARSENIC, TOTAL	0.004		mg/l	y	0.001	0.000034	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	BARIUM, TOTAL	0.0556		mg/l	y	0.001	0.000038	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	BERYLLIUM, TOTAL	0.00002	U	mg/l	n	0.001	0.000015	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	CADMIUM, TOTAL		U	mg/l	n	0.001	0.000034	1
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	CALCIUM, TOTAL	130		mg/l	y	1	0.15	10
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	CHROMIUM, TOTAL	0.0058		mg/l	y	0.001	0.000031	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	COBALT, TOTAL	0.00073	J	mg/l	y	0.001	0.000017	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	COPPER, TOTAL	0.0014		mg/l	y	0.001	0.000172	1
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	IRON, TOTAL	3.2		mg/l	y	0.05	0.013	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	LEAD, TOTAL	0.00035	J	mg/l	y	0.0005	0.000028	1
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	MAGNESIUM, TOTAL	270		mg/l	y	1	0.14	10
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	MANGANESE, TOTAL	0.21		mg/l	y	0.01	0.0006	1
2-GW42DS-04	6-Oct-04	L0411063-08	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	NICKEL, TOTAL	0.0047		mg/l	y	0.001	0.000024	1
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	POTASSIUM, TOTAL	200		mg/l	y	25	0.94	10
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	SELENIUM, TOTAL	0.01		mg/l	y	0.002	0.000298	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	SILVER, TOTAL		U	mg/l	n	0.001	0.000025	1
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	SODIUM, TOTAL	2800		mg/l	y	1000	160	500
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	VANADIUM, TOTAL	0.0034		mg/l	y	0.001	0.00003	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	ZINC, TOTAL	0.0072		mg/l	y	0.005	0.000298	1
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	ANTIMONY, DISSOLVED	0.00066	J	mg/l	y	0.001	0.000022	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	ARSENIC, DISSOLVED	0.0035		mg/l	y	0.001	0.000034	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	BARIUM, DISSOLVED	0.0505		mg/l	y	0.001	0.000038	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	BERYLLIUM, DISSOLVED	0.00002	U	mg/l	n	0.001	0.000015	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	CALCIUM, DISSOLVED	140		mg/l	y	1	0.15	10
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	CHROMIUM, DISSOLVED	0.005		mg/l	y	0.001	0.000031	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	COBALT, DISSOLVED	0.00068	J	mg/l	y	0.001	0.000017	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	COPPER, DISSOLVED	0.0011		mg/l	y	0.001	0.000172	1
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	IRON, DISSOLVED		U	mg/l	n	0.05	0.013	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	LEAD, DISSOLVED	0.00031	J	mg/l	y	0.0005	0.000028	1
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	MAGNESIUM, DISSOLVED	280		mg/l	y	1	0.14	10
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	MANGANESE, DISSOLVED	0.19		mg/l	y	0.01	0.0006	1
2-GW42DS-04	6-Oct-04	L0411063-08	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	NICKEL, DISSOLVED	0.0039		mg/l	y	0.001	0.000024	1
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	POTASSIUM, DISSOLVED	200		mg/l	y	25	0.94	10
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	SELENIUM, DISSOLVED	0.009	J	mg/l	y	0.002	0.000298	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-GW42DS-04	6-Oct-04	L0411063-08	6010B	SODIUM, DISSOLVED	3000		mg/l	y	1000	160	500
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	VANADIUM, DISSOLVED	0.0032		mg/l	y	0.001	0.00003	1
2-GW42DS-04	6-Oct-04	L0411063-08	6020A	ZINC, DISSOLVED	0.00449	J	mg/l	y	0.005	0.000298	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW42DS-04	6-Oct-04	L0411063-08	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	ACENAPHTHENE	0.21		ug/l	y	0.2	0.036	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	FLUORENE	0.12	J	ug/l	y	0.2	0.024	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-GW42DS-04	6-Oct-04	L0411063-08	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-SW19-04	6-Oct-04	L0411063-09	2320B	ALKALINITY, TOTAL	39		mg CaCO3	y	2	0.4	1
2-SW19-04	6-Oct-04	L0411063-09	2540C	SOLIDS, TOTAL DISSOLVED	240		mg/l	y	10	2.8	1
2-SW19-04	6-Oct-04	L0411063-09	2540D	SOLIDS, TOTAL SUSPENDED	150		mg/l	y	10		2
2-SW19-04	6-Oct-04	L0411063-09	9251	CHLORIDE	99		mg/l	y	5	0.36	5
2-SW19-04	6-Oct-04	L0411063-09	9038	SULFATE		U	mg/l	n	10	1.4	1
2-SW19-04	6-Oct-04	L0411063-09	5220D	CHEMICAL OXYGEN DEMAND	48		mg/l	y	20	4.2	1
2-SW19-04	6-Oct-04	L0411063-09	9060	TOTAL ORGANIC CARBON	14		mg/l	y	5	0.43	10
2-SW19-04	6-Oct-04	L0411063-09	2340B	HARDNESS	51		mg/l	y	1.7		1
2-SW19-04	6-Oct-04	L0411063-09	6010B	ALUMINUM, TOTAL	0.47	J	mg/l	y	0.1	0.019	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	ANTIMONY, TOTAL	0.00069	J	mg/l	y	0.001	0.000022	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	ARSENIC, TOTAL	0.0023		mg/l	y	0.001	0.000034	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	BARIUM, TOTAL	0.0475		mg/l	y	0.001	0.000038	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	BERYLLIUM, TOTAL	0.00009	U	mg/l	n	0.001	0.000015	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	CADMIUM, TOTAL	0.0002	J	mg/l	y	0.0002	0.000034	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	CALCIUM, TOTAL	15		mg/l	y	0.1	0.015	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	CHROMIUM, TOTAL	0.0018		mg/l	y	0.001	0.000031	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	COBALT, TOTAL	0.00082	J	mg/l	y	0.001	0.000017	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	COPPER, TOTAL	0.0136		mg/l	y	0.001	0.000172	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	IRON, TOTAL	21		mg/l	y	0.05	0.013	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	LEAD, TOTAL	0.0041		mg/l	y	0.0005	0.000028	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	MAGNESIUM, TOTAL	3.5		mg/l	y	0.1	0.014	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	MANGANESE, TOTAL	0.21		mg/l	y	0.01	0.0006	1
2-SW19-04	6-Oct-04	L0411063-09	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	NICKEL, TOTAL	0.0052		mg/l	y	0.001	0.000024	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	POTASSIUM, TOTAL	3.2	J	mg/l	y	2.5	0.094	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	SELENIUM, TOTAL	0.00086	U	mg/l	n	0.002	0.000298	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	SILVER, TOTAL	0.00003	U	mg/l	n	0.001	0.000025	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW19-04	6-Oct-04	L0411063-09	6010B	SODIUM, TOTAL	58		mg/l	y	10	1.6	5
2-SW19-04	6-Oct-04	L0411063-09	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	VANADIUM, TOTAL	0.01		mg/l	y	0.001	0.00003	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	ZINC, TOTAL	0.1094		mg/l	y	0.005	0.000298	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	ANTIMONY, DISSOLVED	0.00012	U	mg/l	n	0.001	0.000022	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	ARSENIC, DISSOLVED	0.00034	U	mg/l	n	0.001	0.000034	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	BARIUM, DISSOLVED	0.0302		mg/l	y	0.001	0.000038	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	BERYLLIUM, DISSOLVED		U	mg/l	n	0.001	0.000015	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.0002	0.000034	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	CALCIUM, DISSOLVED	14		mg/l	y	0.1	0.015	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	CHROMIUM, DISSOLVED	0.00043	U	mg/l	n	0.001	0.000031	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	COBALT, DISSOLVED	0.00034	J	mg/l	y	0.001	0.000017	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	COPPER, DISSOLVED	0.00064	J	mg/l	y	0.001	0.000172	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	IRON, DISSOLVED	0.76		mg/l	y	0.05	0.013	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	LEAD, DISSOLVED	0.00012	U	mg/l	n	0.0005	0.000028	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	MAGNESIUM, DISSOLVED	3.2		mg/l	y	0.1	0.014	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	MANGANESE, DISSOLVED	0.18		mg/l	y	0.01	0.0006	1
2-SW19-04	6-Oct-04	L0411063-09	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	NICKEL, DISSOLVED	0.0018		mg/l	y	0.001	0.000024	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	POTASSIUM, DISSOLVED	2.5	J	mg/l	y	2.5	0.094	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	SELENIUM, DISSOLVED	0.00059	U	mg/l	n	0.002	0.000298	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	SILVER, DISSOLVED	0.00003	U	mg/l	n	0.001	0.000025	1
2-SW19-04	6-Oct-04	L0411063-09	6010B	SODIUM, DISSOLVED	53		mg/l	y	10	1.6	5
2-SW19-04	6-Oct-04	L0411063-09	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	VANADIUM, DISSOLVED	0.00038	J	mg/l	y	0.001	0.00003	1
2-SW19-04	6-Oct-04	L0411063-09	6020A	ZINC, DISSOLVED	0.0143		mg/l	y	0.005	0.000298	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW19-04	6-Oct-04	L0411063-09	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-SW19-04	6-Oct-04	L0411063-09	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	ACENAPHTHENE	0.32		ug/l	y	0.2	0.036	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	FLUORANTHENE	0.19	J	ug/l	y	0.2	0.04	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	NAPHTHALENE	0.18	J	ug/l	y	0.2	0.031	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	BENZO(A)ANTHRACENE	0.052	J	ug/l	y	0.2	0.038	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	BENZO(A)PYRENE		UJ	ug/l	n	0.2	0.04	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	BENZO(B)FLUORANTHENE	0.1	J	ug/l	y	0.2	0.05	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	BENZO(K)FLUORANTHENE	0.074	J	ug/l	y	0.2	0.036	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	CHRYSENE	0.091	J	ug/l	y	0.2	0.024	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	ANTHRACENE		UJ	ug/l	n	0.2	0.049	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	BENZO(GHI)PERYLENE	0.078	J	ug/l	y	0.25	0.025	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	FLUORENE	0.2		ug/l	y	0.2	0.024	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	PHENANTHRENE	0.2		ug/l	y	0.2	0.031	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	INDENO(1,2,3-CD)PYRENE	0.066	J	ug/l	y	0.2	0.026	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	PYRENE	0.16	J	ug/l	y	0.2	0.046	1
2-SW19-04	6-Oct-04	L0411063-09	8270C-SIM	2-METHYLNAPHTHALENE	0.068	J	ug/l	y	0.2	0.036	1
2-SW100604	6-Oct-04	L0411063-10	6020A	BERYLLIUM, DISSOLVED		U	mg/l	n	0.001	0.000015	1
2-SW100604	6-Oct-04	L0411063-10	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.0002	0.000034	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW100604	6-Oct-04	L0411063-10	6010B	CALCIUM, DISSOLVED	13		mg/l	y	0.1	0.015	1
2-SW100604	6-Oct-04	L0411063-10	6020A	CHROMIUM, DISSOLVED	0.00038	U	mg/l	n	0.001	0.000031	1
2-SW100604	6-Oct-04	L0411063-10	6020A	COBALT, DISSOLVED	0.00033	J	mg/l	y	0.001	0.000017	1
2-SW100604	6-Oct-04	L0411063-10	6020A	COPPER, DISSOLVED	0.00054	J	mg/l	y	0.001	0.000172	1
2-SW100604	6-Oct-04	L0411063-10	6010B	IRON, DISSOLVED	0.7		mg/l	y	0.05	0.013	1
2-SW100604	6-Oct-04	L0411063-10	6020A	LEAD, DISSOLVED	0.00009	U	mg/l	n	0.0005	0.000028	1
2-SW100604	6-Oct-04	L0411063-10	6010B	MAGNESIUM, DISSOLVED	3.4		mg/l	y	0.1	0.014	1
2-SW100604	6-Oct-04	L0411063-10	6010B	MANGANESE, DISSOLVED	0.16		mg/l	y	0.01	0.0006	1
2-SW100604	6-Oct-04	L0411063-10	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-SW100604	6-Oct-04	L0411063-10	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-SW100604	6-Oct-04	L0411063-10	6020A	NICKEL, DISSOLVED	0.0019		mg/l	y	0.001	0.000024	1
2-SW100604	6-Oct-04	L0411063-10	6010B	POTASSIUM, DISSOLVED	2.7		mg/l	y	2.5	0.094	1
2-SW100604	6-Oct-04	L0411063-10	6020A	SELENIUM, DISSOLVED	0.00096	U	mg/l	n	0.002	0.000298	1
2-SW100604	6-Oct-04	L0411063-10	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-SW100604	6-Oct-04	L0411063-10	6010B	SODIUM, DISSOLVED	56		mg/l	y	10	1.6	5
2-SW100604	6-Oct-04	L0411063-10	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-SW100604	6-Oct-04	L0411063-10	6020A	VANADIUM, DISSOLVED	0.00037	J	mg/l	y	0.001	0.00003	1
2-SW100604	6-Oct-04	L0411063-10	6020A	ZINC, DISSOLVED	0.0105		mg/l	y	0.005	0.000298	1
2-SW100604	6-Oct-04	L0411063-10	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-SW100604	6-Oct-04	L0411063-10	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-SW100604	6-Oct-04	L0411063-10	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-SW100604	6-Oct-04	L0411063-10	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-SW100604	6-Oct-04	L0411063-10	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-SW100604	6-Oct-04	L0411063-10	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-SW100604	6-Oct-04	L0411063-10	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-SW100604	6-Oct-04	L0411063-10	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-SW100604	6-Oct-04	L0411063-10	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-SW100604	6-Oct-04	L0411063-10	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-SW100604	6-Oct-04	L0411063-10	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-SW100604	6-Oct-04	L0411063-10	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-SW100604	6-Oct-04	L0411063-10	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-SW100604	6-Oct-04	L0411063-10	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-SW100604	6-Oct-04	L0411063-10	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-SW100604	6-Oct-04	L0411063-10	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-SW100604	6-Oct-04	L0411063-10	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-SW100604	6-Oct-04	L0411063-10	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW100604	6-Oct-04	L0411063-10	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW100604	6-Oct-04	L0411063-10	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW100604	6-Oct-04	L0411063-10	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-SW100604	6-Oct-04	L0411063-10	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-SW100604	6-Oct-04	L0411063-10	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-SW100604	6-Oct-04	L0411063-10	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-SW100604	6-Oct-04	L0411063-10	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-SW100604	6-Oct-04	L0411063-10	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
2-SW100604	6-Oct-04	L0411063-10	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-SW100604	6-Oct-04	L0411063-10	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-SW100604	6-Oct-04	L0411063-10	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-SW100604	6-Oct-04	L0411063-10	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-SW100604	6-Oct-04	L0411063-10	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-SW100604	6-Oct-04	L0411063-10	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-SW100604	6-Oct-04	L0411063-10	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-SW100604	6-Oct-04	L0411063-10	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	ACENAPHTHENE	0.31		ug/l	y	0.2	0.036	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	FLUORANTHENE	0.24		ug/l	y	0.2	0.04	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	NAPHTHALENE	0.15	J	ug/l	y	0.2	0.031	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	BENZO(A)ANTHRACENE	0.06	J	ug/l	y	0.2	0.038	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	BENZO(A)PYRENE	0.064	J	ug/l	y	0.2	0.04	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	BENZO(B)FLUORANTHENE	0.12	J	ug/l	y	0.2	0.05	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	BENZO(K)FLUORANTHENE	0.086	J	ug/l	y	0.2	0.036	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	CHRYSENE	0.092	J	ug/l	y	0.2	0.024	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	ANTHRACENE	0.05	J	ug/l	y	0.2	0.049	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	BENZO(GHI)PERYLENE	0.073	J	ug/l	y	0.25	0.025	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	FLUORENE	0.2		ug/l	y	0.2	0.024	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	PHENANTHRENE	0.21		ug/l	y	0.2	0.031	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	INDENO(1,2,3-CD)PYRENE	0.058	J	ug/l	y	0.2	0.026	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	PYRENE	0.21		ug/l	y	0.2	0.046	1
2-SW100604	6-Oct-04	L0411063-10	8270C-SIM	2-METHYLNAPHTHALENE	0.064	J	ug/l	y	0.2	0.036	1
2-SW100604	6-Oct-04	L0411063-10	2320B	ALKALINITY, TOTAL	38		mg CaCO3	y	2	0.4	1
2-SW100604	6-Oct-04	L0411063-10	2540C	SOLIDS, TOTAL DISSOLVED	230		mg/l	y	10	2.8	1
2-SW100604	6-Oct-04	L0411063-10	2540D	SOLIDS, TOTAL SUSPENDED	140		mg/l	y	10		2
2-SW100604	6-Oct-04	L0411063-10	9251	CHLORIDE	96		mg/l	y	1	0.36	1
2-SW100604	6-Oct-04	L0411063-10	9038	SULFATE		U	mg/l	n	10	1.4	1
2-SW100604	6-Oct-04	L0411063-10	5220D	CHEMICAL OXYGEN DEMAND	62		mg/l	y	20	4.2	1
2-SW100604	6-Oct-04	L0411063-10	9060	TOTAL ORGANIC CARBON	9.9		mg/l	y	4	0.34	8
2-SW100604	6-Oct-04	L0411063-10	2340B	HARDNESS	50		mg/l	y	1.7		1
2-SW100604	6-Oct-04	L0411063-10	6010B	ALUMINUM, TOTAL	0.31	J	mg/l	y	0.1	0.019	1
2-SW100604	6-Oct-04	L0411063-10	6020A	ANTIMONY, TOTAL	0.00056	J	mg/l	y	0.001	0.000022	1
2-SW100604	6-Oct-04	L0411063-10	6020A	ARSENIC, TOTAL	0.0021		mg/l	y	0.001	0.000034	1
2-SW100604	6-Oct-04	L0411063-10	6020A	BARIUM, TOTAL	0.042		mg/l	y	0.001	0.000038	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW100604	6-Oct-04	L0411063-10	6020A	BERYLLIUM, TOTAL	0.00008	U	mg/l	n	0.001	0.000015	1
2-SW100604	6-Oct-04	L0411063-10	6020A	CADMIUM, TOTAL	0.00015	U	mg/l	n	0.0002	0.000034	1
2-SW100604	6-Oct-04	L0411063-10	6010B	CALCIUM, TOTAL	14		mg/l	y	0.1	0.015	1
2-SW100604	6-Oct-04	L0411063-10	6020A	CHROMIUM, TOTAL	0.0023		mg/l	y	0.001	0.000031	1
2-SW100604	6-Oct-04	L0411063-10	6020A	COBALT, TOTAL	0.0007	J	mg/l	y	0.001	0.000017	1
2-SW100604	6-Oct-04	L0411063-10	6020A	COPPER, TOTAL	0.0086		mg/l	y	0.001	0.000172	1
2-SW100604	6-Oct-04	L0411063-10	6010B	IRON, TOTAL	19		mg/l	y	0.05	0.013	1
2-SW100604	6-Oct-04	L0411063-10	6020A	LEAD, TOTAL	0.0032		mg/l	y	0.0005	0.000028	1
2-SW100604	6-Oct-04	L0411063-10	6010B	MAGNESIUM, TOTAL	3.5		mg/l	y	0.1	0.014	1
2-SW100604	6-Oct-04	L0411063-10	6010B	MANGANESE, TOTAL	0.2		mg/l	y	0.01	0.0006	1
2-SW100604	6-Oct-04	L0411063-10	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
2-SW100604	6-Oct-04	L0411063-10	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
2-SW100604	6-Oct-04	L0411063-10	6020A	NICKEL, TOTAL	0.0041		mg/l	y	0.001	0.000024	1
2-SW100604	6-Oct-04	L0411063-10	6010B	POTASSIUM, TOTAL	2.9	J	mg/l	y	2.5	0.094	1
2-SW100604	6-Oct-04	L0411063-10	6020A	SELENIUM, TOTAL	0.00093	J	mg/l	y	0.002	0.000298	1
2-SW100604	6-Oct-04	L0411063-10	6020A	SILVER, TOTAL	0.00003	U	mg/l	n	0.001	0.000025	1
2-SW100604	6-Oct-04	L0411063-10	6010B	SODIUM, TOTAL	59		mg/l	y	10	1.6	5
2-SW100604	6-Oct-04	L0411063-10	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-SW100604	6-Oct-04	L0411063-10	6020A	VANADIUM, TOTAL	0.0075		mg/l	y	0.001	0.00003	1
2-SW100604	6-Oct-04	L0411063-10	6020A	ZINC, TOTAL	0.0839	J	mg/l	y	0.005	0.000298	1
2-SW100604	6-Oct-04	L0411063-10	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
2-SW100604	6-Oct-04	L0411063-10	6020A	ANTIMONY, DISSOLVED	0.00011	U	mg/l	n	0.001	0.000022	1
2-SW100604	6-Oct-04	L0411063-10	6020A	ARSENIC, DISSOLVED	0.00051	U	mg/l	n	0.001	0.000034	1
2-SW100604	6-Oct-04	L0411063-10	6020A	BARIUM, DISSOLVED	0.0284		mg/l	y	0.001	0.000038	1
2-GW21S-04	6-Oct-04	L0411063-11	2320B	ALKALINITY, TOTAL	1600		mg CaCO3	y	10	2	5
2-GW21S-04	6-Oct-04	L0411063-11	2540C	SOLIDS, TOTAL DISSOLVED	16000		mg/l	y	10	2.8	1
2-GW21S-04	6-Oct-04	L0411063-11	2540D	SOLIDS, TOTAL SUSPENDED	24		mg/l	y	5		1
2-GW21S-04	6-Oct-04	L0411063-11	9251	CHLORIDE	9900		mg/l	y	200	0.36	200
2-GW21S-04	6-Oct-04	L0411063-11	9038	SULFATE		U	mg/l	n	10	1.4	1
2-GW21S-04	6-Oct-04	L0411063-11	5220D	CHEMICAL OXYGEN DEMAND	1000		mg/l	y	20	4.2	1
2-GW21S-04	6-Oct-04	L0411063-11	9060	TOTAL ORGANIC CARBON	49		mg/l	y	20	1.7	40
2-GW21S-04	6-Oct-04	L0411063-11	2340B	HARDNESS	3300		mg/l	y	17		10
2-GW21S-04	6-Oct-04	L0411063-11	6010B	ALUMINUM, TOTAL	0.064	J	mg/l	y	0.1	0.019	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	ANTIMONY, TOTAL	0.00049	J	mg/l	y	0.001	0.000022	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	ARSENIC, TOTAL	0.0053		mg/l	y	0.001	0.000034	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	BARIUM, TOTAL	0.1222		mg/l	y	0.001	0.000038	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	BERYLLIUM, TOTAL	0.00005	U	mg/l	n	0.001	0.000015	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	CADMIUM, TOTAL		U	mg/l	n	0.002	0.000068	2
2-GW21S-04	6-Oct-04	L0411063-11	6010B	CALCIUM, TOTAL	210		mg/l	y	1	0.15	10
2-GW21S-04	6-Oct-04	L0411063-11	6020A	CHROMIUM, TOTAL	0.0092		mg/l	y	0.001	0.000031	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	COBALT, TOTAL	0.0012		mg/l	y	0.001	0.000017	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	COPPER, TOTAL	0.0052		mg/l	y	0.001	0.000172	1
2-GW21S-04	6-Oct-04	L0411063-11	6010B	IRON, TOTAL	4		mg/l	y	0.05	0.013	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	LEAD, TOTAL	0.0006		mg/l	y	0.0005	0.000028	1
2-GW21S-04	6-Oct-04	L0411063-11	6010B	MAGNESIUM, TOTAL	680		mg/l	y	1	0.14	10
2-GW21S-04	6-Oct-04	L0411063-11	6010B	MANGANESE, TOTAL	0.14		mg/l	y	0.01	0.0006	1
2-GW21S-04	6-Oct-04	L0411063-11	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW21S-04	6-Oct-04	L0411063-11	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	NICKEL, TOTAL	0.0028		mg/l	y	0.001	0.000024	1
2-GW21S-04	6-Oct-04	L0411063-11	6010B	POTASSIUM, TOTAL	380	J	mg/l	y	25	0.94	10
2-GW21S-04	6-Oct-04	L0411063-11	6020A	SELENIUM, TOTAL	0.017		mg/l	y	0.002	0.000298	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	SILVER, TOTAL	0.00004	U	mg/l	n	0.001	0.000025	1
2-GW21S-04	6-Oct-04	L0411063-11	6010B	SODIUM, TOTAL	5600		mg/l	y	1000	160	500
2-GW21S-04	6-Oct-04	L0411063-11	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	VANADIUM, TOTAL	0.0084		mg/l	y	0.001	0.00003	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	ZINC, TOTAL	0.04	J	mg/l	y	0.005	0.000298	1
2-GW21S-04	6-Oct-04	L0411063-11	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	ANTIMONY, DISSOLVED	0.00039	J	mg/l	y	0.001	0.000022	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	ARSENIC, DISSOLVED	0.0064	J	mg/l	y	0.001	0.000034	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	BARIUM, DISSOLVED	0.1126		mg/l	y	0.001	0.000038	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	BERYLLIUM, DISSOLVED	0.00005	U	mg/l	n	0.001	0.000015	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-GW21S-04	6-Oct-04	L0411063-11	6010B	CALCIUM, DISSOLVED	200		mg/l	y	1	0.15	10
2-GW21S-04	6-Oct-04	L0411063-11	6020A	COPPER, DISSOLVED	0.0026		mg/l	y	0.001	0.000172	1
2-GW21S-04	6-Oct-04	L0411063-11	6010B	IRON, DISSOLVED	0.43		mg/l	y	0.05	0.013	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	LEAD, DISSOLVED	0.00027	J	mg/l	y	0.0005	0.000028	1
2-GW21S-04	6-Oct-04	L0411063-11	6010B	MAGNESIUM, DISSOLVED	640		mg/l	y	1	0.14	10
2-GW21S-04	6-Oct-04	L0411063-11	6010B	MANGANESE, DISSOLVED	0.15		mg/l	y	0.01	0.0006	1
2-GW21S-04	6-Oct-04	L0411063-11	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	NICKEL, DISSOLVED	0.003		mg/l	y	0.001	0.000024	1
2-GW21S-04	6-Oct-04	L0411063-11	6010B	POTASSIUM, DISSOLVED	340		mg/l	y	25	0.94	10
2-GW21S-04	6-Oct-04	L0411063-11	6020A	SELENIUM, DISSOLVED	0.018	J	mg/l	y	0.002	0.000298	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-GW21S-04	6-Oct-04	L0411063-11	6010B	SODIUM, DISSOLVED	5200		mg/l	y	1000	160	500
2-GW21S-04	6-Oct-04	L0411063-11	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	VANADIUM, DISSOLVED	0.0076		mg/l	y	0.001	0.00003	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	ZINC, DISSOLVED	0.0115		mg/l	y	0.005	0.000298	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	CHROMIUM, DISSOLVED	0.0073		mg/l	y	0.001	0.000031	1
2-GW21S-04	6-Oct-04	L0411063-11	6020A	COBALT, DISSOLVED	0.001		mg/l	y	0.001	0.000017	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW21S-04	6-Oct-04	L0411063-11	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	PYRENE	0.14	J	ug/l	y	0.2	0.046	1
2-GW21S-04	6-Oct-04	L0411063-11	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-GW43DS-04	6-Oct-04	L0411063-12	2320B	ALKALINITY, TOTAL	2400		mg CaCO3	y	10	2	5
2-GW43DS-04	6-Oct-04	L0411063-12	2540C	SOLIDS, TOTAL DISSOLVED	25000		mg/l	y	10	2.8	1
2-GW43DS-04	6-Oct-04	L0411063-12	2540D	SOLIDS, TOTAL SUSPENDED	38		mg/l	y	5		1
2-GW43DS-04	6-Oct-04	L0411063-12	9251	CHLORIDE	15000		mg/l	y	200	0.36	200
2-GW43DS-04	6-Oct-04	L0411063-12	9038	SULFATE	160		mg/l	y	50	7.1	5
2-GW43DS-04	6-Oct-04	L0411063-12	5220D	CHEMICAL OXYGEN DEMAND	1300		mg/l	y	80	17	4
2-GW43DS-04	6-Oct-04	L0411063-12	9060	TOTAL ORGANIC CARBON	38		mg/l	y	20	1.7	40
2-GW43DS-04	6-Oct-04	L0411063-12	2340B	HARDNESS	3600		mg/l	y	17		10
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	ALUMINUM, TOTAL	0.058	J	mg/l	y	0.1	0.019	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	ANTIMONY, TOTAL	0.0005	J	mg/l	y	0.001	0.000022	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	ARSENIC, TOTAL	0.0079		mg/l	y	0.001	0.000034	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	BARIUM, TOTAL	0.1082		mg/l	y	0.001	0.000038	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	BERYLLIUM, TOTAL	0.00003	U	mg/l	n	0.001	0.000015	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	CADMIUM, TOTAL		U	mg/l	n	0.001	0.000034	1
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	CALCIUM, TOTAL	240		mg/l	y	1	0.15	10
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	CHROMIUM, TOTAL	0.0075		mg/l	y	0.001	0.000031	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	COBALT, TOTAL	0.0012		mg/l	y	0.001	0.000017	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	COPPER, TOTAL	0.0028		mg/l	y	0.001	0.000172	1
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	IRON, TOTAL	0.25		mg/l	y	0.05	0.013	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	LEAD, TOTAL	0.00026	J	mg/l	y	0.0005	0.000028	1
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	MAGNESIUM, TOTAL	740		mg/l	y	1	0.14	10
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	MANGANESE, TOTAL	0.01		mg/l	y	0.01	0.0006	1
2-GW43DS-04	6-Oct-04	L0411063-12	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	NICKEL, TOTAL	0.0033		mg/l	y	0.001	0.000024	1
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	POTASSIUM, TOTAL	440	J	mg/l	y	25	0.94	10
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	SELENIUM, TOTAL	0.02		mg/l	y	0.002	0.000298	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	SILVER, TOTAL	0.00003	U	mg/l	n	0.001	0.000025	1
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	SODIUM, TOTAL	6400		mg/l	y	1000	160	500
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	VANADIUM, TOTAL	0.0063		mg/l	y	0.001	0.00003	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	ZINC, TOTAL	0.0105	J	mg/l	y	0.005	0.000298	1
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.019	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	ANTIMONY, DISSOLVED	0.00049	J	mg/l	y	0.001	0.000022	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	ARSENIC, DISSOLVED	0.0102	J	mg/l	y	0.001	0.000034	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	BARIUM, DISSOLVED	0.1167		mg/l	y	0.001	0.000038	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	BERYLLIUM, DISSOLVED	0.00003	U	mg/l	n	0.001	0.000015	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.001	0.000034	1
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	CALCIUM, DISSOLVED	240		mg/l	y	1	0.15	10
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	CHROMIUM, DISSOLVED	0.0069		mg/l	y	0.001	0.000031	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	COBALT, DISSOLVED	0.0011		mg/l	y	0.001	0.000017	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	COPPER, DISSOLVED	0.0028		mg/l	y	0.001	0.000172	1
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	IRON, DISSOLVED		U	mg/l	n	0.05	0.013	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	LEAD, DISSOLVED	0.00007	U	mg/l	n	0.0005	0.000028	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	MAGNESIUM, DISSOLVED	750		mg/l	y	1	0.14	10
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	MANGANESE, DISSOLVED	0.0072	J	mg/l	y	0.01	0.0006	1
2-GW43DS-04	6-Oct-04	L0411063-12	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	NICKEL, DISSOLVED	0.0026		mg/l	y	0.001	0.000024	1
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	POTASSIUM, DISSOLVED	460		mg/l	y	25	0.94	10
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	SELENIUM, DISSOLVED	0.021	J	mg/l	y	0.002	0.000298	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-GW43DS-04	6-Oct-04	L0411063-12	6010B	SODIUM, DISSOLVED	6600		mg/l	y	1000	160	500
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	VANADIUM, DISSOLVED	0.0058		mg/l	y	0.001	0.00003	1
2-GW43DS-04	6-Oct-04	L0411063-12	6020A	ZINC, DISSOLVED	0.0182		mg/l	y	0.005	0.000298	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	BIS(2-ETHYLHEXYL)PHTHALATE	2.4	J	ug/l	y	10	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-GW43DS-04	6-Oct-04	L0411063-12	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-SW23-04	6-Oct-04	L0411063-13	2320B	ALKALINITY, TOTAL	19		mg CaCO3	y	2	0.4	1
2-SW23-04	6-Oct-04	L0411063-13	2540C	SOLIDS, TOTAL DISSOLVED	120		mg/l	y	10	2.8	1
2-SW23-04	6-Oct-04	L0411063-13	2540D	SOLIDS, TOTAL SUSPENDED	180		mg/l	y	10		2
2-SW23-04	6-Oct-04	L0411063-13	9251	CHLORIDE	21		mg/l	y	1	0.36	1
2-SW23-04	6-Oct-04	L0411063-13	9038	SULFATE		U	mg/l	n	10	1.4	1
2-SW23-04	6-Oct-04	L0411063-13	5220D	CHEMICAL OXYGEN DEMAND	380		mg/l	y	20	4.2	1
2-SW23-04	6-Oct-04	L0411063-13	9060	TOTAL ORGANIC CARBON	19		mg/l	y	4	0.34	8
2-SW23-04	6-Oct-04	L0411063-13	2340B	HARDNESS	36		mg/l	y	1.7		1
2-SW23-04	6-Oct-04	L0411063-13	6010B	ALUMINUM, TOTAL	4.1	J	mg/l	y	0.1	0.019	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	ANTIMONY, TOTAL	0.0013		mg/l	y	0.001	0.000022	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	ARSENIC, TOTAL	0.012		mg/l	y	0.001	0.000034	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	BARIUM, TOTAL	0.0679		mg/l	y	0.001	0.000038	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	BERYLLIUM, TOTAL	0.0004	J	mg/l	y	0.001	0.000015	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	CADMIUM, TOTAL	0.001		mg/l	y	0.0002	0.000034	1
2-SW23-04	6-Oct-04	L0411063-13	6010B	CALCIUM, TOTAL	8.7		mg/l	y	0.1	0.015	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	CHROMIUM, TOTAL	0.0069		mg/l	y	0.001	0.000031	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	COBALT, TOTAL	0.0053		mg/l	y	0.001	0.000017	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	COPPER, TOTAL	0.0393		mg/l	y	0.001	0.000172	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW23-04	6-Oct-04	L0411063-13	6010B	IRON, TOTAL	13		mg/l	y	0.05	0.013	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	LEAD, TOTAL	0.0202		mg/l	y	0.0005	0.000028	1
2-SW23-04	6-Oct-04	L0411063-13	6010B	MAGNESIUM, TOTAL	3.3		mg/l	y	0.1	0.014	1
2-SW23-04	6-Oct-04	L0411063-13	6010B	MANGANESE, TOTAL	0.41		mg/l	y	0.01	0.0006	1
2-SW23-04	6-Oct-04	L0411063-13	7470A	MERCURY, TOTAL	3.57E-05	J	mg/l	y	0.0002	0.000012	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	MOLYBDENUM, TOTAL	0.0013		mg/l	y	0.001	0.00003	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	NICKEL, TOTAL	0.0253		mg/l	y	0.001	0.000024	1
2-SW23-04	6-Oct-04	L0411063-13	6010B	POTASSIUM, TOTAL	4.3	J	mg/l	y	2.5	0.094	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	SELENIUM, TOTAL	0.00156	U	mg/l	n	0.002	0.000298	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	SILVER, TOTAL	0.00013	U	mg/l	n	0.001	0.000025	1
2-SW23-04	6-Oct-04	L0411063-13	6010B	SODIUM, TOTAL	13		mg/l	y	2	0.31	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	THALLIUM, TOTAL	0.00018	U	mg/l	n	0.001	0.000026	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	VANADIUM, TOTAL	0.0233		mg/l	y	0.001	0.00003	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	ZINC, TOTAL	2.274		mg/l	y	0.1	0.00596	20
2-SW23-04	6-Oct-04	L0411063-13	6010B	ALUMINUM, DISSOLVED	0.12		mg/l	y	0.1	0.019	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	ANTIMONY, DISSOLVED	0.00032	J	mg/l	y	0.001	0.000022	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	ARSENIC, DISSOLVED	0.0036	J	mg/l	y	0.001	0.000034	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	BARIUM, DISSOLVED	0.0192		mg/l	y	0.001	0.000038	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	BERYLLIUM, DISSOLVED	0.00003	U	mg/l	n	0.001	0.000015	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	CADMIUM, DISSOLVED	0.00011	U	mg/l	n	0.0002	0.000034	1
2-SW23-04	6-Oct-04	L0411063-13	6010B	CALCIUM, DISSOLVED	6.1		mg/l	y	0.1	0.015	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	CHROMIUM, DISSOLVED	0.001		mg/l	y	0.001	0.000031	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	COBALT, DISSOLVED	0.0014		mg/l	y	0.001	0.000017	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	COPPER, DISSOLVED	0.0051		mg/l	y	0.001	0.000172	1
2-SW23-04	6-Oct-04	L0411063-13	6010B	IRON, DISSOLVED	3		mg/l	y	0.05	0.013	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	LEAD, DISSOLVED	0.0017		mg/l	y	0.0005	0.000028	1
2-SW23-04	6-Oct-04	L0411063-13	6010B	MAGNESIUM, DISSOLVED	1.7		mg/l	y	0.1	0.014	1
2-SW23-04	6-Oct-04	L0411063-13	6010B	MANGANESE, DISSOLVED	0.16		mg/l	y	0.01	0.0006	1
2-SW23-04	6-Oct-04	L0411063-13	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	MOLYBDENUM, DISSOLVED	0.00007	U	mg/l	n	0.001	0.00003	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	NICKEL, DISSOLVED	0.0072		mg/l	y	0.001	0.000024	1
2-SW23-04	6-Oct-04	L0411063-13	6010B	POTASSIUM, DISSOLVED	2.9		mg/l	y	2.5	0.094	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	SELENIUM, DISSOLVED	0.00093	U	mg/l	n	0.002	0.000298	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-SW23-04	6-Oct-04	L0411063-13	6010B	SODIUM, DISSOLVED	11		mg/l	y	2	0.31	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	VANADIUM, DISSOLVED	0.0027		mg/l	y	0.001	0.00003	1
2-SW23-04	6-Oct-04	L0411063-13	6020A	ZINC, DISSOLVED	0.6432		mg/l	y	0.05	0.00298	10
2-SW23-04	6-Oct-04	L0411063-13	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW23-04	6-Oct-04	L0411063-13	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	DI-N-OCTYLPHTHALATE	1.4	J	ug/l	y	5	0.54	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-SW23-04	6-Oct-04	L0411063-13	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	FLUORANTHENE	0.066	J	ug/l	y	0.2	0.04	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	PHENANTHRENE	0.031	J	ug/l	y	0.2	0.031	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	PYRENE	0.057	J	ug/l	y	0.2	0.046	1
2-SW23-04	6-Oct-04	L0411063-13	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-SW20-04	6-Oct-04	L0411063-14	2320B	ALKALINITY, TOTAL	32		mg CaCO3	y	2	0.4	1
2-SW20-04	6-Oct-04	L0411063-14	2540C	SOLIDS, TOTAL DISSOLVED	200		mg/l	y	10	2.8	1
2-SW20-04	6-Oct-04	L0411063-14	2540D	SOLIDS, TOTAL SUSPENDED	99		mg/l	y	5		1
2-SW20-04	6-Oct-04	L0411063-14	9251	CHLORIDE	86		mg/l	y	1	0.36	1
2-SW20-04	6-Oct-04	L0411063-14	9038	SULFATE	1.8	J	mg/l	y	10	1.4	1
2-SW20-04	6-Oct-04	L0411063-14	5220D	CHEMICAL OXYGEN DEMAND	60		mg/l	y	20	4.2	1
2-SW20-04	6-Oct-04	L0411063-14	9060	TOTAL ORGANIC CARBON	8.4		mg/l	y	2	0.17	4
2-SW20-04	6-Oct-04	L0411063-14	2340B	HARDNESS	46		mg/l	y	1.7		1
2-SW20-04	6-Oct-04	L0411063-14	6010B	ALUMINUM, TOTAL	0.2	J	mg/l	y	0.1	0.019	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	ANTIMONY, TOTAL	0.00019	U	mg/l	n	0.001	0.000022	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	ARSENIC, TOTAL	0.0022		mg/l	y	0.001	0.000034	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	BARIUM, TOTAL	0.0315		mg/l	y	0.001	0.000038	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	BERYLLIUM, TOTAL	0.00004	U	mg/l	n	0.001	0.000015	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	CADMIUM, TOTAL	0.0001	U	mg/l	n	0.0002	0.000034	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	CALCIUM, TOTAL	13		mg/l	y	0.1	0.015	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	CHROMIUM, TOTAL	0.00089	J	mg/l	y	0.001	0.000031	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	COBALT, TOTAL	0.0015		mg/l	y	0.001	0.000017	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	COPPER, TOTAL	0.0038		mg/l	y	0.001	0.000172	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	IRON, TOTAL	5.2		mg/l	y	0.05	0.013	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	LEAD, TOTAL	0.0014		mg/l	y	0.0005	0.000028	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	MAGNESIUM, TOTAL	3.3		mg/l	y	0.1	0.014	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	MANGANESE, TOTAL	0.32		mg/l	y	0.01	0.0006	1
2-SW20-04	6-Oct-04	L0411063-14	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	NICKEL, TOTAL	0.0034		mg/l	y	0.001	0.000024	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	POTASSIUM, TOTAL	2.6	J	mg/l	y	2.5	0.094	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	SELENIUM, TOTAL	0.00038	U	mg/l	n	0.002	0.000298	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	SILVER, TOTAL		U	mg/l	n	0.001	0.000025	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	SODIUM, TOTAL	50		mg/l	y	10	1.6	5
2-SW20-04	6-Oct-04	L0411063-14	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	VANADIUM, TOTAL	0.002		mg/l	y	0.001	0.00003	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	ZINC, TOTAL	0.0772		mg/l	y	0.005	0.000298	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	ALUMINUM, DISSOLVED	0.047	J	mg/l	y	0.1	0.019	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	ANTIMONY, DISSOLVED	0.00011	U	mg/l	n	0.001	0.000022	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	ARSENIC, DISSOLVED	0.00066	J	mg/l	y	0.001	0.000034	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	BARIUM, DISSOLVED	0.0235		mg/l	y	0.001	0.000038	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	BERYLLIUM, DISSOLVED	0.00002	U	mg/l	n	0.001	0.000015	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.0002	0.000034	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	CALCIUM, DISSOLVED	11		mg/l	y	0.1	0.015	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW20-04	6-Oct-04	L0411063-14	6020A	CHROMIUM, DISSOLVED	0.00046	U	mg/l	n	0.001	0.000031	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	COBALT, DISSOLVED	0.00078	J	mg/l	y	0.001	0.000017	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	COPPER, DISSOLVED	0.00072	J	mg/l	y	0.001	0.000172	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	IRON, DISSOLVED	1.2		mg/l	y	0.05	0.013	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	LEAD, DISSOLVED	0.00027	J	mg/l	y	0.0005	0.000028	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	MAGNESIUM, DISSOLVED	3		mg/l	y	0.1	0.014	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	MANGANESE, DISSOLVED	0.24		mg/l	y	0.01	0.0006	1
2-SW20-04	6-Oct-04	L0411063-14	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	NICKEL, DISSOLVED	0.0014		mg/l	y	0.001	0.000024	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	POTASSIUM, DISSOLVED	0.67	J	mg/l	y	2.5	0.094	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	SELENIUM, DISSOLVED	0.00071	U	mg/l	n	0.002	0.000298	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-SW20-04	6-Oct-04	L0411063-14	6010B	SODIUM, DISSOLVED	45		mg/l	y	10	1.6	5
2-SW20-04	6-Oct-04	L0411063-14	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	VANADIUM, DISSOLVED	0.00047	J	mg/l	y	0.001	0.00003	1
2-SW20-04	6-Oct-04	L0411063-14	6020A	ZINC, DISSOLVED	0.029		mg/l	y	0.005	0.000298	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	10	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW20-04	6-Oct-04	L0411063-14	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-SW20-04	6-Oct-04	L0411063-14	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.2	0.036	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	FLUORANTHENE	0.043	J	ug/l	y	0.2	0.04	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-SW20-04	6-Oct-04	L0411063-14	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-SW21-04	6-Oct-04	L0411063-15	2320B	ALKALINITY, TOTAL	48		mg CaCO3	y	2	0.4	1
2-SW21-04	6-Oct-04	L0411063-15	2540C	SOLIDS, TOTAL DISSOLVED	270		mg/l	y	10	2.8	1
2-SW21-04	6-Oct-04	L0411063-15	2540D	SOLIDS, TOTAL SUSPENDED	32		mg/l	y	5		1
2-SW21-04	6-Oct-04	L0411063-15	9251	CHLORIDE	110		mg/l	y	5	0.36	5
2-SW21-04	6-Oct-04	L0411063-15	9038	SULFATE		U	mg/l	n	10	1.4	1
2-SW21-04	6-Oct-04	L0411063-15	5220D	CHEMICAL OXYGEN DEMAND	64		mg/l	y	20	4.2	1
2-SW21-04	6-Oct-04	L0411063-15	9060	TOTAL ORGANIC CARBON	11		mg/l	y	2	0.17	4
2-SW21-04	6-Oct-04	L0411063-15	2340B	HARDNESS	64		mg/l	y	1.7		1
2-SW21-04	6-Oct-04	L0411063-15	6010B	ALUMINUM, TOTAL	0.21	J	mg/l	y	0.1	0.019	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	ANTIMONY, TOTAL	0.00029	J	mg/l	y	0.001	0.000022	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	ARSENIC, TOTAL	0.0014		mg/l	y	0.001	0.000034	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	BARIUM, TOTAL	0.0387		mg/l	y	0.001	0.000038	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	BERYLLIUM, TOTAL	0.00002	U	mg/l	n	0.001	0.000015	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW21-04	6-Oct-04	L0411063-15	6020A	CADMIUM, TOTAL	0.00005	U	mg/l	n	0.0002	0.000034	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	CALCIUM, TOTAL	18		mg/l	y	0.1	0.015	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	CHROMIUM, TOTAL	0.0012		mg/l	y	0.001	0.000031	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	COBALT, TOTAL	0.00086	J	mg/l	y	0.001	0.000017	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	COPPER, TOTAL	0.0029		mg/l	y	0.001	0.000172	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	IRON, TOTAL	4.8		mg/l	y	0.05	0.013	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	LEAD, TOTAL	0.0019		mg/l	y	0.0005	0.000028	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	MAGNESIUM, TOTAL	4.8		mg/l	y	0.1	0.014	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	MANGANESE, TOTAL	0.28		mg/l	y	0.01	0.0006	1
2-SW21-04	6-Oct-04	L0411063-15	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	MOLYBDENUM, TOTAL		U	mg/l	n	0.001	0.00003	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	NICKEL, TOTAL	0.0023		mg/l	y	0.001	0.000024	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	POTASSIUM, TOTAL	3.8	J	mg/l	y	2.5	0.094	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	SELENIUM, TOTAL	0.00068	U	mg/l	n	0.002	0.000298	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	SILVER, TOTAL		U	mg/l	n	0.001	0.000025	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	SODIUM, TOTAL	66		mg/l	y	10	1.6	5
2-SW21-04	6-Oct-04	L0411063-15	6020A	THALLIUM, TOTAL		U	mg/l	n	0.001	0.000026	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	VANADIUM, TOTAL	0.0032		mg/l	y	0.001	0.00003	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	ZINC, TOTAL	0.0436		mg/l	y	0.005	0.000298	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	ALUMINUM, DISSOLVED	0.044	J	mg/l	y	0.1	0.019	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	ANTIMONY, DISSOLVED	0.00013	U	mg/l	n	0.001	0.000022	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	ARSENIC, DISSOLVED	0.00082	J	mg/l	y	0.001	0.000034	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	BARIUM, DISSOLVED	0.0338		mg/l	y	0.001	0.000038	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	BERYLLIUM, DISSOLVED		U	mg/l	n	0.001	0.000015	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	CADMIUM, DISSOLVED		U	mg/l	n	0.0002	0.000034	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	CALCIUM, DISSOLVED	17		mg/l	y	0.1	0.015	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	CHROMIUM, DISSOLVED	0.0007	U	mg/l	n	0.001	0.000031	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	COBALT, DISSOLVED	0.00059	J	mg/l	y	0.001	0.000017	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	COPPER, DISSOLVED	0.001		mg/l	y	0.001	0.000172	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	IRON, DISSOLVED	1.5		mg/l	y	0.05	0.013	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	LEAD, DISSOLVED	0.00037	J	mg/l	y	0.0005	0.000028	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	MAGNESIUM, DISSOLVED	4.6		mg/l	y	0.1	0.014	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	MANGANESE, DISSOLVED	0.26		mg/l	y	0.01	0.0006	1
2-SW21-04	6-Oct-04	L0411063-15	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.001	0.00003	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	NICKEL, DISSOLVED	0.0015		mg/l	y	0.001	0.000024	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	POTASSIUM, DISSOLVED	1.3	J	mg/l	y	2.5	0.094	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	SELENIUM, DISSOLVED	0.0009	U	mg/l	n	0.002	0.000298	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	SILVER, DISSOLVED		U	mg/l	n	0.001	0.000025	1
2-SW21-04	6-Oct-04	L0411063-15	6010B	SODIUM, DISSOLVED	63		mg/l	y	10	1.6	5
2-SW21-04	6-Oct-04	L0411063-15	6020A	THALLIUM, DISSOLVED		U	mg/l	n	0.001	0.000026	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	VANADIUM, DISSOLVED	0.0012		mg/l	y	0.001	0.00003	1
2-SW21-04	6-Oct-04	L0411063-15	6020A	ZINC, DISSOLVED	0.0156		mg/l	y	0.005	0.000298	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW21-04	6-Oct-04	L0411063-15	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	2,4-DIMETHYLPHENOL		UJ	ug/l	n	10	3.1	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	2,4-DINITROPHENOL		UJ	ug/l	n	20	1	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	2,4,5-TRICHLOROPHENOL		UJ	ug/l	n	5	0.96	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	ACENAPHTHENE	0.21		ug/l	y	0.2	0.036	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	FLUORANTHENE	0.056	J	ug/l	y	0.2	0.04	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	NAPHTHALENE	0.037	J	ug/l	y	0.2	0.031	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	BENZO(A)PYRENE		U	ug/l	n	0.2	0.04	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	CHRYSENE		U	ug/l	n	0.2	0.024	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	FLUORENE	0.13	J	ug/l	y	0.2	0.024	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	PHENANTHRENE	0.06	J	ug/l	y	0.2	0.031	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	INDENO(1,2,3-CD)PYRENE		U	ug/l	n	0.2	0.026	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	PYRENE	0.046	J	ug/l	y	0.2	0.046	1
2-SW21-04	6-Oct-04	L0411063-15	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	3,3'-DICHLOROBENZIDINE		UJ	ug/l	n	50	2.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-SW21-04	6-Oct-04	L0411063-15	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	BIS(2-ETHYLHEXYL)PHTHALATE	2.2	J	ug/l	y	10	1.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-SW21-04	6-Oct-04	L0411063-15	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW38DS-04	6-Oct-04	L0411063-16	5220D	CHEMICAL OXYGEN DEMAND	46		mg/l	y	20	4.2	1
2-GW38DS-04	6-Oct-04	L0411063-16	9060	TOTAL ORGANIC CARBON	13		mg/l	y	5	0.43	10

