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Technical Memorandum
Summary of Analytical Results
Sample Round 5

for

Former Tanks 53 and 56 – Tank Farm 5
Naval Station Newport
Newport, Rhode Island

Engineering Field Activity Northeast
Naval Facility Engineering Command

Contract Number N62467-94-D-0888
Contract Task Order 0842

October 2004

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TECHNICAL MEMORANDUM
SUMMARY OF ANALYTICAL RESULTS
SAMPLE ROUND 5

FOR

FORMER TANKS 53 AND 56 – TANK FARM 5
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION - NAVY (CLEAN) CONTRACT

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1.0 INTRODUCTION

This document summarizes the results of the fifth round of groundwater sampling at former Tanks 53 and 56 - Tank Farm 5 ("the Site") located at Naval Station Newport (NAVSTA Newport) (formerly the Naval Education and Training Center (NETC)) in Middletown, Rhode Island. This report has been prepared by Tetra Tech NUS, Inc. (TtNUS) under the Comprehensive Long Term Environmental Action Navy (CLEAN) Contract No. N62467-94-D-0888, Contract Task Order (CTO) 842. The purpose of this sampling round is to evaluate the need to continue groundwater monitoring, or operating a groundwater extraction and treatment system at Tank 53, which is located within Tank Farm 5. The system was installed at Tank 53 to mitigate a potential threat of off-site contaminant migration resulting from a tank leak(s). The Navy removed the contents of the tank, conducted a source removal action to remove contaminated soils surrounding the tank, and consequently mitigated the threat of a continuing release.

Historical and current data from the groundwater monitoring wells suggest that the source removal action was effective in removing the contaminant source before a significant contaminant plume developed and migrated from the Site. This information suggests that potential residual contamination, which may have originally migrated from the tank socket, has attenuated to acceptable or non-detectable concentrations. Consequently, the groundwater extraction and treatment system, which was constructed to abate and contain a potential contaminant plume is no longer needed, as groundwater conditions are within acceptable parameters.

2.0 BACKGROUND

This section provides background information on former Tanks 53 and 56 including their location, features and history, remedial actions, tank demolition, soil gas survey, bedrock groundwater investigation, and post-remedial groundwater monitoring.

2.1 LOCATION, FEATURES, AND HISTORY

NAVSTA Newport is located in Middletown, Newport, and Portsmouth, Rhode Island, approximately 25 miles southeast of Providence, Rhode Island (see Figure 2-1). Tank Farm 5 is located approximately 1 mile north of the NAVSTA Newport facilities in Middletown, Rhode Island (see Figure 2-2). Tanks 53 and 56 were underground storage tanks (USTs) located in the western portion of Tank Farm 5 (see Figure 2-3). The 2.52-million gallon capacity tanks were constructed in 1942 of reinforced concrete in blasted bedrock sockets. The tanks were approximately 116 feet in diameter and 33-feet deep, and were covered by approximately 4 feet of soil and surrounded by a 4-foot wide, crushed-rock ring drain system. The ring drain system was installed to remove groundwater from around the tank and to prevent tank damage caused by hydraulic stresses and tank flotation.

The tanks were originally used to store fuel oils from approximately World War II through 1974. In 1975, as part of an oil recovery program, the Navy began using the tanks to store used oil for alternate use as a heating fuel oil (TRC, 1993). In 1982, the Rhode Island Department of Environmental Management (RIDEM) adopted hazardous waste regulations that were applicable to the waste oils stored in Tanks 53 and 56. Subsequent sampling of the waste oils in 1983 indicated that the oil and sludge layers were considered hazardous due to elevated concentrations of lead. Also, the water phase was found to contain dissolved hydrocarbon compounds.

In 1984, the Navy discontinued use of the tanks. In 1985, the results of a groundwater sampling round from monitoring wells located within the Tank 53 ring drain indicated the presence of chlorinated and aromatic hydrocarbon compounds. In September 1985, RIDEM issued NETC a Hazardous Waste Facility Permit for Tanks 53 and 56, which included a stipulation to remove and close the tanks in accordance with federal hazardous waste regulations RIDEM requirements for USTs that were used for storage of oil and hazardous substances.

2.2 PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

Investigations conducted in 1986 confirmed the presence of volatile organic compounds (VOCs) in the Tank 53 ring drain. Lower concentrations of VOCs were detected in groundwater up to 150 feet

downgradient of Tank 53. In January 1990, oil was observed overflowing from the tank gauging chamber and onto the ground as a result of surface water entering the tank through cracks in the tank roof. The Navy took immediate action to lower the level in the tank to prevent further overflow. RIDEM issued an Immediate Compliance Order, which required that the Navy remove the contents of the tank, begin remediation of contaminated groundwater and soils surrounding the tank, and initiate an investigation to determine the extent of oil contamination in the vicinity of Tank 53.

While the Navy was preparing to comply with the Compliance Order, RIDEM and the United States Environmental Protection Agency (EPA) decided that the EPA would regulate groundwater contamination at the Site, and the State of Rhode Island would oversee responses to soil contamination. This decision was made to avoid complicating investigations being carried out under EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) program. In 1992, the Navy completed the removal of sludge, oil, and water from Tanks 53 and 56. A temporary treatment system was constructed to treat contaminated water from the tanks, as well as groundwater produced during dewatering of the Site. The dewatering system utilized an 8-inch well (RW-1) installed in 1990 to allow recovery of the free product previously observed in the ring drain of Tank 53. Following cleaning of the tanks, the treatment system was dismantled and the tanks were ballasted with potable water. The recovery well was destroyed during the source removal in 1995, as discussed below.

An Interim Action Record of Decision (ROD) was signed by the Navy and EPA in 1992. The Interim Action ROD required installation of a groundwater extraction and treatment system. In 1993, the design for a groundwater extraction and treatment/containment system was completed. The system was designed to contain groundwater in the vicinity of Tank 53 and to prevent it from migrating further toward Narragansett Bay. Construction of the system was completed in December 1994. The system consists of two sets of extraction wells and a treatment system. The first set of extraction wells (EW-9 through EW-13) is located approximately 60 to 70 feet northwest of Tank 53; a second set (EW-1 through EW-8) is located approximately 280 feet northwest of Tank 53. In addition, monitoring wells MW-1A, MW-2A, and MW-3A were installed downgradient of the second set of extraction wells. The system operated between December 1994 and December 1996. The groundwater extraction system was shut down because analytical results for influent samples were below the cleanup levels established in the Interim Action ROD.

In order to meet the State of Rhode Island regulatory requirements for contaminated surface and subsurface soils, the Navy evaluated a number of remedial alternatives including, in situ vapor extraction, in situ bioremediation, and source removal (excavation of all contaminated soils). The Navy elected to conduct a source removal action at the site. The State approved the action and from 1995 through 1996, contaminated soils surrounding the tanks were removed and disposed of off site. The ring

drain was re-constructed with clean stone/soils. However, the ring drain pumping system was not placed back into operation and the tank was ballasted with clean water to address concerns about flotation.

Following shutdown of the extraction system, three groundwater sampling rounds (December 1996, March 1997, and August 1997) were conducted. Analytes detected after shutdown of the extraction and treatment system are summarized in Table 2-1. The analytical results for Rounds 1 through 3 showed near detection limit concentrations of the analytes (B&R Environmental, 1997). Metals concentrations exceeded EPA Maximum Contaminant Levels (MCLs) and RIDEM GA Groundwater Objectives in unfiltered samples. Metals concentrations were elevated in unfiltered groundwater samples relative to dissolved metals concentrations in filtered samples due to the presence of solids in the unfiltered samples. The analytical results indicated that the source removal action and operation of the groundwater extraction system effectively remediated the source of groundwater contamination and concentrations of potential contaminants of concern had attenuated.

2.3 TANK DEMOLITION

All of the tanks in Tank Farm 5, including Tanks 53 and 56, were demolished by the Navy's RAC contractor, Foster Wheeler Environmental Corporation, from late 1998 through early 1999 as part of UST closure activities conducted by the Navy under Rhode Island regulations. The demolition objective was to collapse and separate the tank roof from the tank walls while maintaining the basic structural integrity of the tank floor and side walls. Prior to demolition the ballast water was removed from the tanks and pumps rooms. Then a 15-foot layer of sand was placed into the tank to absorb the shock from the collapsing tank roof and to avoid formation of void spaces between the tank floor and collapsed roof. Each tank was individually imploded and then backfilled with certified clean fill.

2.4 BEDROCK GROUNDWATER INVESTIGATION

In a letter to the Navy dated February 17, 1998, RIDEM requested that a bedrock groundwater investigation be conducted at the Tanks 53 and 56 groundwater operable unit. The investigation consisted of the performance of a passive soil gas survey and the installation of two bedrock wells. The passive soil gas survey was conducted in the fall of 1998 and based on the results (TtNUS, 1999), two sets of nested bedrock monitoring wells were located as follows:

- southeast side of the Tank 53 in the ring drain area, and
- 260 feet north of Tank 53 near the edge of the former historic groundwater contaminant plume

At each location, two nested monitoring wells were installed in a single borehole with the screen elevations selected in consultation with RIDEM (TtNUS, 2000). After the wells were completed and developed, groundwater samples were collected from each of the four new wells following EPA's low flow ("low stress") sampling protocols. The groundwater samples were analyzed for VOCs, semivolatile organic compounds (SVOCs), RCRA metals, gasoline range organic compounds (GRO), and diesel range organic compounds (DRO). The investigation's findings indicated that only a few analytes were detected at near-detection limit concentrations and no RIDEM GA objectives were exceeded. There were no DRO or GRO organic compounds found above the reported detection limit. The results from the 2000 bedrock investigation confirmed the results from previous investigations that showed groundwater at the Tanks 53 and 56 site contained very low levels of contaminants, below EPA MCLs and RIDEM GA Groundwater Objectives.

2.5 GROUNDWATER SAMPLE ROUND 4

Groundwater sample Round 4 was conducted in late May 2001. The analytes detected are summarized in Table 2-1. At the time of Sampling Round 4, the Navy had constructed a temporary holding pond in the footprint of former Tank 53. In addition, the treatment system was set up to treat water drained from sediment dredged from the McAllister Point Landfill and temporarily stored at the Site.

The analytical results of Round 4 (Table 2-1) indicated bis(2-ethylhexyl)phthalate (Bis) exceeded RIDEM GA Groundwater Objectives and EPA MCLs (6 :g/L) at MW-1A, MW-8, MW-9, and MW86-1. Benzo(a)pyrene exceeded the EPA MCL and RIDEM GA Objective (0.2 :g/L) at MW-901B only. Total Petroleum Hydrocarbons (C_8-C_{30}) (TPH) were analyzed in a groundwater sample from MW-902A based on the appearance of a sheen and hydrocarbon odors during purging. The TPH analytical results were low (0.24 mg/L). A "gray-tan colloid", similar to bentonite slurry, appeared during the purging of MW-902A and cleared up after continued purging prior to sample collection. Wells MW-902A and MW-902B were previously sampled in January 2000, one-week after well completion. At that time, colloidal matter and sheens were not observed and TPH (C_8-C_{30}) were not detected (reported detection limit is 0.05 mg/L). Metals concentrations were elevated in unfiltered groundwater samples relative to dissolved metals concentrations in filtered samples due to the presence of solids in the unfiltered samples. The Round 4 report recommended the surface seals and protective casings be repaired or replaced, and that all wells in the monitoring network be repaired, redeveloped, surveyed, and resampled.

3.0 FIELD ACTIVITIES

Field activities conducted at the Site in conjunction with the Round 5 sampling event are described in the following sections. The work included brush clearing, well repairs, well redevelopment, a well survey, and groundwater sampling.

3.1 BRUSH CLEARING AND MONITORING WELL REPAIRS

Brush was cleared to provide access to site monitoring wells on May 10, 2004. Brush clearing was performed by Global Remediation Services, Inc. (Global) of Boston, Massachusetts.

The monitoring wells were repaired from May 17, 2004 to May 19, 2004. The repairs consisted of replacement of outer protective casings, flush-mounted well covers, and concrete surface seals.

New outer protective steel casings, and concrete pads were installed at monitoring wells MW-9, MW-10, MW86-2. The well locations are shown on Figure 3-1. The well cover on the outer protective casing of MW-4 was replaced with a new cast aluminum cover. Flush-mounted well covers were repaired at MW-1A, MW-2A, and MW-3A. The repairs consisted of cleaning the threads on the flush-mount casing using a steel tap and installing new stainless steel bolts. Cement grout was removed between the well and the well cover in MW-1A and MW-3A to allow surface runoff to drain without entering each well. The flush mounted well cover at the MW-902 cluster was reinstalled and concrete pad replaced. All wells were fitted with caps and locked with keyed-alike locks.

3.2 MONITORING WELL DEVELOPMENT

The monitoring wells were developed from May 18, 2004 to May 24, 2004. Prior to initiating development, the depth to groundwater was measured with an electronic water-level indicator, and potential separate phase product was checked with an interface probe and a translucent bailer. Well inspection data sheets in Appendix A do not indicate the presence of light non-aqueous phase liquid (LNAPL) sheens, odors, or dense non-aqueous phase liquids (DNAPL) in any of the monitoring wells. Discharge piping and electric lines prevented access to the extraction wells that were historically monitored (EW-7, EW-13).

Development was performed by pumping and surging. Several monitoring wells were pumped dry and allowed to recharge before continuing development. The well development data sheets (Appendix A) indicated well development was terminated after a turbidity reading of approximately 5 NTUs was met, 10 well volumes were evacuated, the well was pumped dry three times, or approximately 4 hours of well

development was conducted. All development water was containerized in 55-gallon steel drums and temporarily stored at the Site.

3.3 WELL SURVEY AND GROUNDWATER LEVEL MEASUREMENTS

The well survey was performed by Louis Federici & Associates of Providence, Rhode Island on June 3, 2004. The survey's horizontal datum was NAD1983 and the vertical datum was relative to the Navy's mean low water bench mark. The well elevation was surveyed at three points: top of outer protective well casing ("top of case"), top of well casing ("top of riser') and ground elevation (existing grade). The top of the well casing was not surveyed at extraction wells EW-7 and EW-13 due to piping obstructions.

Groundwater levels were measured at the Site monitoring wells on June 3, 2004. The measuring point was the top of the well casing which corresponds to the top of riser point surveyed. All water levels were measured with an electronic water level indicator with an accuracy of 0.01 feet. The water level indicator was decontaminated between wells to avoid potential cross contamination. One monitoring well (MW-602) was dry at the time of the measurements. Water levels were not measured in extraction wells EW-7 and EW-13 that are included in the monitoring network for the Site because both discharge and electric lines entering the well would have interfered with obtaining accurate water level measurements.

The measuring point elevations, depth to groundwater measurements and calculated groundwater elevations for each of the monitoring wells are summarized on Table 4-1. A bedrock aquifer potentiometric surface map is presented on Figure 4-1. The results are discussed in Section 4.1.

3.4 GROUNDWATER SAMPLE COLLECTION

Groundwater samples were collected at the Site from May 24, 2004 to May 27, 2004. Groundwater samples were obtained from MW-1A, MW-2A, MW-3A, MW-4, MW-8, MW-9, MW-10, MW-701, MW-86-1 MW-86-2, MW-86-4, MW-86-5, MW-901A, MW-901B, MW-902A, and MW-902B. Monitoring well MW-86-1 was used as a background location. The well locations are shown on Figure 3-1. Groundwater samples were not collected from MW-602 because groundwater levels were below the base of the well screen at the time of sampling. Extraction wells EW-7 and EW-13, that had been sampled during Rounds 1 through 3, were not sampled during this round because the permanent submersible pumps were not functioning at the time of sampling. Because several monitoring wells are located downgradient of the former Tanks 53 and 56, and in the vicinity of the extraction wells, monitoring of EW-7 and EW-13 is not necessary (Figure 3-1). The historical results for the wells (Table 2-1) indicate that metals in unfiltered groundwater samples collected from EW-7 during one sampling event (August 1997) exceeded EPA MCLs and/or RIDEM GA Objectives. Metals concentrations in the filtered

groundwater samples did not exceed MCLs or GA Objectives. The extraction system has been shutdown since December 1996. Operation of the system is not necessary because a groundwater contaminant plume does not exist at the Site.

3.4.1 Monitoring Wells

Groundwater samples were collected following EPA's low-flow sampling protocol, except for MW-4 that was sampled after evacuating three well volumes using a bailer. Two separate bladder pumps were placed initially in MW-4 in an attempt to collect "low-flow" samples. However, there appeared to be insufficient head above the pump intake to force groundwater into the pump; the pump discharge consisted of a mixture of air and water. Field parameters (pH, temperature, specific conductance, oxidation-reduction potential (ORP), dissolved oxygen (DO) were measured using a YSI flow-thru cell. The discharge water was checked for the appearance of color, odor, and sheens and observations were noted on the sample logsheets (Appendix B). Turbidity was measured with a LaMotte turbidity meter. Groundwater purged from wells with final turbidity greater than 5 NTU was filtered through a new 0.45 micron pore size filter prior to sample collection for analysis of dissolved metals (MW-1A, MW-4, MW-10, MW86-2, MW-902A, and MW-902B). The sample log sheets are presented in Appendix B. Because petroleum sheens or odors were not observed during sampling no samples were collected for analysis of total petroleum hydrocarbons (TPH): gasoline-range organic compounds (GRO) and diesel-range organic compounds (DRO).

3.4.2 Quality Control Samples

Field quality control (QC) samples collected during the sampling effort included field duplicates, source water field blanks, equipment rinsate blanks, and trip blanks. Each type of field quality control sample underwent the same preservation, holding times, etc., as the field samples. The VOC and SVOC sample data were validated using EPA Region I Tier II validation protocols in accordance with the "Data Functional Guidelines for Evaluating Environmental Analyses" (USEPA, December 1996). Metals sample data was validated using EPA Region I Tier II validation protocol in accordance with "Region I, EPA-Region I Laboratory Data Validation Functional Guideline for Evaluating Inorganic Analyses" (modified February 1989). The data validation memoranda are presented in Appendix C.

4.0 ROUND FIVE RESULTS

This section presents the results of groundwater sampling Round 5. Section 4.1 discusses groundwater occurrence and flow.

4.1 GROUNDWATER OCCURRENCE AND FLOW

Groundwater levels were measured at the monitoring wells on June 3, 2004. The groundwater level measurements and elevations for the monitoring wells are summarized on Table 4-1. As indicated by Table 4-1, the depth to groundwater ranged from 17 to 32 feet below ground surface (bgs) in wells completed from 17 to 60 feet bgs. The remaining wells are completed in the deeper bedrock from 110 to 150 feet bgs (MW-901 and 902 clusters) and water levels ranged from 46 to 52 feet bgs.

A potentiometric surface contour map of the upper bedrock is presented on Figure 4-1. As shown by Figure 4-1, the direction of bulk groundwater flow at the Site is in a northwest direction toward Narragansett Bay. The hydraulic gradient at the Site, measured perpendicular to the 30- and 60-foot contours, is approximately 0.07 (ft/ft). The vertical gradient measured at nested wells MW-901A and B was downward, in contrast with that measured at MW-902A and B which was upward. The groundwater elevations measured in the nested wells at the MW-901 and MW-902 locations were not used to develop the groundwater contours because the groundwater elevations in these wells were significantly lower relative to surrounding wells. Both sets of nested wells were completed into deeper portions of the bedrock aquifer relative to the surrounding monitoring wells.

4.2 LABORATORY RESULTS

Groundwater samples were submitted to Mitkem Corporation laboratory located in Warwick, Rhode Island for volatile organic analysis (Method 8260B), semi-volatile organic analysis (Method 8270C), and total and dissolved metals (Method 6010B). Samples were not collected for analysis of TPH (GRO and DRO) because no petroleum odors or separate phase product were observed before and during both well development and groundwater sampling.

All water quality data were evaluated following Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. The validated results for each analytical parameter are discussed in the following sections and presented in Appendix D. Analytes detected in Round 5 are summarized in Table 4-2. Detected concentrations of analytes are bolded. EPA MCLs and RIDEM GA Groundwater Objectives are listed on the tables and analytes exceeding these criteria are highlighted.

Historical analytical data for each well where data are available are summarized in Appendix E. These tables are organized by monitoring well location, sampling date, and analytical parameter to facilitate an evaluation of historical concentrations at each well. EPA MCLs and RIDEM GA Groundwater Objectives are listed on the tables, and analytes exceeding EPA MCLs and/or RIDEM GA objectives are highlighted.

4.3 VOLATILE ORGANIC ANALYSIS

Concentrations of VOCs that were detected in groundwater samples collected during Round 5 are presented below:

- Chloroform was detected in groundwater samples collected from MW-1A (2J :g/L) and MW-4 (4J :g/L), below the 5 :g/L reporting limit. The J qualifier indicates the quantitation is approximate. The EPA MCL (80 :g/L) and RIDEM's GA objective (100 :g/L) for trichloromethanes (total) were not exceeded.

- Cis-1,2-Dichloroethene was detected in both the groundwater sample and field duplicate sample collected from MW-902A (2J :g/L), and in the groundwater sample collected from MW-902B (1J :g/L), both below the 5 :g/L detection limit. The EPA MCL and RIDEM GA standards (70 :g/L) were not exceeded.

Trace concentrations of target VOCs were found in some Round 5 groundwater samples. However, no contaminant concentrations exceeded RIDEM's Class GA groundwater objectives published in RIDEM Regulation 12-100-006, Rules and Regulations for Groundwater Quality, dated August 1996; RIDEM's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, dated February 2004; and EPA's Drinking Water Standards, dated Winter 2004.

4.4 SEMI-VOLATILE ORGANIC ANALYSIS

Concentrations of SVOCs that were detected in groundwater samples collected during Round 5 are presented below:

- Bis(2-ethylhexyl)phthalate was detected at MW-902A (4 :g/L), below the 10 :g/L reporting limit and not detected in the duplicate. The EPA MCL and RIDEM GA standard (6 :g/L) was not exceeded.

- Caprolactam was detected in groundwater samples collected from most monitoring wells except MW-701, MW-8, MW-9, MW-10, MW-701, MW-86-4, MW-86-5, and MW901A. Caprolactam

concentrations ranged from 1J :g/L to 610 :g/L, and was not detected in any rinsate or source water blanks. There are no EPA MCL or RIDEM GA standards established for caprolactum. The EPA Region 9 Preliminary Remedial Goal (PRG) for direct ingestion of drinking water is 18,000 ug/L ((http://www.epa.gov/region09/waste/sfund/prg/index.htm). According to EPA's Technology Transfer Network Air Toxics Website (http://www.epa.gov/ttn/atw/hlthef/caprolac.html), caprolactam is used in the manufacture of synthetic fibers, especially nylon, and in brush bristles, textile stiffeners, film coatings, synthetic plastics, plasticizers, paint vehicles, cross-linking for polyurethanes and in the synthesis of lysine. The source of caprolactum in the Round 5 groundwater samples is unknown. This compound was not on the list of SVOC compounds in previous sampling rounds.

- Di-n-Butylphthalate was detected in groundwater samples collected from MW-1A (1J ug/L) and from MW-86-2, (4J ug/L) at estimated concentrations below the reporting limit (10 ug/L). There are no EPA MCL or RIDEM GA standards established for this compound.

- Fluorene was reported in a duplicate groundwater sample collected from MW-902A (0.10 ug/L) at the reporting limit. There are no EPA MCL or RIDEM GA standards for this compound.

4.5 DISSOLVED AND TOTAL METALS ANALYSIS

Concentrations of TAL dissolved and filtered metals that were detected or estimated in groundwater samples collected during Round 5 are presented below:

- Aluminum was detected in unfiltered groundwater samples collected from MW-1A (1,980 :g/L), MW-3A (432 :g/L; 449 :g/L-duplicate), MW-4 (2,920 :g/L), and MW-902A (396 :g/L: 381 :g/L-duplicate). Aluminum was not detected in any of the filtered groundwater samples. There are no EPA MCL or RIDEM GA standards established for this parameter.

- Arsenic was detected in unfiltered groundwater samples collected from MW-1A (8.4 :g/L), MW-3A (4.3J :g/L; 3.0 U :g/L-duplicate), MW-4 (40.3 :g/L), MW86-1 (3.5J :g/L), MW86-4 (6.0 :g/L), MW86-5 (3.0J :g/L), and MW-902A (4.6J :g/L; 3.9J-duplicate). Arsenic was reported as estimated in filtered groundwater collected from MW-902A (4.7J :g/L, 3.8 J :g/L-duplicate) only. Arsenic exceeded the EPA recommended MCL (10 :g/L) in one groundwater sample (MW-4) collected using the "bailer method". Arsenic concentrations in the filtered samples did not exceed 10 :g/L.

- Barium was reported in unfiltered groundwater samples collected from MW-701(75.9J) only. The EPA MCL and RIDEM GA standards for barium (2,000 :g/L) were not exceeded.

- Calcium was detected in all groundwater samples ranging from 4,470 :g/L (MW-86-4) to 81,800 :g/L (MW-701). There is no EPA MCL or RIDEM GA standard established for this parameter.

- Chromium was detected at MW-4 (13.2 :g/L) in the unfiltered sample only. The EPA MCL and RIDEM GA (100 :g/L) standards for chromium were not exceeded.

- Cobalt was detected at MW-902B (27.1 :g/L) in the unfiltered sample only. There are no EPA MCL or RIDEM GA standards established for this parameter.

- Iron was detected in groundwater samples at concentrations up to 18,400 (MW-4). There are no EPA MCL or RIDEM GA standards established for this parameter.

- Lead was reported in unfiltered groundwater samples collected from MW-1A (2.3J :g/L), MW-3A (2.0 :g/L-not detected and 2.2 J :g/L-duplicate) and MW-4 (8.6 :g/L). The RIDEM GA objective for lead (15 :g/L) was not exceeded.

- Magnesium concentrations ranged from 2,250 :g/L (MW86-4) to 50,500 :g/L (MW-701). There are no EPA MCL or RIDEM GA standards established for this parameter.

- Manganese concentrations ranged from 23.6 :g/L (MW-86-4) to 2,650 :g/L (MW-9). There are no EPA MCL or RIDEM GA standards established for this parameter.

- Nickel concentrations in groundwater samples were up to 63.5 :g/L (MW-902B) in groundwater samples. The RIDEM GA objective for nickel (100 :g/L) was not exceeded.

- Potassium concentrations were up to 4,880 ug/L (MW-701) in groundwater samples. There are no EPA MCL or RIDEM GA standards established for this parameter.

- Sodium was detected at concentrations up to 93,900 :g/L (MW-701) in groundwater samples. There are no EPA MCL or RIDEM GA objectives established for this parameter.

5.0 SUMMARY AND RECOMMENDATIONS

Groundwater samples were collected in Round 5 from a total of 16 monitoring wells (MW-1A, MW-2A, MW-3A, MW-4, MW-8, MW-9, MW-10, MW-701, MW-86-1, MW-86-2, MW-86-4, MW-86-5, MW-901A, MW-901B, MW-902A, and MW-902B) and analyzed for VOCs, SVOCs, and total (unfiltered) and dissolved (filtered) metals. The analytical results for Round 5 indicated detected concentrations did not exceed EPA's drinking water standards and RIDEM's GA drinking water objectives except for arsenic in the unfiltered sample collected from MW-4 (40.3 :g/L). There was no evidence of separate phase product and no samples were collected for analysis of TPH (DRO and GRO). All monitoring wells with the exception of MW4 were sampled following EPA's low flow ("low stress") methodology. Monitoring well MW-04 was sampled using the "bailer method" because there was insufficient head above the pump intake to force sufficient water into the bladder pump. The arsenic exceedence at the MW-4 location may be due to turbidity from using a bailer to sample this well. Groundwater samples could not be collected from the monitoring well MW-601 (dry) and from extraction wells (EW-7 and EW-13), which were sampled during previous rounds (1, 2, and 3), because their submersible pumps were not operational.

Historical results from previous sampling Rounds 1 (December 1996), 2 (March 1997), and 3 (August 1997) (see Appendix E) indicated EPA MCLs and RIDEM GA objectives were not exceeded with the exception of total metals in unfiltered groundwater samples. The bailer method, used to collect samples in the previous rounds created turbulence in the well that incorporated some sediment into the samples. The elevated total metals in the unfiltered samples was affected by sediment in the samples.

In Round 4 (May 2001), monitoring wells were also sampled using the bailer method. The Round 4 results indicated benzo(a)pyrene was detected in a groundwater sample collected from MW-901B (1.0 :g/L) exceeding the MCL (0.2 :g/L) but was not detected in the duplicate of the sample. Bis(2-ethylhexyl)phthalate exceeded GA and MCL standards (6 :g/L) at MW-1A (9 :g/L), MW-8 (7 :g/L), MW-9 (18 :g/L), and MW86-1 (18 :g/L). Monitoring wells MW-9 and MW86-1 were damaged, open, and sediment was present in the purge water from both wells. The analytical results of groundwater samples collected from MW86-1 and MW-9 during Round 4 were compromised and should be disregarded.

The results from Round 5 are consistent with the results from Rounds 1 though 3. EPA MCLs and RIDEM GA objectives were not exceeded, except for arsenic in the unfiltered sample from MW-4, which was collected using a bailer. This result may be biased high due to the presence of fines in the groundwater sample.

Based on the historical analytical results, it appears that the removal action that the Navy conducted in the ring drain has effectively removed the source of contamination and concentrations of potential contaminants of concern have attenuated. Consequently, the extraction and treatment system should remain shut down.

Based on the evaluation of the analytical results from Round 1 though 5, the extraction and treatment system should be abandoned in accordance with applicable procedures and a No-Further-Action Record of Decision prepared as a final ROD for environmental closure of the Tank 53/56 site.

6.0 REFERENCES

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TABLES

TABLE 2-1
ANALYTES DETECTED
POST-EXTRACTION AND TREATMENT SYSTEM SHUTDOWN
DRAFT TECHNICAL MEMORANDUM
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Sample Location			MW01A		MW01A		MW01A		MW01A		MW02A		MW02A		MW02A		MW02A		MW02A		MW02A		MW02A		MW02A		MW02A		MW03A		MW03A		MW03A		MW03A	
Date Sampled			5/23/2001		5/23/2001		5/27/2004		5/27/2004		12/19/1996		12/19/1996		3/24/1997		3/24/1997		8/12/1997		8/14/1997		8/14/1997		5/23/2001		5/23/2001		5/27/2004		12/17/1996		12/17/1996		3/25/1997		3/25/1997	
Matrix	GA Obj.	MCL	GW		GF		GW		GF		GW		GF		GW		GF		GW		GW		GF		GW		GF		GW		GW		GF		GW		GF	
Dup																																						
Volatile Organic Analysis (UG/L)																																						
1,1-Dichloroethane			1	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA		NA	1	U		NA	5	U	5	U		NA	5	U		NA
1,2-Dichloroethene (total)	70	70	2	U		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	2	U		NA		NA		NA		NA		NA		NA
Carbon Disulfide			1	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA		NA	1	U		NA	5	U	5	U		NA	5	U		NA
Chloroform		80	1	U		NA	2	J		NA	5	U		NA	5	U		NA	5	U		NA		NA	1	U		NA	5	U	5	U		NA	5	U		NA
cis-1,2-Dichloroethene	70	70	2	U		NA	5	U		NA	5	U		NA	5	U		NA	1	J		NA		NA	2	U		NA	5	U	5	U		NA	5	U		NA
Total Xylenes	10000	10000	1	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA		NA	1	U		NA	5	U	5	U		NA	5	U		NA
Trichloroethene	5	5	0.9	J		NA	5	U		NA	5	U		NA	5	U		NA	2	J		NA		NA	1			NA	5	U	5	U		NA	5	U		NA
Semivolatile Organic Analysis (UG/L)																																						
Benzo(a)pyrene	0.2	0.2	0.2	U		NA	10	U		NA	10	U		NA	10	U		NA	0.05	U		NA		NA	0.2	U		NA	10	U	10	U		NA	10	U		NA
bis(2-Ethylhexyl)phthalate	6	6	9	J		NA	10	U		NA	10	U		NA	10	U		NA	5			NA		NA	10	U		NA	10	U	10	U		NA	10	U		NA
Caprolactam				NA		NA	85			NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	34			NA		NA		NA		NA
Carbazole			10	U		NA	10	U		NA	20	R		NA	20	U		NA	5	U		NA		NA	10	U		NA	10	U	20	R		NA	20	UJ		NA
Di-n-Butylphthalate			10	U		NA	1	J		NA	10	U		NA	10	U		NA	5	U		NA		NA	10	U		NA	10	U	10	U		NA	10	U		NA
Low Concentration PAH (SIM) Analysis (UG/L)																																						
Fluorene				NA		NA	0.10	UJ		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	0.10	U		NA		NA		NA		NA
TAL Metal Analysis (UG/L)																																						
Aluminum			948	U	90.5	U	1980		6.0	U	2400		100	U	15000	J	100	U		NA	2240	2.2	45.2	U	12100		89.0	U	66.4	U	3300		100	U	1800		100	U
Antimony	6	6	9.13	U	3.65	U	3.0	U	3.0	U	20.0	U	20.0	U	20.0	U	20.0	U		NA	2.0	U	2.0	U	3.65	U	3.65	U	3.1	UJ	20.0	U	20.0	U	20.0	U	20.0	U
Arsenic		10	42.2		2.53	U	8.4		3.0	U	18.0		4.0	U	32.0	J	4.0	UJ		NA	5.4	J	3.2	U	51.7		2.53	U	3.0	U	7.0		4.0	U	5.0	J	4.0	UJ
Barium	2000	2000	32.8		9.9		32.6	U	12.1	U	10.0		10.0	U	80.0	J	10.0	U		NA	17.7	U	4.5	U	69.1		3.3		10.6	U	10.0		10.0	U	50.0		10.0	U
Cadmium	5	5	0.60	U	0.24	UJ	0.20	U	0.20	U	10.0	U	10.0	U	10.0	U	10.0	U		NA	0.50	U	0.50	U	0.24	U	0.24	UJ	0.20	U	10.0	U	10.0	U	10.0	U	10.0	U
Calcium			22000		22600		23200		23100		11000		9900		14000		11000			NA	11400		11600		12400		10900		10500		9500		7200		9600		9000	
Chromium	100	100	1.43	U	0.57	U	0.40	U	0.40	U	20.0	U	20.0	U	50.0		20.0	U		NA	6.5	UJ	6.5	UJ	18.0	U	0.57	U	0.90	U	20.0	U	20.0	U	20.0	U	20.0	U
Cobalt			76.8		2.5	J	16.4	U	1.2	UJ	30.0		20.0	U	30.0		20.0	U		NA	13.3	U	7.0	U	64.9		0.92	UJ	2.1	U	20.0	U	20.0	U	20.0	U	20.0	U
Copper		1300	2.1	U	0.84	U	5.2	U	0.90	U	20.0	U	20.0	U	30.0		20.0	U		NA	3.8	UJ	3.8	UJ	34.7		0.84	U	4.1	U	20.0	U	20.0	U	20.0	U	20.0	U
Iron			209000		26.1	U	17400		37.0	U	7900		40.0	U	52000	J	40.0	U		NA	7130	J	7.1	UJ	43500		32.9	U	234	U	5300		40.0	U	2700		40.0	U
Lead	15	15	6.7	U	1.48	U	2.3	J	2.0	U	8.0		5.0	U	17.0		5.0	U		NA	3.3	U	1.6	U	23.8		1.48	U	2.0	U	8.0		5.0	U	5.0	U	5.0	U
Magnesium			20700		21300		25300		24100		12000		13000		16000		13000			NA	14900		15200		16000		13900		14800		9500		8000		11000		11000	
Manganese			2560		484		2120		393		230		40.0		270		50.0	J		NA	52.3		162		995		19.6		12.2	U	90.0		10.0	U	80.0		10.0	U
Mercury	2	2	0.76	U	0.080	U	0.14	U	0.13	U	0.20	U	0.20	U	0.20	U	0.20	U		NA	0.13	U	0.13	U	0.080	U	0.070	U	0.13	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	100		26.8	U	8.6	U	23.2		11.5	U	40.0	U	40.0	U	70.0	J	40.0	U		NA	7.9	UJ	7.9	UJ	99.0	J	11.0	U	9.7	U	140		40.0	U+E	40.0	U	40.0	U
Potassium			1110		1030		1390	U	1110	U	1000		1000		4000		1000			NA	1500		1320		3200		1610		1400	U	1000	U	1000		3000		2000	
Selenium	50	50	7.6	U	3.04	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	UJ	4.0	UJ		NA	3.4	U	3.4	U	3.04	U	3.04	U	4.0	U	4.0	U	4.0	U	4.0	UJ	4.0	UJ
Silver			2.58	U	1.03	U	2.3	UJ	2.4	UJ	10.0	U	10.0	U	10.0	U	10.0	U		NA	1.6	U	1.7	U	1.03	U	1.03	U	2.9	UJ	10.0	U	10.0	U	10.0	U	10.0	U
Sodium			14200		14300		18100		17900		6000		5900		10000		7500			NA	9640		10300		8280		8500		9760		8900		8000		8900		6800	
Thallium	2	2	0.45	U	0.18	U	3.0	U	3.0	U	5.0	U	5.0	U	5.0	U	5.0	U		NA	2.0	U	2.0	U	0.67	U	0.27	U	3.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Vanadium			1.3	U	0.52	U	2.9	U	0.70	U	10.0	U	10.0	U	30.0		10.0	U		NA	6.0	J	5.3	U	18.8		0.52	U	1.8	U	10.0	U	10.0	U	10.0	U	10.0	U
Zinc			259		12.9	U	56.2	U	12.0	U	70.0		30.0		160	J	20.0			NA	35.2	U	11.2	U	151		19.9		17.1	U	90.0	U	40.0	U	170		120	
Total Petroleum Hydrocarbon Analysis (MG/L)																																						
Total Petroleum Hydrocarbons				NA		NA		NA		NA	1.0	U		NA	1.0	U		NA		NA	1.0	U		NA		NA		NA		NA		NA		NA		NA		NA

Black Background - Criteria Exceeded; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
R - Rejected; NA - Not Analyzed; * - From dilution analysis; GF - Sample Filtered

