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Round 10 Groundwater Monitoring Report for Area A Landfill

Naval Submarine Base New London

Groton, Connecticut

Engineering Field Activity Northeast
Naval Facilities Engineering Command

Contract Number N62467-94-D-0888

Contract Task Order 0816

June 2002

TETRA TECH NUS, INC.

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ROUND 10 GROUNDWATER MONITORING REPORT
FOR
AREA A LANDFILL

NAVAL SUBMARINE BASE - NEW LONDON
GROTON, CONNECTICUT

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

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LIST OF ACRONYMS AND ABBREVIATIONS

Atlantic	Atlantic Environmental Services, Inc.
AWQC	Ambient Water Quality Criteria
B&R Environmental	Brown & Root Environmental
CLEAN	Comprehensive Long-term Environmental Action Navy
COCs	chemicals of concern
COPCs	chemicals of potential concern
CTDEP	Connecticut Department of Environmental Protection
CTO	Contract Task Order
FFS	Focused Feasibility Study
GMP	Groundwater Monitoring Plan
HNUS	Halliburton NUS, Inc.
IDW	investigation derived waste
IRA	Interim Remedial Action
NA	Not Available
Navy	U.S. Department of the Navy
ND	Not Detected
NFESC	Naval Facilities Engineering Service Center
NSB-NLON	Naval Submarine Base New London
NTU	nephelometric turbidity unit
OBDA	Overbank Disposal Area
OU	Operable Unit
PAH	Polycylic Aromatic Hydrocarbons
PCBs	polychlorinated biphenyls
PRAP	Proposed Remedial Action Plan
RI	Remedial Investigation
ROD	Record of Decision
SVOC	semi-volatile organic compound
SWPC	Surface Water Protection Criteria (Connecticut)
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristics Leaching Procedure
TOC	total organic carbon
TPH	total petroleum hydrocarbon
TtNUS	Tetra Tech NUS, Inc.

USEPA	United States Environmental Protection Agency
VOCs	volatile organic compounds

1.0 INTRODUCTION

This Round 10 Groundwater Monitoring Report for the Area A Landfill at the Naval Submarine Base New London (NSB-NLON) in Groton, Connecticut was prepared for the U.S. Department of the Navy (Navy) by Tetra Tech NUS, Inc. (TtNUS) under the Comprehensive Long-term Environmental Action Navy (CLEAN), Contract Number N62467-94-D-0888, Contract Task Order (CTO) 0816.

This document has been prepared in accordance with the Navy Installation Restoration Laboratory Quality Assurance Guide (Interim Guidance) of the Naval Facilities Engineering Service Center (NFESC) (NFESC, February 1996).

1.1 SCOPE AND OBJECTIVE

An Interim Remedial Action (IRA) was completed in 1997 at the Area A Landfill site [Site 2/Operable Unit (OU) 1] to address the risk from direct exposure to landfill material and to minimize the risk of migration of chemicals of concern (COCs) from the landfill to the surrounding areas via groundwater. The IRA consisted of capping the site with a multi-layer low-permeability cover system and installing a surface water and shallow groundwater interception and diversion system upgradient from the cover system. The groundwater monitoring is being conducted to evaluate the effectiveness of the IRA.

The objective of this Round 10 Groundwater Monitoring Report is to present the results of the tenth round of long-term groundwater monitoring at the Area A Landfill site. Three Phase I and Phase II Remedial Investigation (RI) monitoring wells and 11 monitoring wells installed in May 1999 were sampled and analyzed for a suite of analytes based on an evaluation of site history and previous analytical results. One seep sample and six surface water samples, from locations adjacent to monitoring wells, were also obtained. Four additional surface water locations were to be sampled; however, due to a lack of surface water at these locations, samples were not obtained. Sampling and analyses were performed in accordance to the Groundwater Monitoring Plan (GMP) prepared for the Area A Landfill (TtNUS, January 1999).

The results of the first and second years of monitoring are summarized in the Year 1 Annual Groundwater Monitoring Report for Area A Landfill (TtNUS, May 2001) and Draft Year 2 Annual Groundwater Report for Area A Landfill (TtNUS, March 2002), respectively. Because this report is an interim report for the tenth round of groundwater monitoring, evaluation of monitoring results is limited to a comparison of the results to the criteria identified in the GMP for the Area A Landfill (TtNUS, January 1999).

1.2 BACKGROUND INFORMATION

1.2.1 Base Description

NSB-NLON is located in southeastern Connecticut in the Towns of Ledyard and Groton. It encompasses approximately 687 acres and lies 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 1-1). The northern border is a low, east-southeast trending ridge extending from the Thames River to Baldwin Hill.

NSB-NLON currently provides base command for naval submarine activities in the Atlantic Ocean. It also provides housing for Navy personnel and their families and supports submarine training facilities, military offices, medical facilities, and facilities for the submarine maintenance, repair, and overhaul.

1.2.2 Site Description and History

The Area A Landfill is located in the northeastern and north central part of NSB-NLON and encompasses approximately 13 acres (Figure 1-2). 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.

Before the Area A Landfill was opened, dredge spoil from the Thames River was deposited continuously along a major portion of the hillside and within the former valley, which is currently the Area A Wetland. The Area A Landfill reportedly opened sometime before 1957. However, a 1957 aerial photograph (USEPA, EPIC, 1957) shows no apparent landfilling activities, indicating a somewhat later start-up date. After the NSB-NLON incinerator closed in 1963, most of the wastes generated by submarine and base operations were disposed of in the landfill, including all non-salvageable materials.

The area fill method was reportedly used in landfill operations at the Area A Landfill. The area fill method consists of filling an area in a sequence of cells and lifts. Each lift is a specified thickness and consists of several cells. Each cell can be viewed as a rectangular area that is filled from back to front. The front area is the "working face" and is the location were new refuse is placed and is the area that is covered on a daily basis. The cover material used on the landfill was gravel obtained from the Groton water supply reservoir. The Area A Landfill closed in 1973.

After closure, a bituminous concrete pad approximately 160 x 100 feet in size was constructed in the southwest portion of the landfill for above-ground storage of industrial wastes. Steel drums, transformers,

and electrical switches were stored on this pad. All of these materials have been properly disposed of off-site. This pad was also used for crane testing and test weights were stored there. The remainder of the Area A Landfill was unpaved and included a gravel covered parking lot (deployed parking) that was located in the central part of the landfill.

Site investigations were conducted at the Area A Landfill as part of a base-wide Phase I RI (Atlantic, August 1992) and a base-wide Phase II RI (B&R Environmental, March 1997). A site-specific Area A Landfill Focused Feasibility Study (FFS) (Atlantic, May 1995), and a Proposed Remedial Action Plan (PRAP), (Atlantic, June 1995) were also prepared. A Record of Decision (ROD) was prepared and signed by the Navy and United States Environmental Protection Agency (USEPA) Region I on September 26, 1995. The major components of the selected alternative as described in the ROD were as follows:

- Restricting access to the contaminated areas of the site using perimeter fencing and institutional controls.
- Capping the site with a low-permeability multi-layer cover system to prevent water infiltration into the landfill.
- Constructing an interception system to collect shallow groundwater and storm water and re-route these around the landfill
- Establishing landfill gas controls to manage landfill gas migration.
- Developing a groundwater monitoring plan to monitor the quality of groundwater after the landfill closure is completed.

A remedial design for the proposed landfill cover system was first prepared by Atlantic Environmental Services, Inc. (Atlantic) (Atlantic, July 1994) and subsequently amended and finalized by Brown & Root Environmental, Inc. (B&R Environmental) (B&R Environmental, December 1996b). As part of the re-design effort, a Geotechnical Field Investigation (HNUS, May 1995), an Area A East End Investigation (B&R Environmental, December 1996a), and a Groundwater/Leachate Modeling Study (B&R Environmental, October 1996) were also conducted.

Construction of the landfill cover system (including gas control and storm water and shallow groundwater interception systems) was completed as part of an IRA in September 1997 by Foster Wheeler Environmental Corporation. Prior to commencement of construction, a large quantity of metal, concrete

and wood debris, several thousand sandbags, the Deployed Parking lot, the electrical storage building (Building 496), the Master at Arms Building (Building 373), salt storage shed, and various other items that had been located on the surface of the landfill were removed or relocated. The majority of the surficial debris was disposed of off-site as scrap metal or at an off-site landfill. The debris that was salvageable by NSB-NLON was removed and relocated to other areas of NSB-NLON.

The preparation of the subgrade to the cover required excavation from the northern slope of the landfill and placement of the excavated material on the southern slope. Also, approximately 4,000 cubic yards of soil from the Rubble Fill Area at Bunker A 86 (Site 4) and 1,000 cubic yards of common fill were placed over the eastern portion of the landfill, beneath the area of the relocated Deployed Parking. The soils were then compacted. During the subgrade preparation activities, two storm water drainage structures located within the limits of the site were decommissioned. These structures consisted of open catch basins on the southern edge of the landfill that discharged into a reinforced concrete culvert running through the landfill and ultimately into the Area A Wetland. Both culverts were entirely filled with flowable concrete to eliminate potential voids in the subgrade due to pipe collapse. The catch basins were filled with materials unsuitable for placement in the landfill subgrade (e.g., tires, large metal and wood debris, large concrete debris, etc.) followed by encapsulation with flowable concrete fill.

1.2.3 Previous Site Investigations

Six field investigations have been conducted at the Area A Landfill. These include the following:

- Field investigation performed for the base-wide Phase I RI (Atlantic, August 1992)
- Supplemental field investigation performed for the Area A Landfill FFS (Atlantic, May 1995)
- Field investigation performed for the base-wide Phase II RI (B&R Environmental, March 1997)
- Geotechnical Field Investigation (HNUS, May 1995) and Area A East End Investigation (B&R Environmental, December 1996a) performed in support of the Area A Landfill Remedial Design (B&R Environmental, December 1996b)
- Field investigation performed for the Groundwater/Leachate Modeling Study, which supported the Area A Landfill Remedial Design (B&R Environmental, October 1996).

1.2.3.1 Base-Wide Phase I RI

Atlantic conducted a field investigation at the Area A Landfill in 1990 as part of the base-wide Phase I RI (Atlantic, August 1992). A total of 13 monitoring wells (2LMW7S, 2LMW7D, 2LMW8S, 2LMW8D, 2LMW9S, 2LMW9D, 2LMW13S, 2LMW13D, 2LMW14D, 2LMW17S, 2LMW17D, 2LMW18S, 2LMW18D) and 7 test borings (2LTB1 through 2LTB7) 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, polychlorinated biphenyls (PCBs), pesticides, and Toxicity Characteristics Leaching Procedure (TCLP) pesticides and metals. Groundwater samples were analyzed for the same parameters, except TCLP, plus radiological elements.

1.2.3.2 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 (Atlantic, May 1995). 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 (2LTB8 through 2LTB31) 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 and for PCBs with a field gas chromatograph, 13 subsurface soil sample were selected for analysis of TCL organics, PCBs, pesticides and TAL inorganics. Selected samples were also analyzed for organic content, cation exchange capacity, 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.

1.2.3.3 Base-Wide 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 (B&R Environmental, March 1997). A total of 10 monitoring wells (2LPW1S, 2LOW1S, 2LOW1D, 2LOW2S, 2LOW3S, 2LOW4S, 2LMW19S, 2LMW19D, 2LMW20S, 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 1994 and one in August 1994. Groundwater samples were analyzed for TCL organics, TAL inorganics, PCBs, and radiological elements.

1.2.3.4 Geotechnical Field Investigation

B&R Environmental conducted field activities at the Area A Landfill in February and March 1995 as part of the Geotechnical Field Investigation (HNUS, May 1995) 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 obtain additional geotechnical field data.

Twenty test pits (LF-TP01 to LF-TP13 and LF-TP15 to LF-TP21) 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 at strategic locations 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, PCBs, and pesticides, and TAL inorganics). Four borings (LF-SB01 and LF-SB03 through LF-SB05) were advanced through the overburden to auger refusal at the bedrock. Two borings (LF-SB02, LF-SB06) were advanced through the overburden and approximately 5 feet into competent bedrock. Two borings (LF-TP01 and LF-TP07) were drilled through approximately 5 feet of bedrock at the bottom of previously excavated test pits.

1.2.3.5 Area A East End Investigation

B&R Environmental conducted field activities at the Area A Landfill in September 1995 as part of the Area A East End Investigation (B&R Environmental, December 1996a), 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, and 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 TCL organics, PCBs, and pesticides; TAL inorganics and cyanide; 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, PCBs, and pesticides; TAL inorganics and cyanide; and, TPH.

1.2.3.6 Groundwater/Leachate Modeling Study

B&R Environmental conducted field activities at the Area A Landfill in November/December 1995 as part of the Groundwater/Leachate Modeling Study (B&R Environmental, October 1996) 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 piezometer (2LMW32PZ).

- Water level measurement for all newly installed monitoring wells, piezometers, and staff gauges as well as for all previously existing monitoring wells.

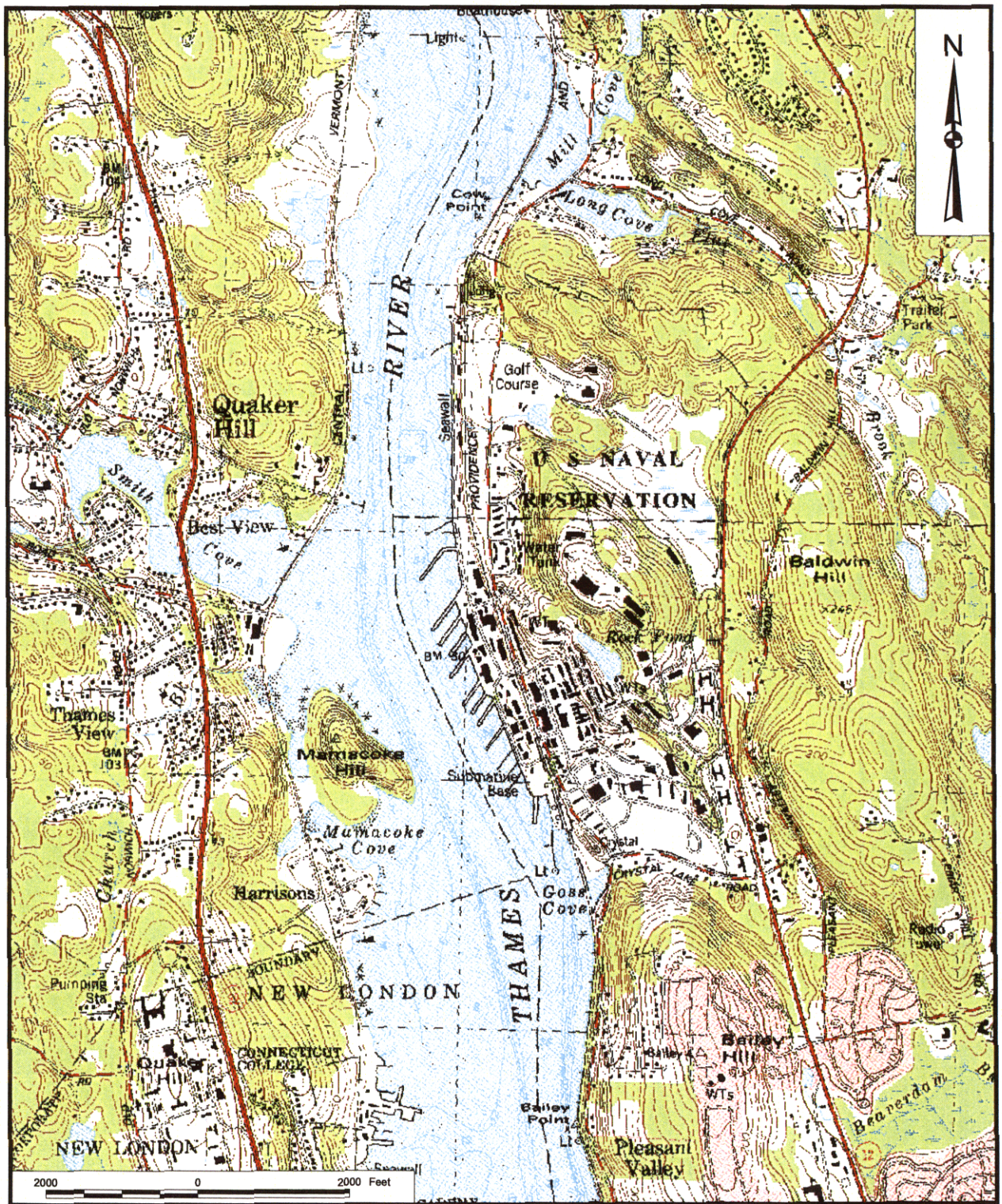
- Flow measurement and sampling of the groundwater seep (3MSP01) from the western face of the Area A Landfill into the Overbank Disposal Area (OBDA) (Site 3) of the adjoining Area A Downstream site. This sample was analyzed for TCL organics and TAL inorganics.

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) underlying the site; 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 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 (AWQCs) or the Connecticut's surface water protection criteria (SWPCs).

1.3 REPORT ORGANIZATION

This report has been prepared in the following format to address the requirements for long-term groundwater monitoring at the Area A Landfill. Section 1.0 is this brief introduction including the project scope and objective and a discussion of previous investigations. Section 2.0 describes Round 9 field activities. Section 3.0 presents and evaluates the analytical results from the Round 10 sampling effort.



DRAWN BY	DATE	Tetra Tech NUS, Inc.	CONTRACT NUMBER	OWNER NO.
J. BELLONE	2/16/00		2863	CTO 816
CHECKED BY	DATE	LOCATION MAP NSB-NLON GROTON, CONNECTICUT	APPROVED BY CAR	DATE 6/26/02
COST/SCHEDULE-AREA			APPROVED BY	DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1 - 1	REV 0

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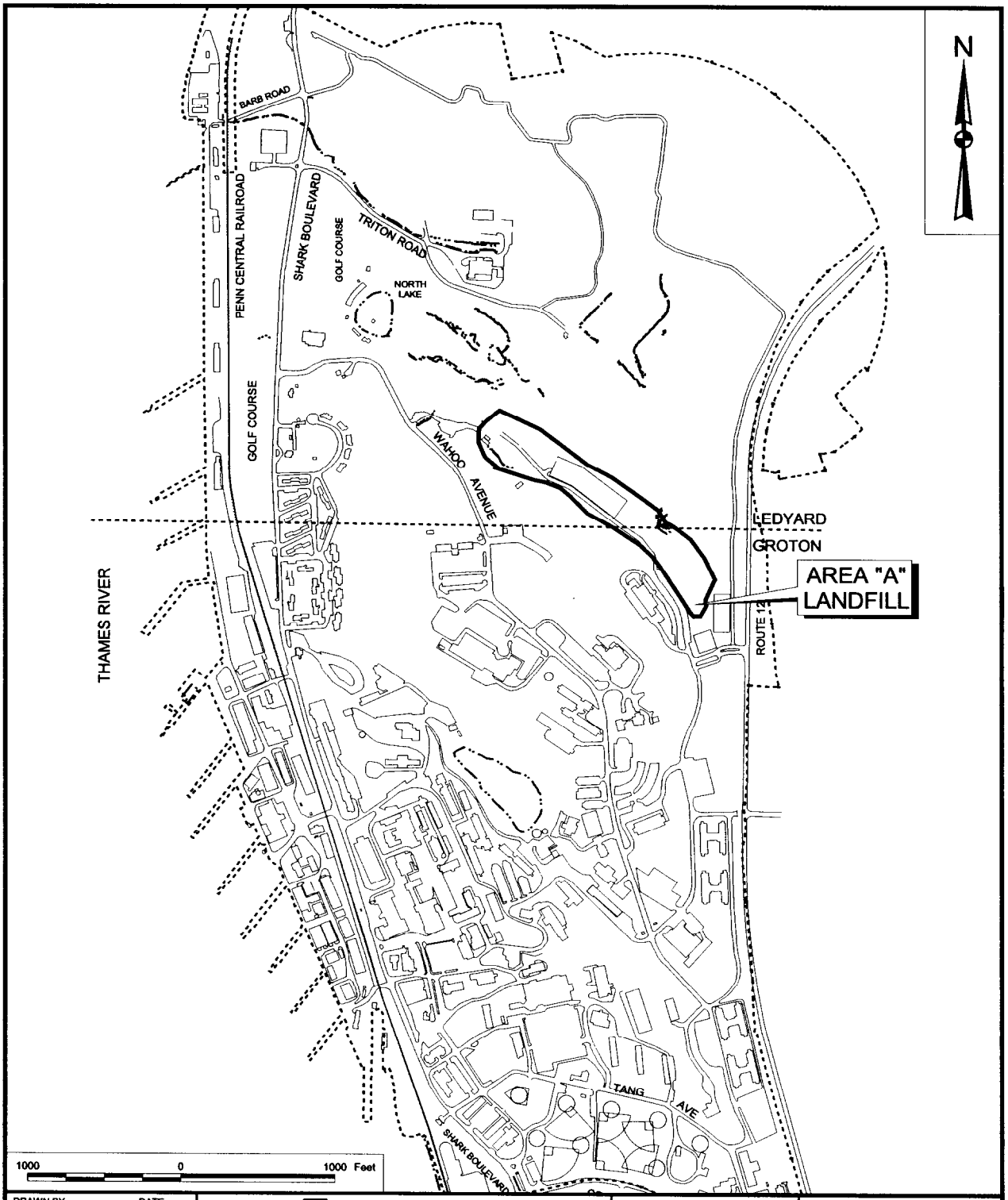

DRAWN BY J. BELLONE — DATE 2/16/00	Tetra Tech NUS, Inc.	CONTRACT NUMBER 2863	OWNER NO. CTO 816
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COST/SCHEDULE-AREA		APPROVED BY —	DATE —
SCALE AS NOTED		DRAWING NO. FIGURE 1 - 2	REV 0

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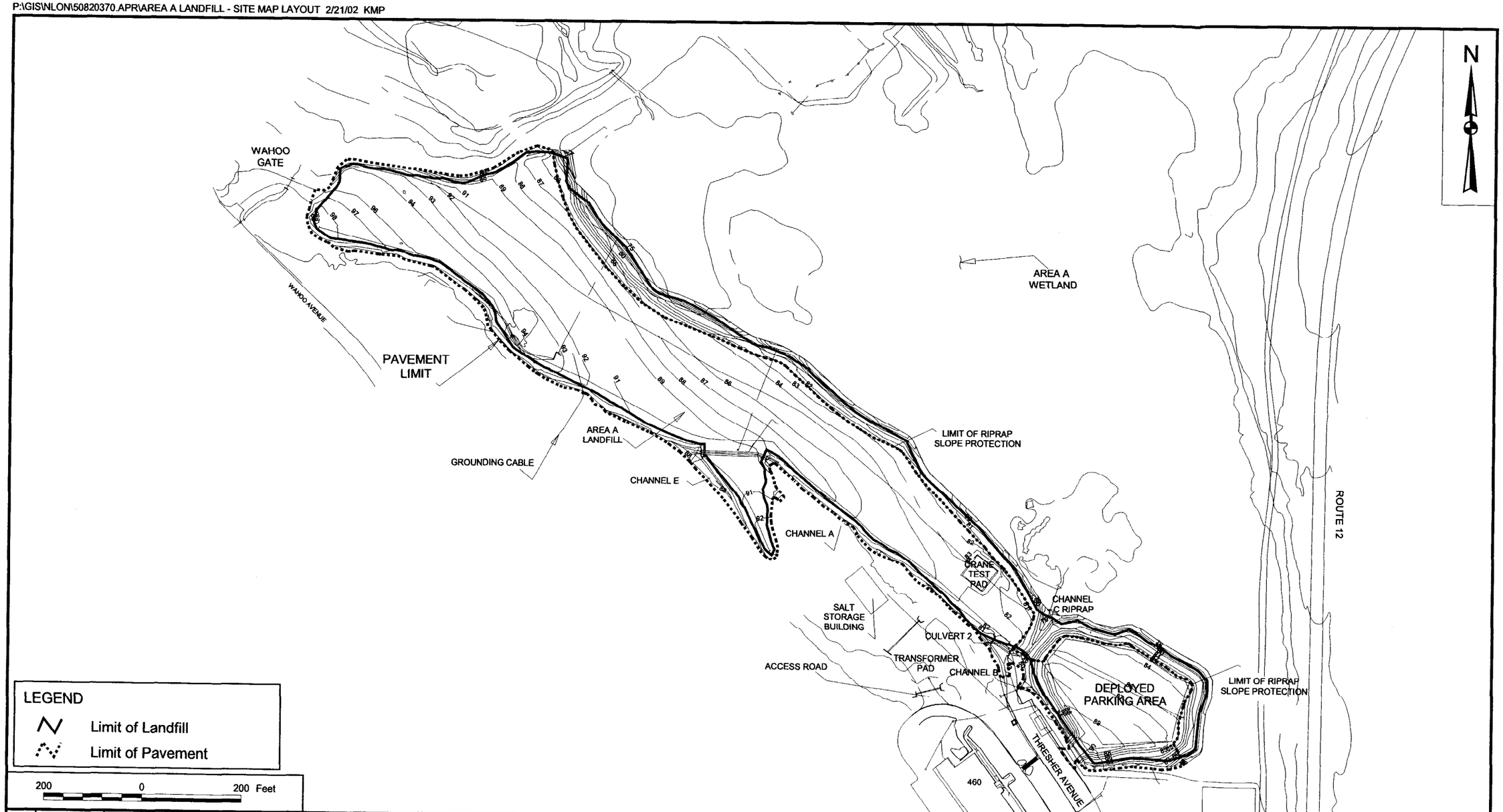

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DRAWN BY J. BELLONE	DATE 1/12/00
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Tetra Tech NUS, Inc.

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

CONTRACT NUMBER 2863	OWNER NUMBER CTO 816
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2.0 FIELD INVESTIGATION ACTIVITIES

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

- One round of water level measurements at 14 monitoring wells and 6 staff gauges
- Collection of groundwater samples from 14 monitoring wells.
- Collection of surface water samples from 6 surface water locations.
- Collection of one seep sample.

Monitoring wells 3MW12S and 3MW12D have been destroyed and have not been sampled since Round 5. Four surface water locations (SG15, SG16, SG17, and SG22) were to be sampled; however, due to a lack of water, samples were not collected at these locations. Round 10 field activities occurred in March 2002. Figure 2-1 shows the sampling locations. Copies of the field logbook, monitoring well inspection sheets, water level measurement sheet, calibration logs, groundwater sample log sheets, surface water sample log sheets and low flow purge data sheet, chain-of custody records, and data validation letters for Round 10 are provided in Appendices A through G, respectively.

2.1 MONITORING WELL INSPECTION

Prior to water level measurements, all 14 monitoring wells were inspected. Monitoring well 2LMW20S had a broken well pad and the vault was full of water. Otherwise, the monitoring wells were in good condition (refer to Appendix B).

2.2 WATER LEVEL MEASUREMENT

Prior to groundwater purging and sampling and surface water sampling, one round of water levels was measured at 14 monitoring wells. Water levels were also measured at six staff gauge locations. Water levels were not measured at four staff gauges (SG-15 through SG-17 and SG-22) because of dry conditions. The survey data for the staff gauges is considered suspect due to some of the staff gauges being moved after installation; therefore, the surface water elevation data were not used in preparing the potentiometric surface map. Table 2-1 summarizes the water level measurements. Figure 2-2 illustrates the potentiometric surface map for the shallow groundwater at the Area A Landfill. Groundwater level measurement sheets are provided in Appendix C.

2.3 GROUNDWATER SAMPLING

A total of 14 monitoring wells, comprised of 2LMW20S, 2WMW21S, 4MW1S, 2WMW38DS through 2WMW47DS, and 3MW37S, were sampled during the tenth round of groundwater monitoring. Monitoring well 2LMW20S was sampled, although the well pad is broken and the vault was full of water. The well still appears to be functioning. Low-flow purging and sampling techniques, as described in Sections 4.1.6 and 4.1.7 of the GMP (TtNUS, January 1999), were used during sampling.

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 to not allow drawdown to exceed 0.3 foot during the purging. Monitoring wells 2WMW38D through 2WMW43DS, 2WMW45DS, and 2WMW46DS were dewatered during purging due to the low recharge rate of the screened formation. These wells were sampled over multiple days to provide sufficient sample volume. Equipment calibration logs are provided in Appendix D. Sample log sheets and low-flow purge data sheets are provided in Appendix E.

During purging, water quality parameters of pH, turbidity, specific conductance, temperature, Eh, salinity, and dissolved oxygen 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 Rounds 1 through 10 is provided in Table E-1 in Appendix E. Stabilization of the above parameters was generally defined as follows:

- pH ± 0.2 standard units
- turbidity ± 10 % for values greater than 1 nephelometric turbidity unit (NTU)
- specific conductance ± 10 %
- temperature ± 10 %
- Eh ± 10 mV
- dissolved oxygen ± 10 %
- Salinity ppt (record only)

Following purging, 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. Samples analyzed for VOCs were collected by drawing a column of water into the tubing with the pump; crimping the discharge end of the tubing; pulling the tubing from the well;

disconnecting the tubing from the pump; releasing the tubing; and decanting the sample into the sample vials from the intake end of the tubing via gravity flow. For filtered inorganic samples, an in-line 0.45-micron filter was used. The filter was attached to the discharge end of the pump tubing and pre-rinsed with approximately 400 ml of sample water prior to filling the filtered inorganic container. Copies of the groundwater sample logsheets and Chain of Custody Records are provided in Appendices E and F, respectively.

Groundwater samples were sent to the project laboratory (Katahdin) for analysis for select TCL VOCs, semivolatile organic compounds (SVOCs), polycylic aromatic hydrocarbons (PAHs), pesticides and PCBs; TAL metals (total and dissolved); TOC; chemical oxygen demand; and water chemistry parameters (total dissolved solids, alkalinity, chloride, sulfate, and hardness). Analytical results for the samples are discussed in Section 3.0.

2.4 SURFACE WATER SAMPLING

As detailed in Section 4.0 of the GMP for the Area A Landfill (TtNUS, January 1999), ten staff gauge locations and one seep sampling location were to be sampled as part of the sampling program. Due to the limited amount of surface water present within the wetland, only six of the surface water locations (SG-18, SG-19, SG-20, SG-21, SG-23, and SG-24) and the one seep location (3MSP01) were sampled. Surface water samples were collected by directly filling sample containers in accordance with Section 4.1.3 of the GMP (TtNUS, January 1999). Surface water sample logsheets and chain of custody are provided in Appendices E and F, respectively. A summary of surface water quality data for Rounds 1 through 10 is provided in Table E-1 of Appendix E.

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.

2.5 DECONTAMINATION AND INVESTIGATION-DERIVED WASTE

All water quality and water level meters were decontaminated by rinsing with deionized water prior to and after use.

Liquid investigation-derived waste (IDW) derived from the sampling of groundwater at the Area A Landfill was extensively tested for COCs during the first four rounds of quarterly monitoring. The liquid IDW generated has been determined to be non-hazardous and therefore it is disposed directly to the OT-10 wastewater processing facility in compliance with the NSB NLON Pre-Treatment Permit from the Connecticut Department of Environmental Protection (CTDEP).

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TABLE 2-1

WATER LEVEL ELEVATIONS (March 2002)
ROUND 10 GROUNDWATER WATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT

Well/ Staff Gauge Number	Ground Surface Elevation[1] (feet msl)	Reference Elevation[1] (feet msl)	Depth to Water (feet)	Water Elevation (feet msl)	Screened Unit[3]
2LMW20S	87.23	86.83	15.81[2]	71.02	F/A
2WMW21S	74.62	76.31	4.33[2]	71.98	DS
2WMW38DS	72.28	74.06	5.81[2]	68.25	DS
2WMW39DS	71.60	73.53	2.40[2]	71.13	SS/DS
2WMW40DS	71.46	73.21	3.15[2]	70.06	DS
2WMW41DS	71.04	73.39	2.42[2]	70.97	DS
2WMW42DS	71.24	73.65	2.05[2]	71.60	DS
2WMW43DS	71.39	74.36	2.44[2]	71.92	DS
2WMW44DS	70.95	73.72	1.62[2]	72.10	DS
2WMW45DS	72.24	74.24	2.12[2]	72.12	DS
2WMW46DS	71.76	73.53	1.55[2]	71.98	DS
2WMW47DS	71.98	73.39	1.38[2]	72.01	SS/DS
3MW37S	44.09	47.26	3.61[2]	43.65	A
4MW1S	127.98	129.55	6.29[2]	123.26	BR
SG-15	71.29	74.03	Dry	--	--
SG-16	71.19	73.50	Dry	--	--
SG-17	71.19	73.57	Dry	--	--
SG-18	70.99	75.92	4.12	71.80	--
SG-19	70.99	75.83	3.92	71.91	--
SG-20	71.09	75.19	3.24	71.95	--
SG-21	70.39	75.32	3.29	72.03	--
SG-22	71.79	76.13	Dry	--	--
SG-23	71.09	75.83	3.92	71.91	--
SG-24	71.59	76.68	[4]	--	--

NOTES:
msl: mean sea level (1982 Base Traverse System)
-- Data not available
1 Reference elevation is top of well casing (1982 Base Traverse System = NGVD 1988 + 2.39 feet)
2 Depth to water is from top of well casing. Measured March 19, 2002.
3 F = fill; DS = dredge spoil; A = alluvium; BR = bedrock; SS = surficial sand
4 Staff Gauge was damaged or missing.

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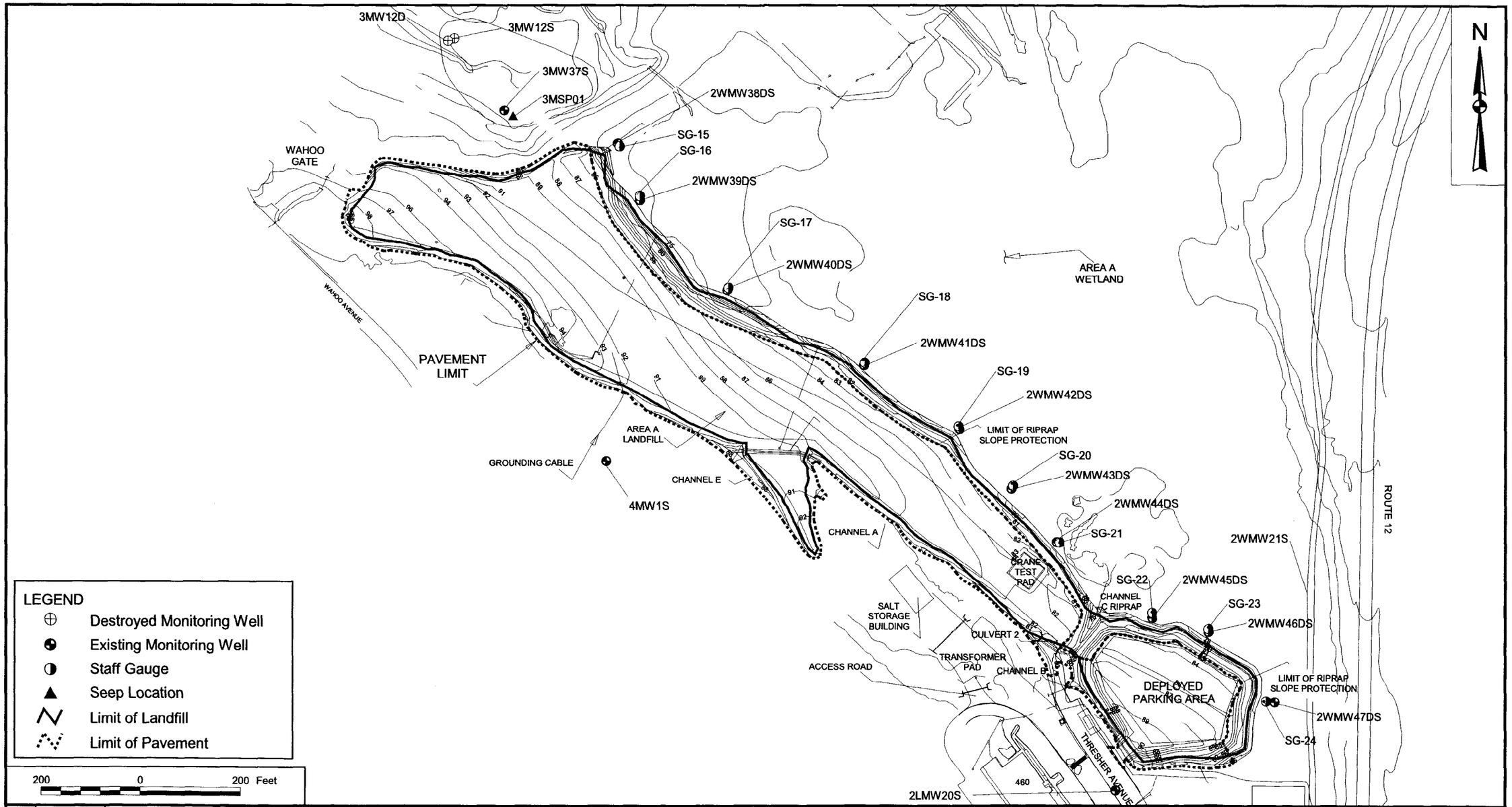
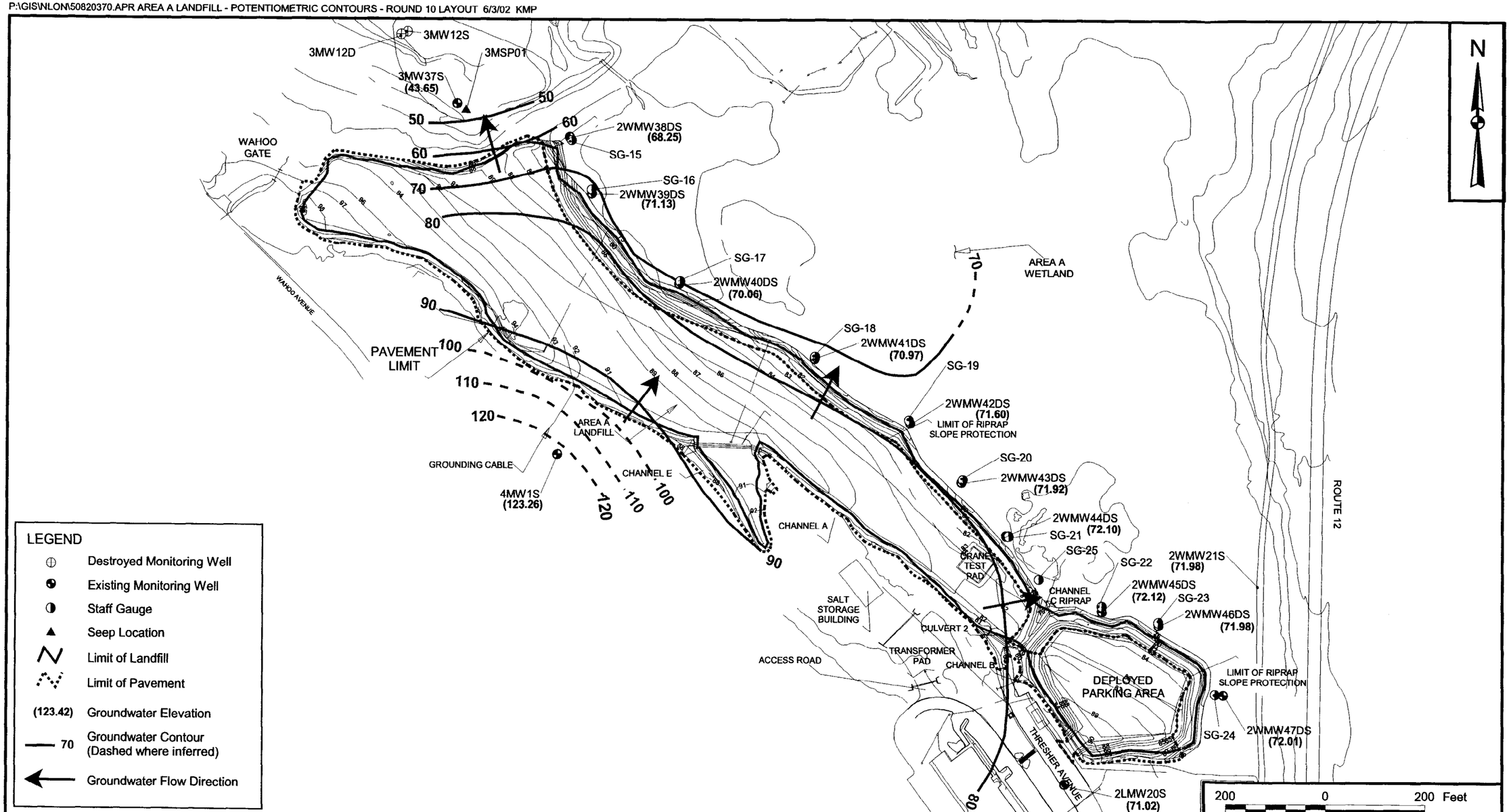
P:\GIS\NLON\50820370.APR\AREA A LANDFILL - MONITORING LOCATIONS LAYOUT 6/3/02 KMP



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY J. BELLONE	DATE 1/12/00	Tetra Tech NUS, Inc.	CONTRACT NUMBER 2863 / OWNER NUMBER CTO 816
CHECKED BY	DATE	SAMPLING LOCATIONS FOR GROUNDWATER AND SURFACE WATER MONITORING AREA A LANDFILL NSB-NEW LONDON, GROTON, CONNECTICUT	APPROVED BY CAR / DATE 6/27/02
COST/SCHEDULE-AREA			APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 2 - 1 / REV 0

P:\GIS\NLON\50820370.APR AREA A LANDFILL - POTENTIOMETRIC CONTOURS - ROUND 10 LAYOUT 6/3/02 KMP



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY K. PEILA	DATE 5/30/02	Tetra Tech NUS, Inc.	CONTRACT NUMBER 2863 / OWNER NUMBER CTO 816
CHECKED BY	DATE	POTENTIOMETRIC SURFACE MAP ROUND 10 GROUNDWATER MONITORING AREA A LANDFILL NSB-NEW LONDON, GROTON, CONNECTICUT	APPROVED BY CAR / DATE 6/27/02
COST/SCHEDULE-AREA			APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 2 - 2 / REV 0

3.0 MONITORING RESULTS

The groundwater samples collected from 14 monitoring wells, six surface water locations, and one seep location were analyzed for select TCL organic compounds, select TAL inorganic (total and dissolved) analytes, and select water chemistry parameters. Monitoring focused on the following organic and inorganic chemicals of potential concern (COPC), as identified in the GMP (TtNUS, January 1999).