Field Sample	Analyte	Analytical Method	Result	Units	Qualifier	Field Duplicate	Analyte	Result	Units	Qualifier	Field Duplicate RPD
2-SW19-04	ACENAPHTHENE	8270C-SIM	0.32	ug/l		2-SW100604	ACENAPHTHENE	0.31	ug/l		3.2
2-SW19-04	FLUORENE	8270C-SIM	0.2	ug/l		2-SW100604	FLUORENE	0.2	ug/l		0.0
2-SW19-04	PHENANTHRENE	8270C-SIM	0.2	ug/l		2-SW100604	PHENANTHRENE	0.21	ug/l		4.9
2-SW19-04	FLUORANTHENE	8270C-SIM	0.19	ug/l	J	2-SW100604	FLUORANTHENE	0.24	ug/l		23.3
2-SW19-04	NAPHTHALENE	8270C-SIM	0.18	ug/l	J	2-SW100604	NAPHTHALENE	0.15	ug/l	J	18.2
2-SW19-04	BENZO(A)ANTHRACENE	8270C-SIM	0.052	ug/l	J	2-SW100604	BENZO(A)ANTHRACENE	0.06	ug/l	J	14.3
2-SW19-04	BENZO(A)PYRENE	8270C-SIM		ug/l	UJ	2-SW100604	BENZO(A)PYRENE	0.064	ug/l	J	NC
2-SW19-04	BENZO(B)FLUORANTHENE	8270C-SIM	0.1	ug/l	J	2-SW100604	BENZO(B)FLUORANTHENE	0.12	ug/l	J	18.2
2-SW19-04	BENZO(K)FLUORANTHENE	8270C-SIM	0.074	ug/l	J	2-SW100604	BENZO(K)FLUORANTHENE	0.086	ug/l	J	15.0
2-SW19-04	CHRYSENE	8270C-SIM	0.091	ug/l	J	2-SW100604	CHRYSENE	0.092	ug/l	J	1.1
2-SW19-04	ANTHRACENE	8270C-SIM		ug/l	UJ	2-SW100604	ANTHRACENE	0.05	ug/l	J	NC
2-SW19-04	BENZO(GHI)PERYLENE	8270C-SIM	0.078	ug/l	J	2-SW100604	BENZO(GHI)PERYLENE	0.073	ug/l	J	6.6
2-SW19-04	INDENO(1,2,3-CD)PYRENE	8270C-SIM	0.066	ug/l	J	2-SW100604	INDENO(1,2,3-CD)PYRENE	0.058	ug/l	J	12.9
2-SW19-04	PYRENE	8270C-SIM	0.16	ug/l	J	2-SW100604	PYRENE	0.21	ug/l		27.0
2-SW19-04	2-METHYLNAPHTHALENE	8270C-SIM	0.068	ug/l	J	2-SW100604	2-METHYLNAPHTHALENE	0.064	ug/l	J	6.1
2-GW45DS-04	ALUMINUM, TOTAL	6010B	0.071	mg/l	J	2-GW100604	ALUMINUM, TOTAL	0.072	mg/l	J	1.4
2-GW45DS-04	CALCIUM, TOTAL	6010B	130	mg/l		2-GW100604	CALCIUM, TOTAL	210	mg/l		47.1
2-GW45DS-04	IRON, TOTAL	6010B	1.1	mg/l	J	2-GW100604	IRON, TOTAL	0.4	mg/l	J	93.3
2-GW45DS-04	MAGNESIUM, TOTAL	6010B	410	mg/l		2-GW100604	MAGNESIUM, TOTAL	680	mg/l		49.5
2-GW45DS-04	MANGANESE, TOTAL	6010B	0.02	mg/l	J	2-GW100604	MANGANESE, TOTAL	0.0076	mg/l	J	89.9
2-GW45DS-04	POTASSIUM, TOTAL	6010B	260	mg/l	J	2-GW100604	POTASSIUM, TOTAL	430	mg/l		49.3
2-GW45DS-04	SODIUM, TOTAL	6010B	3800	mg/l		2-GW100604	SODIUM, TOTAL	6100	mg/l		46.5
2-GW45DS-04	ANTIMONY, TOTAL	6020A	0.00075	mg/l	J	2-GW100604	ANTIMONY, TOTAL	0.00096	mg/l	J	24.6
2-GW45DS-04	ARSENIC, TOTAL	6020A	0.008	mg/l		2-GW100604	ARSENIC, TOTAL	0.0129	mg/l		46.9
2-GW45DS-04	BARIUM, TOTAL	6020A	0.0527	mg/l		2-GW100604	BARIUM, TOTAL	0.0847	mg/l		46.6
2-GW45DS-04	CHROMIUM, TOTAL	6020A	0.0055	mg/l		2-GW100604	CHROMIUM, TOTAL	0.0054	mg/l		1.8
2-GW45DS-04	COBALT, TOTAL	6020A	0.00052	mg/l	J	2-GW100604	COBALT, TOTAL	0.0008	mg/l	J	42.4
2-GW45DS-04	COPPER, TOTAL	6020A	0.0026	mg/l		2-GW100604	COPPER, TOTAL	0.0028	mg/l		7.4
2-GW45DS-04	LEAD, TOTAL	6020A	0.0005	mg/l		2-GW100604	LEAD, TOTAL	0.00045	mg/l	J	10.5
2-GW45DS-04	NICKEL, TOTAL	6020A	0.0033	mg/l		2-GW100604	NICKEL, TOTAL	0.0024	mg/l		31.6
2-GW45DS-04	SELENIUM, TOTAL	6020A	0.013	mg/l		2-GW100604	SELENIUM, TOTAL	0.02	mg/l		42.4
2-GW45DS-04	VANADIUM, TOTAL	6020A	0.0078	mg/l		2-GW100604	VANADIUM, TOTAL	0.0062	mg/l		22.9
2-GW45DS-04	ZINC, TOTAL	6020A	0.0249	mg/l	J	2-GW100604	ZINC, TOTAL	0.0168	mg/l		38.8
2-GW45DS-04	CALCIUM, DISSOLVED	6010B	130	mg/l		2-GW100604	CALCIUM, DISSOLVED	130	mg/l		0.0
2-GW45DS-04	IRON, DISSOLVED	6010B		mg/l	UJ	2-GW100604	IRON, DISSOLVED	0.035	mg/l	J	NC
2-GW45DS-04	MAGNESIUM, DISSOLVED	6010B	400	mg/l		2-GW100604	MAGNESIUM, DISSOLVED	410	mg/l		2.5
2-GW45DS-04	MANGANESE, DISSOLVED	6010B	0.01	mg/l	J	2-GW100604	MANGANESE, DISSOLVED	0.02	mg/l	J	66.7
2-GW45DS-04	POTASSIUM, DISSOLVED	6010B	260	mg/l		2-GW100604	POTASSIUM, DISSOLVED	260	mg/l		0.0
2-GW45DS-04	SODIUM, DISSOLVED	6010B	3900	mg/l		2-GW100604	SODIUM, DISSOLVED	3800	mg/l		2.6
2-GW45DS-04	ANTIMONY, DISSOLVED	6020A	0.00044	mg/l	J	2-GW100604	ANTIMONY, DISSOLVED	0.00044	mg/l	J	0.0
2-GW45DS-04	ARSENIC, DISSOLVED	6020A	0.0065	mg/l	J	2-GW100604	ARSENIC, DISSOLVED	0.007	mg/l		7.4
2-GW45DS-04	BARIUM, DISSOLVED	6020A	0.0503	mg/l		2-GW100604	BARIUM, DISSOLVED	0.0534	mg/l		6.0
2-GW45DS-04	CHROMIUM, DISSOLVED	6020A	0.0048	mg/l		2-GW100604	CHROMIUM, DISSOLVED	0.0047	mg/l		2.1
2-GW45DS-04	COBALT, DISSOLVED	6020A	0.00045	mg/l	J	2-GW100604	COBALT, DISSOLVED	0.00049	mg/l	J	8.5
2-GW45DS-04	COPPER, DISSOLVED	6020A	0.0016	mg/l		2-GW100604	COPPER, DISSOLVED	0.0016	mg/l		0.0
2-GW45DS-04	NICKEL, DISSOLVED	6020A	0.0019	mg/l		2-GW100604	NICKEL, DISSOLVED	0.0024	mg/l		23.3
2-GW45DS-04	SELENIUM, DISSOLVED	6020A	0.012	mg/l	J	2-GW100604	SELENIUM, DISSOLVED	0.012	mg/l	J	0.0
2-GW45DS-04	VANADIUM, DISSOLVED	6020A	0.0066	mg/l		2-GW100604	VANADIUM, DISSOLVED	0.0071	mg/l		7.3