TABLE 2-1 (cont.)
ANALYTES DETECTED
POST-EXTRACTION AND TREATMENT SYSTEM SHUTDOWN
DRAFT TECHNICAL MEMORANDUM
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Sample Location			MW03A		MW03A		MW03A		MW03A		MW03A		MW03A		MW04		MW04		MW04		MW04		MW04		MW04		MW04		EW07		EW07		EW07		EW07	
Date Sampled			8/12/1997		8/12/1997		5/25/2004		5/25/2004		5/25/2004		5/25/2004		12/17/1996		12/17/1996		3/24/1997		3/24/1997		5/23/2001		5/23/2001		5/27/2004		5/27/2004		12/19/1996		3/25/1997		3/25/1997		3/27/1997	
Matrix	GA Obj.	MCL	GW		GF		GW		GF		GW		GF		GW		GF		GW		GF		GW		GF		GW		GF		GW		GW		GW	
Dup											DUP		DUP																						DUP			
Volatile Organic Analysis (UG/L)																																				
1,1-Dichloroethane			5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	1	U		NA	5	U		NA	5	U	5	U	5	U		NA
1,2-Dichloroethene (total)	70	70		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	2	U		NA		NA		NA		NA		NA		NA		NA
Carbon Disulfide			5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	1	U		NA	5	U		NA	5	U	5	U	5	U		NA
Chloroform		80	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	1	U		NA	4	J		NA	5	U	5	U	5	U		NA
cis-1,2-Dichloroethene	70	70	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	2	U		NA	5	U		NA	5	U	5	U	5	U		NA
Total Xylenes	10000	10000	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	1	U		NA	5	U		NA	5	U	5	U	5	U		NA
Trichloroethene	5	5	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	2			NA	5	U		NA	5	U	5	U	5	U		NA
Semivolatile Organic Analysis (UG/L)																																				
Benzo(a)pyrene	0.2	0.2	0.05	U		NA	10	U		NA	10	U		NA	10	U		NA	10	U		NA	0.2	U		NA	10	U		NA	10	U	10	U	10	U		NA
bis(2-Ethylhexyl)phthalate	6	6	1	J		NA	10	UJ		NA	10	UJ		NA	10	U		NA	10	U		NA	10	U		NA	10	U		NA	10	U	10	U	10	U		NA
Caprolactam				NA		NA	7	J		NA	6	J		NA		NA		NA		NA		NA		NA		NA	8	J		NA		NA		NA		NA		NA
Carbazole			5	U		NA	10	U		NA	10	U		NA	20	R		NA	20	U		NA	10	U		NA	10	U		NA	20	R	20	UJ	20	UJ		NA
Di-n-Butylphthalate			5	U		NA	10	U		NA	10	U		NA	10	U		NA	10	U		NA	10	U		NA	10	U		NA	10	U	10	U	10	U		NA
Low Concentration PAH (SIM) Analysis (UG/L)																																				
Fluorene				NA		NA	0.10	U		NA	0.10	U		NA		NA		NA		NA		NA		NA		NA	0.10	U		NA		NA		NA		NA		NA
TAL Metal Analysis (UG/L)																																				
Aluminum			3390000		116000	U	432		6.0	U	449		6.0	U	4000		100	U	4200	J	100	U	8760		85.7	U	2920		6.0	U	100	U		NA		NA	100	U
Antimony	6	6	2200	J	2000	U	3.0	U	3.0	U	3.0	U	3.0	U	20.0	U	20.0	U	20.0	U	20.0	U	3.65	U	3.65	U	3.0	U	3.0	U	20.0	U		NA		NA	20.0	U
Arsenic		10	9100		3200	U	4.3	J	3.0	U	3.0	U	3.0	U	670		4.0	U	60.0	J	4.0	UJ	121		2.53	U	40.3		3.0	U	4.0	U		NA		NA	4.0	UJ
Barium	2000	2000	20900	U	5000	U	7.8	UJ	5.2	UJ	7.1	UJ	5.7	UJ	40.0		10.0	U	40.0	J	10.0	U	126		10.2		36.4	U	12.2	U	10.0	U		NA		NA	10.0	U
Cadmium	5	5	500	U	500	U	0.29	UJ	0.20	U	0.20	U	0.20	U	10.0	U	10.0	U	10.0	U	10.0	U	0.24	U	0.24	UJ	0.20	U	0.20	U	10.0	U		NA		NA	10.0	U
Calcium			8440000		8950000		6640		6520		6660		6700		35000		31000		29000		28000		37100		31100		30100		27500		19000			NA		NA	16000	
Chromium	100	100	6500	UJ	6500	UJ	0.71	UJ	0.40	U	0.80	U	0.85	U	20.0	U	20.0	U	20.0		20.0	U	28.0		1.2	U	13.2		0.42	UJ	20.0	U		NA		NA	90.0	
Cobalt			20000	U	20000	U	1.3	UJ	0.90	U	1.1	UJ	1.5	UJ	20.0	U	20.0	U	20.0	U	20.0	U	39.9		0.92	UJ	10.3	U	0.90	U	20.0	U		NA		NA	20.0	U
Copper		1300	3800	UJ	3800	UJ	4.7	U	3.0	U	4.5	U	2.1	U	20.0	U	20.0	U	20.0	U	20.0	U	36.2		0.84	U	14.5	U	2.8	U	20.0	U		NA		NA	20.0	U
Iron			5420000	J	189000	J	1210		15.5	U	1230		22.9	U	22000		40.0	U	28000	J	40.0	U	33700		16.46	U	18400		18.4	U	230			NA		NA	980	
Lead	15	15	8300	U	1200	U	2.0	U	2.0	U	2.0	U	2.2	J	13.0		5.0	U	9.0		5.0	U	17.8		1.48	U	8.6		2.0	U	5.0	U		NA		NA	5.0	U
Magnesium			10900000		11300000		7410		7210		7400		7290		27000		25000		24000		23000		23400		23600		23800		21900		19000			NA		NA	17000	
Manganese			365000		497000		52.2		7.7	U	48.3		8.8	U	160		10.0	U	180		10.0	U	567		8.2		145		3.1	U	10.0	U		NA		NA	40.0	
Mercury	2	2	130	U	130	U	0.15	U	0.13	U	0.16	U	0.13	U	2.0	U	2.0	U	2.0	U	2.0	U	0.060	U	0.070	U	0.14	U	0.14	U	0.20	U		NA		NA	0.20	U
Nickel	100		7900	UJ	7900	UJ	4.5	U	3.2	U	4.1	U	3.5	U	40.0	U	40.0	U	40.0	U	40.0	U	65.4	J	2.9	U	15.6	U	3.1	U	40.0	U		NA		NA	90.0	J
Potassium			1760000		1340000		1310	UJ	1220	UJ	1310	UJ	1260	UJ	3000		2000		3000		2000		4140		2590		2820		2160		2000			NA		NA	2000	
Selenium	50	50	5000	J	3400	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	UJ	4.0	UJ	3.04	U	3.04	U	4.0	U	4.0	U	4.0	U		NA		NA	4.0	UJ
Silver			2400	U	1800	U	2.0	U	2.0	U	2.0	U	2.0	U	10.0	U	10.0	U	10.0	U	10.0	U	1.03	U	1.03	U	2.0	U	2.3	UJ	10.0	U		NA		NA	10.0	U
Sodium			9580000		10500000		11900		11800		11800		11900		24000		22000		19000		17000		20400		21500		25700		24400		95000			NA		NA	47000	
Thallium	2	2	2000	U	2000	U	3.0	U	3.0	U	3.0	U	3.0	U	5.0	U	5.0	U	5.0	U	5.0	U	2.5	U	0.59	U	3.0	U	3.0	U	5.0	U		NA		NA	5.0	U
Vanadium			9600	J	7700	J	0.70	U	0.70	U	0.70	U	0.70	U	10.0		10.0	U	20.0		10.0	U	14.0		0.52	U	6.0	U	0.70	U	10.0	U		NA		NA	10.0	U
Zinc			46600		30400	U	15.5	U	14.0	U	16.2	U	14.7	U	250		30.0	U	70.0	J	10.0	U	102		4.4	U	39.0	U	7.0	U	70.0			NA		NA	120	
Total Petroleum Hydrocarbon Analysis (MG/L)																																				
Total Petroleum Hydrocarbons				NA		NA		NA		NA		NA		NA	1.0	U		NA	1.0	U		NA		NA		NA		NA		NA	1.0	U		NA		NA	1.0	U

Black Background - Criteria Exceeded; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
R - Rejected; NA - Not Analyzed; * - From dilution analysis; GF - Sample Filtered

TABLE 2-1 (cont.)
ANALYTES DETECTED
POST-EXTRACTION AND TREATMENT SYSTEM SHUTDOWN
DRAFT TECHNICAL MEMORANDUM
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Sample Location			EW07		EW07		EW07		MW08		MW08		MW08		MW08		MW08		MW09		MW09		MW09		MW10		MW10		MW10		MW10		EW13		EW13	
Date Sampled			3/27/1997		8/14/1997		8/14/1997		12/18/1996		12/18/1996		3/24/1997		5/22/2001		5/22/2001		5/25/2004		5/22/2001		5/22/2001		5/26/2004		5/22/2001		5/22/2001		5/25/2004		5/25/2004		12/19/1996		12/19/1996	
Matrix	GA Obj.	MCL	GW		GW		GF		GW		GF		GW		GW		GF		GW		GW		GF		GW		GW		GF		GW		GF		GW		GW	
Dup			DUP																																		DUP	
Volatile Organic Analysis (UG/L)																																						
1,1-Dichloroethane				NA	5	U		NA	5	U		NA	5	U	1	U		NA	5	U	1	U		NA	5	U	1	U		NA	5	U		NA	8		7	
1,2-Dichloroethene (total)	70	70		NA		NA		NA		NA		NA		NA	2	U		NA		NA	2	U		NA		NA	2	U		NA		NA		NA		NA		NA
Carbon Disulfide				NA	5	U		NA	5	U		NA	5	U	1	UJ		NA	5	U	1	U		NA	5	U	1	U		NA	5	U		NA	5	U	5	U
Chloroform		80		NA	5	U		NA	5	U		NA	5	U	1	U		NA	5	U	1	U		NA	5	U	1	U		NA	5	U		NA	5	U	5	U
cis-1,2-Dichloroethene	70	70		NA	5	U		NA	5	U		NA	5	U	2	U		NA	5	U	2	U		NA	5	U	2	U		NA	5	U		NA	8		8	
Total Xylenes	10000	10000		NA	5	U		NA	5	U		NA	5	U	1	U		NA	5	U	1	U		NA	5	U	1	U		NA	5	U		NA	5	U	5	U
Trichloroethene	5	5		NA	2	J		NA	5	U		NA	5	U	1	J		NA	5	U	1	U		NA	5	U	1	U		NA	5	U		NA	5	UJ	5	J
Semivolatile Organic Analysis (UG/L)																																						
Benzo(a)pyrene	0.2	0.2		NA	0.05	U		NA	10	U		NA	10	U	0.2	U		NA	10	U	0.2	U		NA	10	U	0.2	U		NA	10	U		NA	10	U		NA
bis(2-Ethylhexyl)phthalate	6	6		NA	5	U		NA	10	U		NA	10	U	7	J		NA	10	UJ	18			NA	10	U	10	U		NA	10	UJ		NA	10	U		NA
Caprolactam				NA		NA		NA		NA		NA		NA		NA		NA	10	U		NA		NA	10	U		NA		NA	10	U		NA		NA		NA
Carbazole				NA	5	U		NA	20	R		NA	20	U	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U		NA	20	R		NA
Di-n-Butylphthalate				NA	5	U		NA	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U	10	U		NA	10	U		NA	10	U		NA
Low Concentration PAH (SIM) Analysis (UG/L)																																						
Fluorene				NA		NA		NA		NA		NA		NA		NA		NA	0.10	U		NA		NA	0.10	U		NA		NA	0.10	U		NA		NA		NA
TAL Metal Analysis (UG/L)																																						
Aluminum			100	U	1500		94.6	U	600		100	U	200	J	116	U	56.2	U	38.2	U	1040		37.3	U	6.0	U	2060		60.7	U	159	U	6.0	U	100	U	100	U
Antimony	6	6	20.0	U	30.9		2.0	U	20.0	U	20.0	U	20.0	U	3.65	U	3.65	U	3.5	UJ	3.65	U	3.65	U	3.0	U	3.65	U	3.65	U	3.0	U	3.0	U	20.0	U	20.0	U
Arsenic		10	4.0	UJ	95.3		3.2	U	6.0		4.0	U	4.0	UJ	2.53	U	2.53	U	3.0	U	41.8		2.53	U	3.0	U	16.3		2.53	U	3.0	U	3.0	U	4.0	U	4.0	U
Barium	2000	2000	10.0	U	30.9	U	7.7	U	30.0	U	10.0	U	40.0	J	9.9		6.1		23.8	UJ	130		4.0		7.3	U	19.3		6.6		10.3	UJ	9.9	UJ	10.0	U	10.0	U
Cadmium	5	5	10.0	U	0.50	U	0.50	U	10.0	U	10.0	U	10.0	U	0.24	U	0.24	U	0.20	U	4.3		0.24	U	0.20	U	0.25	U	0.24	U	0.20	U	0.20	U	10.0	U	10.0	U
Calcium			16000		17000		15800		53000		54000		42000		35200		34500		48700		71200		62400		67000		30600		31900		40700		39500		40000		41000	
Chromium	100	100	90.0		3760		6.5	UJ	20.0	U	20.0	U	20.0	U	0.57	U	0.57	U	1.3	U	10.3	U	0.57	U	0.40	U	4.1	U	0.57	U	0.65	UJ	0.41	UJ	20.0	U	20.0	U
Cobalt			20.0	U	21.1	U	15.8	U	20.0	U	20.0	U	20.0	U	0.92	U	0.92	U	2.0	U	243		4.6		5.4	U	16.9		0.92	U	0.90	U	1.1	UJ	20.0	U	20.0	U
Copper		1300	20.0	U	139	J	3.8	UJ	20.0	U	20.0	U	20.0	U	1.8	U	0.84	U	6.7	U	18.8	U	0.84	U	1.6	UJ	2.8	U	0.84	U	2.5	U	3.2	U	20.0	U	20.0	U
Iron			1100		48200	J	1450	J	1600		40.0	U	100	J	156	U	16.46	U	233		23300		16.46	U	58.1	U	8830		16.46	U	677		37.1	U	8400		8600	
Lead	15	15	5.0	U	5.5	U	1.3	U	5.0	U	5.0	U	5.0	U	1.48	U	2.0	U	2.0	U	24.7		1.48	U	2.0	U	3.7	U	1.48	U	2.0	U	2.0	U	5.0	U	5.0	U
Magnesium			17000		17600		16000		21000		21000		18000		18000		17900		19500		43900		43200		48200		21000		21700		27000		26200		30000		31000	
Manganese			40.0		424		355		230		10.0	U	20.0		116		4.8		25.9		24200		1730		2650		686		23.0		9.8	U	4.2	U	1100		1200	
Mercury	2	2	0.20	U	0.19		0.13	U	0.20	U	0.20	U	0.20	U	0.080	U	0.070	U	0.13	U	0.090	U	0.030	U	0.14	U	0.090	U	0.070	U	0.14	U	0.13	U	0.20	U	0.20	U
Nickel	100		90.0	J	210	J	116	J	40.0	U	40.0	U	40.0	U	6.5	U	2.3	U	3.0	U	151		7.3	U	4.3	U	27.6	U	4.4	U	2.8	U	2.5	U	40.0	U	40.0	U
Potassium			2000		1900		1370		2000		3000		3000		2600		2560		4130	J	3460		3050		2690		2020		1950		2020	J	1930	J	2000		2000	
Selenium	50	50	4.0	UJ	3.4	U	3.4	U	4.0	U	4.0	U	4.0	UJ	3.04	U	3.04	U	4.0	U	6.08	UJ	3.04	U	4.0	U	3.04	U	3.04	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver			10.0	U	23.3	J	1.1	UJ	10.0	U	10.0	U	10.0	U	1.03	U	1.03	U	5.7	U	2.3		1.03	U	7.5	U	1.03	U	1.03	U	3.5	UJ	2.8	UJ	10.0	U	10.0	U
Sodium			49000		23600		23400		18000		17000		20000		11000		11200		41200		9810		9630		15700		9690		10400		16200		16100		21000		22000	
Thallium	2	2	5.0	U	5.8		2.0	U	5.0	U	5.0	U	5.0	U	0.30	U	0.10	U	3.0	U	0.85	U	0.10	U	3.0	U	2.5	U	0.10	U	3.0	U	3.0	U	5.0	U	5.0	U
Vanadium			10.0	U	5.3	U	5.3	U	10.0	U	10.0	U	10.0	U	0.52	U	0.52	U	1.6	U	2.8	U	0.52	U	0.70	U	3.4		0.52	U	0.70	U	0.70	U	10.0	U	10.0	U
Zinc			110		272		242		20.0		10.0		50.0	J	6.6	U	3.3	U	16.5	U	229		9.4	U	8.1	U	29.5		5.2	U	8.4	U	19.2	U	30.0		20.0	
Total Petroleum Hydrocarbon Analysis (MG/L)																																						
Total Petroleum Hydrocarbons			1.0	U	1.0	U		NA	1.0	U		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	1.0	U		NA

Black Background - Criteria Exceeded; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
R - Rejected; NA - Not Analyzed; * - From dilution analysis; GF - Sample Filtered

TABLE 2-1 (cont.)
ANALYTES DETECTED
POST-EXTRACTION AND TREATMENT SYSTEM SHUTDOWN
DRAFT TECHNICAL MEMORANDUM
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Sample Location			EW13	EW13	MW701	MW701	MW701	MW701	MW701	MW701	MW701	MW701	MW701	MW861	MW861	MW861	MW861	MW861	MW861	MW861	MW861	MW861
Date Sampled			3/25/1997	8/14/1997	3/24/1997	3/24/1997	3/25/1997	8/13/1997	8/13/1997	5/22/2001	5/22/2001	5/25/2004	12/18/1996	12/18/1996	3/25/1997	3/25/1997	8/13/1997	8/13/1997	5/23/2001	5/23/2001	5/26/2004
Matrix	GA Obj.	MCL	GW	GW	GW	GF	GW	GW	GW	GW	GF	GW	GW	GF	GW	GF	GW	GF	GW	GF	GW	
Dup									DUP													
Volatile Organic Analysis (UG/L)																						
1,1-Dichloroethane			6	6	NA	NA	5 U	5 U	5 U	1 U		NA	5 U	5 U	NA	5 U	5 U	NA	1 U	NA	5 U
1,2-Dichloroethene (total)	70	70			NA	NA	NA	NA	NA	2 U		NA	NA	NA	NA	NA	NA	NA	2 U	NA	NA	NA
Carbon Disulfide			5	5	U	NA	NA	5 U	5 U	5 U	1 U	NA	5 U	5 U	NA	5 U	5 U	NA	1 U	NA	5 U
Chloroform		80	5	5	U	NA	NA	5 U	5 U	5 U	1 U	NA	5 U	6	NA	5 U	5 U	NA	0.9 J	NA	5 U
cis-1,2-Dichloroethene	70	70	7	7		NA	NA	5 U	5 U	5 U	2 U	NA	5 U	5 U	NA	5 U	5 U	NA	2 U	NA	5 U
Total Xylenes	10000	10000	5	5	U	NA	NA	5 U	1 J	5 U	1 U	NA	5 U	5 U	NA	5 U	5 U	NA	1 U	NA	5 U
Trichloroethene	5	5	5	5		NA	NA	5 U	5 U	5 U	1 U	NA	5 U	5 U	NA	5 U	5 U	NA	1 U	NA	5 U
Semivolatile Organic Analysis (UG/L)																						
Benzo(a)pyrene	0.2	0.2	10	0.05	U	NA	NA	10 U	0.05 U	0.05 U	0.2 U	NA	10 U	10 U	NA	10 U	10 U	NA	0.05 U	NA	0.2 U	NA	10 U
bis(2-Ethylhexyl)phthalate	6	6	10	5	U	NA	NA	10 U	2 J	5 U	10 U	NA	10 UJ	10 U	NA	10 U	10 U	NA	5 U	NA	18	NA	10 U
Caprolactam					NA	NA	NA		NA	NA	NA	NA	10 U		NA	NA	NA	NA		NA		NA	1 J
Carbazole			20	5	U	NA	NA	20 U	5 U	5 U	10 U	NA	10 U	20	NA	20 UJ	NA	NA	5 U	NA	10 U	NA	10 U
Di-n-Butylphthalate			10	5	U	NA	NA	10 U	5 U	5 U	10 U	NA	10 U	10 U	NA	10 U	NA	NA	5 U	NA	10 U	NA	10 U
Low Concentration PAH (SIM) Analysis (UG/L)																						
Fluorene					NA	NA	NA	NA	NA	NA	NA	NA	0.10 U		NA	NA	NA	NA		NA		NA	0.10 U
TAL Metal Analysis (UG/L)																						
Aluminum			100	84.2	U	3100 J	100 U	NA	331000 U	215000 U	70.5 U	53.3 U	6.0 U	4100	100 U	4700	100 U	1980000	109000 U	6140	87.2 U	16.1 U
Antimony	6	6	20.0	2.0	U	20.0 U	20.0 U	NA	2000 U	2000 U	4.38 U	3.65 U	6.9 U	20.0 U	20.0 U	20.0 U	20.0 U	2000 U	2000 U	3.65 U	3.65 U	3.0 U
Arsenic		10	12.0	12.4		6.0 J	4.0 UJ	NA	3200 U	3200 U	3.04 U	2.53 U	3.0 U	28.0	4.0 U	14.0 J	4.0 UJ	14400	3400 J	25.8	2.53 U	3.5 J
Barium	2000	2000	20.0	24.1	U	80.0 J	30.0	NA	36300 U	37200 U	24.8	24.6	75.9 J	110 U	10.0 U	30.0	10.0 U	14500 U	6800 U	53.6	6.2	4.9 U
Cadmium	5	5	10.0	0.050	U	10.0 U	10.0 U	NA	500 U	500 U	0.29 U	0.24 U	0.20 U	10.0 U	10.0 U	10.0 U	10.0 U	500 U	500 U	1.6 U	0.24 UJ	0.20 U
Calcium			38000	43200		49000	50000	NA	57100000	57200000	39600	39600	81800	21000	15000	24000	15000	21000000	18100000	34900	16500	14500
Chromium	100	100	20.0	6.5	UJ	20.0 U	20.0 U	NA	6500 UJ	6500 UJ	0.68 U	0.57 U	0.40 U	20.0 U	20.0 U	20.0 U	20.0 U	6500 UJ	6500 UJ	12.4 U	0.60 U	0.40 U
Cobalt			20.0	19.1	U	20.0 U	20.0 U	NA	10000 U	10800 U	1.2 J	1.7 J	9.3 U	20.0 U	20.0 U	20.0 U	20.0 U	39100 U	20000	18.1	7.9 J	0.90 U
Copper		1300	20.0	3.8	UJ	20.0 U	20.0 U	NA	3800 UJ	3800 UJ	1.01 U	0.84 U	4.3 U	20.0 U	20.0 U	20.0 U	20.0 U	3800 UJ	3800 UJ	27.3	0.84 U	1.9 U
Iron			10000	15100	J	7700 J	610 J	NA	532000 J	370000 J	61.9 U	16.46 U	88.8 U	9600	40.0 U	12000	40.0 U	6670000 J	7100 UJ	19400	381	81.0 U
Lead	15	15	5.0	1.6	U	5.0 U	5.0 U	NA	1700 U	2500 U	1.78 U	1.48 U	2.0 U	1.5	5.0 U	5.0 U	5.0 U	4900 U	1200 U	11.6 U	1.48 U	2.0 U
Magnesium			30000	31700		16000	14000	NA	26700000	28000000	22200	23300	50500	9700	8900	10000	9500	15700000	14000000	11000	9090	11100
Manganese			1000	1110		2200	3100 J	NA	2130000	2250000	1430	1180	2380	250	10.0 U	190	10.0 U	716000	356000	484	59.8	3.0 U
Mercury	2	2	0.20	0.13	U	0.20 U	0.20 U	NA	130 U	130 U	0.080 U	0.11 U	0.13 U	0.20 U	0.20 U	0.20 U	0.20 U	130 U	130 U	0.080 U	0.090 U	0.14 U
Nickel	100		40.0	21.2	J	40.0 U	40.0 U	NA	7900 UJ	7900 UJ	1.8 U	1.4 U	0.52 UJ	40.0 U	40.0 U	40.0 U	40.0 U	39700 J	25200 J	33.9 U	12.7 U	4.8 U
Potassium			2000	2690		3000	2000	NA	3350000	3640000	2930	2800	4880 J	1000	1000 U	2000	1000 U	1160000 U	1220000	1580	932	981 U
Selenium	50	50	4.0	3.4	U	4.0 UJ	4.0 UJ	NA	3400 U	3400 U	3.65 U	3.04 U	4.0 U	4.0 U	4.0 U	4.0 UJ	4.0 UJ	3400 U	3400 U	3.04 U	3.04 U	4.0 U
Silver			10.0	3.2	U	10.0 U	10.0 U	NA	39900 J	4100 U	1.24 U	1.03 U	11.3 U	10.0 U	10.0 U	10.0 U	10.0 U	1800 U	1800 U	1.03 U	1.03 U	2.0 U
Sodium			26000	24800		16000	13000	NA	20500000	21600000	11900	12000	93900	7800	7600	11000	9100	11900000	11200000	10400	10200	10700
Thallium	2	2	5.0	2.0	U	5.0 U	5.0 U	NA	2000 U	2000 U	0.28 U	0.14 U	3.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2000 U	2000 U	0.20 U	0.15 U	3.0 U
Vanadium			10.0	8.4	J	10.0 U	10.0 U	NA	5800 J	5300 U	0.62 U	0.52 U	1.5 U	10.0 U	10.0 U	10.0 U	10.0 U	6900 J	10500 J	9.1	0.52 U	0.70 U
Zinc			20.0	21.7	U	20.0 J	10.0 U	NA	6700 U	9900 U	1.8 U	2.6 U	7.9 U	60.0	20.0	60.0	10.0	50000	30400	141	45.7	10.7 U
Total Petroleum Hydrocarbon Analysis (MG/L)																						
Total Petroleum Hydrocarbons			1.0	1.0	U	1.0 U	NA	NA	1.0 U	1.0 U	NA	NA	NA	1.0 U	NA	1.0 U	NA	1.1 U	NA	NA	NA	NA

Black Background - Criteria Exceeded; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
R - Rejected; NA - Not Analyzed; * - From dilution analysis; GF - Sample Filtered

TABLE 2-1 (cont.)
ANALYTES DETECTED
POST-EXTRACTION AND TREATMENT SYSTEM SHUTDOWN
DRAFT TECHNICAL MEMORANDUM
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Sample Location			MW862		MW862		MW862		MW862		MW862		MW862		MW864		MW864		MW864		MW864		MW864		MW864		MW864		MW865		MW865		MW865		MW865	
Date Sampled			12/18/1996		12/18/1996		3/25/1997		3/25/1997		5/27/2004		5/27/2004		12/18/1996		12/18/1996		3/25/1997		3/25/1997		8/14/1997		5/22/2001		5/22/2001		5/25/2004		12/17/1996		12/17/1996		3/24/1997		3/24/1997	
Matrix	GA Obj.	MCL	GW		GF		GW		GF		GW		GF		GW		GF		GW		GF		GW		GW		GF		GW		GW		GF		GW		GF	
Dup																																						
Volatile Organic Analysis (UG/L)																																						
1,1-Dichloroethane			5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U	1	U		NA	5	U	5	U		NA	5	U		NA
1,2-Dichloroethene (total)	70	70		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	2	U		NA		NA		NA		NA		NA		NA
Carbon Disulfide			5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U	1	U		NA	5	U	5	U		NA	5	U		NA
Chloroform		80	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U	1	U		NA	5	U	5	U		NA	5	U		NA
cis-1,2-Dichloroethene	70	70	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U	2	U		NA	5	U	5	U		NA	5	U		NA
Total Xylenes	10000	10000	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U	1	U		NA	5	U	5	U		NA	5	U		NA
Trichloroethene	5	5	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U		NA	5	U	1	U		NA	5	U	5	U		NA	5	U		NA
Semivolatile Organic Analysis (UG/L)																																						
Benzo(a)pyrene	0.2	0.2	10	U		NA		NA		NA	10	U		NA		NA		NA		NA		NA		NA	0.2	U		NA	10	U	10	U		NA	10	U		NA
bis(2-Ethylhexyl)phthalate	6	6	10	U		NA		NA		NA	10	U		NA		NA		NA		NA		NA		NA	10	U		NA	10	UJ	10	U		NA	10	U		NA
Caprolactam				NA		NA		NA		NA	610	*		NA		NA		NA		NA		NA		NA		NA		NA	10	U		NA		NA		NA		NA
Carbazole			20	R		NA		NA		NA	10	U		NA		NA		NA		NA		NA		NA	10	U		NA	10	U	20	R		NA	20	U		NA
Di-n-Butylphthalate			10	U		NA		NA		NA	4	J		NA		NA		NA		NA		NA		NA	10	U		NA	10	U	10	U		NA	10	U		NA
Low Concentration PAH (SIM) Analysis (UG/L)																																						
Fluorene				NA		NA		NA		NA	0.10	U		NA		NA		NA		NA		NA		NA		NA		NA	0.10	U		NA		NA		NA		NA
TAL Metal Analysis (UG/L)																																						
Aluminum			2800		100	U		NA		NA	65.4	U	6.0	U	6300		100	U		NA		NA		NA	203	U	114	U	66.7	U	1100		100	U	8000	J	100	U
Antimony	6	6	20.0	U	20.0	U		NA		NA	3.0	U	3.0	U	20.0	U	20.0	U		NA		NA		NA	3.65	U	3.65	U	3.0	U	20.0	U	20.0	U	20.0	U	20.0	U
Arsenic		10	18.0		4.0	U		NA		NA	3.0	U	3.0	U	14.0		4.0			NA		NA		NA	2.53	U	2.53	U	6.0		4.0	U	4.0	U	15.0	J	4.0	UJ
Barium	2000	2000	10.0		10.0	U		NA		NA	11.9	U	12.1	U	10.0	U	10.0	U		NA		NA		NA	3.9		3.3		5.8	UJ	10.0	U	10.0	U	20.0	J	10.0	U
Cadmium	5	5	10.0	U	10.0	U		NA		NA	0.20	U	0.20	U	10.0	U	10.0	U		NA		NA		NA	1.1	U	0.76	U	3.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Calcium			36000		35000			NA		NA	33700		33400		6800		5400			NA		NA		NA	4240		4340		4470		9200		7900		10000		8800	
Chromium	100	100	20.0	U	20.0	U		NA		NA	0.60	UJ	0.46	UJ	20.0	U	20.0	U		NA		NA		NA	0.57	U	0.57	U	0.40	U	20.0	U	20.0	U	20.0	U	20.0	U
Cobalt			20.0	U	20.0	U		NA		NA	0.90	U	0.90	U	20.0	U	20.0	U		NA		NA		NA	3.1		2.8		2.7	U	20.0	U	20.0	U	20.0	U	20.0	U
Copper		1300	20.0	U	20.0	U		NA		NA	1.8	U	2.7	U	20.0	U	20.0	U		NA		NA		NA	0.84	U	0.84	U	5.3	U	20.0	U	20.0	U	20.0	U	20.0	U
Iron			8900		40.0	U		NA		NA	230	U	18.1	U	19000		40.0	U		NA		NA		NA	154	U	20.4	U	48.8	U	2100		40.0	U	20000	J	40.0	U
Lead	15	15	9.0		5.0	U		NA		NA	2.0	U	2.0	U	11.0		5.0			NA		NA		NA	1.48	U	1.48	U	2.0	U	5.0	U	5.0	U	10.0		5.0	U
Magnesium			28000		28000			NA		NA	22400		22500		3800		2100			NA		NA		NA	2030		2070		2250		9200		9100		11000		9000	
Manganese			350		140			NA		NA	8.1	U	4.3	U	200		20.0			NA		NA		NA	23.7		20.3		23.6		10.0		10.0	U	90.0		10.0	U
Mercury	2	2	0.20	U	0.20	U		NA		NA	0.14	U	0.14	U	0.20	U	0.20			NA		NA		NA	0.060	U	0.050	U	0.14	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	100		40.0	U	40.0	U		NA		NA	3.8	U	3.7	U	40.0	U	40.0	U		NA		NA		NA	6.8	U	6.3	U	6.6	U	40.0	U	40.0	U	270	J	40.0	U
Potassium			3000		3000			NA		NA	3490		3600		1000		1000			NA		NA		NA	1030		1130		1140	UJ	1000	U	1000		2000		1000	U
Selenium	50	50	4.0	U	4.0	U		NA		NA	4.0	U	4.0	U	4.0	U	4.0			NA		NA		NA	3.04	U	3.04	U	4.2	J	4.0	U	4.0	U	4.0	UJ	4.0	UJ
Silver			10.0	U	10.0	U		NA		NA	2.3	UJ	2.0	UJ	10.0	U	10.0	U		NA		NA		NA	1.03	U	1.03	U	2.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium			18000		19000			NA		NA	36900		36800		5000		4700			NA		NA		NA	8230		8390		14400		6900		6800		8100		6500	
Thallium	2	2	5.0	U	5.0	U		NA		NA	3.0	U	3.0	U	5.0		5.0			NA		NA		NA	0.12	U	0.10	U	3.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Vanadium			10.0	U	10.0	U		NA		NA	0.70	U	0.70	U	10.0	U	10.0	U		NA		NA		NA	0.52	U	0.52	U	0.70	U	10.0	U	10.0	U	10.0		10.0	U
Zinc			70.0		30.0			NA		NA	7.4	U	7.5	U	30.0		30.0			NA		NA		NA	12.3	U	12.6	U	20.9	U	20.0		10.0	U	70.0	J	10.0	
Total Petroleum Hydrocarbon Analysis (MG/L)																																						
Total Petroleum Hydrocarbons			1.0	U		NA		NA	1.0	U		NA		NA	1.0	U		NA		NA	1.0	U		NA		NA		NA		NA	1.0	U		NA	1.0	U		NA

Black Background - Criteria Exceeded; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
R - Rejected; NA - Not Analyzed; * - From dilution analysis; GF - Sample Filtered

TABLE 2-1 (cont.)
ANALYTES DETECTED
POST-EXTRACTION AND TREATMENT SYSTEM SHUTDOWN
DRAFT TECHNICAL MEMORANDUM
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Sample Location			MW865		MW901A		MW901B		MW901A		MW901A		MW901B		MW901B		MW901B		MW901B		MW901A		MW901B		MW902A		MW902A		MW902B		MW902A		MW902A		MW902A		MW902A		MW902B	
Date Sampled			5/25/2004		1/19/2000		1/19/2000		5/23/2001		5/23/2001		5/23/2001		5/23/2001		5/23/2001		5/26/2004		5/26/2004		1/18/2000		1/18/2000		1/18/2000		5/24/2001		5/24/2001		5/24/2001		5/24/2001		5/24/2001	
Matrix	GA Obj.	MCL	GW		GW		GW		GW		GF		GW		GF		GW		GF		GW		GW		GW		GW		GW		GF		GW		GF		GW	
Dup																	DUP		DUP						DUP								DUP		DUP			
Volatile Organic Analysis (UG/L)																																								
1,1-Dichloroethane			5	U	0.9	J	0.9	J	0.8	J		NA	0.8	J		NA	0.8	J		NA	5	U	5	U	1		1		1		1			NA	2			NA	1	
1,2-Dichloroethene (total)	70	70		NA		NA		NA	2			NA	1	J		NA	2	J		NA		NA		NA		NA		NA		NA	3			NA	3			NA	2	J
Carbon Disulfide			5	U	1	U	1	U	1	U		NA	1	U		NA	1	U		NA	5	U	5	U	1	U	1	U	1	U	1	U		NA	0.7	J		NA	1	U
Chloroform		80	5	U	1	U	1	U	1	U		NA	1	U		NA	1	U		NA	5	U	5	U	1	U	1	U	1	U	1	U		NA	1	U		NA	1	U
cis-1,2-Dichloroethene	70	70	5	U	2		1		2			NA	1	J		NA	2	J		NA	5	U	5	U	3		3		2		3			NA	3			NA	2	J
Total Xylenes	10000	10000	5	U	3	U	3	U	1	U		NA	1	U		NA	1	U		NA	5	U	5	U	3	U	3	U	3	U	1	U		NA	1	U		NA	1	U
Trichloroethene	5	5	5	U	1		0.9	J	1			NA	1			NA	0.8	J		NA	5	U	5	U	1		1		0.9	J	1			NA	1			NA	1	
Semivolatile Organic Analysis (UG/L)																																								
Benzo(a)pyrene	0.2	0.2	10	U	5	U	5	U	0.2	U		NA	1			NA	0.2	U		NA	10	U	10	U	5	U	5	U	5	U	0.2	UJ		NA	0.2	UJ		NA	0.2	UJ
bis(2-Ethylhexyl)phthalate	6	6	10	UJ	5	U	5	U	10	U		NA	10	U		NA	10	U		NA	10	U	10	U	5	U	2	J	5	U	10	U		NA	10	U		NA	10	U
Caprolactam			10	U		NA		NA		NA		NA		NA		NA		NA		NA	10	U	3	J		NA		NA		NA		NA		NA		NA		NA		NA
Carbazole			10	U	5	U	5	U	10	U		NA	10	U		NA	10	U		NA	10	U	10	U	5	U	5	U	5	U	10	U		NA	10	U		NA	10	U
Di-n-Butylphthalate			10	U	5	U	5	U	10	U		NA	10	U		NA	10	U		NA	10	U	10	U	5	U	5	U	5	U	10	U		NA	10	U		NA	10	U
Low Concentration PAH (SIM) Analysis (UG/L)																																								
Fluorene			0.10	U		NA		NA		NA		NA		NA		NA		NA		NA	0.10	U	0.10	U		NA		NA		NA		NA		NA		NA		NA		NA
TAL Metal Analysis (UG/L)																																								
Aluminum			12.9	U		NA		NA	132	U	89.4	U	82.5	U	91.9	U	94.7	U	92.8	U	91.7	U	63.9	U		NA		NA		NA	2310		101	U	1870		144	U	102	U
Antimony	6	6	3.0	U		NA		NA	3.65	U	3.65	U	3.65	U	3.65	U	3.65	U	3.65	U	3.0	U	3.0	U		NA		NA		NA	3.65	U	3.65	U	3.65	U	3.65	U	3.65	U
Arsenic		10	3.0	J	3.6	U	3.6	U	2.53	U	2.53	U	2.53	U	2.53	U	2.53	U	2.53	U	3.0	U	3.0	U	9.9		7.1		8.5		6.5	U	2.53	U	2.53	U	3.3	U	2.53	U
Barium	2000	2000	6.4	UJ	23.0	U	15.3	U	16.7		17.0		17.8		18.6		17.8		17.2		20.8	U	17.9	U	41.7	U	37.5	U	26.0	U	36.9		27.8		34.8		26.7		12.6	
Cadmium	5	5	0.20	U	0.43	U	0.43	U	0.24	U	0.24	UJ	0.24	U	0.24	UJ	0.24	U	0.24	UJ	0.20	U	0.20	U	0.43	U	0.43	U	0.43	U	0.24	U	0.24	UJ	0.24	U	0.24	UJ	0.24	U
Calcium			5030			NA		NA	25000		25500		24200		23200		24100		23500		21800		22100			NA		NA		NA	31800		35200		31900		33600		19800	
Chromium	100	100	0.40	U	5.4	U	5.4	U	0.76	U	0.97	U	0.61	U	1.1	U	0.57	U	1.2	U	0.40	U	0.40	U	5.7		6.5		8.2		4.1	U	1.2	U	3.8	U	0.80	U	1.8	U
Cobalt			1.5	UJ		NA		NA	10.8		11.8	J	10.5		9.4	J	11.2		9.6	J	8.6	U	10.1	U		NA		NA		NA	11.9		13.1	J	12.5		12.4	J	24.5	
Copper		1300	5.2	U		NA		NA	0.84	U	0.84	U	0.84	U	0.84	U	0.84	U	0.84	U	1.3	UJ	2.5	U		NA		NA		NA	3.5	U	0.84	U	1.6	U	0.84	U	0.84	U
Iron			30.8	U		NA		NA	12900		13000		16200		15200		16600		15400		11400		14500			NA		NA		NA	16200		13400		15500		12800		12200	
Lead	15	15	2.0	U	2.7	U	2.7	U	1.48	U	1.9	U	1.48	U	1.48	U	1.48	U	1.48	U	2.0	U	2.0	U	2.7	U	2.7	U	2.7	U	4.0	U	1.9	U	3.3	U	1.9	U	1.48	U
Magnesium			4110			NA		NA	26200		26600		26600		25500		26600		25700		23400		26000			NA		NA		NA	30700		33700		31000		32100		18300	
Manganese			6.2	U		NA		NA	774		789		1080		1040		1090		1050		723		959			NA		NA		NA	1070		1140		1070		1090		708	
Mercury	2	2	0.13	U	0.18	U	0.18	U	0.030	U	0.090	U	0.090	U	0.090	U	0.070	U	0.090	U	0.14	U	0.14	U	0.18	U	0.18	U	0.18	U	0.050	U	0.040	U	0.050	U	0.040	U	0.090	U
Nickel	100		3.1	U		NA		NA	35.6	U	36.7	U	29.9	U	27.6	U	31.5	U	28.2	U	25.8		31.8			NA		NA		NA	31.8	U	32.3	U	30.4	U	30.0	U	57.9	J
Potassium			1050	UJ		NA		NA	1220		1260		907		926		910		892		1340	U	955	U		NA		NA		NA	1650		1610		1470		1550		1310	
Selenium	50	50	4.0	U	2.1	U	2.1	U	3.04	U	3.04	U	3.04	U	3.04	U	3.04	U	3.04	U	4.0	U	4.0	U	2.1	U	2.1	U	2.1	U	3.1	U	3.04	U	3.04	U	3.04	U	3.04	U
Silver			2.3	UJ	3.7	U	3.7	U	1.03	U	1.03	U	1.03	U	1.03	U	1.03	U	1.03	U	2.0	U	2.0	U	3.7	U	3.7	U	3.7	U	1.03	UJ	1.03	U	1.03	U	1.03	U	1.03	U
Sodium			11700			NA		NA	20200		21200		18000		18000		18200		17700		28100		21100			NA		NA		NA	19100		20100		18500		19400		12500	
Thallium	2	2	3.0	U		NA		NA	0.10	U	1.9	U	0.92	U	0.52	U	0.47	U	0.23	U	3.0	U	3.0	U		NA		NA		NA	1.9	U	0.10	U	0.68	U	0.10	U	0.15	U
Vanadium			0.70	U		NA		NA	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.70	U	0.70	U		NA		NA		NA	2.1	U	0.77	U	1.6	U	0.52	U	0.52	U
Zinc			16.1	U		NA		NA	84.1		12.5	U	29.8		15.7	U	46.3		17.3	U	24.4	U	99.2	U		NA		NA		NA	31.9	U	26.6		32.3	U	25.5		137	
Total Petroleum Hydrocarbon Analysis (MG/L)																																								
Total Petroleum Hydrocarbons				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	0.24			NA	0.21			NA		NA