- 1,1,2,2-Tetrachloroethane
- Ethylbenzene
- Xylenes
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Bis(2-ethylhexyl)phthalate
- Phenanthrene
- Aroclor 1016
- Aroclor 1254
- Aroclor 1260
- Dieldrin
- Heptachlor
- Arsenic
- Beryllium
- Cadmium
- Chromium
- Copper
- Lead
- Zinc

The contaminants listed above have been detected either in groundwater at concentrations exceeding the CTDEP SWPCs or in soil and landfill material at concentrations above their respective CTDEP Pollutant Mobility Criteria for GB groundwater.

The Round 10 analytical results are summarized on Tables 3-1 and 3-2. Within each table, the analytical results are compared to the primary and secondary monitoring criteria, as established in the GMP (TtNUS, January 1999). The results are also compared to NSB-NLON background groundwater concentrations established in the Basewide Groundwater OU RI (TtNUS, January 2002). Chemicals exceeding either primary or secondary monitoring criteria, or background concentrations are noted by shading. Figure 3-1 shows the chemicals detected in groundwater samples that exceed criteria and Figure 3-2 shows the chemicals detected in seep and surface water samples that exceed criteria. Data validation letters and laboratory data sheets are attached to this report as Appendix G.

The results of this comparison can be summarized as follows:

- There were no detections of VOCs, pesticides, PCBs, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, beryllium, cadmium, chromium, or lead in the groundwater or surface water samples.

- Bis(2-ethylhexyl)phthalate was detected in two of 14 groundwater samples and in two of seven surface water samples. The concentrations were 3J µg/L and 5J µg/L in the groundwater samples collected from monitoring wells 2WMW21S(DUP) and 2WMW46DS, respectively. The concentrations were 3J µg/L and 15 µg/L in the surface water samples collected from 3MSP01 and SG-20(DUP),

respectively. None of these results exceeded the monitoring criterion for bis(2-ethylhexyl)phthalate (59 µg/L).

- Phenanthrene was detected in one (plus the duplicate) of 14 groundwater samples. The concentrations were 0.05J µg/L and 0.05J µg/L in the groundwater samples collected from monitoring wells 2WMW21S and 2WMW21S(DUP), respectively. Neither of these results exceeded the monitoring criterion (0.077 µg/L). The laboratory's reporting limit (0.1 µg/L) exceeded the primary monitoring criterion for phenanthrene in all of the samples except for the two detections noted above. The project laboratory was unable to report defensible results for the other samples below the monitoring criterion using currently available laboratory equipment.

- The detection limits for aroclors 1016, 1254, and 1260 were elevated (0.96 µg/L and 0.98 µg/L, respectively) and exceeded the primary monitoring criteria (0.5 µg/L) in the samples 2WMW21S and 2WMW21S(DUP). This was caused by a dilution being performed on the sample. The laboratory's detection limits for all pesticide and PCB compounds exceeded the secondary monitoring criteria for all samples. The project laboratory was unable to report defensible results within an order of magnitude of the secondary criteria using currently available laboratory equipment.

- Arsenic was detected in ten (plus a duplicate) of 14 unfiltered groundwater samples (2WMW20S, 2WMW21S, 2WMW21S(DUP), 2WMW40DS, 2WMW41DS, 2WMW42DS, 2WMW43DS, 2WMW44DS, 2WMW45DS, 2WMW46DS and 2WMW47DS) at concentrations ranging from 0.96 µg/L to 23.1 µg/L. Arsenic was also detected in nine filtered samples. The concentrations in the unfiltered samples were 0.96J, 6.0J, 6.8, 7.3, 14.9, 6.0J, 15.3, 1.8, 7.2, 20.4, and 23.1 µg/L, respectively, while the concentrations in the filtered samples were 0.8U, 6.9, 6.3J, 6.5U, 13.2, 4.5, 11.3, 1.0J, 7.1, 38.0, and 21.7 µg/L, respectively. Detected arsenic concentrations in nine total and eight filtered samples exceeded the primary criterion of 4 µg/L. None of the detected concentrations exceeded the secondary criterion of 150 µg/L. Two of the concentrations for arsenic detected in the filtered samples were higher than the concentrations detected in the unfiltered portions of the corresponding samples. Additionally, the nine total and eight filtered concentrations exceeded the NSB-NLON total and filtered background concentrations of arsenic (1.92 and 2.55 µg/L, respectively). The laboratory's reporting limit (6.5 µg/L) exceeded the primary monitoring criteria (4.0 µg/L) for arsenic in the filtered sample 2WMW40DS.

- Arsenic was detected in two unfiltered surface water samples collected from SG-23 and SG-24, and one filtered surface water sample collected from SG-20. The concentrations at SG-23 and SG-24 in the unfiltered samples were 1.8 µg/L and 2.2 µg/L, respectively, while the concentration at SG-20 was 0.93J µg/L in the filtered sample. None of the detected concentrations exceeded either of the

monitoring criteria. However, one of the detected concentrations exceeded the NSB-NLON background concentration of total arsenic (1.92 µg/L).

- The laboratory's reporting limit (14.9 µg/L) exceeded the primary monitoring criterion (6.0 µg/L) for cadmium in the unfiltered and filtered groundwater samples 2WMW21S, 2WMW21S(DUP), 2WMW40DS, 2WMW41DS, 2WMW42DS, 2WMW43DS, and 2WMW46DS. The laboratory's reporting limit (2.98 µg/L) exceeded the secondary monitoring criterion (0.62 µg/L) for cadmium in the unfiltered and filtered groundwater samples 2LMW20S, 2WMW38DS, 2WMW39DS, 2WMW37DS, 4MW1S, and 4MW1S(DUP) and in all surface water samples. The laboratory's reporting limit (5.96 µg/L) exceeded the secondary monitoring criteria (0.62 µg/L) for cadmium in the unfiltered and filtered groundwater samples 2WMW44DS, 2WMW45DS, and 2WMW47DS.

- Copper was detected in two of 14 unfiltered groundwater samples collected from 2LMW20S and 2WMW38DS and in two filtered groundwater samples collected from 2WMW38DS and 3MW37S. The concentrations detected in the unfiltered samples were 4.1 µg/L and 2.9J µg/L, respectively and the concentrations detected in the filtered samples were 5.0 µg/L and 2.0J µg/L, respectively. None of the concentrations of copper detected exceeded the primary criterion of 48 µg/L. One concentration of copper detected exceeded the secondary criterion of 4.8 µg/L. Both of the concentrations of copper detected in the filtered samples were higher than the concentrations detected in the unfiltered portions of the corresponding samples. Additionally, none of the concentrations exceeded the NSB-NLON total and filtered background concentrations of copper (107 and 39.4 µg/L, respectively). The laboratory's reporting limit (8.7 µg/L) exceeded the secondary monitoring criteria (4.8 µg/L) for copper in the unfiltered and filtered portions of groundwater samples 2WMW21S, 2WMW21S(DUP), 2WMW40DS, 2WMW41DS, 2WMW42DS, 2WMW43DS, and 2WMW46DS.

- Copper was detected in two unfiltered surface water samples collected from SG-23 and SG-24 and in three filtered surface water samples collected from SG-19, SG-23 and SG-24. The concentrations in the unfiltered samples were 7.4 µg/L and 11.7 µg/L, respectively, and the concentrations in the filtered samples were 1.8J µg/L, 3.0J µg/L, and 3.7 µg/L respectively. None of the concentrations of copper detected exceeded the primary criterion of 48 µg/L. Two of the concentrations of copper detected exceeded the secondary criterion of 4.8 µg/L. The concentration of copper detected in the filtered sample SG-19 was higher than the result in the unfiltered portion of the corresponding sample. Additionally, none of the concentrations detected exceeded the NSB-NLON total and filtered background concentrations of copper (107 and 39.4 µg/L, respectively).

- The laboratory's reporting limit (2.7 µg/L) exceeded the secondary monitoring criterion (1.2 µg/L) for lead in the unfiltered groundwater sample 2WMW41DS. The laboratory's reporting limits exceeded the secondary monitoring criterion (1.2 µg/L) for lead in the unfiltered surface water samples 3MSP01, SG-20(DUP), SG-21, SG-23, and SG-24 and in the filtered surface water sample SG-23.

- Zinc was detected in three of 14 unfiltered groundwater samples and in two filtered groundwater samples. The concentrations in the unfiltered groundwater samples (2LWM20S, 2WMW38DS, and 4MW1S) were 9.1, 2.3J, and 43.7J µg/L, respectively, while the concentrations in the filtered samples (2LMW20S and 2WMW38DS) were 8.2 and 2.7 µg/L, respectively. None of the concentrations detected exceeded any of the criteria. One concentration of zinc detected in the filtered sample 2WMW38DS (2.7 µg/L) was higher than the result in the unfiltered portion of the corresponding sample (2.3J µg/L). Additionally, none of the concentrations detected exceeded the NSB-NLON total and filtered background concentrations of zinc (131 and 109 µg/L, respectively).

- Zinc was detected in seven (plus the duplicate) of seven unfiltered surface water samples and in seven of seven (but not the duplicate) filtered surface water samples. The concentration of zinc in the unfiltered surface water samples (3MSP01, SG-18, SG-19, SG-20, SG-20(DUP), SG-21, SG-23, and SG-24) were 13.9, 69.8, 15.6, 19.5J, 20.1J, 10.2, 344, and 123 µg/L, respectively, while the concentration in the filtered surface water samples were 13.1, 60.6J, 15.0, 21.0J, 9.1U, 9.1, 290, and 109 µg/L, respectively. The concentrations of zinc detected in the unfiltered samples from SG-23 and SG-24 (344 µg/L and 123 µg/L, respectively) and the filtered sample from SG-23 (290 µg/L) exceeded the primary monitoring criterion (123 µg/L). The concentration of zinc detected in the unfiltered sample from SG-18 (69.8 µg/L) and the concentrations of zinc detected in the filtered samples from SG-18 and SG-24 (60.6J µg/L and 109 µg/L, respectively) exceeded the secondary criterion (58.2 µg/L). The concentration of zinc detected in the filtered sample from SG-20 (21.0J µg/L) was higher than the concentration detected in the unfiltered portion of the corresponding sample (19.5J µg/L). Additionally, several of the concentrations of zinc exceeded the NSB-NLON total and filtered background concentrations of zinc (131 and 109 µg/L, respectively).

- Results for alkalinity, chemical oxygen demand, chloride, hardness, total dissolved solids, total organic carbon, and sulfate are presented in Table 3-1. An evaluation of the results was not done in this section because there were no monitoring criteria for these parameters. An evaluation of the results will be provided in the Year 3 Annual Groundwater Monitoring Report.

As discussed in Section 1.2, because this is only an interim report, the evaluation of the analytical results is limited to the above comparison. No conclusions or recommendations are drawn from this comparison. Initial conclusions and recommendations were stated in the Year 1 and Year 2 Annual Groundwater

Monitoring Reports based on the first eight quarterly rounds of results. Subsequent conclusions and recommendations will be provided in the Year 3 Annual Groundwater Monitoring Report based on monitoring performed during year 3.

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TABLE 3-1

ROUND 10 GROUNDWATER ANALYTICAL RESULTS SUMMARY
INTERIM GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT
PAGE 1 OF 4

Chemical	Primary Monitoring Criterion [1]	Secondary Monitoring Criterion	NSB-NLON Background Concentration[5]	2LMW20S 10 3/24/2002	2WMW21S 10 3/20/2002	2WMW21S (DUP) 10 3/20/2002	2WMW38DS 10 3/23/2002
VOCs (ug/L)							
1,1,2,2-TETRACHLOROETHANE	110	NA	--	1 U	1 U	1 U	1 U
ETHYLBENZENE	580,000	NA	--	1 U	1 U	1 U	1 U
XYLENES, TOTAL	NA	NA	--	1 U	1 U	1 U	1 U
SVOCs (ug/L)							
BENZO(A)ANTHRACENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(A)PYRENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(B)FLUORANTHENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(K)FLUORANTHENE	0.3	NA	--	0.1 UJ	0.1 U	0.1 U	0.1 UJ
BIS(2-ETHYLHEXYL)PHTHALATE	59	NA	--	5 U	5 U	3 J	5 U
PHENANTHRENE	0.077	NA	--	0.1 UJ	0.05 J	0.05 J	0.1 UJ
Pesticides/PCBs (ug/L)							
AROCLOR-1016	0.5	0.014[2]	--	0.21 U	0.96 U	0.98 U	0.19 U
AROCLOR-1254	0.5	0.014[2]	--	0.21 U	0.96 U	0.98 U	0.19 U
AROCLOR-1260	0.5	0.014[2]	--	0.21 U	0.96 U	0.98 U	0.19 U
DIELDRIN	0.1	0.0019[3]	--	0.021 U	0.096 U	0.098 U	0.019 U
HEPTACHLOR	0.05	0.0038[2]	--	0.011 U	0.048 UJ	0.049 UJ	0.010 U
Inorganics (total/dissolved) (ug/L)							
ARSENIC	4	150[2]	1.92/2.55	0.96 J/0.80 U	6.0 J/6.9	6.8/6.3 J	1.6 U/2.3 U
BERYLLIUM	4	NA	ND	0.29 U/0.29 U	1.45 U/1.45 U	1.45 U/1.45 U	0.29 U/0.29 U
CADMIUM	6	0.62[3]	ND	2.98 U/2.98 U	14.90 UJ/14.90 UJ	14.90 UJ/14.90 UJ	2.98 U/2.98 U
CHROMIUM[4]	110	11[2]	49.9/16	0.43 U/0.57 U	6.8 U/4.9 U	6.2 U/6.1 U	2.7 U/2.2 U
COPPER	48	4.8[3]	107/39.4	4.1/1.74 U	8.70 U/8.70 U	8.70 U/8.70 U	2.9 J/5.0
LEAD	13	1.2[3]	6.63/2.52	0.67 U/0.56 U	0.20 U/0.20 U	0.20 U/0.20 U	0.34 U/0.34 U
ZINC	123	58.2[3]	131/109	9.1/8.2	9.4 U/10.0 U	11.7 U/12.2 U	2.3 J/2.7
Miscellaneous Parameters (mg/L)							
ALKALINITY	NA	NA	--	50	910	910	260
CHEMICAL OXYGEN DEMAND	NA	NA	--	15 U	390	320	20 U
CHLORIDE	NA	NA	--	70	5900	6000	200
HARDNESS	NA	NA	--	75.8	1670	1640	215
SULFATE	NA	NA	--	16	20	20	40
TOTAL DISSOLVED SOLIDS	NA	NA	--	290	6700	12000	670
TOTAL ORGANIC CARBON	NA	NA	--	2	34	40	13

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TABLE 3-1

ROUND 10 GROUNDWATER ANALYTICAL RESULTS SUMMARY
INTERIM GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT
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Chemical	Primary Monitoring Criterion [1]	Secondary Monitoring Criterion	NSB-NLON Background Concentration[5]	2WMW39DS 10 3/22/2002	2WMW40DS 10 3/22/2002	2WMW41DS 10 3/22/2002	2WMW42DS 10 3/21/2002
VOCs (ug/L)							
1,1,2,2-TETRACHLOROETHANE	110	NA	--	1 U	1 U	1 U	1 U
ETHYLBENZENE	580,000	NA	--	1 U	1 U	1 U	1 U
XYLENES, TOTAL	NA	NA	--	1 U	1 U	1 U	1 U
SVOCs (ug/L)							
BENZO(A)ANTHRACENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(A)PYRENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(B)FLUORANTHENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(K)FLUORANTHENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BIS(2-ETHYLHEXYL)PHTHALATE	59	NA	--	5 U	5 U	5 U	5 U
PHENANTHRENE	0.077	NA	--	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
Pesticides/PCBs (ug/L)							
AROCLOR-1016	0.5	0.014[2]	--	0.20 U	0.20 U	0.19 U	0.19 U
AROCLOR-1254	0.5	0.014[2]	--	0.20 U	0.20 U	0.19 U	0.19 U
AROCLOR-1260	0.5	0.014[2]	--	0.20 U	0.20 U	0.19 U	0.19 U
DIELDRIN	0.1	0.0019[3]	--	0.020 U	0.020 U	0.019 U	0.019 U
HEPTACHLOR	0.05	0.0038[2]	--	0.010 UJ	0.010 U	0.010 UJ	0.010 UJ
Inorganics (total/dissolved) (ug/L)							
ARSENIC	4	150[2]	1.92/2.55	0.80 U/0.80 U	7.3/6.5 U	14.9/13.2	6.0 J/4.5
BERYLLIUM	4	NA	ND	0.29 U/0.29 U	1.45 U/1.45 U	1.45 U/1.45 U	1.45 U/1.45 U
CADMIUM	6	0.62[3]	ND	2.98 UJ/2.98 UJ	14.90 U/14.90 U	14.90 UJ/14.90 UJ	14.90 UJ/14.90 UJ
CHROMIUM[4]	110	11[2]	49.9/16	1.1 U/0.46 U	3.8 U/3.9 U	15.2 U/8.3 U	2.1 U/2.4 U
COPPER	48	4.8[3]	107/39.4	1.74 U/1.74 U	8.70 U/8.70 U	8.70 U/8.70 U	8.70 U/8.70 U
LEAD	13	1.2[3]	6.63/2.52	0.05 U/0.05 U	0.37 U/0.27 U	2.7 U/0.20 U	0.20 U/0.20 U
ZINC	123	58.2[3]	131/109	2.4 U/3.1 U	6.30 U/6.30 U	25.7 U/11.4 U	26.1 U/11.0 U
Miscellaneous Parameters (mg/L)							
ALKALINITY	NA	NA	--	230	770	2000	530
CHEMICAL OXYGEN DEMAND	NA	NA	--	15 U	600	300	640
CHLORIDE	NA	NA	--	540	10000	10000	3000
HARDNESS	NA	NA	--	77	3540	2720	1280
SULFATE	NA	NA	--	4	1600	350	110
TOTAL DISSOLVED SOLIDS	NA	NA	--	1100	24000	13000	5700
TOTAL ORGANIC CARBON	NA	NA	--	4	35	64	27

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TABLE 3-1

ROUND 10 GROUNDWATER ANALYTICAL RESULTS SUMMARY
INTERIM GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT
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Chemical	Primary Monitoring Criterion [1]	Secondary Monitoring Criterion	NSB-NLON Background Concentration[5]	2WMW43DS 10 3/22/2002	2WMW44DS 10 3/22/2002	2WMW45DS 10 3/22/2002	2WMW46DS 10 3/22/2002
VOCs (ug/L)							
1,1,2,2-TETRACHLOROETHANE	110	NA	--	1 U	1 U	1 U	1 U
ETHYLBENZENE	580,000	NA	--	1 U	1 U	1 U	1 U
XYLENES, TOTAL	NA	NA	--	1 U	1 U	1 U	1 U
SVOCs (ug/L)							
BENZO(A)ANTHRACENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(A)PYRENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(B)FLUORANTHENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(K)FLUORANTHENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BIS(2-ETHYLHEXYL)PHTHALATE	59	NA	--	5 U	5 U	5 U	5 J
PHENANTHRENE	0.077	NA	--	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
Pesticides/PCBs (ug/L)							
AROCLOR-1016	0.5	0.014[2]	--	0.21 U	0.19 U	0.19 U	0.19 U
AROCLOR-1254	0.5	0.014[2]	--	0.21 U	0.19 U	0.19 U	0.19 U
AROCLOR-1260	0.5	0.014[2]	--	0.21 U	0.19 U	0.19 U	0.19 U
DIELDRIN	0.1	0.0019[3]	--	0.021 U	0.019 U	0.019 U	0.019 U
HEPTACHLOR	0.05	0.0038[2]	--	0.011 UJ	0.009 UJ	0.009 UJ	0.009 UJ
Inorganics (total/dissolved) (ug/L)							
ARSENIC	4	150[2]	1.92/2.55	15.3/11.3	1.8/1.0 J	7.2/7.1	20.4/38.0
BERYLLIUM	4	NA	ND	1.45 U/1.45 U	0.29 U/0.58 U	0.29 U/0.58 U	1.45 U/1.45 U
CADMIUM	6	0.62[3]	ND	14.90 UJ/14.90 UJ	5.96 UJ/5.96 UJ	5.96 UJ/5.96 UJ	14.90 UJ/14.90 UJ
CHROMIUM[4]	110	11[2]	49.9/16	8.2 U/8.0 U	4.2 U/2.3 U	2.8 U/2.7 U	10.3 U/9.6 U
COPPER	48	4.8[3]	107/39.4	8.70 U/8.70 U	3.48 U/3.48 U	3.48 U/3.48 U	8.70 U/8.70 U
LEAD	13	1.2[3]	6.63/2.52	0.58 U/0.20 U	0.17 U/0.05 U	0.20 U/0.11 U	0.83 U/0.20 UJ
ZINC	123	58.2[3]	131/109	7.4 U/10.0 U	5.7 U/3.0 U	6.3 U/3.5 U	22.2 U/8.8 U
Miscellaneous Parameters (mg/L)							
ALKALINITY	NA	NA	--	980	960	180	1900
CHEMICAL OXYGEN DEMAND	NA	NA	--	690	40 U	100 U	1100
CHLORIDE	NA	NA	--	12000	5000	1000	20000
HARDNESS	NA	NA	--	4370	583	283	5780
SULFATE	NA	NA	--	400	54	20	660
TOTAL DISSOLVED SOLIDS	NA	NA	--	38000	7000	1300	28000
TOTAL ORGANIC CARBON	NA	NA	--	34	9	16	36

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TABLE 3-1

ROUND 10 GROUNDWATER ANALYTICAL RESULTS SUMMARY
INTERIM GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT
PAGE 4 OF 4

Chemical	Primary Monitoring Criterion [1]	Secondary Monitoring Criterion	NSB-NLON Background Concentration[5]	2WMW47DS 10 3/20/2002	3MW37S 10 3/24/2002	4MW1S 10 3/20/2002	4MW1S (DUP) 10 3/20/2002
VOCs (ug/L)							
1,1,2,2-TETRACHLOROETHANE	110	NA	--	1 U	1 U	1 U	1 U
ETHYLBENZENE	580,000	NA	--	1 U	1 U	1 U	1 U
XYLENES, TOTAL	NA	NA	--	1 U	1 U	1 U	1 U
SVOCs (ug/L)							
BENZO(A)ANTHRACENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(A)PYRENE	0.3	NA	--	0.1 U	0.1 UJ	0.1 U	0.1 U
BENZO(B)FLUORANTHENE	0.3	NA	--	0.1 U	0.1 UJ	0.1 U	0.1 U
BENZO(K)FLUORANTHENE	0.3	NA	--	0.1 U	0.1 UJ	0.1 U	0.1 U
BIS(2-ETHYLHEXYL)PHTHALATE	59	NA	--	5 U	5 U	6 U	5 U
PHENANTHRENE	0.077	NA	--	0.1 U	0.1 UJ	0.1 U	0.1 U
Pesticides/PCBs (ug/L)							
AROCLOR-1016	0.5	0.014[2]	--	0.22 U	0.20 U	0.21 U	0.20 U
AROCLOR-1254	0.5	0.014[2]	--	0.22 U	0.20 U	0.21 U	0.20 U
AROCLOR-1260	0.5	0.014[2]	--	0.22 U	0.20 U	0.21 U	0.20 U
DIELDRIN	0.1	0.0019[3]	--	0.022 U	0.020 U	0.021 U	0.020 U
HEPTACHLOR	0.05	0.0038[2]	--	0.011 UJ	0.010 U	0.010 UJ	0.010 UJ
Inorganics (total/dissolved) (ug/L)							
ARSENIC	4	150[2]	1.92/2.55	23.1/21.7	0.80 U/1.1 U	0.80 U/0.80 U	0.80 U/0.80 U
BERYLLIUM	4	NA	ND	0.58 U/0.58 U	0.29 U/0.29 U	0.29 U/1.45 U	0.29 U/1.45 U
CADMIUM	6	0.62[3]	ND	5.96 UJ/5.96 UJ	2.98 U/2.98 U	2.98 UJ/2.98 UJ	2.98 UJ/2.98 UJ
CHROMIUM[4]	110	11[2]	49.9/16	1.9 U/1.2 U	0.35 U/0.36 U	0.46 U/0.35 U	0.35 U/0.35 U
COPPER	48	4.8[3]	107/39.4	3.48 U/3.48 U	1.74 U/2.0 J	1.8 U/1.74 U	1.74 U/1.74 U
LEAD	13	1.2[3]	6.63/2.52	0.07 U/0.05 U	0.39 U/0.32 U	0.05 U/0.05 U	0.05 U/0.05 U
ZINC	123	58.2[3]	131/109	4.8 U/6.0 U	1.26 U/1.26 U	43.7 J/3.8 U	12.8 U/3.1 U
Miscellaneous Parameters (mg/L)							
ALKALINITY	NA	NA	--	250	130	20	20
CHEMICAL OXYGEN DEMAND	NA	NA	--	30 U	15 U	15 U	15 U
CHLORIDE	NA	NA	--	1000	530	53	59
HARDNESS	NA	NA	--	254	244	66.6	65.4
SULFATE	NA	NA	--	1 U	30	32	32
TOTAL DISSOLVED SOLIDS	NA	NA	--	1800	1100	170	170
TOTAL ORGANIC CARBON	NA	NA	--	22	4	2	1 U

NOTES:
Bold numbers denote exceedances of primary or secondary monitoring criterion and/or background groundwater concentrations.
1 Surface Water Protection Criteria for substances in groundwater. (CTDEP, January 1996)
2 Federal Ambient Water Quality Criteria for protection of aquatic life (chronic, freshwater). (USEPA, 1999)
3 Connecticut Water Quality Criteria for protection of human health from consumption of organisms. (CTDEP, 1997)
4 Hexavalent Chromium
5 Background Concentrations taken from Basewide Groundwater Operable Unit Remedial Investigation Report (TtNUS, January 2002)
J Estimated Value
R Rejected Value
U Undetected
NA Not Available
ND Not Detected in background samples
-- Not analyzed for in background samples.

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TABLE 3-2

ROUND 10 SURFACE WATER ANALYTICAL RESULTS SUMMARY
INTERIM GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT
PAGE 1 OF 2

Chemical	Primary Monitoring Criterion [1]	Secondary Monitoring Criterion	NSB-NLON Background Concentration[5]	3MSP01 10 3/24/2002	SG-18 10 3/21/2002	SG-19 10 3/25/2002	SG-20 10 3/21/2002	SG-20 (DUP) 10 3/21/2002
VOCs (ug/L)								
1,1,2,2-TETRACHLOROETHANE	110	NA	--	1 U	1 U	1 U	1 U	1 U
ETHYLBENZENE	580,000	NA	--	1 U	1 U	1 U	1 U	1 U
XYLENES, TOTAL	NA	NA	--	1 U	1 U	1 U	1 U	1 U
SVOCs (ug/L)								
BENZO(A)ANTHRACENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(A)PYRENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(B)FLUORANTHENE	0.3	NA	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(K)FLUORANTHENE	0.3	NA	--	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U
BIS(2-ETHYLHEXYL)PHTHALATE	59	NA	--	3 J	5 U	5 U	5 U	15
PHENANTHRENE	0.077	NA	--	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
Pesticides/PCBs (ug/L)								
AROCLOR-1016	0.5	0.014[2]	--	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
AROCLOR-1254	0.5	0.014[2]	--	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
AROCLOR-1260	0.5	0.014[2]	--	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
DIELDRIN	0.1	0.0019[3]	--	0.019 U	0.019 U	0.019 U	0.019 U	0.020 U
HEPTACHLOR	0.05	0.0038[2]	--	0.009 U	0.009 UJ	0.009 U	0.010 UJ	0.010 UJ
Inorganics (total/dissolved) (ug/L)								
ARSENIC	4	150[2]	1.92/2.55	0.80 U/0.80 U	0.80 U/0.80 U	0.80 U/0.80 U	0.80 U/0.93 J	3.20 U/0.80 U
BERYLLIUM	4	NA	ND	0.29 U/0.29 U	0.29 U/0.29 U	0.29 U/0.29 U	0.29 U/0.29 U	0.29 U/0.29 U
CADMIUM	6	0.62[3]	ND	2.98 U/2.98 U	2.98 UJ/2.98 UJ	2.98 U/2.98 U	2.98 UJ/2.98 UJ	2.98 UJ/2.98 UJ
CHROMIUM[4]	110	11[2]	49.9/16	0.59 U/0.36 U	0.35 U/0.35 U	0.56 U/0.60 U	0.36 U/0.80 U	1.40 U/0.45 U
COPPER	48	4.8[3]	107/39.4	1.74 U/1.74 U	1.74 U/1.74 U	1.74 U/1.8 J	1.74 U/1.74 U	1.74 U/1.74 U
LEAD	13	1.2[3]	6.63/2.52	1.4 U/0.34 U	0.34 U/0.31 U	0.64 U/0.40 U	0.41 U/0.16 U	2.2 U/0.13 U
ZINC	123	58.2[3]	131/109	13.9/13.1	69.8 J/60.6 J	15.6/15.0	19.5 J/21.0 J	20.1 J/9.1 U
Miscellaneous Parameters (mg/L)								
ALKALINITY	NA	NA	--	70	30	20 U	20 U	20 U
CHEMICAL OXYGEN DEMAND	NA	NA	--	15 U	15 U	15 U	15 U	15 U
CHLORIDE	NA	NA	--	200	70	80	60	60
HARDNESS	NA	NA	--	97.2	44	37.2	31.6	32.2
SULFATE	NA	NA	--	12	9.6	14	11	11
TOTAL DISSOLVED SOLIDS	NA	NA	--	440	190	300	130	170
TOTAL ORGANIC CARBON	NA	NA	--	3	4	5.5	5	4

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TABLE 3-2

ROUND 10 SURFACE WATER ANALYTICAL RESULTS SUMMARY
INTERIM GROUNDWATER MONITORING REPORT
AREA A LANDFILL, NSB-NLON, GROTON, CONNECTICUT
PAGE 2 OF 2

Chemical	Primary Monitoring Criterion [1]	Secondary Monitoring Criterion	NSB-NLON Background Concentration[5]	SG-21 10 3/25/2002	SG-23 10 3/25/2002	SG-24 10 3/25/2002
VOCs (ug/L)						
1,1,2,2-TETRACHLOROETHANE	110	NA	--	1 U	1 U	1 U
ETHYLBENZENE	580,000	NA	--	1 U	1 U	1 U
XYLENES, TOTAL	NA	NA	--	1 U	1 U	1 U
SVOCs (ug/L)						
BENZO(A)ANTHRACENE	0.3	NA	--	0.1 U	0.1 U	0.1 U
BENZO(A)PYRENE	0.3	NA	--	0.1 U	0.1 U	0.1 U
BENZO(B)FLUORANTHENE	0.3	NA	--	0.1 U	0.1 U	0.1 U
BENZO(K)FLUORANTHENE	0.3	NA	--	0.1 UJ	0.1 UJ	0.1 UJ
BIS(2-ETHYLHEXYL)PHTHALATE	59	NA	--	5 U	5 U	5 U
PHENANTHRENE	0.077	NA	--	0.1 UJ	0.1 UJ	0.1 UJ
Pesticides/PCBs (ug/L)						
AROCLOR-1016	0.5	0.014[2]	--	0.19 U	0.19 UJ	0.21 U
AROCLOR-1254	0.5	0.014[2]	--	0.19 U	0.19 UJ	0.21 U
AROCLOR-1260	0.5	0.014[2]	--	0.19 U	0.19 UJ	0.21 U
DIELDRIN	0.1	0.0019[3]	--	0.019 U	0.019 UJ	0.021 U
HEPTACHLOR	0.05	0.0038[2]	--	0.010 U	0.010 UJ	0.010 U
Inorganics (total/dissolved) (ug/L)						
ARSENIC	4	150[2]	1.92/2.55	0.80 U/0.80 U	1.8/1.1 U	2.2/0.80 U
BERYLLIUM	4	NA	ND	0.29 U/0.29 U	0.29 U/0.29 U	0.29 U/0.29 U
CADMIUM	6	0.62[3]	ND	2.98 U/2.98 U	2.98 U/2.98 U	2.98 U/3.0 U
CHROMIUM[4]	110	11[2]	49.9/16	0.43 U/0.47 U	1.3 U/0.82 U	1.9 U/0.44 U
COPPER	48	4.8[3]	107/39.4	1.74 U/1.74 U	7.4/3.0 J	11.7/3.7
LEAD	13	1.2[3]	6.63/2.52	1.9 U/0.60 U	3.3 U/1.5 U	4.2 U/0.46 U
ZINC	123	58.2[3]	131/109	10.2/9.1	344/290	123/109
Miscellaneous Parameters (mg/L)						
ALKALINITY	NA	NA	--	20	20 U	20 U
CHEMICAL OXYGEN DEMAND	NA	NA	--	15 U	15 U	15 U
CHLORIDE	NA	NA	--	70	20	70
HARDNESS	NA	NA	--	40.5	18.8	32.4
SULFATE	NA	NA	--	13	3	4
TOTAL DISSOLVED SOLIDS	NA	NA	--	170	110	270
TOTAL ORGANIC CARBON	NA	NA	--	5.4	6.6	4

NOTES:
Bold numbers denote exceedances of primary or secondary monitoring criterion and/or background groundwater concentrations.
1 Surface Water Protection Criteria for substances in groundwater. (CTDEP, January 1996)
2 Federal Ambient Water Quality Criteria for protection of aquatic life (chronic, freshwater). (USEPA, 1999)
3 Connecticut Water Quality Criteria for protection of human health from consumption of organisms. (CTDEP, 1997)
4 Hexavalent Chromium
5 Background Concentrations taken from Basewide Groundwater Operable Unit Remedial Investigation Report (TtNUS, January 2002)
J Estimated Value
R Rejected Value
U Undetected
NA Not Available
ND Not Detected in background samples
-- Not analyzed for in background samples.