Field Sample	Analyte	Analytical Method	Result	Units	Qualifier	Field Duplicate	Analyte	Result	Units	Qualifier	Field Duplicate RPD
2-GW45DS-04	ZINC, DISSOLVED	6020A	0.0077	mg/l		2-GW100604	ZINC, DISSOLVED	0.00478	mg/l	J	46.8
2-SW19-04	ALUMINUM, TOTAL	6010B	0.47	mg/l	J	2-SW100604	ALUMINUM, TOTAL	0.31	mg/l	J	41.0
2-SW19-04	CALCIUM, TOTAL	6010B	15	mg/l		2-SW100604	CALCIUM, TOTAL	14	mg/l		6.9
2-SW19-04	IRON, TOTAL	6010B	21	mg/l		2-SW100604	IRON, TOTAL	19	mg/l		10.0
2-SW19-04	MAGNESIUM, TOTAL	6010B	3.5	mg/l		2-SW100604	MAGNESIUM, TOTAL	3.5	mg/l		0.0
2-SW19-04	MANGANESE, TOTAL	6010B	0.21	mg/l		2-SW100604	MANGANESE, TOTAL	0.2	mg/l		4.9
2-SW19-04	POTASSIUM, TOTAL	6010B	3.2	mg/l	J	2-SW100604	POTASSIUM, TOTAL	2.9	mg/l	J	9.8
2-SW19-04	SODIUM, TOTAL	6010B	58	mg/l		2-SW100604	SODIUM, TOTAL	59	mg/l		1.7
2-SW19-04	ANTIMONY, TOTAL	6020A	0.00069	mg/l	J	2-SW100604	ANTIMONY, TOTAL	0.00056	mg/l	J	20.8
2-SW19-04	ARSENIC, TOTAL	6020A	0.0023	mg/l		2-SW100604	ARSENIC, TOTAL	0.0021	mg/l		9.1
2-SW19-04	BARIUM, TOTAL	6020A	0.0475	mg/l		2-SW100604	BARIUM, TOTAL	0.042	mg/l		12.3
2-SW19-04	CADMIUM, TOTAL	6020A	0.0002	mg/l	J	2-SW100604	CADMIUM, TOTAL	0.00015	mg/l	U	NC
2-SW19-04	CHROMIUM, TOTAL	6020A	0.0018	mg/l		2-SW100604	CHROMIUM, TOTAL	0.0023	mg/l		24.4
2-SW19-04	COBALT, TOTAL	6020A	0.00082	mg/l	J	2-SW100604	COBALT, TOTAL	0.0007	mg/l	J	15.8
2-SW19-04	COPPER, TOTAL	6020A	0.0136	mg/l		2-SW100604	COPPER, TOTAL	0.0086	mg/l		45.0
2-SW19-04	LEAD, TOTAL	6020A	0.0041	mg/l		2-SW100604	LEAD, TOTAL	0.0032	mg/l		24.7
2-SW19-04	NICKEL, TOTAL	6020A	0.0052	mg/l		2-SW100604	NICKEL, TOTAL	0.0041	mg/l		23.7
2-SW19-04	SELENIUM, TOTAL	6020A	0.00086	mg/l	U	2-SW100604	SELENIUM, TOTAL	0.00093	mg/l	J	NC
2-SW19-04	VANADIUM, TOTAL	6020A	0.01	mg/l		2-SW100604	VANADIUM, TOTAL	0.0075	mg/l		28.6
2-SW19-04	ZINC, TOTAL	6020A	0.1094	mg/l		2-SW100604	ZINC, TOTAL	0.0839	mg/l	J	26.4
2-SW19-04	CALCIUM, DISSOLVED	6010B	14	mg/l		2-SW100604	CALCIUM, DISSOLVED	13	mg/l		7.4
2-SW19-04	IRON, DISSOLVED	6010B	0.76	mg/l		2-SW100604	IRON, DISSOLVED	0.7	mg/l		8.2
2-SW19-04	MAGNESIUM, DISSOLVED	6010B	3.2	mg/l		2-SW100604	MAGNESIUM, DISSOLVED	3.4	mg/l		6.1
2-SW19-04	MANGANESE, DISSOLVED	6010B	0.18	mg/l		2-SW100604	MANGANESE, DISSOLVED	0.16	mg/l		11.8
2-SW19-04	POTASSIUM, DISSOLVED	6010B	2.5	mg/l	J	2-SW100604	POTASSIUM, DISSOLVED	2.7	mg/l		7.7
2-SW19-04	SODIUM, DISSOLVED	6010B	53	mg/l		2-SW100604	SODIUM, DISSOLVED	56	mg/l		5.5
2-SW19-04	BARIUM, DISSOLVED	6020A	0.0302	mg/l		2-SW100604	BARIUM, DISSOLVED	0.0284	mg/l		6.1
2-SW19-04	COBALT, DISSOLVED	6020A	0.00034	mg/l	J	2-SW100604	COBALT, DISSOLVED	0.00033	mg/l	J	3.0
2-SW19-04	COPPER, DISSOLVED	6020A	0.00064	mg/l	J	2-SW100604	COPPER, DISSOLVED	0.00054	mg/l	J	16.9
2-SW19-04	NICKEL, DISSOLVED	6020A	0.0018	mg/l		2-SW100604	NICKEL, DISSOLVED	0.0019	mg/l		5.4
2-SW19-04	VANADIUM, DISSOLVED	6020A	0.00038	mg/l	J	2-SW100604	VANADIUM, DISSOLVED	0.00037	mg/l	J	2.7
2-SW19-04	ZINC, DISSOLVED	6020A	0.0143	mg/l		2-SW100604	ZINC, DISSOLVED	0.0105	mg/l		30.6

CHAIN OF CUSTODY

PAGE 1 OF 2

ALPHA ANALYTICAL LABS

Eight Walk Up Drive Westborough, MA 01581
TEL: 508-898-9220 FAX: 508-898-9193

Date Rec'd in Lab: 10/6/04

ALPHA Job #: L0411063

Client Information

Client: Environmental Chemical Corporation
Address: 50 D'ANGELO DRIVE
MARLBOROUGH, MA 01752
Phone: 508-229-2270
Fax:
Email:

☒ These samples have been Previously analyzed by Alpha

Project Information

Project Name: AREA A LANDFILL
Project Location: NEW LONDON, CT
Project #:
Project Manager:
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: 10/13/04 Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-THESE QUESTIONS MUST BE ANSWERED

☐ Yes	☐ No	Are MCP Analytical Methods Required?
☐ Yes	☐ No	Are Drinking Water Samples Submitted?
☐ Yes	☐ No	Have you met minimum field QC requirements?

Other Project Specific Requirements/Comments/Detection Limits:
Groundwater (GW) Dissolved Metals are field filtered.
Surface Water (SW) and Seep (SP) Dissolved Metals are to be lab filtered.

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	SVOC-8270C	PAH-8270C SIM	TOTAL METALS	DISSOLVED METALS	HARDNESS, TDS, Alk	TOC	TSS	COD	Cl, SO4				Sample Specific Comments
11063 1	2-GW100604	10/6/04	0000	GW		X	X	X	X	X	X	X	X	X				FF
2	2-GW45DS-04	10/6/04	1148	GW		X	X	X	X	X	X	X	X	X				FF
3	2-SW22-04	10/6/04	1210	SW		X	X	X	X	X	X	X	X	X				LF
4	2-GW20S-04	10/6/04	0910	GW		X	X	X	X	X	X	X	X	X				FF
5	2-GW46DS-04	10/6/04	0950	GW		X	X	X	X	X	X	X	X	X				FF
6	4-GW1S-04	10/6/04	1140	GW		X	X	X	X	X	X	X	X	X				FF
7	2-GW40DS-04	10/6/04	1000	GW			X		X			X						FF
8	2-GW42DS-04	10/6/04	0930	GW		X	X	X	X	X	X	X	X	X				FF
9	2-SW19-04	10/6/04	1000	SW		X	X	X	X	X	X	X	X	X				LF MSMSD
10	2-SW100604	10/6/04	0000	SW		X	X	X	X	X	X	X	X	X				LF
					Container Type	-	-	-	-	-	-	-	-	-	-	-	-	
					Preservative	-	-	-	-	-	-	-	-	-	-	-	-	

QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

IS YOUR PROJECT MCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	10/6/04 1430	[illegible]	10/6 1644
[illegible]	10/6/04 1845	[illegible]	10/6/04 1845

Please print clearly, legi and completely. Sample not be logged in and turnaround time clock w start until any ambiguitie resolved. All samples submitted are subject to Alpha's Payment Terms

FORM NO: 01-01 Internal

CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL LABS

Eight Walk Up Drive Westborough, MA 01581
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Project Name: AREA A LANDFILL
Project Location: NEW LONDON, CT
Project #:
Project Manager:
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: 10/13/04 Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-THESE QUESTIONS MUST BE ANSWERED

☐ Yes	☐ No	Are MCP Analytical Methods Required?
☐ Yes	☐ No	Are Drinking Water Samples Submitted?
☐ Yes	☐ No	Have you met minimum field QC requirements?

Other Project Specific Requirements/Comments/Detection Limits:
Groundwater (GW) Dissolved Metals are field filtered.
Surface Water (SW) and Seep (SP) Dissolved Metals are to be lab filtered.

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	SVOC-8270C	PAH-8270C SIM	TOTAL METALS	DISSOLVED METALS	HARDNESS, TDS, Alk	TOC	TSS	COD	Cl, SO4				Sample Specific Comments
11063 11	2-GW21S-04	10/6/04	1448	GW		X	X	X	X	X	X	X	X	X				FF
12	2-GW43DS-04	10/6/04	1240	GW		X	X	X	X	X	X	X	X	X				FF
13	2-SW23-04	10/6/04	1000	SW		X	X	X	X	X	X	X	X	X				LF
14	2-SW20-04	10/6/04	1203	SW		X	X	X	X	X	X	X	X	X				LF
15	2-SW21-04	10/6/04	1420	SW		X	X	X	X	X	X	X	X	X				LF
16	2-GW38DS-04	10/6/04	1000	GW							X		X					

QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

Container Type	-	-	-	-	-	-	-	-	-	-	-	-	
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	

IS YOUR PROJECT MCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	10/6/04 1630	[illegible]	10/6/04
[illegible]	10/6/04 1845	[illegible]	10/6/04 1845

Please print clearly, legi and completely. Sample not be logged in and turnaround time clock w start until any ambiguitie resolved. All samples submitted are subject to Alpha's Payment Terms

FORM NO. 01-01 Internal

DATA VALIDATION MEMORANDUM – AREA A LANDFILL
O&M MONITORING SITES – NEW LONDON NSB
OCTOBER 2004 SAMPLING ROUND 15 (SDG 0411127 ALPHA LAB)

TO: ENGINEERING FIELD ACTIVITY NORTHEAST

FROM: JACKSON KIKER, ECC SENIOR CHEMIST, MARLBOROUGH, MA.

SUBJECT: NEW LONDON NSB – IRP O&M MONITORING SITES - SAMPLING ROUND-15, OCTOBER '04

DATE: DECEMBER 15, 2004

Project data were validated using the following Validation Functional Guideline, as modified for non-CLP methods.

1. Region I, EPA-NE Data Validation Functional Guidelines for Evaluation of Environmental Analyses (Dec, 1996).

2. Operations and Maintenance Manual for Installation Restoration Program at Naval Submarine Base New London (Nov, 2002).

The validation guideline exceedences are assessed and documented on the method specific data validation worksheet. On the data validation worksheet, the data quality acceptance criteria are presented, analytes requiring qualification based on laboratory historical control limits and/or validation guidance criteria exceedences are listed, assigned qualifiers, qualifying rationale is documented, and any potential bias noted. The overall evaluation of the data generated is presented in the data validation worksheet.

Standard EPA Region I data qualifiers are used to denote the assessment of data quality. The final and ranking assigned data qualifier for an analyte is presented in the data summary table. Ancillary qualifiers are noted on the data validation worksheets.

As an exception to the USEPA Region I data validation guidance, non-target ketone VOC data with response factors (RFs) less than the 0.05 were not qualified, as the Tier guidance allows for exceptions to the RF guidance.

The USEPA Region I Organic Regional Data Assessment (ORDA) sheet displays the summarized results of the data validation assessment for all analytical methods reported in the SDG.

Region I, EPA-NE ORGANIC REGIONAL DATA ASSESSMENT

LAB NAME: Alpha Lab
SDG #:__0411127_____
EPA-NE DV TIER LEVEL:___II___
SITE NAME: Area A New London NSB – O&M

# of SAMPLES/MATRIX:___2-GW samples/aqueous
VALIDATION CONTRACTOR:__ECC
VALIDATOR'S NAME: Guru Ranganathan
DV Completion Date:_January 12, 2004
Date Sampled__October 06 & 07, 2004 _____

ANALYTICAL DATA QUALITY SUMMARY

		SVOC	PAH	Metals
1	Preservation and HT	O	O	O
2	Instrument Performance Check	O	O	O
3	Initial Calibration:	O	O	O
4	Continuing Calibration:	O	M	O
5	Blanks:	O	O	M
6	Surrogate Compounds:	O	O	-
7	Internal Standards	O	O	-
8	Matrix Spike/Matrix Spike Duplicate:	O	O	M
9	Sensitivity Check:	O	O	O
10	PE Samples- Accuracy Check	O	O	O
11	Target Compound Identification:	O	O	O
12	Compound Quantitation and Reported QLs	O	O	O
13	Tentatively Identified Compounds:	-	-	-
14	Semivolatile/Pesticide/PCB Cleanup:	-	-	-
15	Data Completeness	O	O	O
16	Overall Evaluation of Data:	O	O	O

O = Data had no problems or were qualified due to minor contractual problems; M = Data were qualified due to major/systemic MPC exceedences: Z = Data were rejected as unusable due to major contractual problems.

ACTION ITEMS: (Z items): _

AREAS OF CONCERN: (M items):

SVOC: None.

PAH: CCV %D's outside MPC limits for benzo(a)pyrene and indeno(1,2,3-cd)pyrene – results qualified UJ.

Metals: Dissolved Cr, total and dissolved Co results in sample 01 were qualified U due to ICB contamination. Total Sb result in sample 01 was qualified U due to CCB contamination. K results qualified J for total and dissolved metals due to high RPD's in serial dilution.

ECC Region I Data Review Worksheet (rv 2) **SVOCs 8270C**
Project: New London Area A – ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual (2002)**

Data Validation Level	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
Tier II	**Aqueous**	**-**	**4-coolers 5.9, 1.4, 1.6 & 2.4 ^{o}C**	**Alpha Laboratory Westborough, MA**	**0411127**

Field Identification of Samples Evaluated:

Field Sample ID	Lab Sample ID
2-GW44DS-04	L0411127-01
2-GW38DS-04	L0411127-02

Note: Samples are described below in the data worksheets by reference to the last two digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIAS
COC, Sample Delivery Group Form.	1)Unbroken custody (accept or if broken R) 2) Temp≤6° (Soil-J detects, R -nondetects preserved per method (amber bottles, temperature, HCl (aq), MeOH/NAHSO4 (soils) (J, UJ, or R (function of HT and compound)	Cooler temperatures < 6 ^{o}C in all the coolers. Sample preservation using ice adequate. Sample custody transferred from Field Team Leader to lab sample courier in person. Unbroken Chain of Custody. No samples qualified.	X	-	
Holding Time	1) 7 Days aqueous – 14 days soil (extract 40 days) 2) J –detects, UJ or R –nondetects (function of time)	Sample Date: October 6, 2004. Extraction Date: October 11, 2004. Analysis Date: October 12, 2004. Samples prepared and analyzed within holding times. No samples qualified.	X	-	
% Solids Check (SOLIDS)	30%<Solids: if no sample weight adjustment made (no USACE) 1) <10% R entire sample 2) 10%.> and <30%; J-detects, NDs -R	Not applicable	-	-	
Results > Cal Range or <Cal Range	1) >Upper Cal Range J-detects - ensure instrument blank performed 2) <PQL but >MDL – J –detects (estimated)	Data reported between the MDL and the MRL or exceeding upper calibration range were qualified as estimated (J). 2-BEHP result in sample 01 is the only such result.	X	2-BEHP result in sample 01 was qualified J.	
TICs (if reported)	1) *verify library search for samples and blanks 2) verify TICs were not misreported compounds (different fraction or miss in search) 3) All TICs – J estimated 4) * verify blanks do not contain TIC peaks 5) * check TIC assignment spectra to STD spectra 6) *review blank and Samples for common lab contaminants	None Reported	X	-	
Internal Stds	1) IS are –50% to 200% of CCV 1) RRT<0.06 (30 sec) 2) IS>100% J-detects 3) IS<20%CCV NDs – R 4) IS>20%CCV <50%CCV NDs – UJ 5) *check for IS transcription errors	Internal standards were within MPC limits. No samples qualified.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIA S
Equip Blank	< 5x (<10x common) contaminants for aq samples – for soil indicate EB (X rules don't apply)	Dedicated equipment – hence not collected/analyzed with this SDG	X	-	
Surrogates	Within historical laboratory limits Qualification: >UCL J –detects, %R<10% J –detects, R –NDs, %R >10% but <LCL% J-detects, UJ NDs	All surrogates within MPC limits for all samples – no sample qualifications.	X	-	
Lab Blanks (method blanks)	1) < 5x (<10x common) contaminants – U 2) analytes <lab PQL (contract lab) 3) no phthalates >5X QL (QAPP)	Lab blank was non-detect for all reported SVOC's. No samples qualified.	X	-	
LCS Recovery	1) Within historical laboratory limits listed in (QAPP) 10% and <LCL% J detects, UJ –NDs >UCL% J detects <10% R NDs, J-detects	All LCS recoveries within MPC limits except for butyl benzyl phthalate. All results for this compound were non-detects, so no qualifications..	X	-	
MS/MSD Recovery	1) Within historical laboratory limits (QAPP) (if MS > 4X native levels) Qualification of MS sample: <10% J detects, R NDs >10% and <70% J detects, UJ -NDs >130% J detects	Native sample - sample 01. High MS recoveries for 2, 6-dinitrotoluene, butyl benzyl phthalate and carbazole. All results for these compounds were non-detects – so no samples qualified.	X	-	
Cleanup Performance Check (if performed)	%R< 10% NDs-R detections J %R>10% <LCL (80%GPC) –detections J, NDs UJ %R>UCL (120%) – detections J Retention Time shift <5%, symmetrical peakshape. GPC check with interferants. Good surrogate recovery, GPC blank check – no carryover.(VOA/SV-IX-I6). Sulfur and High MW compounds removed. Symetrical peaks for all compounds,	NA	-	-	
MS/MSD RPD	RPD =30% aq, <50% (S) J –detects in MS sample UJ-non detects	All MS/MSD RPD's were within MPC limits for all compounds of concern. No samples qualified.	X	-	
Tune Check	Tune check within method parameters for DFTPP	The raw data sheets were used for validation. CCV tune check within limits.	X	-	
DDT degradation Instrument performance check	1) Breakdown <20% DDT 2) benzidine and pentachlorophenol at normal response - no peak trailing (<3.0 benz. , <5.0 penta.) Detections – J	Degradation checks performed with associated tune checks were all within limits.	X	-	
Field Dup RPD	1) RPD = 100% water; = 100% soil for Results > PQL (FD pair only) J-detects (both > PQL) 2) If one > PQL, other ND, J-detections, UJ non-detect 3) Other conditions use judgement	No field duplicate samples analyzed with this SDG.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIA S
Initial Cal (Linearity)	Correct calibration stds %RSD < 15% use average RF for calibration %RSD> 15% use least squares COD (r2) > 0.990 or correlation coefficient r> 0.995 or alternatively mean %RSD <15% for all target analytes, with no analyte %RSD>30% or %RSD<30% each target analyte 1) CCCs %RSD: <30% (acenatphthene, 1,4 dichlorobenzene, hexachlorobutadiene, dipheynlamin, di-n-octyl phthalate, fluoranthene, benzo(a)pyrene, 4-chloro-3-methylphenol, 2,4, dichlorophenol, 2-nitrophenol, phenol, pentachlorophenol, 2,4,6 trichlorophenol) J –detects, R or UJ NDs all samples associated with Ical) 2) SPCCs Average RRF > 0.05: SPCCs n-nitroso-di-n-propylamine, hexachlorcyclopentdiene, 2,4 dinitrophenol, 4-nitrophenol. (J –detects, R NDs) 3) RRF>0.05 all target compounds RRT < 0.06 units (all stds within 30 sec) 4) *verify that instrument parameters met method and that Ical and analysis used the same parameters 5) *recalculate RRF one tgt compound associated with each IS. Recalculated values within 10% of lab values. 6) *recalculate one tgt compound associated with each IS. Recalculated values within 10% 7) *option-review preparation logs to ensure cal stds are traceable to NIST stds. 8) *option-recalculate cal std concentration of one std. Must agree within 10% of lab (option if information is in data package)	Instrument: Buffy End date: October 01, 2004 at 11:04. RRF>0.05 all SVOCs. RSD<15% and/or COD>0.99 criteria used for linearity of SVOC Ical. Acceptable linearity. No samples qualified based on ICAL.	X	-	
2nd Source ICV	%R (between ICV and Ical) analytes 80%--120% (USACE) %D ≤ 25%, (+ or -) once per 5 pt cal Qualification: J detects, R or UJ NDs	Instrument: Buffy Inj. date: October 01, 2004 at 14:09. All %D's within MPC limits for all compounds of concern. No samples qualified.	X		
CCV	1) SPCCs Average RRF: SPCCs n-nitroso-di-n-propylamine, hexachlorcyclopentdiene, 2,4 dinitrophenol, 4-nitrophenol. 2) RRF all compounds > 0.05 3) CCC: (acenatphthene, 1,4 dichlorobenzene, hexachlorobutadiene, dipheynlamin, di-n-octyl phthalate, fluoranthene, benzo(a)pyrene, 4-chloro-3-methylphenol, 2,4, dichlorophenol, 2-nitrophenol, phenol, pentachlorophenol, 2,4,6 trichlorophenol) 4) %D<20%. CCCs (QAPP -except surrogates). 5) Qualification-J detects, R or UJ Nods 6) %D<25% all compounds (Tier I). 7) RRF exclusions: surrogates, 8) *verify same instrument and parameters	Instrument: Buffy Inj. date: 12th October, 2004 at 11:24. %D's within MPC limits for all compounds – no sample qualifications.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inve n-tory	QUAL	BIA S
	9) *Recalculate RRF for one tgt cmpd associated with each IS. (within 10%) 10) *Recalculate %D for one tgt cmpd associated with each IS (within 10%) 11) *IS RRT<0.06 units (30 sec) 12) * IS area -50 % to 100 % of last ICAL 13) *option-review preparation logs to ensure cal stds are traceable to NIST stds. 14) *option-recalculate cal std concentration of one std. Must agree within 10% of lab (option if information is in data package)				
Compound Quantitation	1) Check sensitivity (MDL< 1/3 PQL or per QAPP)	For target SVOC's the MDL< 1/3 PQL. Analytical sensitivity is adequate. Reporting limits were below the monitoring criteria for all compounds.	X	-	
Overall Evaluation of Data	1) Appropriate method 2) Evaluate any analytical problems 3) Evaluate sampling errors – field contamination, sample hold times	The laboratory accuracy and precision were acceptable. No apparent sample bias. Results usable for making project decisions as qualified. High LCS recovery for butyl benzyl phthalate and high MS recoveries for 2, 4-dinitrotoluene, 2, 6-dinitrotoluene and carbazole, but all sample results for these compounds were non-detects – so no qualifications. Method blank; non-detect for all SVOC's reported. MS/MSD RPD's: within MPC limits for all SVOC's of concern. Surrogate recoveries within MPC limits. ICAL; linear. ICV: within MPC limits for all SVOCs. CCV: within MPC limits. 2-BEHP result for sample 01 was qualified J as it was less than RDL but greater than MDL. Sampling error – not evaluated; no field duplicates collected with this SDG.	X	-	

*Tier III criteria.