Black Background - Criteria Exceeded; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
R - Rejected; NA - Not Analyzed; * - From dilution analysis; GF - Sample Filtered

TABLE 2-1 (cont.)
ANALYTES DETECTED
POST-EXTRACTION AND TREATMENT SYSTEM SHUTDOWN
DRAFT TECHNICAL MEMORANDUM
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Sample Location			MW902B		MW902A		MW902A		MW902A		MW902A		MW902B	
Date Sampled			5/24/2001		5/27/2004		5/27/2004		5/27/2004		5/27/2004		5/27/2004	
Matrix	GA Obj.	MCL	GF		GW		GF		GW		GF		GW	
Dup									DUP		DUP			
Volatile Organic Analysis (UG/L)														
1,1-Dichloroethane				NA	5	U		NA	5	U		NA	5	U
1,2-Dichloroethene (total)	70	70		NA		NA		NA		NA		NA		NA
Carbon Disulfide				NA	5	U		NA	5	U		NA	5	U
Chloroform		80		NA	5	U		NA	5	U		NA	5	U
cis-1,2-Dichloroethene	70	70		NA	2	J		NA	2	J		NA	1	J
Total Xylenes	10000	10000		NA	5	U		NA	5	U		NA	5	U
Trichloroethene	5	5		NA	5	U		NA	5	U		NA	5	U
Semivolatile Organic Analysis (UG/L)														
Benzo(a)pyrene	0.2	0.2		NA	10	U		NA	10	U		NA	10	U
bis(2-Ethylhexyl)phthalate	6	6		NA	4	J		NA	10	U		NA	10	U
Caprolactam				NA	20			NA	21			NA	15	
Carbazole				NA	10	U		NA	10	U		NA	10	U
Di-n-Butylphthalate				NA	10	U		NA	10	U		NA	10	U
Low Concentration PAH (SIM) Analysis (UG/L)														
Fluorene				NA	0.10	U		NA	0.10			NA	0.10	U
TAL Metal Analysis (UG/L)														
Aluminum			96.4	U	396		6.0	U	381		6.0	U	83.3	U
Antimony	6	6	3.65	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Arsenic		10	2.6	U	4.6	J	4.7	J	3.9	J	3.8	J	3.0	U
Barium	2000	2000	12.8		53.2	U	50.0	U	54.2	U	50.8	U	18.8	U
Cadmium	5	5	0.24	UJ	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Calcium			19900		49600		48000		49300		49200		22900	
Chromium	100	100	0.75	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Cobalt			22.0	J	14.7	U	16.1	U	14.7	U	14.7	U	27.1	
Copper		1300	0.84	U	0.93	UJ	1.0	UJ	2.4	U	1.6	UJ	1.9	U
Iron			11600		17800		16500		18100		17000		15000	
Lead	15	15	1.48	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium			18200		47100		46300		47800		47400		22400	
Manganese			710		1510		1480		1530		1520		840	
Mercury	2	2	0.040	U	0.14	U	0.14	U	0.13	U	0.14	U	0.13	U
Nickel	100		51.5	U	31.3		30.0		31.1		30.7		63.5	
Potassium			1270		2210		2120		2170		2140		1620	
Selenium	50	50	3.04	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver			1.03	U	3.1	UJ	3.2	UJ	2.8	UJ	2.9	UJ	2.0	U
Sodium			12600		47800		46500		47300		47200		22700	
Thallium	2	2	0.10	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium			0.52	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U
Zinc			35.2		23.0	U	15.0	U	16.0	U	11.9	U	66.4	U
Total Petroleum Hydrocarbon Analysis (MG/L)														
Total Petroleum Hydrocarbons				NA		NA		NA		NA		NA		NA

Black Background - Criteria Exceeded; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
R - Rejected; NA - Not Analyzed; * - From dilution analysis; GF - Sample Filtered

TABLE 4-1
GROUNDWATER ELEVATION SUMMARY – JUNE 3, 2004
DRAFT TECHNICAL MEMORANDUM
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

WELL IDENTIFICATION	MEASURING POINT ELEVATION(1) (feet-MLW)	JUNE 3, 2004 DEPTH TO GROUNDWATER (feet-BLS)	JUNE 3, 2004 DEPTH TO GROUNDWATER (feet-BMP)	TOTAL WELL DEPTH (feet-BMP)	JUNE 3, 2004 GROUNDWATER ELEVATION (feet-MLW)
MW-1A	44.74	31.96	31.74	59.35	13.00
MW-2A	48.26	28.35	27.98	49.35	20.28
MW-3A	51.84	23.10	22.90	48.85	28.94
MW-4	53.07	23.16	26.34	33.54	26.73
MW-8	69.64	28.33	31.10	44.95	38.54
MW-9	82.40	17.13	20.61	40.20	61.79
MW-10	83.74	19.68	22.06	39.75	61.68
MW-602	63.51	>14.98	>17.19	17.19	<46.32
MW-701	70.02	25.46	25.51	39.98	44.51
MW-86-1	90.62	20.23	21.50	36.60	69.12
MW-86-2	60.49	20.27	21.61	36.96	38.88
MW-86-4	62.84	23.63	25.61	36.30	37.23
MW-86-5	56.20	23.98	25.15	27.09	31.05
MW-901A	54.61	45.95	45.64	112.75	8.97
MW-901B	54.54	46.97	46.59	151.00	7.95
MW-902A	71.33	52.06	51.51	127.40	19.82
MW-902B	71.34	51.63	51.13	148.90	20.21

Abbreviations:

MLW = "mean low water", BLS = "below land surface" (bgs), BMP = "below measuring point" (top of well casing), < means "less than", > means "greater than".

Notes:

1) Well survey conducted by Federici and Associates on June 3, 2004.
2) Water levels and total depth not measured in extraction wells EW-7 and EW-13 because power and discharge piping servicing the submersible pumps inside the well prevented access to the well.

TABLE 4-2
ANALYTES DETECTED - ROUND 5
DRAFT TECHNICAL MEMORANDUM
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Sample Location			**MW-1A**		**MW-1A**		**MW-2A**		**MW-3A**		**MW-3A**		**MW-3A**		**MW-3A**		**MW-4**		**MW-4**		**MW-8**		**MW-9**		**MW-10**	
Date Sampled			**5/27/2004**		**5/27/2004**		**5/27/2004**		**5/25/2004**		**5/25/2004**		**5/25/2004**		**5/25/2004**		**5/27/2004**		**5/27/2004**		**5/25/2004**		**5/26/2004**		**5/25/2004**	
Matrix			**GW**		**GF**		**GW**		**GW**		**GW**		**GF**		**GF**		**GW**		**GF**		**GW**		**GW**		**GW**	
QC Info	**GA Obj.**	**MCL**									**DUP**				**DUP**											
Volatile Organic Analysis (UG/L)																										
Chloroform		80	**2**	J		NA	5	U	5	U	5	U		NA		NA	**4**	J		NA	5	U	5	U	5	U
cis-1,2-Dichloroethene	70	70	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U
Semivolatile Organic Analysis (UG/L)																										
bis(2-Ethylhexyl)phthalate	6	6	10	U		NA	10	U	10	UJ	10	UJ		NA		NA	10	U		NA	10	UJ	10	U	10	UJ
Caprolactam			**85**			NA	**34**		**7**	J	**6**	J		NA		NA	**8**	J		NA	10	U	10	U	10	U
Di-n-Butylphthalate			**1**	J		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U
Low Concentration PAH (SIM) Analysis (UG/L)																										
Fluorene			0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U
TAL Metal Analysis (UG/L)																										
Aluminum			**1980**		6.0	U	66.4	U	**432**		**449**		6.0	U	6.0	U	**2920**		6.0	U	38.2	U	6.0	U	159	U
Antimony	6	6	3.0	U	3.0	U	3.1	UJ	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.5	UJ	3.0	U	3.0	U
Arsenic		*10*	**8.4**		3.0	U	3.0	U	**4.3**	J	3.0	U	3.0	U	3.0	U	***40.3***		3.0	U	3.0	U	3.0	U	3.0	U
Barium	2000	2000	32.6	U	12.1	U	10.6	U	7.8	UJ	7.1	UJ	5.2	UJ	5.7	UJ	36.4	U	12.2	U	23.8	UJ	7.3	U	10.3	UJ
Calcium			**23200**		**23100**		**10500**		**6640**		**6660**		**6520**		**6700**		**30100**		**27500**		**48700**		**67000**		**40700**	
Chromium	100	100	0.40	U	0.40	U	0.90	U	0.71	UJ	0.80	U	0.40	U	0.85	U	**13.2**		0.42	UJ	1.3	U	0.40	U	0.65	UJ
Cobalt			16.4	U	1.2	UJ	2.1	U	1.3	UJ	1.1	UJ	0.90	U	1.5	UJ	10.3	U	0.90	U	2.0	U	5.4	U	0.90	U
Iron			**17400**		37.0	U	234	U	**1210**		**1230**		15.5	U	22.9	U	**18400**		18.4	U	**233**		58.1	U	**677**	
Lead	15	15	**2.3**	J	2.0	U	2.0	U	2.0	U	2.0	U	**2.0**	U	**2.2**	J	**8.6**		2.0	U	2.0	U	2.0	U	2.0	U
Magnesium			**25300**		**24100**		**14800**		**7410**		**7400**		**7210**		**7290**		**23800**		**21900**		**19500**		**48200**		**27000**	
Manganese			**2120**		**393**		12.2	U	**52.2**		**48.3**		7.7	U	8.8	U	145		3.1	U	**25.9**		**2650**		9.8	U
Nickel	100		**23.2**		11.5	U	9.7	U	4.5	U	4.1	U	3.2	U	**3.5**	U	**15.6**	U	3.1	U	3.0	U	4.3	U	2.8	U
Potassium			1390	U	1110	U	1400	U	1310	UJ	1310	UJ	1220	UJ	1260	UJ	**2820**		**2160**		**4130**	J	**2690**		**2020**	J
Sodium			**18100**		**17900**		**9760**		**11900**		**11800**		**11800**		**11900**		**25700**		**24400**		**41200**		**15700**		**16200**	

Bold-Detected; Black Background - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approx; J - Quantitation approx;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

TABLE 4-2 (Cont.)
ANALYTES DETECTED - ROUND 5
DRAFT TECHNICAL MEMORANDUM
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND
PAGE 2 OF 2

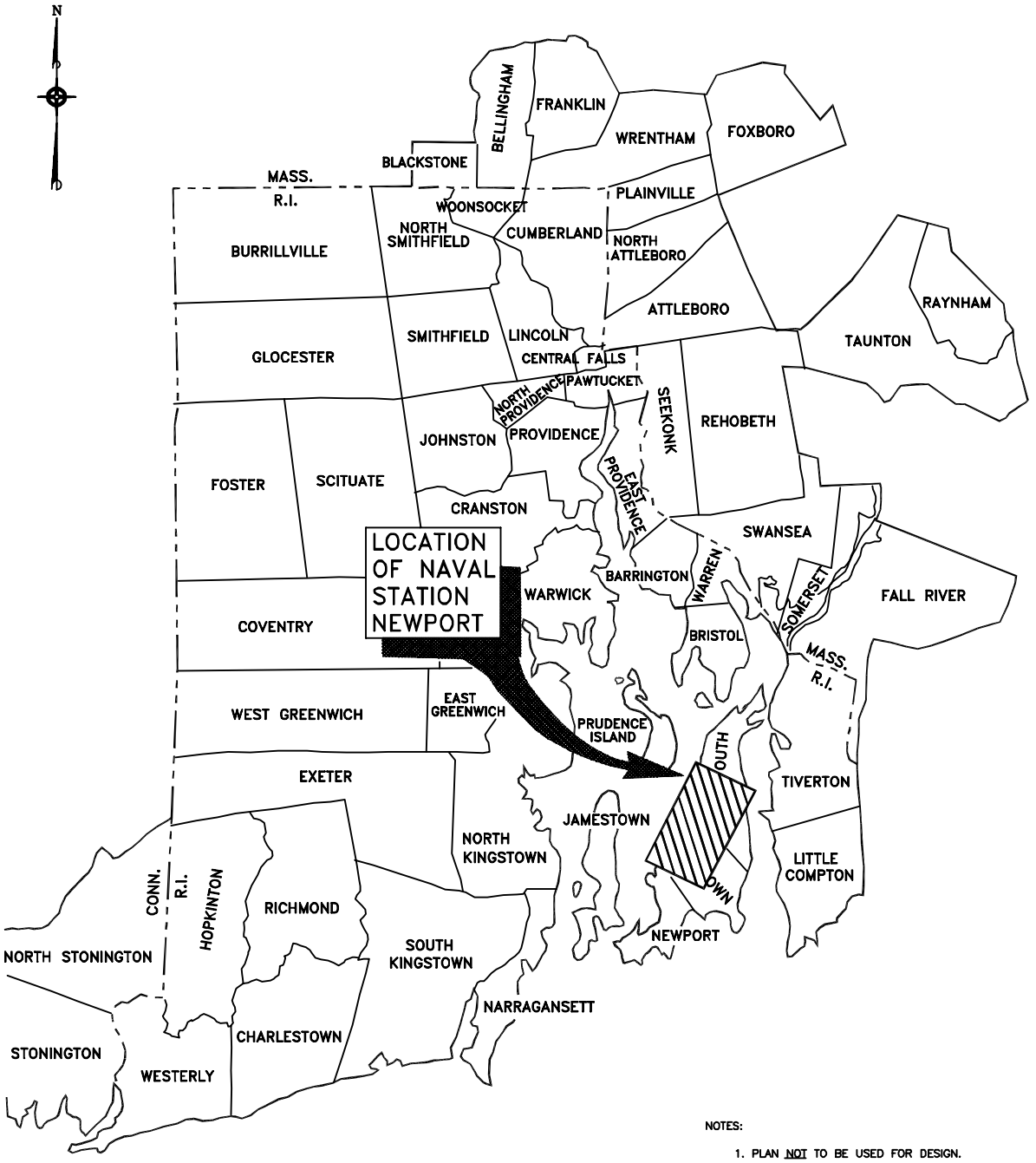
Sample Location			**MW-10**		**MW-701**		**MW-86-1**		**MW-86-2**		**MW-86-2**		**MW-86-4**		**MW-86-5**		**MW-901A**		**901B**		**MW-902A**		**MW-902A**		**MW-902A**		**MW-902A**		**MW-902B**	
Date Sampled			**5/25/2004**		**5/25/2004**		**5/26/2004**		**5/27/2004**		**5/27/2004**		**5/25/2004**		**5/25/2004**		**5/26/2004**		**5/26/2004**		**5/27/2004**		**5/27/2004**		**5/27/2004**		**5/27/2004**		**5/27/2004**	
Matrix			**GF**		**GW**		**GW**		**GW**		**GF**		**GW**		**GW**		**GW**		**GW**		**GW**		**GW**		**GF**		**GF**		**GW**	
QC Info	**GA Obj.**	**MCL**																					**DUP**				**DUP**			
Volatile Organic Analysis (UG/L)																														
Chloroform		80		NA	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
cis-1,2-Dichloroethene	70	70		NA	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	**2**	J	**2**	J		NA		NA	**1**	J
Semivolatile Organic Analysis (UG/L)																														
bis(2-Ethylhexyl)phthalate	6	6		NA	10	UJ	10	U	10	U		NA	10	UJ	10	UJ	10	U	10	U	**4**	J	10	U		NA		NA	10	U
Caprolactam				NA	10	U	**1**	J	**610**	*		NA	10	U	10	U	10	U	**3**	J	**20**		**21**			NA		NA	**15**	
Di-n-Butylphthalate				NA	10	U	10	U	**4**	J		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Low Concentration PAH (SIM) Analysis (UG/L)																														
Fluorene				NA	0.10	U	0.10	U	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	**0.10**			NA		NA	0.10	U
TAL Metal Analysis (UG/L)																														
Aluminum			6.0	U	6.0	U	16.1	U	65.4	U	6.0	U	66.7	U	12.9	U	91.7	U	63.9	U	**396**		**381**		6.0	U	6.0	U	83.3	U
Antimony	6	6	3.0	U	6.9	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	**3.0**	U	**3.0**	U	3.0	U	3.0	U	3.0	U
Arsenic		*10*	3.0	U	3.0	U	**3.5**	J	3.0	U	3.0	U	**6.0**		**3.0**	J	3.0	U	3.0	U	**4.6**	J	**3.9**	J	**4.7**	J	**3.8**	J	3.0	U
Barium	2000	2000	9.9	UJ	**75.9**	J	4.9	U	11.9	U	12.1	U	5.8	UJ	6.4	UJ	20.8	U	17.9	U	53.2	U	54.2	U	50.0	U	50.8	U	18.8	U
Calcium			**39500**		**81800**		**14500**		**33700**		**33400**		**4470**		**5030**		**21800**		**22100**		**49600**		**49300**		**48000**		**49200**		**22900**	
Chromium	100	100	0.41	UJ	0.40	U	0.40	U	0.60	UJ	0.46	UJ	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Cobalt			1.1	UJ	9.3	U	0.90	U	0.90	U	0.90	U	2.7	U	1.5	UJ	8.6	U	10.1	U	14.7	U	14.7	U	16.1	U	14.7	U	**27.1**	
Iron			37.1	U	88.8	U	81.0	U	230	U	18.1	U	48.8	U	30.8	U	**11400**		**14500**		**17800**		**18100**		**16500**		**17000**		**15000**	
Lead	15	15	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium			**26200**		**50500**		**11100**		**22400**		**22500**		**2250**		**4110**		**23400**		**26000**		**47100**		**47800**		**46300**		**47400**		**22400**	
Manganese			4.2	U	**2380**		3.0	U	8.1	U	4.3	U	**23.6**		6.2	U	**723**		**959**		**1510**		**1530**		**1480**		**1520**		**840**	
Nickel	100		2.5	U	0.52	UJ	4.8	U	3.8	U	3.7	U	6.6	U	3.1	U	**25.8**		**31.8**		**31.3**		**31.1**		**30.0**		**30.7**		**63.5**	
Potassium			**1930**	J	**4880**	J	981	U	**3490**		**3600**		1140	UJ	1050	UJ	1340	U	955	U	**2210**		**2170**		**2120**		**2140**		**1620**	
Sodium			**16100**		**93900**		**10700**		**36900**		**36800**		**14400**		**11700**		**28100**		**21100**		**47800**		**47300**		**46500**		**47200**		**22700**	

Bold Values - Detected analytes
Highlighted Values - Exceed criteria noted.

Bold-Detected; Black Background - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approx; J - Quantitation approx;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

FIGURES

DWG\5152\3561\FIG_2-1.DWG 07/13/04 DWM



NOTES:

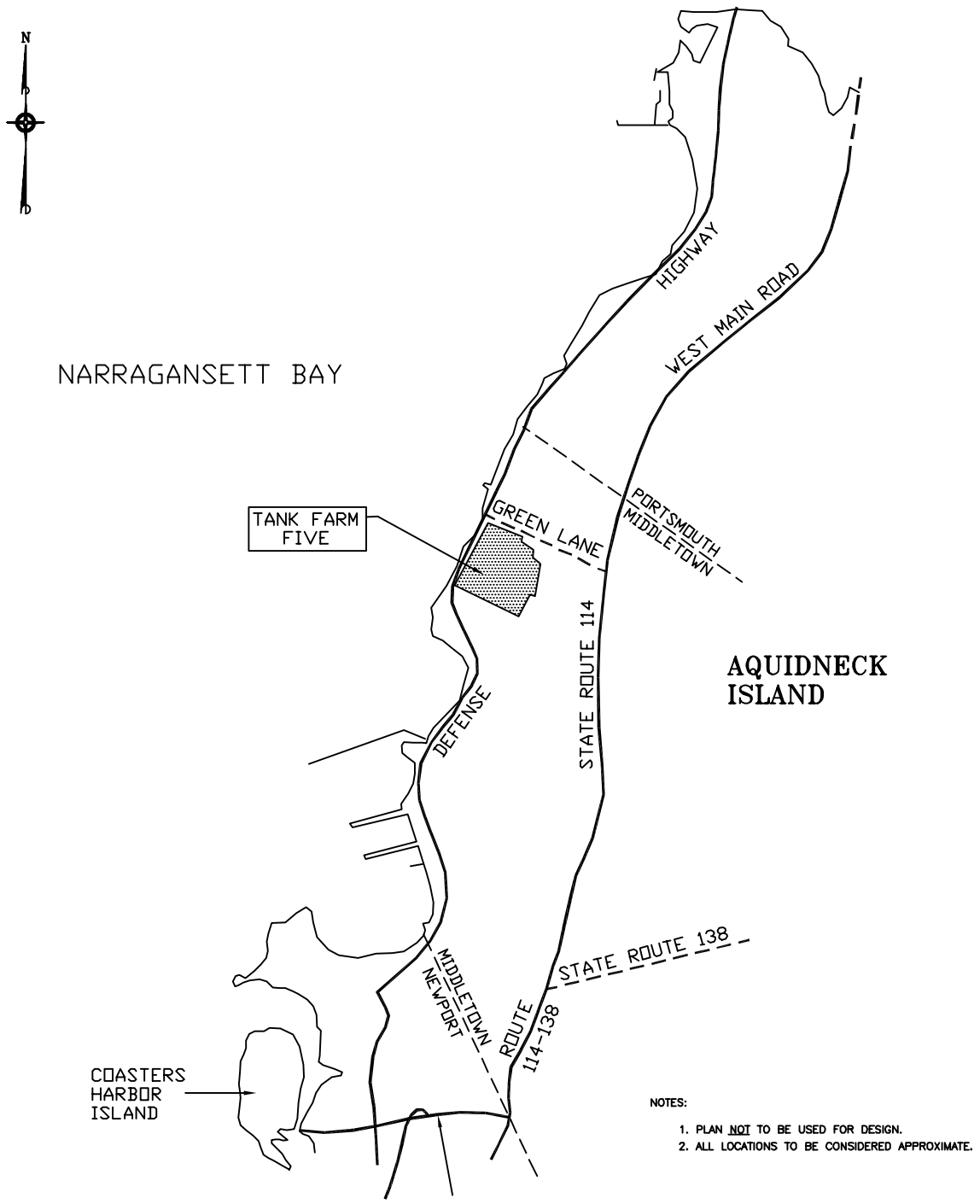
1. PLAN NOT TO BE USED FOR DESIGN.
2. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.

TETRA TECH NUS, INC.

NAVAL STATION NEWPORT LOCUS MAP
TECHNICAL MEMORANDUM – SAMPLE ROUND 5
FORMER TANKS 53 AND 56 – TANK FARM 5
US NAVY NAVFAC EFANE
NAVAL STATION NEWPORT – MIDDLETOWN, RHODE ISLAND

SCALE	NOT TO SCALE
FILE	DWG\5152\3561\FIG_2-1.DWG
REV	0
DATE	07/13/04
FIGURE NUMBER	2-1

DWG\5152\3561\FIG_2-2.DWG 07/13/04 DWM



NOTES:

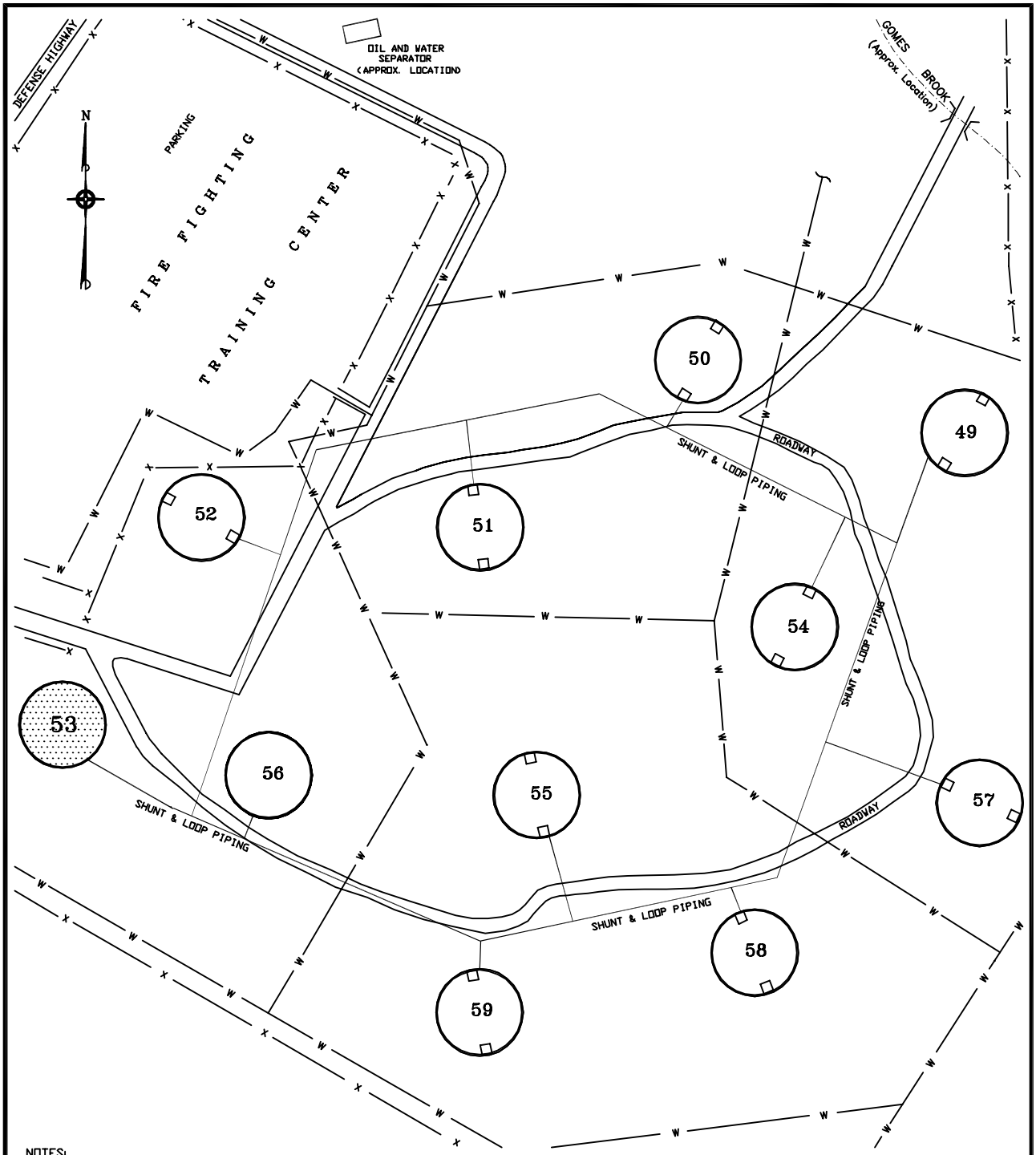
1. PLAN NOT TO BE USED FOR DESIGN.
2. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.

TETRA TECH NUS, INC.

SITE MAP
TECHNICAL MEMORANDUM – SAMPLE ROUND 5
FORMER TANKS 53 AND 56 – TANK FARM 5
US NAVY NAVFAC EFANE
NAVAL STATION NEWPORT – MIDDLETOWN, RHODE ISLAND

SCALE	NOT TO SCALE
FILE	DWG\5152\3561\FIG_2-2.DWG
REV	0
DATE	07/13/04
FIGURE NUMBER	2-2

DWG\5152\3561\FIG_2-3.DWG 10/18/04 DWM



NOTES:

1) TANKS, ROADWAY, FENCE LINES, CULVERT AND SHUNT & LOOP PIPING LOCATIONS FROM AVAILABLE PLANS AND ARE TO BE CONSIDERED APPROXIMATE.

2) PLAN NOT TO BE USED FOR DESIGN.

GRAPHIC SCALE

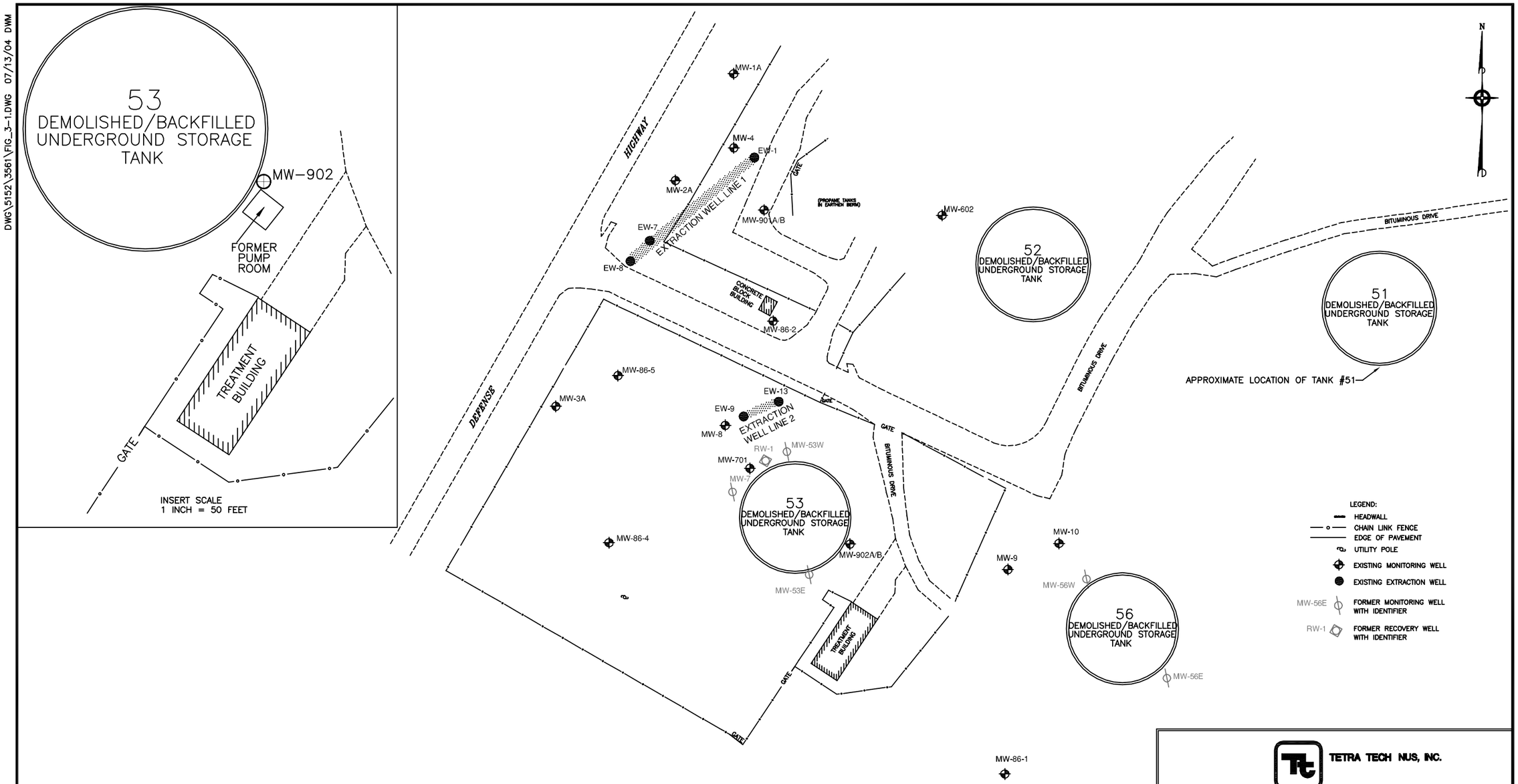
0' 200'

TETRA TECH NUS, INC.

TANK FARM 5 – TANK 53 LOCATION
TECHNICAL MEMORANDUM – SAMPLE ROUND 5
FORMER TANKS 53 AND 56 – TANK FARM 5
US NAVY NAVFAC EFANE
NAVAL STATION NEWPORT – MIDDLETOWN, RHODE ISLAND

SCALE	AS NOTED
FILE	DWG\5152\3561\FIG_2-3.DWG
REV 0	DATE 10/19/04
FIGURE NUMBER	2-3

DWG\5152\3561\FIG_3-1.DWG 07/13/04 DWM



NOTES AND REFERENCES:

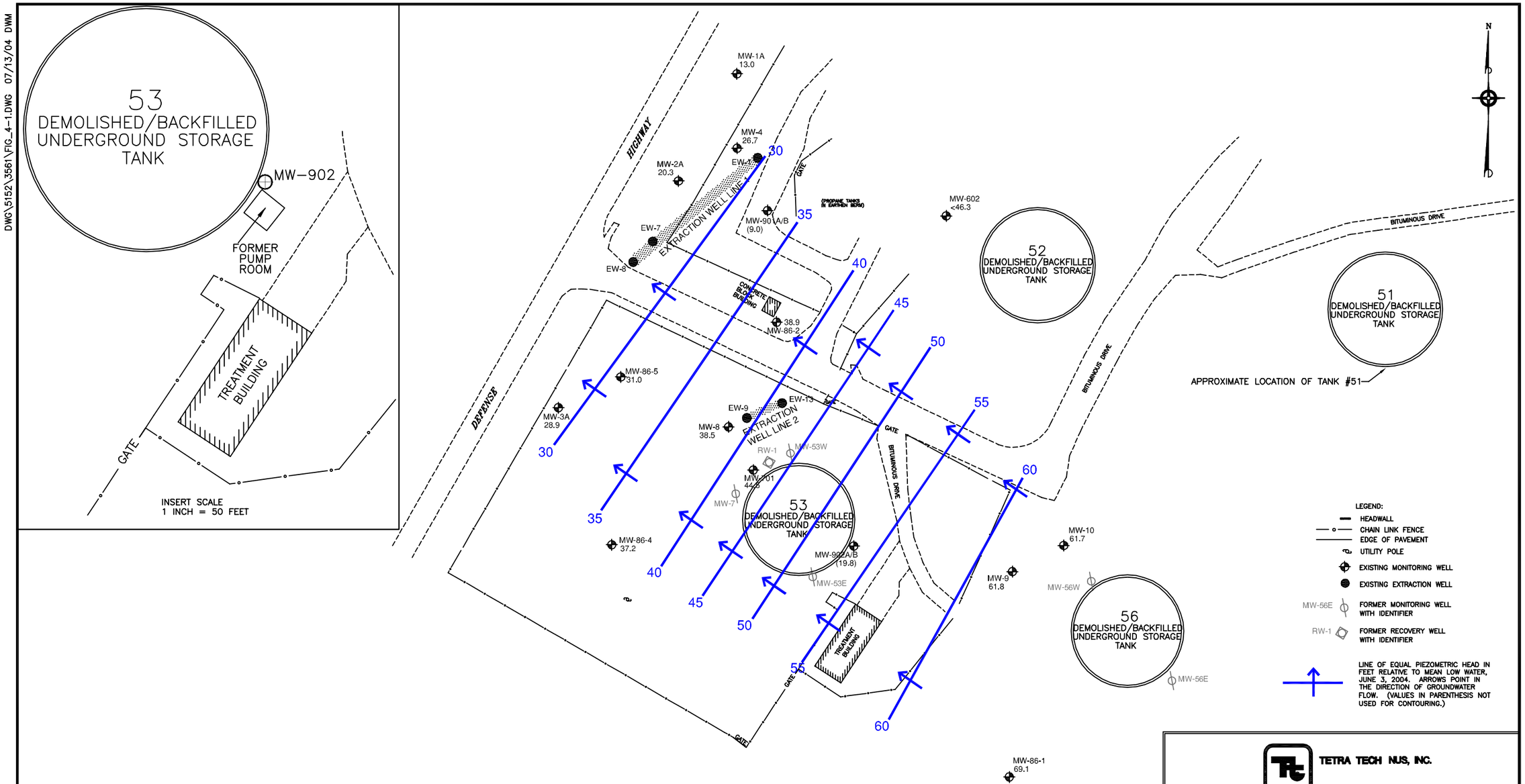
1. U.S. NAVAL BASE NEWPORT, RI, MELVILLE AREAS 2, 3, 4, 8, 5, LOCATION OF ESTABLISHED BENCH MARKS, DEPARTMENT OF THE NAVY BUREAU OF YARDS & DOCKS, DRAWING NO. 638,210, SHEET 1 OF 1, SKETCH NO. C-52-65.
   BM NO. 5 (TANK FARM NO. 5) IS A SQUARE CUT ON N.W. COR. OF R.R. BRIDGE ABUT'MT 83.5'W. OF INTERSECTION. BM ELEV. ARE REFERRED TO THE DATUM OF M.L.W.=0.00.
2. VERTICAL DATUM IS BASED ON LOCAL MEAN LOW WATER (SEE NOTE #2).
3. HORIZONTAL DATUM IS BASED ON THE STATE OF RHODE ISLAND GRID COORDINATE SYSTEM (NAD 1983).
4. PLAN NOT TO BE USED FOR DESIGN.
5. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.