DRAFT

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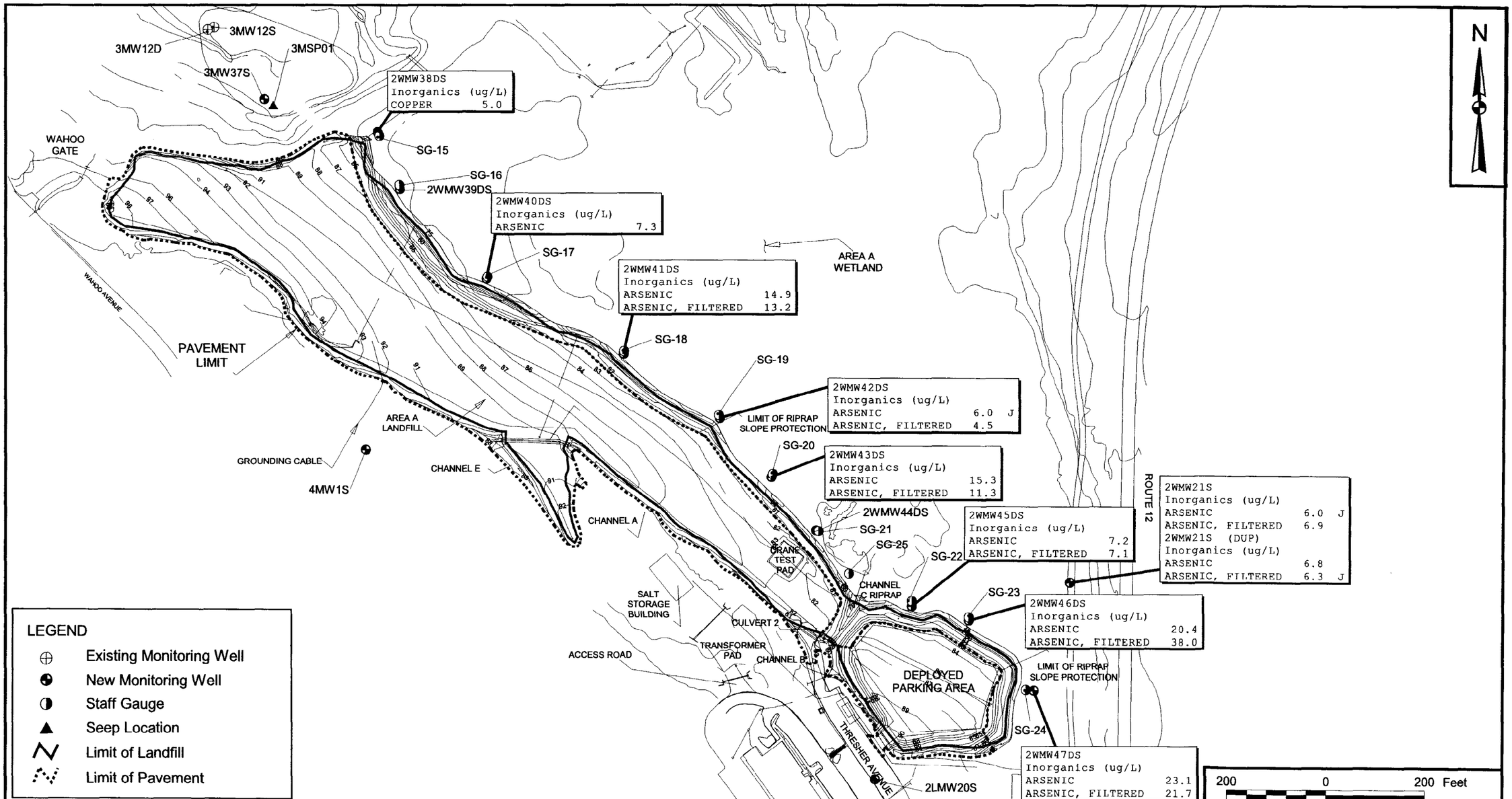

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY K. PEILA	DATE 6/6/02
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	

Tetra Tech NUS, Inc.

COC EXCEEDANCES OF MONITORING CRITERIA
ROUND 10 GROUNDWATER SAMPLING
AREA A LANDFILL
NSB-NLON, GROTON, CONNECTICUT

CONTRACT NUMBER 2863	OWNER NUMBER
APPROVED BY CAL	DATE 6/27/02
APPROVED BY	DATE
DRAWING NO. FIGURE 3-1	REV 0

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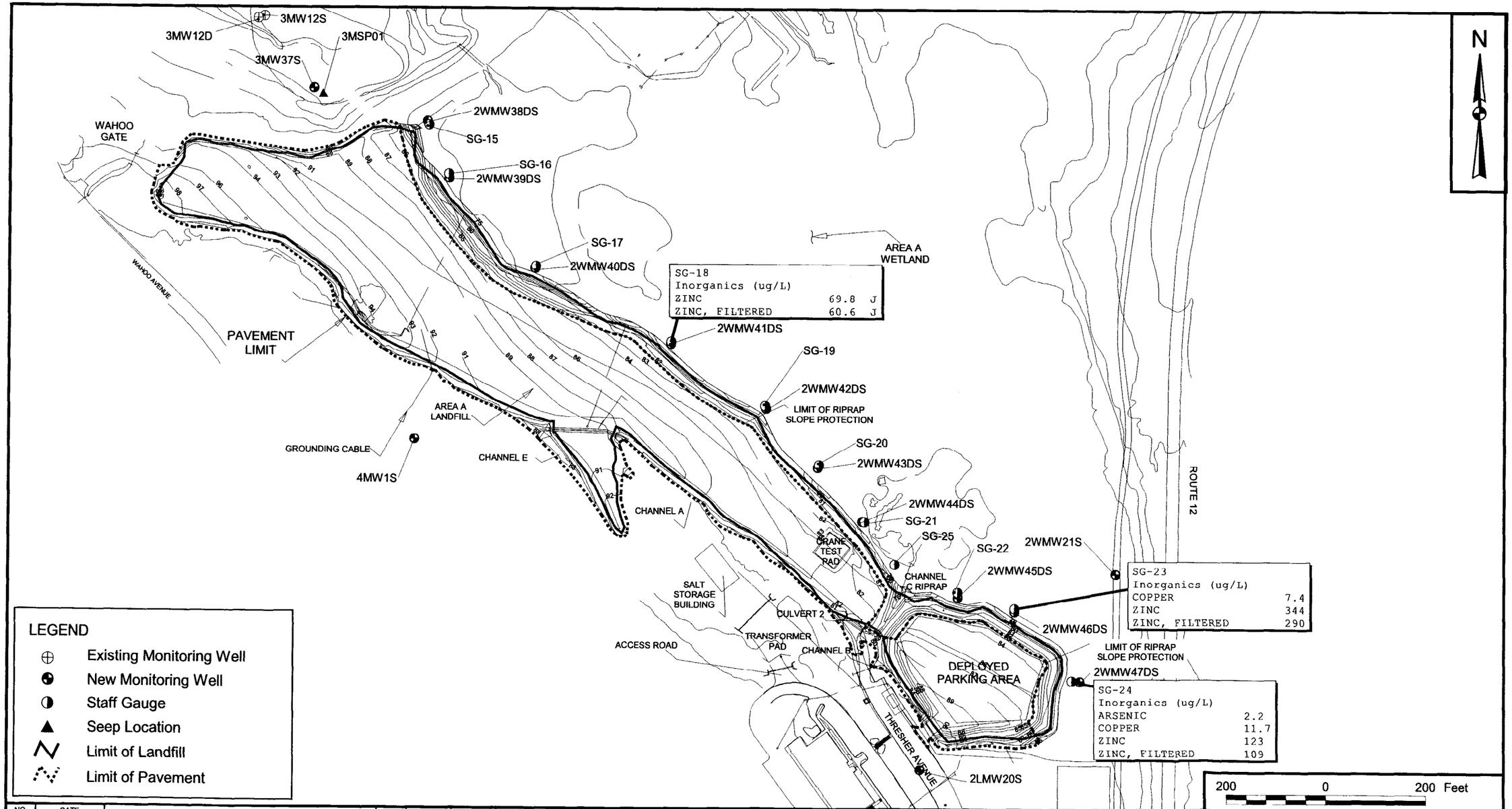

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY K. PEILA	DATE 6/6/02
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	

Tetra Tech NUS, Inc.

COC EXCEEDANCES OF MONITORING CRITERIA
ROUND 10 SURFACE WATER SAMPLING
AREA A LANDFILL
NSB-NLON, GROTON, CONNECTICUT

CONTRACT NUMBER 2863	OWNER NUMBER —
APPROVED BY GAL	DATE 6/27/02
APPROVED BY	DATE
DRAWING NO. FIGURE 3-2	REV 0

060212/P

CTO 0816

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APPENDIX A

FIELD ACTIVITIES LOG BOOK

START SHIF 1

3-18-02

DAILY SUMMARY

ON SITE, T+NUS

KEITH SIMPSON
TERRY ROJAHN

TRAVEL TO SITE (MOB)

HIGH WL @ GOSS COVE (HIGH TIDE RD.)
PREP. BOTTLE SETS,
CAL. EQ.

MONDAY 3.18.02

Work continued from Page WEATHER: SNOW OVERCAST 33-35°F

0630 KEITH SIMPSON & TERRY ROJAHN @ PGH AIRPO - TO GROTON, CT.

1020 CHECK INTO HOTEL, BEST WESTERN TR TO GAS SUPPLY & PICK-UP 3 CYL OF NITROGEN KS PAPER WORK.

TO BASE / PASS & ID THEN TO BLD 166

MET WITH DICK CONANT.

1240 TO GOSS COVE FOR HIGH TIDE WATER LEVELS

1420 RETURN TO BLD 166 PREP BOTTLE SETS CAL. EQ. LOAD TRUCKS, PICK-UP DRUM FROM HAZ-WASTE BLD FOR IDW @ GOSS COVE

1920 TO GOSS COVE & DROP IDW DRUM OFF

1940 TO HOTEL - KS TO STORE FOR WATER, ZIPLOCS

3.19.02

DAILY SUMMARY

ON SITE: T + NUS, T. ROJAHN
R. SIMPSON

4 ~~*~~ KS MWs SAMPLED @ GOSS COVE

2 MWs PURGED DRY @ AREA A

ROUND OF WLs @ AREA A

BOOK NO. 1300

TUES. 3.19.02

Work continued from Page

WEATHER: LT RAIN OVERNITE 34-42°F OVERCAST

0640 KS & TR TO GOSS COVE SET-UP ON 8MW3 & 2S PURGE & SAMPLE.

0930 COMPLETE SAMPLING MOVE TO 9MW6S & 7S NON-TIDAL PURGE & SAMPLE DUP @ 7S, MS/MSD @ 6S

1225 COMPLETE SAMPLING "DUMP" PURGE WATER TO 1MNCH

1310 PICK-UP MORE ICE TO BLD 166

1515 LOAD TRUCKS TO AREA A FOR SITE WATER LEVELS

1715 COMPLETE WL/INSPECTIONS START PURGE @ 2WMW3 9DS & 2WMW4 2DS

1855 RETURN TO BLD 166 CLEAN EQ.

1930 OFF SITE TO HOTEL

SCIENTIFIC BINDERY PRODUCTIONS CHICAGO 60605 MADE IN USA

Work continued to Page

SIGNATURE

DATE 3.19.02

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Work continued from Page

GOSS COVE ROUND 2 SAMPLING
MARCH 2002

LOCATION	DATE SAMPLED	PUMP USED	QA	TIDAL	COMMENTS
8MW1	3.24.02	B	—	Y	
8MW2S	3.19.02	B	—	Y	
8MW2D	3.23.02	P	—	Y	
8MW3	3.19.02	B	—	Y	
8MW5S	3.20.02	P	—	Y	
8MW6S	3.19.02	B	MS/MSD	N	
8MW6D	3.24.02	B	—	Y	
8MW7S	3.19.02	B	DUP	N	
8MW8D	3.23.02	B	—	Y	
8MW10S	3.23.02	P	MS/MSD*	N	ON ROAD - SECURITY TO CLOSE RD.
HNUS23	3.23.02	B	—	N	BALL FIELD

B = BLADDER (DEDICATED PUMPS)
P = PERISTALTIC

* LAB ASK FOR A 2ND MS/MSD. DUE TO RERUNS ON MS/MSD @ 6S THERE WAS NOT SUFFICIENT VOL. A 2ND MS/MSD WAS COLLECTED @ 10S

HIGH TIDE ROUND OF WLs 3.24.02 @ 1748
LOW TIDE ROUND OF WLs 3.25.02 @ 1302

SCIENTIFIC BINDERY PRODUCTIONS CHICAGO 60605 MADE IN USA

Work continued to Page

SIGNATURE [signature] DATE 3.19.02

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE NSIS-NLON 3.19.02

Work continued from Page

PROJECT NO. 2865

BOOK NO. 1300

AREA A LANDFILL SAMPLING
ROUND 10

LOCATION	SAMPLE DATE	QA	PURGE DATE	COMMENTS
3MW37S	3.24.02	MS/MSD	—	
2WMW39DS	3.21,23, 02	—	3.19,02	
39DS	3.22.02	—	3.21.02	
40DS	3.22,23.02	—	3.21.02	RD. 11 PURGE DRY AM
41DS	3.22.02	—	3.21.02	SAMPLE NEXT DAY PM
42DS	3.21.02	—	3.19.02	
43DS	3.22.01	—	3.21.02	
44DS	3.22.02	—	—	RD. 11 PURGE DRY
45DS	3.22.02	—	3.21.02	
46DS	3.22.02	—	3.21.02	
47DS	3.20.02	—	—	
2CMW20S	3.24.02	—	—	FLUSH MT.
WMW21S	3.20.02	DUP	—	
4MW1S	3.20.02	DUP	—	
SWSG 15	DRY	—	NA	
16	DRY	—		
17	DRY	—		
18	3.21.02	MS/MSD		
19	3.25.02	—		
20	3.21.02	DUP		
21	3.25.02	—		
22	DRY	—		
23	3.25.02	—		
24	3.25.02	—		
3MSP01	3.24.02	—		
LFSP01	3.23.02	—		ONE TIME SAMPLE

ROUND OF W/LS 3.19.02 PM

Work continued to Page

SCIENTIFIC BINDERY PRODUCTIONS CHICAGO 60605 MADE IN USA

SIGNATURE [illegible] **DATE** 3.19.02

DISCLOSED TO AND UNDERSTOOD BY **DATE** **WITNESS** **DATE**

3.20.02

DAILY SUMMARY

ON SITE; T+NUS, K. SIMPSON
T. ROJAHN

AREA A: 3 MWs SAMPLED

GOSS COVE: 1 - MW SAMPLED

SHIPPED 9 COOLERS TO LAB

SEE ALSO LOG BOOK # 1301

WED. 3.20.02

Work continued from Page WEATHER: AM OVERCAST 37°F
RAIN/SNOW STARTING @ 1030 31-34°F

0655 KS @ GOSS COVE SET-UP ON 8MW5S
TR @ AREA A SET-UP ON 2WMW21S

0905 KS COMPLETES SAMPLING TO AREA A
TALKED WITH COREY RICH HE WOULD LIKE PHOTOS OF "NEW" SEEP @ AREA A & SEEP BELOW DIKE. ALSO, ALL SAMPLING EQ. IS DEDACATED THEREFORE WE WILL NOT COLLECT A RINSATE BLANK THIS ROUND (BOTH SITES)

1000 WENT TO AREA A WITH DICK CONANT WE LOOK AT "NEW" SEEP AND THERE IS A QUESTION WHETHER IT IS COMING OUT FROM UNDER THE LANDFILL OR FROM UPSTREAM IN THE WETLAND. WE WILL SAMPLE THE WEEKEND.
ALSO SHOWED SURFACE WATER LOCATIONS AND HE AGREES THEY ARE VALID SW LOCATIONS.

1200 TR COMPLETES 2WMW21S + DUP @ BLD 166 TO LUNCH + PICK-UP MORE ICE.

1300 @ BLD 166 PREP FOR GW SAMPLING @ AREA A
KS TO 2WMW47DS PURGE & SAMPLE TR TO 4MW1S PURGE & SAMPLE + DUP
KS COMPLETE SAMPLING TO BLD 166 PACK FOR SAMPLE SHIPPMENT & PAPER WORK

1850 DEPART SITE FOR SAMPLE PICK-UP

Work continued to Page

SIGNATURE [signature] DATE 3.20.02

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

3·21·02

DAILY SUMMARY

ON SITE; T + NUS, K. SIMPSON
T. ROJAHN

AREA A: SAMPLED 1 MW +
STARTED 38DS

6 MWs PURGED DRY

THUR 3.21.02 BOOK NO. 1300

Work continued from Page WEATHER: NICE, SUNNY 33-42°F

0700 KS & TR @ BLD 166 CAL EQ., LOAD SUVs

0735 TO AREA A FOR GW SAMPLING

KS SAMPLED 42DS, TR START SAMPLING 38DS

ALSO PURGE DRY 45DS, 46DS,

TR PURGED 39DS & 40DS TO LUNCH

1250 TO BLD 166 RESTOCK SUVs, DUMP PURGE WATER @ OT 10

1330 RETURN TO AREA A PURGE 41DS & 43DS

1540 START SW SAMPLING SAMPLED 2 SG LOCATIONS SWSG-18 + MS/MSD & SWSG-20 + DUP

1700 TO BLD 166, TR OFF SITE FOR ICE, PAPER WORK FILTER SW DIS. METALS CLEAN-UP

1840 DEPART SITE TO HOTEL

SIGNATURE K. S. DATE 3.21.02

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

3-22-02

DAILY SUMMARY

ON SITE; T+NUS, R. SIMPSON
T. ROJAHN

AREA A:
SAMPLED 7 MWs

SHIPPED 8 COOLERS TO LAB

FRIDAY 3·22·02

Work continued from Page WEATHER: WINDY COLD 22-33°F

0700 KS & TR @ BLD 166 LOAD TRUCKS FOR GW SAMPLING @ AREA A (SEE PG 105)

1040 KS TO BLD 166 PAPERWORK, STORE SAMPLES, IDW TO OT10 LOAD SUV FOR PM GW SAMPLING @ AREA A

1250 KS & TR RETURN TO AREA A & CONTINUE SAMPLING GW.

1625 @ BLD 166 PACKING SAMPLES, PAPER WORK, CLEAN-UP, PREP FOR SAT. SAMPLING

1830 DEPART SITE FOR SAMPLE PICK-UP @ HOTEL

3.23.02

DAILY SUMMARY

ON SITE: T + NYS, T. ROJAHN
K. SIMPSON

AREA A: SEEP LFSP01 SAMPLED
40DS COMPLETED
CONTINUE SAMPLING 38DS

GOSS COVE: 4 MWs SAMPLED
& 1 MS/MSD COLLECTED

SAT. 3.23 '02

BOOK NO. 1300

Work continued from Page

WEATHER: SUNNY 27-45°F-HIGH WINDS

0655 ON SITE KS & TR LOAD SUV CAL EQ.;
TO AREA A SAMPLE 38DS & LFSP01
CALLED SECURITY TO HAVE ROAD BLOCKED FOR
8MW10S @ 1330 TALK WITH SARGENT WELLS
WILL BE THERE @ 1330

0930 RETURN TO BLD 166 FILTER SEEP DIS. METALS
LOAD SUVs FOR GOSS COVE GW SAMPLING

0930 TO GOSS COVE SET-UP PURGE SAMPLE 8D & 20

1210 COMPLETE SAMPLING TO LUNCH, PICK-UP ICE

1250 TR SET-UP ON HNUS23 KS @ 8MW10S
COMPLETE SAMPLING TO BLD 166 STORE
SAMPLES, CLEAN EQ.
TR TO AREA A & CONTINUE SAMPLING 40DS
KS @ 166 PAPERWORK

1840 DEPART SITE TO HOTEL

SIGNATURE

DATE 3-23-02

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

3.24.02

DAILY SUMMARY

ON SITE: T + NUS, R. SIMPSON
T. ROJAHN

AREA A: 2 MWs SAMPLED + MS/MSD
SEEP 3MSP01 SAMPLED

GOSS COVE: 2 MWs SAMPLED
HIGH TIDE WLs

SUNDAY 3.24.02

Work continued from Page WEATHER: NICE SUNNY 35-49°F NO WIND

0655 KS & TR PICK-UP ICE TO BLD 166 CAL EQ.
LOAD SUVs FOR GW SAMPLING @ AREA A
0730 TO AREA A TR SET-UP ON 3MW37S, KS TO 2LMW20S
1010 TO BLD 166 SWITCH OUT EQ. FOR GOSS COVE SAMPLING
1025 TO GOSS COVE SET-UP TO PURGE & SAMPLE MW1 & 6D. ALL MWs SAMPLED @ GOSS COVE
1230 COMPLETE SAMPLING DUMPED PURGE WATER INTO IDW DRUM ≈ 40 GAL OF WATER IN ONE DRUM
1340 TO AREA A TR CONTINUE ON MW 3MW37S + MS/MSD KS SAMPLED SEEP 3MSP01
KS TO BLD 166 CLEAN-UP, PAPER WORK
1730 TO GOSS COVE FOR HIGH TIDE WLs
TR & KS @ BLD 166 STORE SAMPLES
CLEAN-UP
DEPART SITE TO HOTEL

SCIENTIFIC BINDERY PRODUCTIONS CHICAGO 60605 MADE IN USA

Work continued to Page

SIGNATURE [signature] DATE 3-24-02

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

3-25-02

DAILY SUMMARY

ON SITE: T+NUS, K. SIMPSON
T. ROJAHN

AREA A:
4 SW, COMPLETE 38DS

GOSS COVE:
LOW TIDE WL ROUND

SHIPPED 12 COOLERS

DEMOB

MONDAY 3-25-02

Work continued from Page WEATHER: AM OVERCAST 38°F PM

0700 PICK-UP ICE TO BASE @ BLD 166 CAL EQ., LOA SUVs FOR SW SAMPLING @ AREA A
0800 TO AREA A, SAMPLED 4 SW LOCATIONS
0915 RETURN TO BLD 166 UNLOAD SUVs LABEL SAMPLES START DEMOB
1230 TR RETURN NITROGEN CYL. KS TO GOSS COVE FOR ROUND OF LOW TIDE WLs
TR TO MW 38DS TO COMPLETE SAMPLING
1400 TR/KS @ BLD 166 PACKING RENTED EQ. FOR FEDEX
1600 KS RETURN TO BLD 166
LOAD COOLERS, CLEAN TRAINING ROOM, STORE SUPPLIES IN BASEMENT
1730 OFF SITE TO HOTEL FOR SAMPLE PICK-UP

TUESDAY 3-26-02
TRAVEL TO PGH. OFFICE

END OF SHIFT
AREA A ROUND 10
GOSS COVE ROUND 2

SIGNATURE
DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE 3-25-02

APPENDIX B

MONITORING WELL INSPECTION SHEETS

MONITORING WELL INSPECTION SHEET

AREA A ROUND 10

Well ID: 3MW37S

Time: 1523 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 of…	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
Revision: 1
January: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 1D

Well ID: 2WMW38DS

Time: 1547 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 of…	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) Kit S. Simpson

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
vision: 1
ry: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 1D

Well ID: 2WMW39DS

Time: 1557 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 of…	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
Revision: 1
January: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 10

Well ID: 2WMW40DS

Time: 1600 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 of…	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
Revision: 1
Jan: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 1D

Well ID: 2WMW41DS

Time: 1606 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 WELL
Dedicated sampling equipment	Condition of…	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
Revision: 1
January: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 10

Well ID: 2WMW42DS

Time: 1610 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 WELL
Dedicated sampling equipment	Condition of…	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
Revision: 1
Jan: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 10

Well ID: 2UMW43DS

Time: 1613 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 WELL
Dedicated sampling equipment	Condition of...	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
Revision: 1
January: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 10

Well ID: 2WMW44DS

Time: 1619 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 WELL
Dedicated sampling equipment	Condition of…	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [signature]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
Revision: 1
Jan: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 10

Well ID: 2WMW45DS

Time: 1626 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 of...	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
Revision: 1
January: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 1D

Well ID: 2WMW46DS

Time: 1629

Date: 3.19.02

Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 WELL
Dedicated sampling equipment	Condition of…	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
vision: 1
ry: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 10

Well ID: 24MW47DS

Time: 1646 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 WELL
Dedicated sampling equipment	Condition of…	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
Revision: 1
January: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 10

Well ID: 2LMW20S

Time: 1644

Date: 3.19.02

Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible		✓	CAN ID FROM FIG. ALSO, ONLY FLUSH MT.
Well security	Condition protective case, cap, lock	✓		
Well pad	Concrete or gravel & condition		✓	BROKEN, SUNK = 2" SURFACE WATER ON/IN VAULT
Well seal	Condition of…	✓		
Area Immediately around well pad	Record any evidence of/or standing water in area of well		✓	
Dedicated sampling equipment	Condition of…	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
Revision: 1
ry: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 10

Well ID: 2WMW21S

Time: 1653 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 of…	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
Revision: 1
January: 1999

MONITORING WELL INSPECTION SHEET

AREA A ROUND 10

Well ID: 4MW1S

Time: 1538 Date: 3.19.02 Inspector's Name: SIMPSON/ROJAHN

Inspection Item	Types of Problems	Status		Observation
		S	U	
Well Tag	Is it in-place, legible	✓		
Well security	Condition protective case, cap, 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 of...	✓		
PVC Riser	Condition of riser & survey reference point	✓		

Comments:

Signature(s) [illegible]

Note: S= Satisfactory, U= Unsatisfactory
Check one, if unsatisfactory explain

NSB-NLON
Field Form
vision: 1
y: 1999

APPENDIX C

WATER LEVEL MEASUREMENT SHEET

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: NSB-NLON, Groton, CT
Project No.: CTO 816 # 2863.0503
Location: AREA A LANDFILL
Personnel: SIMPSON / ROJAHN
Weather Conditions: 45°F OVERCAST
Measuring Device: M-SCOPE
Tidally Influenced: Yes ___ No X
Remarks:

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
3MW37S	3-19-02	1523			3.61			
2WMW38DS		1547			5.81			
2WMW39DS		1557			2.40			
2WMW40DS		1606			3.15			
2WMW41DS		1606			2.42			
2WMW42DS		1610			2.05			
2WMW43DS		1613			2.44			
2WMW44DS		1619			1.62			
2WMW45DS		1626			2.12			
2WMW46DS		1629			1.55			
2WMW47DS		1646			1.38			
2LMW20S		1644			15.81	BTM 18.65	BAD SHAPE	FLUSH MT.
2WMW21S		1653			4.33			
4MW1S		1538			6.29			
SG06		1551			16.64			WETLAND OUTLET
SG15		1549			2.56*			DRY
SG16		1557			1.70*			DRY
SG17		1601			2.37*			DRY
SG18		1607			4.12			WATER
SG19		1611			3.92			WATER
SG20		1614			3.24			WATER
SG21		1620			3.29			WATER
SG22		1627			4.35*			DRY
SG23		1630			3.92	BROKEN HEW IN PLACE TO MEASURE		WATER
SG24		1647			4.72			WATER

* All measurements to the nearest 0.01 foot

* DRY SW LOCATIONS MEASURED TO GROUND SURFACE

APPENDIX D

MONITORING INSTRUMENT CALIBRATION LOGS

EQUIPMENT CALIBRATION LOG

INSTRUMENT NAME/MODEL : LA MOTTE 2020

PROJECT NAME : NSB-NLON AREA A & GOSS COVE

MANUFACTURER : LA MOTTE TURB

PROJECT NUMBER : CTO 816 N2863

SER# 1738-1800

CALIBRATION DATE	INITIAL SETTINGS	STANDARDS USED	PROCEDURE	ADJUSTMENTS MADE	FINAL SETTINGS	SIGNATURE	COMMENTS
3.18.02	0 & 9.7	0-10	ASPER.	YES	0-10	[illegible]	0-10 NTUs
3.19.02	0 & 10	"	MANUF.	—	"	[illegible]	
3.20.02	0 & 10	"	"	—	"	[illegible]	
3.21.02	0 & 9.8	"	"	Y	"	[illegible]	
3.22.02	0.2 & 9.8	"	"	Y	"	[illegible]	
3.23.02	0 & 9.9	"	"	Y	"	[illegible]	
3.24.02	0 & 10	"	"	N	"	[illegible]	
3.25.02	0 & 10	"	"	N	"	[illegible]	

Instrument Rented From: US ENVIRONMENTAL

EQUIPMENT CALIBRATION LOG

INSTRUMENT NAME/MODEL : LA MOTTE 2020

PROJECT NAME : NSB-NLON AREA A & GOSS COVE

MANUFACTURER : LA MOTTE TURB.

PROJECT NUMBER : CTO 816 N2863

SER# 0914 4098

CALIBRATION DATE	INITIAL SETTINGS	STANDARDS USED	PROCEDURE	ADJUSTMENTS MADE	FINAL SETTINGS	SIGNATURE	COMMENTS
3.18.02	0 & 9.8	0 - 10	AS PER-	YES	0 - 10	[illegible]	0 & 10 NTUs
3.19.02	0 & 9.9	"	MANUF.	Y	"	[illegible]	
3.20.02	0 & 9.7	"	"	Y	"	[illegible]	
3.21.02	0 & 10	"	"	—	"	[illegible]	
3.22.02	0 & 10	"	"	—	"	[illegible]	
3.23.02	0 & 10	"	"	—	"	[illegible]	
3.24.02	0 & 10	"	"	—	"	[illegible]	

Instrume lented From: US ENVIRONMENTAL

EQUIPMENT CALIBRATION LOG

INSTRUMENT NAME/MODEL : PID 2020

PROJECT NAME : NSB-NLON AREA A & GOSS COVE

MANUFACTURER : PHOTOVAC

PROJECT NUMBER : CTO 816 N2863

SER # ED F K 206

CALIBRATION DATE	INITIAL SETTINGS	STANDARDS USED	PROCEDURE	ADJUSTMENTS MADE	FINAL SETTINGS	SIGNATURE	COMMENTS
3.18.02	89	100 PPM	AS PER MANUF.	AUTO	100 PPM	RSP	CHANGED FILTER
		ISOBUTY-					
		LENE					
		EX 8/02					

Instrument Rented From: US ENVIRONMENTAL

EQUIPMENT CALIBRATION LOG

INSTRUMENT NAME/MODEL : YSI 650 MDS SER# 01K1272 A

PROJECT NAME : NSB-NLON AREA A & GOSS COVE

MANUFACTURER : YSI INC

PROJECT NUMBER : CTO 816 N2863

6920 SONDE

CALIBRATION DATE	INITIAL SETTINGS	STANDARDS USED	PROCEDURE	ADJUSTMENTS MADE	FINAL SETTINGS	SIGNATURE	COMMENTS
3.18.02	—	SEE RIGHT	AS PER	YES - AUTO	4.0 PH	RSP	COND. 1.0 MS/CM
3.19.02	—	"	MANUF.	"	7.0 PH	RSP	LOT 2904 EX 11/02
3.20.02	—	"	"	"	1.0 MS/CM	RSP	
3.21.02	—	"	"	"	5. COND	RSP	PH 7.0 LOT 2675
3.22.02	—	"	"	"	100 ORP	RSP	EX 6/03
3.23.02	—	"	"	"		RSP	
3.24.02	—	"	"	"		RSP	PH 4.0 LOT 2230
3.25.02	—	"	"	"		RSP	EX 4/02
							ORP 100 MV
							LOT 2505 EX 4/02
							DO SAT. AIR

Instrume .ented From: US ENVIRONMENTAL

EQUIPMENT CALIBRATION LOG

SER# 01L0055AB

INSTRUMENT NAME/MODEL: YSI 650 MDS

PROJECT NAME: NSB-NLON AREA A & GOSS COVE

MANUFACTURER: YSI INC.

PROJECT NUMBER: CTO 816 N2863

6920 SOND

CALIBRATION DATE	INITIAL SETTINGS	STANDARDS USED	PROCEDURE	ADJUSTMENTS MADE	FINAL SETTINGS	SIGNATURE	COMMENTS
3.18.02	—	SEE 2ND	AS PER	YES - AUTO	4.0 PH	RSP	
3.19.02	—	METER	MANUF.	"	7.0 PH	RSP	
3.20.02	—	SHEET	"	"	1.0 MS/CM	RSP	
3.21.02	—		"	"	COND	RSP	
3.22.02	—		"	"	100 ORP	RSP	
3.23.02	—		"	"		RSP	
3.24.02	—		"	"		RSP	

Instrument Rented From: US ENVIRONMENTAL

APPENDIX E

GROUNDWATER AND SURFACE WATER SAMPLE LOGSHEETS AND LOW-FLOW PURGE DATA SHEETS

TABLE E-1

SUMMARY OF GROUNDWATER/SURFACE WATER FIELD PARAMETERS
AREA A LANDFILL GROUNDWATER MONITORING PROGRAM ROUNDS 1 THROUGH 10
NSB-NLON, GROTON, CONNECTICUT

Location ID	Round	Date	pH Standard	SC mS/cm	Temp. Degree C	Turb. NTU	DO mg/L	Eh mV	Salinity ppt
4MW1S	1	10/27/99	5.69	0.293	13.7	0.1	1.37	124	0.14
(UG)	2	1/23/00	5.70	0.234	8.1	0	1.08	219	0.11
	3	4/8/00	5.65	0.418	10.2	0	0.06	180	0.20
	4	7/6/00	5.53	0.350	14.0	0	6.17	214	0.00
	5	12/16/00	5.80	0.270	10.4	2.8	6.54	67	--
	6	3/11/01	5.38	0.624	7.7	0	9.87	195	0.31
	7	6/25/01	5.61	0.217	12.1	0	8.33	--	--
	8	9/20/01	5.70	0.339	15.3	0	6.13	175	0.00
	9	1/12/02	5.76	0.298	10.1	0	6.08	20	0.14
	10	3/20/02	5.88	0.311	7.7	0.1	8.44	108	0.15
2LMW20S	1	10/24/99	6.09	0.568	15.7	0	1.37	32	0.28
(UG)	2	1/22/00	6.42	0.394	8.8	0.5	2.19	-7	0.19
	3	4/8/00	6.31	0.439	12.3	3.1	0.02	28	0.21
	4	7/6/00	6.16	0.503	16.0	2.2	0.99	-18	0.00
	5	12/16/00	6.23	0.552	12.8	1.6	3.87	-99	--
	6	3/12/01	12.31	0.515	9.9	3.6	0.73	27	0.25
	7	6/24/01	6.48	0.359	15.2	1.0	6.20	--	--
	8	9/21/01	6.34	0.431	17.8	7.2	5.01	-114	0.00
	9	1/13/02	dry	--	--	--	--	--	--
	10	3/24/02	6.07	0.361	11.7	2.1	1.60	81	0.17
2WMW21S	1	10/25/99	6.72	30.27	13.5	190	5.78	-333	18.79
(REF)	2	1/23/00	6.84	34.25	7.6	3.2	3.48	-338	21.32
	3	4/8/00	6.62	34.20	12.1	41	4.49	-366	21.46
	4	7/5/00	6.91	32.30	15.4	40	0.26	-404	20.00
	5	12/14/00	6.95	3.380	8.1	19	9.85	-310	--
	6	3/8/01	6.14	4.585	3.4	1.7	1.18	-234	2.40
	7	6/23/01	6.69	25.58	14.1	45	8.15	--	--
	8	9/19/01	6.99	28.20	15.2	100	3.32	-390	17.00
	9	12/20/02	6.29	21.80	10.2	>999	8.21	-581	13.15
	10	3/20/02	6.71	19.42	7.8	>1000	0	-446	11.49
3MW37S	1	10/28/99	6.10	0.581	12.7	5.8	2.08	60	0.28
(DG)	2	1/22/00	6.22	0.841	4.8	0.5	1.67	55	0.41
	3	4/9/00	6.21	0.824	7.6	2.4	--	68	0.41
	4	7/20/00	6.12	0.664	16.5	1.9	1.19	50	0
	5	12/18/00	6.12	0.760	9.1	0.8	2.49	26	--
	6	3/12/01	5.99	2.455	6.1	0	4.31	70	1.25
	7	6/19/01	6.03	1.355	15.4	1.4	0.70	71	--
	8	9/22/01	6.11	0.932	16.1	2.5	3.78	-31	0
	9	12/19/01	6.10	1.440	10.7	0.4	2.90	174	0.73
	10	3/24/02	6.10	2.022	10.1	0.7	1.98	56	1.04
2WMW38DS	1	10/26/99	6.83	1.130	14.8	6.8	2.48	199	0.57
(DG)	2	1/21/00	7.10	0.811	8.6	4.3	4.40	47	0.39
	3	4/7/00	7.13	1.220	9.1	4.1	3.93	39	0.61
	4	7/20/00	6.80	1.290	14.7	1.3	2.14	-126	0.10
	5	12/15/00	6.84	1.110	11.9	12	2.94	-50	--
	6	3/12/01	6.75	0.874	6.8	1.8	3.34	118	0.43
	7	6/21/01	--	--	--	--	--	--	--
	8	9/25/01	6.69	0.521	15.9	4.6	4.67	-99	0
	9	12/20/02	6.84	1.262	11.3	3.9	3.32	-67	0.64
	10	3/21/02	6.95	0.957	7.7	3.5	2.83	47	0.47
2WMW39DS	1	10/27/99	6.82	4.400	13.6	112	2.03	-125	2.47
(DG)	2	1/21/00	7.02	6.450	8.4	4.7	0.00	-206	3.52
	3	4/6/00	6.94	5.970	9.2	12	0.13	-110	3.24
	4	7/19/00	6.85	4.690	13.1	12	0.70	-133	0.20
	5	12/13/00	6.94	3.430	10.9	19	0.60	76	--
	6	3/8/01	6.76	4.320	8.4	37	0.95	-110	2.30
	7	6/19/01	6.67	1.500	15.1	8.1	0.60	--	--
	8	9/22/01	6.83	3.430	12.4	32	5.94	-152	2.00
	9	12/19/01	6.72	3.606	9.6	37	0.56	-183	1.91
	10	3/22/02	6.91	2.570	9.0	36	1.02	-123	1.33
2WMW40DS	1	10/25/99	7.14	19.23	13.8	11	3.29	-324	11.48
(DG)	2	1/21/00	7.11	26.20	9.4	42	0.16	-328	15.98
	3	4/7/00	6.95	25.33	8.9	51	0	-319	15.35
	4	7/20/00	7.13	35.50	13.9	11	0.64	-324	2.30
	5	12/14/00	7.11	2.52	11.6	8.4	40.31	-320	--
	6	3/9/01	6.86	20.48	8.3	11	0.61	-321	12.25
	7	6/19/01	6.89	12.53	11.3	3.0	0.74	-334	--
	8	9/23/01	7.13	27.90	12.8	8.2	3.36	-372	17.00
	9	12/19/01	6.99	27.70	10.7	5.1	3.45	-426	17.10
	10	3/22/02	7.14	23.65	10.4	10	0	-337	14.25

TABLE E-1

SUMMARY OF GROUNDWATER/SURFACE WATER FIELD PARAMETERS
AREA A LANDFILL GROUNDWATER MONITORING PROGRAM ROUNDS 1 THROUGH 10
NSB-NLON, GROTON, CONNECTICUT