Completeness Check: Inventory Check Sheet_____X__ Sample Quantitation Calculations (TIER III ONLY):

ECC Region I Data Review Worksheet (rv 2) **PAH 8270C - SIM**
Project: New London Area A ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

Data Validation Level	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
Tier II	**Aqueous**	**-**	**4-coolers 5.9, 1.4, 1.6 & 2.4 ^{o}C**	**Alpha Laboratory Westborough, MA**	**0411127**

Field Identification of Samples Evaluated:

Field Sample ID	Lab Sample ID
2-GW44DS-04	L0411127-01
2-GW38DS-04	L0411127-02

Note: Samples are described below in the data worksheets by reference to the last two digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inven-tory	QUAL	BIAS
COC, Sample Delivery Group Form.	1)Unbroken custody (accept or if broken R) 2) Temp≤6° (Soil-J detects, R -nondetects preserved per method (amber bottles, temperature, HCl (aq), MeOH/NAHSO4 (soils) (J, UJ, or R (function of HT and compound)	Cooler temperatures < 6 ^{o}C in all the coolers. Sample preservation using ice adequate. Sample custody transferred from Field Team Leader to lab sample courier in person. Unbroken Chain of Custody. No samples qualified.	X	-	
Holding Time	1) 7 Days water, 40 to analysis 2) J –detects, UJ or R –nondetects (function of time)	Sample Date: October 6, 2004. Extraction Date: October 11, 2004. Analysis Date: October 12, 2004. Samples prepared and analyzed within holding times. No samples qualified.	X	-	
% Solids Check (SOLIDS)	30%<Solids: if no sample weight adjustment made (no USACE) 1) <10% R entire sample 2) 10%.> and <30%; J-detects, NDs -R	Not applicable	-	-	
Results > Cal Range or <Cal Range	1) >Upper Cal Range J-detects - ensure instrument blank performed 2) <PQL but >MDL – J –detects (estimated)	Results > MDL but < MRL are qualified J. Acenaphthene and chrysene in sample 01 were only such results. No results exceeding upper calibration range.	X	Acenaphthene and chrysene in sample 01 qualified J.	
Equip Blank	< 5x (<10x common) contaminants for aq samples – for soil indicate EB (X rules don't apply)	Not applicable. Equipment blank not collected/analyzed with this SDG as all the equipment were dedicated.	-	-	
Surrogates	1) Surrogate acceptance limits Nitrobenzene-d5, 2-Fluorobiphenyl & p-Terphenly-d14 within QAPP limits. Qualification: >UCL J –detects, %R<10% J –detects, R –NDs, %R >10% but <60% J-detects, UJ NDs	All surrogate recoveries within MPC limits. No samples qualified.	X	-	
Lab Blanks (method blanks)	1) < 5x (<10x common) contaminants – U 2) analytes <lab PQL (contract lab)	All method blanks were non-detects for PAH's of concern. No samples qualified.	X	-	
LCS Recovery	1) QAPP limits 10% and <LCL% J detects, UJ -NDs >UCL% J detects <10% R NDs, J-detects	LCS %R's within MPC limits. No samples qualified	X	-	

ECC Region I Data Review Worksheet (rv 2) **PAH 8270C - SIM**
Project: New London Area A ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inven-tory	QUAL	BIAS
MS/MSD Recovery	1) QAPP limits (if MS > 4X native levels) Qualification of MS sample: <10% J detects, R NDs >10% and <70% J detects, UJ -NDs >130% J detects	Native sample – sample 01. MS/MSD %R's within limits. No samples qualified.	X	-	
MS/MSD RPD	RPD =30% solid, 30%. J –detects in MS sample UJ-non detects	MS/MSD RPD's within MPC limits. Laboratory precision acceptable. No samples qualified.	X		
Cleanup Performance Check (if performed)	%R< 10% NDs-R detections J %R>10% <LCL (80%GPC) –detections J, NDs UJ %R>UCL (120%) – detections J Retention Time shift <5%, symmetrical peakshape. GPC check with interferants. Good surrogate recovery, GPC blank check – no carryover.(VOA/SV-IX-I6). Sulfur and High MW compounds removed. SW-846 clean-up not required	NA	-	-	
Retention times	Within 3X standard deviation for each analyte from 72-hour study Exceeds: R qualify data	Retention times within limits.	X	-	
Field Dup RPD	1) RPD = 100% water & soil for Results > X PQL (FD pair only) J-detects (both > X PQL) 2) If one >X PQL, other ND, J-detections, UJ non-detect 3) Other conditions use judgement	Field duplicate samples not collected with this SDG.	X		
Initial Cal (Linearity)	Correct calibration stds %RSD < 15% use average RF for calibration %RSD> 15% use least squares COD (r2) > 0.990 or correlation coefficient r> 0.995 or alternatively mean %RSD <20% for all target analytes, with no analyte %RSD>40% Resolution check mix –valley 60% hgt of shortest peak (CLP criteria only) Performance check mix - >90% (PEM) (CLP criteria only) SW-846 PEM –endirn/DDT breakdown evaluation. Blank and Performance Evaluation Mix (PEM) at start, and blank and midpoint Individual Standard Mix A (ISMA) and ISMB at end or samples(CLP only)	Date: October 9, 2004 at 05:13 (end time). Instrument – Mindy %RSD < 20% ICAL linear. No samples qualified RRF>0.05	X	-	
2nd Source ICV	%R (between ICV and Ical) analytes %D ≤ 20%, (+ or -) once per 5 pt cal Qualification: J detects, R or UJ NDs	Date: October 9, 2004 at 05:59 (inj. time). Instrument – Mindy ICV %D within MPC limits for all compounds. No samples qualified.	X	-	
CCV	1) 15% of initial calib. Curve (85%-115%) If low re-calibrate per method. If high no recalibration needed. J qualify data. 2) 15% D 3) Qualification-J detects, R or UJ NDs	Date: October 12, 2004. Instrument – Mindy ICV %D outside MPC limits for benzo(a)pyrene and indeno(1,2,3-cd)pyrene. Results for these compounds – all non-detects - were qualified UJ.	X	Benzo(a)pyrene and indeno(1,2,3-cd)pyrene results qualified UJ.	

ECC Region I Data Review Worksheet (rv 2) **PAH 8270C - SIM**
Project: New London Area A ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inven-tory	QUAL	BIAS
Tune Check	Tune check within method parameters for DFTPP	Ical tune check within limits. And CCV tune check within limits. Raw data was used to check the tunes. No samples qualified. Degradation checks associated with sample analysis and ICAL tune checks within limits.	X	-	
Internal Stds	1) IS are –50% to 200% of CCV 1) RRT<0.06 (30 sec) 2) IS>100% J-detects 3) IS<20%CCV NDs – R 4) IS>20%CCV <50%CCV NDs – UJ 5) *check for IS transcription errors	Internal standards were within MPC limits. No samples qualified.	X	-	
Sensitivity	1) MDL study – 7 replicates (40 CFR) 2) Surrogates %R 80-120%, 2) %R <10 ND- (R) , J- detects 3) 10%> but <80% , judgement 4) %R>120% J-detects 5) QC, RRT meet criteria, 6) %RSD < 20% 7) MDL< MQL (3x less ideal) 8) Lab fortified blank (see VOA/SV Part II –section X). *Check and recalculate %RSDs and %R for three compounds (with 10% of lab)	MDL well below RL's for all the compounds. Adequate sensitivity in all cases.	X	-	
Compound Quantitation	1) Check sensitivy (MDL< 1/3 PQL or per QAPP	RDL> Project Reporting Limit (marginally) for some of the compounds. All MDL's < PRL and below groundwater criteria for all compunds. Acceptable sensitivity for all compounds. No samples qualified.	X	-	
Overall Evaluation of Data	1) Appropriate method 2) Evaluate any analytical problems 3) Evaluate sampling errors – field contamination, sample hold times	The laboratory accuracy and precision are acceptable. No apparent sample bias. Data usable for project decisions, as qualified. Acenaphthene and chrysene in sample 01 - results below RL but > MDL were qualified as estimated (J). All surrogate, LCS and MS/MSD recoveries within MPC limits. MS/MSD RPD's within MPC limits. ICAL: linear. ICV: within MPC limits. CCV; outside MPC limits for benzo(a)pyrene and indeno(1,2,3-cd)pyrene – results qualified UJ. Method blank non-detect for all PAH's of concern. Sampling error – field duplicate not collected with this SDG. Sampling precision not evaluated.	X	-	

(*Tier III criteria)

Completeness Check: Inventory Check Sheet_____X__ Sample Quantitation Calculations (TIER III ONLY):

ECC Region I Data Review Worksheet (rv 2) **Metals 6010B/7000**
Project: New London Area ECC Job No. 5700 **Review Criteria: Region I Tier II Guidance & OM Manual(2002)**

Data Validation Level	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
Tier II	**Aqueous**	**HNO3**	**4-coolers 5.9, 1.4, 1.6 & 2.4 ^{o}C**	**Alpha Laboratory Westborough , MA**	**0411127**

Field Identification of Samples Evaluated:

Field Sample ID	Lab Sample ID
2-GW44DS-04	L0411127-01

Notes: Sample L0411127-02 (Location 2-GW38DS) did not have enough recharge for total and dissolved metals samples to be collected.
Hg analyzed by 7470A and all other metals are analyzed by 6010B.
Samples are described below in the data worksheets by reference to the last two digits of the Lab Sample Number.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inven-tory	QUAL	BIAS
COC, Sample Delivery Group Form.	1)Unbroken custody (accept or if broken R) 2) Temp≤6° (Soil-J detects, R -nondetects preserved per method (amber bottles, temperature, HCl (aq), MeOH/NAHSO4 (soils) (J, UJ, or R (function of HT and compound)	Cooler temperatures < 6 ^{o}C in all the coolers. Sample preservation using ice adequate. Sample custody transferred from Field Team Leader to lab sample courier in person. Unbroken Chain of Custody. No samples qualified.	X	-	
Holding Time	1) 180 days (6010), Hg 28 Days to analysis 2) J –detects, UJ or R –nondetects (function of time)	Collection Date: October 6, 2004. Extraction Date: October 8 (Hg) & 13 (others), 2004. Analysis Dates: 11 (Hg), 20 (Ca, Mg, Na & K) and 15 (all others), 2004. All samples extracted and analyzed within method required holding times. No samples qualified.	X	-	
Lab Duplicate	1) RPD < 20% 1) If both values > PQL 2) Qualify samples in batch: detects J, NDs UJ	Native sample – part of another SDG. Results with RPD's > 20 % were due to detections < 5X blank contamination levels. So no qualifications.	X	-	
LCS Recovery	1) once per sample batch 2) 75-125% water, soil, QAPP limits. 3) <LCL% Reject 4) >UCL% detects J	LCS %R's acceptable. No samples qualified.	X	-	
Field Dup RPD	1) RPD = 50% water & soil for Results > X PQL (FD pair only) J-detects (both > X PQL) 2) If one >X PQL, other ND, J-detections, UJ non-detect	Only one sample was analyzed in this SDG – no samples qualified.	X	-	
% Solids Check (SOLIDS)	30%<Solids: if no sample weight adjustment made 1) <10% R entire sample 2) 10%.> and <30%; J-detects, NDs -R	Not applicable	-	-	
Results > Cal Range or <Cal Range	1) >Upper Cal Range J-detects - ensure instrument blank performed 2) <PQL but >MDL – J –detects (estimated)	Results less than the method reporting limits and greater than the method detection limits were qualified J. Please see attached data summary table for all such results.	X	J qualify results < PQL and > MDL.	
Lab Blanks (method blank or p reparation blank)	1) Once per sample batch 2) Results> QL; sample results <5X ; sample result U (nd) 3) Sample results >5X blank level; no action	All prep blanks non-detects for all metals analyzed. No sample qualifications.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inven-tory	QUAL	BIAS
MS Recovery	1) 75-125% GFAA/ICP if MS > 4X native levels) Qualification of MS sample: 2) <30% J detects, R NDs 3) 30%--74%, detects J, NDs UJ >125% J detects	Native sample – part of another SDG. MS %R's within limits for total and dissolved analyses for all metals reported. No samples qualified.	X	-	
Sensitivity*	1) MDL study – 7 replicates (40 CFR) 2) Surrogates %R 80-120%, 1) %R <10 ND- (R) , J- detects 2) 10%> but <80% , judgement 3) %R>120% J-detects 4) %RSD < 20% 5) MDL< MQL (3x less ideal) 6) Lab fortitied blank (see VOA/SV Part II – section X). *Check and recalculate %RSDs and %R for three compounds (with 10% of lab)	Ca, Mg & K had to be diluted to 10X and Na had to be diluted to 500X. Lab RL < OM RL for all metals except Pb & Zn. Of these, lab RL was below criterion for Zn.	X	-	
Equip Blank	< 5x contaminants for aq samples – for soil indicate EB (X rules don't apply)	Equipment blank not collected/analyzed with this SDG.	-	-	
Negative blanks	If negative values are reported for an analyte with absolute value >DL and sample value is <5X the absolute value of the blank or is nondetect Qualify detects as estimated (J) Nondetects as estimated (UJ)	No analyte detections for target metals All negative blanks < DL. No samples qualified.	X	-	
Initial Cal Multipoint	1) 6010: 1 std and blank and low-level check at MQL – check std 20% 3 stds and a blank- R = 0.995	ICAL performed according to method. Two point calibration and check standards. The pre-analysis check standard was within limits.	X	-	
Initial Calibration Blanks	1) Ical blank after Ical 2) Results > QL; sample results <5X ; sample result U (nd) 3) Sample results >5X blank level; no action	(All results below in mg/L) The same ICB was applicable to both total and dissolved metals samples. The following detections in ICB led to sample qualifications: Cr – detected at 0.0009, < 0.0045 qualified U. Dissolved Cr result in sample 01 was qualified U. Co – detected at 0.00084, < 0.0042 qualified U. Both total and dissolved metals results in sample 01 were qualified U. Ba, Cd , Mn & Ag were also detected in the ICB; Cd & Ag results were non-detects and others had detections > 5X blank levels.	X	Dissolved Cr, total and dissolved Co results in sample 01 were qualified U.	
Continuing Calibration Blanks	1) CCB every 10 samples end of run 2) Results > QL; sample results <5X ; sample result U (nd) 3) Sample results >5X blank level; no action	(All results below in mg/L) The following detections in CCB led to sample qualifications: Sb – detected at 0.00328, < 0.0164 qualified U. Total Sb result in sample 01 was qualified U. Ba, Co, Mo and Ag were also detected in CCB's above IDL's. Ba detections exceeded 5X blank levels, Co results were already qualified due to ICB detections and Mo & Ag were not detected in the field sample.	X	Total Sb result in sample 01 was qualified U.	
Serial Dilution	1) once per digestion batch 2) Meets method limits (RPD 10%). 3) Metal results >50X MDL levels.	SD on native sample that belonged to another SDG performed on Ca, Mg, Na & K. %D's within MPC limits for Site COCs except for K. Results for K qualified J.	X	K results qualified J for total and dissolved metals.	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inven-tory	QUAL	BIAS
Interelement checks ICS-A, ICS-AB Instrument performance check	1) start of sequence 2) 80-120% target analytes 3) >120% ; detects J (ICS-AB) 4) 50%-79% R ICS-AB; detects J, NDs – UJ 5) <50% R – reject data 6) ICS-A response > DL and samples have <5X ICS-A response: detects J	ICS's %R's within MPC limits for COC elements. No samples qualified.	X	-	
2nd Source ICV	1) following calibration 2) 90- 110% Recovery (6010/7000) 3) 75%-89% R – detects J, NDs – UJ 4) 111-125% R – detects J 5) outside 75-125% R – reject data (R)	Within limits of MPC. No samples qualified.	X	-	
CCV	1) every 10 samples and end of run 2) 90- 110% Recovery (6010) Hg; 80-120% 3) 6010: 75%-89% R Hg, 65-79% R; – detects J, NDs – UJ. 4) 6010: 111-125%, Hg: 121-135% detects J 6010: outside 75-125%, Hg; outside 65-135%; R – reject data (R)	Within limits of MPC. No samples qualified.	X	-	
Post Digestion Spike	1) 75- 125% R	PDS not performed as MS %R's within MPC limits for Site COCs analyzed by ICP.	X	-	
*MDL Study	1) *In accordance with 40CFR – seven replicates %RSD < 20% 2) * IS and retention times within method requirements 3) * performed annually 4) *MDL is at least ½ of PQL *tgt and surrogate 80-120% R	NA	-	-	
*System Performance	1)* evaluate PES, MS//MSD, cal STDs, MDS study, and surrogates for systemic bias – high or low and access system accuracy 3) *Matrix effects- MS/MSD, surrogated, PDS. 4) *overall system contamination-review all blanks for systemic or sporadic contamination	NA	-	-	
*Single Blind PE	1) Qualify associated samples in PES batch PES = ND, Detects J – ND PE analytes in samples, NDs – R 5) PES > acceptance criteria – Detects in samples J, 6) PES<acceptance criteria – Detects J, NDs –R 7) VOA/SV-XI14 other criteria 8) *% of PES sample above and below criteria 9) *Recalculate concentrations for one tgt compound per PES (10% of lab)	NA	-	-	
Overall Evaluation of Data	1) Appropriate method 2) Evaluate any analytical problems 3) Evaluate sampling errors – field contamination, sample hold times	Laboratory accuracy and precision were acceptable. Accuracy was shown by the LCS being within MPC limits. The ICS-A, and ICS-AB were within limits for all elements. Prep blank, ICB and CCB contamination necessitated U qualifiers to be assigned to	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED Narrative (samples listed on attached sheets)	Inven-tory	QUAL	BIAS
		some of the results – the list of results and the qualifiers can be obtained from the above tables or from the data summary tables. ICAL; 2-point calibration. ICV: within MPC limits. CCV: within MPC limits. MS %R's within limits for total and dissolved analyses. Serial dilution RPD's were high for total and dissolved K results – results for K qualified J. Results < MRL & > MDL that were not qualified U due to blank contamination, were qualified U. Only one sample was analyzed with this SDG – no field duplicate was analyzed along with this SDG. Sampling precision not evaluated.			

*TIER III DATA VALIDATION ONLY Completeness Check: Inventory Check Sheet___X_Sample Quantitation Calculations (TIER III DATA VALIDATION ONLY):

Data Summary Table - Round 15 - October 2004, Area A - SDG 0411127

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW44DS-04	6-Oct-04	L0411127-01	2340B	HARDNESS	1900		mg/l	y	17		10
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	ALUMINUM, TOTAL	0.97		mg/l	y	0.1	0.017	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	ANTIMONY, TOTAL	0.00224	U	mg/l	n	0.05	0.002	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	ARSENIC, TOTAL	0.00355	J	mg/l	y	0.004	0.0034	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	BARIUM, TOTAL	0.03		mg/l	y	0.01	0.0004	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	BERYLLIUM, TOTAL		U	mg/l	n	0.004	0.0006	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	CADMIUM, TOTAL		U	mg/l	n	0.005	0.0004	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	CALCIUM, TOTAL	130		mg/l	y	1	0.15	10
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	CHROMIUM, TOTAL	0.005	J	mg/l	y	0.01	0.0008	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	COBALT, TOTAL	0.0008	U	mg/l	n	0.02	0.0005	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	COPPER, TOTAL		U	mg/l	n	0.01	0.0018	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	IRON, TOTAL	2.9		mg/l	y	0.05	0.014	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	LEAD, TOTAL		U	mg/l	n	0.01	0.0048	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	MAGNESIUM, TOTAL	380		mg/l	y	1	0.14	10
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	MANGANESE, TOTAL	0.06		mg/l	y	0.01	0.0005	1
2-GW44DS-04	6-Oct-04	L0411127-01	7470A	MERCURY, TOTAL		U	mg/l	n	0.0002	0.000012	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	MOLYBDENUM, TOTAL		U	mg/l	n	0.05	0.0013	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	NICKEL, TOTAL	0.0029	J	mg/l	y	0.025	0.0018	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	POTASSIUM, TOTAL	260	J	mg/l	y	25	0.94	10
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	SELENIUM, TOTAL		U	mg/l	n	0.01	0.0025	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	SILVER, TOTAL		U	mg/l	n	0.007	0.0007	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	SODIUM, TOTAL	3300		mg/l	y	1000	160	500
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	THALLIUM, TOTAL		U	mg/l	n	0.01	0.0035	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	VANADIUM, TOTAL	0.0043	J	mg/l	y	0.01	0.0008	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	ZINC, TOTAL	0.021	J	mg/l	y	0.05	0.0022	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	ALUMINUM, DISSOLVED		U	mg/l	n	0.1	0.017	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	ANTIMONY, DISSOLVED		U	mg/l	n	0.05	0.002	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	ARSENIC, DISSOLVED		U	mg/l	n	0.004	0.0034	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	BARIUM, DISSOLVED	0.03		mg/l	y	0.01	0.0004	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	BERYLLIUM, DISSOLVED		U	mg/l	n	0.004	0.0006	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	CADMIUM, DISSOLVED		U	mg/l	n	0.005	0.0004	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	CALCIUM, DISSOLVED	120		mg/l	y	1	0.15	10
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	CHROMIUM, DISSOLVED	0.0022	U	mg/l	n	0.01	0.0008	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	COBALT, DISSOLVED	0.00059	U	mg/l	n	0.02	0.0005	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	COPPER, DISSOLVED		U	mg/l	n	0.01	0.0018	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	IRON, DISSOLVED	0.027	J	mg/l	y	0.05	0.014	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	LEAD, DISSOLVED		U	mg/l	n	0.01	0.0048	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	MAGNESIUM, DISSOLVED	370		mg/l	y	1	0.14	10
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	MANGANESE, DISSOLVED	0.03		mg/l	y	0.01	0.0005	1
2-GW44DS-04	6-Oct-04	L0411127-01	7470A	MERCURY, DISSOLVED		U	mg/l	n	0.0002	0.000012	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	MOLYBDENUM, DISSOLVED		U	mg/l	n	0.05	0.0013	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	NICKEL, DISSOLVED		U	mg/l	n	0.025	0.0018	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	POTASSIUM, DISSOLVED	240	J	mg/l	y	25	0.94	10
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	SELENIUM, DISSOLVED		U	mg/l	n	0.01	0.0025	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	SILVER, DISSOLVED		U	mg/l	n	0.007	0.0007	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	SODIUM, DISSOLVED	3100		mg/l	y	1000	160	500
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	THALLIUM, DISSOLVED		U	mg/l	n	0.01	0.0035	1

Data Summary Table - Round 15 - October 2004, Area A - SDG 0411127

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	VANADIUM, DISSOLVED	0.0018	J	mg/l	y	0.01	0.0008	1
2-GW44DS-04	6-Oct-04	L0411127-01	6010B	ZINC, DISSOLVED	0.005	J	mg/l	y	0.05	0.0022	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	5	1.3	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	HEXACHLOROBENZENE		U	ug/l	n	5	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	5	1.3	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	5	1.1	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	5	1	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	5	0.96	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	50	2.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	2,4-DINITROTOLUENE		U	ug/l	n	6	0.48	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	2,6-DINITROTOLUENE		U	ug/l	n	5	0.96	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	5	0.96	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	5	0.99	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	5	2.2	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	5	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	10	2.1	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	HEXACHLOROETHANE		U	ug/l	n	5	0.97	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	ISOPHORONE		U	ug/l	n	5	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	NITROBENZENE		U	ug/l	n	5	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	15	4.2	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	5	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	BIS(2-ETHYLHEXYL)PHTHALATE	2.4	J	ug/l	y	10	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	5	0.67	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	5	0.5	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	5	0.54	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	DIETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	DIMETHYL PHTHALATE		U	ug/l	n	5	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	4-CHLOROANILINE		U	ug/l	n	5	1.4	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	2-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	3-NITROANILINE		U	ug/l	n	5	1.1	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	4-NITROANILINE		U	ug/l	n	7	1.3	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	DIBENZOFURAN		U	ug/l	n	5	0.92	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	5	1.2	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	5	1.5	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	2-CHLOROPHENOL		U	ug/l	n	6	1.8	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	10	2.1	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	10	3.1	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	2-NITROPHENOL		U	ug/l	n	20	2.3	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	4-NITROPHENOL		U	ug/l	n	10	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	2,4-DINITROPHENOL		U	ug/l	n	20	1	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	20	1.4	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	PENTACHLOROPHENOL		U	ug/l	n	20	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	PHENOL		U	ug/l	n	7	1.2	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	2-METHYLPHENOL		U	ug/l	n	6	1.5	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	6	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	2,4,5-TRICHLOROPHENOL		U	ug/l	n	5	0.96	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	BENZOIC ACID		U	ug/l	n	50	0.99	1

Data Summary Table - Round 15 - October 2004, Area A - SDG 0411127

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW44DS-04	6-Oct-04	L0411127-01	8270C	CARBAZOLE		U	ug/l	n	5	1.6	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	ACENAPHTHENE	0.057	J	ug/l	y	0.2	0.036	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.2	0.042	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.2	0.04	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.2	0.031	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.2	0.038	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	BENZO(A)PYRENE		UJ	ug/l	n	0.2	0.04	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.2	0.05	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.2	0.036	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	CHRYSENE	0.033	J	ug/l	y	0.2	0.024	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.2	0.03	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	ANTHRACENE		U	ug/l	n	0.2	0.049	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.25	0.025	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	FLUORENE		U	ug/l	n	0.2	0.024	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.2	0.031	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.2	0.017	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	INDENO(1,2,3-CD)PYRENE		UJ	ug/l	n	0.2	0.026	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	PYRENE		U	ug/l	n	0.2	0.046	1
2-GW44DS-04	6-Oct-04	L0411127-01	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.2	0.036	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	1,2,4-TRICHLOROBENZENE		U	ug/l	n	9.8	2.5	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	HEXACHLOROBENZENE		U	ug/l	n	9.8	3.1	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	BIS(2-CHLOROETHYL)ETHER		U	ug/l	n	9.8	2.6	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	1,2-DICHLOROBENZENE		U	ug/l	n	9.8	2.2	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	1,3-DICHLOROBENZENE		U	ug/l	n	9.8	2	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	1,4-DICHLOROBENZENE		U	ug/l	n	9.8	1.9	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	3,3'-DICHLOROBENZIDINE		U	ug/l	n	98	5	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	2,4-DINITROTOLUENE		U	ug/l	n	12	0.94	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	2,6-DINITROTOLUENE		U	ug/l	n	9.8	1.9	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	4-CHLOROPHENYL PHENYL ETHER		U	ug/l	n	9.8	1.9	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	4-BROMOPHENYL PHENYL ETHER		U	ug/l	n	9.8	1.9	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	BIS(2-CHLOROISOPROPYL)ETHER		U	ug/l	n	9.8	4.3	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	BIS(2-CHLOROETHOXY)METHANE		U	ug/l	n	9.8	3.1	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	HEXACHLOROBUTADIENE		U	ug/l	n	20	4.1	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	HEXACHLOROETHANE		U	ug/l	n	9.8	1.9	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	ISOPHORONE		U	ug/l	n	9.8	3.1	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	NITROBENZENE		U	ug/l	n	9.8	3.1	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	NITROSODIPHENYLAMINE(NDPA)/DPA		U	ug/l	n	29	8.3	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	N-NITROSODI-N-PROPYLAMINE		U	ug/l	n	9.8	3.2	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	BIS(2-ETHYLHEXYL)PHTHALATE		U	ug/l	n	20	3.2	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	BUTYL BENZYL PHTHALATE		U	ug/l	n	9.8	1.3	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	DI-N-BUTYLPHTHALATE		U	ug/l	n	9.8	0.98	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	DI-N-OCTYLPHTHALATE		U	ug/l	n	9.8	1	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	DIETHYL PHTHALATE		U	ug/l	n	9.8	3.1	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	DIMETHYL PHTHALATE		U	ug/l	n	9.8	3.2	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	4-CHLOROANILINE		U	ug/l	n	9.8	2.8	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	2-NITROANILINE		U	ug/l	n	9.8	2.2	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	3-NITROANILINE		U	ug/l	n	9.8	2.2	1

Data Summary Table - Round 15 - October 2004, Area A - SDG 0411127

Sample name	Sample Date	Lab Sample Name	Analytical Method	Analyte Name	Result Value	Data Qualifier	Units	Detect Flag	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	4-NITROANILINE		U	ug/l	n	14	2.5	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	DIBENZOFURAN		U	ug/l	n	9.8	1.8	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	2,4,6-TRICHLOROPHENOL		U	ug/l	n	9.8	2.4	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	P-CHLORO-M-CRESOL		U	ug/l	n	9.8	2.9	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	2-CHLOROPHENOL		U	ug/l	n	12	3.5	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	2,4-DICHLOROPHENOL		U	ug/l	n	20	4.1	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	2,4-DIMETHYLPHENOL		U	ug/l	n	20	6	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	2-NITROPHENOL		U	ug/l	n	39	4.6	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	4-NITROPHENOL		U	ug/l	n	20	3.2	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	2,4-DINITROPHENOL		U	ug/l	n	39	2	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	4,6-DINITRO-O-CRESOL		U	ug/l	n	39	2.8	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	PENTACHLOROPHENOL		U	ug/l	n	39	3	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	PHENOL		U	ug/l	n	14	2.3	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	2-METHYLPHENOL		U	ug/l	n	12	3	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	3-METHYLPHENOL/4-METHYLPHENOL		U	ug/l	n	12	3.1	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	2,4,5-TRICHLOROPHENOL		U	ug/l	n	9.8	1.9	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	BENZOIC ACID		U	ug/l	n	98	1.9	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C	CARBAZOLE		U	ug/l	n	9.8	3.2	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	ACENAPHTHENE		U	ug/l	n	0.39	0.07	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	2-CHLORONAPHTHALENE		U	ug/l	n	0.39	0.082	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	FLUORANTHENE		U	ug/l	n	0.39	0.078	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	NAPHTHALENE		U	ug/l	n	0.39	0.061	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	BENZO(A)ANTHRACENE		U	ug/l	n	0.39	0.074	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	BENZO(A)PYRENE		UJ	ug/l	n	0.39	0.078	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	BENZO(B)FLUORANTHENE		U	ug/l	n	0.39	0.098	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	BENZO(K)FLUORANTHENE		U	ug/l	n	0.39	0.07	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	CHRYSENE		U	ug/l	n	0.39	0.047	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	ACENAPHTHYLENE		U	ug/l	n	0.39	0.059	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	ANTHRACENE		U	ug/l	n	0.39	0.096	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	BENZO(GHI)PERYLENE		U	ug/l	n	0.49	0.049	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	FLUORENE		U	ug/l	n	0.39	0.047	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	PHENANTHRENE		U	ug/l	n	0.39	0.061	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	DIBENZO(A,H)ANTHRACENE		U	ug/l	n	0.39	0.033	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	INDENO(1,2,3-CD)PYRENE		UJ	ug/l	n	0.39	0.051	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	PYRENE		U	ug/l	n	0.39	0.09	1
2-GW38DS-04	6-Oct-04	L0411127-02	8270C-SIM	2-METHYLNAPHTHALENE		U	ug/l	n	0.39	0.07	1
2-GW44DS-04	7-Oct-04	L0411127-03	2320B	ALKALINITY, TOTAL	1000		mg CaCO3	y	5	1	2.5
2-GW44DS-04	7-Oct-04	L0411127-03	2540C	SOLIDS, TOTAL DISSOLVED	10000		mg/l	y	10	2.8	1
2-GW44DS-04	7-Oct-04	L0411127-03	2540D	SOLIDS, TOTAL SUSPENDED	49		mg/l	y	5		1
2-GW44DS-04	7-Oct-04	L0411127-03	9251	CHLORIDE	5900		mg/l	y	100	0.36	100
2-GW44DS-04	7-Oct-04	L0411127-03	9038	SULFATE	9.2	J	mg/l	y	10	1.4	1
2-GW44DS-04	7-Oct-04	L0411127-03	5220D	CHEMICAL OXYGEN DEMAND	530		mg/l	y	20	4.2	1
2-GW44DS-04	7-Oct-04	L0411127-03	9060	TOTAL ORGANIC CARBON	13		mg/l	y	10	0.86	20

CHAIN OF CUSTODY

PAGE OF

ALPHA

Eight Walk Up Drive Westborough, MA 01581
TEL: 508-898-9220 FAX: 508-898-9193

Date Rec'd in Lab: 10/7/04

ALPHA Job #: L0411127

Client Information

Client: Environmental Chemical Corporation
Address: 50 D'ANGELO DRIVE
MARLBOROUGH, MA 01752
Phone: 508-229-2270
Fax:
Email:
☒ These samples have been Previously analyzed by Alpha

Project Information

Project Name: AREA A LANDFILL
Project Location: NEW LONDON, CT
Project #:
Project Manager:
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: 10/14/04 Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MCP PRESUMPTIVE CERTAINTY-THESE QUESTIONS MUST BE ANSWERED

☐ Yes	☐ No	Are MCP Analytical Methods Required?
☐ Yes	☐ No	Are Drinking Water Samples Submitted?
☐ Yes	☐ No	Have you met minimum field QC requirements?