TETRA TECH NUS, INC.

WELL LOCATIONS
TECHNICAL MEMORANDUM – SAMPLE ROUND 5
FORMER TANKS 53 AND 56 – TANK FARM 5
US NAVY NAVFAC EFANE
NAVAL STATION NEWPORT – MIDDLETOWN, RHODE ISLAND

FILE	SCALE
DWG\5152\3561\FIG_3-1.DWG	AS NOTED
FIGURE NUMBER 3-1	REV 0 / DATE 07/13/04

DWG\5152\3561\FIG_4-1.DWG 07/13/04 DWM



NOTES AND REFERENCES:

1. U.S. NAVAL BASE NEWPORT, RI, MELVILLE AREAS 2, 3, 4, 8, 5, LOCATION OF ESTABLISHED BENCH MARKS, DEPARTMENT OF THE NAVY BUREAU OF YARDS & DOCKS, DRAWING NO. 638,21D, SHEET 1 OF 1, SKETCH NO. C-52-65.
   BM NO. 5 (TANK FARM NO. 5) IS A SQUARE CUT ON N.W. COR. OF R.R. BRIDGE ABUT'MT 83.5'W. OF INTERSECTION. BM ELEV. ARE REFERRED TO THE DATUM OF M.L.W.=0.00.
2. VERTICAL DATUM IS BASED ON LOCAL MEAN LOW WATER (SEE NOTE #2).
3. HORIZONTAL DATUM IS BASED ON THE STATE OF RHODE ISLAND GRID COORDINATE SYSTEM (NAD 1983).
4. PLAN NOT TO BE USED FOR DESIGN.
5. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.

TETRA TECH NUS, INC.

POTENTIOMETRIC SURFACE –
UPPER BEDROCK – JUNE 3, 2004
TECHNICAL MEMORANDUM – SAMPLE ROUND 5
FORMER TANKS 53 AND 56 – TANK FARM 5
US NAVY NAVFAC EFANE
NAVAL STATION NEWPORT – MIDDLETOWN, RHODE ISLAND

FILE	SCALE
DWG\5152\3561\FIG_4-1.DWG	AS NOTED
FIGURE NUMBER 4-1	REV 0 / DATE 07/13/04

APPENDIX A

WELL REPAIR AND WELL DEVELOPMENT RECORDS

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW 902B

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/21/04 1230

PROJECT MANAGER C. Race

INSPECTED BY J Lambert
M Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 0.0

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 146.6

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 50.94

WELL STICK-UP -0.2'

CASING STICK UP (FEET) NA (flush-mount)

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? NO no sheen/odor
DNAPL tone? NO noted w/ bailer.
soft bottom

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER mw-902A

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 0945 5/24/04

PROJECT MANAGER C. Race

INSPECTED BY J Lambert

M Heaby

VENT WELL

MONITORING INSTRUMENT READING (FID) 0.0

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 124.4 (Soft Bottom)

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 51.37

WELL STICK-UP NA

CASING STICK-UP (FEET) NA

WELL DIAMETER (INCHES) 2-in.

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? NO DNAPL tone? No no indication of sheen/odor

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER mw-1A

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/21/04 @ 0855

PROJECT MANAGER C Race

INSPECTED BY J Lambert

M Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) BKG

LEL/02 READING —

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 56.5' (Sealed)

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 30.64

WELL STICK-UP Flush mount (-0.2)

CASING STICK UP (FEET) "

WELL DIAMETER (INCHES) 2-in

WELL CONSTRUCTION (PVC STEEL ETC) PVC (Steel Road Box)

LOCKED UPON ARRIVAL?	(YES)	NO	Removed grout from inside Road Box to Drain Water Water up to top of PVC.
LOCKED REPLACED?	(YES)	NO	
OBSTRUCTIONS?	YES	(NO)	
WELL RELABELED?	YES	(NO)	
SLUG TEST CONDUCTED?	YES	(NO)	(If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? NO no sheen noted w/ bailer

DNAPL tone? NO no odors

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW-2A

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/21/04 1115

PROJECT MANAGER C. Race

INSPECTED BY J Lambert
M Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 0.0

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 49.50

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 27.88

WELL STICK-UP -0.4'

CASING STICK-UP (FEET) flush-mount

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? NO
DNAPL tone? No
no bailer ind. of free product (sheen etc)

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW-3A

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/20/04 0830

PROJECT MANAGER C Race

INSPECTED BY J Lambert

M Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 0 0

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 49.5

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 21 62

WELL STICK-UP -0 2' (flush-mount

CASING STICK-UP (FEET) NA

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? NO no jet odor, no
DNAPL tone? NO sheen on water in bailer.

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW-4

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 0830 5/21/04

PROJECT MANAGER C. Race

INSPECTED BY J Lambert
M Heaby

VENT WELL

MONITORING INSTRUMENT READING (FID) 0 0

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC)	34.71 (51 soft)
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)	25.41
WELL STICK-UP	3.15
CASING STICK-UP (FEET)	3.45
WELL DIAMETER (INCHES)	2"
WELL CONSTRUCTION (PVC STEEL ETC)	PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? NO
DNAPL tone? NO
no indications of sheen on bailer no pet odor

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW 8

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/19/04 1115

PROJECT MANAGER C Race

INSPECTED BY J Lambert

M Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 0 0

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 44.30

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 30 18

WELL STICK-UP 32

CASING STICK-UP (FEET) 27

WELL DIAMETER (INCHES) 4'

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? No No Sheen, odor on
DNAPL tone? No water in bailer

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW-9

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 1350 5/18/04

PROJECT MANAGER C. Race

INSPECTED BY J Lambert

M Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 0 0

LEL/02 READING —

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 40 38

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 19 61

WELL STICK-UP 3 55'

CASING STICK-UP (FEET) 3.75'

WELL DIAMETER (INCHES) 4"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	(NO)
LOCKED REPLACED?	(YES)	NO
OBSTRUCTIONS?	YES	(NO)
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? no — no sheen on
DNAPL tone? none water in bailer
soft bottom
-new casing

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW-10

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/18/04 1430

PROJECT MANAGER C. Race

INSPECTED BY J Lambert

M Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 0 0

LEL/02 READING —

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 38.70

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 21.10

WELL STICK UP 2 4'

CASING STICK-UP (FEET) 3 0'

WELL DIAMETER (INCHES) 4"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? NO - no sheen / not odor
DNAPL tone? NO detected / w/ bailer

- new casing

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER HW602

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/20/04 1000

PROJECT MANAGER C Race

INSPECTED BY J Lambert

M. Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 0.0

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 17'

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) well dry - no tone from WL indicator

WELL STICK-UP 2

CASING STICK-UP (FEET) 2 2'

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	(NO)
LOCKED REPLACED?	YES	(NO)
OBSTRUCTIONS?	YES	(NO)
WELL RELABELED?	(YES)	NO
SLUG TEST CONDUCTED?	YES	(NO) (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? None - no bailer sample
DNAPL tone? None collected → well dry

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW-~~602~~ 701

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/19/04 1100

PROJECT MANAGER C. Race

INSPECTED BY J Lambert

M Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 0 0

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC)	~~34.45'~~ 39.14
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)	~~17.55'~~ 24.72
WELL STICK UP	1.77'
CASING STICK-UP (FEET)	1.8'
WELL DIAMETER (INCHES)	2"
WELL CONSTRUCTION (PVC STEEL ETC)	PVC

LOCKED UPON ARRIVAL?	YES	(NO)
LOCKED REPLACED?	(YES)	NO
OBSTRUCTIONS?	YES	(NO)
WELL RELABELED?	YES	(NO)
SLUG TEST CONDUCTED?	YES	(NO) (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? no
DNAPL tone? no
No sheen noted; no odor (from bailer)

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW 86-1

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/18/09

PROJECT MANAGER C. Race

INSPECTED BY J Lambert

M Heaby

VENT WELL

MONITORING INSTRUMENT READING (FID) 0 0

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) ~~20 12~~ ~~29 88~~ ~~31 88~~

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 20 12

WELL STICK-UP 1.2'

CASING STICK-UP (FEET) 1.5'

WELL DIAMETER (INCHES) 1.5"

WELL CONSTRUCTION (PVC STEEL ETC) 1.5" PVC

LOCKED UPON ARRIVAL?	YES	(NO)
LOCKED REPLACED?	(YES)	NO
OBSTRUCTIONS?	YES	(NO)
WELL RELABELED?	(YES)	NO
SLUG TEST CONDUCTED?	YES	(NO) (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? none -no indication of NAPL
DNAPL tone? none w/bailer - water looks clear.
casing sl. bent - PVC looks OK

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER 86-2

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 1450 5/21/04

PROJECT MANAGER C Race

INSPECTED BY J Lambert

M. Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 0.0

LEL/02 READING 0.0

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 37.0

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 20.5

WELL STICK-UP 1.25'

CASING STICK-UP (FEET) 1.50'

WELL DIAMETER (INCHES) ~~2"~~ 1.5"

WELL CONSTRUCTION (PVC, STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	(NO)
LOCKED REPLACED?	(YES)	NO
OBSTRUCTIONS?	YES	(NO)
WELL RELABELED?	YES	(NO)
SLUG TEST CONDUCTED?	YES	(NO) (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? NO
DNAPL tone? NO
no int. w/ bailer

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW 86-4

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/20/04 1015

PROJECT MANAGER C Race

INSPECTED BY J Lambert

M Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 0.0 (6ug/d)

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 36.4

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) <39

WELL STICK-UP 1.9'

CASING STICK-UP (FEET) 2.1'

WELL DIAMETER (INCHES) 1.5"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	(NO)
LOCKED REPLACED?	(YES)	NO
OBSTRUCTIONS?	YES	(NO)
WELL RELABELED?	YES	(NO)
SLUG TEST CONDUCTED?	YES	(NO) (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? No - No sheen on water w/ bailer, no pet. odor

DNAPL tone? No

-may be short a J-plug

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW-86-5

PROJECT NAME Tank Farm S- Tank 53

DATE/TIME 5/19/04 1440

PROJECT MANAGER C Race

INSPECTED BY J Lambert

M Heaby

VENT WELL

MONITORING INSTRUMENT READING (FID) 0.0

LEL/02 READING —

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 27.15

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 23.84

WELL STICK-UP 1.4'

CASING STICK-UP (FEET) 1.2'

WELL DIAMETER (INCHES) 1.5"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	(NO)
LOCKED REPLACED?	(YES)	NO
OBSTRUCTIONS?	YES	(NO)
WELL RELABELED?	YES	(NO)
SLUG TEST CONDUCTED?	YES	(NO) (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? No DNAPL tone? No > bailer sample indicates no sheen

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER EW-7

PROJECT NAME Tank Farm S- Tank 53

DATE/TIME 5/24 ~~900~~ 0930

PROJECT MANAGER C Race

INSPECTED BY J Lambert, C Seydewitz
M Heaby, C Sanchez

VENT WELL

MONITORING INSTRUMENT READING (FID) 0.0

LEL/02 READING 20.0 % O_2, no other gas detected.

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) - M-scope not inserted due to well construction

WATER LEVEL DEPTH (FEET FROM TOP OF PVC)

WELL STICK-UP ~6' bgs

CASING STICK-UP (FEET) ~6' bgs

WELL DIAMETER (INCHES) 4"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? NA
DNAPL tone? NA
note ~~unable to turn on w/ it~~ when turned on, well produces just a trickle of water → may not be able to collect a sample. After it runs for a few min, water flow stops - may just be res. dead water in the system.

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER EW-13

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/24/04 0900

PROJECT MANAGER C Race

INSPECTED BY J Lambert, L Seydewitz
M Healey, C. Sanchez

VENT WELL

MONITORING INSTRUMENT READING (FID) 0.0

LEL/02 READING 19.9% O_2 → after venting 15 min increases to 20.5% O_2 (outside air = 21% O_2)

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) - meter not inserted due to well construction - unable to access interior of well.

WATER LEVEL DEPTH (FEET FROM TOP OF PVC)

WELL STICK-UP ~6' bgs

CASING STICK-UP (FEET) ~6' bgs

WELL DIAMETER (INCHES) 4"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? NA
DNAPL tone? NA
- note: unable to turn on well at first - once the ~~two~~ pump is turned on (energized by the panel nearby) no water comes out of the sample port, after letting it run about 2 min TTFW personnel stops by; unable to get it to work.

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW-901A

PROJECT NAME Tank Farm S- Tank 53

DATE/TIME 5/20/04 1300

PROJECT MANAGER C Race

INSPECTED BY J Lambert

M Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 0.0

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) ~113'

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 46.3'

WELL STICK-UP -0.3'

CASING STICK-UP (FEET) (flush-mount)

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	(NO)
LOCKED REPLACED?	(YES)	NO
OBSTRUCTIONS?	YES	(NO)
WELL RELABELED?	YES	(NO)
SLUG TEST CONDUCTED?	YES	(NO) (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? no DNAPL tone? no no sheen/odor in water in bailer

note - 901A is labelled both A + B on the outside.

Tt NUS Form 0021

TETRA TECH NUS INC

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER MW 901B

PROJECT NAME Tank Farm 5- Tank 53

DATE/TIME 5/20/04 1315

PROJECT MANAGER C. Race

INSPECTED BY J Lambert

M Healey

VENT WELL

MONITORING INSTRUMENT READING (FID) 20

LEL/02 READING NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) ~~113'~~ 150.5

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) ~~46.3'~~ 47.45

WELL STICK-UP -0.3'

CASING STICK-UP (FEET) (flush-mount)

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC STEEL ETC) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS LNAPL tone? No DNAPL tone? No No sheen on water in bailer, no petroleum odor

Tt NUS Form 0021

TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No MW-1A

PROJECT Tank Farm 5 - Tank 53

PROJECT NO 5152-0561

PERSONNEL J Lambert / M. Healey

DATE 5/20/04

WEATHER overcast → sunny

Well Screen Depth 30 / 50 ft bgs

H&S Monitoring Instrument Reading 0 0

Pump Type/Material Waterra

Pump Intake Depth 46 ~~49~~ 50'

Total Purge Volume = 25 (gal)

Data Recorded By JL/MH

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
0905	30 04								
0923	Start Dev.							Water Rusty	
0944	50 5								Well dry
0957								697	
1054	50.5								Well dry
1212	40.9								Dry @ 32.4'
1600	42 69'	25	purged well dry		(cum. total 25 gal)				

Tt NUS Form 0013

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130 47.10

TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No MW-2A

PROJECT Tank Farm 5 - Tank 53
PROJECT NO 5152-0561
PERSONNEL J Lambert / M Healey

o 16 x 25' - 40 gal
Dwell vol's = 40 gal

DATE 5/21/04
WEATHER overcast

Well Screen Depth 30 / 50 ft bgs
H&S Monitoring Instrument Reading 0 0

Pump Type/Material Waterra
Pump Intake Depth 45 - 49

Total Purge Volume = 45 (gal)
Data Recorded By [signature]

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1140	27.88	Start purge (init. WL)							
1150	35 02	water v. cloudy - lots of sed. clogged foot valve will clean							
1155	resume purge try again								
1205	44 35	turb. too high for meter to read clearing up.							
1210	dry	~20 gal							
1215	43.02								
1255	34.77	resume purge (due to time constraints)							
1310	42 80							883	
1315	dry	~30 gal.							
1400	35.45	resume purge							
1405	41 35							851	
1410	dry	45						812	

Tt NUS Form 0013

Page ___ of ___

TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No MW3A

PROJECT Tank Farm 5 - Tank 53
PROJECT NO 5152-0561
PERSONNEL J Lambert / M. Healey

DATE 5/20/04
WEATHER Clear, 78°

Well Screen Depth 30 / 60 ft bgs
H&S Monitoring Instrument Reading 0.0

Pump Type/Material Waterra
Pump Intake Depth 47-48'

Total Purge Volume = 55 (gal)
Data Recorded By J Lambert

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
0905	21.62		begin purge						
0910	25.15			v. dark, opaque					
0915	25.30		tan, still opaque.						
0930	25.80		tan, turb. too high for meter						
0945	25.88		tan, water still opaque						
			~1 gpm						
0950		55		0.16 gal/ft x 30' = 4.8 gal / well volume.					
				10 well vol = 48 gal - stop development					
				due to vol. limit (10 well volumes)					

Tt NUS Form 0013

Page ___ of ___

TETRA TECH NUS, INC | **WELL DEVELOPMENT DATA SHEET** | Well No MW-4

PROJECT Tank Farm 5 - Tank 53
PROJECT NO 5152-0561
PERSONNEL J Lambert / M Healey

1 well vol = 0.16 x 10' = 1.6 gal
10 well vol - 16 gal

DATE 5/21/04
WEATHER overcast

Well Screen Depth 16' / 31' ft bgs
H&S Monitoring Instrument Reading 0.0

Pump Type/Material Waterra
Pump Intake Depth 30-33-34'

Total Purge Volume = 35 (gal)
Data Recorded By [signature]

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
0850	25.41	initial WL begin purge							
0900	30.30	→ well went dry (water v cloudy) but recovered to 30.30							
		within 30 sec. will monitor for recovery							
0905	29.40								
0910	28.14								
0915	27.45 →	resume purge.							
0920	28.50	water is extremely opaque, sed rich brown							
0925	(dry)	- water less opaque but still lt. brown + cloudy, turb too high to read							
0940	27.53 →	resume purge							
0950	→ having difficulty w/ check valve (keeps sitting up - will hang a little higher +								
	try to clear that out first								
1005	(dry)								
1020	28.0 →	resume purge							
1030	(dry)	water still brown + opaque. Will remove surge block + try to							
		remove solids with just the check valve. Everything covered w/ sed.							
1040/~~1045~~	27.75 →	resume purge							
1045	32.70 turb still lower but still above turb meter levels (completely opaque)								
1051	(dry)	35 →	more than 10 well volumes, water not clearing to anywhere near 5 NTU.						

Tt NUS Form 0013

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TETRA TECH NUS, INC | **WELL DEVELOPMENT DATA SHEET** | **Well No** MW-8

PROJECT Tank Farm 5 - Tank 53
PROJECT NO 5152-0561
PERSONNEL J Lambert / M. Healey

DATE 5/19/04
WEATHER cloudy

Well Screen Depth 25 / 45 ft bgs
H&S Monitoring Instrument Reading 0 0

Pump Type/Material Waterra
Pump Intake Depth 40 - 44

Total Purge Volume = (gal)
Data Recorded By J Lambert

Time	Water Level ft below top PVC	Volume ~~mlgal~~	Flow Rate ~~mlmin~~ gpm	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1210	30.16	initial - begin purge							
1220	30.80		1	water cloudy w/ materials floating.				585	
1245	33.18		1	still particles in the water, clearing up.				263	
1315	35.74		1					143	
1330	36.01		1	still particles in water				186	
1345	36.72		1					198	
1400	36.60							217	
1410	~~stop pump~~ 40		stop pump to empty drum						
1420	pumping resumed								
1430	37.15							258	
1450	38.80							317	
1500	34.20							324	
1515	33.95							282	
1535	33.19							283	
1555	33.01							276	

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TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No MW-9

PROJECT Tank Farm 5 - Tank 53
PROJECT NO 5152-0561
PERSONNEL J Lambert / M. Healey

DATE 5/18 → 5/19
WEATHER foggy → sl rain

Well Screen Depth 17 / 37 ft bgs
H&S Monitoring Instrument Reading 0.0

Pump Type/Material Waterra
Pump Intake Depth 20-36'

Total Purge Volume = 110 (gal)
Data Recorded By J Lambert

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1440	19.61	initial							
1445	19.65					very turbid.			
1450	20.05	water stopped + ~~add~~ increasing flow.							
1515	stopped pump - check valve clogged w/ insects, sand etc cleaned out valve +								
	begin purge again further from the well bottom								
1520	19.30	810	- opaque brown water - change to drum for 1 gal/s						
1545	19.40	~~liquids~~ same color as before							
1605	19.40		same as before; error 3 (turb. too high) on meter)						
1635	19.40		move down 6'						
18 1655	19.50		no water appearing from tubing - will remove surge block + try						
~~1715~~		flow beginning again to evacuate the well.							
1715	19.80	water still highly turbid							
1730	shut down pump for the night ~70 gal purged								
19 0845	19.61								
0855	19.85							41.8	
0915	19.85							35.0	
0930	19.85		water appears clear					30.9	
0945	19.80							41.1	
~~0955~~ 1000	19.80	110 gal purged						24.9	

Tt NUS Form 0013

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note: stopped due to 4 hr time limit

TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No MW-10

PROJECT Tank Farm 5 - Tank 53
PROJECT NO 5152-0561
PERSONNEL J Lambert / M Healey

1 well vol - ~12 gall

DATE 5/18 → 5/19
WEATHER fog → 5' rain

Well Screen Depth 16 / 36 ft bgs
H&S Monitoring Instrument Reading 0.0

Pump Type/Material waterra
Pump Intake Depth 30-35.5' bgs

Total Purge Volume = 160 (gal)
Data Recorded By [signature]

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1450	21 10	(initial)	- black water						
1500	24 05		- water ex. opaque - brown now (10 cum. gal)						
1515	24.60		- water still opaque - drill cuttings (?) in water - stop						
			devel to get a 80 gallon drum.						
1525 ~~1525~~	re-start	pump.							
1595	~~26.97~~ 25.9								
5/18 1610	27.60								
1635	27.40	~50	water same color turb as before						
1650	28.60		changed drums (~55 gal), color & turb same as before						
1715	33 94	~70 gal	same water.						
1730		shut	down pump for the night - 90 gal purged						
5/19 0850	21 19								
0855	~~19.85~~ 24.55		water still brown & completely opaque					~~41.8~~	
0915	29 92		"				turb. too high for meter		
0930	33 10							716	
0955	34 90		"				turb too high for meter		
1000	36.05						"		
1010	37.30	160	→ timed out				"		

Tt NUS Form 0013

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TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No MW-60Z

PROJECT Tank Farm 5 - Tank 53

PROJECT NO 5152-0561

PERSONNEL J Lambert / M. Healey

Well DRY - NOT DEVELOPED

DATE 5/20/04

WEATHER part- cloudy, 70°

Well Screen Depth 7 / 15 ft bgs

H&S Monitoring Instrument Reading 0.0

Pump Type/Material NA

Pump Intake Depth NA

Total Purge Volume = NA (gal)

Data Recorded By [illegible]

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments

5/20/04

Tt NUS Form 0013

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TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No ~~602~~ MW-701

PROJECT Tank Farm 5 - Tank 53

PROJECT NO 5152 0561

PERSONNEL J Lambert / M Healey

DATE 5/19/04

WEATHER overcast

Well Screen Depth unknown / _____ ft bgs

H&S Monitoring Instrument Reading 0.0

Pump Type/Material Waterra

Pump Intake Depth 36-39 below TOC

Total Purge Volume = 5 gal (gal)

Data Recorded By [illegible]

Time	Water Level ft below top PVC	Volume ~~mlgal~~	Flow Rate ~~mL/min~~ gpm	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1220	24.75 ~~17.55~~ ~~39~~	5 initial	- water	clear					
1285	24.75							3.39	
		25	1gpm						

Tt NUS Form 0013

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TETRA TECH NUS, INC | **WELL DEVELOPMENT DATA SHEET** | Well No MW-86-1

PROJECT Tank Farm 5 - Tank 53
PROJECT NO 5152-0561
PERSONNEL J Lambert / M. Healey

DATE 5/18/04
WEATHER foggy

Well Screen Depth 15 / 35 ft bgs
H&S Monitoring Instrument Reading 0.0

Pump Type/Material Waterra
Pump Intake Depth 29-30'

Total Purge Volume = 7.5 (gal)
Data Recorded By J Lambert

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp ~~°C~~	~~pH~~	Sp Cond ~~mS/cm~~	~~DO mg/L~~	Turbidity NTU	Comments
0930	20 12	(initial)							
0935	dry	15 gal		brown water				out of range	
	→ let the well		recover						
0940			(just collect enough water for a turb reading)					(579)	
0945	31.01								
0950	28 70								
0955	26.05								
1000	24 50								
1010	23 50	init.		start pump				715	
1012	30' (about)							151	
1013	dry - will	let recover (3 Can gal)							
1050	27 65	init						312/521	
1055	dry - will	let recover (4.5 gal)							
1145	20 95	initial	(6 gal)					453	
1150	dry								
1405	20 20								
1410	begin purge	7.5	~~7.5 gal~~					499	

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(25 gal)

TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No MW 86-2

PROJECT Tank Farm 5 - Tank 53
PROJECT NO 5152-0561
PERSONNEL J Lambert / M. Healey

well vol = 15'
25 gal = vol (conserv)
26' = 75% recovery

DATE 5/21/09
WEATHER overcast 75°

Well Screen Depth 15 / 35 ft bgs
H&S Monitoring Instrument Reading 0 0

Pump Type/Material Waterra
Pump Intake Depth 34-36' BTOC

Total Purge Volume = 6 (gal)
Data Recorded By [signature]

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1500	20.50'								
1505	(dry)	1.5 - water	sl. cloudy & went	dry	before	turb	sample.		
1510	31.14								
1515	30.05								
1530	28.15								
1545	26.75	3 - begin	purge.					3/7	
1550	(dry)								
1645	26.60	4.5 resume	purge					110	
1648	←							878	
1650	(dry)								
1140	20.80	resume	purge.						
1145	(dry)	6 gal							

/21
/24

Tt NUS Form 0013

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TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No MW 86-4

PROJECT Tank Farm 5 - Tank 53

PROJECT NO 5152-0561

PERSONNEL J Lambert / M. Healey

~15 x

DATE 5/20/04

WEATHER sunny

Well Screen Depth 14 / 34 ft bgs

H&S Monitoring Instrument Reading

Pump Type/Material watera

Pump Intake Depth 34-35'

Total Purge Volume = ~~40~~ 30 (gal)

Data Recorded By [signature]

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate ~~mL/min~~ gal/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1020	23 90'	initial WL - begin purge.							
1035	27.70 *		~~~~	water is colorless; no odor/sheen.				143	
1045	28 30 *		~1.0		"			132	
1055	29.21				"			47.0	
1105	30.06	~~40~~ 30	→ turb is stablizing at ~40 and we have purged more than 10 well volumes					43.5	

Tt NUS Form 0013

* need to stop pump to check WL

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TETRA TECH NUS, INC | **WELL DEVELOPMENT DATA SHEET** | **Well No** MW-86 5

PROJECT Tank Farm 5 - Tank 53
PROJECT NO 5152-0561
PERSONNEL J Lambert / M. Healey

DATE 5/19/04
WEATHER overcast

Well Screen Depth 6 / 26 ft bgs
H&S Monitoring Instrument Reading 0.0

Pump Type/Material waterra
Pump Intake Depth 23-25' bgs

Total Purge Volume = 10 (gal)
Data Recorded By [signature]

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1445 ~~1535~~	23.84	initial (pre-purge) wl							
		note: can't get WL while pumping due to sm. well diameter.							
1500		~~[illegible]~~ → water appears clear						38.8	~~38~~
1510	24.72 *							28.5	
1520	24.30 *		water is clear.					13.4	
1530	24.49 *							18.3	
1535		10 gal							
↳ pumped more than 10 well volumes, development complete									

Tt NUS Form 0013

* DTW measured w/ pump turned off.

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TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No EW-07

PROJECT Tank Farm 5 - Tank 53

PROJECT NO 5152-0561

PERSONNEL ~~J Lambert / M. Healey~~ C Sanchez

DATE 5/24/04, 5/25/04

WEATHER clear, ~70°/overcast

Well Screen Depth 70 / 100 ft bgs

H&S Monitoring Instrument Reading 0.0

Pump Type/Material dedicated pump

Pump Intake Depth

Total Purge Volume = ~~50 mL~~ 500 mL ~~(gal)~~

Data Recorded By [signature]

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
5/24 ~~5/25~~ 0930	start pump, take to sample	purge about 20 mL → after discussion with PM, will just come by							
5/25/04 1300	Start pump	purge about 500 mL, water stops flowing. TTFW personnel believe that the water was being pumped was just residual water in the system + not fresh groundwater. Will not develop / sample this well.							

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TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No EW-13

PROJECT Tank Farm 5 - Tank 53

PROJECT NO 5152-0561

PERSONNEL J Lambert / M. Healey / C Sanchez

Unable to get water flow from system - will not develop / sample this well. See well inspection notes

DATE 5/24/04

WEATHER 70°, part. cloudy

Well Screen Depth 20 / 100 ft bgs

H&S Monitoring Instrument Reading 0.0

Pump Type/Material dedicated pump

Pump Intake Depth

Total Purge Volume = _____ (gal)

Data Recorded By [signature]

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments

Tt NUS Form 0013

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TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No MW 901A

PROJECT Tank Farm 5 - Tank 53

PROJECT NO 5152-0561

PERSONNEL J Lambert / M. Healey

DATE 5/20/04

WEATHER 70°, sl. breeze

Well Screen Depth 91 / 111 ft bgs

H&S Monitoring Instrument Reading

Pump Type/Material ~~~10~~ waterra

Pump Intake Depth ~102-112 (intake moved)

Total Purge Volume = 150 (gal)

Data Recorded By [signature]

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1325	46.3	start purge (initial DTW)							
1345	49.45 (cloudy)	Note: due to flat mount construction, waterra is "walking" across the							
		pavement - need to keep a foot on it.							
1400								570	
1420	46.90								
1430	47.01							482	
1455	48.0							727	
~~1515~~	Note - unable to collect WL + purge - need to stand on							1	
1545		waterra to keep it from "walking" across the						343	
~~1600~~	1615	pavement.						110	
~~1625~~								~~177~~	
1645								71.2	
1700								28.4	
1715	→ purged 150 gal - stop development due to volume + time							33.6	
		limits (1 well volume = ~8 gal, 10 = 80 gal)							

Tt NUS Form 0013

TETRA TECH NUS, INC | **WELL DEVELOPMENT DATA SHEET** | **Well No** 901B

PROJECT Tank Farm 5 - Tank 53
PROJECT NO 5152-0561
PERSONNEL J Lambert / M. Healey

DATE 5/20/04
WEATHER clear, 70°

Well Screen Depth 128.5 / 148.5 ft bgs
H&S Monitoring Instrument Reading _____

Pump Type/Material waterra
Pump Intake Depth ~139 - 149' below TOC

Total Purge Volume = 100 (gal)
Data Recorded By [signature]

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1410			initial WL, start purge						
1420								12.1	
1430	47.80			water is	light tan	color		29.0	
1435	stop pump to pump out drum								
1440	resume purge								
1445	47.75							~~99.5~~	
1500	"							99.5	
1515	stop pump to empty drum							93.9	
1545	note - inable to record WL and purge - need to continuously stand							34.5	
1600	on waterra to keep it from			water is	clear + colorless			45.9	
1615	"walking" across the pavement							23.8	
1630								14.5	
1630								11.7	
1640								12.2	
1650								58	
								~~devel complete~~	

(4.5 drums)

Tt NUS Form 0013

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TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No MW-902A

PROJECT Tank Farm 5 - Tank 53

PROJECT NO 5152-0561

PERSONNEL J Lambert / M Healey

DATE 3/24/04

WEATHER overcast sl drizzle

Well Screen Depth 1055 / 1255 ft bgs

H&S Monitoring Instrument Reading BKg.

Pump Type/Material waterra

Pump Intake Depth 2120'

Total Purge Volume = 128 (gal)

Data Recorded By (M Healey)

Time	Water Level ft below top PVC	Volume ~~mL~~ gals	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
0945	31.37			start					
1015									Water was
1047	water turbid but		starting	to	clear	up			turbid.
1105	33.4							206	
1125		55 gal						101	
1145		70						58	
1200		85						64	
1230		110						35	
1245		125						34	

Tt NUS Form 0013

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TETRA TECH NUS, INC

WELL DEVELOPMENT DATA SHEET

Well No MW-902B

PROJECT Tank Farm 5 - Tank 53
PROJECT NO 5152-0561
PERSONNEL J Lambert / M Healey

bottom of well = 146.6'
well vol - 100' x 0.16'
= 16 gal, 160 gal for 10 well volumes

DATE 5/21/04
WEATHER

Well Screen Depth 136 / 146 ft bgs
H&S Monitoring Instrument Reading

Pump Type/Material Waterra
Pump Intake Depth 135-146

Total Purge Volume = ~130 (gal)
Data Recorded By (MH)

Time	Water Level ft below top PVC	Volume ~~mL~~ gal	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1305	50.94	initial water level, begin purge							
1305									
1355	52.65	240						11.9	
1417								22	
1430		55						26	
1515		75						28	Reset pump
1530		85						228	up 5'
1645		115						248	
1710	52.5							152	

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APPENDIX B

ROUND 5 SAMPLE LOG SHEETS

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW" GROUNDWATER

Site Name: Tank Farm 5 Tank 53
Sample ID: TF5-GW-NW17-05

Tetra Tech NUS Charge No: N5152 0562
QC: MS/MSD - Filtered Metals only (TF5 Cu - NW14 - C-F) (If applicable)

Sample Method: Low Flow Using Bladder Pump
Depth Sampled: 50 Feet Screened Interval Depth: 30-50 feet
Sample Date & Time: 5/22/04 1615 hours ____/Dup
Sampler(s): J. Lambert, C. Sanchez, (L. Seydewitz)
Signature of Data Recorder: L. Seydewitz
Initial Water Level = 32.2
Circle MP = Top of Steele or (PVC)

H&S Survey Meter ____ PPM Field Instrument Group (A/B/C/D)
Pre pump insertion WL 32.14 ft Post pump insertion WL 32.2 ft
Stabilization Parameters
Total Depth 50.75
Specific Conductance and Temp (3%)
pH (+/- 0.1 units)
ORP (+/- 10 millivolts)
Turb & DO (10%)

* The pump intake was set at 50 due to well development data and the fact that the well went dry with 2.35 min of development

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial 1~~ setting	Purge Rate ml/min	Cumm Volume Purged liters	Temp °C	Spec Cond 2 mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
1450	32.2	30		Begin purging	filling	flush thru	cell	adjusting	flow rate		
1500	32.1		180		13.31	275	6.18	94.1	2.46	246	
1505	34.3	15 psi	110		13.52	263	5.72	145.1	4.57	231	
1515	34.9				13.58	263	5.70	147.3	4.62	77	
1530	35.2				13.29	270	5.92	161.3	4.83	154	
1540	35.6				13.55	262	5.90	186.5	5.03	155	
1550	36.4				13.56	263	5.88	203.8	5.25	157	
1555	36.8				13.54	263	5.88	207.1	2.26	154	
1601	37.1				13.49	261	5.55	204.0	5.22	154	
1605	37.3				13.47	264	5.88	212.8	5.28	151	
1610	37.6			~3 gal	13.47	265	5.88	212.6	5.28	152	
End purge		Collect sample		all parameters are stable							

TINUS Form 0009

1. Pump dial setting (for example hertz cycle/min etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C
3. Oxidation reduction potential (stand in for Eh)

Filtered Metals Collected → MS/MSD collected for metals only

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW' GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5-gw-MW3A-05

Tetra Tech NUS Charge No N5152 0562
QC NONE (If applicable)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cumm Volume Purged liters	Temp C	Spec Cond 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1530	29.91		200		14.6	139	6.1	180	6.0	130	
1540	29.91		200		14.5	139	6.1	180	6.0	125	
1550	29.91		200		14.3	139	6.1	179	6.0	128	
1600	29.91		200		14.0	138	6.1	179	6.0	120	
1605	29.91		200		13.6	137	6.1	186	5.4	80	Clear
1610	29.91		200		13.5	138	6.1	187	5.6	70	
1615	29.91		200		13.5	139	6.1	188	5.4	69	
1620	29.91		200		13.5	140	6.1	188	5.4	50	
1625	29.91		200		13.3	140	6.1	189	5.2	47	
1630	29.91		200		13.2	140	6.1	189	5.2	31	
1635	29.91		200		13.4	141	6.1	189	5.2	29	
1640	29.91		200		13.4	141	6.1	189	5.2	27	
1650	29.91		200		13.4	141	6.1	190	5.3	13	
1700	29.91		200		13.4	142	6.1	190	5.3	9.6	
1705	29.91		200		13.3	144	6.1	190	5.0	10	
1710	29.91		200		13.1	144	6.1	191	5.2	09	
1715	29.91		200		13.2	143	6.1	191	5.1	6.0	
1720	29.91		200		13.0	145	6.1	191	5.0	5.0	
1725	29.91		200		13.0	145	6.1	191	5.0	5.0	
1730	29.91		200		12.9	146	6.1	192	5.1	4.9	
1735	29.91		200		12.5	146	6.1	192	5.1	4.5	
1740	29.91		200	≈7 gal	12.5	147	6.1	192	5.1	4.9	

TtNUS Form 0009

1745 parameters stable - sample

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5-gw-mw2A-05

Tetra Tech NUS Charge No N5152 0562
QC NONE (If applicable)

Sample Method Low Flow Using Bladder Pump
Depth Sampled 50 Feet Screened Interval Depth 30-50 feet
Sample Date & Time 5/27/04 1745 hours NA /Dup
Sampler(s) J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder [signature]
Initial Water Level = 29.68
Circle MP = Top of Steele or PVC 4440' TD TPVC

H&S Survey Meter 0.0 PPM Field Instrument Group A/B/C/D
Pre pump insertion WL 27.88 ft Post pump insertion WL 29.68 ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0.1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial~~ setting 1	Purge Rate ml/min	Cumm Volume Purged liters	Temp °C	Spec Cond 2 µS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
115	29.65	4cpm	200		14.4	148	63	952	69	220	Start Pumping
1420	21.75		200		14.9	141	61	119	65	180	cloudy
1425	29.83		200		14.6	139	61	134	63	180	clearing
1430	29.87		200		14.6	139	61	140	62	179	no odor
1435	29.90		200		14.6	139	61	149	61	175	
1440	21.91		200		14.7	139	61	156	61	170	
445	29.91		200		14.6	139	61	161	61	170	
1450	29.91		200		14.7	140	61	163	61	170	
1455	29.91		200		14.7	140	61	165	60	181	
1500	29.91		200		14.7	140	61	168	59	170	
1505	29.91		200		14.6	141	61	170	60	180	
1510	29.91		200		14.6	141	61	176	59	170	
1515	29.91		200		14.7	141	61	178	59	150	
1520	29.91		200		14.6	140	61	179	60	130	

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

500 1440 [illegible]

TETRA TECH NUS, INC

SAMPLE LOG SHEET 'LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5-GW-MW3A-05 / TF5 GW MW3A 05F

Tetra Tech NUS Charge No N5152 0562
QC TF5-GW-DUP01-05 / TF5 GW DUP01-05F (If applicable)

Sample Method Low Flow Using Bladder Pump
Depth Sampled 45 Feet Screened Interval Depth 30-60 feet
Sample Date & Time 5/25/04 1635 hours 1640/Dup
Sampler(s) J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder [signature]
Initial Water Level =
Circle MP = Top of Steel or PVC

H&S Survey Meter 0 0 PPM Field Instrument Group A/B/C/D
Pre pump insertion WL 22 60 ft Post pump insertion WL 22 64 ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial 1~~ Setting 4cpM	Purge Rate ml/min	Cumm Volume Purged ~~liters~~ gal	Temp °C	Spec Cond 2 ~~y~~ mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
1520	22 60		start	purge	water is	lt. tan color, no	odor, no	sheen.			
1530	22 60		170		1109	142	6 13	128.8	6 43	250	lt brown/tan
1540	22.60		170		1081	140	6.10	138.0	4 46	233	color
1550	22 60		170		1069	140	6.10	146 8	5 66	74 1	no odor no sheen
1600	22 60		170		1074	139	6 10	150 2	6.08	40 5	colorless
1610	22 66		170		1059	139	6.10	153 1	6 29	36.6	↓
1615	22.66		170		10.59	139	6 11	154 4	6 43	34 2	↓
1620	22 65		170		1058	139	6.10	156 3	6.64	31 2	↓
1625	22 65		170		1058	138	6.11	157.3	6 76	27 4	↓
1628	22 65		170		1057	138	6 10	157 7	6 80	27 6	↓
1631	22 65		170	4	1058	138	6.10	158.4	6 83	26 9	↓

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

* Collected an additional metals aliquot for filtering for both MW3A and DUP01 The filtered metals samples were given new sample IDs (See above) Filtered Metals Collected.