Location ID	Round	Date	pH Standard	SC mS/cm	Temp. Degree C	Turb. NTU	DO mg/L	Eh mV	Salinity ppt
2WMW41DS	1	10/28/99	6.88	31.86	12.2	14	8.94	-292	19.82
(DG)	2	1/21/00	6.86	27.73	9.7	32	4.02	-326	17.07
	3	4/7/00	6.55	27.06	9.1	23	17.06	-325	16.59
	4	7/20/00	6.93	27.40	13.4	6.4	0.24	-349	17.00
	5	12/14/00	7.01	2.78	10.8	11	40.47	-331	--
	6	3/9/01	6.56	21.88	8.6	2.9	2.93	-324	13.01
	7	6/20/01	7.03	21.40	19.7	34	7.77	-314	--
	8	9/23/01	7.08	28.20	12.7	6.0	4.64	-371	17.00
	9	12/19/01	6.95	13.20	10.7	4.1	3.77	-417	13.00
	10	3/22/02	6.93	25.30	10.2	12	0	-333	15.37
2WMW42DS	1	10/28/99	6.97	32.56	12.1	142	9.65	-339	20.39
(DG)	2	1/21/00	6.96	28.94	8.6	22	2.04	-328	19.21
	3	4/6/00	6.67	29.97	9.1	25	26.81	-338	18.49
	4	7/20/00	7.09	31.30	12.2	20	0.31	-351	19.00
	5	12/13/00	6.85	2.96	10.7	55	3.04	-327	--
	6	3/8/01	6.71	26.70	8.3	32	0.08	-340	16.06
	7	6/20/01	6.86	11.86	14.7	63	2.39	--	--
	8	9/24/01	7.15	29.10	13.2	23	4.40	-373	18.00
	9	1/10/02	6.98	23.20	10.3	16	2.92	-413	13.90
	10	3/21/02	7.04	23.44	8.2	30	0.30	-337	13.83
2WMW43DS	1	10/27/99	6.52	36.50	12.3	109	8.29	-345	23.06
(DG)	2	1/22/00	6.69	38.66	7.4	90	6.30	-320	24.34
	3	4/8/00	6.46	38.31	10.6	133	11.76	-355	24.31
	4	7/21/00	6.85	40.60	11.7	50	0.28	-371	26.00
	5	12/14/00	6.60	3.68	10.4	65	4.65	-360	--
	6	3/13/01	6.27	33.31	8.7	32	7.18	-346	20.74
	7	6/20/01	6.89	20.29	12.9	5.5	2.88	--	--
	8	9/23/01	6.96	38.60	13.7	25	4.13	-390	25.00
	9	1/11/02	6.80	33.40	9.4	32	3.88	-382	22.40
	10	3/22/02	6.70	34.44	9.5	45	7.60	-360	21.54
2WMW44DS	1	10/28/99	6.96	18.73	12.9	145	13.21	-307	11.04
(DG)	2	--	--	--	--	--	--	--	--
	3	4/9/00	6.85	20.49	11.8	238	1.52	-329	12.26
	4	7/20/00	7.15	22.20	12.2	49	0.80	-325	13.00
	5	12/15/00	7.19	1.900	9.9	29	13.75	-307	--
	6	3/9/01	6.65	18.25	10.3	34	0.25	-324	10.84
	7	6/22/01	6.92	27.88	15.7	4.3	5.87	--	--
	8	9/24/01	7.22	23.90	14.0	39	3.11	-346	14.00
	9	1/12/02	6.86	16.55	8.0	13	1.39	-404	9.68
	10	3/22/02	6.86	11.07	8.9	55	0	-342	6.29
2WMW45DS	1	10/26/99	6.79	42.12	11.3	17	6.22	-321	26.43
(DG)	2	1/23/00	6.85	39.68	8.1	6.2	5.17	-340	24.93
	3	4/8/00	6.91	36.19	9.7	13	0.95	-350	22.49
	4	7/20/00	7.03	37.50	11.3	26	0.26	-382	23.00
	5	12/15/00	6.98	3.900	10.6	17	40.38	-351	--
	6	3/11/01	6.55	39.59	9.3	33	2.82	-359	25.40
	7	6/20/01	7.02	18.01	18.3	35	5.68	-325	--
	8	9/24/01	7.05	34.80	13.1	11	2.61	-392	22.00
	9	1/12/02	7.02	29.48	9.9	14	7.57	-429	18.20
	10	3/22/02	6.89	31.51	9.1	18	1.55	-353	19.60
2WMW46DS	1	10/26/99	6.83	41.17	11.3	223	3.97	-331	26.30
(DG)	2	1/24/00	7.12	41.45	7.4	67	2.76	-328	26.28
	3	4/7/00	6.82	42.15	9.2	71	6.94	-366	26.89
	4	7/20/00	7.28	44.50	15.1	42	0.20	-363	28.00
	5	12/15/00	7.00	4.050	9.4	45	2.24	-370	--
	6	3/11/01	6.65	37.46	8.3	33	6.84	-357	23.59
	7	6/21/01	6.94	29.67	14.4	4.7	2.94	--	--
	8	9/20/01	7.26	51.70	12.7	42	2.23	-378	33.00
	9	1/13/02	6.96	43.78	9.2	70	5.87	-441	28.00
	10	3/22/02	7.12	41.11	8.8	21	1.36	-352	26.16

TABLE E-1

SUMMARY OF GROUNDWATER/SURFACE WATER FIELD PARAMETERS
AREA A LANDFILL GROUNDWATER MONITORING PROGRAM ROUNDS 1 THROUGH 10
NSB-NLON, GROTON, CONNECTICUT

Location ID	Round	Date	pH Standard	SC mS/cm	Temp. Degree C	Turb. NTU	DO mg/L	Eh mV	Salinity ppt
2WMW47DS	1	10/25/99	6.45	7.180	13.2	19	0.60	-187	3.97
(DG)	2	1/24/00	6.62	7.340	6.5	52	0.76	-308	4.03
	3	4/6/00	6.76	6.150	10.0	46	0.22	-230	3.31
	4	7/18/00	6.60	11.60	17.7	101	0.24	-451	7.00
	5	12/14/00	6.40	9.250	7.6	85	12.22	-233	--
	6	3/9/01	6.36	19.57	8.2	260	5.49	-379	11.46
	7	6/23/01	6.68	5.430	15.0	29	2.89	-237	--
	8	9/20/01	6.94	23.90	13.9	35	4.60	-335	15.00
	9	1/12/02	6.57	4.762	7.8	20	1.43	-177	2.53
	10	3/20/02	6.74	3.466	5.9	4.0	0.91	-124	1.82
3MSP01	1	10/24/99	6.57	0.371	14.0	13	7.25	184	0.18
(SP)	2	--	--	--	--	--	--	--	--
	3	--	--	--	--	--	--	--	--
	4	7/22/00	6.12	1.040	12.5	4.9	6.88	-53	0
	5	12/16/00	6.78	0.926	13.9	26	8.06	-122	--
	6	3/13/01	6.52	0.172	3.5	42	14.27	66	0.08
	7	6/19/01	6.50	0.491	16.2	11	7.00	51	--
	8	9/25/01	6.38	0.843	18.4	5.6	8.90	-62	0
	9	12/20/02	6.18	1.130	13.4	3.8	4.44	-51	0.57
	10	3/24/02	6.42	0.705	11.5	3.5	5.18	-10	0.35
SG16	9	12/19/01	6.72	0.611	10.7	250	6.21	-92	12.27
(DG)	Note: Dry all other rounds								
SG18	1	10/27/99	6.45	0.639	10.1	6.1	3.81	-24	0.31
(DG)	2	--	--	--	--	--	--	--	--
	3	4/5/00	7.70	0.442	9.0	5.3	1.89	-221	0.21
	4	7/18/00	6.64	0.734	19.0	18	1.18	-161	0
	5	12/18/00	7.34	0.332	3.9	11	3.65	-54	--
	6	3/13/01	6.57	0.285	1.0	11	12.41	104	0.13
	7	6/20/01	7.87	0.309	24.3	89	6.49	-80	--
	8	9/25/01	6.35	0.405	19.0	159	7.22	-88	0
	9	12/18/01	7.12	0.322	5.9	132	3.10	-75	0.25
	10	3/21/02	8.42	0.414	6.3	4.5	4.87	-241	0.30
SG19	1	10/27/99	6.62	0.628	10.5	6.2	5.05	23	0.31
(DG)	2	--	--	--	--	--	--	--	--
	3	4/5/00	8.11	0.536	9.7	22	2.04	-219	0.26
	4	7/19/00	6.56	1.260	18.5	6.6	0.70	-192	0.10
	5	12/19/00	6.81	0.395	2.8	8.4	1.01	126	--
	6	3/12/01	6.56	0.389	2.8	2.9	8.59	-66	0.19
	7	6/22/01	6.51	0.236	20.1	5.8	4.56	32	--
	8	9/25/01	6.16	0.583	20.1	28	7.67	-61	0
	9	12/18/01	7.23	0.188	6.1	1.5	2.10	-72	0.09
	10	3/25/02	6.68	0.304	5.4	3.1	8.45	26	0.15
SG20	1	10/27/99	6.63	0.624	11.0	6.3	4.95	7	0.31
(DG)	2	--	--	--	--	--	--	--	--
	3	4/4/00	6.96	0.360	11.8	7.1	6.61	163	0.17
	4	7/19/00	6.28	0.422	18.0	6.3	0.57	-101	0
	5	12/19/00	6.98	0.267	2.0	7.3	3.44	-17	--
	6	3/13/01	6.67	0.380	1.7	12	7.29	39	0.18
	7	6/22/01	6.55	0.231	20.2	7.2	6.21	14	--
	8	9/25/01	6.18	0.302	21.0	18	6.92	-13	0
	9	12/18/01	6.57	0.558	5.6	8.7	4.24	151	0.27
	10	3/21/02	8.86	0.274	5.8	4.6	9.88	-240	0.13
SG21	1	10/24/99	6.68	0.568	9.4	6.3	1.80	46	0.28
(DG)	2	--	--	--	--	--	--	--	--
	3	4/4/00	7.74	0.401	12.1	7.0	7.68	145	0.19
	4	7/19/00	6.65	0.599	17.9	15	0.43	-172	0.00
	5	12/19/00	6.53	0.253	2.3	6.1	2.29	-26	--

TABLE E-1

SUMMARY OF GROUNDWATER/SURFACE WATER FIELD PARAMETERS
AREA A LANDFILL GROUNDWATER MONITORING PROGRAM ROUNDS 1 THROUGH 10
NSB-NLON, GROTON, CONNECTICUT

Location ID	Round	Date	pH Standard	SC mS/cm	Temp. Degree C	Turb. NTU	DO mg/L	Eh mV	Salinity ppt
	6	3/11/01	7.15	0.097	1.2	4.7	11.25	5	0.05
	7	6/24/01	7.46	0.335	23.7	--	9.70	-10	--
	8	9/25/01	6.44	0.494	20.6	15	6.62	-81	0.00
	9	12/18/01	6.63	0.739	5.3	28	2.40	97	0.36
	10	3/25/02	6.84	0.291	5.2	3.5	9.73	2	0.14
SG22	1	10/27/99	6.39	0.559	14.0	30	4.35	-50	0.27
(DG)	2	--	--	--	--	--	--	--	--
	3	4/5/00	6.90	0.360	8.6	10	0.65	-57	0.17
	4	--	--	--	--	--	--	--	--
	5	12/19/00	6.69	0.258	3.7	7.0	1.96	-11	--
	6	3/11/01	7.03	0.491	3.5	10	1.27	-68	0.24
	7	6/25/01	6.80	0.430	14.8	--	3.16	-103	--
	8	9/25/01	dry	--	--	--	--	--	--
	9	12/20/01	dry	--	--	--	--	--	--
	10	3/25/02	dry	--	--	--	--	--	--
SG23	1	10/27/99	6.16	0.500	11.0	6.8	4.01	-19	0.24
(DG)	2	--	--	--	--	--	--	--	--
	3	4/6/00	7.84	0.617	6.0	6.3	5.61	-246	0.30
	4	7/18/00	6.12	0.650	16.7	13	0.79	-82	0
	5	12/19/00	6.57	0.055	2.6	0	4.67	-1	--
	6	3/11/01	8.03	0.069	0.8	5.0	6.28	-45	0.03
	7	6/21/01	7.82	0.368	20.1	5.2	5.25	-96	--
	8	9/25/01	dry	--	--	--	--	--	--
	9	12/20/01	5.50	0.461	4.7	6.3	5.40	-15	0.22
	10	3/25/02	7.45	0.207	3.4	1.2	3.67	-93	0.10
SG24	1	10/27/99	7.32	0.403	12.7	3.9	6.46	-29	0.19
(DG)	2	--	--	--	--	--	--	--	--
	3	4/5/00	6.80	4.500	13.7	10	1.12	-176	2.54
	4	--	--	--	--	--	--	--	--
	5	12/18/00	9.29	0.371	3.2	4.9	9.68	-211	--
	6	3/13/01	7.55	0.037	0.5	6.4	14.47	89	0.02
	7	6/25/01	6.56	0.253	24.8	--	3.22	-12	--
	8	9/25/01	dry	--	--	--	--	--	--
	9	12/20/01	dry	--	--	--	--	--	--
	10	3/25/02	6.37	0.230	4.6	3.4	6.72	64	0.11

DG = Downgradient Location
UG = Upgradient Location
REF = Reference Location
SP = Seep Location
MW = Monitoring Well
SG = Staff Gauge
Shaded numbers are suspect results.
Staff Gauges SG-15 and SG-17 were dry during Rounds 1 through 10.
Locations marked with -- were either not sampled or had an instrument error.

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 4-GW015-10-10
Sample Location: 4MW015
Sampled By: T. ROJAHN
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Eh	Salinity
Date: 3-20-02	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	ppt
Time: 1440								
Method:Peristaltic Pump	CLEAR	5.88	0.311	7.73	0.10	8.44	+108	0.15

PURGE DATA:

Date: 3/20/02
Method:Peristaltic Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 20.3
Static Water Level (WL): 6.25
One Casing Volume(gal): 2.3
Start Purge (hrs): 1345
End Purge (hrs): 1435
Total Purge Time (min): 50
Total Vol. Purged (gal): 2.1

See Attached Low Flow Purge Data Sheet for Purge Data

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	✓
TCL PAH	4° C	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD —

Duplicate ID No.: FD032002-02

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 4MW01S
DATE: 3-20-02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	Comments
1345	6.25	—	—	—	—	—	—	—	—	Start Purge
1355	6.30	200	6.32	0.321	4.0	7.53	7.40	+64	0.15	2000 CLEAR
1405	6.29	100	6.11	0.316	3.7	8.03	7.06	+77	0.15	3000 "
1415	6.30	150	5.99	0.312	2.5	8.43	7.46	+89	0.15	4500 "
1425	6.31	150	5.92	0.312	1.0	8.47	7.52	+100	0.15	6000 "
1430	6.33	180	5.90	0.311	0.15	8.67	7.67	+105	0.15	6900 "
1435	6.34	180	5.88	0.311	0.10	8.44	7.73	+108	0.15	7800 "
1440	—	—	—	—	—	—	—	—	—	Start Sampling

SIGNATURE(S): Terry Rogal

PAGE 2 of 2

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 2LGW20S 10
Sample Location: 2LMW20S
Sampled By: R. SIMPSON
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Eh mV	Salinity ppt
Date: 3-24-02								
Time: 0840								
Method: Peristaltic Pump	CLEAR	6.07	0.361	11.7	2.1	1.60	81	0.17

PURGE DATA:

Date: 3-24-02
Method: Peristaltic Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 18.78
Static Water Level (WL): 14.83
One Casing Volume(gal): 0.6
Start Purge (hrs): 0800
End Purge (hrs): 0840
Total Purge Time (min): 40
Total Vol. Purged (gal): 1.3

NO ODOR

See Attached Low Flow Purge Data Sheet for Purge Data

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	✓
TCL PAH	4° C	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	✓

OBSERVATIONS / NOTES:

FLUSH MT.
WELL IN BAD SHAPE
VAULT & PAD BROKEN.
WATER IN VAULT

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2LGW205 10
DATE: 3.24.02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	Comments
0800	14.83	125								START PURGE
0810	14.94		6.24	0.342	23	4.18	10.7	24	0.16	CLEAR, NO ODOR
0820	15.05		6.08	0.352	12	2.45	11.5	60	0.17	
0830	15.08		6.07	0.358	4.5	1.62	11.7	75	0.17	
0835	15.10		6.07	0.360	3.3	1.58	11.7	80	0.17	
0840	15.11		6.07	0.361	2.1	1.60	11.7	81	0.17	END PURGE

SIGNATURE(S): [illegible]

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 2W-GW21S - 10
Sample Location: 2WMW21S
Sampled By: T. ROJAHN
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Eh ORP mV	Salinity ppt
Date: 3/20/02 Time: 0915 Method: Peristaltic Pump	BLACK	6.71	19.42	7.91	1000+	0.0	-446	11.49

PURGE DATA:

Date: 3/20/02
Method: Peristaltic Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 17.31
Static Water Level (WL): 4.35
One Casing Volume(gal): 2.1
Start Purge (hrs): 0730
End Purge (hrs): 0910
Total Purge Time (min): 100
Total Vol. Purged (gal): 4.8

See Attached Low Flow Purge Data Sheet for Purge Data

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	✓
TCL PAH	4° C	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	✓

OBSERVATIONS / NOTES:

Strong Sulfur Odor
Turbidity Dark Grey - Black
Chemical Reaction between VOA Vial Acid & Sample

Circle if Applicable:

MS/MSD —

Duplicate ID No.: FD032002 01

Signature(s): Tony Rojahn

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2WMW215
DATE: 3/20/02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	Comments
0730	4.35	—	—	—	—	—	—	—	—	start purge
0740	5.56	200	7.12	38.73	3.5	0.0	8.40	-345	24.43	2000 Yellowish - CLEAR
0750	5.75	190	7.05	35.11	2.9	0.0	8.27	-341	21.96	3800 " - "
0800	5.94	180	7.00	31.47	2.4	0.0	8.25	-335	18.37	5600 " - "
0810	5.87	190	6.93	28.61	436	0.0	8.30	-352	17.28	7400 Lt. Gray
0820	5.82	190	6.84	25.86	+1000	0.0	8.13	-371	15.51	9200 Dark Grey
0830	5.78	180	6.80	24.04	+1000	0.0	8.09	-383	14.48	11000 " "
0840	5.75	180	6.76	22.77	+1000	0.0	8.03	-392	13.63	12800 " "
0850	5.75	180	6.73	21.54	+1000	0.0	7.90	-410	12.84	14600 " "
0900	5.75	180	6.70	20.22	+1000	0.0	7.82	-425	11.99	16400 " "
0910	5.75	180	6.71	19.42	+1000	0.0	7.81	-446	11.49	18200 " "
0915	—	—	—	—	—	—	—	—	—	start sampling

SIGNATURE(S): Tony Agel

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 3-GW37S-10
Sample Location: 3MW37S
Sampled By: T. ROJAHN
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 3/24/02	Color	pH	S.C.	Temp.	Turbidity	DO	Elp ORP	Salinity
Time: 1420	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	ppt
Method:Peristaltic Pump	CLEAR	6.10	2022	10.10	0.65	1.98	+56	1.04

PURGE DATA:

Date: 3/24/02
Method:Peristaltic Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 8.45
Static Water Level (WL): 3.51
One Casing Volume(gal): 0.8
Start Purge (hrs): 08:15
End Purge (hrs): 09:05
Total Purge Time (min): 50
Total Vol. Purged (gal): 1.4

See Attached Low Flow Purge Data Sheet for Purge Data

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements		Collected
TCL VOLATILES	HCL / 4° C	(9)	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	(8)	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	(6)	2 - Qt. Amber Glass	✓
TCL PAH	4° C	(6)	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	(2)	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	(2)	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	(2)	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	(2)	1 - L PE	✓

OBSERVATIONS / NOTES:

NO ODOR
PURGED WELL & stopped to sample @ low tide @ Goss Cove

Circle if Applicable:

MS/MSD YES

Duplicate ID No.:

Signature(s): Tuy Nguyen

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 3MW375 ~~2MMW375~~ (TR)
DATE: 3/24/02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	Comments
0815	3.51	—	—	—	—	—	—	—	—	Start PURGE
0825	4.06	130	6.23	2.173	10	3.95	9.35	+54	1.12	1300 CLEAR — NO ODOR
0835	3.98	100	6.19	2.094	2.6	2.59	9.85	+54	1.08	2300 "
0845	3.91	100	6.15	2.053	2.5	2.50	9.92	+55	1.05	3300 "
0855	3.95	100	6.12	2.038	1.0	2.06	10.08	+55	1.05	4300 "
0900	3.91	100	6.11	2.033	1.8	2.04	10.20	+56	1.04	4800 "
0905	3.91	100	6.10	2.022	0.65	1.98	10.10	+56	1.04	5300 "
										Start SAMPLING

SIGNATURE(S): Tony Rogak

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: ZW1-GW38DS-10
Sample Location: ZWMW38DS
Sampled By: T. ROJAHN
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	~~Eh~~ ORP	Salinity
Date: 3/21/02	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	ppt
Time: 0815								
Method: Peristaltic Pump	CLEAR	6.95	0.957	7.68	3.5	2.83	+47	+0.47

PURGE DATA:

Date: 3-19-02
Method: Peristaltic Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 11.92
Static Water Level (WL): 5.81
One Casing Volume(gal): 1.0
Start Purge (hrs): 1715
End Purge (hrs): 1751
Total Purge Time (min): 36
Total Vol. Purged (gal): 1.6

See Attached Low Flow Purge Data Sheet for Purge Data

SAMPLE
DATE: 3/23
TIME: 0744
VOL: 1.5 L

DATE = 3/25/02
TIME = 1310
VOL = 2.5 L
WL = 8.53

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	3/25
TCL SEMIVOLATILES	4° C	1 ~~2~~ - Qt. Amber Glass	3/23
TCL PEST/PCBs	4° C	1 ~~2~~ - Qt. Amber Glass	3/23
TCL PAH	4° C	1 ~~2~~ - Qt. Amber Glass	3/25
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	3/21/02
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	3/21/02
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	3/25
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	3/25
		LOW VOL.	

OBSERVATIONS / NOTES:

Pump to Dry
SAMPLED ON: 3·21/23/25·02

Circle if Applicable:

MS/MSD —
Duplicate ID No.: —

Signature(s): Tony Rojahn

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2WMW38DS
DATE: 3-19-02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	Comments
1715	5.81	—	—	—	—	—	—	—	—	Start Purge
1720	6.70	160	7.16	0.836	5.7	~~0.41~~ 7.44	7.98	+131	0.41	1600 CLEAR
1725	6.90	60	7.01	0.812	3.9	7.33	7.91	+141	0.40	1900 "
1730	7.47	140	6.96	0.807	3.5	6.59	7.74	+144	0.40	2600 "
1735	8.35	200	6.92	0.804	3.1	5.84	7.66	+144	0.40	3600 "
1740	9.14	180	6.89	0.811	3.4	4.22	7.60	+139	0.40	4500 "
1745	9.82	160	6.91	0.867	4.0	2.94	7.61	+86	0.43	5300 "
1750	10.65	160	6.95	0.957	3.5	2.83	7.68	+47	0.47	6100 "
1754									→	DRY

SIGNATURE(S): Tony Agel

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 2WGW39DS-10
Sample Location: 2WMW39S
Sampled By: T. ROHIN
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Eh ORP mV	Salinity ppt
Date: 3/22/02 Time: 0805 Method: Peristaltic Pump	CLEAR	6.91	2.570	9.04	36	1.02	-123	1.33

PURGE DATA:

Date: 3/21/02
Method: Peristaltic Pump
Monitor Reading (ppm): –
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 16.70
Static Water Level (WL): 2.45
One Casing Volume(gal): 2.3
Start Purge (hrs): 0900
End Purge (hrs): 1005
Total Purge Time (min): 65
Total Vol. Purged (gal): 4.3

3/22/02 WL = 2.15'

See Attached Low Flow Purge Data Sheet for Purge Data

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	✓
TCL PAH	4° C	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.: —

Signature(s): Tony Rohin

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2WMW395
DATE: 3/21/02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh or ORP mV	Sal. ppt	Comments
0900	2.45	—	—	—	—	—	—	—	—	Start Purge
0905	4.95	260	6.88	1.573	80	1.84	7.87	-13	0.80	1300 ml orange percip.
0915	6.85	250	6.86	1.571	60	0.84	7.98	+7	0.79	3800 "
0925	8.52	250	6.82	1.558	35	0.57	7.84	-60	0.79	6300 "
0935	10.25	250	6.78	1.555	32	0.47	8.02	-109	0.79	8800 "
0945	11.94	250	6.79	1.790	30	0.43	8.29	-120	0.92	11300 "
0955	13.86	250	6.85	2.252	21	0.37	8.64	-125	1.16	13800 "
1005	16.00	250	6.91	2.570	36	1.02	9.04	-123	1.33	16300 "
1007	—	—	—	—	—	—	—	—	—	Purged Dry

SIGNATURE(S): Terry Nagel

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 2WGW40DS- 10
Sample Location: 2WMW40DS
Sampled By:
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Eh ORP mV	Salinity ppt
Date: 3/22/02								
Time: 1525 *								
Method: Peristaltic Pump	CLEAR, Greenish Tint	7.14	23.65	10.43	10	0.0	-337	14.25

PURGE DATA:

Date: 3/21/02
Method: Peristaltic Pump
Monitor Reading (ppm): -
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 16.62
Static Water Level (WL): 3.02
One Casing Volume(gal): 2.2
Start Purge (hrs): 1035
End Purge (hrs): 1148
Total Purge Time (min): 73
Total Vol. Purged (gal): 2.8

See Attached Low Flow Purge Data Sheet for Purge Data

*SAMPLED 3/23/02
TIME: 1705 HRS

SAMPLED 3.22 & 23.02 (POOR PRODUCER)

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	✓	3/22
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	✓	3/22
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	* ✓	3/23
TCL PAH	4° C	2 - Qt. Amber Glass	✓	3/22
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	* ✓	3/23
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	* ✓	3/23
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	✓	3/22
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	✓	3/22
TCL PAH	4° C	1 QT AMBER	* ✓	3/23

OBSERVATIONS / NOTES:

SULFUR ODOR STRONG
03/22/02 WL @ 0920 = 10.2'
" " 1520 = 9.35'
Strong Chemical Reaction between sample & VOA Vial Acid

Circle if Applicable:

MS/MSD —
Duplicate ID No.: —

Signature(s): Troy Rogers

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2WMW40SD
DATE: 3/21/02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	Comments
10:35	3.02	—	—	—	—	—	—	—	—	Start PURGE
10:45	5.40	150	7.05	33.21	2.3	0.43	9.90	-332	20.74	1500 ml Lt. Greenish TINT
10:55	7.27	150	7.03	29.17	2.0	0.00	9.77	-329	18.03	3000 ml "
1105	8.55	150	7.03	22.79	3.6	0.00	9.71	-326	13.70	4500 ml CLEAR
1115	10.12	150	7.23	17.82	7.2	0.00	9.67	-321	10.48	6000 ml "
1125	11.80	150	7.23	18.27	6.4	0.00	9.77	-327	10.80	7500 ml "
1135	13.35	150	7.18	20.66	8.0	0.00	9.98	-332	12.42	9,000 ml "
1145	15.38	150	7.14	23.65	10	0.00	10.43	-337	14.25	10,500 ml Lt Greenish Tint & percip.
1148										PURGED DRY

SIGNATURE(S): Terry Nagel

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 2WGW41DS - 10
Sample Location: 2WMW41DS
Sampled By: T. ROJAHN
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Eh or Rp mV	Salinity ppt
Date: 3-22-02								
Time: 1500								
Method: Peristaltic Pump	LT YELLOW SULFUR ODOR	6.93	25.30	10.2	12	0	-333	15.37

PURGE DATA:

Date: 3/21/02	
Method: Peristaltic Pump	
Monitor Reading (ppm): —	
Well Casing Diameter & Material Type: 2" PVC	See Attached Low Flow Purge Data Sheet for Purge Data
Total Well Depth (TD): 16.65	
Static Water Level (WL): 2.21	
One Casing Volume(gal): 2.4	
Start Purge (hrs): 1350	
End Purge (hrs): 1523	
Total Purge Time (min): 93	
Total Vol. Purged (gal): 3.9	

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	3.22.02 @1500
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	
TCL PAH	4° C	1 ~~2~~ - Qt. Amber Glass	
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	

OBSERVATIONS / NOTES:

SULFUR ODOR
03/22/02 WL @ 0927 HRS = 10.53'
3.22.02 WL @ 1500 = 9.56

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2WMW41DS
DATE: 3/21/02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	Comments
1350	2.21	—	—	—	—	—	—	—	—	PURGE STARTED
1400	4.80	200	6.94	28.52	24	0.0	10.10	-332	17.62	2000 ml BLACK @ 1st / CLEAR @ 1400 w/ GREENISH TINT
1410	6.84	150	6.87	25.45	65	0.0	10.04	-325	15.54	3500 ml GREENISH TINT
1420	8.02	150	6.82	21.23	16	0.0	9.78	-318	12.76	5000 ml " "
1430	9.24	150	6.84	17.03	16	0.0	9.61	-310	10.14	6500 ml " "
1440	10.45	150	7.02	15.77	14	0.0	9.42	-317	9.22	8000 ml " "
1450	11.52	150	7.01	16.78	6.5	0.0	9.46	-321	9.85	9500 ml " "
1500	12.87	150	6.99	18.42	20	0.0	10.12	-324	10.89	11000 ml " "
1510	14.50	180	6.98	20.53	9	0.0	9.88	-329	12.33	12800 ml " "
1520	15.95	180	6.93	25.30	12	0.0	10.21	-333	15.37	14600 ml " "
1523	—	—	—	—	—	—	—	—	—	PURGED DRY

SIGNATURE(S): Tony Rogers

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 2WGW42DS 10
Sample Location: 2W MW42DS
Sampled By: K. SIMPSON
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	ORP Eh mV	Salinity ppt
Date: 3-21-02								
Time: 0820								
Method: Peristaltic Pump		7.04	23.44	8.2	30	0.30	-337	13.83

PURGE DATA:

Date: 3-19-02
Method: Peristaltic Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 16.91
Static Water Level (WL): 2.09
One Casing Volume(gal): 2.4
Start Purge (hrs): 1720
End Purge (hrs): 1840
Total Purge Time (min): 80
Total Vol. Purged (gal): 3.8

CLEAR WITH BLACK FINES SULFUR ODOR

See Attached Low Flow Purge Data Sheet for Purge Data

WL 3-21-02 @ 0810 = 2.12'

≈ 2" OF SW OVER WELL PAD

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	✓
TCL PAH	4° C	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	✓

OBSERVATIONS / NOTES:

PURGED DRY ON 3-19-02
SAMPLED ON 3-21-02

PHOTO TAKEN

Circle if Applicable:

MS/MSD —
Duplicate ID No.: —

Signature(s): KJ SL

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2WMW42DS
DATE: 3.19.02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	Comments
1720	~~RTE~~ 2.09	200								START PURGE
1725	4.38	110	7.06	30.31	14	0.25	8.6	-338	19.47	BLACK FINES,
1735	5.43	150	6.96	19.38	9.3	0.20	7.9	-340	11.72	SULFUR ODOR
1745	7.19	↓	6.88	14.87	4.5	0.11	7.9	-327	8.64	
1755	8.75	↓	6.88	14.67	3.1	0.12	8.0	-325	8.50	
1805	10.80	↓	6.88	14.67	2.6	0.08	8.2	-330	8.51	
1815	12.22	180	6.87	14.02	14	0.13	8.3	-349	8.16	
1825	13.30	↓	6.99	16.42	45	0.21	8.3	-349	9.40	
1835	14.10	↓	7.04	21.03	36	0.23	8.3	-335	12.50	
1840	16.12	↓	7.04	23.44	30	0.30	8.2	-337	13.83	PUMPED DRY

SIGNATURE(S): [illegible]

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 2WGW43DS 10
Sample Location: 2WMW43DS
Sampled By: R. SIMPSON
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Eh ORP mV	Salinity ppt
Date: 3-22-02								
Time: 1330								
Method: Peristaltic Pump		6.70	34.44	9.5	45	7.60	-360	21.54

PURGE DATA:

Date: 3-21-02
Method: Peristaltic Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 15.75
Static Water Level (WL): 2.30
One Casing Volume(gal): 2.1
Start Purge (hrs): 13:55
End Purge (hrs): 1512
Total Purge Time (min): 77
Total Vol. Purged (gal): 3.7

L BLACK FINES, STRONG SULFUR ODOR

See Attached Low Flow Purge Data Sheet for Purge Data

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	✓
TCL PAH	4° C	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	✓

OBSERVATIONS / NOTES:

PURGED DRY 3-21-02
SAMPLED ON 3-22-02 WL @ 1330 = 7.26'

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [illegible]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2W MW 43DS
DATE: 3-21-02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	Comments
1355	2.30	180								START PURGE
1400	3.75		6.72	40.58	11	3.46	9.5	-366	25.86	BLACK FINES
1410	5.52		6.67	37.75	8.7	2.83	9.3	-364	24.02	STRONG SULFUR
1420	7.55		6.76	29.77	6.4	3.48	9.2	-357	18.46	ODOR
1430	8.73		6.86	26.95	12	3.84	9.0	-349	16.47	
1440	10.45		6.84	27.01	20	3.65	9.2	-355	16.52	
1450	12.04		6.80	27.49	23	4.24	9.2	-354	16.81	
1500	13.76		6.75	30.26	27	5.04	9.4	-362	18.66	
1510	15.34		6.70	34.44	45	7.60	9.5	-360	21.54	
1512	15.60									DRY

SIGNATURE(S): [illegible]

BTM = 15.75'

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 2WGW44DS10
Sample Location: 2W MW44DS
Sampled By: T. ROJHAN
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Eh ORP mV	Salinity ppt
Date: 3/22/02								
Time: 1320								
Method: Peristaltic Pump	Blackish Tint	6.96	11.07	8.84	55	0.0	-342	6.29

PURGE DATA:

Date: 3-22-02
Method: Peristaltic Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 16.77
Static Water Level (WL): 1.55
One Casing Volume(gal): 2.5
Start Purge (hrs): 1010
End Purge (hrs): 1130
Total Purge Time (min): 80
Total Vol. Purged (gal): 2.5

See Attached Low Flow Purge Data Sheet for Purge Data

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	✓
TCL PAH	4° C	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	✓

OBSERVATIONS / NOTES:

SULFUR ODOR
PURGED WELL IN THE MORNING & LEFT TO RECOVER OVER LUNCH.
WL @ 1320 HRS = 3.45'

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2WMW44DS
DATE: 3/22/02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh mV	Sal. ppt	Comments
1010	1.55	—	—	—	—	—	—	—	—	START PURGE
1020	3.33	140	7.05	38.30	11	0.0	7.88	-370	24.11	1400 ml CLEAR
1030	5.08	140	7.03	37.24	3.7	0.0	8.18	-364	23.42	2800 "
1040	6.53	140	7.01	32.89	4.6	0.0	8.41	-361	20.34	4200 "
1050	7.49	140	7.00	26.65	4.5	0.0	8.39	-360	16.22	5600 "
1100	8.16	120	6.95	19.31	13	0.0	8.41	-352	11.54	6800 "
1110	8.86	120	6.87	10.77	60	0.0	8.67	-348	6.16	8000 Blackish
1120	9.52	100	6.84	9.822	60	0.0	8.98	-342	5.53	9000 "
1130	9.85	100	6.86	11.07	55	0.0	8.94	-342	6.24	10000 "

SIGNATURE(S): Terry Rigsbee

Strong Sulfur Odor

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 2WGW45DS 10
Sample Location: 2W MW45DS
Sampled By: K. SIMPSON
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Eh ORP mV	Salinity ppt
Date: 3.22.02								
Time: 0930								
Method: Peristaltic Pump	9	6.89	31.51	9.1	18	1.55	-353	19.60

LT YELLOW, BLACK FINES
STRONG SULFUR ODOR

PURGE DATA:

Date: 3.21.02
Method: Peristaltic Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 16.75
Static Water Level (WL): 1.98
One Casing Volume(gal): 2.4
Start Purge (hrs): 1100
End Purge (hrs): 1202
Total Purge Time (min): 62
Total Vol. Purged (gal): 3.3

See Attached Low Flow Purge Data Sheet for Purge Data

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	—
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	—
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	—
TCL PAH	4° C	2 - Qt. Amber Glass	—
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	—
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	—
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	—
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	—

OBSERVATIONS / NOTES:

PURGED DRY ON 3.21.02
SAMPLED ON 3.22.02 WL @ 0930 = 2.09'

SAMPLE EFFERVESING IN HCL (VOCs)

Circle If Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [illegible]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2W MW45DS
DATE: 3·21·02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	Comments
1100	1.98	200								START PURGE
1105	3.62		6.93	38.10	8.1	0.69	9.2	-356	24.13	BLACK FINES,
1115	5.71		6.95	33.14	5.7	1.71	9.2	-357	20.72	STRONG SULFUR ODOR
1125	7.83		6.86	26.02	3.6	1.58	8.9	-358	15.95	
1135	9.75		6.77	10.78	9.6	1.04	8.8	-340	6.18	
1145	11.88		6.80	14.84	13	0.19	8.7	-330	8.51	
1155	14.13		6.88	25.07	15	0.62	9.0	-348	15.12	
1202	16.00		6.89	31.51	18	1.55	9.1	-353	19.60	DRY

SIGNATURE(S): [illegible]

BTM = 16.75'

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 2W~~6W~~46DS 10
Sample Location: 2W MW46DS
Sampled By: K. SIMPSON
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Eh ORP mV	Salinity ppt
Date: 3.22.02								
Time: 0810								
Method: Peristaltic Pump	LT YELLOW WITH BLACK FINES STRONG SULFUR ODOR	7.12	41.11	8.8	21	1.36	-352	26.16

PURGE DATA:

Date: 3.21.02
Method: Peristaltic Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 17.32
Static Water Level (WL): 1.54
One Casing Volume(gal): 2.6
Start Purge (hrs): 0940
End Purge (hrs): 1037
Total Purge Time (min): 57
Total Vol. Purged (gal): 2.7

See Attached Low Flow Purge Data Sheet for Purge Data

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	—
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	—
TCL PEST/PCBs	4° C	KS 1 ~~2~~ - Qt. Amber Glass	—
TCL PAH	4° C	2 - Qt. Amber Glass	—
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	—
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	—
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	—
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	—
		LOW VOL ON PEST/PCB	
		WELL DRY	

OBSERVATIONS / NOTES:

PUMPED DRY 3.21.02
SAMPLED 3.22.02 WL @ 0810 = 6.61

EFFERVESING IN HCL (VOCs)

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	

Signature(s): KS

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2W MW46DS
DATE: 3-21-02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	Comments
0940	1.54	180								START PURGE
0948	3.72		7.06	42.84	9.0	1.48	8.7	-376	27.33	YELLOW (LT.)
1000	6.78		7.06	42.32	7.6	2.30	8.6	-391	26.98	STRONG SULFUR
1010	9.71		7.07	38.07	5.9	2.46	8.3	-375	24.08	ODOR
1020	12.58		7.12	37.70	12	2.05	8.2	-365	23.71	
1030	15.49		7.11	38.72	21	1.55	8.7	-370	24.45	
1037	17.00		7.12	41.11	—	1.36	8.8	-352	26.16	DRY, END PURGE

SIGNATURE(S): [illegible]

BTM = 17.32

Tetra Tech NUS, Inc

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 2WGW47DS 10
Sample Location: 2WMW47DS
Sampled By: R. SIMPSON
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Eh ORP mV	Salinity ppt
Date: 3-20-02								
Time: 1500								
Method: Peristaltic Pump	CLEAR	6.74	3.466	5.9	4.0	0.91	-124	1.82

PURGE DATA:

Date: 3-20-02
Method: Peristaltic Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material
Type: 2" PVC
Total Well Depth (TD): 16.20
Static Water Level (WL): 1.42
One Casing Volume(gal): 2.4
Start Purge (hrs): 1338
End Purge (hrs): 1500
Total Purge Time (min): 82
Total Vol. Purged (gal): 2.2

See Attached Low Flow Purge Data Sheet for Purge Data

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	✓
TCL PAH	4° C	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NSB-NLON / AREA A - ROUND 10
PROJECT NUMBER: CTO 816 job#2863

WELL ID.: 2WGW47DS 10
DATE: 3.20.02

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	Eh ORP mV	Sal. ppt	PUMP RATE HIGHER Comments 1ST 6 MIN.
1338	1.42	100								START PURGE
1350	3.78		6.79	13.00	5.9	2.20	7.7	-167	7.52	CLEAR LT. SULFUR
1400	4.06		6.70	9.502	6.1	1.19	6.1	-140	5.27	ODOR
1410	4.18		6.72	7.662	6.8	0.80	6.0	-136	4.03	
1420	4.30		6.72	5.461	8.1	0.87	5.8	-132	2.97	
1430	4.40		6.74	4.572	6.0	0.86	5.8	-130	2.41	
1440	4.48		6.77	3.622	5.5	0.85	5.8	-130	1.90	
1450	4.53		6.75	3.531	4.6	0.88	5.9	-127	1.85	
1500	4.65		6.74	3.466	4.0	0.91	5.9	-124	1.82	END PURGE

SIGNATURE(S): [illegible]

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: SEEP
[] QA Sample Type:

Sample ID No.: 3MSP01 10
Sample Location: 3MSP01
Sampled By: K. SIMPSON
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity ppt	Eh ORP mV
Date: 3-24-02 Time: 1450 Depth: 0 - 4" Method: DIRECT FILL	CLEAR	6.42	0.705	11.5	3.5	5.18	0.35	-10

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	✓
TCL PAH	4° C	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	✓

OBSERVATIONS / NOTES:

FLOW EST. 30 GPM

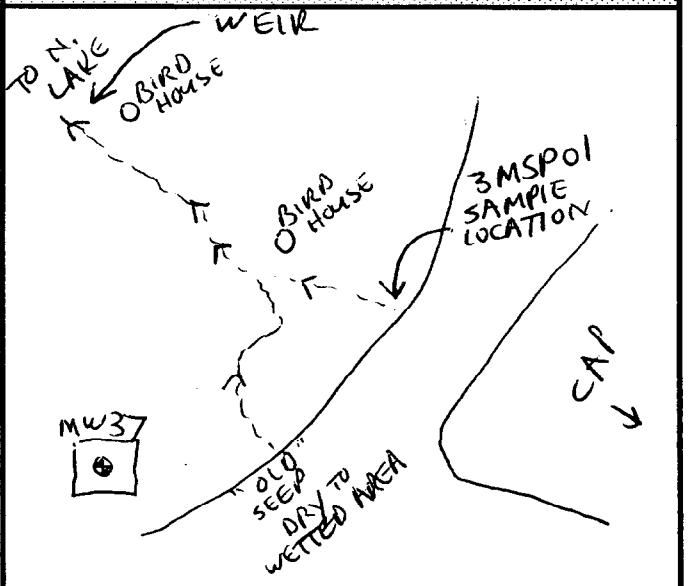
RUST COLOR FLOCKING ON STREAM BTM.