Other Project Specific Requirements/Comments/Detection Limits:
Groundwater (GW) Dissolved Metals are field filtered.
Surface Water (SW) and Seep (SP) Dissolved Metals are to be lab filtered.

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	SVOC-8270C	PAH-8270C SIM	TOTAL METALS	DISSOLVED METALS	HARDNESS, TDS, Alk	TOC	TSS	COD	Cl, SO4				Sample Specific Comments
11127.1	2-GW44DS-04	10/6/04	1451	GW		X	X	X	X									FF
.2	2-GW38DS-04	10/7/04	1330	GW			X											
.3	2-GW44DS-04	10/7/04	1300	GW						X	X	X	X	X				
					Container Type	-	-	-	-	-	-	-	-	-	-	-	-	
					Preservative	-	-	-	-	-	-	-	-	-	-	-	-	

QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

IS YOUR PROJECT MCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	10/7/04 1600	[illegible]	10/7/04 16[illegible]
[illegible]	10/7/04 1830	[illegible]	10/7/04 1830

Please print clearly, legi and completely. Sample not be logged in and turnaround time clock w start until any ambiguitie resolved. All samples submitted are subject to Alpha's Payment Terms

FORM NO 01-01 Internal

APPENDIX F

Statistical Analysis

APPENDIX F

1.0 STATISTICAL ANALYSIS

A statistical analysis was performed on the results from the groundwater monitoring effort to determine if contaminants associated with past activities at the Area A Landfill are having an impact on groundwater at the site. This groundwater monitoring program employed two upgradient wells (2LMW20S and 4MW1S) and twelve downgradient wells [2WMW38DS, 2WMW39DS, 2WMW40DS, 2WMW41DS, 2WMW42DS, 2WMW43DS, 2WMW44DS, 2WMW45DS, 2WMW46DS, 2WMW47DS, 3MW12D (Round 11 only), and 3MW37S] sampled over two semi-annual rounds. Well 2WMW21S was used as a reference well. Wells 3MW37S and 3MW12D are hydrologically downgradient of the site but they are not completed in dredge spoils like the rest of the downgradient wells.

The specific tests performed on data collected at the Area A Landfill are identified and described in the next section.

The statistical methods used to evaluate the groundwater data are employed in order to:

- Develop summary statistics that describe environmental contaminant concentrations at the Area A Landfill.

- Allow comparisons of COPC concentrations in wells upgradient of the Area A Landfill to those detected in downgradient wells (i.e., samples collected in downgradient areas potentially impacted by contaminant migration from the landfill).

1.1 Comparison of Downgradient Wells to Upgradient Wells

Figure 4-1 is a flow diagram taken from the GMP (TtNUS, 1999). It presents the approach to determine if statistically significant contaminant migration is occurring. Downgradient data was compared to upgradient data using various statistical methods. No correction for seasonal variability was required since wells at the facility should be affected similarly. The statistical methods described in the following paragraphs were used to determine if parameter concentrations detected in downgradient wells are significantly greater than those detected in samples from the upgradient wells.

If all the observations from upgradient and downgradient wells were nondetects, no statistical analysis was performed and downgradient and upgradient concentrations were declared statistically similar. In cases where there were detections in the downgradient wells but all upgradient results were nondetects

for an analyte, no statistical analysis was performed but downgradient concentrations were declared statistically higher than upgradient concentrations.

The Analysis of Variance (ANOVA) technique is the preferred method to compare data from upgradient and downgradient monitoring well locations. The ANOVA technique is used to test whether there is statistically significant evidence of contamination. There are two types of ANOVA tests: parametric and non-parametric. The parametric ANOVA method makes two important assumptions: 1) the upgradient and downgradient data sets are both normally (or both lognormally) distributed and 2) the group variances of the upgradient and downgradient data sets are homogeneous. These assumptions can be checked using the Shapiro-Wilk Test of Normality and Levene's test of Homogeneity of Variance, respectively. If the analysis of the data demonstrated that these assumptions critical to the parametric ANOVA were violated, non-parametric ANOVA techniques were conducted using the ranks of the observations rather than the observations themselves. The Wilcoxon Rank-Sum test (also known as the Mann-Whitney U test) was employed as the non-parametric ANOVA for comparing the downgradient results to the upgradient results.

According to USEPA guidance (USEPA, 1992), parametric ANOVAs should not be used in the event that nondetects exceed 50% of the data set. In addition, for analyses using the Wilcoxon Rank-Sum Test, several environmental statistics guidance documents limit the percent of nondetects allowable in the test data sets to 50% (Navy, 1998) or even 40% [United States Department of Defense (USDOD), United States Department of Energy (USDOE), USEPA, and United States Nuclear Regulatory Commission (USNRC), 2000]. Therefore, a Two-Sample Test of Proportions was performed on all data where nondetects exceed 50% of the data set.

1.2 Detection Limit

During the chemical analysis of environmental samples, some analytes may be present at concentrations that are below the sample quantitation limit (SQL) for the analytical procedure. The results are generally reported as not detected (rather than zero), and the appropriate detection limit is given. The amount of data that are below the detection limit play an important role in selecting the statistical method of addressing the detection limit problem. The nondetects found at the Area A Landfill were replaced with the SQL, divided by two, prior to the statistical analysis. In addition, results from each field duplicate pair were averaged and counted as one sample for use in the statistical analysis.

1.3 Parametric and Non-Parametric Analysis of Variance (ANOVA)

ANOVA is widely used in the examination of environmental data sets. A one-way classification ANOVA is used to determine whether or not the difference between average concentrations of a parameter detected

in downgradient wells and upgradient wells is statistically significant. Since only two means are compared, an ANOVA test will give the same result as the t-test for independent samples. The parametric ANOVA method makes two key assumptions: 1) the data are both normally (or both lognormally) distributed and 2) the group variances are homogeneous. If either of these two assumptions is not met then the non-parametric ANOVA method should be used.

1.3.1 The Shapiro-Wilk "W-test" of Normality (n =50)

As stated above, the data must be analyzed to determine whether they were drawn from an underlying normal or lognormal distribution. A number of statistical evaluations may be used to determine which, if either, of the distributions is exhibited by a given data set. As recommended by the EPA, the Shapiro-Wilk "W-test" (for sample sets < 50) and the Shapiro-Francia "W-test" (for sample sets >50) will be used to determine whether the data are normally or lognormally distributed (USEPA, 1992). For the analysis performed on the results from the groundwater monitoring effort at the Area A Landfill, only the Shapiro-Wilk “W-test” was used (all sample sets < 50).

The Shapiro-Wilk W-test (Gilbert, 1987) is an effective method for determining whether a data set has been drawn from an underlying normal (or lognormal) distribution. By conducting the Shapiro-Wilk W-test on the log-transformed data, the test may be used to determine whether the data have been drawn from an underlying lognormal distribution. The null hypothesis (H_0) that is tested is:

H_O - The population has a normal (or lognormal when the data is log-transformed) distribution.

The alternate hypothesis (H_A) is:

H_A - The population does not have a normal (or lognormal when the data is log-transformed) distribution.

A ‘W’ statistic (W_{calc}) is computed for a data set and compared to a test statistic (W_{test}). If $W_{calc} < W_{test}$, then the null hypothesis is rejected, H_A is accepted, the data are assumed to not be normally distributed. If $W_{calc} = W_{test}$, then the null hypothesis is not rejected, the data is assumed to be normally distributed. Another ‘W’ statistic is computed for the log-transformed data set and compared to the test statistic as described above. If both the normal and lognormal W_{calc} are greater than or equal to the W_{test} then the underlying distribution is considered to be the one producing the highest W_{calc} value. If neither of the ‘W’ statistics is greater than or equal to the test statistic, the underlying distribution can be defaulted to lognormal. This is because “EPA’s experience with environmental concentration data, and groundwater data in particular, suggests that the Lognormal distribution is generally more appropriate as a default statistical model than the Normal distribution…” (USEPA, 1992).

The following equations present a step-by-step procedure for conducting the Shapiro-Wilk W-test:

- Step 1. Combine all of the data from each of the individual (*k*) wells.

- Step 2. Order the *n* results from least to greatest:

$$x_1 \leq x_2 \leq x_3 \leq \cdots \leq x_n$$

- Step 3. Compute the standard deviation by:

$$S_x = \sqrt{\sum_{i=1}^{n} \frac{\left(x_i - \overline{x}\right)^2}{(n-1)}}$$

- Step 4. Determine the coefficients $a_1, a_2, a_3, \ldots, a_k$ for the sample size *n* using Table J-1 in Appendix J, where:

$$k = \frac{n}{2} \text{ if n is even ; And}$$

$$k = \frac{n1}{2} \text{ if n is odd}$$

- Step 5. Determine *b* by the formula:

$$b = \sum_{i=1}^{k} a_i \left(x_{[n-i+1]} - x_i\right) = \sum_{i=1}^{k} b_i$$

- Step 6. Calculate W_{calc} using *b* from above, where:

$$W_{calc} = \left[\frac{b}{S_x \sqrt{n-1}}\right]^2$$

- Step 7. Determine W_{test} at the 5% significance level from Table J-2.

- Step 8. Reject H_O at the 5% significance level if W_{calc} is less than W_{test}.

To test the null hypothesis for a data set drawn from an underlying lognormal distribution, transform the data to y_{1j}, $y_{2j}, y_{3j}, \ldots, y_{km}$ where $y_{ij} = ln\ X_{ij}$. Repeat steps 1 through 8 as described in the preceding paragraphs.

1.3.2 Homogeneity of Variance

An important assumption in ANOVA is that the variances in the different groups are equal (homogeneous). A powerful and commonly used test of this assumption is the Levene test. This test has practically replaced the older and less robust Bartlett's test and Chi-square test.

Levene's test (homogeneity of variances): For each dependent variable, an analysis of variance is performed on the absolute deviations of values from the respective group means. If the Levene test is statistically significant, then the hypothesis of homogeneous variances should be rejected

To conduct Levene's test first compute the absolute value of the residuals:

$$Zij = \left| Xij - \overline{Xi} \right|$$

where *Xij* represents the jth value from the ith location. Then run a standard one-way ANOVA on the variable *Zij* (see section 4.4.3.3). If the F test is significant, reject the hypothesis of equal group variances. Otherwise, proceed with the analysis as planned.

1.3.3 Parametric ANOVA

Assume that a site has *k* wells and that n_i data points (analyte concentrations) are available for the ith well. The following presents a step-by-step procedure for conducting the parametric ANOVA.

- Step 1. Compute the sums and means of each well (*i*) using the following equations as follows:

$$X_i = \sum_{j=1}^{n_i} X_{ij}\ ,\ \sum \text{ of all } n_i \text{ observations at well } i$$

$$\overline{X}_i = \frac{X_i}{n_i}\ ,\ \text{average of all } n_i \text{ observations at well } i$$

$$X = \sum_{i-1}^{k} \sum_{j=1}^{n_i} X_{ij}\ ,\ \text{grand total of all } n_i \text{ observations}$$

$$N = \sum^{k} n_i\ ,\ \text{total number of observations}$$

$$\overline{X} = \frac{X}{N},\ \text{grand mean of all observations}$$

- Step 2. Compute the sum of squares of differences between the individual well means and the grand mean by the formula:

$$SS_{wells} = \sum_{i=1}^{k} n_i \left(\overline{X}_i - \overline{X}\right)^2 = \sum_{i=1}^{k} \left[\frac{X_i^2}{n_i}\right] - \frac{X^2}{N}$$

This sum of squares has (*k-1*) degrees of freedom associated with it and is a measure of the variability between wells.

- Step 3. Compute the corrected total sum of squares by the formula:

$$SS_{total} = \sum_{i-1}^{k} \sum_{j=1}^{n_i} \left(X_{ij} - \overline{X}\right)^2 = \sum_{i=1}^{k} \sum_{j=1}^{n_i} \left[\left(X_{ij}\right)^2\right] - \frac{X^2}{N}$$

This sum of squares has (*N-1*) degrees of freedom associated with it and is a measure of variability in the whole data set.

- Step 4. Compute the sum of squares of differences of observations within wells from the well means. This value is the sum of squares due to error and is obtained by simple subtraction:

$$SS_{Error} = SS_{Total} - SS_{Wells}$$

The sum of squares due to error has associated with it (*N-k*) degrees of freedom and is a measure of the variability within wells.

- Step 5. Set up an ANOVA table as shown below. The sums of squares and their degree of freedom were obtained from Steps 2 through 4. The mean square quantities are simply obtained by dividing each sum of squares by its corresponding degrees of freedom.

ONE-WAY PARAMETRIC ANOVA TABLE

Source of Variation	Sums of Squares	Degrees of Freedom	Mean Squares	F
Between Wells	SS_{Well}	k-1	$MS_{Well}=SS_{Well}/(k-1)$	$F=MS_{Well} / MS_{Error}$
Error (within Wells)	SS_{Error}	N-k	$MS_{Error}=SS_{Error}/(N-k)$	
Total	SS_{Total}	N-1		

- Step 6. To test the hypothesis of equal means for all k wells, compute $F = MS_{well} / MS_{Error}$ (last column in above table). Compare this statistic to the tabulated F statistic with (k-1) and (N-k) degrees of freedom (Table J-3) at a 5% significance level. If the calculated F value does not exceed the tabulated value, conclude that there is no significant difference between the concentrations of the k wells. If the calculated F value exceeds the tabulated value, reject the hypothesis of equal well means. Check the downgradient mean concentration relative to the upgradient mean concentration. If the downgradient mean is less than the upgradient mean, there is no evidence of contamination. If the downgradient mean is greater than the upgradient mean, the downgradient concentration is identified as statistically greater than the upgradient concentration at a 95% confidence level.

1.3.4 Non-Parametric ANOVA

The parametric ANOVA technique is the preferred approach for comparing environmental measurements from downgradient monitoring wells to upgradient well data. However, parametric ANOVA methods make two key assumptions: 1) the data are both normally (or both lognormally) distributed and 2) the group variances are homogeneous. If these assumptions are violated, non-parametric tests (i.e. Kruskal-Wallis or Wilcoxon Rank-Sum tests) may be used to determine if constituent concentrations present in the downgradient areas significantly exceed those present in the upgradient wells.

The Kruskal-Wallis (USEPA, 1989) test should be employed when comparing three or more data sets. However, it is not amenable to two data set comparisons. In these situations, the Wilcoxon Rank-Sum test (USEPA, 1992) (also known as the Mann-Whitney U test) should be employed.

Non-parametric tests are conducted using the ranks of the analytical results rather than the analytical results themselves. Therefore, the data sets need to be inspected for extremely high values that may be underestimated as a result of the ranking process.

1.3.5 The Wilcoxon Rank-Sum Test

The Wilcoxon Rank-Sum test is described in the following paragraphs.

- Step 1. Combine the upgradient and downgradient data and rank the ordered values from 1 to N.

  Assume there are n downgradient samples and m upgradient samples so that $N = m + n$.

- Step 2. Compute the Wilcoxon statistic *W* for the downgradient wells:

$$W = \sum_{i=1}^{n} E_i - \frac{1}{2} n(n+1)$$

where E_i are the ranks of the downgradient samples. Large values of the statistic *W* give evidence of contamination in downgradient wells.

- Step 3. Compute an approximate *Z-score*. To find the critical value of *W*, a normal approximation to its distribution is used. The expected value and standard deviation of *W* under the null hypothesis (i.e., no contamination exists) are given by the formulas

$$E(W) = \frac{1}{2} mn; \qquad SD(W) = \sqrt{\frac{1}{12} mn(N+1)}$$

An approximate *Z-score* for the Wilcoxon Rank-Sum test may be calculated by the following equations:

$$Z = \frac{W - E(W) - \frac{1}{2}}{SD(W)}$$

The factor of 1/2 in the numerator serves as a continuity correction since the discrete distribution of the statistic W is being approximated by the continuous normal distribution. If *n, m* > 10 and ties are present; an adjustment to the approximate *Z-score* must be made as follows:

$$Z_{RS} = \frac{W - E(W) - \frac{1}{2}}{S'D(W)}$$

where: $SD'(W) = \left(\frac{mn}{12} \left[N + 1 - \frac{\sum_{j=1}^{g} t_j (t_j^2 - 1)}{N(N-1)} \right] \right)^{\frac{1}{2}}$

g = the number of tied groups and t_j is the number of tied data in the jth group.

- Step 4. For a one-tailed 0.05 significance level test for H_0 versus H_A (i.e. the measurements from population 1 tend to exceed those from population 2), reject H_0 and accept H_A if: $Z_{RS} > Z_{0.95} = +1.645$.

1.4 Two-Sample Test of Proportions

When more than 50% of the data for a constituent are nondetects, it is difficult to conduct a valid statistical test of whether the average downgradient concentration is significantly higher than the average upgradient concentration. The Two-Sample Test of Proportions is suitable for this situation.

The null and alternative hypotheses are:

$$H_0: P_d \leq P_u$$
$$H_A: P_d > P_u$$

Where P_d and P_u are the true proportions of the downgradient and upgradient measurements, respectively, that exceed a specified concentration C. The value of the concentration C should be just slightly greater than the largest upgradient nondetect value. The following is a step-by-step procedure to conduct the Two-Sample Test of Proportions:

- Step 1. Let K_d and K_u be the number of downgradient and upgradient measurements that exceed C.
- Step 2. Compute $P_d = K_d / n$ and $P_u = K_u / m$ where there are n downgradient samples and m upgradient samples so that $N = m + n$.
- Step 3. Compute $P = (K_d + K_u) / N$.
- Step 4. Compute the Test Statistic: $Z_p = (P_d - P_u) / [P(1-P)(1/n+1/m)]^{1/2}$
- Step 5. At 95% confidence, reject H_0 and accept H_A if $Z_p > Z_{0.95} = +1.645$.

COEFFICIENTS A_i FOR W TEST OF NORMALITY FOR N=2 to 50

i/n	2	3	4	5	6	7	8	9	10
1	0.7071	0.7071	0.6872	0.6646	0.6431	0.6233	0.6052	0.5888	0.5739
2			0.1677	0.2413	0.2806	0.3031	0.3164	0.3244	0.3291
3					0.0875	0.1401	0.1743	0.1976	0.2141
4							0.0561	0.0947	0.1224
5									0.0399

i/n	11	12	13	14	15	16	17	18	19	20
1	0.5601	0.5475	0.5359	0.5251	0.5150	0.5056	0.4968	0.4886	0.4808	0.4734
2	0.3315	0.3325	0.3325	0.3318	0.3306	0.3290	0.3273	0.3253	0.3232	0.3211
3	0.2260	0.2347	0.2412	0.2460	0.2495	0.2521	0.2540	0.2553	0.2561	0.2565
4	0.1429	0.1586	0.1707	0.1802	0.1878	0.1939	0.1988	0.2027	0.2059	0.2085
5	0.0695	0.0922	0.1099	0.1240	0.1353	0.1447	0.1524	0.1587	0.1641	0.1686
6		0.0303	0.0539	0.0727	0.0880	0.1005	0.1109	0.1197	0.1271	0.1334
7				0.0240	0.0433	0.0593	0.0725	0.0837	0.0932	0.1013
8						0.0196	0.0359	0.0496	0.0612	0.0711
9								0.0163	0.0303	0.0422
10										0.0140

i/n	21	22	23	24	25	26	27	28	29	30
1	0.4643	0.4590	0.4542	0.4493	0.4450	0.4407	0.4366	0.4328	0.4291	0.4254
2	0.3185	0.3156	0.3126	0.3098	0.3069	0.3043	0.3018	0.2992	0.2968	0.2944
3	0.2578	0.2571	0.2563	0.2554	0.2543	0.2533	0.2522	0.2510	0.2499	0.2487
4	0.2119	0.2131	0.2139	0.2145	0.2148	0.2151	0.2152	0.2151	0.2150	0.2148
5	0.1736	0.1764	0.1787	0.1807	0.1822	0.1836	0.1848	0.1857	0.1864	0.1870
6	0.1399	0.1443	0.1480	0.1512	0.1539	0.1563	0.1584	0.1601	0.1616	0.1630
7	0.1092	0.1150	0.1201	0.1245	0.1283	0.1316	0.1346	0.1372	0.1395	0.1415
8	0.0804	0.0878	0.0941	0.0997	0.1046	0.1089	0.1128	0.1162	0.1192	0.1219
9	0.0530	0.0618	0.0696	0.0764	0.0823	0.0876	0.0923	0.0965	0.1002	0.1036
10	0.0263	0.0368	0.0459	0.0539	0.0610	0.0672	0.0728	0.0778	0.0822	0.0862
11		0.0122	0.0228	0.0321	0.0403	0.0476	0.0540	0.0598	0.0650	0.0697
12				0.0107	0.0200	0.0284	0.0358	0.0424	0.0483	0.0537
13						0.0094	0.0178	0.0253	0.0320	0.0381
14								0.0084	0.0159	0.0227
15										0.0076

i/n	31	32	33	34	35	36	37	38	39	40
1	0.4220	0.4188	0.4156	0.4127	0.4096	0.4068	0.4040	0.4015	0.9689	0.3964
2	0.2921	0.2898	0.2876	0.2854	0.2834	0.2813	0.2794	0.2774	0.2755	0.2737
3	0.2475	0.2463	0.2451	0.2439	0.2427	0.2415	0.2403	0.2391	0.2380	0.2368
4	0.2145	0.2141	0.2137	0.2132	0.2127	0.2121	0.2116	0.2110	0.2104	0.2098
5	0.1874	0.1878	0.1880	0.1882	0.1883	0.1883	0.1883	0.1881	0.1880	0.1878
6	0.1641	0.1651	0.1660	0.1667	0.1673	0.1678	0.1683	0.1686	0.1689	0.1691
7	0.1433	0.1449	0.1463	0.1475	0.1487	0.1496	0.1503	0.1513	0.1520	0.1526
8	0.1243	0.1265	0.1284	0.1301	0.1317	0.1331	0.1344	0.1356	0.1366	0.1376
9	0.1066	0.1093	0.1118	0.1140	0.1160	0.1179	0.1196	0.1211	0.1225	0.1237
10	0.0899	0.0931	0.0961	0.0988	0.1013	0.1036	0.1056	0.1075	0.1092	0.1108
11	0.0739	0.0777	0.0821	0.0844	0.0873	0.0900	0.0924	0.0947	0.0967	0.0986
12	0.0585	0.0629	0.0669	0.0706	0.0739	0.0770	0.0798	0.0824	0.0848	0.0870
13	0.0435	0.0485	0.0530	0.0572	0.0610	0.0645	0.0677	0.0706	0.0733	0.0759
14	0.0289	0.0344	0.0395	0.0441	0.0484	0.0523	0.0559	0.0592	0.0622	0.0651
15	0.0144	0.0206	0.0262	0.0314	0.0361	0.0404	0.0444	0.0481	0.0515	0.0546
16		0.0068	0.0131	0.0187	0.0239	0.0287	0.0331	0.0372	0.0409	0.0444
17				0.0062	0.0119	0.0172	0.0220	0.0264	0.0305	0.0343
18						0.0057	0.0110	0.0158	0.0203	0.0244
19								0.0053	0.0101	0.0146
20										0.0049

i/n	41	42	43	44	45	46	47	48	49	50
1	0.3940	0.3917	0.3894	0.3872	0.3850	0.3830	0.3808	0.3789	0.3770	0.3751
2	0.2719	0.2701	0.2684	0.2667	0.2651	0.2635	0.2620	0.2604	0.2589	0.2574
3	0.2357	0.2345	0.2334	0.2323	0.2313	0.2302	0.2291	0.2281	0.2271	0.2260
4	0.2091	0.2085	0.2078	0.2072	0.2065	0.2058	0.2052	0.2045	0.2038	0.2032
5	0.1876	0.1874	0.1871	0.1868	0.1865	0.1862	0.1859	0.1855	0.1851	0.1847
6	0.1693	0.1694	0.1695	0.1695	0.1695	0.1695	0.1695	0.1693	0.1692	0.1691
7	0.1531	0.1535	0.1539	0.1542	0.1545	0.1548	0.1550	0.1551	0.1553	0.1554
8	0.1384	0.1392	0.1398	0.1405	0.1410	0.1415	0.1420	0.1423	0.1427	0.1430
9	0.1249	0.1259	0.1269	0.1278	0.1286	0.1293	0.1300	0.1306	0.1312	0.1317
10	0.1123	0.1136	0.1149	0.1160	0.1170	0.1180	0.1189	0.1197	0.1205	0.1212
11	0.1004	0.1020	0.1035	0.1049	0.1062	0.1073	0.1085	0.1095	0.1105	0.1113
12	0.0891	0.0909	0.0927	0.0943	0.0959	0.0972	0.0986	0.0998	0.1010	0.1020
13	0.0782	0.0804	0.0824	0.0842	0.0860	0.0876	0.0892	0.0906	0.0919	0.0932
14	0.0677	0.0701	0.0724	0.0745	0.0775	0.0785	0.0801	0.0817	0.0832	0.0846
15	0.0575	0.0602	0.0628	0.0651	0.0673	0.0694	0.0713	0.0731	0.0748	0.0764
16	0.0476	0.0506	0.0534	0.0560	0.0584	0.0607	0.0628	0.0648	0.0667	0.0685
17	0.0379	0.0411	0.0442	0.0471	0.0497	0.0522	0.0546	0.0568	0.0588	0.0608
18	0.0283	0.0318	0.0352	0.0383	0.0412	0.0439	0.0465	0.0489	0.0511	0.0532
19	0.0188	0.0227	0.0263	0.0296	0.0328	0.0357	0.0385	0.0411	0.0436	0.0459
20	0.0094	0.0136	0.0175	0.0211	0.0245	0.0277	0.0307	0.0335	0.0361	0.0386
21		0.0045	0.0087	0.0126	0.0163	0.0197	0.0229	0.0259	0.0288	0.0314
22				0.0042	0.0081	0.0188	0.0153	0.0185	0.0215	0.0244
23						0.0039	0.0076	0.0111	0.0143	0.0174
24								0.0037	0.0071	0.0104
25										0.0350