Site Name: Tank Farm 5 - Newport, RI
Sample ID: TF5-GW-MW4-05

Tetra Tech NUS Charge No: 5752-0562
QC Information: TF5-GW-MW4-05F (Filtered Metals) (if applicable)

Sample Method/Device: bailer *
Depth Sampled: 28' feet Total Depth: — feet (SW Only)
Sample Date & Time: 5/27/04 1450 hours
Sampler(s): S. Lambert

Recorded By: [signature]
Signature

TYPE OF SAMPLE (Check all that apply)

- X Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- X Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify)

include sample source & lot No

WELL PURGE DATA

Well Depth	33.45 feet ~~ft bgs~~ below TOC	Purge Start	1420 hrs
Inside Diameter	Inches TOC = inner casing	Purge Stop Time	1445 hrs
Water Level	25.96 feet ~~bgs~~	Total Gallons Purged	3.5
Well Volume	gal	Purge Method	bailer

Color: lt orange-brown Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading ppm

Sampling/Purge Data

Vol #	turb	Temp °C	pH	ORP	Spec Cond	DO
0	236	15.29	7.57	186.7	436	8.40
1	268	13.10	6.57	241.5	431	10.05
~~2~~ 2	439	12.90	6.37	240.2	424	9.29
~~4~~ 3	299	12.74	6.43	235.7	424	9.28
4	~~33.45~~ ~~25.96~~					

well vol = 65' × 0.16 gal/ft = ~1 gal

ANALYSIS	BOTTLE LOT NO	TRAFFIC REPORT NO ORGANIC	TRAFFIC REPORT NO INORGANIC	COMMENTS
* bailer used b/c head was too low on well - only a few feet of water + 30 feet down - ~~water~~ air was getting in the water line instead of outside the bladder. Tried all morning; changed all tubing + pump. After discussing w PM (c Race) - will sample w/ a bailer instead.				

TtNUS Form 0004

Filtered Metals Collected (see above)

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW" GROUNDWATER

Site Name: Tank Farm 5 Tank 53
Sample ID: TF5GWM08-05

Tetra Tech NUS Charge No: N5152 0562
QC: NONE (If applicable)

Sample Method: Low Flow Using Bladder Pump
Depth Sampled: 35 Feet Screened Interval Depth: 25 45 feet
Sample Date & Time: 5/25/04 1135 hours NA /Dup
Sampler(s): J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder: [signature]
Initial Water Level = 3 00
Circle MP = Top of Steel or PVC

H&S Survey Meter: 0 0 PPM
Pre-pump insertion WL: 30 00 ft
Post pump insertion WL: 30 00 ft
Field Instrument Group A/B/C/D

Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial 1~~ setting	Purge Rate ml/min	Cumm Volume Purged liters	Temp °C	Spec Cond 2 µmS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
1015	30 00	17ps	100		12 8	448	6 3	194	0 87	32	Clear
1025	30 55*	4 cpm	100*		12 6	444	6 2	111	1 10	30	
1030	30 11		100		12 5	438	6 2	189	1 6	27	
1035	30.11		100		12 5	437	6 1	184	1.71	26	
1040	30 13		100		12 5	436	6 1	183	1.85	24	
1050	30 15		100		12 5	435	6 1	179	1 8	23	
1055	30 16		100		12 6	434	6 1	175	8	17	
1100	30 18		100		12 5	432	6 1	173	1 8	13	no odor/
1105	30 9		100		12 5	431	6 1	161	1 5	10	drill
110	30.20		100		12 6	429	6 1	168	1 8	6 7	
115	30 22		100		12 7	428	6 1	166	8	5.5	
1120	30 27		100		12 7	428	6 1	164	1 7	4 9	
1125	30.23		100		12 7	427	6 0	100	1 8	4 7	
1130	30 24		100	≈5gal	12 5	427	6 0	101	1 8	4 3	

TtNUS Form 0009

1135 pumped 5 stable consecutive sampling

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

* pump on lowest setting cannot control drawdown

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW" GROUNDWATER

Site Name: Tank Farm 5 Tank 53
Sample ID: TF5 GW-MW9-00

Tetra Tech NUS Charge No: N5152 0562
QC: N/A (If applicable)

Sample Method: Low Flow Using Bladder Pump
Depth Sampled: 27 Feet Screened Interval Depth: 17 37 feet
Sample Date & Time: 5/26/04 1220 hours N/A /Dup
Sampler(s): J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder: L. Seydewitz
Initial Water Level = 19 97
Circle MP = Top of Steele or PVC

H&S Survey Meter: - PPM Field Instrument Group A/B/C/D
Pre pump insertion WL: ~~19~~ ft Post pump insertion WL: 19 97 ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Do not collect DRO/GRO > no visible sheen, no odor detected

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial 1~~ Setting	Purge Rate ml/min	Cumm Volume Purged liters	Temp C	Spec Cond 2 µS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
1130	19 97			Begin filling flowthru cell, adjusting purge rate							no color/ no sheen
1145	19 97	18 psi	110		11 83	517	6 73	177.4	0.45	1.57	
1150	19.97	↓	↓		11.37	509	6 58	178.9	0 45	1 66	
1155	19 97				11 35	508	6 52	180.5	0 45	1 19	
1 00	19 97				11.32	506	6 50	181 7	0 46	1 14	
1205	19 97				11.26	506	6.49	182.4	0 46	1 13	
1210	19.97				11.21	506	6.49	183.5	0.45	1.13	
1215	19.97			~3 gal	11.20	505	6.49	184 1	0.44	1 14	
1220	End purge - Collect sample										no odor

TtNUS Form 0009

4 cycles/m @ 18 psi

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

TETRA TECH NUS, INC

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Tank Farm 5 Tank 53
Sample ID: TF5-GW MW10-05 / TF5-GW MW10-05F

Tetra Tech NUS Charge No: N5152 0562
QC: none (If applicable)

Sample Method: Low Flow Using Bladder Pump
Depth Sampled: 26 Feet Screened Interval Depth: 16 36 feet
Sample Date & Time: 5 / 25 / 04 1730 hours — /Dup
Sampler(s): J Lambert, C Sanchez, (L Seydewitz)
Signature of Data Recorder: L. Seydewitz
Initial Water Level = 21 5
Circle MP = Top of Steel or (PVC)

H&S Survey Meter: 0 0 PPM Field Instrument Group (A)/B/C/D
Pre pump insertion WL: 21.10 ft Post pump insertion WL: 21 50 ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial~~ setting[1]	Purge Rate ml/min	Cumm Volume Purged liters	Temp °C	Spec Cond[2] µmS/cm	pH	ORP/Eh[3] mv	DO mg/L	Turbidity NTU	Comment
1540	21 50	20psi		Begin purging, filling flow thru cell, limit drawdown							no color/
1545	21 55		140		12.58	362	6 11	164.2	3.32	92.1	no odor
1555	21 60				12.58	360	6 10	174 6	2 81	49 4	
1605	21.62				12.54	361	6 09	179.0	2 96	35 5	
1615	21.62				12.19	358	6 10	182 6	2.92	22.7	
1625	21.62				12.10	359	6 10	182 3	2 71	14 7	
1635	21.62				11.96	357	6 11	183 2	2.64	16 4	
1645	21 62				11 96	356	6 11	183 4	2 62	15 7	
1655	21.62				11 97	356	6.11	183 7	2 60	14 2	
1700	21 62				11.99	360	6 11	184 1	2 61	12 0	
1705	21.62				12 09	360	6.11	184 3	2 64	11 8	
1710	21 62				12.10	360	6 11	184.6	2.67	11.5	
1715	21 62				12 09	360	6 11	184.4	2.70	11 3	
1720	21.62				12 11	360	6.11	184 2	2.71	11 4	

TtNUS Form 0009

20 psi @ 4 cycles/min

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

Filtered Metals

An additional aliquot was collected for metals to be filtered A new ID was given to the filtered metals samp

TETRA TECH NUS, INC

SAMPLE LOG SHEET LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5 GW-MW10-05

Tetra Tech NUS Charge No N5152 0562
QC none (If applicable)

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial 1~~ setting	Purge Rate ml/min	Cumm Volume Purged liters	Temp °C	Spec Cond 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1725	21.62	20 psi	140	~4 gal	12.10	360	6.11	184.1	2.76	11.2	
1730	End Purge - Collect Sample - parameters stable										

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

TETRA TECH NUS, INC

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5-GW MW602-05

Tetra Tech NUS Charge No N5152 0562
QC _____ (If applicable)

Sample Method Low Flow Using Bladder Pump
Depth Sampled _____ Feet Screened Interval Depth _____ feet
Sample Date & Time 5 / ___ / 04 _____ hours ___ — ___ /Dup
Sampler(s) J Lambert, C Sanchez, L. Seydewitz
Signature of Data Recorder L. Seydewitz
Initial Water Level =
Circle MP = Top of Steele or PVC

H&S Survey Meter _____ PPM Field Instrument Group A/B/C/D
Pre pump insertion WL _____ ft Post pump insertion WL _____ ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cumm Volume Purged liters	Temp °C	Spec Cond 2 mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment

NOT COLLECTED: DRY

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5-GW-MW701 05

Tetra Tech NUS Charge No N5152 0562
QC MS MSD (If applicable)

Sample Method Low Flow Using Bladder Pump
Depth Sampled 35 Feet Screened Interval Depth ** feet
Sample Date & Time 5/25/04 1115 hours N/A /Dup
Sampler(s) J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder L. Seydewitz
Initial Water Level = 25 0
Circle MP = Top of Steel or (PVC)

H&S Survey Meter — PPM
Field Instrument Group (A)/B/C/D
Pre pump insertion WL 21 72 ft
Post pump insertion WL 25 0 ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

* no petroleum odor, v s ble sheen so did not collect DRO/GRO samples
** screened interval not provided

Clock Time 24hr	Water Depth below MP ft	pump setting ~~Pump Dial 1~~	Purge Rate ml/min	Cumm Volume Purged ~~liters~~ gal	Temp °C	Spec Cond 2 µmS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
1020	25.0	20 psi		Begin purging, fill flow thru cell, and limit drawdown							no color/
1030	25 0		160		12.23	835	6.31	128.7	1.56	0 00	no odor
1040	25 0		↓		12.12	845	6.30	113 3	0.97	0.00	
1050	25.0				12.20	846	6 30	101.7	0 86	0.00	
1055	25 0				12.27	845	6 30	106	0.86	0 00	
1100	25.0				12.30	845	6.30	103	0.85	0.00	
1105	25 0		↓	~4 gal	12.30	845	6.31	102	0 86	0.00	
1110	End purge - Collect sample										

TtNUS Form 0009

20 psi, 4 cycles/min

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5-GW-MW861-05

Tetra Tech NUS Charge No N5152 0562
QC NA (If applicable)

Sample Method Low Flow Using Bladder Pump
Depth Sampled 25 Feet Screened Interval Depth 15-35 feet
Sample Date & Time 5/26/04 1155 hours NA /Dup
Sampler(s) J Lambert, S Sanchez, L Seydewitz
Signature of Data Recorder [signature]
Initial Water Level = 20 73
Circle MP = Top of Steele or PVC

H&S Survey Meter 00 PPM
Field Instrument Group (A)/B/C/D
Pre pump insertion WL 20.12 ft
Post pump insertion WL 20.73 ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial 1~~ Setting 4 GPM	Purge Rate ml/min	Cumm Volume Purged ~~liters~~ gal	Temp °C	Spec Cond 2 mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
1100	20 73	begin	purge								
1110	21 20		40		11 33	227	5 93	201 0	10 00	3 97	colorless,
1120	21 50		40		11 28	217	5.88	196 7	9.77	3 20	No odor,
1130	21 70		40		11 30	202	589	192 7	4.55	2.75	clear.
1140	21 80		40		11 35	202	589	192 4	9.51	2 15	
1145	21.82		40		11.31	201	589	195 1	9 49	2.04	
1150	21 83		40	~ 1 gal	11 30	200	588	193 3	9.48	1.98	

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

* cannot lower flow rate any further.

TETRA TECH NUS, INC

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5-GW-MW862 05

Tetra Tech NUS Charge No N5152 0562
QC NA TF5-GW-MW862 05FM (If applicable)
Filtered Metals

Sample Method Low Flow Using Bladder Pump
Depth Sampled 35 Feet Screened Interval Depth 15 35 feet
Sample Date & Time 5/27/04 1065 hours NA/Dup
Sampler(s) J Lambert, C Sanchez, L Seydewitz
Signature of ~~Data~~ Recorder [signature]
Initial Water Level = 21 00
Circle MP = Top of Steele or PVC

H&S Survey Meter 0 0 PPM
Pre pump insertion WL _____ ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Field Instrument Group A/B/C/D
Post pump insertion WL 21 00 ft

*The tubing intake was set at 35' due to significant drawdown during development

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial 1~~ setting	Purge Rate ml/min	Cumm Volume Purged liters gal	Temp C	Spec Cond 2 mmS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
0850	21 00	Begin purge, filling flow-through cell									
0900	21.30	filling flow through cell									
0910	21 55	4cpm	40		12 7	436	6.07	173.4	7 44	24.9	water is
0920	21 95		40		12 76	441	6 06	168 9	6.76	19 9	clear, colorless
* 0945	22 28		40		13 16	440	6 06	166 5	6 50	17.3	no odor/sheen
0950	22 33		40		13 08	440	6 06	167.4	6.45	15 8	
0955	22 41		40		13 07	440	6 06	168 1	6 44	15 5	
1000	22.50		40	~0.5	13 09	439	6 06	168 8	6.43	15 1	

TtNUS Form 0009

* assisting with other sampler's pump problems.

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

*-Filtered Metals Sample (see above for separate ID)

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW" GROUNDWATER

Site Name: Tank Farm 5 Tank 53
Sample ID: TF5GMW0864-05

Tetra Tech NUS Charge No: N5152 0562
QC: NONE (If applicable)

Sample Method: Low Flow Using Bladder Pump
Depth Sampled: 30 Feet Screened Interval Depth: 14-34 feet
Sample Date & Time: 5/25/04 1605 hours NA /Dup
Sampler(s): J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder: [signature]
Initial Water Level = 24.47
Circle MP = Top of Steele or (PVC)

H&S Survey Meter: 0.0 PPM Field Instrument Group A/B/(C)/D
Pre pump insertion WL: 24.45 ft Post pump insertion WL: 24.47 ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/- 0.1 units)
ORP (+/- 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial 1~~ Setting	Purge Rate ml/min	Cumm Volume Purged liters	Temp °C	Spec Cond 2 mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
1530	24.55		100		15.98	108	5.7	186	8.1	2.4	no color -
1535	24.55		100								o-sheen
1540	24.55		100		15.2	99	5.3	215	7.8	1.0	no odor
1545	24.55		100		14.7	96	5.3	227	7.6	0.5	
1550	24.55		100		14.1	95	5.3	234	7.6	0.0	
1555	24.55		100		14.0	93	5.3	237	7.5	0.0	
1600	24.55		100	≈1 gal	13.8	91	5.2	240	7.4	0.0	
1605	24.55		parameters stable commence sampling								

TtNUS Form 0009

1 Pump dial setting (for example hertz, cycle/min etc.)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5-~~AW~~ GW MW865 05

Tetra Tech NUS Charge No N5152 0562
QC NA (If applicable)

Sample Method Low Flow Using Bladder Pump
Depth Sampled 25 Feet Screened Interval Depth 6 26 feet
Sample Date & Time 5/25/04 1225 hours NA /Dup
Sampler(s) J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder [signature]
Initial Water Level = 24 39
Circle MP = Top of Steel or PVC

end sampling at ~1400

H&S Survey Meter 0 0 PPM
Pre-pump insertion WL 24 39 ft
Stabilization Parameters

Field Instrument Group A/B/C/D
Post pump insertion WL 24 40 ft

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

DRO, GRO not collected - no evidence of petroleum contamination Turb below SNTH, no filtered ... colle

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial 1~~ Setting	Purge Rate ml/min	Cumm Volume Purged ~~liters~~ gal	Temp C	Spec Cond 2 µ ~~m~~S/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
1115	24 ~~39~~	40 begin	purge,	filling flow	cell						
1145	24.40	5cpm			16.38	129	5 71	164 6	8 99	5.38	colorless,
1150	24 40	10/5	50		16 19	125	5 70	166 6	8 58	4.93	no sheen,
1155	24 39		50		16 23	122	5 69	168 3	8 47	4 56	no odor
1200	24 39		50		16 29	121	5 68	170 0	8 45	3 72	
1205	24 39		50		16 44	120	5.68	172 2	8 42	3 53	
1208	24 39		50		16 47	120	5 67	173 0	8.37	3 07	
1211	24 39		50		16 51	119	5 67	174 0	8 28	2 85	
1214	24.39		50		16 59	119	5 67	175.0	8 30	2 65	
1217	24 39		50		16.81	119	5 67	176 8	8.33	2 51	
1220	24.39		50	~~2.2~~ ~05	16.88	119	5.67	177.1	8 32	2 38	

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

135 - casing height
1 10 well height

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5-GW-EW-07-05

Tetra Tech NUS Charge No N5152 0562
QC _____ (If applicable)

Sample Method Low Flow Using Bladder Pump
Depth Sampled _____ Feet Screened Interval Depth _____ feet
Sample Date & Time 5 / 26 / 04 _____ hours _____ /Dup
Sampler(s) J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder L. Seydewitz
Initial Water Level =
Circle MP = Top of Steele or PVC

H&S Survey Meter _____ PPM Field Instrument Group A/B/C/D
Pre-pump insertion WL _____ ft Post pump insertion WL _____ ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cumm Volume Purged liters	Temp °C	Spec Cond 2 mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
		NOT COLLECTED									
		(see field logbook)									

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

* pump is not working - can't collect sample

TETRA TECH NUS, INC

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5-GW-EW-13-05

Tetra Tech NUS Charge No N5152 0562
QC _____ (If applicable)

Sample Method Low Flow Using Bladder Pump
Depth Sampled _____ Feet Screened Interval Depth _____ feet
Sample Date & Time 5 / 26 / 04 _____ hours _____ /Dup
Sampler(s) J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder L. Seydewitz
Initial Water Level =
Circle MP = Top of Steele or PVC

H&S Survey Meter _____ PPM Field Instrument Group A/B/C/D
Pre pump insertion WL _____ ft Post pump insertion WL _____ ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cumm Volume Purged liters	Temp C	Spec Cond 2 mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment

NOT COLLECTED
(see field logbook)

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

*pump is not working - can't collect sample.

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID T5-GW-0901A 05

Tetra Tech NUS Charge No N5152 0562
QC NONE (If applicable)

Sample Method Low Flow Using Bladder Pump
Depth Sampled 101 Feet Screened Interval Depth 91-111 feet
Sample Date & Time 5/26/04 1250 hours NA /Dup
Sampler(s) J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder [signature]
Initial Water Level = 45.80
Circle MP = Top of Steele or (PVC)

H&S Survey Meter 0.0 PPM Field Instrument Group A/B/C/(D)
Pre pump insertion WL 46.3 ft Post pump insertion WL 47.80 ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/- 0.1 units)
ORP (+/- 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cumm Volume Purged liters	Temp °C	Spec Cond 2 mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
1130	45.92		200		12.5	309	6.14	15.3	2.5	56	Clear
1130	45.75		200		12.6	312	6.15	18.3	2.0	41.9	
1140	45.80		200		12.7	312	6.15	27.6	3.0	35	
1145	45.80		200		12.6	302	6.3	-8.5	0.5	20	
1150	45.80		200		12.6	307	6.4	13	0.5	17	
1155	45.80		200		12.6	308	6.4	20	0.4	15	
0	45.80		200		12.6	311	6.2	-4	0.5	14	
1205	45.80		200		12.6	310	6.2	0.7	0.5	9.9	
1210	45.80		200		12.5	309	6.2	0.3	0.5	11.0	
1215	45.80		200		12.5	310	6.2	0.4	0.5	11	
1220	45.80		200		12.5	310	6.2	0.4	0.5	8.6	
1225	45.80		200		12.5	310	6.2	0.5	0.4	8.0	
1230	45.80		200		12.5	310	6.2	0.5	0.4	7.5	
1235	45.80		200		12.6	310	6.2	0.4	0.5	6.9	
1240	45.80		200		12.6	310	6.1	1.0	0.5	4.7	
1245	45.80		200	≈5 gal	12.5	311	6.2	1.1	0.5	4.6	
1250	parameters stable [illegible] sampling										

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

TETRA TECH NUS, INC

SAMPLE LOG SHEET "LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53 MW901
Sample ID T^5 gw 8003-05

Tetra Tech NUS Charge No N5152 0562
QC NONE (If applicable)

Sample Method Low Flow Using Bladder Pump
Depth Sampled 139 Feet Screened Interval Depth 128.5 148.5 feet
Sample Date & Time 5/26/04 1220 hours NA /Dup
Sampler(s) J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder [signature]
Initial Water Level = 46 62
Circle MP = Top of Steele or PVC

H&S Survey Meter 0 0 PPM Field Instrument Group A/B/C/D
Pre pump insertion WL 47 45 ft Post pump insertion WL 46 62 ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cumm Volume Purged liters	Temp C	Spec Cond 2 mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
1140	46 50		250		12 5	306	6 11	-67	1 23	16 1	clear
1145	46 43		250		12 4	306	6 10	61	0 79	16 0	
1150	46 3		250		12 4	306	6 10	65	0 69	15 9	
1156	46 3		250		12 0	305	6 4	70	0 41	12	
1200	46 3		250		12 4	305	6 11	80	0 7	6 1	
1205	46 3		250		12 4	305	6 11	87	0 7	2 3	
1210	46 3		250		12 4	305	6 10	-96	0 7	2 1	
1215	46 3		250	~4.5 gal	12 4	305	6 11	-93	0 7	1 9	
1220		per meters	stable	common	sampling						

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

TETRA TECH NUS, INC

SAMPLE LOG SHEET 'LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5 GW MW902A-05

Tetra Tech NUS Charge No N5152 0562
QC ~~NO NE~~ TF5-GW MW902A 05F (If applicable)
TF5-GW-DUP02 05 Filtered Metals

Sample Method Low Flow Using Bladder Pump
Depth Sampled 115 Feet Screened Interval Depth 105 - 120 feet
Sample Date & Time 5/27/04 1245 hours 1250 /Dup
Sampler(s) J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder [illegible]
Initial Water Level = ~~50.95~~ ~~51.31~~ 51.60
Circle MP = Top of Steele or PVC

H&S Survey Meter — PPM
Pre pump insertion WL 51.37 ft
Post pump insertion WL 51.60 ft
Field Instrument Group A/B/C/D
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0.1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial 4~~ Setting	Purge Rate ml/min	Cumm Volume Purged liters	Temp C	Spec Cond 2 ~~µ~~mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
1150	51.60	4 gpm	360		12.8	395	6.6	26	5.3	24.4	no odor/
1155											no odor
1200	51.70		288		12.4	594	6.2	45	1.1	12.3	
1205	51.65		260		12.4	592	6.3	-48	1.1	10.1	
1210	51.60		240		12.4	596	6.2	-55	0.9	11.0	
1215	51.60										
1220	51.60		240		12.6	595	6.2	-64	0.9	21.0	
1225	51.60		240		12.6	593	6.2	66	0.9	26.8	
1230	51.60		240		12.6	595	6.2	-69	0.8	27.8	
1235	51.60		240		12.6	594	6.2	-71	0.8	27.9	
1240	51.60		240	≈ 2.5 gal	12.7	594	6.2	-72	0.8	27.4	*
1245	End purge - Collect Sample										

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same s umhos/cm) at 25°C
3 Oxidation reduction potential (stand in for Eh)

* Non petroleum based material was observed on the surface of the purge water in the bucket. No odor was detected and the material was not rainbow in color

Filtered Metals Sample (see above)
DUP02 collected

TETRA TECH NUS, INC

SAMPLE LOG SHEET 'LOW FLOW" GROUNDWATER

Site Name Tank Farm 5 Tank 53
Sample ID TF5-gw-MW9 2B-05

Tetra Tech NUS Charge No N5152 0562
QC None (If applicable)

Sample Method Low Flow Using Bladder Pump
Depth Sampled 141 Feet Screened Interval Depth 136-146 feet
Sample Date & Time 5/27/04 1100 hours N/A /Dup
Sampler(s) J Lambert, C Sanchez, L Seydewitz
Signature of Data Recorder L. Seydewitz
Initial Water Level = 50 95
Circle MP = Top of Steele or PVC

H&S Survey Meter — PPM Field Instrument Group A/B/C/D
Pre-pump insertion WL 50 94 ft Post pump insertion WL 50 95 ft
Stabilization Parameters

Specific Conductance and Temp (3%)
pH (+/ 0 1 units)
ORP (+/ 10 millivolts)
Turb & DO (10%)

Clock Time 24hr	Water Depth below MP ft	Pump ~~Dial~~ Setting	Purge Rate ml/min	Cumm Volume Purged liters	Temp C	Spec Cond 2 µS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comment
0500	51 15	60 psi	280		11 9	196	6 10	19 6	5 0	16	Clear
0910	51.25		280		11.9	767	6 10	11 6	3 3	15	no odor or
0905	51 35		220								sheen
		FL	needed	assistance	w/	well -	gone for	40 min.			
0945	52 10		220*		15.7	318	6 10	-3 9	1 3	10 78	
1015	51.09		220		20.34	363	6 09	11.8	1.92	5.81	**
1020	51 13		220		12.43	291	6.09	4 7	2.07	5.60	
1025	51.15		220		12 26	291	6 09	0.3	1 55	5 51	
1030	51.15		220		12.27	291	6.09	-0 1	1.35	2.49	
1035	51.15		220		13.20	300	6.09	0.1	1.23	2.96	
1040	51 15		220		13.25	300	6.09	0.9	1.17	2.50	
1045	51.15		220		13.21	298	6.09	0.6	1 16	2.48	
1050	51.15		220		13.23	297	6 09	0 1	1.18	2 50	
1055	End purge - Collect Sample										

TtNUS Form 0009

1 Pump dial setting (for example hertz cycle/min etc)
2 Siemens per cm (same as umhos/cm) at 25 °C
3 Oxidation reduction potential (stand in for Eh)

* pump on lowest setting - cannot control drawdown
** changed out Nitrogen tank

TETRA TECH NUS, INC

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Tank Farm 5 - Tank 53
Sample ID: TF5 CW TB01 05

Tetra Tech NUS Charge No: 5152-0562
QC Information: Trip Blank (if applicable)

Sample Method/Device: Direct Pour
Depth Sampled: N/A feet Total Depth: N/A feet (SW Only)
Sample Date & Time: 5/25/04 0800 hours
Sampler(s): L Seydewitz

Recorded By: L Seydewitz
Signature

TYPE OF SAMPLE (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- X Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): Trip Blank using Poland Spring Water
  include sample source & lot No

WELL PURGE DATA

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal	Purge Method	

Color _____ Turbidity CLR/SL CLDY/CLDY/OPAQ

LS 5/25/04

Micro Tip/OVA Monitor Reading ppm

Sampling/Purge Data

Vol #	Temp °C	pH	Spec Cond	DO
0				
1				
3				
4				

LS 5/25/04

ANALYSIS	BOTTLE LOT NO	TRAFFIC REPORT NO		COMMENTS
		ORGANIC	INORGANIC	
VOC	Poland Spring Water			Direct pour of poland spring water into 3 VOA vials pre preserved with HCL.

LS 5/25/04

LS 5/25/04

LS 5/25/04

TtNUS Form 0004

TETRA TECH NUS, INC

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Tank Farm 5 - Tank 53
Sample ID: TF5-GW-TB02-05

Tetra Tech NUS Charge No: 5152-0562
QC Information: Trip Blank (if applicable)

Sample Method/Device: Direct Pour
Depth Sampled: N/A feet Total Depth: N/A feet (SW Only)
Sample Date & Time: 5/26/04 0800 hours
Sampler(s): L Seydent

Recorded By: L Seydent
Signature

TYPE OF SAMPLE (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- X Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify)

Trip Blank with Poland Spring water
Include sample source & lot No

WELL PURGE DATA LS 5/27/04

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal	Purge Method	

LS 5/27/04

Color _____ Turbidity CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading ppm

Sampling/Purge Data

Vol #	Temp °C	pH	Spec Cond	DO
0				
1				
3				
4				

LS 5/27/04

ANALYSIS	BOTTLE LOT NO	TRAFFIC REPORT NO ORGANIC	TRAFFIC REPORT NO INORGANIC	COMMENTS
VOC	Poland Spring Water			Direct Pouring of Poland Spring water into 40 ml VOA Vials.

LS 5/26/04

TtNUS Form 0004

TETRA TECH NUS, INC

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Tank Farm 5 Tank 5.3
Sample ID: TF5 GW SB01-05

Tetra Tech NUS Charge No: 5152-0562
QC Information: Source Blank (if applicable)

Sample Method/Device: Direct Pour
Depth Sampled: N/A feet Total Depth: N/A feet (SW Only)
Sample Date & Time: 5/26/04 0720 hours
Sampler(s): C. Sanchez

Recorded By: L. Seydewitz / [signature]
Signature

TYPE OF SAMPLE (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify)

Source Blank
include sample source & lot No
DIUF lot # 0410103 Exp H 05

WELL PURGE DATA

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal	Purge Method	

LS 5/26/04

Color _____ Turbidity CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading ppm

Sampling/Purge Data

Vol #	Temp °C	pH	Spec Cond	DO
0				
1				
3				
4				

LS 5/26/04

ANALYSIS	BOTTLE LOT NO	TRAFFIC REPORT NO ORGANIC	TRAFFIC REPORT NO INORGANIC	COMMENTS
TM				
SVOC				opened-up fresh DIUF H_2O
VOC				container & poured H_2O into
				appropriate sample containers
(TM - Total Metals)				

TtNUS Form 0004

TECH NUS, INC

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Tank Farm 5 - Tank 53
Sample ID: TF5-GW-RB01-05

Tetra Tech NUS Charge No: 3152-0562
QC Information: Rinsate Blank (if applicable)

Sample Method/Device: Grab
Depth Sampled: N/A feet Total Depth: N/A feet (SW Only)
Sample Date & Time: 5/25/04 1000 hours
Sampler(s): C. Sanchez

Recorded By: L. Seyfert / [signature]
Signature

TYPE OF SAMPLE (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify)

DIUF lot # 0416134Exp4 cs
include sample source & lot No

WELL PURGE DATA

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal	Purge Method	

LS 5/25/04

Color _____ Turbidity CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading _____ ppm

Sampling/Purge Data

Vol #	Temp °C	pH	Spec Cond	DO
0				
1				
3				
4				

LS 5/25/04

ANALYSIS	BOTTLE LOT NO	TRAFFIC REPORT NO ORGANIC	TRAFFIC REPORT NO INORGANIC	COMMENTS
TVM				Insited decontaminated bladder in pump
SVOC				into DIUF H_2O & collected samples
VOC				by pumping H_2O from container
				into appropriate sample containers
Total Metals (filtered)				NOTE: A, Pol, bladder was used
(separate sheet)				decontaminated

TtNUS Form 0004

TETRA TECH NUS, INC

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Tank Farm 5 Tank 53
Sample ID: TF5-GW RB01-05F

Tetra Tech NUS Charge No: 5152-0562
QC Information: Rinsate Blank (Filtered Metals) (if applicable)

Sample Method/Device: Grab
Depth Sampled: N/A feet Total Depth: N/A feet (SW Only)
Sample Date & Time: 5/25/04 1000 hours
Sampler(s): L. Sanchez

Recorded By: L. Seyckert
Signature

TYPE OF SAMPLE (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify)

DIVF lot # 04101J4
include sample source & lot No
Exp 4-05

~~WELL PURGE DATA~~ LS 5/25/04

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal	Purge Method	

Color _____ Turbidity CLR/SL CLDY/CLDY/OPAQ

LS 5/25/04

Micro Tip/OVA Monitor Reading ppm

Sampling/Purge Data

Vol #	Temp °C	pH	Spec Cond	DO
0				
1				
3				
4				

LS 5/25/04

ANALYSIS	BOTTLE LOT NO	TRAFFIC REPORT NO		COMMENTS
		ORGANIC	INORGANIC	
Total Metals (filtered in field)				
				pumped DIVF using
				a peristaltic pump through
				a 0.45 micron filter into
				appropriate sample container.

LS 5/25/04

TtNUS Form 0004

TETRA TECH NUS, INC

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Tank Farm 5 - Tank 53
Sample ID: TF5-GW RB02-05

Tetra Tech NUS Charge No: 5152-0562
QC Information: Rinsate Blank (if applicable)

Sample Method/Device: Direct Pour
Depth Sampled: N/A feet Total Depth: ____ feet (SW Only)
Sample Date & Time: 5/26/04 0745 hours
Sampler(s): C. Sanchez

Recorded By: L. Seydel / [signature]
Signature

TYPE OF SAMPLE (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- X Grab
- ____ Composite
- ____ Trip Blank*
- X Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify)

DI of lot 0416134 Exp H 05
include sample source & lot No

WELL PURGE DATA: XS

Micro Tip/OVA Monitor Reading: ____ ppm

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal	Purge Method	

LS 5/26/04

Color: ____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Sampling/Purge Data

Vol #	Temp °C	pH	Spec Cond	DO
0				
1				
3				
4				

LS 5/26/04

ANALYSIS	BOTTLE LOT NO	TRAFFIC REPORT NO ORGANIC	TRAFFIC REPORT NO INORGANIC	COMMENTS
TM				Sample was collected pouring H_2O through a pre-cleaned teflon bladder into the appropriate sample containers. (NOTE The teflon bladder was taken directly out of the package & used to grab sample.)
SVOC				
VOC				
Total Metals (filtered) (separate sheet)				

TtNUS Form 0004

TETRA TECH NUS, INC

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Tank Farm 5 - Tank 53
Sample ID: TF5-GW-RB02-05F

Tetra Tech NUS Charge No: 5152-0562
QC Information: Rinsate Blank (Filtered Metals) (if applicable)

Sample Method/Device: Grab
Depth Sampled: N/A feet Total Depth: N/A feet (SW Only)
Sample Date & Time: 5/26/04 0745 hours
Sampler(s): C Sanchez

Recorded By: Y Seydut
Signature

TYPE OF SAMPLE (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify) DIUF lot # 041434
  Include sample source & lot No
  Exp 4-05

WELL PURGE DATA

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal	Purge Method	

Color _____ Turbidity CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading ppm

Sampling/Purge Data

Vol #	Temp °C	pH	Spec Cond	DO
0				
1				
3				
4				

YS 5/26/04

ANALYSIS	BOTTLE LOT NO	TRAFFIC REPORT NO		COMMENTS
		ORGANIC	INORGANIC	
Total Metals (filtered) in field				pumped DIUF H_2O using a per Static pump through 0.45 micron filter into appropriate sample containers.

TtNUS Form 0004

TETRA TECH NUS, INC

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Tank Farm 5 - Tank 53
Sample ID: TF5-GW-RB03-05

Tetra Tech NUS Charge No: 5152-0562
QC Information: Rinsate Blank (if applicable)

Sample Method/Device: grab
Depth Sampled: N/A feet Total Depth: N/A feet (SW Only)
Sample Date & Time: 5/27/04 0830 hours
Sampler(s): C. Sanchez

Recorded By: L. Sanchez
Signature

TYPE OF SAMPLE (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify)

DIUF lot # 0410134
include sample source & lot No
Exp 4-05

~~WELL PURGE DATA~~ LS 5/27/04

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal	Purge Method	

LS 5/27/04

Color _____ Turbidity CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading ppm

Sampling/Purge Data

Vol #	Temp °C	pH	Spec Cond	DO
0				
1				
3				
4				

LS 5/27/04

ANALYSIS	BOTTLE LOT NO	TRAFFIC REPORT NO ORGANIC	TRAFFIC REPORT NO INORGANIC	COMMENTS
VOC				
SVOC				pumped DI H_2O from supplied box
Total Metals				using a decontaminated bladder
Total Metals (filtered)				pump & a precleaned "fresh" bladder
(separate sheet)				into appropriate sample containers.
TF5 GW-RB03-05F				

TtNUS Form 0004

TETRA TECH NUS INC

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Tank Farm 5 - Tank 53
Sample ID: TF5-G60-RB03-05F

Tetra Tech NUS Charge No: 5152-0562
QC Information: Rinsate Blank (Filtered Metals) (if applicable)

Sample Method/Device: Grab
Depth Sampled: N/A feet Total Depth: N/A feet (SW Only)
Sample Date & Time: 5/27/04 0830 hours
Sampler(s): C Sanchez

Recorded By: L Seydnt
Signature

TYPE OF SAMPLE (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): DIUF lot # 0410134 Exp 4-05

include sample source & lot No

~~WELL PURGE DATA~~ LS 5/27/04

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal	Purge Method	

LS 5/27/04

Color _____ Turbidity CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading ppm

Sampling/Purge Data

Vol #	Temp °C	pH	Spec Cond	DO
0				
1				
3				
4				

LS 5/27/04

ANALYSIS	BOTTLE LOT NO	TRAFFIC REPORT NO		COMMENTS
		ORGANIC	INORGANIC	
Total Metals (filtered in field)				Pumped DIUF H_2O using peristaltic pump through 0.45 micron filter into appropriate sample containers.