≈6" DEEP

5.55' WIDE WEIR 75 YDS ± FROM BASE OF DIKE WITH 0.04' OF FLOW OVER WEIR PLATE. MOST OF THAT FLOW IS FROM SEEP (3MSP01)

TOOK PHOTOS

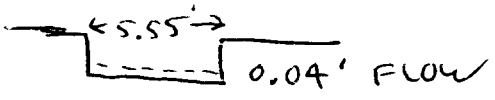
MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: SURFACE WATER
[] QA Sample Type: WETLAND

Sample ID No.: SWSG18 10
Sample Location: SG18/2WMW4IDS
Sampled By: KS / TR
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity ppt	~~Eh~~ ORP mV
Date: 3.21.02								
Time: 1610								
Depth: 0-6"	CLEAR	8.42	0.414	6.3	4.5	4.87	0.30	-241
Method: DIRECT FILL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements		Collected
TCL VOLATILES	HCL / 4° C	9	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	KS ~~9~~ 6	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	8	2 - Qt. Amber Glass	✓
TCL PAH	4° C	6	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	6	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	2	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	2	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	2	1 - L PE	✓

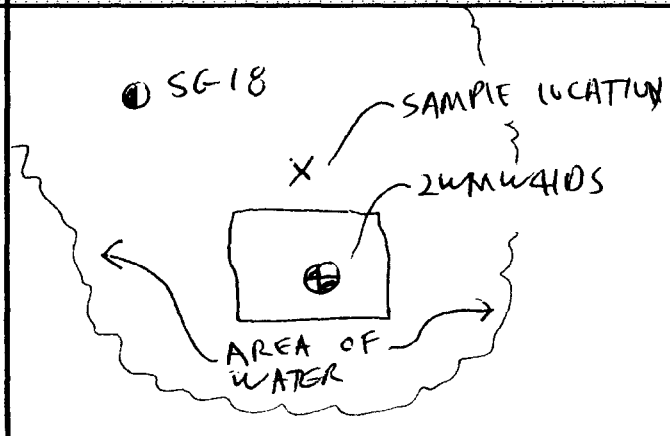
OBSERVATIONS / NOTES:

SOME FLOCK & ORGANIC MATERIAL STIRRED UP DURING SAMPLING (ORANGE FLOCK)

~~NO FLOW NOTED~~ KS
VERY SLIGHT FLOW TO DIKE

MAX DEPTH 10" ±

MAP:



CAP

Circle if Applicable:

MS/MSD: YES
Duplicate ID No.:

Signature(s):

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

Sample ID No.: SWSG19 10
Sample Location: SWSG19
Sampled By: KS / TR
C.O.C. No.:
@ 2WMW42DS

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: WETLAND, SURFACE WATER
[] QA Sample Type:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity ppt	Eh mV
Date: 3.25.02								
Time: 0850								
Depth: 0 - 4"	CLEAR	6.68	0.304	5.4	3.1	8.45	0.15	26
Method: DIRECT FILL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	✓
TCL PAH	4° C	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	✓

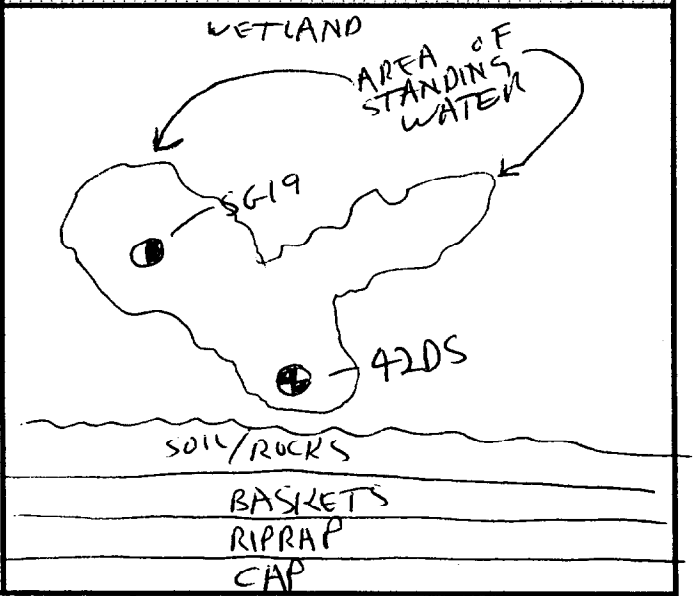
OBSERVATIONS / NOTES:

NO FLOW NOTED

SOME SOLIDS STIRRED UP DURING SAMPLING

RUST COLOR FLOCKING ON WATER BTM.

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: SURFACE WATER
[] QA Sample Type: WETLAND

Sample ID No.: SW SG-20 - 10
Sample Location: SG20/ MW43 DS
Sampled By: KS / TR
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity ppt	Eh ORP mV
Date: 3-21-02	CLEAR	8.86	0.274	5.8	4.6	9.88	0.13	-240
Time: 1640								
Depth: 0 - 4"								
Method: DIRECT FILL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements		Collected
TCL VOLATILES	HCL / 4° C	6	3 - 40 ml Vial	✓
TCL SEMIVOLATILES	4° C	4	2 - Qt. Amber Glass	✓
TCL PEST/PCBs	4° C	4	2 - Qt. Amber Glass	✓
TCL PAH	4° C	4	2 - Qt. Amber Glass	✓
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	2	1- L PE	✓
TAL METALS (DISSOLVED)	HNO_3 / 4° C	2	1 - L PE	✓
TOC & COD	H_2SO_4 / 4° C	2	125 ml Glass	✓
Alkalinity, Chloride, Sulfate, TDS	4° C	2	1 - L PE	✓

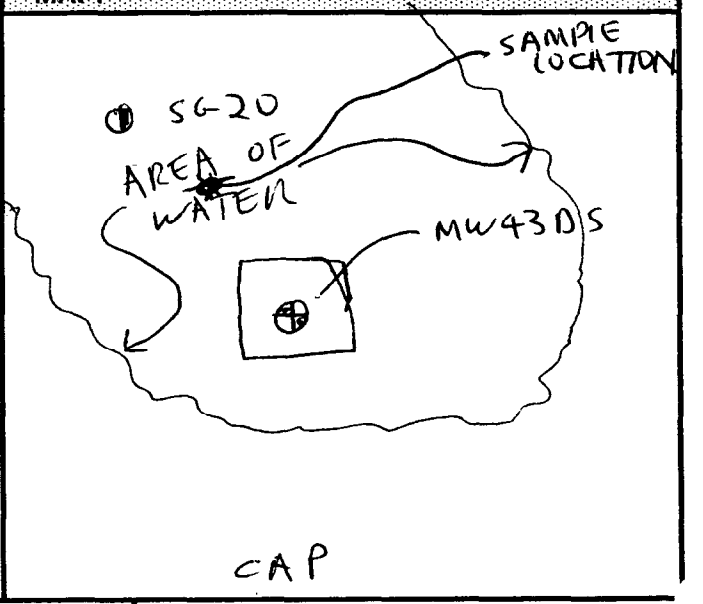
OBSERVATIONS / NOTES:

TR ORANGE FLOCK & ORGANIC MATERIAL STIRRED UP DURING

MAX DEPTH 10" ±

SLIGHT FLOW TOWARDS DIKE

MAP:



Circle if Applicable:

MS/MSD: ____

Duplicate ID No.: FD 032102 01

Signature(s):

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: WETLAND, SURFACE WATER
[] QA Sample Type:

Sample ID No.: SWSG21 10
Sample Location: SWSG-21
Sampled By: KS / TR
C.O.C. No.:
@ 2WMW44DS

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity ppt	Eh ORP mV
Date: 3-25-02								
Time: 0930								
Depth: 0-4"	CLEAR	6.84	0.291	5.2	3.5	9.73	0.14	2
Method: DIRECT FILL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	—
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	—
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	—
TCL PAH	4° C	2 - Qt. Amber Glass	—
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	—
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	—
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	—
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	—

OBSERVATIONS / NOTES:

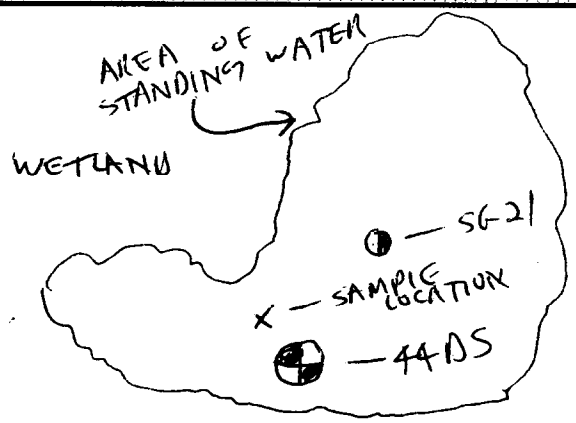
NO FLOW NOTED

SOME SOLIDS STIRRED-UP DURING SAMPLING

9" DEEP MAX

WELL PAD IS WASHED AWAY

MAP:



SOIL
GABION BASKETS
RIPRAP
CAP

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: SURFACE WATER, WETLAND
[] QA Sample Type:

Sample ID No.: SWSG23 10
Sample Location: SWSG23
Sampled By: KS / TR
C.O.C. No.:
@ 2W MW46DS
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity ppt	Eh ORP mV
Date: 3-25-02 Time: 0815 Depth: 0-4" Method: DIRECT FILL	CLEAR	7.45	0.207	3.4	1.2	KS ~~0.11~~ 3.67	0.10	-93

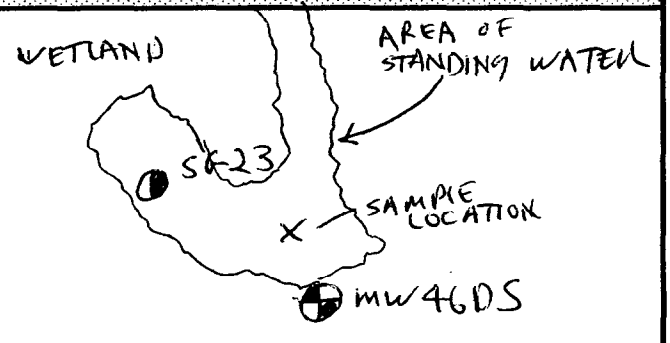
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	—
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	—
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	—
TCL PAH	4° C	2 - Qt. Amber Glass	—
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	—
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	—
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	—
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	—

OBSERVATIONS / NOTES:

NO FLOW NOTED
SOME SOLIDS STIRRED-UP DURING SAMPLING
8" DEPTH MAX

MAP:



GABION BASKETS

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

Sample ID No.: SWSG2410
Sample Location: SWSG24
Sampled By: KS/TR
C.O.C. No.:

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: WETLAND, SURFACE WATER
[] QA Sample Type:

@ 2W MW47DS

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity ppt	Eh mV
Date: 3-25-02 Time: 0910 Depth: 0-4" Method: DIRECT FILL	CLEAR	6.37	0.230	4.6	3.4	6.72	0.11	64

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	—
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	—
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	—
TCL PAH	4° C	2 - Qt. Amber Glass	—
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	—
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	—
TOC & COD	H_2SO_4 / 4° C	125 ml Glass	—
Alkalinity, Chloride, Sulfate, TDS	4° C	1 - L PE	—

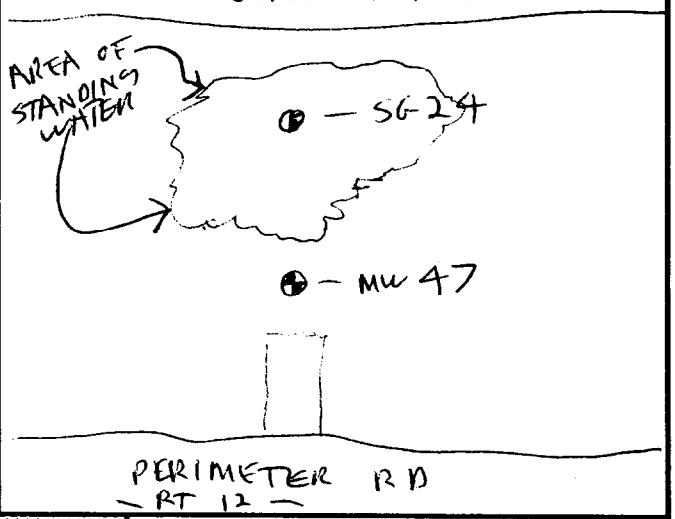
OBSERVATIONS / NOTES:

NO FLOW NOTED

MAX DEPTH = 6"

SOME SOLIDS STIRRED-UP DURING SAMPLING

MAP:



Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NSB-NLON / AREA A
Project No.: CTO 816 2863

[] Stream
[X] Spring/SEEP
[] Pond
[] Lake
[] Other:
[] QA Sample Type:

Sample ID No.: LFSP01
Sample Location: LFSP01
Sampled By: T. ROJAHN
C.O.C. No.: KS

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	Salinity ppt	Eh ORP mV
Date: 3.23.02								
Time: 0820								
Depth: 0-4"	CLEAR	7.03	0.975	8.1	3.7	4.72	0.48	-137
Method: DIRECT FILL								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOLATILES	HCL / 4° C	3 - 40 ml Vial	—
TCL SEMIVOLATILES	4° C	2 - Qt. Amber Glass	—
TCL PEST/PCBs	4° C	2 - Qt. Amber Glass	—
TCL PAH	4° C	2 - Qt. Amber Glass	—
TAL METALS (TOTAL) + Hardness	HNO_3 / 4° C	1- L PE	—
TAL METALS (DISSOLVED)	HNO_3 / 4° C	1 - L PE	—
~~TOC & COD~~	~~H_2SO_4 / 4° C~~	~~125 ml Glass~~	—
~~Alkalinity, Chloride, Sulfate, TDS~~	~~4° C~~	~~1 - L PE~~	—

OBSERVATIONS / NOTES:

FLOW (EST.) 10 GPM

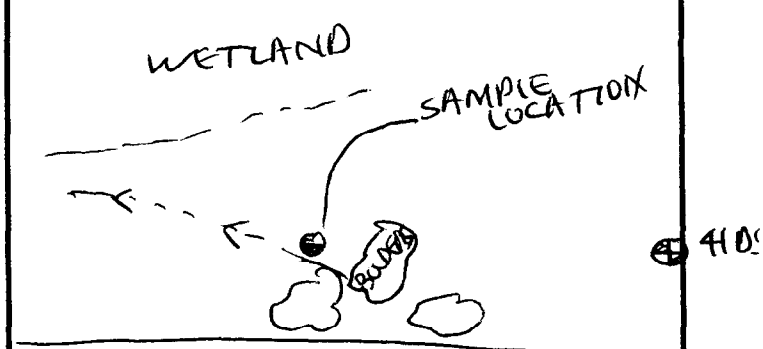
SEE IS NW OF 2WMW410S

ORANGE FLOCKING IN STREAM BTM.

PHOTOS TAKEN

1" PVC PIPE MARKING SAMPLE LOCATION

MAP:



GABION BASKETS
RIPRAP
CAP

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

EXTRA SAMPLE NOT PART OF ROUND 10/AREA A SAMPLING.

APPENDIX F

CHAIN OF CUSTODY RECORDS

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER PAGE 1 OF

PROJECT NO: CTO 816 #2863	SITE NAME: NSB-NLON	PROJECT MANAGER AND PHONE NUMBER: COREY RICH 412921 8994	LABORATORY NAME AND CONTACT: RATAHDIN
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER AND PHONE NUMBER: KEITH SIMPSON 412921 8131	ADDRESS:
		CARRIER/WAYBILL NUMBER: CD & L	CITY, STATE: MAINE

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2002	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TCL VOC	TCL SVOC	TCL PEST/PCB	TCL PAH	TAL METALS + HARDNESS	DISS. TAL METALS	TOC & COD	ALK, CHLORIDE, SULFATE, TDS	COMMENTS
		AREA A ROUND 10												
						G	G	G	G	P	P	E	P	
						HCL	4°C	4°C	4°C	HNO3	HNO3	H2SO4	4°C	
3/20	0000	FD032002 01	AQ	G	13	3	2	2	2	1	1	1	1	DUP OF 2WGW21S10
	0915	2WGW21S 10	AQ	G	13	3	2	2	2	1	1	1	1	
	0000	FD032002 02	AQ	G	13	3	2	2	2	1	1	1	1	4GW01S 10
	1440	4GW01S 10	AQ	G	13	3	2	2	2	1	1	1	1	(4GW01S10)
	1500	2WGW47DS 10	AQ	G	13	3	2	2	2	1	1	1	1	

1. RELINQUISHED BY: [signature]	DATE 3.20.02	TIME 1900	1. RECEIVED BY CD & L	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS NOTE: ALL DISSOLVED IDs END IN "F" FILTERED

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 1 OF 1

PROJECT NO: CTO 81 6#2863	SITE NAME: NSB-NLON	PROJECT MANAGER AND PHONE NUMBER: COREY RICH 412 921 8984	LABORATORY NAME AND CONTACT: KATAHDIN
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER AND PHONE NUMBER: KEITH SIMPSON	ADDRESS
		CARRIER/WAYBILL NUMBER: CD&L	CITY, STATE: MAINE

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2002	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TCL VOC	TCL SVOC	TCL PEST/PCB	TCL PAH	TAL METALS + HARDNESS	DISS. TAL METALS	TOC & COD	ALK, CHLORIDE, SULFATE, TDS	COMMENTS
		AREA A ROUND 10												
		CONTAINER TYPE PLASTIC (P) or GLASS (G)				G	G	G	G	P	P	G	P	
		PRESERVATIVE USED				HCL	4°C	4°C	4°C	HNO3	HNO3	H2SO4	4°C	
3/21	0705	TB 032102 01	AQ	G	2	2	—	—	—	—	—	—	—	
	1610	SWSG18 10	AQ	G	37	9	6	8	6	2	2	2	2	MS/MSD
	1640	SWSG20 10	AQ	G	13	3	2	2	2	1	1	1	1	
	0820	2WGW42DS 10	AQ	G	13	3	2	2	2	1	1	1	1	
	0000	FD 032102 01	AQ	G	13	3	2	2	2	1	1	1	1	DUP OF SWSG20 10
3/22	0805	2WGW39DS 10	AQ	G	13	3	2	2	2	1	1	1	1	
	0810	2WGW46DS 10	AQ	G	12	3	2	1	2	1	1	1	1	LOW VOL.
	0930	2WGW45DS 10	AQ	G	13	3	2	2	2	1	1	1	1	
	1320	2WGW44DS 10	AQ	G	13	3	2	2	2	1	1	1	1	
	1330	2WGW43DS 10	AQ	G	13	3	2	2	2	1	1	1	1	
	1500	2WGW41DS 10	AQ	G	12	3	2	2	1	1	1	1	1	LOW VOC
	1525	2WGW40DS 10	AQ	G	8	3	2	—	1	—	—	1	1	PARTIAL SAMPLE REST WILL BE SHIPPED ON MONDAY

1. RELINQUISHED BY [signature]	DATE 3.22.02	TIME 1900	1. RECEIVED BY CD&L	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS NOTE: ALL DISSOLVED IDs END IN "F" FILTERED

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3/99
FORM NO TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 1 OF 1

PROJECT NO: CTO 816 #2863	SITE NAME: NSB-NLON
PROJECT MANAGER AND PHONE NUMBER	COREY RICH 412 921 8994
LABORATORY NAME AND CONTACT:	KATAHDIN
SAMPLERS (SIGNATURE)	KJ SL
FIELD OPERATIONS LEADER AND PHONE NUMBER	KEITH SIMPSON 412 921 8131
ADDRESS	
CARRIER/WAYBILL NUMBER	CD&L
CITY, STATE	MAINE

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2002	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TCL VOC	TCL SVOC	TCL PEST/PCB	TCL PAH	TAL METALS + HARDNESS	DISS. TAL METALS	TOC + COD	ACR, CHLORIDE, SULFATE, TDS	COMMENTS
		AREA A ROUND 10												
		CONTAINER TYPE PLASTIC (P) or GLASS (G)				G	G	G	G	P	P	G	P	
		PRESERVATIVE USED				HCL	4°C	4°C	4°C	HNO_3	HNO_3	H_2SO_4	4°C	
3/21	0815	2WGW38DS 10	AQ	G	2	—	—	—	—	1	1	—	—	
3/23	0744	2WGW38DS 10	AQ	G	2	—	1	1	—	—	—	—	—	
3/25	1310	2WGW38DS 10	AQ	G	6	3	—	—	1	—	—	1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY KJ SL	3.25.02	1900	1. RECEIVED BY CD&L		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS NOTE: DISSOLVED IDs END IN 'F' FILTERED

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TINUS 001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 1 OF 1

PROJECT NO: CT0816 #2863	SITE NAME: NSB - NLON	PROJECT MANAGER AND PHONE NUMBER: COREY RICH 412 921 8984	LABORATORY NAME AND CONTACT: KATAHDIN
SAMPLERS (SIGNATURE): RCJ SL		FIELD OPERATIONS LEADER AND PHONE NUMBER: KEITH SIMPSON 412 921 831	ADDRESS:
		CARRIER/WAYBILL NUMBER: CD & L	CITY, STATE: MAINE

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2002	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TCL VOC	TCL SVOC	TCL PEST/PCB	TCL PAH	TAL METALS + HARDNESS	DISS. TAL METALS	TOC + COD	ALK, CHLORIDE, SULFATE, TDS	COMMENTS
		AREA A ROUND 10												
		CONTAINER TYPE PLASTIC (P) or GLASS (G)				G	G	G	G	P	P	G	P	
		PRESERVATIVE USED				HCL	4°C	4°C	4°C	HNO3	HNO3	H_2SO_4	4°C	
3/23	0730	TB 032302 01	AQ	G	2	2								
↓	1705	2W GW 40 DS 10	AQ	G	5	—	2	1	1	1	—			
3/24	0840	2L GW 20 S 10	AQ	G	13	3	2	2	2	1	1	1	1	
↓	1420	3 GW 37S 10	AQ	G	37	9	8	6	6	2	2	2	2	MS/MSD
↓	1450	3M SP01 10	AQ	G	13	3	2	2	2	1	1	1	1	
3/25	0915	SWSG 23 10	AQ	G	13	3	2	2	2	1	1	1	1	
	0930	SWSG 21 10	AQ	G	13	3	2	2	2	1	1	1	1	
	0950	SWSG 19 10	AQ	G	13	3	2	2	2	1	1	1	1	
↓	0910	SWSG 24 10	AQ	G	13	3	2	2	2	1	1	1	1	

1. RELINQUISHED BY: RCJ SL	DATE 3.25.02	TIME 1900	1. RECEIVED BY CD & L	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: OTE: ALL DISSOLVED IDs END IN F FILTERED

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TINUS-001

APPENDIX G

DATA VALIDATION LETTERS AND LABORATORY DATA SHEETS

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**C. RICH**	**DATE:**	**JUNE 3, 2002**
FROM:	**ETHAN G. LEE**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – TAL METALS AND MISCELLANEOUS PARAMETERS**
CTO- 816 NSB NEW LONDON
SAMPLE DELIVERY GROUP (SDG) – 816-4

SAMPLES: 31/AQUEOUS/

2WGW21S10	2WGW39DS10	2WGW41DS10
2WGW42DS10	2WGW43DS10	2WGW44DS10
2WGW45DS10	2WGW46DS10	2WGW47DS10
4GW01S10	FD03200201	FD03200202
FD03210201	SWSG1810	SWSG2010
2WGW21S10-F	2WGW39DS10-F	2WGW41DS10-F
2WGW42DS10-F	2WGW43DS10-F	2WGW44DS10-F
2WGW45DS10-F	2WGW46DS10-F	2WGW47DS10-F
4GW01S10-F	FD03200201-F	FD03200202-F
FD03210201-F	SWSG1810-F	SWSG2010-F
2WGW40DS10		

Overview

The sample set for CTO 816, NSB New London, SDG 816-4, consists of thirty-one (31) aqueous environmental samples. Six (6) field duplicate pairs (FD03200201 / 2WGW21S10; FD03200202 / 4GW01S10; FD03210201 / SWSG2010; FD03200201-F / 2WGW21S10-F; FD03200202-F / 4GW01S10-F; FD03210201 / SWSG2010-F) are included in this SDG.

The samples were analyzed for TAL metals, alkalinity, chemical oxygen demand (COD), chloride, hardness, sulfate, total dissolved solids (TDS), and total organic carbon (TOC). TAL metals and hardness were analyzed for all samples except 2WGW40DS10. Alkalinity, COD, chloride, hardness, sulfate, TDS, and TOC were not analyzed in the filtered samples (designated with a –F suffix). The samples were collected by Tetra Tech NUS March 20-22, 2002 and analyzed by Katahdin Analytical Services under Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. TAL metals and TDS analyses were conducted using method EPA 160.1. Alkalinity analyses were conducted using method EPA 310.1. COD analyses were conducted using method EPA 410.4. Chloride and sulfate analyses were conducted using method EPA 300. TOC analyses were conducted using method EPA 415.1.

Metals analyses except mercury, antimony, arsenic, chromium, lead, selenium, and thallium were conducted using Inductively Coupled Plasma (ICP) methodologies. Mercury analyses were conducted using Manual Cold Vapor AA (CV) methodologies. Antimony, arsenic, chromium, lead, selenium, and thallium analyses were conducted using ICP Mass Spectrophotometry (MS) methodologies.

These data were evaluated based on the following parameters:

* • Data Completeness

* • Holding Times
  • Calibration Recoveries
  • Laboratory Blank Analyses
* • Laboratory Control Sample Results
  • ICP Interference Check Sample Results
* • Matrix Spike Results
* • Laboratory Duplicate Results
* • Field Duplicate Results
* • ICP Serial Dilution Results
* • Sample Quantitation
* • Detection Limits

* - All quality control criteria were met for this parameter.

Laboratory Blank Analyses

The following contaminants were detected in the laboratory method/preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Aluminum	326 ug/L	1631 ug/L
Antimony	0.06 ug/L	0.3 ug/L
Antimony(1)	0.12 ug/L	0.60 ug/L
Antimony(2)	0.12 ug/L	0.60 ug/L
Antimony(3)	0.33 ug/L	1.65 ug/L
Barium	0.96 ug/L	4.8 ug/L
Barium(4)	1.3 ug/L	6.5 ug/L
Beryllium	0.84 ug/L	4.2 ug/L
Calcium	68.5 ug/L	343 ug/L
Chromium	0.62 ug/L	3.1 ug/L
Copper	3.9 ug/L	19.5 ug/L
Iron	30.1 ug/L	151 ug/L
Lead	0.17 ug/L	0.85 ug/L
Magnesium	66.6 ug/L	333 ug/L
Mercury	0.1 ug/L	0.5 ug/L
Potassium	22.0 ug/L	110 ug/L
Sodium	65.4 ug/L	327 ug/L
Thallium	0.13 ug/L	0.65 ug/L
Thallium(3)	0.65 ug/L	3.3 ug/L
Zinc	3.4 ug/L	17.0 ug/L
Zinc(3)	3.8 ug/L	19.0 ug/L
COD	21.6 mg/L	108 mg/L

(1) Maximum concentration found in laboratory preparation blank from preparation batch SC27ICW0.
(2) Maximum concentration found in laboratory preparation blank from preparation batch SC27ICW1.
(3) Maximum concentration found in laboratory preparation blank from preparation batch SC28ICW0.
(4) Maximum concentration found in laboratory preparation blank from preparation batch SD02ICW1.

An action level of 5X the maximum concentration was used to evaluate the sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration

when evaluating for blank contamination. Positive results < Action Level were qualified (U). Because different analytes were analyzed on different instruments (resulting in different Instrument Detection Limits (IDLs)), maximum contaminant concentrations were evaluated relative to the instrument in which they were run. No validation action was required for beryllium, calcium, magnesium, potassium, and sodium because all the results were greater than the action level.

Calibration Verification

The Percent Recovery (%R) for aluminum, beryllium, cadmium, cobalt, iron, manganese, nickel, potassium, sodium, vanadium, and zinc were above the control limit of 90-110%. Positive results (>IDL) were qualified as estimated (J).

Calibration Recoveries Analysis

The Contract Required Detection Limit (CRDL) Percent Recovery (%R) for cadmium was above the control limit of 80-120% affecting all samples. Positive results (>IDL; <3X CRDL) reported for lead in the affected samples were qualified as estimated (J). Nondetects (<IDL) were qualified as estimated (UJ).

Interference Check Sample Analysis

The interfering analyte magnesium was present in sample 2WGW46DS10-F at a concentration that was comparable to the level of magnesium in the Interference Check Sample (ICS) solution. Several analytes, namely antimony, chromium, cobalt, lead, manganese, silver, sodium, and zinc were present in the ICS solution at concentrations that exceeded two times the Instrument Detection Limit (IDL). Interference effects exist cobalt, lead, silver, and zinc in the affected sample. Positive results reported for zinc were qualified as estimated, (J). Nondetected results reported for cobalt, lead, and silver were qualified as estimated, (UJ).

Uncertainty Near Detection Limit

The concentrations of arsenic in samples 2WGW21S10, 2WGW42DS10, 2WGW44DS10-F, FD03200201-F, and SWSG2010-F were <2X IDL. The concentrations of selenium in samples 2WGW46DS10, 2WGW43DS10-F, and 2WGW46DS10-F were <2X IDL. The concentration of silver in sample 2WGW39DS10-F was <2X IDL. The concentrations of vanadium in samples 2WGW21S10, 2WGW41DS10, 2WGW44DS10, FD03200201, 2WGW21S10-F, and 2WGW46DS10-F were <2X IDL. Positive results (<2X IDL) were qualified as estimated (J).

Notes

ICP serial dilution noncompliance (percent difference >15) was noted for manganese. However, no action was taken because the undiluted sample value was greater than the diluted sample value.

Executive Summary

Laboratory Performance: Several analytes were present in the laboratory method/preparation blanks. Several analytes were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Sample 2WGW46DS10-F was qualified due to ICP interference. All positive results <2X IDL were qualified due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", February 1989 and the NFESC document entitled "Navy IRCDQM" (September 1999).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Tetra Tech NUS
Ethan G. Lee
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
N01 = Internal Standard Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCD% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: M

nsample	2WGW21S10
samp_date	3/20/2002
lab_id	WS0607-002
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	78.00	U	
ANTIMONY	0.20	U	
ARSENIC	6.0	J	P
BARIUM	48.1		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	116000		
CHROMIUM	6.8	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	52200	J	C
LEAD	0.20	U	
MAGNESIUM	336000		
MANGANESE	427	J	C
MERCURY	0.08	U	A
NICKEL	46.25	U	
POTASSIUM	108000	J	C
SELENIUM	8.00	U	
SILVER	19.45	U	
SODIUM	2950000	J	C
THALLIUM	0.85	U	A
VANADIUM	20.3	J	CP
ZINC	9.4	U	A

nsample	2WGW39DS10
samp_date	3/22/2002
lab_id	WS0657-005
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	20.1	U	A
ANTIMONY	0.20	U	A
ARSENIC	0.80	U	
BARIUM	56.3		
BERYLLIUM	0.29	U	
CADMIUM	2.98	UJ	C
CALCIUM	22000		
CHROMIUM	1.1	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	3260	J	C
LEAD	0.05	U	
MAGNESIUM	5370		
MANGANESE	374	J	C
MERCURY	0.14	U	A
NICKEL	9.25	U	
POTASSIUM	7540	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	155000	J	C
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	2.4	U	A

nsample	2WGW41DS10
samp_date	3/22/2002
lab_id	WS0657-010
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	1760	U	A
ANTIMONY	0.90	U	A
ARSENIC	14.9		
BARIUM	43.2		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	183000		
CHROMIUM	15.2	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	19600	J	C
LEAD	2.7	U	A
MAGNESIUM	549000		
MANGANESE	354	J	C
MERCURY	0.12	U	A
NICKEL	46.25	U	
POTASSIUM	178000	J	C
SELENIUM	8.1		
SILVER	19.45	U	
SODIUM	4370000	J	C
THALLIUM	0.40	U	
VANADIUM	27.5	J	CP
ZINC	25.7	U	A

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: M

nsample	2WGW42DS10
samp_date	3/21/2002
lab_id	WS0657-003
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	217	U	A
ANTIMONY	0.20	U	
ARSENIC	6.0	J	P
BARIUM	58.6		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	117000		
CHROMIUM	2.1	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	13600	J	C
LEAD	0.20	U	
MAGNESIUM	239000		
MANGANESE	435	J	C
MERCURY	0.08	U	A
NICKEL	46.25	U	
POTASSIUM	88200	J	C
SELENIUM	8.00	U	
SILVER	19.45	U	
SODIUM	2140000	J	C
THALLIUM	0.40	U	
VANADIUM	19.20	U	
ZINC	26.1	U	A

nsample	2WGW43DS10
samp_date	3/22/2002
lab_id	WS0657-009R
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	124	U	A
ANTIMONY	1.1	U	A
ARSENIC	15.3		
BARIUM	95.1		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	297000		
CHROMIUM	8.2	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	11500	J	C
LEAD	0.58	U	A
MAGNESIUM	881000		
MANGANESE	242	J	C
MERCURY	0.12	U	A
NICKEL	46.25	U	
POTASSIUM	256000	J	C
SELENIUM	8.00	U	
SILVER	19.45	U	
SODIUM	6760000	J	C
THALLIUM	0.66	U	A
VANADIUM	19.20	U	
ZINC	7.4	U	A

nsample	2WGW44DS10
samp_date	3/22/2002
lab_id	WS0657-008
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	170	U	A
ANTIMONY	0.24	U	A
ARSENIC	1.8		
BARIUM	30.7		
BERYLLIUM	0.29	U	
CADMIUM	5.96	UJ	C
CALCIUM	76500		
CHROMIUM	4.2	U	A
COBALT	5.86	U	
COPPER	3.48	U	
IRON	21900	J	C
LEAD	0.17	U	A
MAGNESIUM	95200		
MANGANESE	593	J	C
MERCURY	0.08	U	A
NICKEL	18.50	U	
POTASSIUM	39700	J	C
SELENIUM	2.00	U	
SILVER	7.78	U	
SODIUM	768000	J	C
THALLIUM	0.10	U	
VANADIUM	8.4	J	CP
ZINC	5.7	U	A

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: M

nsample	2WGW45DS10
samp_date	3/22/2002
lab_id	WS0657-007
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	158	U	A
ANTIMONY	0.32	U	A
ARSENIC	7.2		
BARIUM	7.3	U	A
BERYLLIUM	0.29	U	
CADMIUM	5.96	UJ	C
CALCIUM	23000		
CHROMIUM	2.8	U	A
COBALT	5.86	U	
COPPER	3.48	U	
IRON	9470	J	C
LEAD	0.20	U	A
MAGNESIUM	54700		
MANGANESE	115	J	C
MERCURY	0.04	U	A
NICKEL	18.50	U	
POTASSIUM	27400	J	C
SELENIUM	2.00	U	
SILVER	7.78	U	
SODIUM	576000	J	C
THALLIUM	0.10	U	
VANADIUM	7.68	U	
ZINC	6.3	U	A

nsample	2WGW46DS10
samp_date	3/22/2002
lab_id	WS0657-006
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	633	U	A
ANTIMONY	1.3	U	A
ARSENIC	20.4		
BARIUM	96.6		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	365000		
CHROMIUM	10.3	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	7450	J	C
LEAD	0.83	U	A
MAGNESIUM	1180000		
MANGANESE	152	J	C
MERCURY	0.09	U	A
NICKEL	46.25	U	
POTASSIUM	316000	J	C
SELENIUM	14.1	J	P
SILVER	19.45	U	
SODIUM	8440000	J	C
THALLIUM	0.40	U	
VANADIUM	19.20	U	
ZINC	22.2	U	A

nsample	2WGW47DS 10
samp_date	3/20/2002
lab_id	WS0607-005
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	36.6	U	A
ANTIMONY	0.41	U	A
ARSENIC	23.1		
BARIUM	236		
BERYLLIUM	0.58	U	
CADMIUM	5.96	UJ	C
CALCIUM	32100		
CHROMIUM	1.9	U	A
COBALT	5.86	U	
COPPER	3.48	U	
IRON	84700	J	C
LEAD	0.07	U	A
MAGNESIUM	42200		
MANGANESE	3320	J	C
MERCURY	0.04	U	A
NICKEL	18.50	U	
POTASSIUM	35200	J	C
SELENIUM	2.00	U	
SILVER	7.78	U	
SODIUM	620000	J	C
THALLIUM	0.10	U	
VANADIUM	7.68	U	
ZINC	4.8	U	A