PERCENTAGE POINTS OF THE W TEST FOR N=3 to 50

n	0.01	0.05
3	0.753	0.767
4	0.687	0.748
5	0.686	0.762
6	0.713	0.788
7	0.730	0.803
8	0.749	0.818
9	0.764	0.829
10	0.781	0.842
11	0.792	0.850
12	0.805	0.859
13	0.814	0.866
14	0.825	0.874
15	0.835	0.881
16	0.844	0.887
17	0.851	0.892
18	0.858	0.897
19	0.863	0.901
20	0.868	0.905
21	0.873	0.908
22	0.878	0.911
23	0.881	0.914
24	0.884	0.916
25	0.888	0.918
26	0.891	0.920
27	0.894	0.923
28	0.896	0.924
29	0.898	0.926
30	0.900	0.927

n	0.01	0.05
31	0.902	0.929
32	0.904	0.930
33	0.906	0.931
34	0.908	0.933
35	0.910	0.934
36	0.912	0.935
37	0.914	0.936
38	0.916	0.938
39	0.917	0.939
40	0.919	0.940
41	0.920	0.941
42	0.922	0.942
43	0.923	0.943
44	0.924	0.944
45	0.926	0.945
46	0.927	0.945
47	0.928	0.946
48	0.929	0.947
49	0.929	0.947
50	0.930	0.947

95th PERCENTILES OF F-DISTRIBUTION WITH v_1 and v_2 DEGREES OF FREEDOM

v_2/v_1	1	2	3	4	5	6	7	8	9	10	12	15	20	24	30	39	40	60	120
1	161.4	199.5	215.7	224.6	230.2	234.0	236.8	238.9	240.5	241.9	243.9	245.9	248.0	249.1	250.1	251.0	251.1	252.2	253.3
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38	19.40	19.41	19.43	19.45	19.45	19.46	19.47	19.47	19.48	19.49
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.79	8.74	8.70	8.66	8.64	8.62	8.59	8.59	8.57	8.55
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	5.96	5.91	5.86	5.80	5.77	5.75	5.72	5.72	5.69	5.66
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.74	4.68	4.62	4.56	4.53	4.50	4.46	4.46	4.43	4.40
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.06	4.00	3.94	3.87	3.84	3.81	3.77	3.77	3.74	3.70
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64	3.57	3.51	3.44	3.41	3.38	3.34	3.34	3.30	3.27
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	3.35	3.28	3.22	3.15	3.12	3.08	3.04	3.04	3.01	2.97
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14	3.07	3.01	2.94	2.90	2.86	2.83	2.83	2.79	2.72
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98	2.91	2.85	2.77	2.74	2.70	2.66	2.66	2.62	2.58
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	2.85	2.79	2.72	2.65	2.61	2.57	2.53	2.53	2.49	2.45
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.75	2.69	2.62	2.54	2.51	2.47	2.43	2.43	2.38	2.34
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67	2.60	2.53	2.46	2.42	2.38	2.34	2.34	2.30	2.25
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.60	2.53	2.46	2.39	2.35	2.31	2.27	2.27	2.22	2.18
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.54	2.48	2.40	2.33	2.29	2.25	2.21	2.20	2.16	2.11
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49	2.42	2.35	2.28	2.24	2.19	2.15	2.15	2.11	2.06
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	2.45	2.38	2.31	2.23	2.19	2.15	2.11	2.10	2.06	2.01
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41	2.34	2.27	2.19	2.15	2.11	2.07	2.06	2.02	1.97
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	2.38	2.31	2.23	2.16	2.11	2.07	2.03	2.03	1.98	1.93
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	2.35	2.28	2.20	2.12	2.08	2.04	2.00	1.99	1.95	1.90
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37	2.32	2.25	2.18	2.10	2.05	2.01	1.97	1.96	1.92	1.87
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	2.30	2.23	2.15	2.07	2.03	1.98	1.94	1.94	1.89	1.84
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32	2.27	2.20	2.13	2.05	2.01	1.96	1.92	1.91	1.86	1.81
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	2.25	2.18	2.11	2.03	1.98	1.94	1.90	1.89	1.84	1.79
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28	2.24	2.16	2.09	2.01	1.96	1.92	1.88	1.87	1.82	1.77
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22	2.15	2.07	1.99	1.95	1.90	1.86	1.85	1.80	1.75
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25	2.20	2.13	2.06	1.97	1.93	1.88	1.84	1.84	1.79	1.73
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24	2.19	2.12	2.04	1.96	1.91	1.87	1.83	1.82	1.77	1.71
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22	2.18	2.10	2.03	1.94	1.90	1.85	1.81	1.81	1.75	1.70
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.16	2.09	2.01	1.93	1.89	1.84	1.80	1.79	1.74	1.68
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.08	2.00	1.92	1.84	1.79	1.74	1.70	1.69	1.64	1.58
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04	1.99	1.92	1.84	1.75	1.70	1.65	1.60	1.59	1.53	1.47
120	3.92	3.07	2.68	2.45	2.29	2.17	2.09	2.02	1.96	1.91	1.83	1.75	1.66	1.61	1.55	1.51	1.50	1.43	1.35

NOTE: v_1: Degrees of Freedom for numerator (horizontal axis)
v_2: Degrees of freedom for denominator (vertical axis)

Sample name	Sample Date	Analyte Name	Result (ug/L)	Data Qualifier	Units	Value	lognormal value	Reporting Limit (mg/L)	Reporting Limit	Method Detection Limit	Dilution Factor
4-GW1S-02	2-Jun-04	ARSENIC, TOTAL	0.07	U	ug/L	0.5	-0.3010	0.001	1	0.000034	1
4-GW1S-04	6-Oct-04	ARSENIC, TOTAL	0.32	U	ug/L	0.5	-0.3010	0.001	1	0.000034	1
2-GW20S-02	3-Jun-04	ARSENIC, TOTAL	2.9		ug/L	2.9	0.4624	0.001	1	0.000034	1
2-GW20S-04	6-Oct-04	ARSENIC, TOTAL	9.3		ug/L	9.3	0.9685	0.001	1	0.000034	1

Frequency of Detection:	2	/	4	Standard Deviation:	4.16
Range of Detections:	2.9	-	9.3	Shapiro Wilk Normal W_{calc}	0.12
Average of Detections:	6.1			Lognormal standard Deviation:	0.62
Average of All Date:	3.3			Shapiro Wilk Normal W_{calc}	0.86
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.748
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

3-GW37S-02	2-Jun-04	ARSENIC, TOTAL	0.38	U	ug/L	0.5	-0.3010	0.001	1	0.000034	1
2-GW39DS-02	1-Jun-04	ARSENIC, TOTAL	0.45	U	ug/L	0.5	-0.3010	0.001	1	0.000034	1
3-GW37S-04	5-Oct-04	ARSENIC, TOTAL	0.38	U	ug/L	0.5	-0.3010	0.001	1	0.000034	1
2-GW39DS-04	5-Oct-04	ARSENIC, TOTAL	0.75	J	ug/L	0.75	-0.1249	0.001	1	0.000034	1
3-GW12D-02	2-Jun-04	ARSENIC, TOTAL	0.8		ug/L	0.8	-0.0969	0.001	1	0.000034	1
3-GW12D-04	5-Oct-04	ARSENIC, TOTAL	0.85	J	ug/L	0.85	-0.0706	0.001	1	0.000034	1
2-GW38DS-02	3-Jun-04	ARSENIC, TOTAL	1.6		ug/L	1.6	0.2041	0.001	1	0.000034	1
2-GW44DS-04	6-Oct-04	ARSENIC, TOTAL	3.55	J	ug/L	3.55	0.5502	0.004	4	0.0034	1
2-GW42DS-04	6-Oct-04	ARSENIC, TOTAL	4		ug/L	4	0.6021	0.001	1	0.000034	1
2-GW41DS-02	2-Jun-04	ARSENIC, TOTAL	4.1		ug/L	4.1	0.6128	0.001	1	0.000034	1
2-GW44DS-02	2-Jun-04	ARSENIC, TOTAL	4.2		ug/L	4.2	0.6232	0.001	1	0.000034	1
2-GW42DS-02	2-Jun-04	ARSENIC, TOTAL	4.4		ug/L	4.4	0.6435	0.001	1	0.000034	1
2-GW41DS-04	5-Oct-04	ARSENIC, TOTAL	6.1		ug/L	6.1	0.7853	0.001	1	0.000034	1
2-GW43DS-02	3-Jun-04	ARSENIC, TOTAL	7		ug/L	7	0.8451	0.001	1	0.000034	1
2-GW43DS-04	6-Oct-04	ARSENIC, TOTAL	7.9		ug/L	7.9	0.8976	0.001	1	0.000034	1
2-GW45DS-02	2-Jun-04	ARSENIC, TOTAL	8.8		ug/L	8.8	0.9445	0.005	5	0.00017	5
2-GW45DS-04	6-Oct-04	ARSENIC, TOTAL	10.45		ug/L	10.45	1.0191	0.001	1	0.000034	1
2-GW40DS-04	5-Oct-04	ARSENIC, TOTAL	13.8		ug/L	13.8	1.1399	0.001	1	0.000034	1
2-GW40DS-02	1-Jun-04	ARSENIC, TOTAL	14.1		ug/L	14.1	1.1492	0.005	5	0.00017	5
2-GW46DS-04	6-Oct-04	ARSENIC, TOTAL	22.1		ug/L	22.1	1.3444	0.001	1	0.000034	1
2-GW46DS-02	2-Jun-04	ARSENIC, TOTAL	25.2		ug/L	25.2	1.4014	0.005	5	0.00017	5
2-GW47DS-02	3-Jun-04	ARSENIC, TOTAL	34.95		ug/L	34.95	1.5434	0.001	1	0.000034	1
2-GW47DS-04	5-Oct-04	ARSENIC, TOTAL	38.4		ug/L	38.4	1.5843	0.001	1	0.000034	1

Frequency of Detection:	20	/	23	Standard Deviation:	10.93
Range of Detections:	0.75	-	38.4	Shapiro Wilk Normal W_{calc}	0.02
Average of Detections:	10.7			Lognormal standard Deviation:	0.61
Average of All Date:	9.33			Shapiro Wilk Normal W_{calc}	0.34
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.914
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

Shapiro Wilk Test does not indicate that downgradient data sets are normally or lognormally distributed. Therefore, non-parametric ANOVA is the appropiate method.

ARSENIC, TOTAL

NON PARAM ANOVA

m= 4 Number of upgradient wells

n= 23 Number of downgradient wells

N= 27 Total number of wells

Combine upgradient and downgradient data and rank

Assign upgradient values "u" and downgradient values "d"

Well	Rank	Value	Class	downgradient ranks
4-GW1S-02	1	0.5	u	
4-GW1S-04	2	0.5	u	
3-GW37S-02	3	0.5	d	3
2-GW39DS-02	4	0.5	d	4
3-GW37S-04	5	0.5	d	5
2-GW39DS-04	6	0.75	d	6
3-GW12D-02	7	0.8	d	7
3-GW12D-04	8	0.85	d	8
2-GW38DS-02	9	1.6	d	9
2-GW20S-02	10	2.9	u	
2-GW44DS-04	11	3.55	d	11
2-GW42DS-04	12	4	d	12
2-GW41DS-02	13	4.1	d	13
2-GW44DS-02	14	4.2	d	14
2-GW42DS-02	15	4.4	d	15
2-GW41DS-04	16	6.1	d	16
2-GW43DS-02	17	7	d	17
2-GW43DS-04	18	7.9	d	18
2-GW45DS-02	19	8.8	d	19
2-GW20S-04	20	9.3	u	
2-GW45DS-04	21	10.45	d	21
2-GW40DS-04	22	13.8	d	22
2-GW40DS-02	23	14.1	d	23
2-GW46DS-04	24	22.1	d	24
2-GW46DS-02	25	25.2	d	25
2-GW47DS-02	26	34.95	d	26
2-GW47DS-04	27	38.4	d	27

Compute W for downgradient wells

W= 69

Large Values of W indicate contamination of downgradient wells.

Compute Z-score 46

Z= 1.536 14.65

Downgradient > Upgradient? NO YES if downgradients results statistically exceed upgradient when Z_p>1.645

Sample name	Sample Date	Analyte Name	Result (ug/L)	Data Qualifier	Units	Value	lognormal value	Reporting Limit	Reporting Limit	Method Detection Limit	Dilution Factor
4-GW1S-02	2-Jun-04	ARSENIC, DISSOLVED	0.04	J	ug/L	0.04	-1.3979	0.001	1	0.000034	1
4-GW1S-04	6-Oct-04	ARSENIC, DISSOLVED	0.14	U	ug/L	0.5	-0.3010	0.001	1	0.000034	1
2-GW20S-02	3-Jun-04	ARSENIC, DISSOLVED	2.2		ug/L	2.2	0.3424	0.001	1	0.000034	1
2-GW20S-04	6-Oct-04	ARSENIC, DISSOLVED	7.3	J	ug/L	7.3	0.8633	0.001	1	0.000034	1

Frequency of Detection:	3	/	4	Standard Deviation:	3.33
Range of Detections:	0.04	-	7.3	Shapiro Wilk Normal W_{calc}	0.16
Average of Detections:	3.18			Lognormal standard Deviation:	0.97
Average of All Date:	2.51			Shapiro Wilk Normal W_{calc}	0.58
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.748
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

3-GW37S-02	2-Jun-04	ARSENIC, DISSOLVED	0.33	U	ug/L	0.5	-0.3010	0.001	1	0.000034	1
2-GW39DS-02	1-Jun-04	ARSENIC, DISSOLVED	0.43	U	ug/L	0.5	-0.3010	0.001	1	0.000034	1
3-GW37S-04	5-Oct-04	ARSENIC, DISSOLVED	0.2	U	ug/L	0.5	-0.3010	0.001	1	0.000034	1
2-GW39DS-04	5-Oct-04	ARSENIC, DISSOLVED	0.44	U	ug/L	0.5	-0.3010	0.001	1	0.000034	1
3-GW12D-04	5-Oct-04	ARSENIC, DISSOLVED	0.72	J	ug/L	0.72	-0.1427	0.001	1	0.000034	1
3-GW12D-02	2-Jun-04	ARSENIC, DISSOLVED	0.78	J	ug/L	0.78	-0.1079	0.001	1	0.000034	1
2-GW44DS-02	2-Jun-04	ARSENIC, DISSOLVED	1.8		ug/L	1.8	0.2553	0.001	1	0.000034	1
2-GW44DS-04	6-Oct-04	ARSENIC, DISSOLVED	0	U	ug/L	2	0.3010	0.004	4	0.0034	1
2-GW38DS-02	3-Jun-04	ARSENIC, DISSOLVED	2.7		ug/L	2.7	0.4314	0.001	1	0.000034	1
2-GW42DS-04	6-Oct-04	ARSENIC, DISSOLVED	3.5		ug/L	3.5	0.5441	0.001	1	0.000034	1
2-GW41DS-02	2-Jun-04	ARSENIC, DISSOLVED	4.5		ug/L	4.5	0.6532	0.001	1	0.000034	1
2-GW42DS-02	2-Jun-04	ARSENIC, DISSOLVED	4.9		ug/L	4.9	0.6902	0.001	1	0.000034	1
2-GW41DS-04	5-Oct-04	ARSENIC, DISSOLVED	5.3		ug/L	5.3	0.7243	0.001	1	0.000034	1
2-GW45DS-04	6-Oct-04	ARSENIC, DISSOLVED	6.75	J	ug/L	6.75	0.8293	0.001	1	0.000034	1
2-GW43DS-02	3-Jun-04	ARSENIC, DISSOLVED	7.9		ug/L	7.9	0.8976	0.001	1	0.000034	1
2-GW45DS-02	2-Jun-04	ARSENIC, DISSOLVED	9.9		ug/L	9.9	0.9956	0.005	5	0.00017	5
2-GW43DS-04	6-Oct-04	ARSENIC, DISSOLVED	10.2	J	ug/L	10.2	1.0086	0.001	1	0.000034	1
2-GW40DS-04	6-Oct-04	ARSENIC, DISSOLVED	10.3	J	ug/L	10.3	1.0128	0.001	1	0.000034	1
2-GW40DS-02	1-Jun-04	ARSENIC, DISSOLVED	10.7		ug/L	10.7	1.0294	0.005	5	0.00017	5
2-GW46DS-04	6-Oct-04	ARSENIC, DISSOLVED	21.4	J	ug/L	21.4	1.3304	0.001	1	0.000034	1
2-GW46DS-02	2-Jun-04	ARSENIC, DISSOLVED	22.6		ug/L	22.6	1.3541	0.005	5	0.00017	5
2-GW47DS-02	3-Jun-04	ARSENIC, DISSOLVED	33.55		ug/L	33.55	1.5257	0.001	1	0.000034	1
2-GW47DS-04	5-Oct-04	ARSENIC, DISSOLVED	36.8		ug/L	36.8	1.5658	0.001	1	0.000034	1

Frequency of Detection:	18	/	23	Standard Deviation:	10.38
Range of Detections:	0.72	-	36.8	Shapiro Wilk Normal W_{calc}	0.02
Average of Detections:	10.8			Lognormal standard Deviation:	0.61
Average of All Date:	8.62			Shapiro Wilk Normal W_{calc}	0.33
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.914
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

Shapiro Wilk Test does not indicate that downgradient data sets are normally or lognormally distributed. Therefore, non-parametric ANOVA is the appropiate method.

NON PARAM ANOVA

ARSENIC, DISSOLVED

m= 4 Number of upgradient wells

n= 23 Number of downgradient wells

N= 27 Total number of wells

Combine upgradient and downgradient data and rank

Assign upgradient values "u" and downgradient values "d"

Well	Rank	Value	Class	downgradient ranks
4-GW1S-02	1	0.04	u	
4-GW1S-04	2	0.5	u	
3-GW37S-02	3	0.5	d	3
2-GW39DS-02	4	0.5	d	4
3-GW37S-04	5	0.5	d	5
2-GW39DS-04	6	0.5	d	6
3-GW12D-04	7	0.72	d	7
3-GW12D-02	8	0.78	d	8
2-GW44DS-02	9	1.8	d	9
2-GW44DS-04	10	2	d	10
2-GW20S-02	11	2.2	u	
2-GW38DS-02	12	2.7	d	12
2-GW42DS-04	13	3.5	d	13
2-GW41DS-02	14	4.5	d	14
2-GW42DS-02	15	4.9	d	15
2-GW41DS-04	16	5.3	d	16
2-GW45DS-04	17	6.75	d	17
2-GW20S-04	18	7.3	u	
2-GW43DS-02	19	7.9	d	19
2-GW45DS-02	20	9.9	d	20
2-GW43DS-04	21	10.2	d	21
2-GW40DS-04	22	10.3	d	22
2-GW40DS-02	23	10.7	d	23
2-GW46DS-04	24	21.4	d	24
2-GW46DS-02	25	22.6	d	25
2-GW47DS-02	26	33.55	d	26
2-GW47DS-04	27	36.8	d	27

Compute W for downgradient wells

W= 70

Large Values of W indicate contamination of downgradient wells.

Compute Z-score 46

Z= 1.604 14.65

Downgradient > Upgradient? NO YES if downgradients results statistically exceed upgradient when Z_p>1.645

Sample name	Sample Date	Analyte Name	Result (ug/L)	Data Qualifier	Units	Value	Reporting Limit	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW20S-02	3-Jun-04	CADMIUM, TOTAL	0.2		ug/L	0.2	0.0001	0.1	0.000034	1
4-GW1S-04	6-Oct-04	CADMIUM, TOTAL	0.04	U	ug/L	0.5	0.001	1	0.000034	1
2-GW1S-02	2-Jun-04	CADMIUM, TOTAL	0.1		ug/L	0.1	0.0001	0.1	0.000034	1
2-GW20S-04	6-Oct-04	CADMIUM, TOTAL	0.04	U	ug/L	0.5	0.001	1	0.000034	1

Frequency of Detection:	2	/	4
Range of Detections:	0.1	-	0.2
Average of Detections:	0.15		
Average of All Date:	0.33		
Non-Detects >50%:	NO		

3-GW46S-02	2-Jun-04	CADMIUM, TOTAL	0	U	ug/L	0.25	0.0005	0.5	0.00017	5
2-GW42DS-02	2-Jun-04	CADMIUM, TOTAL		U	ug/L	0.25	0.0005	0.5	0.00017	5
3-GW44DS-02	2-Jun-04	CADMIUM, TOTAL	0	U	ug/L	0.5	0.001	1	0.00034	10
2-GW43DS-02	3-Jun-04	CADMIUM, TOTAL	0	U	ug/L	0.5	0.001	1	0.00034	10
3-GW47DS-02	3-Jun-04	CADMIUM, TOTAL		U	ug/L	0.25	0.0005	0.5	0.00017	5
3-GW38DS-02	3-Jun-04	CADMIUM, TOTAL	0.08	J	ug/L	0.08	0.0001	0.1	0.000034	1
3-GW37S-02	2-Jun-04	CADMIUM, TOTAL	0.2		ug/L	0.2	0.0001	0.1	0.000034	1
3-GW12D-02	2-Jun-04	CADMIUM, TOTAL	0.05	U	ug/L	0.05	0.0001	0.1	0.000034	1
2-GW45DS-02	2-Jun-04	CADMIUM, TOTAL	0.19	U	ug/L	0.25	0.0005	0.5	0.00017	5
2-GW41DS-02	2-Jun-04	CADMIUM, TOTAL	0	U	ug/L	0.25	0.0005	0.5	0.00017	5
2-GW40DS-02	1-Jun-04	CADMIUM, TOTAL	0	U	ug/L	0.25	0.0005	0.5	0.00017	5
2-GW39DS-02	1-Jun-04	CADMIUM, TOTAL	0	U	ug/L	0.05	0.0001	0.1	0.000034	1
3-GW37S-04	5-Oct-04	CADMIUM, TOTAL	0.09	J	ug/L	0.09	0.001	1	0.000034	1
2-GW39DS-04	5-Oct-04	CADMIUM, TOTAL	0.12	J	ug/L	0.12	0.001	1	0.000034	1
2-GW41DS-04	5-Oct-04	CADMIUM, TOTAL	0.11	J	ug/L	0.11	0.001	1	0.000034	1
3-GW12D-04	5-Oct-04	CADMIUM, TOTAL	0.09	J	ug/L	0.09	0.001	1	0.000034	1
2-GW40DS-04	5-Oct-04	CADMIUM, TOTAL		U	ug/L	0.5	0.001	1	0.000034	1
2-GW45DS-04	6-Oct-04	CADMIUM, TOTAL		U	ug/L	0.5	0.001	1	0.000034	1
2-GW46DS-04	6-Oct-04	CADMIUM, TOTAL	0	U	ug/L	1	0.002	2	0.000068	2
2-GW42DS-04	6-Oct-04	CADMIUM, TOTAL	0	U	ug/L	0.5	0.001	1	0.000034	1
2-GW43DS-04	6-Oct-04	CADMIUM, TOTAL	0	U	ug/L	0.5	0.001	1	0.000034	1
2-GW44DS-04	6-Oct-04	CADMIUM, TOTAL	0	U	ug/L	2.5	0.005	5	0.0004	1
2-GW47DS-04	5-Oct-04	CADMIUM, TOTAL	0	U	ug/L	0.5	0.001	1	0.000034	1

Frequency of Detection:	6	/	23
Range of Detections:	0.05	-	2.5
Average of Detections:	0.12		
Average of All Date:	0.40		
Non-Detects >50%:	YES		

TWO SAMPLE TEST OF PROPORTIONS

1.0001	C = Largest upgradient non-detect value plus 0.0001	0.043	p_d = Proportion of Downgradient samples that exceed C
1	K_d = Downgradient measurements that exceed C	0.000	p_u = Proportion of Upgradient samples that exceed C
0	K_u = Upgradient measurements that exceed C	0.037	p = Proportion of samples that exceed C
23	n = Number of Downgradient Samples	0.425	Z_p = Test Statistic
4	m = Number of Upgradient Samples	NO	Downgradients results statistically exceed upgradient when Z_p>1.645

Sample name	Sample Date	Analyte Name	Result (ug/L)	Data Qualifier	Units	Value	lognormal value	Reporting Limit	Reporting Limit	Method Detection Limit	Dilution Factor
4-GW1S-04	6-Oct-04	CHROMIUM, TOTAL	0.3	J	ug/L	0.3	-0.5229	0.001	1	0.000031	1
4-GW1S-02	2-Jun-04	CHROMIUM, TOTAL	0.23	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
2-GW20S-04	6-Oct-04	CHROMIUM, TOTAL	1.1		ug/L	1.1	0.0414	0.001	1	0.000031	1
2-GW20S-02	3-Jun-04	CHROMIUM, TOTAL	1.4		ug/L	1.4	0.1461	0.001	1	0.000031	1

Frequency of Detection:	3	/	4	Standard Deviation:	0.51
Range of Detections:	0.3	-	1.4	Shapiro Wilk Normal W_{calc}	1.09
Average of Detections:	0.93			Lognormal standard Deviation:	0.31
Average of All Date:	0.83			Shapiro Wilk Normal W_{calc}	1.81
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.748
				Pass Shapiro Wilk (W_{calc}>W_{test})?	YES

3-GW37S-02	5-Oct-04	CHROMIUM, TOTAL	0.21	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
3-GW12D-02	2-Jun-04	CHROMIUM, TOTAL	0.22	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
3-GW12D-04	5-Oct-04	CHROMIUM, TOTAL	0.26	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
3-GW37S-02	2-Jun-04	CHROMIUM, TOTAL	0.34	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
2-GW39DS-02	1-Jun-04	CHROMIUM, TOTAL	0.94	J	ug/L	0.94	-0.0269	0.001	1	0.000031	1
2-GW39DS-04	5-Oct-04	CHROMIUM, TOTAL	0.94	J	ug/L	0.94	-0.0269	0.001	1	0.000031	1
2-GW47DS-02	3-Jun-04	CHROMIUM, TOTAL	2.5		ug/L	2.5	0.3979	0.001	1	0.000031	1
2-GW47DS-04	5-Oct-04	CHROMIUM, TOTAL	2.9		ug/L	2.9	0.4624	0.001	1	0.000031	1
2-GW38DS-02	3-Jun-04	CHROMIUM, TOTAL	3.1		ug/L	3.1	0.4914	0.001	1	0.000031	1
2-GW44DS-04	6-Oct-04	CHROMIUM, TOTAL	5	J	ug/L	5	0.6990	0.01	10	0.0008	1
2-GW45DS-04	6-Oct-04	CHROMIUM, TOTAL	5.45		ug/L	5.45	0.7364	0.001	1	0.000031	1
2-GW42DS-04	6-Oct-04	CHROMIUM, TOTAL	5.8		ug/L	5.8	0.7634	0.001	1	0.000031	1
2-GW44DS-02	2-Jun-04	CHROMIUM, TOTAL	6.4		ug/L	6.4	0.8062	0.001	1	0.000031	1
2-GW43DS-02	3-Jun-04	CHROMIUM, TOTAL	6.9		ug/L	6.9	0.8388	0.001	1	0.000031	1
2-GW43DS-04	6-Oct-04	CHROMIUM, TOTAL	7.5		ug/L	7.5	0.8751	0.001	1	0.000031	1
2-GW40DS-04	5-Oct-04	CHROMIUM, TOTAL	7.5		ug/L	7.5	0.8751	0.001	1	0.000031	1
2-GW45DS-02	2-Jun-04	CHROMIUM, TOTAL	8		ug/L	8	0.9031	0.005	5	0.000155	5
2-GW46DS-04	6-Oct-04	CHROMIUM, TOTAL	8.7		ug/L	8.7	0.9395	0.001	1	0.000031	1
2-GW46DS-02	2-Jun-04	CHROMIUM, TOTAL	10.6		ug/L	10.6	1.0253	0.005	5	0.000155	5
2-GW41DS-04	5-Oct-04	CHROMIUM, TOTAL	13.5		ug/L	13.5	1.1303	0.001	1	0.000031	1
2-GW41DS-02	2-Jun-04	CHROMIUM, TOTAL	16.2		ug/L	16.2	1.2095	0.001	1	0.000031	1
2-GW42DS-02	2-Jun-04	CHROMIUM, TOTAL	16.4		ug/L	16.4	1.2148	0.001	1	0.000031	1
2-GW40DS-02	1-Jun-04	CHROMIUM, TOTAL	29.1		ug/L	29.1	1.4639	0.005	5	0.000155	5

Frequency of Detection:	19	/	23	Standard Deviation:	6.82
Range of Detections:	0.94	-	29.1	Shapiro Wilk Normal W_{calc}	0.03
Average of Detections:	8.29			Lognormal standard Deviation:	0.55
Average of All Date:	6.93			Shapiro Wilk Normal W_{calc}	0.37
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.914
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

Shapiro Wilk Test does not indicate that downgradient data sets are normally or lognormally distributed. Therefore, non-parametric ANOVA is the appropiate method.