LS 5/27/04

TtNUS Form 0004

APPENDIX C

DATA VALIDATION MEMORANDA

TETRA TECH NUS, INC.
55 Jonspin Road • Wilmington, MA 01887-1020
Tel 978.658.7899 • Fax 978.658.7870 • www.tetratech.com

C-NAVY-07-04-1727-1W

Date: July 9, 2004 c: File N5152-D-4.10

To: Chuck Race

From: Dan Wielandt

Subject: Tier II Data Validation Organic/Inorganic Data
Mitkem Corporation Project Number C0477
CTO-842, NAS Newport Tank Farm 5, Tank 53, Newport, Rhode Island

VOC/SVOC/PAH(SIM)/Total Metals:

7/Groundwaters/	TF5-GW-DUP01-05, TF5-GW-MW10-05, TF5-GW-MW3A-05, TF5-GW-MW701-05, TF5-GW-MW8-05, TF5-GW-MW-864-05, TF5-GW-MW865-05 (Field Duplicate Pair: TF5-GW-MW3A-05/ TF5-GW-DUP01-05)
2/Rinsate Blanks/	TF5-GW-RB01-05, TF5-GW-RB02-05
1/Source Blank/	TF5-GW-SB01-05

Dissolved Metals:

3/Groundwaters/	TF5-GW-DUP01-05F, TF5-GW-MW10-05F, TF5-GW-MW3A-05F (Field Duplicate Pair: TF5-GW-MW3A-05F/ TF5-GW-DUP01-05F)

VOC:

1/Trip Blank/	TF5-GW-TB01-05

A Tier II data validation was performed by Tetra Tech NUS, Inc. (TtNUS) on the volatile (VOC), semivolatile (SVOC), polycyclic aromatic hydrocarbons (PAHs), and metals data from groundwater samples collected at the Tank Farm 5 Area, Tank 53 on May 25 and 26, 2004. The VOC and SVOC analyses were performed according to USEPA SW-846 Methods 8260B and 8270C, respectively. The PAH analysis was performed by SW-846 Method 8270C Selected Ion Monitoring (SIM). The metals analysis was performed according to SW-846 Method 6010B/7470A. The volatile and semivolatile data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The metals data validation was performed using the Region I, EPA-NE Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, modified February 1989.

ORGANIC DATA

The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
- Data Completeness (CSF Audit - Tier I)
- * Preservation and Technical Holding Times
- * GC/MS Instrument Performance Check (Tuning)
- Initial and Continuing Calibrations
- Blanks
- * Surrogate Compounds
- Internal Standards
- * Matrix Spike/Matrix Spike Duplicate
- * Laboratory Control Sample/Laboratory Control Sample Duplicate
- * Field Duplicates
- NA Target Compound Identification
- NA Compound Quantitation and Reported Quantitation Limits
- * Tentatively Identified Compounds
- * System Performance

NA – Parameter not included in a Tier II level data validation.

* All criteria were met for this parameter.

<u>Data Completeness</u>

The laboratory was contacted on July 8, 2004 to request that it submit the missing last page to the 80ppb initial calibration standard from the semivolatiles fraction of the data base. The laboratory submitted an updated electronic copy.

Semivolatiles

The following table summarizes the semivolatile compounds that failed to meet the initial calibration (IC) criterion of %RSD < 30 and the continuing calibration (CC) criterion of %D < 25:

	Action		Affected Samples
Compound	(+)	NDs	
Hexachlorocyclopentadiene		UJ	All samples
Atrazine		UJ	
Benzaldehyde		UJ	
Pyrene		UJ	
3,3'-Dichlorobenzidine		UJ	
Bis(2-Ethylhexyl)phthalate		UJ	

PAHs

The following table summarizes the PAH compounds that failed to meet the initial calibration (IC) criterion of %RSD < 30:

Instrument	Action		Affected Samples
Compound	(+)	NDs	
Dibenzo(a,h)anthracene		UJ	All Samples

Blanks

Semivolatiles

The following table summarizes the level of blank contamination detected in the field and laboratory blanks associated with these samples.

Compound	Type of Blank	Maximum Concentration (ug/L)	Action Level (ug/L)	Affected Samples
bis(2-Ethylhexyl)phthalate	Rinsate	1	10	TF5-GW-DUP01-05, TF5-GW-MW10-05, TF5-GW-MW8-05, TF5-GW-MW864-05

Blank actions were applied to the samples due to bis(2-ethylhexyl)phthalate blank contamination. Since bis(2-ethylhexyl)phthalate is a common laboratory contaminants, the 10x rule applies for action limits. The data may be biased high or false positive.

The following actions apply for blank contamination:

- Accept values > Action Level.
- Report as (U) values > CRQL and < Action Level.
- Report CRQL (U) values < CRQL and < Action Level.

Matrix Spike/Matrix Spike Duplicate

Volatiles

The following table summarizes the volatile matrix spiking compound recoveries that did not meet QC limits in the matrix spike and matrix spike duplicate analysis of sample TF5-GW-MW701-05:

TF5-GW-MW701-05		
Compound	MS % Recovery	QC Limits
1,1,2,2-Tetrachloroethane	72	76 – 125

The non-detected result for 1,1,2,2-tetrachloroethane in sample TF5-GW-MW701-05 is estimated (UJ) due to poor matrix spike recovery. The results may be biased low.

Semivolatiles

The following table summarizes the semivolatile matrix spiking recovery that did not meet QC limits in the matrix spike and matrix spike duplicate analysis of sample TF5-GW-MW701-05:

TF5-GW-MW701-05			
Compound	MS % Recovery	MSD % Recovery	QC Limits
Hexachlorocyclopentadiene	0	0	34 – 103

The non-detected result for hexachlorocyclopentadiene in sample TF5-GW-MW701-05 is rejected (R) due to low matrix spike recovery. The result may be false negative.

Laboratory Control Sample

The following table summarizes the semivolatile spiking recovery that did not meet QC limits in the laboratory control sample:

Compound	LCS % Recovery	QC Limits
Hexachlorocyclopentadiene	0	34 – 103

The non-detected results for hexachlorocyclopentadiene in all samples are rejected (R) due to low spike recovery. The results may be false negative.

System Performance

The volatile, semivolatile, and polycyclic aromatic hydrocarbons sample results do not indicate any major analytical data quality trends or problems.

METALS DATA

The metals data were evaluated based on the following parameters:

- Data Completeness
- * Holding Times
- * Calibration Verification
- Field and Laboratory Blank Analyses
- * ICP Interference Check Sample Results
- * Matrix Spike Recoveries
- * Laboratory Control Sample Results
- * Laboratory Duplicate Results
- * Field Duplicate Precision

- ICP Serial Dilution Results
- Detection Limits
- NA Sample Quantitation

NA – Parameter not evaluated for Tier II level data validation.

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

Data Completeness

The laboratory was contacted on July 8, 2004 about an error in the Form VI (Duplicates). A hard copy of the revised form was received by e-mail on July 8, 2004, and the laboratory responded that the corrected electronic deliverables would be sent shortly.

The laboratory was contacted on July 9, 2004 to ask the source of the Contract Required Detection Limits (CRDL) in the Form X. The laboratory responded on the same day that the CRDL values, which are used by the laboratory as limits for allowable levels of calibration blank contamination, are the laboratory's quantitation limits for Method 6010B.

Field and Laboratory Blank Analyses

Blank actions were taken for aluminum, antimony, barium, cadmium, chromium, cobalt, copper, iron, manganese, nickel, potassium, silver, vanadium, and zinc in the groundwater samples due to field or laboratory blank contamination.

In addition, blank actions were taken for barium, copper, iron, magnesium, manganese, sodium, and zinc in the field blank samples due to laboratory blank contamination.

ICP Serial Dilution Results

The positive barium and potassium results are qualified as estimated (J) in all of the groundwater samples due to a sample matrix suppressing effect detected in the ICP serial dilution analysis. The results may be biased low.

Detection Limits

The laboratory's instrument detection limit of 3.0 ug/L for thallium was above the Required Detection Limit of 0.002 mg/L (2.0 ug/L) specified in the Technical Specification for Laboratory Services for this case.

Overall Assessment of the Data

The data are acceptable for use as qualified. Positive sample results changed to non-detected values due to blank contamination are treated as positive results for qualification purposes. The estimation of these non-detected values is reported in the data summary table as (UJ).

Blank actions were taken for aluminum, antimony, barium, cadmium, chromium, cobalt, copper, iron, manganese, nickel, potassium, silver, vanadium, and zinc in the groundwater samples due to field or laboratory blank contamination. Blank actions also were taken for barium, copper, iron, magnesium, manganese, sodium, and zinc in the field blank samples due to laboratory blank contamination.

The positive barium and potassium results are qualified as estimated (J) in all of the groundwater samples due to a sample matrix suppressing effect detected in the ICP serial dilution analysis. The results may be biased low.

The laboratory's instrument detection limit of 3.0 ug/L for thallium was above the Required Detection Limit of 0.002 mg/L (2.0 ug/L) specified in the Technical Specification for Laboratory Services for this case.

Sample results less than 2x IDL and less than the CRDL are estimated (J) due to uncertainty in values near the instrument detection limit.

Tables: Table III: TIC Summary Table
Data Summary Tables

Enclosures: Data Validation Worksheets

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l) TABLE III - TENTATIVELY IDENTIFIED COMPOUND SUMMARY
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477_TIC

EPA Sample Number	TF5-GW-MW864		TF5-GW-RB01-		TF5-GW-SB01-	
5-HEPTEN-2-ONE, 6-METHYL-	6	NJ				
7,9-DI-TERT-BUTYL-1-OXASPIRO(4,5)DECA-6,			4	NJ	4	NJ

J - Quantitation Approximate; N - Presumptive evidence;
B - Blank contamination; _# - Number of peaks quantitated

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01		TF5-GW-MW10-		TF5-GW-MW3A-		TF5-GW-MW701		TF5-GW-MW8-0	
Station Location	TF5-GW-DUP01-05		TF5-GW-MW10-05		TF5-GW-MW3A-05		TF5-GW-MW701-05		TF5-GW-MW8-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted										
Date Analyzed	5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		None		Field Dup. TF5-GW-MW3A-05		None		None	
Dichlorodifluoromethane	5	U	5	U	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Acetone	5	U	5	U	5	U	5	U	5	U
Carbon Disulfide	5	U	5	U	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U	5	U
2-Butanone	5	U	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Chloroform	5	U	5	U	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U	5	U	5	U
Toluene	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U	5	U	5	U
m-Xylene	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01		TF5-GW-MW10-		TF5-GW-MW3A-		TF5-GW-MW701		TF5-GW-MW8-0	
Station Location	TF5-GW-DUP01-05		TF5-GW-MW10-05		TF5-GW-MW3A-05		TF5-GW-MW701-05		TF5-GW-MW8-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted										
Date Analyzed	5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		None		Field Dup. TF5-GW-MW3A-05		None		None	
Total Xylenes	5	U	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	UJ	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW864		TF5-GW-MW865		TF5-GW-RB01-		TF5-GW-RB02-		TF5-GW-SB01-		TF5-GW-TB01-	
Station Location	TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05		TF5-GW-RB02-05		TF5-GW-SB01-05		TF5-GW-TB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/26/04		5/26/04		5/25/04	
Date Extracted												
Date Analyzed	5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004	
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	None		None		Rinsate Blank		Rinsate Blank		Source Blank		Trip Blank	
Dichlorodifluoromethane	5	U	5	U	5	U	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	5	U	5	U	63		46		68		5	U
Carbon Disulfide	5	U	5	U	5	U	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U	5	U	5	U
2-Butanone	5	U	5	U	3	J	5	U	4	J	5	U
cis-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U	5	U
Chloroform	5	U	5	U	5	U	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U	5	U	5	U	5	U
Toluene	5	U	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U	5	U	5	U	5	U
m-Xylene	5	U	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW864		TF5-GW-MW865		TF5-GW-RB01-		TF5-GW-RB02-		TF5-GW-SB01-		TF5-GW-TB01-	
Station Location	TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05		TF5-GW-RB02-05		TF5-GW-SB01-05		TF5-GW-TB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/26/04		5/26/04		5/25/04	
Date Extracted												
Date Analyzed	5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004	
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	None		None		Rinsate Blank		Rinsate Blank		Source Blank		Trip Blank	
Total Xylenes	5	U	5	U	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01		TF5-GW-MW10-		TF5-GW-MW3A-		TF5-GW-MW701		TF5-GW-MW8-0	
Station Location	TF5-GW-DUP01-05		TF5-GW-MW10-05		TF5-GW-MW3A-05		TF5-GW-MW701-05		TF5-GW-MW8-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/2/2004		6/2/2004		6/2/2004		6/2/2004		6/2/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		None		Field Dup. TF5-GW-MW3A-05		None		None	
Phenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	10	U
Naphthalene	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		R		R		R		R		R
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	20	U	20	U	20	U	20	U	20	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Acenaphthene	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	20	U	20	U	20	U	20	U	20	U
Dibenzofuran	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01		TF5-GW-MW10-		TF5-GW-MW3A-		TF5-GW-MW701		TF5-GW-MW8-0	
Station Location	TF5-GW-DUP01-05		TF5-GW-MW10-05		TF5-GW-MW3A-05		TF5-GW-MW701-05		TF5-GW-MW8-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/2/2004		6/2/2004		6/2/2004		6/2/2004		6/2/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		None		Field Dup. TF5-GW-MW3A-05		None		None	
4-Nitroaniline	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-2-methylphenol	20	U	20	U	20	U	20	U	20	U
N-Nitroso-diphenylamine	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	20	U	20	U	20	U	20	U	20	U
Phenanthrene	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	10	U	10	U	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U	10	U	10	U
Pyrene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(a)anthracene	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Di-n-octylphthalate	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U	10	U	10	U
Dibenzo(a,h)anthracene	10	U	10	U	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U	10	U	10	U
1,1'-Biphenyl	10	U	10	U	10	U	10	U	10	U
Acetophenone	10	U	10	U	10	U	10	U	10	U
Atrazine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzaldehyde	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Caprolactam	6	J	10	U	7	J	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW864		TF5-GW-MW865		TF5-GW-RB01-		TF5-GW-RB02-		TF5-GW-SB01-	
Station Location	TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05		TF5-GW-RB02-05		TF5-GW-SB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/26/04		5/26/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/2/2004		6/2/2004		6/3/2004		6/3/2004		6/3/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		Rinsate Blank		Rinsate Blank		Source Blank	
Phenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	10	U
Naphthalene	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		R		R		R		R		R
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	20	U	20	U	20	U	20	U	20	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Acenaphthene	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	20	U	20	U	20	U	20	U	20	U
Dibenzofuran	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW864		TF5-GW-MW865		TF5-GW-RB01-		TF5-GW-RB02-		TF5-GW-SB01-	
Station Location	TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05		TF5-GW-RB02-05		TF5-GW-SB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/26/04		5/26/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/2/2004		6/2/2004		6/3/2004		6/3/2004		6/3/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		Rinsate Blank		Rinsate Blank		Source Blank	
4-Nitroaniline	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-2-methylphenol	20	U	20	U	20	U	20	U	20	U
N-Nitroso-diphenylamine	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	20	U	20	U	20	U	20	U	20	U
Phenanthrene	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	10	U	10	U	1	J	10	U	1	J
Fluoranthene	10	U	10	U	10	U	10	U	10	U
Pyrene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(a)anthracene	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	UJ	10	UJ	1	J	10	UJ	1	J
Di-n-octylphthalate	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U	10	U	10	U
Dibenzo(a,h)anthracene	10	U	10	U	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U	10	U	10	U
1,1'-Biphenyl	10	U	10	U	10	U	10	U	10	U
Acetophenone	10	U	10	U	10	U	10	U	10	U
Atrazine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzaldehyde	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Caprolactam	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Low Concentration PAH (SIM) Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01		TF5-GW-MW10-		TF5-GW-MW3A-		TF5-GW-MW701		TF5-GW-MW8-0	
Station Location	TF5-GW-DUP01-05		TF5-GW-MW10-05		TF5-GW-MW3A-05		TF5-GW-MW701-05		TF5-GW-MW8-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/3/2004		6/3/2004		6/3/2004		6/3/2004		6/3/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		None		Field Dup. TF5-GW-MW3A-05		None		None	
Naphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
2-Methylnaphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthylene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Fluorene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Phenanthrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Pyrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(a)anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Chrysene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(b)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(k)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(a)pyrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Dibenzo(a,h)anthracene	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ
Benzo(g,h,i)perylene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Low Concentration PAH (SIM) Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW864		TF5-GW-MW865		TF5-GW-RB01-		TF5-GW-RB02-		TF5-GW-SB01-	
Station Location	TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05		TF5-GW-RB02-05		TF5-GW-SB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/26/04		5/26/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/3/2004		6/3/2004		6/3/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		Rinsate Blank		Rinsate Blank		Source Blank	
Naphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
2-Methylnaphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthylene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Fluorene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Phenanthrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Pyrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(a)anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Chrysene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(b)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(k)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(a)pyrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Dibenzo(a,h)anthracene	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ
Benzo(g,h,i)perylene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01-05		TF5-GW-DUP01-05F		TF5-GW-MW10-05		TF5-GW-MW10-05F		TF5-GW-MW3A-05	
Station Location	TF5-GW-DUP01-05		TF5-GW-DUP01-05F		TF5-GW-MW10-05		TF5-GW-MW10-05F		TF5-GW-MW3A-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted										
Date Analyzed										
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		Field Dup. TF5-GW-MW3A-05F		None		None		Field Dup. TF5-GW-MW3A-05	
Aluminum	449		6.0	U	159	U	6.0	U	432	
Antimony	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Arsenic	3.0	U	3.0	U	3.0	U	3.0	U	4.3	J
Barium	7.1	UJ	5.7	UJ	10.3	UJ	9.9	UJ	7.8	UJ
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U	0.20	U	0.20	U	0.29	UJ
Calcium	6660		6700		40700		39500		6640	
Chromium	0.80	U	0.85	U	0.65	UJ	0.41	UJ	0.71	UJ
Cobalt	1.1	UJ	1.5	UJ	0.90	U	1.1	UJ	1.3	UJ
Copper	4.5	U	2.1	U	2.5	U	3.2	U	4.7	U
Iron	1230		22.9	U	677		37.1	U	1210	
Lead	2.0	U	2.2	J	2.0	U	2.0	U	2.0	U
Magnesium	7400		7290		27000		26200		7410	
Manganese	48.3		8.8	U	9.8	U	4.2	U	52.2	
Mercury	0.16	U	0.13	U	0.14	U	0.13	U	0.15	U
Nickel	4.1	U	3.5	U	2.8	U	2.5	U	4.5	U
Potassium	1310	UJ	1260	UJ	2020	J	1930	J	1310	UJ
Selenium	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver	2.0	U	2.0	U	3.5	UJ	2.8	UJ	2.0	U
Sodium	11800		11900		16200		16100		11900	
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U
Zinc	16.2	U	14.7	U	8.4	U	19.2	U	15.5	U

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW3A-05F		TF5-GW-MW701-05		TF5-GW-MW8-05		TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05	
Station Location	TF5-GW-MW3A-05F		TF5-GW-MW701-05		TF5-GW-MW8-05		TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted												
Date Analyzed												
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	Field Dup. TF5-GW-MW3A-05F		None		None		None		None		Rinsate Blank	
Aluminum	6.0	U	6.0	U	38.2	U	66.7	U	12.9	U	6.0	U
Antimony	3.0	U	6.9	U	3.5	UJ	3.0	U	3.0	U	3.0	U
Arsenic	3.0	U	3.0	U	3.0	U	6.0		3.0	J	3.0	U
Barium	5.2	UJ	75.9	J	23.8	UJ	5.8	UJ	6.4	UJ	1.6	U
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U	0.20	U	3.0	U	0.20	U	0.20	U
Calcium	6520		81800		48700		4470		5030		74	U
Chromium	0.40	U	0.40	U	1.3	U	0.40	U	0.40	U	0.40	U
Cobalt	0.90	U	9.3	U	2.0	U	2.7	U	1.5	UJ	0.90	U
Copper	3.0	U	4.3	U	6.7	U	5.3	U	5.2	U	2.0	U
Iron	15.5	U	88.8	U	233		48.8	U	30.8	U	9.9	U
Lead	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium	7210		50500		19500		2250		4110		20.7	U
Manganese	7.7	U	2380		25.9		23.6		6.2	U	1.5	U
Mercury	0.13	U	0.13	U	0.13	U	0.14	U	0.13	U	0.14	U
Nickel	3.2	U	0.52	UJ	3.0	U	6.6	U	3.1	U	0.50	U
Potassium	1220	UJ	4880	J	4130	J	1140	UJ	1050	UJ	58	U
Selenium	4.0	U	4.0	U	4.0	U	4.2	J	4.0	U	4.0	U
Silver	2.0	U	11.3	U	5.7	U	2.0	U	2.3	UJ	2.0	U
Sodium	11800		93900		41200		14400		11700		115	U
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium	0.70	U	1.5	U	1.6	U	0.70	U	0.70	U	0.70	U
Zinc	14.0	U	7.9	U	16.5	U	20.9	U	16.1	U	3.0	UJ

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-RB02-05		TF5-GW-SB01-05	
Station Location	TF5-GW-RB02-05		TF5-GW-SB01-05	
Date Sampled	5/26/04		5/26/04	
Date Extracted				
Date Analyzed				
Dilution Factor	1		1	
Percent Solids				
QC Identifier	Rinsate Blank		Source Blank	
Aluminum	6.0	U	6.0	U
Antimony	3.0	U	3.0	U
Arsenic	3.0	U	3.0	U
Barium	1.5	U	1.2	U
Beryllium	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U
Calcium	74	U	74	U
Chromium	0.40	U	0.40	U
Cobalt	0.90	U	0.90	U
Copper	1.5	UJ	1.7	UJ
Iron	10.4	U	10.5	U
Lead	2.0	U	2.0	U
Magnesium	6.0	U	6.0	U
Manganese	1.4	U	3.2	U
Mercury	0.14	U	0.14	U
Nickel	0.50	U	0.50	U
Potassium	58	U	58	U
Selenium	4.0	U	4.0	U
Silver	2.0	U	2.0	U
Sodium	75.3	UJ	87.3	UJ
Thallium	3.0	U	3.0	U
Vanadium	0.70	U	0.70	U
Zinc	2.9	UJ	2.0	U

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name NAVY TANK FARM 5 TANK 53
Reference No. _____

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name MITKEM
Case/Project No. C04477
SDG No. _____
No. of Samples/Matrix _____

SOW/Method No. SW-846
Sampling Date(s) 5/25/04 5/26/04
Shipping Date(s) 5/26/04
Date Rec'd by lab 5/26/04

Traffic Report Sample Nos. TF5-GW-DUP01-05, MW10, MW3A, MW701, MW8, MW804, MW805, RB01,

Trip Blank No. TF5-GW-TB01-05
Equipment Blank No. TF5-GW-RB01-05 RB02
~~Bottle Blank~~ No. SOURCE BLANK TF5-GW-SB01-05
Field Duplicate Nos. _____
PES Nos. DUP01 / MW3A

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision 12/96 was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

TIER II

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name D. WIELANDT Company Name TENUS Phone Number (978) 658-7899

Date Validation Started 7/8/04 Date Validation Completed 7/9/04

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	✓
VOA/SV-III	INITIAL CALIBRATION	
VOA/SV-IV	CONTINUING CALIBRATION	
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	
SV-VI	SV SURROGATE SPIKE RECOVERIES	✓
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	✓
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	✓
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	NA
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	NA
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	NA
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	NA
VOA/SV-XV	SEMIVOLATILE CLEANUP	NA
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	✓

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	N/A
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	
Pest/PCB-III	INITIAL CALIBRATION	
Pest/PCB-IV	CONTINUING CALIBRATION	
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT	
Pest/PCB-VII	PESTICIDE CLEANUP	
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	
Pest/PCB-XII	COMPOUND IDENTIFICATION	
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	✓

I certify that all criteria were met for the worksheets checked above.

Signature: Dan Wielandt

Name: DAN WIELANDT

Date: 7/9/04

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: VOC / SVOC / PAH

Missing Information	Date Lab Contacted	Date Received
3rd Quant page from 80ppb std	7/8/04	
Ag ICAL is missing		

Validator: [signature]

Date: 7/8/04

12/96

EPA-NE - Data Validation
VOA/SV - Pest/PCB-I

12/96

Sampler: _____ Company: TENUS Contacted: Yes No Date: _____

I. PRESERVATION AND HOLDING TIMES - Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action
DUP01	G.W.	1,2,3	5/25/04	5/31/04	6	acm	5/28/04	3 (L/L)	6/2/04	5	acm	5/28/04	3 (L/L)	6/3/04	6	acm
MW10																
MW3A																
MW701																
MW8																
MW864																
MW865																
RB01	R.B.								6/3/04	6						
RB02	R.S		5/26/04		5			2					2	6/4/04	7	
SB01	source Blank															
TB01	T.B.															

Cooler Temp: 3°c

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator:

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
BFB	5/28/04 19:39	V2					am
	5/31/04 04:17	V2					↓

Comments:

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
DFTPP	6/2/04 10:03	S2	SVOC				am
	6/2/04 16:51	S2					↓
DFTPP	6/3/04 14:16	S1	— PAH				↓

Comments:

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: DW

Date: 7/8/04

EPA-NE - Data Validation Worksheet
VOA/SV-III

III. **INITIAL CALIBRATION** - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	RRF	Samples Affected	Action
5/28/04	V2	VOC	AQ				all	
6/2/04	S2	SVOC	AQ	Hexachlorocyclopentadiene	33.3			UJ
				Atrazine	74.1		all samples	UJ
				Benzaldehyde	33.2			UJ
6/3/04	S1	PAH	AQ	Dibenzo(a,h)anthracene	30.3		all samples	UJ

Comments:

Validator: BJW

Date: 7/8/04

EPA-NE - Data Validation Worksheet
VOA/SV-IV

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action
5/28/04	5/31/04	V2	VOC	AQ				all	
6/2/04	6/2/04	S2	SVOC	AQ	Pyrene	29.2		all samples	UJ
					3,3'-Dichlorobenzidine	34.4			UJ
					bis(2-Ethylhexyl)phthalate	29.2			J, UJ
					Atrazine	78.4			UJ
					Benzaldehyde	53.6			UJ
6/3	6/3/04	S1						all	

Comments:

Validator: [signature]

Date: 7/8/04

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-A

V. BLANK ANALYSIS

List the blank contamination below.

VOC

Concentration Level:_____

Sampler: _____ Company: _____ Contacted: Yes No Date:_____

1. Laboratory: Method, Storage and Instrument Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)
	5/3/04	VOA/AQ	VBLK2M (method)		clean	
5/20/04	6/2/04	SVOC/AQ	SBLK2A (method		clean	

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)
—	5/3/04	VOC/AQ	RB01 (R.B)		Acetone	63 ug/L
					2-Butanone	3
	5/3/04	"	RB02 (R.B.)		Acetone	46
	5/3/04	"	SB0 (SOURCE BLANK)		Acetone	68
					2-Butanone	4

Not to use. this blank

Validator: _____

Date: 7/28/04

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

3. **Blank Actions** - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action
Acetone	SOURCE		~~68~~ 63	~~680~~ 630		since all results	
2-Butanone			~~4~~ 3	~~40~~ 30		in GW samples	
						are ND	no action taken
						Prof. Jud.	
Di-n-butyl phthalate	RB		1 µg/L	10 µg/L		none	
Dis(2-Ethyl hexyl)phthalate	R.B.		1 µg/L	10 µg/L		MW8604	CRDL "U"
						DUP01, MW10, MW8	
PAH	—	no blank	actions				

Comments: _____

Validator: [signature]

Date: 7/8/04

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII
LCS / LCSD & MS/MSD

VIII. ~~MATRIX SPIKE/MATRIX SPIKE DUPLICATE~~ - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # MW701 Matrix AQ Concentration Level _____

	Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits % Rec	Method QC Limits RPD	Concentration Unspiked Sample	Concentration MS	Concentration MSD	% RSD	Action
MS/MSD	VOC	chloroethane	122			72-118					ND	accept
		1,1,2,2-Tetrachloroethane	72			76-125						UJ
		Freon 113	140			70-130					ND	accept
	VOC LCS/LCSD	Vinyl chloride	114			65-113					ND	accept
MS/MSD	SVOC	Hexachlorocyclopentadiene	0	0		34-103						R
		Chrysene	130	132		53-123					ND	accept
	SVOC LCS	Hexachlorocyclopentadiene	0			34-103						R
		N-Nitrosodiphenylamine	122			48-121					ND	accept
		Chrysene	136			53-123						↓
	PAH	acm										

all samples

Validator: [signature]

Date: 7/8/04

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria: +100% -50%
IS Retention Time method QC acceptance criteria: ± 0.50 min

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action
			VOC — acceptable					
			SVOC — acceptable					
MW701		S1	PAH	1,4-Dichlorobenzene-d4	168579	- no PAH	no action	
				Phenanthrene	404318		98310 - 313238	all results to be accepted

Validator: [signature]

Date: 7/8/04

REGION I
Data Review Worksheets

Site Name Tank Farm 5 - Tank 53
Reference Number _____

REGION I REVIEW OF INORGANIC CONTRACT LABORATORY DATA PACKAGE

The hardcopied (laboratory name) Mitkem Corp. data package received at Region I has been reviewed and the quality assurance and performance data summarized. The data review included:

Case No.	TF5	SAS No.		Sampling Date(s)	5/25, 5/26/04
SDG. No.	C0477	Matrix	water	Shipping Date(s)	5/26/04
No. of Samples	13			Date Rec'd by Lab	5/26/04

Traffic Report Nos: TF5-GW-DUP01-05, -DUP01-05F, -MW10-05, -MW10-05F, -MW3A-05, -MW3A-05F, -MW701-05, -MW8-05, -MW864-05, -RB01-05,
~~Trip Blank No.:~~ -RB02-05, -SB01-05
Equipment Blank No.: TF5-GW-RB01-05, -RB02-05, -SB01-05
Field Dup Nos: TF5-GW-MW3A-05/TF5-GW-DUP01-05,
TF5-GW-MW3A-05F/TF5-GW-DUP01-05F

SOW No. ILM04.1 requires that specific analytical work be done and that associated reports be provided by the laboratory to the Regions, EMSL-LV, and SMO. The general criteria used to determine the performance were based on an examination of:

- -Data Completeness
- -Holding Times
- -Calibrations
- -Blanks
- -ICP Interference Check Results
- -Matrix Spike Recoveries
- -Laboratory Duplicates
- -Field Duplicates
- -Lab Control Sample Results
- -Furnace AA Results
- -ICP Serial Dilution Results
- -Detection Limit Results
- -Sample Quantitation

Overall Comments: Tier II.

Definitions and Qualifiers:

A - Acceptable data.
J - Approximate data due to quality control criteria.
R - Reject data due to quality control criteria.
U - Analyte not detected.

Reviewer: Ann Franke Date: 7/04

REGION I
Data Review Worksheets

I. DATA COMPLETENESS

MISSING INFORMATION	DATE LAB CONTACTED	DATE REC'D
Form VI (Dup.) listed 0.0000 u for Cu + Zn Dups instead of positive results	7/8/04	Received hard copy of corrected form 7/8/04. Lab will send corrected disk.
Lab was contacted 7/9/04 to ask source of CRDLs in Form X.		Lab responded 7/9/04 that CRDLs are lab's Quantitation Limits for Method 6010B.

REGION I
Data Review Worksheets

II. HOLDING TIMES

Complete table for all samples and circle the analysis date for samples not within criteria.

SAMPLE ID	DATE SAMPLED	HG DATE ANALYSIS	CYANIDE DATE ANALYSIS	OTHERS DATE ANALYSIS	pH	ACTION
TF5-GW-						
DUP01-05	5/25/04	9 6/3/04	NA	6/4, 6/5, 6/6/04	<2	None
DUP01-05F						
MW10-05						
MW10-05F						
MW3A-05						
MW3A-05F						
MW701-05						
MW8-05						
MW864-05						
MW865-05						
RB01-05						
RB02-05	5/26					
SB01-05						

METALS - 180 DAYS FROM SAMPLE COLLECTION
MERCURY - 28 DAYS FROM SAMPLE COLLECTION
CYANIDE - 14 DAYS FROM SAMPLE COLLECTION

ACTION:

1. If holding times are exceeded all positive results are estimated (J) and non-detects are estimated (UJ).

2. If holding times are grossly exceeded, the reviewer may determine that non-detects are unusable (R).

Cooler Temp = 3°C - within 4°±2°C

III A. INSTRUMENT CALIBRATION (Section 1)

1. Recovery Criteria

List the analytes which did not meet the percent recovery (%R) criteria for Initial or Continuing Calibration.

DATE	ICV/CCV#	ANALYTE	%R	ACTION	SAMPLES AFFECTED
	All met criteria				

ACTIONS:

If any analyte does not meet the %R criteria follow the actions stated below:

For Positive Results:

	Accept	Estimate (J)	Reject (R)
Metals	90-110%R	75-89%R, 111-125%R	<75%R, >125%R
Mercury	80-120%R	65-79%R, 121-135%R	<65%R, >135%R
Cyanide	85-115%R	70-84%R, 116-130%R	<70%R, >130%R

For Non-detected Results:

	Accept	Estimate (UJ)	Reject (R)
Metals	90-125%R	75-89%R	<75%R, >125%R
Mercury	80-135%R	65-79%R	<65%R, >135%R
Cyanide	85-130%R	70-84%R	<70%R, >130%R

CRDL standard analyses: (80-120% QC criteria)

Analyte	% Rs	Actions
NA		

REGION I
Data Review Worksheets

III B. INSTRUMENT CALIBRATION (Section 2)

2. Analytical Sequence

A. Did the laboratory use the proper number of standards for calibration as described in the ~~SOW~~? Method — Yes or No

B. Were calibrations performed at the beginning of each analysis? — Yes or No

C. Were calibration standards analyzed at the beginning of sample analysis and at a minimum frequency of ten percent ~~or every two hours~~ during analysis, ~~whichever is more frequent~~? — Yes or No

D. Were the correlation coefficients for the calibration curves for ~~AA~~, Hg, and ~~CN~~ NA ≥ 0.995? ICP-~~AES~~ — Yes or No

E. Was a standard at 2xCRDL analyzed for all ICP analyses? NA — Yes or No

If No,

The data may be affected. Use professional judgement to determine the severity of the effect and qualify the data accordingly. Discuss any actions below and list the samples affected.

calibration curve correlation coefficients

NA, Tier II

Data Review Worksheet

IV A. BLANK ANALYSIS RESULTS (Sections 1-3)

List the blank contamination in Sections 1 & 2 below. A separate worksheet should be used for soil and water blanks.

1. Laboratory Blanks See Blank Worksheet MATRIX: water

DATE	ICB/CCB#	PREP BL	ANALYTE	CONC./UNITS

2. Equipment/Trip Blanks

Collection DATE	EQUIP BL#	Type of RB (according to Sample Log Sheet)	~~ANALYTE~~	CONC./UNITS
5/25/97	F5 - GW - RB01 - 05	- Deconned pump rinsate blank	Apply to all GW samples	
5/26	" " - RB02 - 05	- Pre-cleaned pump R.B.		
5/25	" " RB01 - 05F	- Filter blank	Apply only to filtered samples; reported in SDG C0491	
5/26	" " RB02 - 05F	- Filter blank		

- FB results all ND after blank actions due to laboratory blank contamination

3. Frequency Requirements

A. Was a preparation blank analyzed for each matrix, for every 20 samples and for each digestion batch? Yes or No

B. Was a calibration blank run every 10 samples ~~or every 2 hours whichever is more frequent~~? Yes or No

If No,

The data may be affected. Use professional judgement to determine the severity of the effect and qualify the data accordingly. Discuss any actions below, and list the samples affected.

COPY - RB01-05F

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

TF5-GW-RB01-05F

Lab Name: Mitkem Corporation Contract: 42-842

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0491

Matrix (soil/water): WATER Lab Sample ID: C0491-01

Level (low/med): MED Date Received: 05/28/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6.0	U		P
7440-36-0	Antimony	3.0	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	8.4	~~B~~	U	P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.21	~~B~~	U	P
7440-70-2	Calcium	74	U		P
7440-47-3	Chromium	0.64	~~B~~	U	P
7440-48-4	Cobalt	1.4	~~B~~	U	P
7440-50-8	Copper	4.0	~~B~~	U	P
7439-89-6	Iron	22.8	~~B~~	U	P
7439-92-1	Lead	2.0	U		P
7439-95-4	Magnesium	14.8	~~B~~	U	P
7439-96-5	Manganese	2.8	~~B~~	U	P
7440-02-0	Nickel	1.4	~~B~~	U	P
7440-09-7	Potassium	58	U		P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	109	~~B~~	U	P
7440-28-0	Thallium	4.2	~~B~~	U	P
7440-62-2	Vanadium	1.1	~~B~~	U	P
7440-66-6	Zinc	8.5	~~B~~	U	P
7439-97-6	Mercury	0.13	U		CV

Comments:

COPY - RB02-05F

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

TF5-GW-RB02-05F

Lab Name: Mitkem Corporation Contract: 42-842

Lab Code: MITKEM Case No. SAS No.: SDG No.: MC0491

Matrix (soil/water): WATER Lab Sample ID: C0491-02

Level (low/med): MED Date Received: 05/28/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6.0	U		P
7440-36-0	Antimony	3.0	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	1.9	~~B~~	U	P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	74	U		P
7440-47-3	Chromium	0.40	U		P
7440-48-4	Cobalt	0.90	U		P
7440-50-8	Copper	1.6	~~B~~	U	P
7439-89-6	Iron	13.3	~~B~~	U	P
7439-92-1	Lead	2.0	U		P
7439-95-4	Magnesium	6.0	U		P
7439-96-5	Manganese	1.7	~~B~~	U	P
7440-02-0	Nickel	0.50	U		P
7440-09-7	Potassium	58	U		P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	117	~~B~~	U	P
7440-28-0	Thallium	3.0	U		P
7440-62-2	Vanadium	0.70	U		P
7440-66-6	Zinc	6.4	~~B~~	U	P
7439-97-6	Mercury	0.15	U		CV

Comments:

Applies to Unfiltered and Filtered Samples and Field Blank Samples

ug/L

BLANK WORKSHEET

	ICB				CCB										PB		RB01 ~~FB~~	RB02 ~~BB~~ (RB01-F, RB02-F)	RB	RB	MAX, GWs	MAX, ~~All~~ Field Blanks
	1	2	3	4	1	2	3	4	5	6	7	8	9	10	1	2	1	2	3	4	*	
Aluminum					32.1	8.0		35.6													35.6	35.6
Antimony	9.6														6.14						9.6	9.6
Arsenic																						
Barium	5.5				8.2	7.8	10.5	11.1							1.73		1.6	1.5			11.1	11.1
Beryllium					0.4	0.3	0.3	0.4													0.4	0.4
Cadmium	0.2				0.4	0.2	0.4	0.3													0.4	0.4
Calcium																						
Chromium	0.5				0.8	0.6	0.8	0.9													0.9	0.9
Cobalt	1.3				2.1	1.9	2.7	2.7													2.7	2.7
Copper	2.3				4.2	3.1	2.3	2.4							7.06		2.0	1.5			7.06	7.06
Iron					10.8		3.6	14.5							18.3		9.9	10.4			18.3	18.3
Lead																						
Magnesium	13.1				50	24	20.8	61.7									20.7				61.7	61.7
Manganese	1.2				1.9	1.8	2.4	2.6							1.60		1.5	1.4			2.6	2.6
Mercury																						
Nickel	1.3				2.1	1.8	2.6	2.7													2.7	2.7
Potassium	323.9				169	89.8	95.7								137.6						323.9	323.9
Selenium																						
Silver	18.5				3.1	2.1	2.6	2.2							6.37						18.5	18.5
Sodium	253.1				169.2	72.7	98.7								159.7		115	75.3			253.1	253.1
Thallium					3.4		3.6	4.9													4.9	4.9
Vanadium	1.5				2.2	2.5	2.5	2.9													2.9	2.9
Zinc	3.4				4.0	3.0	3.1	3.5							10.04		3.0	2.9			10.04	10.04

* Maximums are equal for Filtered and Unfiltered Samples because Filter Blank results are all ND.