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: M

nsample	4GW01S 10
samp_date	3/20/2002
lab_id	WS0607-004
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
MANGANESE	6.0	J	C
MERCURY	0.03	U	
NICKEL	9.25	U	
POTASSIUM	2920	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	36100	J	C
THALLIUM	0.15	U	A
VANADIUM	3.84	U	
ZINC	43.7	J	C

nsample	4GW01S10
samp_date	3/20/2002
lab_id	WS0607-004
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	43.2	U	A
ANTIMONY	0.19	U	A
ARSENIC	0.80	U	
BARIUM	44.2		
BERYLLIUM	0.29	U	
CADMIUM	2.98	UJ	C
CALCIUM	21400		
CHROMIUM	0.46	U	A
COBALT	2.93	U	
COPPER	1.8	U	A
IRON	9.0	U	A
LEAD	0.05	U	
MAGNESIUM	3190		

nsample	FD03200201
samp_date	3/20/2002
lab_id	WS0607-001
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	2WGW21S10

Parameter	Result	ValQual	QualCode
ALUMINUM	118	U	A
ANTIMONY	0.23	U	A
ARSENIC	6.8		
BARIUM	48.5		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	114000		
CHROMIUM	6.2	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	45300	J	C
LEAD	0.20	U	
MAGNESIUM	330000		
MANGANESE	429	J	C
MERCURY	0.09	U	A
NICKEL	46.25	U	
POTASSIUM	108000	J	C
SELENIUM	8.00	U	
SILVER	19.45	U	
SODIUM	2900000	J	C
THALLIUM	1.6	U	A
VANADIUM	19.6	J	CP
ZINC	11.7	U	A

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: M

nsample	FD03200202
samp_date	3/20/2002
lab_id	WS0607-003
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	4GW01S10

Parameter	Result	ValQual	QualCode
ALUMINUM	39.0	U	A
ANTIMONY	0.16	U	A
ARSENIC	0.80	U	
BARIUM	43.4		
BERYLLIUM	0.29	U	
CADMIUM	2.98	UJ	C
CALCIUM	21000		
CHROMIUM	0.35	U	
COBALT	2.93	U	
COPPER	1.74	U	
IRON	7.3	U	A
LEAD	0.05	U	
MAGNESIUM	3130		
MANGANESE	5.8	J	C
MERCURY	0.08	U	A
NICKEL	9.25	U	
POTASSIUM	2810	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	34800	J	C
THALLIUM	0.19	U	A
VANADIUM	3.84	U	
ZINC	12.8	U	A

nsample	FD03210201
samp_date	3/21/2002
lab_id	WS0657-004
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	SWSG2010

Parameter	Result	ValQual	QualCode
ALUMINUM	115	U	A
ANTIMONY	0.61	U	A
ARSENIC	3.20	U	
BARIUM	13.9		
BERYLLIUM	0.29	U	
CADMIUM	2.98	UJ	C
CALCIUM	8320		
CHROMIUM	1.40	U	
COBALT	2.93	U	
COPPER	1.74	U	
IRON	934	J	C
LEAD	2.2	U	A
MAGNESIUM	2790		
MANGANESE	40.5	J	C
MERCURY	0.09	U	A
NICKEL	9.25	U	
POTASSIUM	3000	J	C
SELENIUM	8.00	U	
SILVER	3.89	U	
SODIUM	34400	J	C
THALLIUM	0.40	U	
VANADIUM	3.84	U	
ZINC	20.1	J	C

nsample	SWSG1810
samp_date	3/21/2002
lab_id	WS0657-001
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	52.9	U	A
ANTIMONY	0.26	U	A
ARSENIC	0.80	U	
BARIUM	24.9		
BERYLLIUM	0.29	U	
CADMIUM	2.98	UJ	C
CALCIUM	12400		
CHROMIUM	0.35	U	
COBALT	2.93	U	
COPPER	1.74	U	
IRON	2200	J	C
LEAD	0.34	U	A
MAGNESIUM	3150		
MANGANESE	53.0	J	C
MERCURY	0.06	U	A
NICKEL	9.25	U	
POTASSIUM	3500	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	40400	J	C
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	69.8	J	C

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: M

nsample	SWSG2010
samp_date	3/21/2002
lab_id	WS0657-002
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	106	U	A
ANTIMONY	0.24	U	A
ARSENIC	0.80	U	
BARIUM	14.4		
BERYLLIUM	0.29	U	
CADMIUM	2.98	UJ	C
CALCIUM	8130		
CHROMIUM	0.36	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	953	J	C
LEAD	0.41	U	A
MAGNESIUM	2730		
MANGANESE	43.8	J	C
MERCURY	0.05	U	A
NICKEL	9.25	U	
POTASSIUM	3410	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	34100	J	C
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	19.5	J	C

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: MF

nsample	2WGW 21S 10-F
samp_date	3/20/2002
lab_id	WS0607-007
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	118	U	A
ANTIMONY	0.20	U	
ARSENIC	6.9		
BARIUM	41.3		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	85400		
CHROMIUM	4.9	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	42000	J	C
LEAD	0.20	U	
MAGNESIUM	237000		
MANGANESE	518	J	C
MERCURY	0.03	U	A
NICKEL	46.25	U	
POTASSIUM	76700	J	C
SELENIUM	8.00	U	
SILVER	19.45	U	
SODIUM	2200000	J	C
THALLIUM	0.40	U	
VANADIUM	24.0	J	CP
ZINC	10.0	U	A

nsample	2WGW39DS10-F
samp_date	3/22/2002
lab_id	WS0657-015
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	15.60	U	
ANTIMONY	0.27	U	A
ARSENIC	0.80	U	
BARIUM	59.0		
BERYLLIUM	0.29	U	
CADMIUM	2.98	UJ	C
CALCIUM	25900		
CHROMIUM	0.46	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	2720	J	C
LEAD	0.05	U	
MAGNESIUM	6320		
MANGANESE	438	J	C
MERCURY	0.09	U	A
NICKEL	9.25	U	
POTASSIUM	7440	J	C
SELENIUM	2.00	U	
SILVER	4.0	J	P
SODIUM	152000	J	C
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	3.1	U	A

nsample	2WGW41DS10-F
samp_date	3/22/2002
lab_id	WS0657-020
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	78.00	U	
ANTIMONY	0.98	U	A
ARSENIC	13.2		
BARIUM	33.9		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	181000		
CHROMIUM	8.3	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	19200	J	C
LEAD	0.20	U	
MAGNESIUM	544000		
MANGANESE	326	J	C
MERCURY	0.09	U	A
NICKEL	46.25	U	
POTASSIUM	172000	J	C
SELENIUM	8.00	U	
SILVER	19.45	U	
SODIUM	4310000	J	C
THALLIUM	0.40	U	
VANADIUM	19.20	U	
ZINC	11.4	U	A

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: MF

nsample	2WGW42DS10-F
samp_date	3/21/2002
lab_id	WS0657-013
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	780.00	U	
ANTIMONY	0.20	U	
ARSENIC	4.5		
BARIUM	50.3		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	119000		
CHROMIUM	2.4	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	6860	J	C
LEAD	0.20	U	
MAGNESIUM	238000		
MANGANESE	472	J	C
MERCURY	0.05	U	A
NICKEL	46.25	U	
POTASSIUM	77800	J	C
SELENIUM	8.0	U	
SILVER	19.45	U	
SODIUM	1790000	J	C
THALLIUM	0.40	U	
VANADIUM	19.20	U	
ZINC	11.0	U	A

nsample	2WGW43DS10-F
samp_date	3/22/2002
lab_id	WS0657-019
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	78.00	U	
ANTIMONY	0.24	U	A
ARSENIC	11.3		
BARIUM	104		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	321000		
CHROMIUM	8.0	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	2080	J	C
LEAD	0.20	U	
MAGNESIUM	968000		
MANGANESE	213	J	C
MERCURY	0.07	U	A
NICKEL	46.25	U	
POTASSIUM	245000	J	C
SELENIUM	10.9	J	P
SILVER	19.45	U	
SODIUM	6530000	J	C
THALLIUM	0.40	U	
VANADIUM	19.20	U	
ZINC	10.0	U	A

nsample	2WGW44DS10-F
samp_date	3/22/2002
lab_id	WS0657-018
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	31.20	U	
ANTIMONY	0.19	U	A
ARSENIC	1.0	J	P
BARIUM	25.1		
BERYLLIUM	0.58	U	
CADMIUM	5.96	UJ	C
CALCIUM	71200		
CHROMIUM	2.3	U	A
COBALT	5.86	U	
COPPER	3.48	U	
IRON	12400	J	C
LEAD	0.05	U	
MAGNESIUM	94600		
MANGANESE	515	J	C
MERCURY	0.06	U	A
NICKEL	18.50	U	
POTASSIUM	37700	J	C
SELENIUM	2.00	U	
SILVER	7.78	U	
SODIUM	712000	J	C
THALLIUM	0.10	U	
VANADIUM	7.68	U	
ZINC	3.0	U	A

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: MF

nsample	2WGW45DS10-F	nsample	2WGW46DS10-F	nsample	2WGW47DS 10-F
samp_date	3/22/2002	samp_date	3/22/2002	samp_date	3/20/2002
lab_id	WS0657-017	lab_id	WS0657-016	lab_id	WS0607-010
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0	Pct_Solids	0	Pct_Solids	0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	31.20	U	
ANTIMONY	0.32	U	A
ARSENIC	7.1		
BARIUM	5.8	U	A
BERYLLIUM	0.58	U	
CADMIUM	5.96	UJ	C
CALCIUM	24400		
CHROMIUM	2.7	U	A
COBALT	5.86	U	
COPPER	3.48	U	
IRON	8020	J	C
LEAD	0.11	U	A
MAGNESIUM	60300		
MANGANESE	104	J	C
MERCURY	0.04	U	A
NICKEL	18.50	U	
POTASSIUM	28000	J	C
SELENIUM	2.00	U	
SILVER	7.78	U	
SODIUM	561000	J	C
THALLIUM	0.10	U	
VANADIUM	7.68	U	
ZINC	3.5	U	A

Parameter	Result	ValQual	QualCode
ALUMINUM	78.00	U	
ANTIMONY	3.8	U	A
ARSENIC	38.0		
BARIUM	121		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	403000		
CHROMIUM	9.6	U	A
COBALT	14.65	UJ	K
COPPER	8.70	U	
IRON	42.2	U	A
LEAD	0.20	UJ	K
MAGNESIUM	1260000		
MANGANESE	33.8	J	C
MERCURY	0.08	U	A
NICKEL	46.25	U	
POTASSIUM	350000	J	C
SELENIUM	11.2	J	P
SILVER	19.45	UJ	K
SODIUM	9170000	J	C
THALLIUM	0.40	U	
VANADIUM	22.8	J	CP
ZINC	8.8	U	A

Parameter	Result	ValQual	QualCode
ALUMINUM	31.20	U	
ANTIMONY	0.48	U	A
ARSENIC	21.7		
BARIUM	217		
BERYLLIUM	0.58	U	
CADMIUM	5.96	UJ	C
CALCIUM	29600		
CHROMIUM	1.2	U	A
COBALT	5.86	U	
COPPER	3.48	U	
IRON	77700	J	C
LEAD	0.05	U	
MAGNESIUM	38200		
MANGANESE	3070	J	C
MERCURY	0.04	U	A
NICKEL	18.50	U	
POTASSIUM	32200	J	C
SELENIUM	2.00	U	
SILVER	7.78	U	
SODIUM	567000	J	C
THALLIUM	0.10	U	
VANADIUM	7.68	U	
ZINC	6.0	U	A

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: MF

nsample	4GW01S 10-F
samp_date	3/20/2002
lab_id	WS0607-009
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	44.2	U	A
ANTIMONY	0.20	U	A
ARSENIC	0.80	U	
BARIUM	44.5		
BERYLLIUM	1.45	U	
CADMIUM	2.98	UJ	C
CALCIUM	21400		
CHROMIUM	0.35	U	
COBALT	2.93	U	
COPPER	1.74	U	
IRON	6.91	U	
LEAD	0.05	U	
MAGNESIUM	3240		
MANGANESE	5.9	J	C
MERCURY	0.04	U	A
NICKEL	9.25	U	
POTASSIUM	3030	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	36900	J	C
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	3.8	U	A

nsample	FD 032002 01-F
samp_date	3/20/2002
lab_id	WS0607-006
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	2WGW21S10-F

Parameter	Result	ValQual	QualCode
ALUMINUM	78.00	U	
ANTIMONY	0.22	U	A
ARSENIC	6.3	J	P
BARIUM	41.5		
BERYLLIUM	1.45	U	
CADMIUM	14.90	UJ	C
CALCIUM	96000		
CHROMIUM	6.1	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	36700	J	C
LEAD	0.20	U	
MAGNESIUM	272000		
MANGANESE	470	J	C
MERCURY	0.03	U	A
NICKEL	46.25	U	
POTASSIUM	87500	J	C
SELENIUM	8.00	U	
SILVER	19.45	U	
SODIUM	2390000	J	C
THALLIUM	0.40	U	
VANADIUM	19.20	U	
ZINC	12.2	U	A

nsample	FD 032002 02-F
samp_date	3/20/2002
lab_id	WS0607-008
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	4GW01S10-F

Parameter	Result	ValQual	QualCode
ALUMINUM	35.6	U	A
ANTIMONY	0.17	U	A
ARSENIC	0.80	U	
BARIUM	42.6		
BERYLLIUM	1.45	U	
CADMIUM	2.98	UJ	C
CALCIUM	20400		
CHROMIUM	0.35	U	
COBALT	2.93	U	
COPPER	1.74	U	
IRON	6.91	U	
LEAD	0.05	U	
MAGNESIUM	3090		
MANGANESE	5.4	J	C
MERCURY	0.03	U	A
NICKEL	9.25	U	
POTASSIUM	2900	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	34900	J	C
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	3.1	U	A

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: MF

nsample	FD03210201-F
samp_date	3/21/2002
lab_id	WS0657-014R
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	SWSG2010-F

Parameter	Result	ValQual	QualCode
ALUMINUM	15.60	U	
ANTIMONY	0.16	U	A
ARSENIC	0.80	U	
BARIUM	13.5		
BERYLLIUM	0.29	U	
CADMIUM	2.98	UJ	C
CALCIUM	3770		
CHROMIUM	0.45	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	394	J	C
LEAD	0.13	U	A
MAGNESIUM	1290		
MANGANESE	12.0	J	C
MERCURY	0.09	U	A
NICKEL	9.25	U	
POTASSIUM	2950	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	34500	J	C
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	9.1	U	A

nsample	SWSG1810-F
samp_date	3/21/2002
lab_id	WS0657-011
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	15.60	U	
ANTIMONY	0.26	U	A
ARSENIC	0.80	U	
BARIUM	27.1		
BERYLLIUM	0.29	U	
CADMIUM	2.98	UJ	C
CALCIUM	13200		
CHROMIUM	0.35	U	
COBALT	2.93	U	
COPPER	1.74	U	
IRON	749	J	C
LEAD	0.31	U	A
MAGNESIUM	3420		
MANGANESE	54.6	J	C
MERCURY	0.03	U	
NICKEL	9.25	U	
POTASSIUM	3630	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	42100	J	C
THALLIUM	0.47	U	A
VANADIUM	3.84	U	
ZINC	60.6	J	C

nsample	SWSG2010-F
samp_date	3/21/2002
lab_id	WS0657-012
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	15.60	U	
ANTIMONY	0.30	U	A
ARSENIC	0.93	J	P
BARIUM	14.0		
BERYLLIUM	0.29	U	
CADMIUM	2.98	UJ	C
CALCIUM	8960		
CHROMIUM	0.80	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	427	J	C
LEAD	0.16	U	A
MAGNESIUM	2960		
MANGANESE	30.1	J	C
MERCURY	0.04	U	A
NICKEL	9.25	U	
POTASSIUM	2890	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	35100	J	C
THALLIUM	0.10	U	A
VANADIUM	3.84	U	
ZINC	21.0	J	C

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: MISC

nsample	2WGW21S10
samp_date	3/20/2002
lab_id	WS0607-2
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	910		
CHEMICAL OXYGEN DEMAND	MG/L	390		
CHLORIDE	MG/L	5900		
HARDNESS	MG/L	1670		
SULFATE	MG/L	20		
TOTAL DISSOLVED SOLIDS	MG/L	6700		
TOTAL ORGANIC CARBON	MG/L	34		

nsample	2WGW39DS10
samp_date	3/22/2002
lab_id	WS0657-5
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	230		
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	540		
HARDNESS	MG/L	77		
SULFATE	MG/L	4		
TOTAL DISSOLVED SOLIDS	MG/L	1100		
TOTAL ORGANIC CARBON	MG/L	4		

nsample	2WGW40DS 10
samp_date	3/22/2002
lab_id	WS0657-22
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	770		
CHEMICAL OXYGEN DEMAND	MG/L	600		
CHLORIDE	MG/L	10000		
SULFATE	MG/L	1600		
TOTAL DISSOLVED SOLIDS	MG/L	24000		
TOTAL ORGANIC CARBON	MG/L	35		

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: MISC

nsample	2WGW41DS10
samp_date	3/22/2002
lab_id	WS0657-10
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	2000		
CHEMICAL OXYGEN DEMAND	MG/L	300		
CHLORIDE	MG/L	10000		
HARDNESS	MG/L	2720		
SULFATE	MG/L	350		
TOTAL DISSOLVED SOLIDS	MG/L	13000		
TOTAL ORGANIC CARBON	MG/L	64		

nsample	2WGW42DS10
samp_date	3/21/2002
lab_id	WS0657-3
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	530		
CHEMICAL OXYGEN DEMAND	MG/L	640		
CHLORIDE	MG/L	3000		
HARDNESS	MG/L	1280		
SULFATE	MG/L	110		
TOTAL DISSOLVED SOLIDS	MG/L	5700		
TOTAL ORGANIC CARBON	MG/L	27		

nsample	2WGW43DS10
samp_date	3/22/2002
lab_id	WS0657-9
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	980		
CHEMICAL OXYGEN DEMAND	MG/L	690		
CHLORIDE	MG/L	12000		
HARDNESS	MG/L	4370		
SULFATE	MG/L	400		
TOTAL DISSOLVED SOLIDS	MG/L	38000		
TOTAL ORGANIC CARBON	MG/L	34		

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: MISC

nsample	2WGW44DS10
samp_date	3/22/2002
lab_id	WS0657-8
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	960		
CHEMICAL OXYGEN DEMAND	MG/L	40	U	A
CHLORIDE	MG/L	5000		
HARDNESS	MG/L	583		
SULFATE	MG/L	54		
TOTAL DISSOLVED SOLIDS	MG/L	7000		
TOTAL ORGANIC CARBON	MG/L	9		

nsample	2WGW45DS10
samp_date	3/22/2002
lab_id	WS0657-7
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	180		
CHEMICAL OXYGEN DEMAND	MG/L	100	U	A
CHLORIDE	MG/L	1000		
HARDNESS	MG/L	283		
SULFATE	MG/L	20		
TOTAL DISSOLVED SOLIDS	MG/L	1300		
TOTAL ORGANIC CARBON	MG/L	16		

nsample	2WGW46DS10
samp_date	3/22/2002
lab_id	WS0657-6
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	1900		
CHEMICAL OXYGEN DEMAND	MG/L	1100		
CHLORIDE	MG/L	20000		
HARDNESS	MG/L	5780		
SULFATE	MG/L	660		
TOTAL DISSOLVED SOLIDS	MG/L	28000		
TOTAL ORGANIC CARBON	MG/L	36		

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: MISC

nsample	2WGW47DS 10
samp_date	3/20/2002
lab_id	WS0607-5
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	250		
CHEMICAL OXYGEN DEMAND	MG/L	30	U	A
CHLORIDE	MG/L	1000		
SULFATE	MG/L	1	U	
TOTAL DISSOLVED SOLIDS	MG/L	1800		
TOTAL ORGANIC CARBON	MG/L	22		

nsample	2WGW47DS10
samp_date	3/20/2002
lab_id	WS0607-005
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
HARDNESS	MG/L	254		

nsample	4GW01S 10
samp_date	3/20/2002
lab_id	WS0607-4
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
CHLORIDE	MG/L	53		
TOTAL DISSOLVED SOLIDS	MG/L	170		

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: MISC

nsample	4GW01S10
samp_date	3/20/2002
lab_id	WS0607-4
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	20		
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
HARDNESS	MG/L	66.6		
SULFATE	MG/L	32		
TOTAL ORGANIC CARBON	MG/L	2		

nsample	FD03200201
samp_date	3/20/2002
lab_id	WS0607-1
qc_type	NM
Pct_Solids	0
DUP_OF:	2WGW21S10

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	910		
CHEMICAL OXYGEN DEMAND	MG/L	320		
CHLORIDE	MG/L	6000		
HARDNESS	MG/L	1640		
SULFATE	MG/L	20		
TOTAL DISSOLVED SOLIDS	MG/L	12000		
TOTAL ORGANIC CARBON	MG/L	40		

nsample	FD03200202
samp_date	3/20/2002
lab_id	WS0607-3
qc_type	NM
Pct_Solids	0
DUP_OF:	4GW01S10

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	20		
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	59		
HARDNESS	MG/L	65.4		
SULFATE	MG/L	32		
TOTAL DISSOLVED SOLIDS	MG/L	170		
TOTAL ORGANIC CARBON	MG/L	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: MISC

nsample	FD03210201
samp_date	3/21/2002
lab_id	WS0657-4
qc_type	NM
Pct_Solids	0
DUP_OF:	SWSG2010

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	20	U	
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	60		
HARDNESS	MG/L	32.2		
SULFATE	MG/L	11		
TOTAL DISSOLVED SOLIDS	MG/L	170		
TOTAL ORGANIC CARBON	MG/L	4		

nsample	SWSG1810
samp_date	3/21/2002
lab_id	WS0657-1
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	30		
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	70		
HARDNESS	MG/L	44		
SULFATE	MG/L	9.6		
TOTAL DISSOLVED SOLIDS	MG/L	190		
TOTAL ORGANIC CARBON	MG/L	4		

nsample	SWSG2010
samp_date	3/21/2002
lab_id	WS0657-2
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	20	U	
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	60		
HARDNESS	MG/L	31.6		
SULFATE	MG/L	11		
TOTAL DISSOLVED SOLIDS	MG/L	130		
TOTAL ORGANIC CARBON	MG/L	5		

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**C. RICH**	**DATE:**	**JUNE 3, 2002**
FROM:	**ETHAN G. LEE**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – TAL METALS AND MISCELLANEOUS PARAMETERS**
CTO- 816 NSB NEW LONDON
SAMPLE DELIVERY GROUPS (SDGs) – WS0669 & WS0671

SAMPLES: 20/AQUEOUS/

2LGW20S10	2WGW38DS10	2WGW40DS10
3GW37S10	3MSP0110	SWSG1910
SWSG2110	SWSG2310	SWSG2410
2LGW20S10-F	2WGW38DS10-F	2WGW40DS10-F
3GW37S10-F	3MSP0110-F	SWSG1910-F
SWSG2110-F	SWSG2310-F	SWSG2410-F
LFSP01	LFSP01-F	

Overview

The sample set for CTO 816, NSB New London, SDGs WS0669 & WS0671, consists of twenty (20) aqueous environmental samples.

The samples in SDG WS0669 were analyzed for TAL metals, alkalinity, chemical oxygen demand (COD), chloride, hardness, sulfate, total dissolved solids (TDS), and total organic carbon (TOC). Alkalinity, COD, chloride, hardness, sulfate, TDS, and TOC were not analyzed in sample 2WGW40DS10 and the filtered samples (designated with –F suffix). The samples in SDG WS0671 were analyzed for TAL metals and hardness. The samples were collected by Tetra Tech NUS March 21, 23-25, 2002 and analyzed by Katahdin Analytical Services under Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. TAL metals analyses were conducted using method ILM 04.0. TDS analyses were conducted using method EPA 160.1. Alkalinity analyses were conducted using method EPA 310.1. COD analyses were conducted using method EPA 410.4. Chloride and sulfate analyses were conducted using method EPA 300. TOC analyses were conducted using method EPA 415.1. Hardness analyses were conducted using method APHA 2340B.

Metals analyses except mercury, antimony, arsenic, chromium, lead, selenium, and thallium were conducted using Inductively Coupled Plasma (ICP) methodologies. Mercury analyses were conducted using Manual Cold Vapor AA (CV) methodologies. Antimony, arsenic, chromium, lead, selenium, and thallium analyses were conducted using ICP Mass Spectrophotometry (MS) methodologies.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
  • Calibration Recoveries
  • Laboratory Blank Analyses

* • Laboratory Control Sample Results
• ICP Interference Check Sample Results
• Matrix Spike Results
* • Laboratory Duplicate Results
* • Field Duplicate Results
* • ICP Serial Dilution Results
* • Sample Quantitation
• Detection Limits

* - All quality control criteria were met for this parameter.

Laboratory Blank Analyses

The following contaminants were detected in the laboratory method/preparation blanks in SDG WS0669 at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Aluminum	49.9 ug/L	250 ug/L
Antimony[1]	0.31 ug/L	1.55 ug/L
Antimony[2]	0.23 ug/L	1.15 ug/L
Arsenic[2]	0.72 ug/L	3.6 ug/L
Barium[1]	1.3 ug/L	6.5 ug/L
Beryllium	0.51 ug/L	2.55 ug/L
Calcium	48.5 ug/L	243 ug/L
Chromium[1]	0.56 ug/L	2.8 ug/L
Chromium[2]	0.44 ug/L	2.2 ug/L
Iron	20.0 ug/L	100 ug/L
Lead[1]	0.41 ug/L	2.1 ug/L
Lead[2]	0.33 ug/L	1.65 ug/L
Magnesium	41.4 ug/L	207 ug/L
Mercury	0.1 ug/L	0.5 ug/L
Nickel	11.5 ug/L	57.5 ug/L
Sodium[1]	39.4 ug/L	197 ug/L
Sodium[2]	55.9 ug/L	280 ug/L
Thallium[1]	0.11 ug/L	0.55 ug/L
Thallium	0.1 ug/L	0.5 ug/L
COD	21.6 mg/L	108 mg/L

[1] Maximum concentration found in laboratory preparation blank from preparation batch SD02ICW1.
[2] Maximum concentration found in laboratory preparation blank from preparation batch SD02ICW2.

An action level of 5X the maximum concentration was used to evaluate the sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results < Action Level were qualified (U). Because different analytes were analyzed on different instruments (resulting in different Instrument Detection Limits (IDLs)), maximum contaminant concentrations were evaluated relative to the instrument in which they were run. No validation action was required for beryllium, calcium, magnesium, and sodium because all the results were greater than the action level.

The following contaminants were detected in the laboratory method/preparation blanks in SDG WS0671 at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Aluminum	86.7 ug/L	434 ug/L
Antimony[1]	0.12 ug/L	0.6 ug/L
Barium	0.96 ug/L	4.8 ug/L
Beryllium	0.62 ug/L	3.1 ug/L
Calcium	37.0 ug/L	185 ug/L
Chromium	0.62 ug/L	3.1 ug/L
Iron	30.1 ug/L	151 ug/L
Lead	0.02 ug/L	0.1 ug/L
Magnesium	45.6 ug/L	228 ug/L
Mercury[1]	0.086 ug/L	0.43 ug/L
Sodium	41.3 ug/L	207 ug/L
Thallium	0.13 ug/L	0.65 ug/L

[1] Maximum concentration found in laboratory preparation blank.

An action level of 5X the maximum concentration was used to evaluate the sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results < Action Level were qualified (U). No validation action was required for barium, beryllium, calcium, magnesium, and sodium because either all the results were greater than the action level or they were nondetects.

Calibration Verification

The Percent Recoveries (%R) for aluminum, magnesium, and sodium were >110%, affecting samples SWSG2310-F, SWSG2110-F, SWSG1910-F, SWSG2410-F, 2WGW40DS10-F, 2WGW38DS10, and 2WGW38DS10-F. Positive results (>IDL) were qualified as estimated (J).

The %Rs for aluminum, cadmium, cobalt, iron, manganese, nickel, potassium, silver, sodium, vanadium, and zinc were >110%, affecting samples LFSP01 and LFSP01-F. Positive results (>IDL) were qualified as estimated (J).

Calibration Recoveries Analysis

The Contract Required Detection Limit (CRDL) Percent Recovery (%R) for cadmium was outside the control limit of 80-120% affecting all samples. Nondetects (<IDL; <3X CRDL) were qualified as estimated (UJ).

The CRDL %R for zinc was outside the control limit of 80-120% affecting samples LFSP01 and LFSP01-F. Positive results (>IDL; <3X CRDL) were qualified as estimated (J).

Matrix Spike Recovery

The Matrix Spike %R for selenium was <75%, affecting all samples in SDG WS0669 in the aqueous matrix. Positive results were qualified as estimated (J). Nondetects were qualified as estimated (UJ).

Uncertainty Near Detection Limit

The concentration of arsenic in sample 2LGW20S10 was <2X IDL. The concentrations of copper in samples 2WGW38DS10, 3GW37S10-F, SWSG1910-F, and SWSG2310-F were <2X IDL. The concentration of silver in sample 2WGW39DS10-F was <2X IDL. The concentrations of vanadium in samples 2WGW38DS10, SWSG2310, and 2WGW38DS10-F were <2X IDL. The concentration of zinc in sample 2WGW38DS10 was <2X IDL. Positive results (<2X IDL) were qualified as estimated (J).

Notes

No post-digestion spike was performed for selenium in SDG WS0669.

Executive Summary

Laboratory Performance: Several analytes were present in the laboratory method/preparation blanks. Several analytes were qualified due to calibration noncompliance. Selenium was qualified due to matrix spike noncompliance

Other Factors Affecting Data Quality: All positive results <2X IDL were qualified due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", February 1989 and the NFESC document entitled "Navy IRCDQM" (September 1999).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Tetra Tech NUS
Ethan G. Lee
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
N01 = Internal Standard Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCD% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: M

nsample	2LGW20S10
samp_date	3/24/2002
lab_id	WS0669-001
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	31.8	U	A
ANTIMONY	0.32	U	A
ARSENIC	0.96	J	P
BARIUM	48.2		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	23400		
CHROMIUM	0.43	U	A
COBALT	2.93	U	
COPPER	4.1		
IRON	55.8	U	A
LEAD	0.67	U	A
MAGNESIUM	4190		
MANGANESE	103		
MERCURY	0.08	U	A
NICKEL	9.25	U	
POTASSIUM	3810		
SELENIUM	2.00	UJ	D
SILVER	3.89	U	
SODIUM	41000		
THALLIUM	0.34	U	A
VANADIUM	3.84	U	
ZINC	9.1		

nsample	2WGW38DS10
samp_date	3/21/2002
lab_id	WS0669-018
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	82.6	U	A
ANTIMONY	0.66	U	A
ARSENIC	1.6	U	A
BARIUM	9.3		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	50800		
CHROMIUM	2.7	U	A
COBALT	2.93	U	
COPPER	2.9	J	P
IRON	344		
LEAD	0.34	U	A
MAGNESIUM	21500	J	C
MANGANESE	243		
MERCURY	0.12	U	A
NICKEL	9.25	U	
POTASSIUM	15000		
SELENIUM	2.00	UJ	D
SILVER	3.89	U	
SODIUM	175000	J	C
THALLIUM	0.10	U	
VANADIUM	4.9	J	P
ZINC	2.3	J	P

nsample	2WGW40DS10
samp_date	3/23/2002
lab_id	WS0669-017
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	78.00	U	
ANTIMONY	0.51	U	A
ARSENIC	7.3		
BARIUM	60.6		
BERYLLIUM	1.45	U	
CADMIUM	14.90	U	
CALCIUM	225000		
CHROMIUM	3.8	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	1930		
LEAD	0.37	U	A
MAGNESIUM	723000		
MANGANESE	101		
MERCURY	0.06	U	A
NICKEL	46.25	U	
POTASSIUM	260000		
SELENIUM	8.00	UJ	D
SILVER	19.45	U	
SODIUM	6630000		
THALLIUM	0.40	U	
VANADIUM	19.20	U	
ZINC	6.30	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: M

nsample	3GW37S10
samp_date	3/24/2002
lab_id	WS0669-002
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	34.0	U	A
ANTIMONY	0.36	U	A
ARSENIC	0.80	U	
BARIUM	224		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	50100		
CHROMIUM	0.35	U	
COBALT	9.2		
COPPER	1.74	U	
IRON	977		
LEAD	0.39	U	A
MAGNESIUM	29000		
MANGANESE	4160		
MERCURY	0.10	U	A
NICKEL	9.25	U	
POTASSIUM	10500		
SELENIUM	2.00	UJ	D
SILVER	3.89	U	
SODIUM	292000		
THALLIUM	0.59	U	A
VANADIUM	3.84	U	
ZINC	1.26	U	

nsample	3MSP0110
samp_date	3/24/2002
lab_id	WS0669-003
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	48.3	U	A
ANTIMONY	0.50	U	A
ARSENIC	0.80	U	
BARIUM	52.9		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	24400		
CHROMIUM	0.59	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	5090		
LEAD	1.4	U	A
MAGNESIUM	8800		
MANGANESE	709		
MERCURY	0.09	U	A
NICKEL	9.25	U	
POTASSIUM	4830		
SELENIUM	2.00	UJ	D
SILVER	3.89	U	
SODIUM	94100		
THALLIUM	0.16	U	A
VANADIUM	3.84	U	
ZINC	13.9		

nsample	SWSG1910
samp_date	3/25/2002
lab_id	WS0669-006
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	38.5	U	A
ANTIMONY	0.36	U	A
ARSENIC	0.80	U	
BARIUM	16.6		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	9720		
CHROMIUM	0.56	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	1450		
LEAD	0.64	U	A
MAGNESIUM	3140		
MANGANESE	13.6		
MERCURY	0.10	U	A
NICKEL	9.25	U	
POTASSIUM	3260		
SELENIUM	2.00	UJ	D
SILVER	3.89	U	
SODIUM	40100		
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	15.6		

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: M

nsample	SWSG2110
samp_date	3/25/2002
lab_id	WS0669-005
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	132	U	A
ANTIMONY	0.33	U	A
ARSENIC	0.80	U	
BARIUM	19.4		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	11100		
CHROMIUM	0.43	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	838		
LEAD	1.9	U	A
MAGNESIUM	3120		
MANGANESE	34.8		
MERCURY	0.05	U	A
NICKEL	9.25	U	
POTASSIUM	3380		
SELENIUM	2.00	UJ	D
SILVER	3.89	U	
SODIUM	38400		
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	10.2		

nsample	SWSG2310
samp_date	3/25/2002
lab_id	WS0669-004
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	376		
ANTIMONY	0.52	U	A
ARSENIC	1.8		
BARIUM	21.1		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	5130		
CHROMIUM	1.3	U	A
COBALT	2.93	U	
COPPER	7.4		
IRON	3110		
LEAD	3.3	U	A
MAGNESIUM	1460		
MANGANESE	151		
MERCURY	0.04	U	A
NICKEL	10.3	U	A
POTASSIUM	2750		
SELENIUM	2.00	UJ	D
SILVER	3.89	U	
SODIUM	13200		
THALLIUM	0.10	U	
VANADIUM	4.7	J	P
ZINC	344		

nsample	SWSG2410
samp_date	3/25/2002
lab_id	WS0669-007
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	1140		
ANTIMONY	0.41	U	A
ARSENIC	2.2		
BARIUM	69.4		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	7130		
CHROMIUM	1.9	U	A
COBALT	2.93	U	
COPPER	11.7		
IRON	5250		
LEAD	4.2	U	A
MAGNESIUM	3560		
MANGANESE	100		
MERCURY	0.08	U	A
NICKEL	9.25	U	
POTASSIUM	4120		
SELENIUM	2.00	UJ	D
SILVER	3.89	U	
SODIUM	29700		
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	123		

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: MF

nsample	2LGW20S10-F
samp_date	3/24/2002
lab_id	WS0669-009
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	15.9	U	A
ANTIMONY	0.38	U	A
ARSENIC	0.80	U	
BARIUM	47.3		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	22700		
CHROMIUM	0.57	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	20.9	U	A
LEAD	0.56	U	A
MAGNESIUM	4160		
MANGANESE	104		
MERCURY	0.07	U	A
NICKEL	9.6	U	A
POTASSIUM	3520		
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	41400		
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	8.2		

nsample	2WGW38DS10-F
samp_date	3/21/2002
lab_id	WS0669-021
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	40.9	U	A
ANTIMONY	0.89	U	A
ARSENIC	2.3	U	A
BARIUM	8.0		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	47700		
CHROMIUM	2.2	U	A
COBALT	2.93	U	
COPPER	5.0		
IRON	142		
LEAD	0.34	U	A
MAGNESIUM	19000	J	C
MANGANESE	148		
MERCURY	0.13	U	A
NICKEL	9.25	U	
POTASSIUM	14100		
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	160000	J	C
THALLIUM	0.10	U	
VANADIUM	6.5	J	P
ZINC	2.7		

nsample	2WGW40DS10-F
samp_date	3/23/2002
lab_id	WS0669-008
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	78.00	U	
ANTIMONY	0.42	U	A
ARSENIC	6.5	U	A
BARIUM	45.7		
BERYLLIUM	1.45	U	
CADMIUM	14.90	U	
CALCIUM	197000		
CHROMIUM	3.9	U	A
COBALT	14.65	U	
COPPER	8.70	U	
IRON	1620		
LEAD	0.27	U	A
MAGNESIUM	632000	J	C
MANGANESE	148		
MERCURY	0.06	U	A
NICKEL	46.25	U	
POTASSIUM	218000		
SELENIUM	8.00	U	
SILVER	19.45	U	
SODIUM	5500000	J	C
THALLIUM	0.40	U	
VANADIUM	19.20	U	
ZINC	6.30	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: MF

nsample	3GW37S10-F
samp_date	3/24/2002
lab_id	WS0669-010
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	24.6	U	A
ANTIMONY	0.27	U	A
ARSENIC	1.1	U	A
BARIUM	226		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	49900		
CHROMIUM	0.36	U	A
COBALT	10.2		
COPPER	2.0	J	P
IRON	1020		
LEAD	0.32	U	A
MAGNESIUM	29200		
MANGANESE	4140		
MERCURY	0.09	U	A
NICKEL	9.25	U	
POTASSIUM	10900		
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	300000		
THALLIUM	0.97	U	A
VANADIUM	3.84	U	
ZINC	1.26	U	

nsample	3MSP0110-F
samp_date	3/24/2002
lab_id	WS0669-011
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	18.4	U	A
ANTIMONY	0.56	U	A
ARSENIC	0.80	U	
BARIUM	53.2		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	24400		
CHROMIUM	0.36	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	3450		
LEAD	0.34	U	A
MAGNESIUM	8880		
MANGANESE	711		
MERCURY	0.03	U	A
NICKEL	9.25	U	
POTASSIUM	4880		
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	96500		
THALLIUM	0.14	U	A
VANADIUM	3.84	U	
ZINC	13.1		

nsample	SWSG1910-F
samp_date	3/25/2002
lab_id	WS0669-014
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	29.1	U	A
ANTIMONY	0.35	U	A
ARSENIC	0.80	U	
BARIUM	17.6		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	10400		
CHROMIUM	0.60	U	A
COBALT	2.93	U	
COPPER	1.8	J	P
IRON	385		
LEAD	0.40	U	A
MAGNESIUM	3390	J	C
MANGANESE	15.1		
MERCURY	0.10	U	A
NICKEL	9.25	U	
POTASSIUM	3850		
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	43400	J	C
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	15.0		