CHROMIUM, TOTAL

NON PARAM ANOVA

m= 4 Number of upgradient wells

n= 23 Number of downgradient wells

N= 27 Total number of wells

Combine upgradient and downgradient data and rank

Assign upgradient values "u" and downgradient values "d"

Well	Rank	Value	Class	downgradient ranks
4-GW1S-04	1	0.3	u	
4-GW1S-02	2	0.5	u	
3-GW37S-02	3	0.5	d	3
3-GW12D-02	4	0.5	d	4
3-GW12D-04	5	0.5	d	5
3-GW37S-02	6	0.5	d	6
2-GW39DS-02	7	0.94	d	7
2-GW39DS-04	8	0.94	d	8
2-GW20S-04	9	1.1	u	
2-GW20S-02	10	1.4	u	
2-GW47DS-02	11	2.5	d	11
2-GW47DS-04	12	2.9	d	12
2-GW38DS-02	13	3.1	d	13
2-GW44DS-04	14	5	d	14
2-GW45DS-04	15	5.45	d	15
2-GW42DS-04	16	5.8	d	16
2-GW44DS-02	17	6.4	d	17
2-GW43DS-02	18	6.9	d	18
2-GW43DS-04	19	7.5	d	19
2-GW40DS-04	20	7.5	d	20
2-GW45DS-02	21	8	d	21
2-GW46DS-04	22	8.7	d	22
2-GW46DS-02	23	10.6	d	23
2-GW41DS-04	24	13.5	d	24
2-GW41DS-02	25	16.2	d	25
2-GW42DS-02	26	16.4	d	26
2-GW40DS-02	27	29.1	d	27

Compute W for downgradient wells

W= 80

Large Values of W indicate contamination of downgradient wells.

Compute Z-score 46

Z= 2.2865 14.65

Downgradient > Upgradient? YES YES if downgradients results statistically exceed upgradient when Z_p>1.645

Sample name	Sample Date	Analyte Name	Result (ug/L)	Data Qualifier	Units	Value	lognormal value	Reporting Limit	Reporting Limit	Method Detection Limit	Dilution Factor
4-GW1S-04	6-Oct-04	CHROMIUM, DISSOLVED	0.67	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
4-GW1S-02	2-Jun-04	CHROMIUM, DISSOLVED	0.15	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
2-GW20S-04	6-Oct-04	CHROMIUM, DISSOLVED	0.38	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
2-GW20S-02	3-Jun-04	CHROMIUM, DISSOLVED	0.56	J	ug/L	0.56	-0.2518	0.001	1	0.000031	1

Frequency of Detection:	1	/	4	Standard Deviation:	0.03
Range of Detections:		-	0.56	Shapiro Wilk Normal W_{calc}	15.27
Average of Detections:	0.56			Lognormal standard Deviation:	0.02
Average of All Date:	0.52			Shapiro Wilk Normal W_{calc}	18.62
Non-Detects >50%:	YES			Shapiro Wilk Test W_{test}	0.748
				Pass Shapiro Wilk (W_{calc}>W_{test})?	YES

3-GW37S-02	2-Jun-04	CHROMIUM, DISSOLVED	0.31	J	ug/L	0.31	-0.5086	0.001	1	0.000031	1
2-GW39DS-02	1-Jun-04	CHROMIUM, DISSOLVED	0.38	J	ug/L	0.38	-0.4202	0.001	1	0.000031	1
3-GW12D-02	2-Jun-04	CHROMIUM, DISSOLVED	0.1	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
3-GW12D-04	5-Oct-04	CHROMIUM, DISSOLVED	0.26	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
3-GW37S-04	5-Oct-04	CHROMIUM, DISSOLVED	0.6	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
2-GW39DS-04	5-Oct-04	CHROMIUM, DISSOLVED	0.23	U	ug/L	0.5	-0.3010	0.001	1	0.000031	1
2-GW47DS-02	3-Jun-04	CHROMIUM, DISSOLVED	0.8	J	ug/L	0.8	-0.0969	0.001	1	0.000031	1
2-GW38DS-02	3-Jun-04	CHROMIUM, DISSOLVED	1.2		ug/L	1.2	0.0792	0.001	1	0.000031	1
2-GW47DS-04	5-Oct-04	CHROMIUM, DISSOLVED	1.55		ug/L	1.55	0.1903	0.001	1	0.000031	1
2-GW44DS-02	2-Jun-04	CHROMIUM, DISSOLVED	1.9		ug/L	1.9	0.2788	0.001	1	0.000031	1
2-GW40DS-02	1-Jun-04	CHROMIUM, DISSOLVED	3.77	J	ug/L	3.77	0.5763	0.005	5	0.000155	5
2-GW45DS-02	2-Jun-04	CHROMIUM, DISSOLVED	4.54	J	ug/L	4.54	0.6571	0.005	5	0.000155	5
2-GW45DS-04	6-Oct-04	CHROMIUM, DISSOLVED	4.75		ug/L	4.75	0.6767	0.001	1	0.000031	1
2-GW42DS-04	3-Jun-04	CHROMIUM, DISSOLVED	5		ug/L	5	0.6990	0.001	1	0.000031	1
2-GW40DS-04	6-Oct-04	CHROMIUM, DISSOLVED	5		ug/L	5	0.6990	0.001	1	0.000031	1
2-GW44DS-04	6-Oct-04	CHROMIUM, DISSOLVED	2.2	U	ug/L	5	0.6990	0.01	10	0.0008	1
2-GW43DS-02	3-Jun-04	CHROMIUM, DISSOLVED	6.3		ug/L	6.3	0.7993	0.001	1	0.000031	1
2-GW43DS-04	6-Oct-04	CHROMIUM, DISSOLVED	6.9		ug/L	6.9	0.8388	0.001	1	0.000031	1
2-GW42DS-02	2-Jun-04	CHROMIUM, DISSOLVED	7.6		ug/L	7.6	0.8808	0.001	1	0.000031	1
2-GW46DS-04	6-Oct-04	CHROMIUM, DISSOLVED	8.1		ug/L	8.1	0.9085	0.001	1	0.000031	1
2-GW46DS-02	2-Jun-04	CHROMIUM, DISSOLVED	8.2		ug/L	8.2	0.9138	0.005	5	0.000155	5
2-GW41DS-02	2-Jun-04	CHROMIUM, DISSOLVED	9.1		ug/L	9.1	0.9590	0.001	1	0.000031	1
2-GW41DS-04	5-Oct-04	CHROMIUM, DISSOLVED	10.8		ug/L	10.8	1.0334	0.001	1	0.000031	1

Frequency of Detection:	18	/	23	Standard Deviation:	3.31
Range of Detections:	0.31	-	10.8	Shapiro Wilk Normal W_{calc}	0.06
Average of Detections:	4.79			Lognormal standard Deviation:	0.53
Average of All Date:	4.05			Shapiro Wilk Normal W_{calc}	0.38
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.914
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

Shapiro Wilk Test does not indicate that downgradient data sets are normally or lognormally distributed. Therefore, non-parametric ANOVA is the appropiate method.

NON PARAM ANOVA

CHROMIUM, DISSOLVED

m= 4 Number of upgradient wells

n= 23 Number of downgradient wells

N= 27 Total number of wells

Combine upgradient and downgradient data and rank

Assign upgradient values "u" and downgradient values "d"

Well	Rank	Value	Class	downgradient ranks
3-GW37S-02	1	0.31	d	1
2-GW39DS-02	2	0.38	d	2
4-GW1S-04	3	0.5	u	
4-GW1S-02	4	0.5	u	
2-GW20S-04	5	0.5	u	
3-GW12D-02	6	0.5	d	6
3-GW12D-04	7	0.5	d	7
3-GW37S-04	8	0.5	d	8
2-GW39DS-04	9	0.5	d	9
2-GW20S-02	10	0.56	u	
2-GW47DS-02	11	0.8	d	11
2-GW38DS-02	12	1.2	d	12
2-GW47DS-04	13	1.55	d	13
2-GW44DS-02	14	1.9	d	14
2-GW40DS-02	15	3.77	d	15
2-GW45DS-02	16	4.54	d	16
2-GW45DS-04	17	4.75	d	17
2-GW42DS-04	18	5	d	18
2-GW40DS-04	19	5	d	19
2-GW44DS-04	20	5	d	20
2-GW43DS-02	21	6.3	d	21
2-GW43DS-04	22	6.9	d	22
2-GW42DS-02	23	7.6	d	23
2-GW46DS-04	24	8.1	d	24
2-GW46DS-02	25	8.2	d	25
2-GW41DS-02	26	9.1	d	26
2-GW41DS-04	27	10.8	d	27

Compute W for downgradient wells

W= 80

Large Values of W indicate contamination of downgradient wells.

Compute Z-score 46

Z= 2.286 14.65

Downgradient > Upgradient? YES YES if downgradients results statistically exceed upgradient when Z_p>1.645

Sample name	Sample Date	Analyte Name	Result (ug/L)	Data Qualifier	Units	Value	lognormal value	Reporting Limit	Reporting Limit	Method Detection Limit	Dilution Factor
4-GW1S-02	2-Jun-04	COPPER, TOTAL	0.68	J	ug/L	0.68	-0.1675	0.001	1	0.000172	1
4-GW1S-04	6-Oct-04	COPPER, TOTAL	1.4		ug/L	1.4	0.1461	0.001	1	0.000172	1
2-GW20S-04	6-Oct-04	COPPER, TOTAL	2.5		ug/L	2.5	0.3979	0.001	1	0.000172	1
2-GW20S-02	3-Jun-04	COPPER, TOTAL	3.5		ug/L	3.5	0.5441	0.001	1	0.000172	1

Frequency of Detection:	4	/	4	Standard Deviation:	1.24
Range of Detections:	0.68	-	3.5	Shapiro Wilk Normal W_{calc}	0.46
Average of Detections:	2.02			Lognormal standard Deviation:	0.31
Average of All Date:	2.02			Shapiro Wilk Normal W_{calc}	1.82
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.748
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

2-GW39DS-02	1-Jun-04	COPPER, TOTAL	0.29	J	ug/L	0.29	-0.5376	0.001	1	0.000172	1
2-GW12D-02	2-Jun-04	COPPER, TOTAL	0.55	J	ug/L	0.55	-0.2596	0.001	1	0.000172	1
2-GW12D-04	5-Oct-04	COPPER, TOTAL	0.73	J	ug/L	0.73	-0.1367	0.001	1	0.000172	1
2-GW45DS-02	2-Jun-04	COPPER, TOTAL	1.08	J	ug/L	1.08	0.0334	0.005	5	0.00086	5
2-GW39DS-04	5-Oct-04	COPPER, TOTAL	1.2		ug/L	1.2	0.0792	0.001	1	0.000172	1
3-GW47DS-02	3-Jun-04	COPPER, TOTAL	1.25		ug/L	1.25	0.0969	0.001	1	0.000172	1
3-GW47DS-04	5-Oct-04	COPPER, TOTAL	1.35		ug/L	1.35	0.1303	0.001	1	0.000172	1
2-GW42DS-04	6-Oct-04	COPPER, TOTAL	1.4		ug/L	1.4	0.1461	0.001	1	0.000172	1
3-GW37S-04	5-Oct-04	COPPER, TOTAL	1.7		ug/L	1.7	0.2304	0.001	1	0.000172	1
2-GW41DS-04	5-Oct-04	COPPER, TOTAL	2.1		ug/L	2.1	0.3222	0.001	1	0.000172	1
2-GW46DS-02	2-Jun-04	COPPER, TOTAL	2.2	J	ug/L	2.2	0.3424	0.005	5	0.00086	5
3-GW37S-02	2-Jun-04	COPPER, TOTAL	2.2		ug/L	2.2	0.3424	0.001	1	0.000172	1
2-GW38DS-02	3-Jun-04	COPPER, TOTAL	2.6		ug/L	2.6	0.4150	0.001	1	0.000172	1
2-GW45DS-04	3-Jun-04	COPPER, TOTAL	2.7		ug/L	2.7	0.4314	0.001	1	0.000172	1
2-GW43DS-04	6-Oct-04	COPPER, TOTAL	2.8		ug/L	2.8	0.4472	0.001	1	0.000172	1
2-GW40DS-02	1-Jun-04	COPPER, TOTAL	3.06	J	ug/L	3.06	0.4857	0.005	5	0.00086	5
2-GW42DS-02	2-Jun-04	COPPER, TOTAL	3.2		ug/L	3.2	0.5051	0.001	1	0.000172	1
2-GW40DS-04	5-Oct-04	COPPER, TOTAL	3.3		ug/L	3.3	0.5185	0.001	1	0.000172	1
2-GW41DS-02	2-Jun-04	COPPER, TOTAL	3.7		ug/L	3.7	0.5682	0.001	1	0.000172	1
2-GW46DS-04	6-Oct-04	COPPER, TOTAL	4.3		ug/L	4.3	0.6335	0.001	1	0.000172	1
2-GW44DS-04	6-Oct-04	COPPER, TOTAL	0	U	ug/L	5	0.6990	0.01	10	0.0018	1
2-GW43DS-02	3-Jun-04	COPPER, TOTAL	5.5		ug/L	5.5	0.7404	0.001	1	0.000172	1
2-GW44DS-02	2-Jun-04	COPPER, TOTAL	6.8		ug/L	6.8	0.8325	0.001	1	0.000172	1

Frequency of Detection:	22	/	23	Standard Deviation:	1.66
Range of Detections:	0.29	-	6.8	Shapiro Wilk Normal W_{calc}	0.12
Average of Detections:	2.46			Lognormal standard Deviation:	0.33
Average of All Date:	2.57			Shapiro Wilk Normal W_{calc}	0.63
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.914
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

Shapiro Wilk Test does not indicate that downgradient data sets are normally or lognormally distributed. Therefore, non-parametric ANOVA is the appropiate method.

COPPER, TOTAL

NON PARAM ANOVA

m= 4 Number of upgradient wells

n= 23 Number of downgradient wells

N= 27 Total number of wells

Combine upgradient and downgradient data and rank

Assign upgradient values "u" and downgradient values "d"

Well	Rank	Value	Class	downgradient ranks
2-GW39DS-02	1	0.29	d	1
2-GW12D-02	2	0.55	d	2
4-GW1S-02	3	0.68	u	
2-GW12D-04	4	0.73	d	4
2-GW45DS-02	5	1.08	d	5
2-GW39DS-04	6	1.2	d	6
3-GW47DS-02	7	1.25	d	7
3-GW47DS-04	8	1.35	d	8
2-GW42DS-04	9	1.4	d	9
3-GW37S-04	10	1.4	u	
4-GW1S-04	11	1.7	d	11
2-GW41DS-04	12	2.1	d	12
2-GW46DS-02	13	2.2	d	13
3-GW37S-02	14	2.2	d	14
2-GW20S-04	15	2.5	u	
2-GW38DS-02	16	2.6	d	16
2-GW45DS-04	17	2.7	d	17
2-GW43DS-04	18	2.8	d	18
2-GW40DS-02	19	3.06	d	19
2-GW42DS-02	20	3.3	d	20
2-GW40DS-04	21	3.2	d	21
2-GW20S-02	22	3.5	u	
2-GW41DS-02	23	3.7	d	23
2-GW46DS-04	24	4.3	d	24
2-GW44DS-04	25	5	d	25
2-GW43DS-02	26	5.5	d	26
2-GW44DS-02	27	6.8	d	27

Compute W for downgradient wells

W= 52

Large Values of W indicate contamination of downgradient wells.

Compute Z-score 46

Z= 0.3754 14.65

Downgradient > Upgradient? NO YES if downgradients results statistically exceed upgradient when Z_p>1.645

Sample name	Sample Date	Analyte Name	Result (ug/L)	Data Qualifier	Units	Value	lognormal value	Reporting Limit	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW20S-04	6-Oct-04	COPPER, DISSOLVED	0.21	J	ug/L	0.21	-0.6778	0.001	1	0.000172	1
2-GW20S-02	3-Jun-04	COPPER, DISSOLVED	0.27	J	ug/L	0.27	-0.5686	0.001	1	0.000172	1
2-GW1S-02	2-Jun-04	COPPER, DISSOLVED	0.68	J	ug/L	0.68	-0.1675	0.001	1	0.000172	1
2-GW1S-04	6-Oct-04	COPPER, DISSOLVED	0.78	J	ug/L	0.78	-0.1079	0.001	1	0.000172	1

Frequency of Detection:	4	/	4	Standard Deviation:	0.29
Range of Detections:	0.21	-	0.78	Shapiro Wilk Normal W_{calc}	1.86
Average of Detections:	0.49			Lognormal standard Deviation:	0.28
Average of All Date:	0.49			Shapiro Wilk Normal W_{calc}	1.88
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.748
				Pass Shapiro Wilk (W_{calc}>W_{test})?	YES

2-GW39DS-04	5-Oct-04	COPPER, DISSOLVED	0.19	J	ug/L	0.19	-0.7212	0.001	1	0.000172	1
2-GW39DS-02	1-Jun-04	COPPER, DISSOLVED	0.2	J	ug/L	0.2	-0.6990	0.001	1	0.000172	1
2-GW12D-02	2-Jun-04	COPPER, DISSOLVED	0.26	J	ug/L	0.26	-0.5850	0.001	1	0.000172	1
2-GW44DS-02	2-Jun-04	COPPER, DISSOLVED	0.3	J	ug/L	0.3	-0.5229	0.001	1	0.000172	1
2-GW47DS-04	5-Oct-04	COPPER, DISSOLVED	0.39	J	ug/L	0.39	-0.4089	0.001	1	0.000172	1
3-GW42DS-02	2-Jun-04	COPPER, DISSOLVED	0.43	J	ug/L	0.43	-0.3665	0.001	1	0.000172	1
3-GW47DS-02	3-Jun-04	COPPER, DISSOLVED		U	ug/L	0.5	-0.3010	0.001	1	0.000172	1
2-GW43DS-02	3-Jun-04	COPPER, DISSOLVED	0.76	J	ug/L	0.76	-0.1192	0.001	1	0.000172	1
2-GW12D-04	5-Oct-04	COPPER, DISSOLVED	0.81	J	ug/L	0.81	-0.0915	0.001	1	0.000172	1
2-GW38DS-02	3-Jun-04	COPPER, DISSOLVED	0.81	J	ug/L	0.81	-0.0915	0.001	1	0.000172	1
3-GW37S-04	5-Oct-04	COPPER, DISSOLVED	0.84	J	ug/L	0.84	-0.0757	0.001	1	0.000172	1
3-GW42DS-02	6-Oct-04	COPPER, DISSOLVED	1.1		ug/L	1.1	0.0414	0.001	1	0.000172	1
2-GW46DS-02	2-Jun-04	COPPER, DISSOLVED	1.11	J	ug/L	1.11	0.0453	0.005	5	0.00086	5
2-GW41DS-04	5-Oct-04	COPPER, DISSOLVED	1.3		ug/L	1.3	0.1139	0.001	1	0.000172	1
2-GW45DS-04	6-Oct-04	COPPER, DISSOLVED	1.6		ug/L	1.6	0.2041	0.001	1	0.000172	1
2-GW437S-02	2-Jun-04	COPPER, DISSOLVED	1.6		ug/L	1.6	0.2041	0.001	1	0.000172	1
2-GW45DS-02	2-Jun-04	COPPER, DISSOLVED	0	U	ug/L	2.5	0.3979	0.005	5	0.00086	5
2-GW40DS-02	1-Jun-04	COPPER, DISSOLVED	0	U	ug/L	2.5	0.3979	0.005	5	0.00086	5
2-GW40DS-04	6-Oct-04	COPPER, DISSOLVED	2.7		ug/L	2.7	0.4314	0.001	1	0.000172	1
2-GW43DS-04	6-Oct-04	COPPER, DISSOLVED	2.8		ug/L	2.8	0.4472	0.001	1	0.000172	1
2-GW41DS-02	2-Jun-04	COPPER, DISSOLVED	3.2		ug/L	3.2	0.5051	0.001	1	0.000172	1
2-GW46DS-04	6-Oct-04	COPPER, DISSOLVED	3.8		ug/L	3.8	0.5798	0.001	1	0.000172	1
2-GW44DS-04	6-Oct-04	COPPER, DISSOLVED	0	U	ug/L	5	0.6990	0.01	10	0.0018	1

Frequency of Detection:	19	/	23	Standard Deviation:	1.31
Range of Detections:	0.19	-	3.8	Shapiro Wilk Normal W_{calc}	0.15
Average of Detections:	1.27			Lognormal standard Deviation:	0.42
Average of All Date:	1.51			Shapiro Wilk Normal W_{calc}	0.49
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.914
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

Shapiro Wilk Test does not indicate that downgradient data sets are normally or lognormally distributed. Therefore, non-parametric ANOVA is the appropiate method.

COPPER, DISSOLVED

NON PARAM ANOVA

m= 4 Number of upgradient wells

n= 23 Number of downgradient wells

N= 27 Total number of wells

Combine upgradient and downgradient data and rank

Assign upgradient values "u" and downgradient values "d"

Well	Rank	Value	Class	downgradient ranks
2-GW39DS-04	1	0.19	d	1
2-GW39DS-02	2	0.2	d	2
2-GW20S-04	3	0.21	u	
2-GW12D-02	4	0.26	d	4
2-GW20S-02	5	0.27	u	
2-GW44DS-02	6	0.3	d	6
2-GW47DS-04	7	0.39	d	7
3-GW42DS-02	8	0.43	d	8
3-GW47DS-02	9	0.5	d	9
2-GW1S-02	10	0.68	u	
2-GW43DS-02	11	0.76	d	11
2-GW1S-04	12	0.78	u	
2-GW12D-04	13	0.81	d	13
2-GW38DS-02	14	0.81	d	14
3-GW37S-04	15	0.84	d	15
3-GW42DS-02	16	1.1	d	16
2-GW46DS-02	17	1.11	d	17
2-GW41DS-04	18	1.3	d	18
2-GW45DS-04	19	1.6	d	19
2-GW437S-02	20	1.6	d	20
2-GW45DS-02	21	2.5	d	21
2-GW40DS-02	22	2.5	d	22
2-GW40DS-04	23	2.7	d	23
2-GW43DS-04	24	2.8	d	24
2-GW41DS-02	25	3.2	d	25
2-GW46DS-04	26	3.8	d	26
2-GW44DS-04	27	5	d	27

Compute W for downgradient wells

W= 72

Large Values of W indicate contamination of downgradient wells.

Compute Z-score 46

Z= 1.7404 14.65

Downgradient > Upgradient? YES YES if downgradients results statistically exceed upgradient when Z_p>1.645

Sample name	Sample Date	Analyte Name	Result (ug/L)	Data Qualifier	Units	Value	lognormal value	Reporting Limit	Reporting Limit	Method Detection Limit	Dilution Factor
4-GW1S-02	3-Jun-04	LEAD, TOTAL		u	ug/L	0.25	-0.6021	0.0005	0.5	0.000028	1
4-GW1S-04	2-Jun-04	LEAD, TOTAL		U	ug/L	0.25	-0.6021	0.0005	0.5	0.000028	1
2-GW20S-04	6-Oct-04	LEAD, TOTAL	0.5		ug/L	0.5	-0.3010	0.0005	0.5	0.000028	1
2-GW20S-02	6-Oct-04	LEAD, TOTAL	1.1		ug/L	1.1	0.0414	0.0005	0.5	0.000028	1

Frequency of Detection:	1	/	3	Standard Deviation:	0.14
Range of Detections:	0.25	-	0.5	Shapiro Wilk Normal W_{calc}	10.02
Average of Detections:	0.8			Lognormal standard Deviation:	0.17
Average of All Date:	0.53			Shapiro Wilk Normal W_{calc}	5.44
Non-Detects >50%:	YES			Shapiro Wilk Test W_{test}	0.748
				Pass Shapiro Wilk (W_{calc}>W_{test})?	YES

3-GW37S-04		LEAD, TOTAL	0.22	j	ug/L	0.22	-0.6576	0.0005	0.5	0.000028	1
3-GW12D-02		LEAD, TOTAL	0.5	u	ug/L	0.25	-0.6021	0.0005	0.5	0.000028	1
3-GW12D-04		LEAD, TOTAL	0.5	u	ug/L	0.25	-0.6021	0.0005	0.5	0.000028	1
2-GW39DS-02		LEAD, TOTAL	0.5	u	ug/L	0.25	-0.6021	0.0005	0.5	0.000028	1
2-GW43DS-02		LEAD, TOTAL	0.5	u	ug/L	0.25	-0.6021	0.0005	0.5	0.000028	1
3-GW37S-02		LEAD, TOTAL	0.5	u	ug/L	0.25	-0.6021	0.0005	0.5	0.000028	1
2-GW43DS-04		LEAD, TOTAL	0.26	j	ug/L	0.26	-0.5850	0.0005	0.5	0.000028	1
2-GW42DS-02		LEAD, TOTAL	0.32	j	ug/L	0.32	-0.4949	0.0005	0.5	0.000028	1
2-GW42DS-04		LEAD, TOTAL	0.35	j	ug/L	0.35	-0.4559	0.0005	0.5	0.000028	1
2-GW46DS-04		LEAD, TOTAL	0.35	j	ug/L	0.35	-0.4559	0.0005	0.5	0.000028	1
2-GW40DS-04		LEAD, TOTAL	0.4	j	ug/L	0.4	-0.3979	0.0005	0.5	0.000028	1
2-GW45DS-04		LEAD, TOTAL	0.475	j	ug/L	0.475	-0.3233	0.0005	0.5	0.000028	1
2-GW39DS-04		LEAD, TOTAL	0.49	j	ug/L	0.49	-0.3098	0.0005	0.5	0.000028	1
2-GW41DS-04		LEAD, TOTAL	0.5		ug/L	0.5	-0.3010	0.0005	0.5	0.000028	1
2-GW47DS-04		LEAD, TOTAL	0.51		ug/L	0.51	-0.2924	0.0005	0.5	0.000028	1
2-GW47DS-02		LEAD, TOTAL	0.59		ug/L	0.59	-0.2291	0.0005	0.5	0.000028	1
2-GW41DS-02		LEAD, TOTAL	0.8		ug/L	0.8	-0.0969	0.0005	0.5	0.000028	1
2-GW44DS-02		LEAD, TOTAL	0.9		ug/L	0.9	-0.0458	0.0005	0.5	0.000028	1
2-GW38DS-02		LEAD, TOTAL	1		ug/L	1	0.0000	0.0005	0.5	0.000028	1
2-GW46DS-02		LEAD, TOTAL	2.5	u	ug/L	1.25	0.0969	0.05	2.5	0.014	1
2-GW45DS-02		LEAD, TOTAL	2.5	u	ug/L	1.25	0.0969	0.0025	2.5	0.00014	5
2-GW40DS-02		LEAD, TOTAL	2.5	u	ug/L	1.25	0.0969	0.0025	2.5	0.00014	5
2-GW44DS-04		LEAD, TOTAL	10	u	ug/L	5	0.6990	0.0025	10	0.00014	5

Frequency of Detection:	14	/	23	Standard Deviation:	0.99
Range of Detections:	0.22	-	1.25	Shapiro Wilk Normal W_{calc}	0.15
Average of Detections:	0.51			Lognormal standard Deviation:	0.33
Average of All Date:	0.75			Shapiro Wilk Normal W_{calc}	0.60
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.914
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

Shapiro Wilk Test does not indicate that downgradient data sets are normally or lognormally distributed. Therefore, non-parametric ANOVA is the appropiate method.