REGION I
Data Review Worksheets

IV B. BLANK ANALYSIS RESULTS (Section 4)

4. Blank Actions

The Action Levels for any analyte is equal to five times the highest concentration of that element's contamination in any blank. The action level for samples which have been concentrated or diluted should be multiplied by the concentration/dilution factor. No positive sample result should be reported unless the concentration of the analyte in the sample exceeds the Action Level (AL). Specific actions are as follows:

1. When the concentration is greater than the IDL, but less than the Action Level, report the sample concentration detected with a U.
2. When the sample concentration is greater than the Action Level, report the sample concentration unqualified.

Blank Actions – Unfiltered Samples

MATRIX: water

ELEMENT	MAX. CONC./ UNITS ug/L	AL/ UNITS ug/L
Al	35.6	178
Sb	9.6	48
Ba	11.1	55.5
Be	0.4	2.0 - ND
Cd	0.4	2.0
Cr	0.9	4.5
Co	2.7	13.5
Na	253.1	1266 > AL
Tl	4.9	24.5 - ND

MATRIX: _____

ELEMENT	MAX. CONC./ UNITS	AL/ UNITS
Cu	7.06	35.3
Fe	18.3	91.5
Mg	61.7	308 > AL
Mn	2.6	13.0
Ni	2.7	13.5
K	323.9	1620
Ag	18.5	92.5
V	2.9	14.5
Zn	10.04	50.2

NOTE: Blanks analyzed during a soil case must be converted to mg/kg in order to compare them with the sample results.

$$\text{Conc. in ug/L} \times \frac{\text{Volume diluted to (200ml)}}{\text{Weight digested (1gram)}} \times \frac{1L}{1000ml} \times \frac{1000gm}{1kg} \times \frac{1mg}{1000ug} = mg/kg$$

Multiplying this result by 5 to arrive at the action level gives a final result in mg/kg which can then be compared to sample results.

REGION I
Data Review Worksheets

IV B. BLANK ANALYSIS RESULTS (Section 4)

4. Blank Actions

The Action Levels for any analyte is equal to five times the highest concentration of that element's contamination in any blank. The action level for samples which have been concentrated or diluted should be multiplied by the concentration/dilution factor. No positive sample result should be reported unless the concentration of the analyte in the sample exceeds the Action Level (AL). Specific actions are as follows:

1. When the concentration is greater than the IDL, but less than the Action Level, report the sample concentration detected with a U.
2. When the sample concentration is greater than the Action Level, report the sample concentration unqualified.

Blank Actions - Filtered Samples

MATRIX: water

ELEMENT	MAX. CONC./ UNITS ug/L	AL/ UNITS ug/L		ELEMENT	MAX. CONC./ UNITS	AL/ UNITS	
Al	35.6	178	- ND	Cu	7.06	35.3	
Sb	9.6	48	- ND	Fe	18.3	91.5	
Ba	11.1	55.5		Mg	61.7	308	> AL
Be	0.4	2.0	- ND	Mn	2.6	13.0	
Cd	0.4	2.0	- ND	Ni	2.7	13.5	
Cr	0.9	4.5		K	323.9	1620	
Co	2.7	13.5		Ag	18.5	92.5	
Na	253.1	1266	> AL	V	2.9	14.5	- ND
Tl	4.9	24.5	- ND	Zn	10.04	50.2	

MATRIX: _____

NOTE: Blanks analyzed during a soil case must be converted to mg/kg in order to compare them with the sample results.

$$\text{Conc. in ug/L} \times \frac{\text{Volume diluted to (200ml)}}{\text{Weight digested (1gram)}} \times \frac{1L}{1000ml} \times \frac{1000gm}{1kg} \times \frac{1mg}{1000ug} = mg/kg$$

Multiplying this result by 5 to arrive at the action level gives a final result in mg/kg which can then be compared to sample results.

IV B. BLANK ANALYSIS RESULTS (Section 4)

4. Blank Actions

The Action Levels for any analyte is equal to five times the highest concentration of that element's contamination in any blank. The action level for samples which have been concentrated or diluted should be multiplied by the concentration/dilution factor. No positive sample result should be reported unless the concentration of the analyte in the sample exceeds the Action Level (AL). Specific actions are as follows:

1. When the concentration is greater than the IDL, but less than the Action Level, report the sample concentration detected with a U.
2. When the sample concentration is greater than the Action Level, report the sample concentration unqualified.

Blank Actions - Field Blank Samples

MATRIX: water

ELEMENT	MAX. CONC./ UNITS ug/L	AL/ UNITS ug/L	ELEMENT	MAX. CONC./ UNITS	AL/ UNITS
Al	35.6	178 - ND	Cu	7.06	35.3
Sb	9.6	48 - ND	Fe	18.3	91.5
Ba	11.1	55.5	Mg	61.7	308
Be	0.4	2.0 - ND	Mn	2.6	13.0
Cd	0.4	2.0 - ND	Ni	2.7	13.5 - ND
Cr	0.9	4.5 - ND	K	323.9	1620 - ND
Co	2.7	13.5 - ND	Ag	18.5	92.5 - ND
Na	253.1	1266	V	2.9	14.5 - ND
Tl	4.9	24.5 - ND	Zn	10.04	50.2

MATRIX: _____

NOTE: Blanks analyzed during a soil case must be converted to mg/kg in order to compare them with the sample results.

$$\text{Conc. in ug/L} \times \frac{\text{Volume diluted to (200ml)}}{\text{Weight digested (1gram)}} \times \frac{1L}{1000ml} \times \frac{1000gm}{1kg} \times \frac{1mg}{1000ug} = mg/kg$$

Multiplying this result by 5 to arrive at the action level gives a final result in mg/kg which can then be compared to sample results.

V A. ICP INTERFERENCE CHECK SAMPLE (Sections 1 & 2)

1. Recovery Criteria

List any elements in the ICS AB solution which did not meet the criteria for %R.

DATE	ELEMENT	%R	ACTION	SAMPLES AFFECTED
	All met criteria			

ACTIONS:

If an element does not meet the %R criteria , follow the actions stated below:

	PERCENT RECOVERY		
	<50%	50-79%	>120%
Positive Sample Results	R	J	J
Non-detected Sample Results	R	UJ	A

2. Frequency Requirements

Were Interference QC samples run at the beginning and end of each sample analysis run or a minimum of twice per 8 hour working shift, whichever is more frequent? Yes or No

If no,

The data may be affected. Use professional judgement to determine the severity of the effect and qualify the data accordingly. Discuss any actions below and list the samples affected.

REGION I
Data Review Worksheets

V B. ICP INTERFERENCE CHECK SAMPLE (Section 3)

3. Report the concentration of any elements detected in the ICS A solution > 2xIDL that should not be present.

ELEMENT	CONC. DETECTED IN THE ICS ug/l	CONC. OF INTERFERENTS IN THE ICS ug/l AL	CA	FE	MG	
		500000				
			500000			
				200000		
					500000	
		250000	250000	100000	250000	50%

Estimate the concentration produced by the interfering element in all affected samples. See guidelines for examples. List the samples affected by interferences below:

SAMPLE AFFECTED	ELEMENT AFFECTED	SAMPLE CONC. (ug/L)	SAMPLE INTERFERENT CONC. AL	CA	FE	MG	ESTIMATED INTERF. (ug/L)

ACTIONS:

<50% - No action

1. In general, the sample data can be accepted without qualification if the sample concentrations of Al, Ca, Fe, and Mg are less than 50% of their respective levels in the ICS solution.

2. Estimate (J) positive results for affected elements for samples with levels of interferents 50% or more of that in the ICS solution.

3. Reject (R) positive results if the ~~reported concentration is due entirely to the interfering element.~~ estimated interference is > 80% of the sample concentration.

4. Estimate (UJ) non-detected results for which false negatives are suspect.

Give explanations for any actions taken below:
No other Table 2 interferents (Cr, Cu, Mn, Ni, V) > 10 mg/L - no action for other interferents.

REGION I
Data Review Worksheets

VI. MATRIX SPIKE

TR # TF5-GW-MW701-05 MATRIX: Water

1. Recovery Criteria

List the percent recoveries for analytes which did not meet the required criteria.

S - amount of spike added
SSR - spikes sample result
SR - sample result

Analyte	SSR	SR	S	%R	Action
All met criteria					

Matrix Spike Actions apply to all samples of the same matrix.

ACTIONS:

1. If the sample concentration exceeds the spike concentration by a factor of 4 or more, no action is taken.

2. If any analyte does not meet the %R criteria follow the actions stated below:

	PERCENT RECOVERY		
	<30%	30%-74%	>125%
Positive Sample Results	J	J	J
Non-detected Results	R	UJ	A

2. Frequency Criteria

A. Was a matrix spike prepared at the required frequency? Yes or No

B. Was a post digestion spike analyzed for elements that did not meet required criteria for matrix spike recovery? NA Yes or No

A separate worksheet should be used for each matrix spike pair.

REGION I
Data Review Worksheets

VII. LABORATORY DUPLICATES

List the concentrations of any analyte not meeting the criteria for duplicate precision. For soil duplicates, calculate the CRDL in mg/kg using the sample weight, volume and percent solids data for the sample. Indicate what criteria was used to evaluate precision by circling either the RPD or CRDL for each element.

MATRIX: water

Element	CRDL water ug/L	CRDL soil mg/kg	Sample # TF5-GW-MW701-05	Duplicate# TF5-GW-MW701-05DUP	RPD	Action
Aluminum	200					
Antimony	60		6.8697	4.9626	32.2	None - Diff < CRDL
Arsenic	10					
Barium	200					
Beryllium	5					
Cadmium	5					
Calcium	5000					
Chromium	10					
Cobalt	50					
Copper	25		4.2701	2.6222	47.8	"
Iron	100					
Lead	3					
Magnesium	5000					
Manganese	15					
Mercury	0.2					
Nickel	40		0.5184	ND	200	"
Potassium	5000					
Selenium	5					
Silver	10					
Sodium	5000					
Thallium	10					
Vanadium	50		1.478	ND	200	"
Zinc	20		7.9208	4.2539	60.2	"
Cyanide	10					

Laboratory Duplicate Actions should be applied to all other samples of the same matrix type.

ACTIONS:

1. Estimate (J) positive results for elements which have an RPD >20% for waters and >35% for soils.

2. If sample results are less than 5x the CRDL, ~~estimate~~ (J) positive results for elements whose absolute difference is >CRDL (2xCRDL for soils). If both samples are non-detected, the RPD is not calculated (NC). Per Guidelines, App. C, U.J NDs.

VIII. FIELD DUPLICATES

List the concentrations of all analytes in the field duplicate pair. For soil duplicates, calculate the CRDL in mg/kg using the sample weight, volume and percent solids data for the sample. Indicate what criteria was used to evalute the precision by circling either the RPD or CRDL for each element.

MATRIX: water

Element	CRDL water ug/L	CRDL soil mg/kg	Sample # TF5-GW-MW3A-05	Duplicate# TF5-GW-DUP01-05	RPD	Action
Aluminum	200		See Field Dup. Worksheet			
Antimony	60					
Arsenic	10					
Barium	200					
Beryllium	5					
Cadmium	5					
Calcium	5000					
Chromium	10					
Cobalt	50					
Copper	25					
Iron	100					
Lead	~~3~~ 5					
Magnesium	5000					
Manganese	15					
Mercury	0.2					
Nickel	40					
Potassium	5000					
Selenium	5					
Silver	10					
Sodium	5000					
Thallium	10					
Vanadium	50					
Zinc	20					
Cyanide	10					

Field Duplicate Actions should be applied to all other samples of the same matrix type.

ACTIONS:

1. Estimate (J) positive results for elements which have an RPD >30% for waters and >50% for soils.

2. If sample results are less than 5x the CRDL, estimate (J) positive results and (UJ) nondetected results for elements whose absolute difference is >2xCRDL, (4xCRDL for soils). If both samples are non-detected, the ~~RPD is~~ not calculated (NC).

Field Duplicates Worksheet
--%RPD and Absolute Difference

MATRIX: Water

SDG:

ANALYTE	CRDL(ug/L)	5xCRDL(ug/L)	1st DUP SAMPLE # MW3A-05 REP'D CONC (ug/L)	2nd DUP SAMPLE # DUP01-05 REP'D CONC (ug/L)	%RPD	CRITERIA: %RPD if both results >= 5xCRDL	CRITERIA: %RPD >30%?*	ABS DIFF	CRITERIA: ABS DIFF if both results not >=5xCRDL	2xCRDL (ug/L)	ABS DIFF >2xCRDL?*	ACTION*
ALUMINUM	200	1000	432	449	3.9			17	17	400	no	None
ANTIMONY	60	300	U	U	NC			NC		120		
ARSENIC	10	50	4.3	U	• 200.0			4.3	4.3	20	no	
BARIUM	200	1000	7.8	7.1	9.4			0.7	0.7	400	no	
BERYLLIUM	5	25	U	U	NC			NC		10		
CADMIUM	5	25	0.29	U	• 200.0			0.29	0.29	10	no	
CALCIUM	5000	25000	6640	6660	0.3			20	20	10000	no	
CHROMIUM	10	50	0.71	0.80	11.9			0.09	0.09	20	no	
COBALT	50	250	1.3	1.1	16.7			0.2	0.2	100	no	
COPPER	25	125	4.7	4.5	4.3			0.2	0.2	50	no	
IRON	100	500	1210	1230	1.6	1.6	no	20		200		
LEAD	3	15	U	U	NC			NC		6		
MAGNESIUM	5000	25000	7410	7400	0.1			10	10	10000	no	
MANGANESE	15	75	52.2	48.3	7.8			3.9	3.9	30	no	
MERCURY	0.20	1	U	U	NC			NC		0.40		
NICKEL	40	200	4.5	4.1	9.3			0.4	0.4	80	no	
POTASSIUM	5000	25000	1310	1310	0.0			0	0	10000	no	
SELENIUM	5	25	U	U	NC			NC		10		
SILVER	10	50	U	U	NC			NC		20		
SODIUM	5000	25000	11900	11800	0.8			100	100	10000	no	
THALLIUM	10	50	U	U	NC			NC		20		
VANADIUM	50	250	U	U	NC			NC		100		
ZINC	20	100	15.5	16.2	4.4			0.7	0.7	40	no	

* - "no" means criteria were met; "yes" means criteria were not met, and action is required.

VIII. FIELD DUPLICATES

List the concentrations of all analytes in the field duplicate pair. For soil duplicates, calculate the CRDL in mg/kg using the sample weight, volume and percent solids data for the sample. Indicate what criteria was used to evalute the precision by circling either the RPD or CRDL for each element.

MATRIX: water

Element	CRDL water ug/L	CRDL soil mg/kg	Sample # TF5-GW-MW3A-05F	Duplicate# TF5-GW-DUP01-05F	RPD	Action
Aluminum	200		See Field Dup. Worksheet			
Antimony	60					
Arsenic	10					
Barium	200					
Beryllium	5					
Cadmium	5					
Calcium	5000					
Chromium	10					
Cobalt	50					
Copper	25					
Iron	100					
Lead	~~3~~ 5					
Magnesium	5000					
Manganese	15					
Mercury	0.2					
Nickel	40					
Potassium	5000					
Selenium	5					
Silver	10					
Sodium	5000					
Thallium	10					
Vanadium	50					
Zinc	20					
Cyanide	10					

Field Duplicate Actions should be applied to all other samples of the same matrix type.

ACTIONS:

1. Estimate (J) positive results for elements which have an RPD >30% for waters and >50% for soils.

2. If sample results are less than 5x the CRDL, estimate (J) positive results and (UJ) nondetected results for elements whose absolute difference is >2xCRDL (4xCRDL for soils). If both samples are non-detected, the RPD is not calculated (NC).

Field Duplicates Worksheet
--%RPD and Absolute Difference

MATRIX: Water

SDG:

ANALYTE	CRDL(ug/L)	5xCRDL(ug/L)	1st DUP SAMPLE # MW3A-05F REP'D CONC (ug/L)	2nd DUP SAMPLE # DUP01-05F REP'D CONC (ug/L)	%RPD	CRITERIA: %RPD if both results >= 5xCRDL	%RPD >30%?*	ABS DIFF	CRITERIA: ABS DIFF if both results not >=5xCRDL	2xCRDL (ug/L)	ABS DIFF >2xCRDL?*	ACTION*
ALUMINUM	200	1000	U	U	NC			NC		400		None
ANTIMONY	60	300	U	U	NC			NC		120		
ARSENIC	10	50	U	U	NC			NC		20		
BARIUM	200	1000	5.2	5.7	9.2			0.5	0.5	400	no	
BERYLLIUM	5	25	U	U	NC			NC		10		
CADMIUM	5	25	U	U	NC			NC		10		
CALCIUM	5000	25000	6520	6700	2.7			180	180	10000	no	
CHROMIUM	10	50	U	0.85	• 200.0			0.85	0.85	20	no	
COBALT	50	250	U	1.5	• 200.0			1.5	1.5	100	no	
COPPER	25	125	3.0	2.1	35.3			0.9	0.9	50	no	
IRON	100	500	15.5	22.9	38.5			7.4	7.4	200	no	
LEAD	3	15	U	2.2	• 200.0			2.2	2.2	6	no	
MAGNESIUM	5000	25000	7210	7290	1.1			80	80	10000	no	
MANGANESE	15	75	7.7	8.8	13.3			1.1	1.1	30	no	
MERCURY	0.20	1	U	U	NC			NC		0.40		
NICKEL	40	200	3.2	3.5	9.0			0.3	0.3	80	no	
POTASSIUM	5000	25000	1220	1260	3.2			40	40	10000	no	
SELENIUM	5	25	U	U	NC			NC		10		
SILVER	10	50	U	U	NC			NC		20		
SODIUM	5000	25000	11800	11900	0.8			100	100	10000	no	
THALLIUM	10	50	U	U	NC			NC		20		
VANADIUM	50	250	U	U	NC			NC		100		
ZINC	20	100	14.0	14.7	4.9			0.7	0.7	40	no	

* - "no" means criteria were met; "yes" means criteria were not met, and action is required.

IX. LABORATORY CONTROL SAMPLE

1. Aqueous LCS

List any LCS recoveries not within the 80-120% criteria and the samples affected.

DATE	ELEMENT	%R	ACTION	SAMPLES AFFECTED
	All met criteria			

2. Solid LCS NA

List any analytes that were not within the control windows set by the EPA for the solid LCS sample. The 80-120% criteria is not used to evaluate solid LCS results.

ELEMENT	LCS CONC.	CONTROL WINDOWS	ACTION	SAMPLES AFFECTED

ACTIONS:

AQUEOUS LCS	Percent Recovery <50%	51-79%	>120%
Positive Results	R	J	J
Non-detected Results	R	UJ	A

SOLID LCS	<EPA Control Windows	>EPA Control Windows
Positive Results	J	J
Non-detected Results	UJ	A

3. Frequency Criteria

A. Was an LCS analyzed for every matrix, every digestion batch, and every 20 samples? Yes or No

XI. INDUCTIVELY COUPLED PLASMA (ICP) SERIAL DILUTION ANALYSIS

_____ Serial Dilutions were performed for each matrix and results of the diluted sample analysis agreed within ~~ten~~ fifteen percent of the original undiluted analysis.

_____ Serial Dilutions were not performed for the following:

_____

✓ Serial Dilutions were performed, but analytical results did not agree within 15% for analyte concentrations greater than 50x the IDL before dilution.

Report all results below that do not meet the required laboratory criteria for ICP serial dilution analysis.

MATRIX: water

ELEMENT	IDL	50xIDL	SAMPLE RESULT	SERIAL DILUTION	%D	ACTION
Antimony	3.0	150	6.87	ND	100	None - SR<50XIDL
Aluminum						
Barium	0.3	15	< 75.91	114.78	51.2	J+ all GWs - biased low
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt	0.9	45	9.35	19.40	107.5	None - SR<50XIDL
Copper	0.9	45	4.27	26.92	530.4	"
Iron	3.0	150	88.80	148.33	67.0	"
Lead						
Magnesium						
Manganese						
Nickel	0.5	25	0.52	34.88	6607.7	"
Potassium	58.0	2900	< 4879.15	5821.04	19.3	J+ all GWs biased low
Silver	2.0	100	11.30	21.73	92.3	None - SR<50XIDL
Sodium						
Vanadium	0.7	35	1.48	9.48	540.5	"
Zinc	2.0	100	7.92	83.59	955.4	"

Actions apply to all samples of the same matrix.

ACTIONS:

1. Estimate (J) positive results if %D >15.

XII. DETECTION LIMIT RESULTS

1. Instrument Detection Limits

✓ Instrument Detection Limit results were present and found to be less than the Contract Required Detection Limits.

_____ IDLs were not included in the data package on Form XI.

_____ IDLs were present, but the criteria was not met for the following elements: _____

2. Reporting Requirements

✓ Were sample results on Form I reported down to the IDL not the CRDL for all analytes? (Yes) or No

NA Were sample results that were analyzed by ICP for Se, Tl, As, or Pb at least 5x IDL. Yes or No

✓ Were sample weights, volumes, and dilutions taken into account when reporting detection limits on Form I. (Yes) or No

If No,

The reported results may be inaccurate. Make the necessary changes on the data summary tables and request that the laboratory resubmit the corrected data.

J + < 2x IDL + < CRDL due to uncertainty near the IDL.

Thallium IDL = 3.0 ug/L > Required detection limit of 2.0 ug/L in Technical Specification for Lab. Services.

XIII. SAMPLE QUANTITATION

✓ Sample results fall within the linear range for ICP and within the calibrated range for all other parameters.

_____ Sample results were beyond the linear range/ calibration range of the instrument for the following samples/elements:

_____

In the space below, please show a minimum of one sample calculation per method: NA, Tier II

ICP

FURNACE

MERCURY

CYANIDE

For soil samples, the following equation may be necessary to convert raw data values (usually reported in ug/L) to actual sample concentrations (mg/kg):

The lab is required to use 1 gram sample (wet weight) to 200 ml.

Wet weight concentration =

$$\text{digest conc. in } \frac{ug}{L} \times \frac{200ml}{1\ gm} \times \frac{1L}{1000\ ml} \times \frac{1000gm}{1kg} \times \frac{1mg}{1000ug} = \frac{mg}{kg}$$

In addition the sample results are converted to dry weight using the percent solids calculations:

$$\frac{\text{Wet weight conc.}}{\%\text{solids}} \times 100 = \text{final concentration, dry weight (mg/kg)}$$

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C-NAVY-07-04-1725-1W

Date: July 9, 2004 File N5152-D-4.10

To: Chuck Race

From: Dan Wielandt

Subject: Tier II Data validation Organic/Inorganic Data
Mitkem Corporation Project Number C0491
CTO-842, NAS Newport Tank Farm 5, Tank 53, Newport, Rhode Island

VOC/SVOC/PAH(SIM)/Total Metals:

11/Groundwaters/ TF5-GW-DUP02-05, TF5-GW-MW1A-05, TF5-GW-MW2A-05, TF5-GW-MW4-05, TF5-GW-MW861-05, TF5-GW-MW-862-05, TF5-GW-MW9-05, TF5-GW-MW901A-05, TF5-GW-MW901B-05, TF5-GW-MW902A-05, TF5-GW-MW902B-05
(Field Duplicate Pair: TF5-GW-MW902A-05/TF5-GW-DUP02-05)

1/Rinsate Blank/ TF5-GW-RB03-05

Dissolved Metals:

5/Groundwaters/ TF5-GW-DUP02-05F, TF5-GW-MW1A-05F, TF5-GW-MW4-05F, TF5-GW-MW862-05F, TF5-GW-902A-05F
(Field Duplicate Pair: TF5-GW-MW902A-05F/TF5-GW-DUP02-05F)

3/Rinsate Blanks/ TF5-GW-RB01-05F, TF5-GW-RB02-05F, TF5-GW-RB03-05F

VOC:

1/Trip Blank/ TF5-GW-TB02-05

A Tier II data review was performed by Tetra Tech NUS, Inc. (TtNUS) on the volatile (VOC), semivolatile (SVOC), polycyclic aromatic hydrocarbons (PAHs), and metals data from groundwater samples collected at the Tank Farm 5 Area, Tank 53 on May 25, 26, and 27, 2004. The VOC and SVOC analyses were performed according to USEPA SW-846 Methods 8260B and 8270C, respectively. The PAH analyses was perfomred by SW-846 Method 8270C Selected Ion Monitoring (SIM). The metals analysis was performed according to SW-846 Methods 6010B/7470A. The volatile and semivolatile data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The metals data validation was performed using the Region I, EPA-NE Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, modified February 1989.

ORGANIC DATA

The organic data were evaluated based on the following parameters:

	•	Overall Evaluation of Data and Potential Usability Issues
*	•	Data Completeness (CSF Audit - Tier I)
*	•	Preservation and Technical Holding Times
*	•	GC/MS Instrument Performance Check (Tuning)
	•	Initial and Continuing Calibrations
*	•	Blanks
*	•	Surrogate Compounds
	•	Internal Standards
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
*	•	Field Duplicates
N/A	•	Target Compound Identification
N/A	•	Compound Quantitation and Reported Quantitation Limits
*	•	Tentatively Identified Compounds
*	•	System Performance

* All criteria were met for this parameter.

N/A - Parameter not applicable for Tier II level data validation.

Note: Worksheets, except for Worksheet XIII – Sample Quantitation, are not included for parameters that have met criteria or for criteria that are not applicable (NA) to the method.

The data required qualifications resulting from instrument calibration variability, low internal standard recoveries, and low laboratory control sample recovery.

Semivolatiles

The following tables summarize the semivolatile compounds that failed to meet the initial calibration (IC) criterion of %RSD < 30 and the continuing calibration (CC) criterion of %D < 25:

Compound	Action		Affected Samples
	(+)	(+)	
Hexachlorocyclopentadiene		UJ	All Samples
Atrazine		UJ	
Benzaldehyde		UJ	
2,4-Dimethylphenol		UJ	TF5-GW-MW1A-05, TF5-GW-MW4-05, TF5-GW-MW861-05, TF5-GW-MW-862-05, TF5-GW-MW9-05, TF5-GW-MW901A-05, TF5-GW-MW901B-05, TF5-GW-MW902A-05, TF5-GW-MW902B-05, TF5-GW-RB03-05

Compound	Action		Affected Samples
	(+)	(+)	
Indeno(1,2,3-cd)pyrene		UJ	All Samples
Dibenzo(a,h)anthracene		UJ	
Benzo(g,h,i)perylene		UJ	
2,4-Dinitrophenol		UJ	TF5-GW-DUP02-05, TF5-GW-MW2A-05
3,3'-Dichlorobenzidine		UJ	

Internal Standards

PAH

The following table summarizes the internal standard areas outside the quality control limits.

Internal Standard	IS Area	Acceptable Range	Action		Affected Sample
			(+)	NDs	
Chrysene-d_{12}	64778	84627 – 338508		UJ	TF5-GW-DUP02-05
Perylene-d_{12}	86374	108770 – 435080		UJ	
Acenaphthene-d_{10}	61474	65446 - 261782		UJ	TF5-GW-MW1A—05
Chrysene-d_{12}	70692	84627 – 338508		UJ	
Perylene-d_{12}	98685	108770 – 435080		UJ	
Chrysene-d_{12}	83358	84627 – 338508		UJ	TF5-GW-MW4-05
Phenanthrene-d_{10}	119189	133955 – 535818		UJ	TF5-GW-MW862-05
Perylene-d_{12}	105216	108770 – 435080		UJ	
Chrysene-d_{12}	71575	84627 – 338508		UJ	TF5-GW-MW902A-05
Perylene-d_{12}	74293	108770 – 435080		UJ	

The compounds associated with internal standards outside quality control limits are estimated (UJ).

Laboratory Control Sample/Laboratory Control Sample Duplicate

Semivolatile

The following table summarizes the semivolatile spiking compound recovery that did not meet QC limits in the laboratory control sample:

Compound	MS %REC	QC Limits	Action	
			(+)	ND
Di-n-octylphthalate	54	59 – 138		UJ

The non-detected results for di-n-octylphthalate is estimated (J) in all samples due to low laboratory spike recovery. The results may be false negative.

System Performance

The volatile, semivolatile, and polycyclic aromatic hydrocarbons sample results do not indicate any major analytical data quality trends or problems.

METALS DATA

The metals data were evaluated based on the following parameters:

- Data Completeness
- * Holding Times
- * Calibration Verification
- Field and Laboratory Blank Analyses
- * ICP Interference Check Sample Results
- * Matrix Spike Recoveries
- * Laboratory Control Sample Results
- * Laboratory Duplicate Results
- * Field Duplicate Precision
- NA ICP Serial Dilution Results
- Detection Limits
- NA Sample Quantitation
- NA Performance Evaluation Sample Results

NA – Parameter not applicable for Tier II data validation or QC check not performed by laboratory.

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

Table I summarizes the validation recommendations, which were based on the following information:

Data Completeness

The laboratory was contacted on July 8, 2004 about an error in the Form VI (Duplicates). A hard copy of the revised form was received by e-mail on July 8, 2004, and the laboratory responded that the corrected electronic deliverables would be sent shortly.

The laboratory was contacted on July 9, 2004 to ask the source of the Contract Required Detection Limits (CRDL) in the Form X. The laboratory responded on the same day that the CRDL values, which are used by the laboratory as limits for allowable levels of calibration blank contamination, are the laboratory's quantitation limits for Method 6010B.

The laboratory did not perform an ICP serial dilution analysis for this SDG. Therefore, the data are not evaluated based on this parameter.

Field and Laboratory Blank Analyses

Blank actions were taken for aluminum, antimony, barium, chromium, cobalt, copper, iron, manganese, nickel, potassium, silver, vanadium, and zinc in the groundwater samples due to field or laboratory blank contamination.

In addition, blank actions were taken for aluminum, barium, cadmium, calcium, chromium, cobalt, copper, iron, magnesium, manganese, nickel, sodium, thallium, vanadium, and zinc in the field blank samples due to laboratory blank contamination.

Detection Limits

The laboratory's instrument detection limit of 3.0 ug/L for thallium was above the Required Detection Limit of 0.002 mg/L (2.0 ug/L) specified in the Technical Specification for Laboratory Services for this case.

Overall Assessment of the Data

The data are acceptable for use as qualified. Positive sample results changed to non-detected values due to blank contamination are treated as positive results for qualification purposes. The estimation of these non-detected values is reported in the data summary table as (UJ).

Blank actions were taken for aluminum, antimony, barium, chromium, cobalt, copper, iron, manganese, nickel, potassium, silver, vanadium, and zinc in the groundwater samples due to field or laboratory blank contamination.

In addition, blank actions were taken for aluminum, barium, cadmium, calcium, chromium, cobalt, copper, iron, magnesium, manganese, nickel, sodium, thallium, vanadium, and zinc in the field blank samples due to laboratory blank contamination.

The laboratory's instrument detection limit of 3.0 ug/L for thallium was above the Required Detection Limit of 0.002 mg/L (2.0 ug/L) specified in the Technical Specification for Laboratory Services for this case.

Sample results less than 2x IDL and less than the CRDL are estimated (J) due to uncertainty in values near the instrument detection limit.

Tables:	Table III:	TIC Summary Table
	Data Summary Tables	

Enclosures: Data Validation Worksheets

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW4-0		TF5-GW-MW861	
Station Location	TF5-GW-DUP02-05		TF5-GW-MW1A-05		TF5-GW-MW2A-05		TF5-GW-MW4-05		TF5-GW-MW861-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/26/04	
Date Extracted										
Date Analyzed	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW902A-05		None		None		None		None	
Dichlorodifluoromethane	5	U	5	U	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Acetone	5	U	5	U	5	U	5	U	5	U
Carbon Disulfide	5	U	5	U	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U	5	U
2-Butanone	5	U	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	2	J	5	U	5	U	5	U	5	U
Chloroform	5	U	2	J	5	U	4	J	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U	5	U	5	U
Toluene	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U	5	U	5	U
m-Xylene	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW4-0		TF5-GW-MW861	
Station Location	TF5-GW-DUP02-05		TF5-GW-MW1A-05		TF5-GW-MW2A-05		TF5-GW-MW4-05		TF5-GW-MW861-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/26/04	
Date Extracted										
Date Analyzed	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW902A-05		None		None		None		None	
Total Xylenes	5	U	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW862		TF5-GW-MW9-0		TF5GWMW901A		TF5GWMW901B		TF5GWMW902A	
Station Location	TF5-GW-MW862-05		TF5-GW-MW9-05		TF5-GW-MW901A-05		TF5-GW-MW901B-05		TF5-GW-MW902A-05	
Date Sampled	5/27/04		5/26/04		5/26/04		5/26/04		5/27/04	
Date Extracted										
Date Analyzed	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		None		None		Field Dup. TF5-GW-MW902A-05	
Dichlorodifluoromethane	5	U	5	U	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Acetone	5	U	5	U	5	U	5	U	5	U
Carbon Disulfide	5	U	5	U	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U	5	U
2-Butanone	5	U	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	5	U	5	U	5	U	5	U	2	J
Chloroform	5	U	5	U	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U	5	U	5	U
Toluene	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U	5	U	5	U
m-Xylene	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW862		TF5-GW-MW9-0		TF5GWMW901A		TF5GWMW901B		TF5GWMW902A	
Station Location	TF5-GW-MW862-05		TF5-GW-MW9-05		TF5-GW-MW901A-05		TF5-GW-MW901B-05		TF5-GW-MW902A-05	
Date Sampled	5/27/04		5/26/04		5/26/04		5/26/04		5/27/04	
Date Extracted										
Date Analyzed	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		None		None		Field Dup. TF5-GW-MW902A-05	
Total Xylenes	5	U	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5GWMW902B		TF5-GW-RB03-		TF5-GW-TB02-	
Station Location	TF5-GW-MW902B-05		TF5-GW-RB03-05		TF5-GW-TB02-05	
Date Sampled	5/27/04		5/27/04		5/26/04	
Date Extracted						
Date Analyzed	6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1	
Percent Solids						
QC Identifier	None		Rinsate Blank		Trip Blank	
Dichlorodifluoromethane	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U
Acetone	5	U	46		6	
Carbon Disulfide	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U
2-Butanone	5	U	5	U	5	U
cis-1,2-Dichloroethene	1	J	5	U	5	U
Chloroform	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U
Benzene	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U
Toluene	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U
m-Xylene	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5GWMW902B		TF5-GW-RB03-		TF5-GW-TB02-	
Station Location	TF5-GW-MW902B-05		TF5-GW-RB03-05		TF5-GW-TB02-05	
Date Sampled	5/27/04		5/27/04		5/26/04	
Date Extracted						
Date Analyzed	6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1	
Percent Solids						
QC Identifier	None		Rinsate Blank		Trip Blank	
Total Xylenes	5	U	5	U	5	U
Styrene	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW4-0		TF5-GW-MW861	
Station Location	TF5-GW-DUP02-05		TF5-GW-MW1A-05		TF5-GW-MW2A-05		TF5-GW-MW4-05		TF5-GW-MW861-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/26/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/8/2004		6/4/2004		6/8/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW902A-05		None		None		None		None	
Phenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	10	U	10	UJ	10	U	10	UJ	10	UJ
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	10	U
Naphthalene	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	20	U	20	U	20	U	20	U	20	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Acenaphthene	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	20	UJ	20	U	20	UJ	20	U	20	U
4-Nitrophenol	20	U	20	U	20	U	20	U	20	U
Dibenzofuran	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW4-0		TF5-GW-MW861	
Station Location	TF5-GW-DUP02-05		TF5-GW-MW1A-05		TF5-GW-MW2A-05		TF5-GW-MW4-05		TF5-GW-MW861-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/26/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/8/2004		6/4/2004		6/8/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW902A-05		None		None		None		None	
4-Nitroaniline	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-2-methylphenol	20	U	20	U	20	U	20	U	20	U
N-Nitroso-diphenylamine	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	20	U	20	U	20	U	20	U	20	U
Phenanthrene	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	10	U	1	J	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U	10	U	10	U
Pyrene	10	U	10	U	10	U	10	U	10	U
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	UJ	10	U	10	UJ	10	U	10	U
Benzo(a)anthracene	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	U	10	U	10	U	10	U	10	U
Di-n-octylphthalate	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Dibenzo(a,h)anthracene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(g,h,i)perylene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
1,1'-Biphenyl	10	U	10	U	10	U	10	U	10	U
Acetophenone	10	U	10	U	10	U	10	U	10	U
Atrazine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzaldehyde	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Caprolactam	21		85		34		8	J	1	J

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW862		TF5-GW-MW9-0		TF5GWMW901A		TF5GWMW901B		TF5GWMW902A	
Station Location	TF5-GW-MW862-05		TF5-GW-MW9-05		TF5-GW-MW901A-05		TF5-GW-MW901B-05		TF5-GW-MW902A-05	
Date Sampled	5/27/04		5/26/04		5/26/04		5/26/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		None		None		Field Dup. TF5-GW-MW902A-05	
Phenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	10	U
Naphthalene	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	20	U	20	U	20	U	20	U	20	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Acenaphthene	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	20	U	20	U	20	U	20	U	20	U
Dibenzofuran	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW862		TF5-GW-MW9-0		TF5GWMW901A		TF5GWMW901B		TF5GWMW902A	
Station Location	TF5-GW-MW862-05		TF5-GW-MW9-05		TF5-GW-MW901A-05		TF5-GW-MW901B-05		TF5-GW-MW902A-05	
Date Sampled	5/27/04		5/26/04		5/26/04		5/26/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		None		None		Field Dup. TF5-GW-MW902A-05	
4-Nitroaniline	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-2-methylphenol	20	U	20	U	20	U	20	U	20	U
N-Nitroso-diphenylamine	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	20	U	20	U	20	U	20	U	20	U
Phenanthrene	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	4	J	10	U	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U	10	U	10	U
Pyrene	10	U	10	U	10	U	10	U	10	U
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	U	10	U	10	U	10	U	4	J
Di-n-octylphthalate	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Dibenzo(a,h)anthracene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(g,h,i)perylene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
1,1'-Biphenyl	10	U	10	U	10	U	10	U	10	U
Acetophenone	10	U	10	U	10	U	10	U	10	U
Atrazine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzaldehyde	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Caprolactam	610	*	10	U	10	U	3	J	20	