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: MF

nsample	SWSG2110-F
samp_date	3/25/2002
lab_id	WS0669-013
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	21.2	U	A
ANTIMONY	0.42	U	A
ARSENIC	0.80	U	
BARIUM	19.0		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	11400		
CHROMIUM	0.47	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	392		
LEAD	0.60	U	A
MAGNESIUM	3140	J	C
MANGANESE	38.1		
MERCURY	0.11	U	A
NICKEL	9.25	U	
POTASSIUM	3380		
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	38600	J	C
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	9.1		

nsample	SWSG2310-F
samp_date	3/25/2002
lab_id	WS0669-012
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	87.8	U	A
ANTIMONY	0.60	U	A
ARSENIC	1.1	U	A
BARIUM	19.2		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	5330		
CHROMIUM	0.82	U	A
COBALT	2.93	U	
COPPER	3.0	J	P
IRON	2140		
LEAD	1.5	U	A
MAGNESIUM	1480	J	C
MANGANESE	160		
MERCURY	0.03	U	
NICKEL	9.25	U	
POTASSIUM	3000		
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	14200	J	C
THALLIUM	0.18	U	A
VANADIUM	3.84	U	
ZINC	290		

nsample	SWSG2410-F
samp_date	3/25/2002
lab_id	WS0669-015
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	21.4	U	A
ANTIMONY	0.39	U	A
ARSENIC	0.80	U	
BARIUM	59.9		
BERYLLIUM	0.29	U	
CADMIUM	3.0	U	
CALCIUM	7190		
CHROMIUM	0.44	U	A
COBALT	2.93	U	
COPPER	3.7		
IRON	440		
LEAD	0.46	U	A
MAGNESIUM	3330	J	C
MANGANESE	87.5		
MERCURY	0.13	U	A
NICKEL	9.25	U	
POTASSIUM	3890		
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	31100	J	C
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	109		

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: MISC

nsample	2LGW20S10
samp_date	3/24/2002
lab_id	WS0669-1
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	50		
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	70		
HARDNESS	MG/L	75.8		
SULFATE	MG/L	16		
TOTAL DISSOLVED SOLIDS	MG/L	290		
TOTAL ORGANIC CARBON	MG/L	2		

nsample	2WGW38DS10
samp_date	3/25/2002
lab_id	WS0669-20
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	260		
CHEMICAL OXYGEN DEMAND	MG/L	20	U	A
CHLORIDE	MG/L	200		
HARDNESS	MG/L	215		
SULFATE	MG/L	40		
TOTAL DISSOLVED SOLIDS	MG/L	670		
TOTAL ORGANIC CARBON	MG/L	13		

nsample	2WGW40DS10
samp_date	3/23/2002
lab_id	WS0669-017
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
HARDNESS	MG/L	3540		

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: MISC

nsample	3GW37S10
samp_date	3/24/2002
lab_id	WS0669-2
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	130		
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	530		
HARDNESS	MG/L	244		
SULFATE	MG/L	30		
TOTAL DISSOLVED SOLIDS	MG/L	1100		
TOTAL ORGANIC CARBON	MG/L	4		

nsample	3MSP0110
samp_date	3/24/2002
lab_id	WS0669-3
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	70		
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	200		
HARDNESS	MG/L	97.2		
SULFATE	MG/L	12		
TOTAL DISSOLVED SOLIDS	MG/L	440		
TOTAL ORGANIC CARBON	MG/L	3		

nsample	SWSG1910
samp_date	3/25/2002
lab_id	WS0669-6
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	20	U	
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	80		
HARDNESS	MG/L	37.2		
SULFATE	MG/L	14		
TOTAL DISSOLVED SOLIDS	MG/L	300		
TOTAL ORGANIC CARBON	MG/L	5.5		

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: MISC

nsample	SWSG2110
samp_date	3/25/2002
lab_id	WS0669-5
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	20		
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	70		
HARDNESS	MG/L	40.5		
SULFATE	MG/L	13		
TOTAL DISSOLVED SOLIDS	MG/L	170		
TOTAL ORGANIC CARBON	MG/L	5.4		

nsample	SWSG2310
samp_date	3/25/2002
lab_id	WS0669-4
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	20	U	
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	20		
HARDNESS	MG/L	18.8		
SULFATE	MG/L	3		
TOTAL DISSOLVED SOLIDS	MG/L	110		
TOTAL ORGANIC CARBON	MG/L	6.6		

nsample	SWSG2410
samp_date	3/25/2002
lab_id	WS0669-7
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
ALKALINITY	MG/L	20	U	
CHEMICAL OXYGEN DEMAND	MG/L	15	U	
CHLORIDE	MG/L	70		
HARDNESS	MG/L	32.4		
SULFATE	MG/L	4		
TOTAL DISSOLVED SOLIDS	MG/L	270		
TOTAL ORGANIC CARBON	MG/L	4		

PROJ_NO: 2863

SDG: WS0671 MEDIA: WATER DATA FRACTION: M

nsample	LFSP01
samp_date	3/23/2002
lab_id	WS0671-001
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	15.60	U	
ANTIMONY	0.29	U	A
ARSENIC	0.80	U	
BARIUM	327		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	57900		
CHROMIUM	1.1	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	46900	J	C
LEAD	0.28	U	A
MAGNESIUM	8860		
MANGANESE	619	J	C
MERCURY	0.10	U	A
NICKEL	9.25	U	
POTASSIUM	6130	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	97200	J	C
THALLIUM	0.10	U	
VANADIUM	3.84	U	
ZINC	18.0	J	C

PROJ_NO: 2863

SDG: WS0671 MEDIA: WATER DATA FRACTION: MF

nsample	LFSP01-F
samp_date	3/23/2002
lab_id	WS0671-002
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
ALUMINUM	24.3	U	A
ANTIMONY	0.29	U	A
ARSENIC	0.80	U	
BARIUM	322		
BERYLLIUM	0.29	U	
CADMIUM	2.98	U	
CALCIUM	56500		
CHROMIUM	0.88	U	A
COBALT	2.93	U	
COPPER	1.74	U	
IRON	46200	J	C
LEAD	0.32	U	A
MAGNESIUM	8680		
MANGANESE	621	J	C
MERCURY	0.11	U	A
NICKEL	9.25	U	
POTASSIUM	6920	J	C
SELENIUM	2.00	U	
SILVER	3.89	U	
SODIUM	97300	J	C
THALLIUM	0.13	U	A
VANADIUM	3.84	U	
ZINC	10.4	J	C

PROJ_NO: 2863

SDG: WS0671 MEDIA: WATER DATA FRACTION: MISC

nsample	LFSP01
samp_date	3/23/2002
lab_id	WS0671-001
qc_type	NM
Pct_Solids	0
DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
HARDNESS	MG/L	181		

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **C. RICH** **DATE: JUNE 3, 2002**

FROM: **BERNARD F SPADA III** **COPIES: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION: VOA/SVOA/PEST/PCB/PAH**
CTO 816, NEW LONDON
SDG 816-4

SAMPLES: 15 / Aqueous / VOA/SVOA/PEST/PCB/PAH

2WGW21S10	2WGW39DS10	2WGW41DS10
2WGW42DS10	2WGW43DS10	2WGW44DS10
2WGW45DS10	2WGW46DS10	2WGW47DS10
4GW01S10	FD03200201	FD03200202
FD03210201	SWSG1810	SWSG2010

1 / Aqueous / VOA/SVOA/PAH

2WGW40DS10*

1 / Aqueous / VOA

TB03210201

Overview

The sample set for CTO 816, New London; SDG 816-4 consists of thirteen (13) environmental aqueous samples, one (1) trip blank, and three (3) field duplicates. All 13 environmental aqueous samples were analyzed for volatile organic comopunds (VOC), semivolatile organic compounds (SVOC), pesticides (PEST), polychlorinated biphenyls (PCB), and polynuclear aromatic hydrocarbons (PAH). One environmental aqueous sample denoted with an asterisk (*) was analyzed for VOC, SVOC, PAH. The trip blank (TB03210201) was analyzed for VOC only. Three field duplicate pairs were included in this SDG, FD03200201 / 2WGW21S10, FD03200202 / 4GW01S10, and FD03210201 / SWSG2010.

The samples were collected by TetraTech NUS on March 20, 21, and 22, 2002 and were analyzed by Katahdin Analytical Services. Analyses were conducted using CLP OLC02.1 for VOC, PEST, and PCB, SW-846 8270B for SVOC, and SW-846 8270B Selective Ion Monitoring (SIM) for PAH.

The data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
• Initial and Continuing Calibration
• Laboratory Method and/or Field Quality Control Blanks
* • Surrogate Spike Recoveries
• Blank Spike / Blank Spike Duplicate Recoveries

- Internal Standards Performance
- * Instrument Performance
- Field Duplicate Results
- * Detection Limits

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. The attached Table summarizes the validation qualifications which are based on the following information:

CALIBRATIONS

The following tables summarize calibration noncompliance and corresponding actions for volatiles:

Compound	ICAL 3/21/02	CCV 3/25/02 (07:40)
acetone	Y	
carbon disulfide		X
carbon tetrachloride		X
bromodichloromethane		X
1,3-dichlorobenzene		X
Associated Samples:	ALL	2WGW39DS10
		2WGW40DS10
		2WGW41DS10
		2WGW42DS10
		2WGW43DS10
		2WGW44DS10
		2WGW45DS10
		2WGW46DS10
		SWSG1810
		SWSG2010
		FD03210201
		TB03210201

Calibration Actions:

X - Percent Difference > 25%; estimate (J) positive and (UJ) non-detected results.
Y – Relative Percent Difference > 30%; estimate (J) positive and (UJ) non-detected results.

The following tables summarize calibration noncompliance and corresponding actions for semivolatiles:

Compound	ICAL 3/28/02	CCV 3/28/02 (11:43a)	CCV 4/1/02 (11:34a)	CCV 4/2/02 (9:48a)
benzoic acid	X		Y	
4-chloroaniline	X			
3-nitroaniline	X	Y, Z	Y	Y
2,4-dinitrophenol	X			
4-nitrophenol	X			
3,3'-dichlorobenzidine			Y	
Associated Samples:	ALL	FD03200201 FD03200202 2WGW21S10 2WGW47DS10 4GW01S10	2WGW39DS10 2WGW41DS10 2WGW42DS10 2WGW43DS10 2WGW44DS10 2WGW45DS10 2WGW46DS10 FD03210201 SWSG1810 SWSG2010	2WGW40DS10

Calibration Actions:

X - Percent Difference > 30%; estimate (J) positive and (UJ) non-detected results.
Y – Relative Percent Difference > 25%; estimate (J) positive and (UJ) non-detected results.
Z – RRF <0.05; reject (UR) non-detects and estimate (J) positive results. If a compound is rejected, no other calibration qualifications are made.

The following tables summarize calibration noncompliance and corresponding actions for pesticides:

Compound	ICAL 3/21/02	CCV 3/29/02 (16:40/17:09)	CCV 4/3/02 (06:18/06:47)
Endrin		X	Y
4,4-DDT		Y	
Associated Samples:	ALL	SWSG1810 SWSG2010	FD03200201 2WGW21S10

Calibration Actions:

X – Percent Difference > 25% on both columns; estimate (UJ) non-detected results.
Y – Percent Difference > 25% on one column; No action taken because one column compliant.

The following tables summarize calibration noncompliance and corresponding actions for PAH by 8270:

Compound	ICAL 3/25/02	CCV 3/28/02 (7:47a)	CCV 3/29/02 (11:28a)	CCV 4/1/02 (8:57a)
Dibenz(a,h)anthracene		X		X
naphthalene			X	
acenaphthylene			X	
fluorene			X	
phenanthrene			X	X
anthracene			X	
pyrene			X	
1-methylnaphthylene				X
Associated Samples:	ALL	FD03200201	2WGW39DS10	2WGW40DS10
		FD03200202	2WGW42DS10	2WGW41DS10
		2WGW21S10	FD03210201	2WGW43DS10
		2WGW47DS10	SWSG1810	2WGW44DS10
		4GW01S10	SWSG2010	2WGW45DS10
				2WGW46DS10

Calibration Actions:

X - Percent Difference > 25%; estimate (J) positive and (UJ) non-detected results.

Laboratory Method Blanks

The following compounds were detected in the laboratory method blanks at the following maximum concentrations:

Compound	Maximum Concentration	Action Level
Methylene Chloride	0.5µg/L	5.0µg/L

An action level of 10X the maximum concentration was used to evaluate samples for blank contamination. The positive results less than the blank action level for methylene chloride were qualified, "U", as a result of blank contamination.

Surrogate Spike Recoveries / Internal Standard Performance

The surrogates in the pesticide fraction were not recovered (0%) in samples 2WGW21S10DL and FD03200201DL because the samples were analyzed at a dilution due to the concentration of target analyte present. No action was taken.

INTERNAL STANDARDS

All internal standards areas were evaluated within the range +100% and –50%. Sample 2WGW42DS10 exceeded the upper acceptance range (+100%) for internal standard 5 and 6 (IS5 & IS6). The sample was effectively re-analyzed and matrix interference was confirmed (All internal standards exceeded the quality control criteria in the re-analysis. These samples were qualified as estimated (J) for all detected target analytes associated with IS5 & IS6. No qualifications were assigned for non-detected results.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

% Recovery in the matrix spike/matrix spike duplicate fell below the lower quality control limits for bromoform in sample SWSG1810 for the volatiles fraction. The non-detected result was qualified as estimated (UJ).

% Recovery in the matrix spike/matrix spike duplicate fell below the lower quality control limits for benzoic acid, hexachlorocyclopentadiene, and 3,3'-dichlorobenzidine in sample SWSG1810 for the semivolatiles fraction. The non-detected results were qualified as estimated (UJ).

% Recoveries in the matrix spike/matrix spike duplicate exceeded the upper quality control limits for carbazole, 3-nitroaniline, and 4-nitroaniline in sample SWSG1810. No action was taken on non-detected results.

Blank Spike Results

The Blank Spike Percent Recovery (%R) was below the quality control limits for 1,2,4-trichlorobenzene, 2,2-oxybis(1-chloropropane), 2,4-dichlorophenol, 2,4-dimethylphenol, 2-chlorophenol, 2-methylphenol, benzoic acid, 2-nitrophenol, 4-bromophenyl phenyl ether, 4-chlorophenyl phenyl ether, bis(2-chloroethoxy)methane, hexachlorobutadiene, hexachlorocyclopentadiene, hexachloroethane, isophorone, N-nitroso-di-N-propylamine, nitrobenzene, and phenol in LCS032502. All results for the aforementioned compounds included in the same extraction batch with the LCS were qualified as estimated (J, UJ).

The Blank Spike Percent Recovery (%R) was below the quality control limits for benzoic acid, hexachlorobutadiene, and hexachlorocyclopentadiene in LCS032702. All results for the aforementioned compounds included in the same extraction batch with the LCS were qualified as estimated (J, UJ).

ADDITIONAL COMMENTS

Positive results reported at concentrations below the CRQL were qualified as estimated (J).

The undiluted analysis of samples 2WGW21S10 and FD03200201 contained results for 4,4'-DDD that exceeded the linear range for the instrument. The samples were reanalyzed at a dilution. The diluted results for the aforementioned compounds were used for validation.

The florisil check recovery was below the 80% quality control criteria for heptachlor on both columns. All non-detected results for heptachlor were qualified as estimated (UJ).

The compound 1,2,4-trichlorobenzene was reported in both the VOC and SVOC fractions. The result from the VOC fraction was used for validation. The result from the SVOC fraction was deleted because the RL in the SVOC fraction is higher than the RL in the VOC fraction.

OVERALL ASSESSMENT

Laboratory Performance: Qualifications were made based on calibration non-compliances, method blank contamination, internal standard non-compliances, MS/MSD non-compliances, field duplicate imprecision, and blank spike non-compliances.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region I EPA "Data Validation Functional

Guidelines - Part II" (12/96).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

TetraTech NUS
Bernard F Spada III
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
N01 = Internal Standard Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCD% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	2WGW21S10
samp_date	3/20/2002
lab_id	WS0607-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UJ	C
BENZENE	0.2	J	P
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	2WGW21S10
samp_date	3/20/2002
lab_id	WS0607-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	2WGW39DS10
samp_date	3/22/2002
lab_id	WS0657-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	12	J	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	UJ	C
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.4	J	CP
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	2WGW39DS10
samp_date	3/22/2002
lab_id	WS0657-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1		
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	2WGW40DS 10
samp_date	3/22/2002
lab_id	WS0657-22
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	4	J	CP
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	UJ	C
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	2	J	C
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	2WGW40DS 10
samp_date	3/22/2002
lab_id	WS0657-22
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	0.3	J	P
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	2WGW41DS10
samp_date	3/22/2002
lab_id	WS0657-10
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UJ	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	UJ	C
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	J	C
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	2WGW41DS10
samp_date	3/22/2002
lab_id	WS0657-10
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	2WGW42DS10
samp_date	3/21/2002
lab_id	WS0657-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	1	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UJ	C
BENZENE	0.3	J	P
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	UJ	C
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	J	C
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	2WGW42DS10
samp_date	3/21/2002
lab_id	WS0657-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	2WGW43DS10
samp_date	3/22/2002
lab_id	WS0657-9
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	3	J	CP
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	UJ	C
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	2WGW43DS10
samp_date	3/22/2002
lab_id	WS0657-9
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	2WGW44DS10
samp_date	3/22/2002
lab_id	WS0657-8
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UJ	C
BENZENE	0.2	J	P
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	UJ	C
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.6	J	CP
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	2WGW44DS10
samp_date	3/22/2002
lab_id	WS0657-8
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	2WGW45DS10
samp_date	3/22/2002
lab_id	WS0657-7
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	6	J	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	UJ	C
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	3	J	C
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	2WGW45DS10
samp_date	3/22/2002
lab_id	WS0657-7
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	2WGW46DS10
samp_date	3/22/2002
lab_id	WS0657-6
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	2	J	CP
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	UJ	C
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.6	J	CP
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	2WGW46DS10
samp_date	3/22/2002
lab_id	WS0657-6
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	2WGW47DS10
samp_date	3/20/2002
lab_id	WS0607-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UJ	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	2WGW47DS10
samp_date	3/20/2002
lab_id	WS0607-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	4GW01S10
samp_date	3/20/2002
lab_id	WS0607-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	10	J	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	2		
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	4GW01S10
samp_date	3/20/2002
lab_id	WS0607-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	FD03200201
samp_date	3/20/2002
lab_id	WS0607-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	2WGW21S10

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UJ	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	FD03200201
samp_date	3/20/2002
lab_id	WS0607-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	2WGW21S10

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	FD03200202
samp_date	3/20/2002
lab_id	WS0607-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	4GW01S10

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UJ	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.9	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	FD03200202
samp_date	3/20/2002
lab_id	WS0607-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	4GW01S10

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	FD03210201
samp_date	3/21/2002
lab_id	WS0657-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	SWSG2010

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UJ	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	UJ	C
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.5	J	CP
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	FD03210201
samp_date	3/21/2002
lab_id	WS0657-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	SWSG2010

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	SWSG1810
samp_date	3/21/2002
lab_id	WS0657-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UJ	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	UJ	C
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	UJ	D
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.2	J	CP
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	SWSG1810
samp_date	3/21/2002
lab_id	WS0657-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	SWSG2010
samp_date	3/21/2002
lab_id	WS0657-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	3	J	CP
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	UJ	C
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	SWSG2010
samp_date	3/21/2002
lab_id	WS0657-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	TB03210201
samp_date	3/21/2002
lab_id	WS0657-21
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	U	
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	UJ	C
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	6	J	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	UJ	C
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.9	J	CP
CARBON TETRACHLORIDE	1	UJ	C
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OV

nsample	TB03210201
samp_date	3/21/2002
lab_id	WS0657-21
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OS

nsample	2WGW21S10
samp_date	3/20/2002
lab_id	WS0607-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	UJ	E
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	UJ	E
2,4-DIMETHYLPHENOL	5	UJ	E
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	UJ	E
2-METHYLPHENOL	5	UJ	E
2-NITROANILINE	20	U	
2-NITROPHENOL	5	UJ	E
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UR	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	UJ	E
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	UJ	E
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	UJ	E
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	2WGW21S10
samp_date	3/20/2002
lab_id	WS0607-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	UJ	E
ISOPHORONE	5	UJ	E
N-NITROSO-DI-N-PROPYLAMINE	5	UJ	E
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	UJ	E
PENTACHLOROPHENOL	20	U	
PHENOL	5	UJ	E

nsample	2WGW39DS10
samp_date	3/22/2002
lab_id	WS0657-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	2	J	P
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OS

nsample	2WGW39DS10
samp_date	3/22/2002
lab_id	WS0657-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

nsample	2WGW40DS 10
samp_date	3/22/2002
lab_id	WS0657-22
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	1	J	CEP
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	2WGW40DS 10
samp_date	3/22/2002
lab_id	WS0657-22
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OS

nsample	2WGW41DS10
samp_date	3/22/2002
lab_id	WS0657-10
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	2	J	P
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	2	J	CEP
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	2WGW41DS10
samp_date	3/22/2002
lab_id	WS0657-10
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

nsample	2WGW42DS10
samp_date	3/21/2002
lab_id	WS0657-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	0.5	J	CEP
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OS

nsample	2WGW42DS10
samp_date	3/21/2002
lab_id	WS0657-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

nsample	2WGW43DS10
samp_date	3/22/2002
lab_id	WS0657-9
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CEP
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	2WGW43DS10
samp_date	3/22/2002
lab_id	WS0657-9
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OS

nsample	2WGW44DS10
samp_date	3/22/2002
lab_id	WS0657-8
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	2WGW44DS10
samp_date	3/22/2002
lab_id	WS0657-8
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

nsample	2WGW45DS10
samp_date	3/22/2002
lab_id	WS0657-7
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	0.9	J	P
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OS

nsample	2WGW45DS10
samp_date	3/22/2002
lab_id	WS0657-7
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

nsample	2WGW46DS10
samp_date	3/22/2002
lab_id	WS0657-6
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	J	P
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	2WGW46DS10
samp_date	3/22/2002
lab_id	WS0657-6
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OS

nsample	2WGW47DS10
samp_date	3/20/2002
lab_id	WS0607-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	UJ	E
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	UJ	E
2,4-DIMETHYLPHENOL	5	UJ	E
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	UJ	E
2-METHYLPHENOL	5	UJ	E
2-NITROANILINE	20	U	
2-NITROPHENOL	5	UJ	E
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UR	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	UJ	E
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	UJ	E
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	UJ	E
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	2WGW47DS10
samp_date	3/20/2002
lab_id	WS0607-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	UJ	E
ISOPHORONE	5	UJ	E
N-NITROSO-DI-N-PROPYLAMINE	5	UJ	E
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	UJ	E
PENTACHLOROPHENOL	20	U	
PHENOL	5	UJ	E

nsample	4GW01S10
samp_date	3/20/2002
lab_id	WS0607-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	6	UJ	E
2,4,5-TRICHLOROPHENOL	22	U	
2,4,6-TRICHLOROPHENOL	6	U	
2,4-DICHLOROPHENOL	6	UJ	E
2,4-DIMETHYLPHENOL	6	UJ	E
2,4-DINITROPHENOL	22	UJ	C
2,4-DINITROTOLUENE	6	U	
2,6-DINITROTOLUENE	6	U	
2-CHLORONAPHTHALENE	6	U	
2-CHLOROPHENOL	6	UJ	E
2-METHYLPHENOL	6	UJ	E
2-NITROANILINE	22	U	
2-NITROPHENOL	6	UJ	E
3,3'-DICHLOROBENZIDINE	6	U	
3-NITROANILINE	22	UR	C
4,6-DINITRO-2-METHYLPHENOL	22	U	
4-BROMOPHENYL PHENYL ETHER	6	UJ	E
4-CHLORO-3-METHYLPHENOL	6	U	
4-CHLOROANILINE	6	UJ	C
4-CHLOROPHENYL PHENYL ETHER	6	UJ	E
4-METHYLPHENOL	6	U	
4-NITROANILINE	22	U	
4-NITROPHENOL	22	UJ	CE
BENZOIC ACID	22	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	6	UJ	E
BIS(2-CHLOROETHYL)ETHER	6	U	
BIS(2-ETHYLHEXYL)PHTHALATE	6	U	
BUTYL BENZYL PHTHALATE	6	U	
CARBAZOLE	6	U	
DI-N-BUTYL PHTHALATE	0.6	J	P

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OS

nsample	4GW01S10
samp_date	3/20/2002
lab_id	WS0607-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	6	U	
DIBENZOFURAN	6	U	
DIETHYL PHTHALATE	6	U	
DIMETHYL PHTHALATE	6	U	
HEXACHLOROBENZENE	6	U	
HEXACHLOROBUTADIENE	6	UJ	E
HEXACHLOROCYCLOPENTADIENE	6	UJ	E
HEXACHLOROETHANE	6	UJ	E
ISOPHORONE	6	UJ	E
N-NITROSO-DI-N-PROPYLAMINE	6	UJ	E
N-NITROSODIPHENYLAMINE	6	U	
NITROBENZENE	6	UJ	E
PENTACHLOROPHENOL	22	U	
PHENOL	6	UJ	E

nsample	FD03200201
samp_date	3/20/2002
lab_id	WS0607-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	2WGW21S10

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	UJ	E
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	UJ	E
2,4-DIMETHYLPHENOL	5	UJ	E
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	UJ	E
2-METHYLPHENOL	5	UJ	E
2-NITROANILINE	20	U	
2-NITROPHENOL	5	UJ	E
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UR	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	UJ	E
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	UJ	E
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	1	J	CEP
BIS(2-CHLOROETHOXY)METHANE	5	UJ	E
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	3	J	P
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	0.9	J	P

nsample	FD03200201
samp_date	3/20/2002
lab_id	WS0607-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	2WGW21S10

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	UJ	E
ISOPHORONE	5	UJ	E
N-NITROSO-DI-N-PROPYLAMINE	5	UJ	E
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	UJ	E
PENTACHLOROPHENOL	20	U	
PHENOL	5	UJ	E

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OS

nsample	FD03200202
samp_date	3/20/2002
lab_id	WS0607-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	4GW01S10

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	UJ	E
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	UJ	E
2,4-DIMETHYLPHENOL	5	UJ	E
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	UJ	E
2-METHYLPHENOL	5	UJ	E
2-NITROANILINE	20	U	
2-NITROPHENOL	5	UJ	E
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UR	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	UJ	E
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	UJ	E
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	UJ	E
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	FD03200202
samp_date	3/20/2002
lab_id	WS0607-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	4GW01S10

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	UJ	E
ISOPHORONE	5	UJ	E
N-NITROSO-DI-N-PROPYLAMINE	5	UJ	E
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	UJ	E
PENTACHLOROPHENOL	20	U	
PHENOL	5	UJ	E

nsample	FD03210201
samp_date	3/21/2002
lab_id	WS0657-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	SWSG2010

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	15		
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OS

nsample	FD03210201
samp_date	3/21/2002
lab_id	WS0657-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	SWSG2010

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

nsample	SWSG1810
samp_date	3/21/2002
lab_id	WS0657-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	UJ	D
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CED
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	SWSG1810
samp_date	3/21/2002
lab_id	WS0657-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: OS

nsample	SWSG2010
samp_date	3/21/2002
lab_id	WS0657-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	SWSG2010
samp_date	3/21/2002
lab_id	WS0657-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: PAH

nsample	2WGW21S10	nsample	2WGW39DS10	nsample	2WGW40DS 10
samp_date	3/20/2002	samp_date	3/22/2002	samp_date	3/22/2002
lab_id	WS0607-2	lab_id	WS0657-5	lab_id	WS0657-22
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0	Pct_Solids	0	Pct_Solids	0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	U	
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	U	
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	C
FLUORANTHENE	0.1	U	
FLUORENE	0.1	U	
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.05	J	P
PYRENE	0.1	U	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	U	
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	UJ	C
ANTHRACENE	0.1	UJ	C
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	U	
FLUORANTHENE	0.1	U	
FLUORENE	0.1	UJ	C
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	UJ	C
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	UJ	C

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	U	
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	C
FLUORANTHENE	0.1	U	
FLUORENE	0.1	U	
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: PAH

nsample	2WGW41DS10
samp_date	3/22/2002
lab_id	WS0657-10
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	U	
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	C
FLUORANTHENE	0.1	U	
FLUORENE	0.1	U	
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

nsample	2WGW42DS10
samp_date	3/21/2002
lab_id	WS0657-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1		
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.2		
ACENAPHTHYLENE	0.1	UJ	C
ANTHRACENE	0.1	UJ	C
BENZO(A)ANTHRACENE	0.1	U	N
BENZO(A)PYRENE	0.1	U	N
BENZO(B)FLUORANTHENE	0.1	U	N
BENZO(G,H,I)PERYLENE	0.1	U	N
BENZO(K)FLUORANTHENE	0.1	U	N
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	U	N
FLUORANTHENE	0.1	U	
FLUORENE	0.08	J	CP
INDENO(1,2,3-CD)PYRENE	0.1	U	N
NAPHTHALENE	0.1	UJ	C
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	UJ	C

nsample	2WGW43DS10
samp_date	3/22/2002
lab_id	WS0657-9
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	U	
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	C
FLUORANTHENE	0.1	U	
FLUORENE	0.1	U	
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: PAH

nsample	2WGW44DS10	nsample	2WGW45DS10	nsample	2WGW46DS10
samp_date	3/22/2002	samp_date	3/22/2002	samp_date	3/22/2002
lab_id	WS0657-8	lab_id	WS0657-7	lab_id	WS0657-6
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0	Pct_Solids	0	Pct_Solids	0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.2	J	C
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.2		
ACENAPHTHYLENE	0.1	U	
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	C
FLUORANTHENE	0.1	U	
FLUORENE	0.1	U	
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	U	
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	C
FLUORANTHENE	0.1	U	
FLUORENE	0.1	U	
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	U	
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	C
FLUORANTHENE	0.1	U	
FLUORENE	0.1	U	
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: PAH

nsample	2WGW47DS10
samp_date	3/20/2002
lab_id	WS0607-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	U	
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	U	
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	C
FLUORANTHENE	0.1	U	
FLUORENE	0.1	U	
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	U	
PYRENE	0.1	U	

nsample	4GW01S10
samp_date	3/20/2002
lab_id	WS0607-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	U	
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	U	
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	C
FLUORANTHENE	0.1	U	
FLUORENE	0.1	U	
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	U	
PYRENE	0.1	U	

nsample	FD03200201
samp_date	3/20/2002
lab_id	WS0607-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	2WGW21S10

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	U	
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	U	
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	C
FLUORANTHENE	0.1	U	
FLUORENE	0.1	U	
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.05	J	P
PYRENE	0.1	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: PAH

nsample	FD03200202	nsample	FD03210201	nsample	SWSG1810
samp_date	3/20/2002	samp_date	3/21/2002	samp_date	3/21/2002
lab_id	WS0607-3	lab_id	WS0657-4	lab_id	WS0657-1
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0	Pct_Solids	0	Pct_Solids	0
DUP_OF:	4GW01S10	DUP_OF:	SWSG2010	DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	U	
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	U	
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	C
FLUORANTHENE	0.1	U	
FLUORENE	0.1	U	
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	U	
PYRENE	0.1	U	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	U	
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	UJ	C
ANTHRACENE	0.1	UJ	C
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	U	
FLUORANTHENE	0.1	U	
FLUORENE	0.1	UJ	C
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	UJ	C
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	UJ	C

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	U	
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	UJ	C
ANTHRACENE	0.1	UJ	C
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	U	
FLUORANTHENE	0.1	U	
FLUORENE	0.1	UJ	C
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	UJ	C
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	UJ	C

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: PAH

nsample	SWSG2010
samp_date	3/21/2002
lab_id	WS0657-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	U	
2-METHYLNAPHTHALENE	0.1	U	
ACENAPHTHENE	0.1	U	
ACENAPHTHYLENE	0.1	UJ	C
ANTHRACENE	0.1	UJ	C
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	U	
FLUORANTHENE	0.1	U	
FLUORENE	0.1	UJ	C
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	UJ	C
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	UJ	C