LEAD, TOTAL

NON PARAM ANOVA

m= 3 Number of upgradient wells

n= 23 Number of downgradient wells

N= 26 Total number of wells

Combine upgradient and downgradient data and rank

Assign upgradient values "u" and downgradient values "d"

Well	Rank	Value	Class	downgradient ranks
3-GW37S-04	1	0.22	d	1
3-GW12D-02	2	0.25	d	2
3-GW12D-04	3	0.25	d	3
2-GW39DS-02	4	0.25	d	4
2-GW43DS-02	5	0.25	d	5
3-GW37S-02	6	0.25	d	6
4-GW1S-02	7	0.25	u	
4-GW1S-04	8	0.25	u	
2-GW43DS-04	9	0.26	d	9
2-GW42DS-02	10	0.32	d	10
2-GW42DS-04	11	0.35	d	11
2-GW46DS-04	12	0.35	d	12
2-GW40DS-04	13	0.4	d	13
2-GW45DS-04	14	0.475	d	14
2-GW39DS-04	15	0.49	d	15
2-GW41DS-04	16	0.5	d	16
2-GW20S-04	17	0.5	u	
2-GW47DS-04	18	0.51	d	18
2-GW47DS-02	19	0.59	d	19
2-GW41DS-02	20	0.8	d	20
2-GW44DS-02	21	0.9	d	21
2-GW38DS-02	22	1	d	22
2-GW20S-02	23	1.1	u	
2-GW46DS-02	24	1.25	d	24
2-GW45DS-02	25	1.25	d	25
2-GW40DS-02	26	1.25	d	26
2-GW44DS-04	27	5	d	27

Compute W for downgradient wells

W= 47

Large Values of W indicate contamination of downgradient wells.

Compute Z-score 34.5

Z= 0.963 12.46

Downgradient > Upgradient? NO YES if downgradients results statistically exceed upgradient when Z_p>1.645

Sample name	Sample Date	Analyte Name	Result (ug/L)	Data Qualifier	Units	Value	Reporting Limit	Reporting Limit	Method Detection Limit	Dilution Factor
2-GW20S-02	3-Jun-04	LEAD, DISSOLVED	0.11	U	ug/L	0.25	0.0005	0.5	0.000028	1
4-GW20S-04	6-Oct-04	LEAD, DISSOLVED	0.33	J	ug/L	0.33	0.0005	0.5	0.000028	1
2-GW1S-02	2-Jun-04	LEAD, DISSOLVED	0.23	U	ug/L	0.25	0.0005	0.5	0.000028	1
2-GW1S-04	6-Oct-04	LEAD, DISSOLVED	0.37	J	ug/L	0.37	0.0005	0.5	0.000028	1

Frequency of Detection:	2	/	4
Range of Detections:	0.33	-	0.37
Average of Detections:	0.35		
Average of All Date:	0.30		
Non-Detects >50%:	NO		

3-GW46S-02	2-Jun-04	LEAD, DISSOLVED	0.09	U	ug/L	0.25	0.0005	0.5	0.000028	1
2-GW42DS-02	2-Jun-04	LEAD, DISSOLVED	0.085	U	ug/L	0.25	0.0005	0.5	0.000028	1
3-GW44DS-02	2-Jun-04	LEAD, DISSOLVED	0.04	U	ug/L	0.25	0.0005	0.5	0.000028	1
2-GW43DS-02	3-Jun-04	LEAD, DISSOLVED	0	u	ug/L	0.25	0.0005	0.5	0.000028	1
3-GW47DS-02	3-Jun-04	LEAD, DISSOLVED	0.05	U	ug/L	0.25	0.0005	0.5	0.000028	1
3-GW38DS-02	3-Jun-04	LEAD, DISSOLVED	0.7		ug/L	0.7	0.0005	0.5	0.000028	1
3-GW37S-02	2-Jun-04	LEAD, DISSOLVED	0.29	U	ug/L	0.25	0.0005	0.5	0.000028	1
3-GW12D-02	2-Jun-04	LEAD, DISSOLVED	0.24	U	ug/L	0.25	0.0005	0.5	0.000028	1
2-GW45DS-02	2-Jun-04	LEAD, DISSOLVED	0.34	U	ug/L	1.25	0.0025	2.5	0.00014	5
2-GW41DS-02	2-Jun-04	LEAD, DISSOLVED	0.6	U	ug/L	1.25	0.0025	2.5	0.00014	5
2-GW40DS-02	1-Jun-04	LEAD, DISSOLVED	0.39	U	ug/L	1.25	0.0025	2.5	0.00014	5
2-GW39DS-02	1-Jun-04	LEAD, DISSOLVED	0.36	U	ug/L	0.25	0.0005	0.5	0.000028	1
3-GW37S-04	5-Oct-04	LEAD, DISSOLVED	0.36	J	ug/L	0.36	0.0005	0.5	0.000028	1
2-GW39DS-04	5-Oct-04	LEAD, DISSOLVED	0.29	J	ug/L	0.29	0.0005	0.5	0.000028	1
2-GW41DS-04	5-Oct-04	LEAD, DISSOLVED	0.37	J	ug/L	0.37	0.0005	0.5	0.000028	1
3-GW12D-04	5-Oct-04	LEAD, DISSOLVED	0.03	U	ug/L	0.25	0.0005	0.5	0.000028	1
2-GW40DS-04	5-Oct-04	LEAD, DISSOLVED	0.23	J	ug/L	0.23	0.0005	0.5	0.000028	1
2-GW45DS-04	6-Oct-04	LEAD, DISSOLVED	0.085	U	ug/L	0.25	0.0005	0.5	0.000028	1
2-GW46DS-04	6-Oct-04	LEAD, DISSOLVED	0.13	U	ug/L	0.25	0.0005	0.5	0.000028	1
2-GW42DS-04	6-Oct-04	LEAD, DISSOLVED	0.27	J	ug/L	0.27	0.0005	0.5	0.000028	1
2-GW43DS-04	6-Oct-04	LEAD, DISSOLVED	0.31	J	ug/L	0.31	0.0005	0.5	0.000028	1
2-GW44DS-04	6-Oct-04	LEAD, DISSOLVED	0.07	U	ug/L	0.25	0.0005	0.5	0.000028	1
2-GW47DS-04	6-Oct-04	LEAD, DISSOLVED	0	U	ug/L	5	0.01	10	0.0048	1

Frequency of Detection:	7	/	23
Range of Detections:	0.23	-	5
Average of Detections:	0.36		
Average of All Date:	0.62		
Non-Detects >50%:	YES		

TWO SAMPLE TEST OF PROPORTIONS

0.5001	C = Largest upgradient non-detect value plus 0.0001	0.217	p_d = Proportion of Downgradient samples that exceed C
5	K_d = Downgradient measurements that exceed C	0.000	p_u = Proportion of Upgradient samples that exceed C
0	K_u = Upgradient measurements that exceed C	0.185	p = Proportion of samples that exceed C
23	n = Number of Downgradient Samples	1.033	Z_p = Test Statistic
4	m = Number of Upgradient Samples	NO	Downgradients results statistically exceed upgradient when Z_p>1.645

Sample name	Sample Date	Analyte Name	Result (ug/L)	Data Qualifier	Units	Value	lognormal value	Reporting Limit	Reporting Limit	Method Detection Limit	Dilution Factor
4-GW1S-04	6-Oct-04	ZINC, TOTAL	3.65	J	ug/L	3.65	0.5623	0.005	5	0.000298	1
4-GW1S-02	2-Jun-04	ZINC, TOTAL	5.3		ug/L	5.3	0.7243	0.005	5	0.000298	1
2-GW20S-02	3-Jun-04	ZINC, TOTAL	43.4		ug/L	43.4	1.6375	0.005	5	0.000298	1
2-GW20S-04	6-Oct-04	ZINC, TOTAL	58.5	J	ug/L	58.5	1.7672	0.005	5	0.000298	1

Frequency of Detection:	4	/	4	Standard Deviation:	27.54
Range of Detections:	3.65	-	58.5	Shapiro Wilk Normal W_{calc}	0.02
Average of Detections:	27.7			Lognormal standard Deviation:	0.62
Average of All Date:	27.7			Shapiro Wilk Normal W_{calc}	0.86
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.748
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

3-GW37S-04	5-Oct-04	ZINC, TOTAL	3.1	U	ug/L	2.5	0.3979	0.005	5	0.000298	1
3-GW12D-04	5-Oct-04	ZINC, TOTAL	3.3	U	ug/L	2.5	0.3979	0.005	5	0.000298	1
3-GW37S-02	2-Jun-04	ZINC, TOTAL	2.69	J	ug/L	2.69	0.4298	0.005	5	0.000298	1
2-GW39DS-02	1-Jun-04	ZINC, TOTAL	2.89	J	ug/L	2.89	0.4609	0.005	5	0.000298	1
3-GW12D-02	2-Jun-04	ZINC, TOTAL	3.26	J	ug/L	3.26	0.5132	0.005	5	0.000298	1
3-GW47DS-04	5-Oct-04	ZINC, TOTAL	5.2	J	ug/L	5.2	0.7160	0.005	5	0.000298	1
2-GW42DS-04	6-Oct-04	ZINC, TOTAL	7.2		ug/L	7.2	0.8573	0.005	5	0.000298	1
2-GW43DS-04	6-Oct-04	ZINC, TOTAL	10.5	J	ug/L	10.5	1.0212	0.005	5	0.000298	1
2-GW39DS-04	5-Oct-04	ZINC, TOTAL	11.3	J	ug/L	11.3	1.0531	0.005	5	0.000298	1
2-GW42DS-02	2-Jun-04	ZINC, TOTAL	14.55		ug/L	14.55	1.1629	0.005	5	0.000298	1
2-GW41DS-04	5-Oct-04	ZINC, TOTAL	14.9	J	ug/L	14.9	1.1732	0.005	5	0.000298	1
2-GW45DS-02	2-Jun-04	ZINC, TOTAL	15.14	J	ug/L	15.14	1.1801	0.025	25	0.00149	5
2-GW40DS-04	5-Oct-04	ZINC, TOTAL	19.5	J	ug/L	19.5	1.2900	0.005	5	0.000298	1
2-GW46DS-04	6-Oct-04	ZINC, TOTAL	20.2	J	ug/L	20.2	1.3054	0.005	5	0.000298	1
2-GW45DS-04	6-Oct-04	ZINC, TOTAL	20.85	J	ug/L	20.85	1.3191	0.005	5	0.000298	1
2-GW44DS-04	6-Oct-04	ZINC, TOTAL	21	J	ug/L	21	1.3222	0.05	50	0.0022	1
2-GW43DS-02	3-Jun-04	ZINC, TOTAL	21.1		ug/L	21.1	1.3243	0.005	5	0.000298	1
2-GW47DS-02	3-Jun-04	ZINC, TOTAL	23.435	J	ug/L	23.435	1.3699	0.005	5	0.000298	1
2-GW41DS-02	2-Jun-04	ZINC, TOTAL	28.5		ug/L	28.5	1.4548	0.005	5	0.000298	1
2-GW40DS-02	1-Jun-04	ZINC, TOTAL	32.6		ug/L	32.6	1.5132	0.025	25	0.00149	5
2-GW46DS-02	2-Jun-04	ZINC, TOTAL	33.3		ug/L	33.3	1.5224	0.025	25	0.00149	5
2-GW44DS-02	2-Jun-04	ZINC, TOTAL	42		ug/L	42	1.6232	0.005	5	0.000298	1
2-GW38DS-02	3-Jun-04	ZINC, TOTAL	46.5		ug/L	46.5	1.6675	0.005	5	0.000298	1

Frequency of Detection:	21	/	23	Standard Deviation:	12.75
Range of Detections:	2.69	-	46.5	Shapiro Wilk Normal W_{calc}	0.02
Average of Detections:	18.9			Lognormal standard Deviation:	0.41
Average of All Date:	17.5			Shapiro Wilk Normal W_{calc}	0.49
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.914
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

Shapiro Wilk Test does not indicate that downgradient data sets are normally or lognormally distributed. Therefore, non-parametric ANOVA is the appropiate method.

ZINC, TOTAL

NON PARAM ANOVA

m= 4 Number of upgradient wells

n= 23 Number of downgradient wells

N= 27 Total number of wells

Combine upgradient and downgradient data and rank

Assign upgradient values "u" and downgradient values "d"

Well	Rank	Value	Class	downgradient ranks
3-GW37S-04	1	2.5	d	1
3-GW12D-04	2	2.5	d	2
3-GW37S-02	3	2.69	d	3
2-GW39DS-02	4	2.89	d	4
3-GW12D-02	5	3.26	d	5
4-GW1S-04	6	3.65	u	
3-GW47DS-04	7	5.2	d	7
4-GW1S-02	8	5.3	u	
2-GW42DS-04	9	7.2	d	9
2-GW43DS-04	10	10.5	d	10
2-GW39DS-04	11	11.3	d	11
2-GW42DS-02	12	14.55	d	12
2-GW41DS-04	13	14.9	d	13
2-GW45DS-02	14	15.14	d	14
2-GW40DS-04	15	19.5	d	15
2-GW46DS-04	16	20.2	d	16
2-GW45DS-04	17	20.85	d	17
2-GW44DS-04	18	21	d	18
2-GW43DS-02	19	21.1	d	19
2-GW47DS-02	20	23.435	d	20
2-GW41DS-02	21	28.5	d	21
2-GW40DS-02	22	32.6	d	22
2-GW46DS-02	23	33.3	d	23
2-GW44DS-02	24	42	d	24
2-GW20S-02	25	43.4	u	
2-GW38DS-02	26	46.5	d	26
2-GW20S-04	27	58.5	u	

Compute W for downgradient wells

W= 36

Large Values of W indicate contamination of downgradient wells.

Compute Z-score 46

Z= -0.7166 14.65

Downgradient > Upgradient? NO YES if downgradients results statistically exceed upgradient when Z_p>1.645

Sample name	Sample Date	Analyte Name	Result (ug/L)	Data Qualifier	Units	Value	lognormal value	Reporting Limit	Reporting Limit	Method Detection Limit	Dilution Factor
4-GW1S-04	6-Oct-04	ZINC, DISSOLVED	4.05	J	ug/L	4.05	0.6075	0.005	5	0.000298	1
4-GW1S-02	2-Jun-04	ZINC, DISSOLVED	5.6	J	ug/L	5.6	0.7482	0.005	5	0.000298	1
2-GW20S-02	3-Jun-04	ZINC, DISSOLVED	26.7	J	ug/L	26.7	1.4265	0.005	5	0.000298	1
2-GW20S-04	6-Oct-04	ZINC, DISSOLVED	58.7		ug/L	58.7	1.7686	0.005	5	0.000298	1

Frequency of Detection:	4	/	4	Standard Deviation:	25.48
Range of Detections:	4.05	-	58.7	Shapiro Wilk Normal W_{calc}	0.02
Average of Detections:	23.8			Lognormal standard Deviation:	0.55
Average of All Date:	23.8			Shapiro Wilk Normal W_{calc}	1.00
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.748
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

3-GW44DS-02	2-Jun-04	ZINC, DISSOLVED	1.4	J	ug/L	1.4	0.1461	0.005	5	0.000298	1
2-GW43DS-02	3-Jun-04	ZINC, DISSOLVED	2.29	J	ug/L	2.29	0.3598	0.005	5	0.000298	1
3-GW37S-02	2-Jun-04	ZINC, DISSOLVED	2.46	U	ug/L	2.5	0.3979	0.005	5	0.000298	1
2-GW39DS-02	1-Jun-04	ZINC, DISSOLVED	3.22	U	ug/L	2.5	0.3979	0.005	5	0.000298	1
3-GW37S-04	5-Oct-04	ZINC, DISSOLVED	3.22	U	ug/L	2.5	0.3979	0.005	5	0.000298	1
3-GW12D-04	5-Oct-04	ZINC, DISSOLVED	2.2	U	ug/L	2.5	0.3979	0.005	5	0.000298	1
2-GW47DS-02	3-Jun-04	ZINC, DISSOLVED	3.14	J	ug/L	3.14	0.4969	0.005	5	0.000298	1
2-GW38DS-02	3-Jun-04	ZINC, DISSOLVED	3.24	J	ug/L	3.24	0.5105	0.005	5	0.000298	1
2-GW41DS-02	2-Jun-04	ZINC, DISSOLVED	3.58	J	ug/L	3.58	0.5539	0.005	5	0.000298	1
2-GW12D-02	2-Jun-04	ZINC, DISSOLVED	3.91	J	ug/L	3.91	0.5922	0.005	5	0.000298	1
2-GW42DS-02	2-Jun-04	ZINC, DISSOLVED	4.145	J	ug/L	4.145	0.6175	0.005	5	0.000298	1
2-GW42DS-04	6-Oct-04	ZINC, DISSOLVED	4.49	J	ug/L	4.49	0.6522	0.005	5	0.000298	1
2-GW45DS-02	2-Jun-04	ZINC, DISSOLVED	4.74	J	ug/L	4.74	0.6758	0.025	25	0.00149	5
2-GW41DS-04	5-Oct-04	ZINC, DISSOLVED	4.84	J	ug/L	4.84	0.6848	0.005	5	0.000298	1
2-GW44DS-04	6-Oct-04	ZINC, DISSOLVED	5	J	ug/L	5	0.6990	0.05	50	0.0022	1
2-GW47DS-04	5-Oct-04	ZINC, DISSOLVED	5	J	ug/L	5	0.6990	0.005	5	0.000298	1
2-GW45DS-04	6-Oct-04	ZINC, DISSOLVED	6.24		ug/L	6.24	0.7952	0.005	5	0.000298	1
2-GW39DS-04	5-Oct-04	ZINC, DISSOLVED	6.5	J	ug/L	6.5	0.8129	0.005	5	0.000298	1
2-GW40DS-04	6-Oct-04	ZINC, DISSOLVED	7.7		ug/L	7.7	0.8865	0.005	5	0.000298	1
2-GW46DS-02	2-Jun-04	ZINC, DISSOLVED	2.59	U	ug/L	12.5	1.0969	0.025	25	0.00149	5
2-GW40DS-02	1-Jun-04	ZINC, DISSOLVED	2.04	U	ug/L	12.5	1.0969	0.025	25	0.00149	5
2-GW46DS-04	6-Oct-04	ZINC, DISSOLVED	12.5		ug/L	12.5	1.0969	0.005	5	0.000298	1
2-GW43DS-04	6-Oct-04	ZINC, DISSOLVED	18.2		ug/L	18.2	1.2601	0.005	5	0.000298	1

Frequency of Detection:	17	/	23	Standard Deviation:	4.25
Range of Detections:	1.4	-	18.2	Shapiro Wilk Normal W_{calc}	0.04
Average of Detections:	5.70			Lognormal standard Deviation:	0.28
Average of All Date:	5.74			Shapiro Wilk Normal W_{calc}	0.74
Non-Detects >50%:	NO			Shapiro Wilk Test W_{test}	0.914
				Pass Shapiro Wilk (W_{calc}>W_{test})?	NO

Shapiro Wilk Test does not indicate that downgradient data sets are normally or lognormally distributed. Therefore, non-parametric ANOVA is the appropiate method.

NON PARAM ANOVA

ZINC, DISSOLVED

m= 4 Number of upgradient wells

n= 23 Number of downgradient wells

N= 27 Total number of wells

Combine upgradient and downgradient data and rank

Assign upgradient values "u" and downgradient values "d"

Well	Rank	Value	Class	downgradient ranks
3-GW44DS-02	1	1.4	d	1
2-GW43DS-02	2	2.29	d	2
3-GW37S-02	3	2.5	d	3
2-GW39DS-02	4	2.5	d	4
3-GW37S-04	5	2.5	d	5
3-GW12D-04	6	2.5	d	6
2-GW47DS-02	7	3.14	d	7
2-GW38DS-02	8	3.24	d	8
2-GW41DS-02	9	3.58	d	9
2-GW12D-02	10	3.91	d	10
4-GW1S-04	11	4.05	u	
2-GW42DS-02	12	4.145	d	12
2-GW42DS-04	13	4.49	d	13
2-GW45DS-02	14	4.74	d	14
2-GW41DS-04	15	4.84	d	15
2-GW44DS-04	16	5	d	16
2-GW47DS-04	17	5	d	17
4-GW1S-02	18	5.6	u	
2-GW45DS-04	19	6.24	d	19
2-GW39DS-04	20	6.5	d	20
2-GW40DS-04	21	7.7	d	21
2-GW46DS-02	22	12.5	d	22
2-GW40DS-02	23	12.5	d	23
2-GW46DS-04	24	12.5	d	24
2-GW43DS-04	25	18.2	d	25
2-GW20S-02	26	26.7	u	
2-GW20S-04	27	58.7	u	

Compute W for downgradient wells

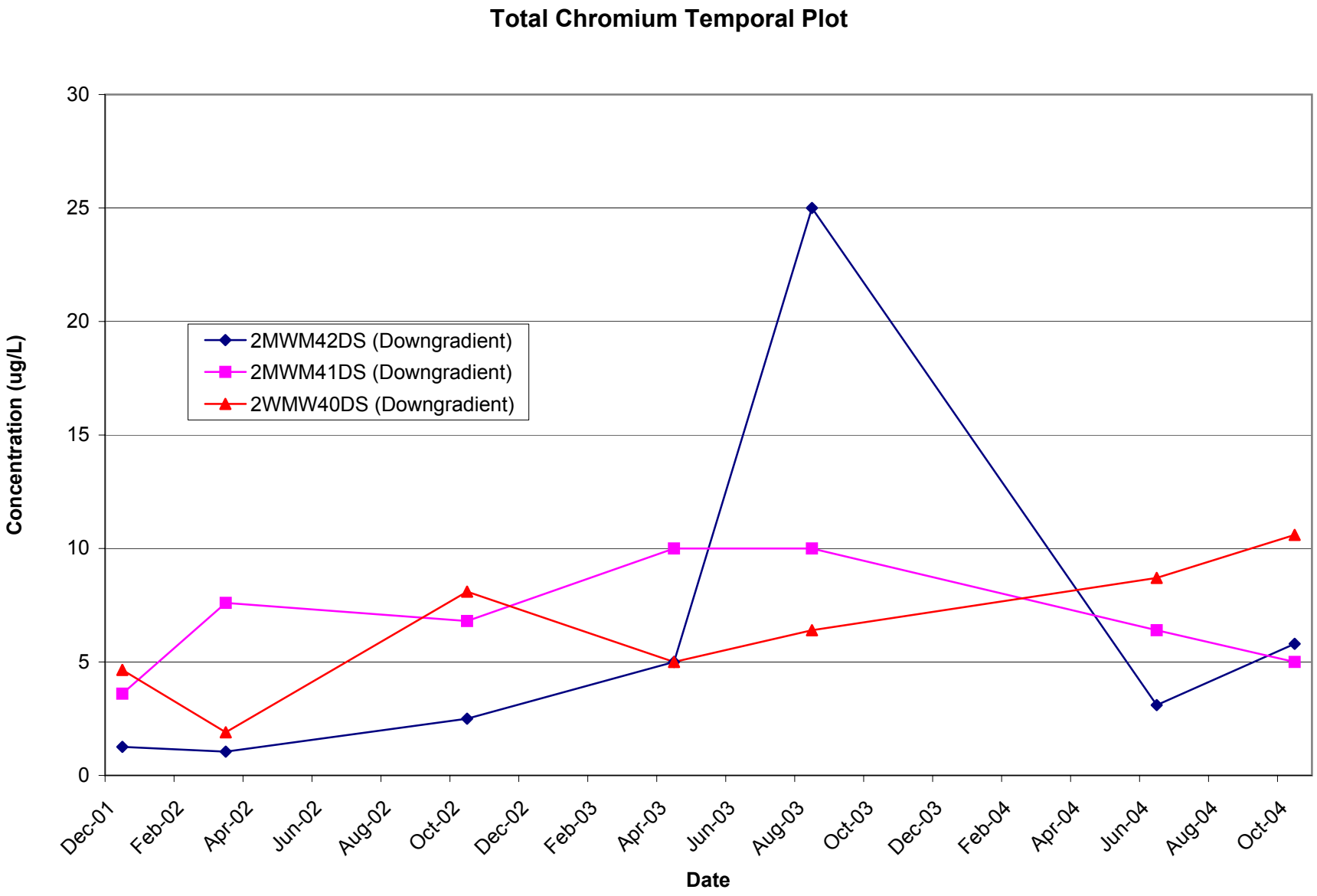
W= 20

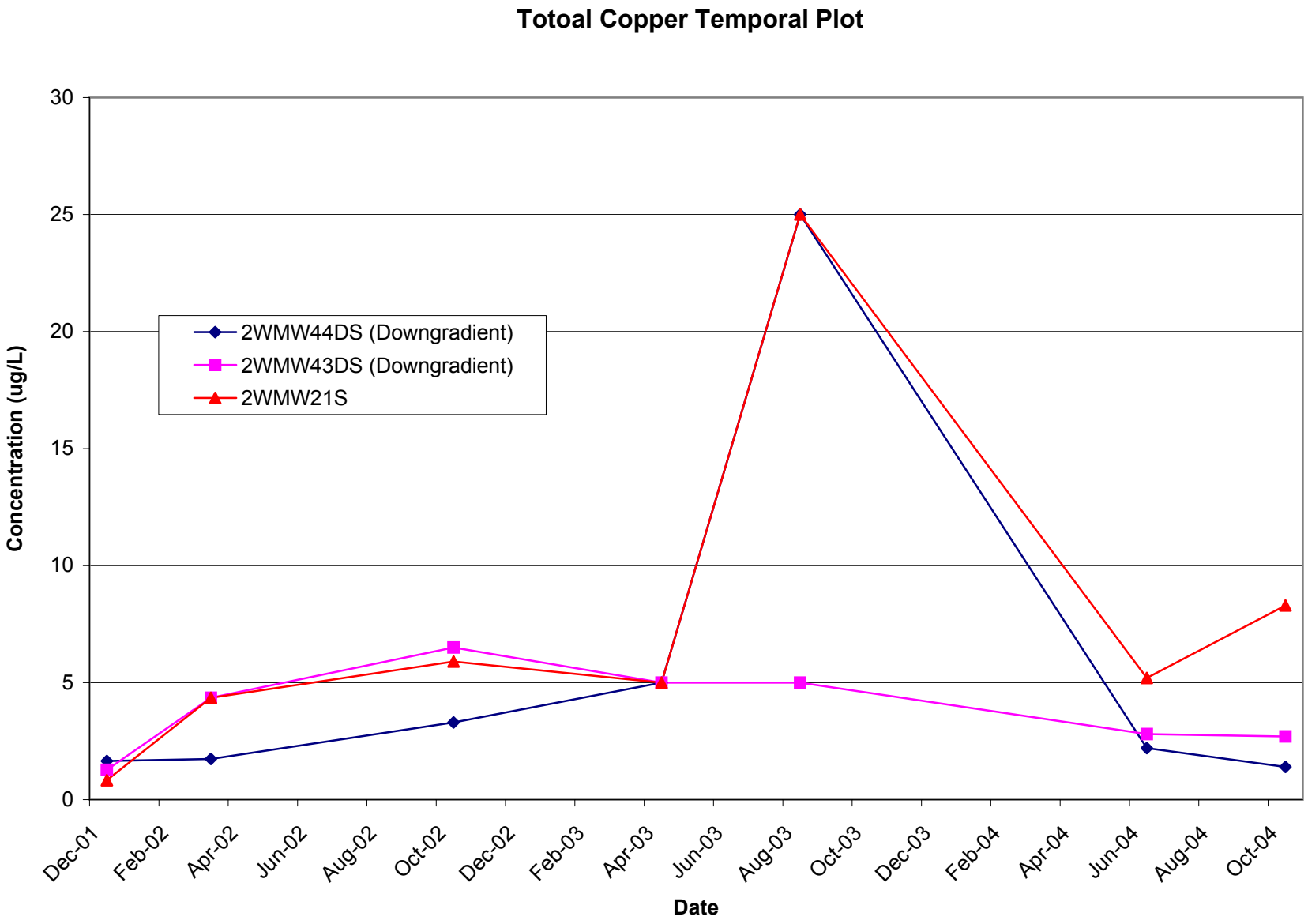
Large Values of W indicate contamination of downgradient wells.

Compute Z-score 46

Z= -1.809 14.65

Downgradient > Upgradient? NO YES if downgradients results statistically exceed upgradient when Z_p>1.645


Total Chromium Temporal Plot
Concentration (ug/L)
30
25
20
15
10
5
0
2MWM42DS (Downgradient)
2MWM41DS (Downgradient)
2WMW40DS (Downgradient)
Dec-01
Feb-02
Apr-02
Jun-02
Aug-02
Oct-02
Dec-02
Feb-03
Apr-03
Jun-03
Aug-03
Oct-03
Dec-03
Feb-04
Apr-04
Jun-04
Aug-04
Oct-04
Date


Totoal Copper Temporal Plot
Concentration (ug/L)
30
25
20
15
10
5
0
2WMW44DS (Downgradient)
2WMW43DS (Downgradient)
2WMW21S
Dec-01
Feb-02
Apr-02
Jun-02
Aug-02
Oct-02
Dec-02
Feb-03
Apr-03
Jun-03
Aug-03
Oct-03
Dec-03
Feb-04
Apr-04
Jun-04
Aug-04
Oct-04
Date