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: PEST/PCB

nsample	2WGW21S10	nsample	2WGW39DS10	nsample	2WGW41DS10
samp_date	3/20/2002	samp_date	3/22/2002	samp_date	3/22/2002
lab_id	WS0607-2SC (1:5	lab_id	WS0657-5SC	lab_id	WS0657-10SC
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0	Pct_Solids	0	Pct_Solids	0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.96	U	
4,4'-DDD	7.0		
4,4'-DDE	0.096	U	
4,4'-DDT	0.096	U	
ALDRIN	0.048	U	
ALPHA-BHC	0.048	U	
ALPHA-CHLORDANE	0.048	U	
AROCLOR-1016	0.96	U	
AROCLOR-1221	2.0	U	
AROCLOR-1232	0.96	U	
AROCLOR-1242	0.96	U	
AROCLOR-1248	0.96	U	
AROCLOR-1254	0.96	U	
AROCLOR-1260	0.96	U	
BETA-BHC	0.048	U	
DELTA-BHC	0.048	U	
DIELDRIN	0.096	U	
ENDOSULFAN I	0.048	U	
ENDOSULFAN II	0.096	U	
ENDOSULFAN SULFATE	0.096	U	
ENDRIN	0.096	U	
ENDRIN ALDEHYDE	0.096	U	
ENDRIN KETONE	0.096	U	
GAMMA-BHC (LINDANE)	0.048	U	
GAMMA-CHLORDANE	0.048	U	
HEPTACHLOR	0.048	UJ	Q
HEPTACHLOR EPOXIDE	0.048	U	
METHOXYCHLOR	0.48	U	
TOXAPHENE	5.0	U	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.20	U	
4,4'-DDD	0.020	U	
4,4'-DDE	0.020	U	
4,4'-DDT	0.020	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.20	U	
AROCLOR-1221	0.40	U	
AROCLOR-1232	0.20	U	
AROCLOR-1242	0.20	U	
AROCLOR-1248	0.20	U	
AROCLOR-1254	0.20	U	
AROCLOR-1260	0.20	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.020	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.020	U	
ENDOSULFAN SULFATE	0.020	U	
ENDRIN	0.020	U	
ENDRIN ALDEHYDE	0.020	U	
ENDRIN KETONE	0.020	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	UJ	Q
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.10	U	
TOXAPHENE	1.0	U	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	U	
4,4'-DDD	0.019	U	
4,4'-DDE	0.019	U	
4,4'-DDT	0.019	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.19	U	
AROCLOR-1221	0.38	U	
AROCLOR-1232	0.19	U	
AROCLOR-1242	0.19	U	
AROCLOR-1248	0.19	U	
AROCLOR-1254	0.19	U	
AROCLOR-1260	0.19	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.019	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.019	U	
ENDOSULFAN SULFATE	0.019	U	
ENDRIN	0.019	U	
ENDRIN ALDEHYDE	0.019	U	
ENDRIN KETONE	0.019	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	UJ	Q
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.096	U	
TOXAPHENE	0.96	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: PEST/PCB

nsample	2WGW42DS10
samp_date	3/21/2002
lab_id	WS0657-3SC
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	U	
4,4'-DDD	0.019	U	
4,4'-DDE	0.019	U	
4,4'-DDT	0.019	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.19	U	
AROCLOR-1221	0.39	U	
AROCLOR-1232	0.19	U	
AROCLOR-1242	0.19	U	
AROCLOR-1248	0.19	U	
AROCLOR-1254	0.19	U	
AROCLOR-1260	0.19	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.019	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.019	U	
ENDOSULFAN SULFATE	0.019	U	
ENDRIN	0.019	U	
ENDRIN ALDEHYDE	0.019	U	
ENDRIN KETONE	0.019	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	UJ	Q
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.097	U	
TOXAPHENE	0.97	U	

nsample	2WGW43DS10
samp_date	3/22/2002
lab_id	WS0657-9SC
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.21	U	
4,4'-DDD	0.021	U	
4,4'-DDE	0.021	U	
4,4'-DDT	0.021	U	
ALDRIN	0.011	U	
ALPHA-BHC	0.011	U	
ALPHA-CHLORDANE	0.011	U	
AROCLOR-1016	0.21	U	
AROCLOR-1221	0.43	U	
AROCLOR-1232	0.21	U	
AROCLOR-1242	0.21	U	
AROCLOR-1248	0.21	U	
AROCLOR-1254	0.21	U	
AROCLOR-1260	0.21	U	
BETA-BHC	0.011	U	
DELTA-BHC	0.011	U	
DIELDRIN	0.021	U	
ENDOSULFAN I	0.011	U	
ENDOSULFAN II	0.021	U	
ENDOSULFAN SULFATE	0.021	U	
ENDRIN	0.021	U	
ENDRIN ALDEHYDE	0.021	U	
ENDRIN KETONE	0.021	U	
GAMMA-BHC (LINDANE)	0.011	U	
GAMMA-CHLORDANE	0.011	U	
HEPTACHLOR	0.011	UJ	Q
HEPTACHLOR EPOXIDE	0.011	U	
METHOXYCHLOR	0.11	U	
TOXAPHENE	1.0	U	

nsample	2WGW44DS10
samp_date	3/22/2002
lab_id	WS0657-8SC
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	U	
4,4'-DDD	0.019	U	
4,4'-DDE	0.019	U	
4,4'-DDT	0.019	U	
ALDRIN	0.009	U	
ALPHA-BHC	0.009	U	
ALPHA-CHLORDANE	0.009	U	
AROCLOR-1016	0.19	U	
AROCLOR-1221	0.37	U	
AROCLOR-1232	0.19	U	
AROCLOR-1242	0.19	U	
AROCLOR-1248	0.19	U	
AROCLOR-1254	0.19	U	
AROCLOR-1260	0.19	U	
BETA-BHC	0.009	U	
DELTA-BHC	0.009	U	
DIELDRIN	0.019	U	
ENDOSULFAN I	0.009	U	
ENDOSULFAN II	0.019	U	
ENDOSULFAN SULFATE	0.019	U	
ENDRIN	0.019	U	
ENDRIN ALDEHYDE	0.019	U	
ENDRIN KETONE	0.019	U	
GAMMA-BHC (LINDANE)	0.009	U	
GAMMA-CHLORDANE	0.009	U	
HEPTACHLOR	0.009	UJ	Q
HEPTACHLOR EPOXIDE	0.009	U	
METHOXYCHLOR	0.093	U	
TOXAPHENE	0.93	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: PEST/PCB

nsample	2WGW45DS10	nsample	2WGW46DS10	nsample	2WGW47DS10
samp_date	3/22/2002	samp_date	3/22/2002	samp_date	3/20/2002
lab_id	WS0657-7SC	lab_id	WS0657-6SC	lab_id	WS0607-5SC
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0	Pct_Solids	0	Pct_Solids	0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	U	
4,4'-DDD	0.019	U	
4,4'-DDE	0.019	U	
4,4'-DDT	0.019	U	
ALDRIN	0.009	U	
ALPHA-BHC	0.009	U	
ALPHA-CHLORDANE	0.009	U	
AROCLOR-1016	0.19	U	
AROCLOR-1221	0.37	U	
AROCLOR-1232	0.19	U	
AROCLOR-1242	0.19	U	
AROCLOR-1248	0.19	U	
AROCLOR-1254	0.19	U	
AROCLOR-1260	0.19	U	
BETA-BHC	0.009	U	
DELTA-BHC	0.009	U	
DIELDRIN	0.019	U	
ENDOSULFAN I	0.009	U	
ENDOSULFAN II	0.019	U	
ENDOSULFAN SULFATE	0.019	U	
ENDRIN	0.019	U	
ENDRIN ALDEHYDE	0.019	U	
ENDRIN KETONE	0.019	U	
GAMMA-BHC (LINDANE)	0.009	U	
GAMMA-CHLORDANE	0.009	U	
HEPTACHLOR	0.009	UJ	Q
HEPTACHLOR EPOXIDE	0.009	U	
METHOXYCHLOR	0.093	U	
TOXAPHENE	0.93	U	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	U	
4,4'-DDD	0.019	U	
4,4'-DDE	0.019	U	
4,4'-DDT	0.019	U	
ALDRIN	0.009	U	
ALPHA-BHC	0.009	U	
ALPHA-CHLORDANE	0.009	U	
AROCLOR-1016	0.19	U	
AROCLOR-1221	0.37	U	
AROCLOR-1232	0.19	U	
AROCLOR-1242	0.19	U	
AROCLOR-1248	0.19	U	
AROCLOR-1254	0.19	U	
AROCLOR-1260	0.19	U	
BETA-BHC	0.009	U	
DELTA-BHC	0.009	U	
DIELDRIN	0.019	U	
ENDOSULFAN I	0.009	U	
ENDOSULFAN II	0.019	U	
ENDOSULFAN SULFATE	0.019	U	
ENDRIN	0.019	U	
ENDRIN ALDEHYDE	0.019	U	
ENDRIN KETONE	0.019	U	
GAMMA-BHC (LINDANE)	0.009	U	
GAMMA-CHLORDANE	0.009	U	
HEPTACHLOR	0.009	UJ	Q
HEPTACHLOR EPOXIDE	0.009	U	
METHOXYCHLOR	0.093	U	
TOXAPHENE	0.93	U	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.22	U	
4,4'-DDD	0.043		
4,4'-DDE	0.022	U	
4,4'-DDT	0.022	U	
ALDRIN	0.011	U	
ALPHA-BHC	0.011	U	
ALPHA-CHLORDANE	0.011	U	
AROCLOR-1016	0.22	U	
AROCLOR-1221	0.43	U	
AROCLOR-1232	0.22	U	
AROCLOR-1242	0.22	U	
AROCLOR-1248	0.22	U	
AROCLOR-1254	0.22	U	
AROCLOR-1260	0.22	U	
BETA-BHC	0.011	U	
DELTA-BHC	0.011	U	
DIELDRIN	0.022	U	
ENDOSULFAN I	0.011	U	
ENDOSULFAN II	0.022	U	
ENDOSULFAN SULFATE	0.022	U	
ENDRIN	0.022	U	
ENDRIN ALDEHYDE	0.022	U	
ENDRIN KETONE	0.022	U	
GAMMA-BHC (LINDANE)	0.011	U	
GAMMA-CHLORDANE	0.011	U	
HEPTACHLOR	0.011	UJ	Q
HEPTACHLOR EPOXIDE	0.011	U	
METHOXYCHLOR	0.11	U	
TOXAPHENE	1.0	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: PEST/PCB

nsample	4GW01S10	nsample	FD03200201	nsample	FD03200202
samp_date	3/20/2002	samp_date	3/20/2002	samp_date	3/20/2002
lab_id	WS0607-4	lab_id	WS0607-1SC (1:5	lab_id	WS0607-3
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0	Pct_Solids	0	Pct_Solids	0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.21	U	
4,4'-DDD	0.021	U	
4,4'-DDE	0.021	U	
4,4'-DDT	0.021	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.21	U	
AROCLOR-1221	0.42	U	
AROCLOR-1232	0.21	U	
AROCLOR-1242	0.21	U	
AROCLOR-1248	0.21	U	
AROCLOR-1254	0.21	U	
AROCLOR-1260	0.21	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.021	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.021	U	
ENDOSULFAN SULFATE	0.021	U	
ENDRIN	0.021	U	
ENDRIN ALDEHYDE	0.021	U	
ENDRIN KETONE	0.021	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	UJ	Q
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.10	U	
TOXAPHENE	1.0	U	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.98	U	
4,4'-DDD	7.0		
4,4'-DDE	0.098	U	
4,4'-DDT	0.098	U	
ALDRIN	0.049	U	
ALPHA-BHC	0.049	U	
ALPHA-CHLORDANE	0.049	U	
AROCLOR-1016	0.98	U	
AROCLOR-1221	2.0	U	
AROCLOR-1232	0.98	U	
AROCLOR-1242	0.98	U	
AROCLOR-1248	0.98	U	
AROCLOR-1254	0.98	U	
AROCLOR-1260	0.98	U	
BETA-BHC	0.049	U	
DELTA-BHC	0.049	U	
DIELDRIN	0.098	U	
ENDOSULFAN I	0.050	J	U
ENDOSULFAN II	0.098	U	
ENDOSULFAN SULFATE	0.098	U	
ENDRIN	0.098	U	
ENDRIN ALDEHYDE	0.098	U	
ENDRIN KETONE	0.098	U	
GAMMA-BHC (LINDANE)	0.049	U	
GAMMA-CHLORDANE	0.049	U	
HEPTACHLOR	0.049	UJ	Q
HEPTACHLOR EPOXIDE	0.049	U	
METHOXYCHLOR	0.49	U	
TOXAPHENE	5.0	U	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.20	U	
4,4'-DDD	0.020	U	
4,4'-DDE	0.020	U	
4,4'-DDT	0.020	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.20	U	
AROCLOR-1221	0.40	U	
AROCLOR-1232	0.20	U	
AROCLOR-1242	0.20	U	
AROCLOR-1248	0.20	U	
AROCLOR-1254	0.20	U	
AROCLOR-1260	0.20	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.020	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.020	U	
ENDOSULFAN SULFATE	0.020	U	
ENDRIN	0.020	U	
ENDRIN ALDEHYDE	0.020	U	
ENDRIN KETONE	0.020	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	UJ	Q
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.10	U	
TOXAPHENE	1.0	U	

PROJ_NO: 2863

SDG: 816-4 MEDIA: WATER DATA FRACTION: PEST/PCB

nsample	FD03210201
samp_date	3/21/2002
lab_id	WS0657-4SC
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.20	U	
4,4'-DDD	0.020	U	
4,4'-DDE	0.020	U	
4,4'-DDT	0.020	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.20	U	
AROCLOR-1221	0.39	U	
AROCLOR-1232	0.20	U	
AROCLOR-1242	0.20	U	
AROCLOR-1248	0.20	U	
AROCLOR-1254	0.20	U	
AROCLOR-1260	0.20	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.020	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.020	U	
ENDOSULFAN SULFATE	0.020	U	
ENDRIN	0.020	U	
ENDRIN ALDEHYDE	0.020	U	
ENDRIN KETONE	0.020	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	UJ	Q
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.098	U	
TOXAPHENE	0.98	U	

nsample	SWSG1810
samp_date	3/21/2002
lab_id	WS0657-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	U	
4,4'-DDD	0.019	U	
4,4'-DDE	0.019	U	
4,4'-DDT	0.019	U	
ALDRIN	0.009	U	
ALPHA-BHC	0.009	U	
ALPHA-CHLORDANE	0.009	U	
AROCLOR-1016	0.19	U	
AROCLOR-1221	0.37	U	
AROCLOR-1232	0.19	U	
AROCLOR-1242	0.19	U	
AROCLOR-1248	0.19	U	
AROCLOR-1254	0.19	U	
AROCLOR-1260	0.19	U	
BETA-BHC	0.009	U	
DELTA-BHC	0.009	U	
DIELDRIN	0.019	U	
ENDOSULFAN I	0.009	U	
ENDOSULFAN II	0.019	U	
ENDOSULFAN SULFATE	0.019	U	
ENDRIN	0.019	UJ	C
ENDRIN ALDEHYDE	0.019	U	
ENDRIN KETONE	0.019	U	
GAMMA-BHC (LINDANE)	0.009	U	
GAMMA-CHLORDANE	0.009	U	
HEPTACHLOR	0.009	UJ	Q
HEPTACHLOR EPOXIDE	0.009	U	
METHOXYCHLOR	0.093	U	
TOXAPHENE	0.93	U	

nsample	SWSG2010
samp_date	3/21/2002
lab_id	WS0657-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	U	
4,4'-DDD	0.019	U	
4,4'-DDE	0.019	U	
4,4'-DDT	0.019	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.19	U	
AROCLOR-1221	0.39	U	
AROCLOR-1232	0.19	U	
AROCLOR-1242	0.19	U	
AROCLOR-1248	0.19	U	
AROCLOR-1254	0.19	U	
AROCLOR-1260	0.19	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.019	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.019	U	
ENDOSULFAN SULFATE	0.019	U	
ENDRIN	0.019	UJ	C
ENDRIN ALDEHYDE	0.019	U	
ENDRIN KETONE	0.019	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	UJ	Q
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.097	U	
TOXAPHENE	0.97	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **C. RICH** **DATE: JUNE 3, 2002**

FROM: **BERNARD F SPADA III** **COPIES: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION: VOA/SVOA/PEST/PCB/PAH**
CTO 816, NEW LONDON
SDG WS0669

SAMPLES: 8 / Aqueous / VOA/SVOA/PEST/PCB/PAH

2LGW20S10	2WGW38DS10	3GW37S10
3MSP0110	SWSG1910	SWSG2110
SWSG2310	SWSG2410	

1 / Aqueous / PEST/PCB

2WGW40DS10*

1 / Aqueous / VOA

TB03230201

Overview

The sample set for CTO 816, New London; SDG WS0669 consists of nine (9) environmental aqueous samples and one (1) trip blank. Eight environmental aqueous samples were analyzed for volatile organic comopunds (VOC), semivolatile organic compounds (SVOC), pesticides (PEST), polychlorinated biphenyls (PCB), and polynuclear aromatic hydrocarbons (PAH). One environmental aqueous sample denoted with an asterisk (*) was analyzed for PEST and PCB. The trip blank (TB03230201) was analyzed for VOC only.

The samples were collected by TetraTech NUS on March 21, 23, 24, and 25, 2002 and were analyzed by Katahdin Analytical Services. Analyses were conducted using CLP OLC02.1 for VOC, PEST, and PCB, SW-846 8270B for SVOC, and SW-846 8270B Selective Ion Monitoring (SIM) for PAH.

The data were evaluated based on the following parameters:

- * Data Completeness
- * Holding Times
- * GC/MS Tuning
- Initial and Continuing Calibration
- Laboratory Method and/or Field Quality Control Blanks
- Surrogate Spike Recoveries
- Blank Spike / Blank Spike Duplicate Recoveries
- * Internal Standards Performance
- * Instrument Performance
- * Detection Limits

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. The attached Table summarizes the validation qualifications which are based on the following information:

CALIBRATIONS

The following tables summarize calibration noncompliance and corresponding actions for volatiles:

Compound	ICAL 3/21/02	CCV 3/27/02 (10:43)	CCV 3/28/02 (11:34)
acetone	X	X	X
2-butanone	X		X
1,2-dibromo-3-chloropropane	X		X
methylene chloride		Y	Y
cis-1,3-dichloropropene		Y	
Associated Samples:	ALL	2LGW20S10 3GW37S10 3MSP0110 SWSG2110 SWSG2310	2WGW38DS10 SWSG1910 TB03230201 SWSG2410

Calibration Actions:

X – Relative Response Factor < 0.05; estimate (J) positive and reject (UR) non-detected results.
Y – Relative Percent Difference > 25%; estimate (J) positive and (UJ) non-detected results.

The following tables summarize calibration noncompliance and corresponding actions for semivolatiles:

Compound	ICAL 3/28/02	CCV 4/1/02 (11:34a)	CCV 4/2/02 (9:48a)
benzoic acid	X	Y	
4-chloroaniline	X		
3-nitroailine	X	Y	Y
2,4-dinitrophenol	X		
4-nitrophenol	X		
3,3'-dichlorobenzidine		Y	
dibenz(a,h)anthracene		Y	
Associated Samples:	ALL	NONE	2LGW20S10 3GW37S10 3MSP0110 SWSG2310 SWSG2110 SWSG1910 SWSG2410 2WGW38DS10

Calibration Actions:

X - Percent Difference > 30%; estimate (J) positive and (UJ) non-detected results.
Y – Relative Percent Difference > 25%; estimate (J) positive and (UJ) non-detected results.

The following tables summarize calibration noncompliance and corresponding actions for pesticides:

Compound	ICAL 3/21/02	CCV 3/29/02 (16:40/17:09)
Endrin		X
4,4-DDT		Y
Associated Samples:	ALL	2LGW20S10 3GW37S10 3MSP0110

Calibration Actions:

X – Percent Difference > 25% on both columns; estimate (UJ) associated non-detected results.
Y – Percent Difference > 25% on one column; No action taken because one column compliant.

The following tables summarize calibration noncompliance and corresponding actions for PAH by 8270:

Compound	ICAL 3/25/02	CCV 4/1/02 (8:57a)	CCV 4/2/02 (8:49a)
Anthracene			X
Benzo(g,h,i)perylene			X
Dibenz(a,h)anthracene		X	X
Phenanthrene		X	X
Naphthalene			X
1-Methylnaphthalene		X	X
Associated Samples:	ALL	2LGW20S10 3GW37S10 3MSP0110 SWSG2310 SWSG2110 SWSG1910 SWSG2410	2WGW38DS10

Calibration Actions:

X - Percent Difference > 25%; estimate (J) positive and (UJ) non-detected results.

Laboratory Method Blanks

The following compounds were detected in the laboratory method blanks at the following maximum concentrations:

Compound	Maximum Concentration	Action Level
Methylene Chloride	2.0µg/L	20µg/L
Acetone	2.0µg/L	20µg/L
1,4-Dichlorobenzene	0.6µg/L	3.0µg/L

An action level of 10X the maximum concentration was used to evaluate samples for blank contamination of methylene chloride and acetone. An action level of 5X the maximum concentration was used to evaluate samples for blank contamination of 1,4-dichlorobenzene. The positive results less than the blank action level for the aforementioned compounds were qualified, "U", as a result of blank contamination.

Surrogate Spike Recoveries / Internal Standard Performance

The surrogate tetrachloro-m-xylene was recovered below the quality control criteria in sample SWSG2310 for the pesticide/PCB fraction. All non-detected results were qualified as estimated (UJ) in sample SWSG2310.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

% Recovery in the matrix spike/matrix spike duplicate was below the lower quality control criteria for benzoic acid, hexachlorocyclopentadiene, benzo(k)fluoranthene, 2-methylnaphthalene, acenaphthene,

acenaphthylene, benzo(a)pyrene, benzo(g,h,i)perylene, fluorene, indeno(1,2,3-cd)pyrene, and benzo(b)fluoranthene in sample 3GW37S10. The non-detected results were qualified as estimated (UJ).

% Recovery in the matrix spike/matrix spike duplicate was <10% for dibenz(a,h)anthracene in sample 3GW37S10 for the semivolatiles fraction. The non-detected result was rejected (UR).

% Recoveries in the matrix spike/matrix spike duplicate exceeded the upper quality control criteria for vinyl chloride, carbazole, 3-nitroaniline, and 4-nitroaniline in sample 3GW37S10. No action was taken for non-detected results.

Blank Spike Results

The Blank Spike Percent Recovery (%R) was below the quality control criteria for 2-methylnaphthalene, acenaphthene, acenaphthylene, benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenz(a,h)anthracene, fluoranthene, and fluorene in LCS032802. All results for the aforementioned compounds included in the same extraction batch with the LCS were qualified as estimated (J, UJ).

The Blank Spike %R was below the quality control criteria for benzoic acid, hexachlorobutadiene, and hexachlorocyclopentadiene in LCS032702. All results for the aforementioned compounds included in the same extraction batch with the LCS were qualified as estimated (J, UJ).

The Blank Spike %R exceeded the quality control criteria for 3,3'-dichlorobenzidine, 3-nitroaniline, carbazole, and 4-nitroaniline. No action was taken because all results for the aforementioned compounds were non-detected.

ADDITIONAL COMMENTS

Positive results reported at concentrations below the CRQL were qualified as estimated (J).

The florisil check recovery was below the 80% quality control criteria for heptachlor on both columns. All non-detected results for heptachlor were qualified as estimated (UJ).

The compound 1,2,4-trichlorobenzene was reported in both the VOC and SVOC fractions. The result from the VOC fraction was used for validation. The result from the SVOC fraction was deleted because the RL in the SVOC fraction is higher than the RL in the VOC fraction.

OVERALL ASSESSMENT

Laboratory Performance: Qualifications were made based on calibration non-compliances, method blank contamination, MS/MSD non-compliances, florisil check recovery non-compliances, and blank spike non-compliances.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region I EPA "Data Validation Functional Guidelines - Part II" (12/96).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Bernard F Spada III

TetraTech NUS
Bernard F Spada III
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
N01 = Internal Standard Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCD% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OV

nsample	2LGW20S10
samp_date	3/24/2002
lab_id	WS0669-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	UR	C
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	UR	C
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	2LGW20S10
samp_date	3/24/2002
lab_id	WS0669-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	UJ	C
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	2WGW38DS10
samp_date	3/25/2002
lab_id	WS0669-20
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	UR	C
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	UR	C
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OV

nsample	2WGW38DS10
samp_date	3/25/2002
lab_id	WS0669-20
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	3GW37S10
samp_date	3/24/2002
lab_id	WS0669-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	UR	C
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	UR	C
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	R	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	3GW37S10
samp_date	3/24/2002
lab_id	WS0669-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	UJ	C
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.9	J	P
VINYL CHLORIDE	1	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OV

nsample	3MSP0110
samp_date	3/24/2002
lab_id	WS0669-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	UR	C
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	UR	C
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1		
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	3MSP0110
samp_date	3/24/2002
lab_id	WS0669-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	UJ	C
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	SWSG1910
samp_date	3/25/2002
lab_id	WS0669-6
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	UR	C
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	UR	C
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	R	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OV

nsample	SWSG1910
samp_date	3/25/2002
lab_id	WS0669-6
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	SWSG2110
samp_date	3/25/2002
lab_id	WS0669-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	UR	C
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	UR	C
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	R	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	SWSG2110
samp_date	3/25/2002
lab_id	WS0669-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	UJ	C
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OV

nsample	SWSG2310
samp_date	3/25/2002
lab_id	WS0669-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	UR	C
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	UR	C
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	SWSG2310
samp_date	3/25/2002
lab_id	WS0669-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	UJ	C
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	SWSG2410
samp_date	3/25/2002
lab_id	WS0669-7
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	0.2	J	P
1,2-DIBROMO-3-CHLOROPROPANE	1	UR	C
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	A
2-BUTANONE	5	UR	C
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OV

nsample	SWSG2410
samp_date	3/25/2002
lab_id	WS0669-7
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	2	U	A
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

nsample	TB03230201
samp_date	3/23/2002
lab_id	WS0669-16
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1,1,1-TRICHLOROETHANE	1	U	
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1	U	
1,2,4-TRICHLOROBENZENE	1	U	
1,2-DIBROMO-3-CHLOROPROPANE	1	UR	C
1,2-DIBROMOETHANE	1	U	
1,2-DICHLOROBENZENE	1	U	
1,2-DICHLOROETHANE	1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1	U	
2-BUTANONE	5	UR	C
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	0.4	J	C
BENZENE	1	U	
BROMOCHLOROMETHANE	1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	

nsample	TB03230201
samp_date	3/23/2002
lab_id	WS0669-16
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
METHYLENE CHLORIDE	1	UJ	C
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TOTAL XYLENES	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OS

nsample	2LGW20S10
samp_date	3/24/2002
lab_id	WS0669-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	2LGW20S10
samp_date	3/24/2002
lab_id	WS0669-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

nsample	2WGW38DS10
samp_date	3/23/2002
lab_id	WS0669-19
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OS

nsample	2WGW38DS10
samp_date	3/23/2002
lab_id	WS0669-19
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

nsample	3GW37S10
samp_date	3/24/2002
lab_id	WS0669-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CDE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	3GW37S10
samp_date	3/24/2002
lab_id	WS0669-2
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	DE
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OS

nsample	3MSP0110
samp_date	3/24/2002
lab_id	WS0669-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	3	J	P
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	3MSP0110
samp_date	3/24/2002
lab_id	WS0669-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

nsample	SWSG1910
samp_date	3/25/2002
lab_id	WS0669-6
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OS

nsample	SWSG1910
samp_date	3/25/2002
lab_id	WS0669-6
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

nsample	SWSG2110
samp_date	3/25/2002
lab_id	WS0669-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	SWSG2110
samp_date	3/25/2002
lab_id	WS0669-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OS

nsample	SWSG2310
samp_date	3/25/2002
lab_id	WS0669-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

nsample	SWSG2310
samp_date	3/25/2002
lab_id	WS0669-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

nsample	SWSG2410
samp_date	3/25/2002
lab_id	WS0669-7
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2'-OXYBIS(1-CHLOROPROPANE)	5	U	
2,4,5-TRICHLOROPHENOL	20	U	
2,4,6-TRICHLOROPHENOL	5	U	
2,4-DICHLOROPHENOL	5	U	
2,4-DIMETHYLPHENOL	5	U	
2,4-DINITROPHENOL	20	UJ	C
2,4-DINITROTOLUENE	5	U	
2,6-DINITROTOLUENE	5	U	
2-CHLORONAPHTHALENE	5	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	20	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	5	U	
3-NITROANILINE	20	UJ	C
4,6-DINITRO-2-METHYLPHENOL	20	U	
4-BROMOPHENYL PHENYL ETHER	5	U	
4-CHLORO-3-METHYLPHENOL	5	U	
4-CHLOROANILINE	5	UJ	C
4-CHLOROPHENYL PHENYL ETHER	5	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	20	U	
4-NITROPHENOL	20	UJ	C
BENZOIC ACID	20	UJ	CE
BIS(2-CHLOROETHOXY)METHANE	5	U	
BIS(2-CHLOROETHYL)ETHER	5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U	
BUTYL BENZYL PHTHALATE	5	U	
CARBAZOLE	5	U	
DI-N-BUTYL PHTHALATE	5	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: OS

nsample	SWSG2410
samp_date	3/25/2002
lab_id	WS0669-7
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
DI-N-OCTYL PHTHALATE	5	U	
DIBENZOFURAN	5	U	
DIETHYL PHTHALATE	5	U	
DIMETHYL PHTHALATE	5	U	
HEXACHLOROBENZENE	5	U	
HEXACHLOROBUTADIENE	5	UJ	E
HEXACHLOROCYCLOPENTADIENE	5	UJ	E
HEXACHLOROETHANE	5	U	
ISOPHORONE	5	U	
N-NITROSO-DI-N-PROPYLAMINE	5	U	
N-NITROSODIPHENYLAMINE	5	U	
NITROBENZENE	5	U	
PENTACHLOROPHENOL	20	U	
PHENOL	5	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: PAH

nsample	2LGW20S10	nsample	2WGW38DS10	nsample	3GW37S10
samp_date	3/24/2002	samp_date	3/25/2002	samp_date	3/24/2002
lab_id	WS0669-1	lab_id	WS0669-20	lab_id	WS0669-2
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0	Pct_Solids	0	Pct_Solids	0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	UJ	E
ACENAPHTHENE	0.1	UJ	E
ACENAPHTHYLENE	0.1	UJ	E
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	UJ	E
BENZO(K)FLUORANTHENE	0.1	UJ	E
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	CE
FLUORANTHENE	0.1	UJ	E
FLUORENE	0.1	UJ	E
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	UJ	E
ACENAPHTHENE	0.1	UJ	E
ACENAPHTHYLENE	0.1	UJ	E
ANTHRACENE	0.1	UJ	C
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	UJ	CE
BENZO(K)FLUORANTHENE	0.1	UJ	E
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	CE
FLUORANTHENE	0.1	UJ	E
FLUORENE	0.1	UJ	E
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	UJ	C
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	UJ	DE
ACENAPHTHENE	0.1	UJ	DE
ACENAPHTHYLENE	0.1	UJ	DE
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	UJ	D
BENZO(B)FLUORANTHENE	0.1	UJ	D
BENZO(G,H,I)PERYLENE	0.1	UJ	DE
BENZO(K)FLUORANTHENE	0.1	UJ	DE
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UR	D
FLUORANTHENE	0.1	UJ	E
FLUORENE	0.1	UJ	DE
INDENO(1,2,3-CD)PYRENE	0.1	UJ	D
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: PAH

nsample	3MSP0110
samp_date	3/24/2002
lab_id	WS0669-3
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	UJ	E
ACENAPHTHENE	0.1	UJ	E
ACENAPHTHYLENE	0.1	UJ	E
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	UJ	E
BENZO(K)FLUORANTHENE	0.1	UJ	E
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	CE
FLUORANTHENE	0.1	UJ	E
FLUORENE	0.1	UJ	E
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

nsample	SWSG1910
samp_date	3/25/2002
lab_id	WS0669-6
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	UJ	E
ACENAPHTHENE	0.1	UJ	E
ACENAPHTHYLENE	0.1	UJ	E
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	UJ	E
BENZO(K)FLUORANTHENE	0.1	UJ	E
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	CE
FLUORANTHENE	0.1	UJ	E
FLUORENE	0.1	UJ	E
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

nsample	SWSG2110
samp_date	3/25/2002
lab_id	WS0669-5
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	UJ	E
ACENAPHTHENE	0.1	UJ	E
ACENAPHTHYLENE	0.1	UJ	E
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	UJ	E
BENZO(K)FLUORANTHENE	0.1	UJ	E
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	CE
FLUORANTHENE	0.1	UJ	E
FLUORENE	0.1	UJ	E
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: PAH

nsample	SWSG2310
samp_date	3/25/2002
lab_id	WS0669-4
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	UJ	E
ACENAPHTHENE	0.1	UJ	E
ACENAPHTHYLENE	0.1	UJ	E
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	UJ	E
BENZO(K)FLUORANTHENE	0.1	UJ	E
CHRYSENE	0.1	U	
DIBENZO(A,H)ANTHRACENE	0.1	UJ	CE
FLUORANTHENE	0.1	UJ	E
FLUORENE	0.1	UJ	E
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.1	U	

nsample	SWSG2410
samp_date	3/25/2002
lab_id	WS0669-7
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.1	UJ	E
ACENAPHTHENE	0.1	UJ	E
ACENAPHTHYLENE	0.1	UJ	E
ANTHRACENE	0.1	U	
BENZO(A)ANTHRACENE	0.1	U	
BENZO(A)PYRENE	0.1	U	
BENZO(B)FLUORANTHENE	0.1	U	
BENZO(G,H,I)PERYLENE	0.1	UJ	E
BENZO(K)FLUORANTHENE	0.1	UJ	E
CHRYSENE	0.06	J	P
DIBENZO(A,H)ANTHRACENE	0.1	UJ	CE
FLUORANTHENE	0.09	J	EP
FLUORENE	0.1	UJ	E
INDENO(1,2,3-CD)PYRENE	0.1	U	
NAPHTHALENE	0.1	U	
PHENANTHRENE	0.1	UJ	C
PYRENE	0.09	J	P

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: PEST/P

nsample	2LGW20S10
samp_date	3/24/2002
lab_id	WS0669-1
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.21	U	
4,4'-DDD	0.021	U	
4,4'-DDE	0.021	U	
4,4'-DDT	0.021	U	
ALDRIN	0.011	U	
ALPHA-BHC	0.011	U	
ALPHA-CHLORDANE	0.011	U	
AROCLOR-1016	0.21	U	
AROCLOR-1221	0.43	U	
AROCLOR-1232	0.21	U	
AROCLOR-1242	0.21	U	
AROCLOR-1248	0.21	U	
AROCLOR-1254	0.21	U	
AROCLOR-1260	0.21	U	
BETA-BHC	0.011	U	
DELTA-BHC	0.011	U	
DIELDRIN	0.021	U	
ENDOSULFAN I	0.011	U	
ENDOSULFAN II	0.021	U	
ENDOSULFAN SULFATE	0.021	U	
ENDRIN	0.021	U	
ENDRIN ALDEHYDE	0.021	UJ	C
ENDRIN KETONE	0.021	U	
GAMMA-BHC (LINDANE)	0.011	U	
GAMMA-CHLORDANE	0.011	U	
HEPTACHLOR	0.011	U	
HEPTACHLOR EPOXIDE	0.011	U	
METHOXYCHLOR	0.11	U	
TOXAPHENE	1.0	U	

nsample	2WGW38DS10
samp_date	3/23/2002
lab_id	WS0669-19
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	U	
4,4'-DDD	0.019	U	
4,4'-DDE	0.019	U	
4,4'-DDT	0.019	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.19	U	
AROCLOR-1221	0.38	U	
AROCLOR-1232	0.19	U	
AROCLOR-1242	0.19	U	
AROCLOR-1248	0.19	U	
AROCLOR-1254	0.19	U	
AROCLOR-1260	0.19	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.019	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.019	U	
ENDOSULFAN SULFATE	0.019	U	
ENDRIN	0.019	U	
ENDRIN ALDEHYDE	0.019	U	
ENDRIN KETONE	0.019	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	U	
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.095	U	
TOXAPHENE	0.95	U	

nsample	2WGW40DS10
samp_date	3/23/2002
lab_id	WS0669-17SC
qc_type	NM
units	UG/L
Pct_Solids	0
DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.20	U	
4,4'-DDD	0.020	U	
4,4'-DDE	0.020	U	
4,4'-DDT	0.020	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.20	U	
AROCLOR-1221	0.40	U	
AROCLOR-1232	0.20	U	
AROCLOR-1242	0.20	U	
AROCLOR-1248	0.20	U	
AROCLOR-1254	0.20	U	
AROCLOR-1260	0.20	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.020	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.020	U	
ENDOSULFAN SULFATE	0.020	U	
ENDRIN	0.020	U	
ENDRIN ALDEHYDE	0.020	U	
ENDRIN KETONE	0.020	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	U	
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.10	U	
TOXAPHENE	1.0	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: PEST/P

nsample	3GW37S10	nsample	3MSP0110	nsample	SWSG1910
samp_date	3/24/2002	samp_date	3/24/2002	samp_date	3/25/2002
lab_id	WS0669-2	lab_id	WS0669-3	lab_id	WS0669-6
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0	Pct_Solids	0	Pct_Solids	0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.20	U	
4,4'-DDD	0.020	U	
4,4'-DDE	0.020	U	
4,4'-DDT	0.020	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.20	U	
AROCLOR-1221	0.40	U	
AROCLOR-1232	0.20	U	
AROCLOR-1242	0.20	U	
AROCLOR-1248	0.20	U	
AROCLOR-1254	0.20	U	
AROCLOR-1260	0.20	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.020	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.020	U	
ENDOSULFAN SULFATE	0.020	U	
ENDRIN	0.020	UJ	C
ENDRIN ALDEHYDE	0.020	U	
ENDRIN KETONE	0.020	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	U	
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.099	U	
TOXAPHENE	0.99	U	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	U	
4,4'-DDD	0.019	U	
4,4'-DDE	0.019	U	
4,4'-DDT	0.019	U	
ALDRIN	0.009	U	
ALPHA-BHC	0.009	U	
ALPHA-CHLORDANE	0.009	U	
AROCLOR-1016	0.19	U	
AROCLOR-1221	0.38	U	
AROCLOR-1232	0.19	U	
AROCLOR-1242	0.19	U	
AROCLOR-1248	0.19	U	
AROCLOR-1254	0.19	U	
AROCLOR-1260	0.19	U	
BETA-BHC	0.009	U	
DELTA-BHC	0.009	U	
DIELDRIN	0.019	U	
ENDOSULFAN I	0.009	U	
ENDOSULFAN II	0.019	U	
ENDOSULFAN SULFATE	0.019	U	
ENDRIN	0.019	UJ	C
ENDRIN ALDEHYDE	0.019	U	
ENDRIN KETONE	0.019	U	
GAMMA-BHC (LINDANE)	0.009	U	
GAMMA-CHLORDANE	0.009	U	
HEPTACHLOR	0.009	U	
HEPTACHLOR EPOXIDE	0.009	U	
METHOXYCHLOR	0.094	U	
TOXAPHENE	0.94	U	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	U	
4,4'-DDD	0.019	U	
4,4'-DDE	0.019	U	
4,4'-DDT	0.019	U	
ALDRIN	0.009	U	
ALPHA-BHC	0.009	U	
ALPHA-CHLORDANE	0.009	U	
AROCLOR-1016	0.19	U	
AROCLOR-1221	0.38	U	
AROCLOR-1232	0.19	U	
AROCLOR-1242	0.19	U	
AROCLOR-1248	0.19	U	
AROCLOR-1254	0.19	U	
AROCLOR-1260	0.19	U	
BETA-BHC	0.009	U	
DELTA-BHC	0.009	U	
DIELDRIN	0.019	U	
ENDOSULFAN I	0.009	U	
ENDOSULFAN II	0.019	U	
ENDOSULFAN SULFATE	0.019	U	
ENDRIN	0.019	U	
ENDRIN ALDEHYDE	0.019	U	
ENDRIN KETONE	0.019	U	
GAMMA-BHC (LINDANE)	0.009	U	
GAMMA-CHLORDANE	0.009	U	
HEPTACHLOR	0.009	U	
HEPTACHLOR EPOXIDE	0.009	U	
METHOXYCHLOR	0.094	U	
TOXAPHENE	0.94	U	

PROJ_NO: 2863

SDG: WS0669 MEDIA: WATER DATA FRACTION: PEST/P

nsample	SWSG2110	nsample	SWSG2310	nsample	SWSG2410
samp_date	3/25/2002	samp_date	3/25/2002	samp_date	3/25/2002
lab_id	WS0669-5	lab_id	WS0669-4	lab_id	WS0669-7
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0	Pct_Solids	0	Pct_Solids	0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	U	
4,4'-DDD	0.019	U	
4,4'-DDE	0.019	U	
4,4'-DDT	0.019	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.19	U	
AROCLOR-1221	0.38	U	
AROCLOR-1232	0.19	U	
AROCLOR-1242	0.19	U	
AROCLOR-1248	0.19	U	
AROCLOR-1254	0.19	U	
AROCLOR-1260	0.19	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.019	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.019	U	
ENDOSULFAN SULFATE	0.019	U	
ENDRIN	0.019	U	
ENDRIN ALDEHYDE	0.019	U	
ENDRIN KETONE	0.019	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	U	
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.095	U	
TOXAPHENE	0.95	U	

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.19	UJ	R
4,4'-DDD	0.019	UJ	R
4,4'-DDE	0.019	UJ	R
4,4'-DDT	0.019	UJ	R
ALDRIN	0.010	UJ	R
ALPHA-BHC	0.010	UJ	R
ALPHA-CHLORDANE	0.010	UJ	R
AROCLOR-1016	0.19	UJ	R
AROCLOR-1221	0.39	UJ	R
AROCLOR-1232	0.19	UJ	R
AROCLOR-1242	0.19	UJ	R
AROCLOR-1248	0.19	UJ	R
AROCLOR-1254	0.19	UJ	R
AROCLOR-1260	0.19	UJ	R
BETA-BHC	0.010	UJ	R
DELTA-BHC	0.010	UJ	R
DIELDRIN	0.019	UJ	R
ENDOSULFAN I	0.010	UJ	R
ENDOSULFAN II	0.019	UJ	R
ENDOSULFAN SULFATE	0.019	UJ	R
ENDRIN	0.019	UJ	R
ENDRIN ALDEHYDE	0.019	UJ	R
ENDRIN KETONE	0.019	UJ	R
GAMMA-BHC (LINDANE)	0.010	UJ	R
GAMMA-CHLORDANE	0.010	UJ	R
HEPTACHLOR	0.010	UJ	R
HEPTACHLOR EPOXIDE	0.010	UJ	R
METHOXYCHLOR	0.097	UJ	R
TOXAPHENE	0.97	UJ	R

Parameter	Result	ValQual	QualCode
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.21	U	
4,4'-DDD	0.021	U	
4,4'-DDE	0.021	U	
4,4'-DDT	0.021	U	
ALDRIN	0.010	U	
ALPHA-BHC	0.010	U	
ALPHA-CHLORDANE	0.010	U	
AROCLOR-1016	0.21	U	
AROCLOR-1221	0.42	U	
AROCLOR-1232	0.21	U	
AROCLOR-1242	0.21	U	
AROCLOR-1248	0.21	U	
AROCLOR-1254	0.21	U	
AROCLOR-1260	0.21	U	
BETA-BHC	0.010	U	
DELTA-BHC	0.010	U	
DIELDRIN	0.021	U	
ENDOSULFAN I	0.010	U	
ENDOSULFAN II	0.021	U	
ENDOSULFAN SULFATE	0.021	U	
ENDRIN	0.021	U	
ENDRIN ALDEHYDE	0.021	U	
ENDRIN KETONE	0.021	U	
GAMMA-BHC (LINDANE)	0.010	U	
GAMMA-CHLORDANE	0.010	U	
HEPTACHLOR	0.010	U	
HEPTACHLOR EPOXIDE	0.010	U	
METHOXYCHLOR	0.10	U	
TOXAPHENE	1.0	U	