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5GWMW902B		TF5-GW-RB03-	
Station Location	TF5-GW-MW902B-05		TF5-GW-RB03-05	
Date Sampled	5/27/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004	
Dilution Factor	1		1	
Percent Solids				
QC Identifier	None		Rinsate Blank	
Phenol	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U
2-Chlorophenol	10	U	10	U
2-Methylphenol	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U
4-Methylphenol	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U
Hexachloroethane	10	U	10	U
Nitrobenzene	10	U	10	U
Isophorone	10	U	10	U
2-Nitrophenol	10	U	10	U
2,4-Dimethylphenol	10	UJ	10	UJ
2,4-Dichlorophenol	10	U	10	U
Naphthalene	10	U	10	U
4-Chloroaniline	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U
Hexachlorobutadiene	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U
2-Methylnaphthalene	10	U	10	U
Hexachlorocyclopentadiene	10	UJ	10	UJ
2,4,6-Trichlorophenol	10	U	10	U
2,4,5-Trichlorophenol	20	U	20	U
2-Chloronaphthalene	10	U	10	U
2-Nitroaniline	20	U	20	U
Dimethylphthalate	10	U	10	U
Acenaphthylene	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U
3-Nitroaniline	20	U	20	U
Acenaphthene	10	U	10	U
2,4-Dinitrophenol	20	U	20	U
4-Nitrophenol	20	U	20	U
Dibenzofuran	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U
Diethylphthalate	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U
Fluorene	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5GWMW902B		TF5-GW-RB03-	
Station Location	TF5-GW-MW902B-05		TF5-GW-RB03-05	
Date Sampled	5/27/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004	
Dilution Factor	1		1	
Percent Solids				
QC Identifier	None		Rinsate Blank	
4-Nitroaniline	20	U	20	U
4,6-Dinitro-2-methylphenol	20	U	20	U
N-Nitroso-diphenylamine	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U
Hexachlorobenzene	10	U	10	U
Pentachlorophenol	20	U	20	U
Phenanthrene	10	U	10	U
Anthracene	10	U	10	U
Carbazole	10	U	10	U
Di-n-Butylphthalate	10	U	10	U
Fluoranthene	10	U	10	U
Pyrene	10	U	10	U
Butylbenzylphthalate	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U
Benzo(a)anthracene	10	U	10	U
Chrysene	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	U	10	U
Di-n-octylphthalate	10	UJ	10	UJ
Benzo(b)fluoranthene	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U
Benzo(a)pyrene	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	UJ	10	UJ
Dibenzo(a,h)anthracene	10	UJ	10	UJ
Benzo(g,h,i)perylene	10	UJ	10	UJ
1,1'-Biphenyl	10	U	10	U
Acetophenone	10	U	10	U
Atrazine	10	UJ	10	UJ
Benzaldehyde	10	UJ	10	UJ
Caprolactam	15		10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Low Concentration PAH (SIM) Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW4-0		TF5-GW-MW861		TF5-GW-MW862	
Station Location	TF5-GW-DUP02-05		TF5-GW-MW1A-05		TF5-GW-MW2A-05		TF5-GW-MW4-05		TF5-GW-MW861-05		TF5-GW-MW862-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/26/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	Field Dup. TF5-GW-MW902A-05		None		None		None		None		None	
Naphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
2-Methylnaphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthylene	0.10	U	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthene	0.10	U	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
Fluorene	0.10		0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
Phenanthrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Pyrene	0.10	UJ	0.10	UJ	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(a)anthracene	0.10	UJ	0.10	UJ	0.10	U	0.10	UJ	0.10	U	0.10	U
Chrysene	0.10	UJ	0.10	UJ	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(b)fluoranthene	0.10	UJ	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	UJ
Benzo(k)fluoranthene	0.10	UJ	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	UJ
Benzo(a)pyrene	0.10	UJ	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	UJ
Dibenzo(a,h)anthracene	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ
Benzo(g,h,i)perylene	0.10	UJ	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	UJ

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Low Concentration PAH (SIM) Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW9-0		TF5GWMW901A		TF5GWMW901B		TF5GWMW902A		TF5GWMW902B		TF5-GW-RB03-	
Station Location	TF5-GW-MW9-05		TF5-GW-MW901A-05		TF5-GW-MW901B-05		TF5-GW-MW902A-05		TF5-GW-MW902B-05		TF5-GW-RB03-05	
Date Sampled	5/26/04		5/26/04		5/26/04		5/27/04		5/27/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	None		None		None		Field Dup. TF5-GW-MW902A-05		None		Rinsate Blank	
Naphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
2-Methylnaphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthylene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Fluorene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Phenanthrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Pyrene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(a)anthracene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Chrysene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(b)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(k)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(a)pyrene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Dibenzo(a,h)anthracene	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ
Benzo(g,h,i)perylene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02-05		TF5-GW-DUP02-05F		TF5-GW-MW1A-05		TF5-GW-MW1A-05F		TF5-GW-MW2A-05	
Station Location	TF5-GW-DUP02-05		TF5-GW-DUP02-05F		TF5-GW-MW1A-05		TF5-GW-MW1A-05F		TF5-GW-MW2A-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/27/04	
Date Extracted										
Date Analyzed										
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW902A-05		Field Dup. TF5-GW-MW902A-05F		None		None		None	
Aluminum	381		6.0	U	1980		6.0	U	66.4	U
Antimony	3.0	U	3.0	U	3.0	U	3.0	U	3.1	UJ
Arsenic	3.9	J	3.8	J	8.4		3.0	U	3.0	U
Barium	54.2	U	50.8	U	32.6	U	12.1	U	10.6	U
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Calcium	49300		49200		23200		23100		10500	
Chromium	0.40	U	0.40	U	0.40	U	0.40	U	0.90	U
Cobalt	14.7	U	14.7	U	16.4	U	1.2	UJ	2.1	U
Copper	2.4	U	1.6	UJ	5.2	U	0.90	U	4.1	U
Iron	18100		17000		17400		37.0	U	234	U
Lead	2.0	U	2.0	U	2.3	J	2.0	U	2.0	U
Magnesium	47800		47400		25300		24100		14800	
Manganese	1530		1520		2120		393		12.2	U
Mercury	0.13	U	0.14	U	0.14	U	0.13	U	0.13	U
Nickel	31.1		30.7		23.2		11.5	U	9.7	U
Potassium	2170		2140		1390	U	1110	U	1400	U
Selenium	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver	2.8	UJ	2.9	UJ	2.3	UJ	2.4	UJ	2.9	UJ
Sodium	47300		47200		18100		17900		9760	
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium	0.70	U	0.70	U	2.9	U	0.70	U	1.8	U
Zinc	16.0	U	11.9	U	56.2	U	12.0	U	17.1	U

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW4-05		TF5-GW-MW4-05F		TF5-GW-MW861-05		TF5-GW-MW862-05		TF5-GW-MW862-05F		TF5-GW-MW901A-05	
Station Location	TF5-GW-MW4-05		TF5-GW-MW4-05F		TF5-GW-MW861-05		TF5-GW-MW862-05		TF5-GW-MW862-05F		TF5-GW-MW901A-05	
Date Sampled	5/27/04		5/27/04		5/26/04		5/27/04		5/27/04		5/26/04	
Date Extracted												
Date Analyzed												
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	None		None		None		None		None		None	
Aluminum	2920		6.0	U	16.1	U	65.4	U	6.0	U	91.7	U
Antimony	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Arsenic	40.3		3.0	U	3.5	J	3.0	U	3.0	U	3.0	U
Barium	36.4	U	12.2	U	4.9	U	11.9	U	12.1	U	20.8	U
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Calcium	30100		27500		14500		33700		33400		21800	
Chromium	13.2		0.42	UJ	0.40	U	0.60	UJ	0.46	UJ	0.40	U
Cobalt	10.3	U	0.90	U	0.90	U	0.90	U	0.90	U	8.6	U
Copper	14.5	U	2.8	U	1.9	U	1.8	U	2.7	U	1.3	UJ
Iron	18400		18.4	U	81.0	U	230	U	18.1	U	11400	
Lead	8.6		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium	23800		21900		11100		22400		22500		23400	
Manganese	145		3.1	U	3.0	U	8.1	U	4.3	U	723	
Mercury	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U
Nickel	15.6	U	3.1	U	4.8	U	3.8	U	3.7	U	25.8	
Potassium	2820		2160		981	U	3490		3600		1340	U
Selenium	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver	2.0	U	2.3	UJ	2.0	U	2.3	UJ	2.0	UJ	2.0	U
Sodium	25700		24400		10700		36900		36800		28100	
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium	6.0	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U
Zinc	39.0	U	7.0	U	10.7	U	7.4	U	7.5	U	24.4	U

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW901B-05		TF5-GW-MW902A-05		TF5-GW-MW902A-05F		TF5-GW-MW902B-05		TF5-GW-MW9-05	
Station Location	TF5-GW-MW901B-05		TF5-GW-MW902A-05		TF5-GW-MW902A-05F		TF5-GW-MW902B-05		TF5-GW-MW9-05	
Date Sampled	5/26/04		5/27/04		5/27/04		5/27/04		5/26/04	
Date Extracted										
Date Analyzed										
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		Field Dup. TF5-GW-MW902A-05		Field Dup. TF5-GW-MW902A-05F		None		None	
Aluminum	63.9	U	396		6.0	U	83.3	U	6.0	U
Antimony	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Arsenic	3.0	U	4.6	J	4.7	J	3.0	U	3.0	U
Barium	17.9	U	53.2	U	50.0	U	18.8	U	7.3	U
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Calcium	22100		49600		48000		22900		67000	
Chromium	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Cobalt	10.1	U	14.7	U	16.1	U	27.1		5.4	U
Copper	2.5	U	0.93	UJ	1.0	UJ	1.9	U	1.6	UJ
Iron	14500		17800		16500		15000		58.1	U
Lead	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium	26000		47100		46300		22400		48200	
Manganese	959		1510		1480		840		2650	
Mercury	0.14	U	0.14	U	0.14	U	0.13	U	0.14	U
Nickel	31.8		31.3		30.0		63.5		4.3	U
Potassium	955	U	2210		2120		1620		2690	
Selenium	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver	2.0	U	3.1	UJ	3.2	UJ	2.0	U	7.5	U
Sodium	21100		47800		46500		22700		15700	
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U
Zinc	99.2	U	23.0	U	15.0	U	66.4	U	8.1	U

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-RB01-05F		TF5-GW-RB02-05F		TF5-GW-RB03-05		TF5-GW-RB03-05F	
Station Location	TF5-GW-RB01-05F		TF5-GW-RB02-05F		TF5-GW-RB03-05		TF5-GW-RB03-05F	
Date Sampled	5/25/04		5/26/04		5/27/04		5/27/04	
Date Extracted								
Date Analyzed								
Dilution Factor	1		1		1		1	
Percent Solids								
QC Identifier	Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank	
Aluminum	6.0	U	6.0	U	7.3	UJ	6.0	U
Antimony	3.0	U	3.0	U	3.0	U	3.0	U
Arsenic	3.0	U	3.0	U	3.0	U	3.0	U
Barium	8.4	U	1.9	U	2.4	U	1.8	U
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.21	UJ	0.20	U	0.20	U	0.20	U
Calcium	74	U	74	U	145	UJ	74	U
Chromium	0.64	UJ	0.40	U	1.7	U	0.40	U
Cobalt	1.4	UJ	0.90	U	0.90	U	0.90	U
Copper	4.0	U	1.6	UJ	5.1	U	1.4	UJ
Iron	22.8	U	13.3	U	70.0	U	15.1	U
Lead	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium	14.8	U	6.0	U	60.0	U	6.0	U
Manganese	2.8	U	1.7	U	5.9	U	2.2	U
Mercury	0.13	U	0.15	U	0.14	U	0.14	U
Nickel	1.4	U	0.50	U	2.2	U	0.50	U
Potassium	58	U	58	U	58	U	58	U
Selenium	4.0	U	4.0	U	4.0	U	4.0	U
Silver	2.0	U	2.0	U	2.0	U	2.0	U
Sodium	109	U	117	U	292	U	165	U
Thallium	4.2	UJ	3.0	U	3.0	U	3.0	U
Vanadium	1.1	UJ	0.70	U	0.70	U	0.70	U
Zinc	8.5	U	6.4	U	19.9	U	13.6	U

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l) TABLE III - TENTATIVELY IDENTIFIED COMPOUND SUMMARY
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491_TIC

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW862		TF5GWMW901B	
1,8-DIAZACYCLOTETRADECANE-2,9-DIONE_TOTAL			15	NJ_1			22	NJ		
1-[4-TRIFLUOROMETHYLPHENYL]-2-METHYL-2-[							13	NJ		
1-NONADECENE_TOTAL	6	NJ_1			7	NJ_1	53	NJ_2		
9-OCTADECENOIC ACID (Z)-, OCTADECYL ESTE									5	NJ
DIETHYLTOLUAMIDE							8	NJ		
N-HEXADECANOIC ACID	5	NJ								
OCTADECANOIC ACID	5	NJ								
UNKNOWN ALKANE_TOTAL		J_		J_		J_		J_		J_
TETRADECANOIC ACID										

J - Quantitation Approximate; N - Presumptive evidence;
B - Blank contamination; _# - Number of peaks quantitated

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l) TABLE III - TENTATIVELY IDENTIFIED COMPOUND SUMMARY
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491_TIC

EPA Sample Number	TF5-GW-MW902A	
1,8-DIAZACYCLOTETRADECANE-2,9-DIONE_TOTAL		
1-[4-TRIFLUOROMETHYLPHENYL]-2-METHYL-2-[		
1-NONADECENE_TOTAL		
9-OCTADECENOIC ACID (Z)-, OCTADECYL ESTE	9	NJ
DIETHYLTOLUAMIDE		
N-HEXADECANOIC ACID	6	NJ
OCTADECANOIC ACID		
UNKNOWN ALKANE_TOTAL		
TETRADECANOIC ACID	6	NJ

Data Validation Worksheet Cover Page Page 1

Site Name TANK FARMS, TANK 5
Reference No _____

REGION I ORGANIC DATA VALIDATION

The following data package has been validated

Lab Name MITKEM
Case/Project No Project C0491
SDG No _____
No of Samples/Matrix _____

SOW/Method No SW 846-8260B 8270C, 8Act(SI) 6010/7470
Sampling Date(s) 5/25, 26, 27/04
Shipping Date(s) 5/28/04
Date Rec d by lab 5/28/04

Traffic Report Sample Nos JF5-GW-DUP02-05, MW1A-05, MW2A-05, MW4-05, MW861, MW862, MW9, MW901A, MW901B, MW902A, MW902B

Trip Blank No JF5-GW-TB03-05
Equipment Blank No JF5-GW-RB03-05
Bottle Blank No _____
Field Duplicate Nos MW902A/DUP02
PES Nos N/A

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses revision 12/96 was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page (attach modified criteria from EPA approved QAPjP or amendment to QAPjP)

A Tier II or Tier III evaluation was used to validate the data (circle one) If a Tier II validation with a partial Tier III was used then identify samples parameters etc that received partial Tier III validation

_____

The data were evaluated based upon the following parameters

- Overall Evaluation of Data
  Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
  Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
  Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity
R - The data are rejected as unusable The R replaces the numerical value or sample quantitation limit
U - Compound not detected at that numerical sample quantitation limit
UJ The sample quantitation limit is an estimated quantity
TB BB EB - Compound detected in aqueous trip blank aqueous bottle blank or aqueous equipment blank associated with soil/sediment samples

Validator s Name D. WIELANDT Company Name TENUS Phone Number (978)658-7899

Date Validation Started 7/2/04 Date Validation Completed 7/6/04

Check if all criteria are met and no hard copy worksheet provided Indicate NA if worksheet is not applicable to analytical method Note there is no standard worksheet for System Performance however, the validator must document all system performance issues in the Data Validation Memorandum

VOA/SV worksheets

VOA/SV Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	✓
VOA/SV Pest/PCB I	PRESERVATION AND HOLDING TIMES	
VOA/SV II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	✓
VOA/SV III	INITIAL CALIBRATION	
VOA/SV IV	CONTINUING CALIBRATION	
VOA/SV Pest/PCB-V A	BLANK ANALYSIS	
VOA/SV Pest/PCB-V-B	BLANK ANALYSIS	
VOA VI	VOA SURROGATE SPIKE RECOVERIES	✓
SV VI	SV SURROGATE SPIKE RECOVERIES	
VOA/SV VII	INTERNAL STANDARD PERFORMANCE	
VOA/SV Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	✓
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	NA
VOA/SV Pest/PCB-XI	ACCURACY CHECK	NA
VOA/SV Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	✓
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	NA
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	✓
VOA/SV-XV	SEMIVOLATILE CLEANUP	NA
TABLE II WORKSHEET	OVERALL EVALUATION OF DATA	

Pest/PCB worksheets

VOA/SV Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	NA
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK RESOLUTION	
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK ACCURACY CHECK OF INITIAL CALIBRATION	
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	
Pest/PCB III	INITIAL CALIBRATION	
Pest/PCB IV	CONTINUING CALIBRATION	
VOA/SV Pest/PCB-V-A	BLANK ANALYSIS	
VOA/SV Pest/PCB-V-B	BLANK ANALYSIS	
Pest/PCB-VI	SURROGATE COMPOUNDS SPIKE RECOVERIES AND RETENTION TIME SHIFT	
Pest/PCB-VII	PESTICIDE CLEANUP	
VOA/SV Pest/PCB VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
VOA/SV Pest/PCB-IX	FIELD DUPLICATE PRECISION	
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	
VOA/SV Pest/PCB-XI	ACCURACY CHECK	
Pest/PCB-XII	COMPOUND IDENTIFICATION	
VOA/SV Pest/PCB XIII	SAMPLE QUANTITATION	
TABLE II WORKSHEET	OVERALL EVALUATION OF DATA	✓

I certify that all criteria were met for the worksheets checked above

Signature Dan Wielandt Name DAN WIELANDT

Date 7/8/04

Sampler _____ Company _____ Contacted Yes No Date _____

I PRESERVATION AND HOLDING TIMES

Circle sample numbers with exceeded technical holding times or omitted preservation
List all required preservation codes and circle omitted preservation codes
Circle all exceeded technical holding times
Identify extraction technique after # of Days /(*Extraction Code)

Sample No (TR No)	Matrix	Pres Code	Date Sampled	VOA Date Analyzed	VOA # of Days from Samp to Anal	VOA Action	BNA Date Extracted	BNA # of Days from Samp to Extr /(*)	BNA Date Analyzed	BNA # of Days from Extr to Anal	BNA Action	~~TEST/ECB~~ PAH(SIM) Date Extracted	~~TEST/ECB~~ PAH(SIM) # of Days from Samp to Extr /(*)	~~TEST/ECB~~ PAH(SIM) Date Analyzed	~~TEST/ECB~~ PAH(SIM) # of Days from Extr to Anal	~~TEST/ECB~~ PAH(SIM) Action
TFSCW-DUP02-05 GW		1,2,3	5/27/04	6/1/04	5	[illegible]	6/1/04	5 (L/L)	6/8/04	7	[illegible]	6/1/04	5 (L/L)	6/4/04	3	[illegible]
MW1A									6/4/04	3						
MW2A									6/8/04	7						
MW4									6/4/04	3						
MW861			5/26/04		4			4					4			
MW862			5/27/04		5			5	6/4/04	3,7			5			
MW9			5/26/04		4			4	6/4/04	3			4			
MW901A																
MW901B																
MW902A			5/27/04		5			5					5			
MW902B																
RB03																
TB02			5/26/04		4			4					4			

Cooler 2°C

Preservation Code
1 Cool @ 4 C (± 2)
2 Preserve with HCl to at least pH 2
3 Protect from light
4 Freeze
5 Room Temperature (Avoid excessive heat)

(*Extraction Code)
L/L Liquid/Liquid
SON Sonication
SEP Separatory Funnel
SOX Soxhlet
SPE Solid Phase Extraction

Action Code
J Estimate (J) Detected Values
UJ Estimate (UJ) Non Detected Values
R Reject (R) Non Detected Values

EPA-NE - Data Validation Worksheet
VOA/SV-III

III INITIAL CALIBRATION List all analytes that are outside calibration criteria

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	RRF	Samples Affected	Action
5/28/04	V2	VOC					all	
6/2/04	S2	SVOC		Hexachlorocyclopentadiene	33.3			UJ
				Atrazine	74.1		all	UJ
				Benzaldehyde	33.2			UJ
6/3/04	S1	SIM(PAH)		Dibenzo(a,h)anthracene	30.3		all	UJ
6/7/04	S1	SIMPAH		only for		method Blank	no action	

Comments

Validator [signature]

Date 7/7/04

EPA NE - Data Validation Worksheet
VOA/SV-IV

IV CONTINUING CALIBRATION - List all analytes that are outside calibration criteria

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action
5/28/04	5/31/04	V2	VOC					all	
6/2/04	6/4/04	S2	SVOC		2,4-Dimethylphenol	25.4		MW1A, MW4, MB61, MW8B7,	UJ
					Indeno(1,2,3-cd)pyrene	33.1		MW9, MW901A, MW908B,	UJ
					Dibenzo(a,h)anthracene	32.6		MW902A, MW902B, RB03,	UJ
					Benzo(g,h,i)perylene	46.3		~~TB02~~	UJ
					Atrazine	58.4			
6/2/04	6/8/04	S2	SVOC		2,4-Dinitrophenol	-25.8		DUP02, MW2A, ~~MW902DL~~	UJ
					3,3'-Dichlorobenzidine	35.0			UJ
					Indeno(1,2,3-cd)pyrene	29.4			UJ
					Dibenzo(a,h)anthracene	29.7			UJ
					Benzo(g,h,i)perylene	36.3			UJ
					Benzaldehyde	29.1			UJ

Comments
6/3/04 6/4/04 S1 PAH(SIM) — all samples
6/7/04 6/7/04 S1 — for extraction blank only no action taken

Validator _____ Date 7/7/04

EPA NE - Data Validation Worksheet
VOA/SV - Pest/PCB V-A

V BLANK ANALYSIS

List the blank contamination below Concentration Level _____

Sampler _____ Company _____ Contacted Yes No Date _____

1 Laboratory Method, Storage and Instrument Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No (Blank Type)	Instrument/ Column	Compound	Conc (units)
—	5/3/04	VOC/AQ	VBLK2W (method)		clean	
6/1/4	6/4/4	SVOC/AQ	SBLK2C (method)		clean	
6/1/04	6/7/04	PAH/AQ	SBLK1C (method)		clean	

2 Field Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No (Blank Type)	Instrument/ Column	Compound	Conc (units)
—	6/1/04	VOC/AQ	TF5 GW-TB02-05		Acetone	6
	6/1/04	"	TF5 GW-RB03 05		Acetone	46
6/1/04	6/4/04	SVOC/AQ	TF5-GW-RB03-05		clean	
6/1/04	6/4/04	PAH/AQ	TF5 GW-RB03-05		clean	

Validator _____ Date 7/7/04

EPA NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

3 Blank Actions List the maximum concentrations of blank compounds

Compound	Type of Blank	Date Blank Sampled/Originated	Max Conc (units)	Action Level (units)	Sample QL	Samples Affected	Action
Acetone	FRTPRB		46 µg/L	460 µg/L		none all acetone results are ND except TB	none
SVOC — no blank action							
PAH — no blank action							

Comments _____

Validator _____ Date 7/7/04

EPA-NE - Data Validation Worksheet
SV-VI

VI SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ d_5	2 FBP	TPH d_{14}	F2 DCB d_4*	Other Benzo(e) pyrene	
OLM03 2	Water Soil 35 114 23 120	Water Soil 43 116 30 115	Water Soil 33 141 18 137	Water Soil 16 110 20 130		PAH(SIM)
OLC02 1	40 110	30 110	20 140	NA		
Other SO-846	48-106	38-120	0-147	37-106	45-135	
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Action
TES-GW-MW2A-05						ok

Method	Acid Method QC Acceptance Criteria					
	Phenol d_5	2 FP	2 4 6 TBP	2 CP d_4*	Other	
OLM03 2	Water Soil 10 110 24 113	Water Soil 21 110 25 121	Water Soil 10 123 19 122	Water Soil 33 110 20 130		
OLC02 1	15 115	15 110	15 130	NA		
Other	0-120	1-103	37-122	28-107		
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Action
			27	11	up to two may be ok	
						no action taken

* Advisory Surrogates OLM03 2

Validator [signature]

Date 7/7/04

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB VIII

VIII ~~MATRIX SPIKE/MATRIX SPIKE DUPLICATE~~ LCS/LCSD - List all MS/MSD analytes that are outside method QC acceptance criteria

Use a separate worksheet for each MS/MSD pair

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		
VOC	— acm										
SVOC	Dim-octylphthalate	54			59-138						UJ
PAH	— acm										

Validator _____ Date 7/7/04

EPA NE Data Validation Worksheet
VOA/SV-VII

VII INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria
IS Area Count method QC acceptance criteria ± 100% -50%
IS Retention Time method QC acceptance criteria ± 0.50 min

Sample Number (IR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action
			VOC — ACM					
			SVOC — ACM					
TES GW-MW1A-05	6/4/04	S1	PAH	Acenaphthene-d10	61474		65446-261782	
RB03				Phenanthrene-d10	125679		133955-535818	
8602				"	119189		" "	
				Perylene-d12	105216		108870 455080	
902A				Chrysene-d12	71575		84627-338508	
				Perylene-d12	74293			
MW14				Chrysene-d12	83358			
MW1A				Chrysene-d12	70692			
				Perylene-d12	94685			
DUP02				Chrysene-d12	64778			
				Perylene-d12	86374			

Validator [signature]

Date 7/7/04

REGION I
Data Review Worksheets

Site Name Tank Farm 5 - Tank 53
Reference Number _____

REGION I REVIEW OF INORGANIC CONTRACT LABORATORY DATA PACKAGE

The hardcopied (laboratory name) Mitkem Corp. data package received at Region I has been reviewed and the quality assurance and performance data summarized The data review included

Case No TF5 SAS No _____ Sampling Date(s) 5/25, 5/26, 5/27/04
SDG No C0491 Matrix Water Shipping Date(s) 5/28/04
No of Samples 20 Date Rec'd by Lab 5/28/04

Traffic Report Nos TF5-GW-DUP02-05, -DUP02-05F, -MW1A-05, -MW1A-05F, -MW2 05, -MW4-05, -MW4-05F, -MW861-05, -MW862-05, -MW862 05F, -MW901A
~~Trip Blank No.~~ -MW901B-05, -MW902A-05, -MW902A-05F, -MW902B-05, -MW9 05, -RB01-05F
Equipment Blank No RB01-05F, RB02 05F, RB03 05, ~~RB05F~~ -RB02-05F, -RB03 05, RB03-05F
Field Dup. Nos TF5 GW902A-05/TF5 GW-DUP02 05,
TF5-GW902A-05F/TF5 GW-DUP02-05F

SOW No _____ requires that specific analytical work be done and that associated reports be provided by the laboratory to the Regions, EMSL-LV, and SMO The general criteria used to determine the performance were based on an examination of

- -Data Completeness
- -Holding Times
- -Calibrations
- -Blanks
- -ICP Interference Check Results
- -Matrix Spike Recoveries
- -Laboratory Duplicates
- -Field Duplicates
- -Lab Control Sample Results
- -Furnace AA Results
- -ICP Serial Dilution Results
- -Detection Limit Results
- -Sample Quantitation

Overall Comments Tier II

Definitions and Qualifiers

A - Acceptable data
J - Approximate data due to quality control criteria
R - Reject data due to quality control criteria
U - Analyte not detected

Reviewer Ann Franke Date 7/04

I DATA COMPLETENESS

MISSING INFORMATION	DATE LAB CONTACTED	DATE REC'D
Form VI (Duplicates) lists 0.0000 U for the Dup result Fe instead of the positive result.	7/8/04	Hard-copy revised form rec'd 7/8/04 Revised disk will be sent
Lab was contacted to ask what the CRDL values in Form X represent	7/9/04	Lab responded 7/9/04 that these are Mitkem's quantitation Limits for Method 6010B. They are the low calibration std level.

II. HOLDING TIMES Complete table for all samples and circle the analysis date for samples not within criteria

SAMPLE ID	DATE SAMPLED	HG DATE ANALYSIS	CYANIDE DATE ANALYSIS	OTHERS DATE ANALYSIS	pH	ACTION
TF5-GN-						
DUP02-05	5/27/04	(7) 6/3/04	NA	6/4, 6/5, 6/6/04	< 2	None
DUP02-05F						
MW1A-05						
MW1A-05F						
MW2A-05						
MW4-05						
MW4-05F						
MW861-05	5/26					
MW862-05	5/27					
MW862 05F						
MW901A-05	5/26					
MW 901B-05						
MW902A-05	5/27					
MW902A-05F						
MW902B-05						

METALS - 180 DAYS FROM SAMPLE COLLECTION
MERCURY - 28 DAYS FROM SAMPLE COLLECTION
CYANIDE - 14 DAYS FROM SAMPLE COLLECTION

ACTION

1 If holding times are exceeded all positive results are estimated (J) and non-detects are estimated (UJ)

2 If holding times are grossly exceeded the reviewer may determine that non-detects are unusable (R)

II HOLDING TIMES

Complete table for all samples and circle the analysis date for samples not within criteria

SAMPLE ID	DATE SAMPLED	HG DATE ANALYSIS	CYANIDE DATE ANALYSIS	OTHERS DATE ANALYSIS	pH	ACTION
TF5-GW-						
MW9-05	5/26/04	6/3/04	NA	6/4-6/6/04	< 2	None
RB01 05F	5/25	↓	↓	↓	↓	↓
RB02-05F	5/26					
RB03 05	5/27					
RB03-05F	↓					

METALS - 180 DAYS FROM SAMPLE COLLECTION
MERCURY - 28 DAYS FROM SAMPLE COLLECTION
CYANIDE - 14 DAYS FROM SAMPLE COLLECTION

ACTION

1 If holding times are exceeded a[illegible] [illegible] are estimated (J) and non-detects are estimated (UJ)

2 If holding times are grossly exceeded the reviewer may determine that non-detects are unusable (R)

III A INSTRUMENT CALIBRATION (Section 1)

1 Recovery Criteria

List the analytes which did not meet the percent recovery (%R) criteria for Initial or Continuing Calibration

DATE	ICV/CCV#	ANALYTE	%R	ACTION	SAMPLES AFFECTED
	All met criteria				

ACTIONS

If any analyte does not meet the %R criteria follow the actions stated below

For Positive Results

	Accept	Estimate (J)	Reject (R)
Metals	90-110%R	75-89%R, 111-125%R	<75%R >125%R
Mercury	80-120%R	65-79%R, 121-135%R	<65%R >135%R
Cyanide	85-115%R	70-84%R 116-130%R	<70%R >130%R

For Non-detected Results

	Accept	Estimate (UJ)	Reject (R)
Metals	90-125%R	75-89%R	<75%R >125%R
Mercury	80-135%R	65-79%R	<65%R >135%R
Cyanide	85-130%R	70-84%R	<70%R >130%R

CRDL standard analyses (80-120% QC criteria)

Analyte	% Rs	Actions
NA		

III B. INSTRUMENT CALIBRATION (Section 2)

2 Analytical Sequence

A Did the laboratory use the proper number of standards for calibration as described in the SOW? Yes or No

B Were calibrations performed at the beginning of each analysis? Yes or No

C Were calibration standards analyzed at the beginning of sample analysis and at a minimum frequency of ten percent ~~or every two hours~~ during analysis, ~~whichever is more frequent?~~ Yes or No

D Were the correlation coefficients for the calibration curves for ~~AA~~ ICP-AES -g, and ~~CN~~ NA ≥ 0 995? Yes or No

E Was a standard at 2xCRDL analyzed for all ICP analyses? NA Yes or No

If No,

The data may be affected Use professional judgement to determine the severity of the effect and qualify the data accordingly Discuss any actions below and list the samples affected

calibration curve correlation coefficients

NA, Tier II

IV A BLANK ANALYSIS RESULTS (Sections 1-3)

List the blank contamination in Sections 1 & 2 below. A separate worksheet should be used for soil and water blanks.

1 Laboratory Blanks See Blank Worksheet MATRIX water

DATE	ICB/CCB#	PREP BL	ANALYTE	CONC /UNITS

2 Equipment/Trip Blanks See Blank Worksheet

Collection DATE	EQUIP BL#	Type of RB (according to Sample Log sheet)	ANALYTE	CONC /UNITS
5/25/04	TF5-~~GW~~-RB01-05F	- Filter Blank	- Apply to filtered samples only	
5/26	- RB02 05F	- Filter Blank	- " "	
5/27	- RB03-05	- Rinsate from deconned pump and pre cleaned pump	- Apply to all GW samples	
5/27	- RB03-05F	- Filter Blank	- Apply to all filtered samples only	

3 Frequency Requirements

A Was a preparation blank analyzed for each matrix for every 20 samples and for each digestion batch? (Yes) or No

B Was a calibration blank run every 10 samples ~~or every 2 hours whichever is more frequent~~? (Yes) or No

4 Comments

The data may be affected. Use professional judgement to determine the severity of the effect and qualify the data accordingly. Discuss any actions below and list the samples affected.

_____

_____

Applies to Unfiltered Samples and Field Blank Samples

mg/L

BLANK WORKSHEET

RB03-05

	ICB				CCB										PB			TB	BB	RB	RB	MAX, GWs
	1	2	3	4	1	2	3	4	5	6	7	8	9	10	1	2	3	1	1	1	1	
Aluminum					321	80		356	97	32	126	376									73	376
Antimony	96																					96
Arsenic																						
Barium	55				82	78	105	111	112	132	144	156			276						24	156
Beryllium					04	03	03	04	03	04	04	04										04
Cadmium	02				04	02	04	03	03	04	04	05										05
Calcium												873									145	145
Chromium	05				08	06	08	09	11	13	12	14									17	17
Cobalt	13				21	19	27	27	28	31	37	38										38
Copper	23				42	31	23	24	25	33	29	39			290						51	51
Iron					108		36	145	45	157	74	179			1527						70	70
Lead																						
Magnesium	131				50	24	208	617	306	64	417	723									60	723
Manganese	12				19	18	24	26	27	35	39	42			139						59	59
Mercury																						
Nickel	13				21	18	26	27	28	35	35	38									22	38
Potassium	3239				169	898	957	737	653	849												3239
Selenium																						
Silver	185				31	21	26	22	21	22	27	29										185
Sodium	2531				1692	727	987	486	1174	1205					8126						292	292
Thallium					34		36	49	51	58	71	68										71
Vanadium	15				22	25	25	29	28	33	33	40										40
Zinc	34				40	30	31	35	32	38	44	45			435						199	199

Applies to Filtered Samples

BLANK WORKSHEET

	ICB				CCB										PB			~~FB~~ RB01-05E	~~BB~~ RB02-05F	RB	RB03-05F RB	MAX
	1	2	3	4	1	2	3	4	5	6	7	8	9	10	1	2	3	1	1	1	1	*
Aluminum					321	80		356	97	32	126	376									73	376
Antimony	96																					96
Arsenic																						
Barium	55				82	78	105	117	112	132	144	156			276			84	19	18	24	156
Beryllium					04	03	03	04	03	04	04	04										04
Cadmium	02				04	02	04	03	03	04	04	05						021				05
Calcium												873									145	145
Chromium	05				08	06	08	09	11	13	12	14						064			17	17
Coball	13				21	19	27	27	28	31	37	38						14				38
Copper	23				42	31	23	24	25	33	29	39			290			40	16	14	51	51
Iron					108		36	145	45	157	74	179			1527			228	133	151	70	70
Lead																						
Magnesium	131				50	24	208	617	306	64	417	723						148			60	723
Manganese	12				19	18	24	26	27	35	39	42			139			28	17	22	69	59
Mercury																						
Nickel	13				21	18	26	27	28	35	35	38						14			22	38
Potassium	3239				169	898	957	737	653	849												3239
Selenium																						
Silver	185				31	21	26	22	21	22	27	29										185
Sodium	2531				1692	727	987	486	1174	1205					8126			109	117	165	292	292
Thallium					34		36	49	51	58	71	68						42				71
Vanadium	15				22	25	25	29	28	33	33	40						11				40
Zinc	34				40	30	31	35	32	38	44	45			435			85	64	136	199	199

* Maximum Concs for Filtered Samples are equal to those for Unfiltered samples

IV B BLANK ANALYSIS RESULTS (Section 4)

Blank Actions

The Action Levels for any analyte is equal to five times the highest concentration of that element's contamination in any blank The action level for samples which have been concentrated or diluted should be multiplied by the concentration/dilution factor No positive sample result should be reported unless the concentration of the analyte in the sample exceeds the Action Level (AL) Specific actions are as follows

1 When the concentration is greater than the IDL, but less than the Action Level, report the sample concentration detected with a U

2 When the sample concentration is greater than the Action Level, report the sample concentration unqualified

Applies to Filtered and Unfiltered GWs

MATRIX water

ELEMENT	MAX CONC / UNITS ug/L	AL/ UNITS ug/L	
Al	37 6	188	
Sb	9 6	48 0	
Ba	15 6	78 0	
Be	0 4	2 0	-ND
Cd	0 5	2 5	-ND
Ca	145	725	>AL
Cr	17	8 5	
Co	3 8	19 0	
Cu	5 1	25 5	

MATRIX _____

ELEMENT	MAX CONC / UNITS	AL/ UNITS	
Fe	70	350	
Mg	72 3	362	>AL
Mn	5 9	29 5	
Ni	3 8	19 0	
K	3239	1620	
Ag	18 5	92 5	
Na	292	1460	>AL
Tl	7 1	35 5	-ND
V	4 0	20 0	
Zn	19 9	99 5	

NOTE Blanks analyzed during a soil case must be converted to ug/kg in order to compare them with the sample results

$$\text{Conc in ug/L} \times \frac{\text{Volume diluted to (200ml)}}{\text{Weight digested (1gram)}} \times \frac{1L}{1000ml} \times \frac{1000gm}{1kg} \times \frac{mg}{1000ug} = mg/kg$$

Multiplying this result by 5 to arrive at the action level gives a final result in mg/kg which can then be compared to sample results

IV B BLANK ANALYSIS RESULTS (Section 4)

4 Blank Actions

The Action Levels for any analyte is equal to five times the highest concentration of that element's contamination in any blank The action level for samples which have been concentrated or diluted should be multiplied by the concentration/dilution factor No positive sample result should be reported unless the concentration of the analyte in the sample exceeds the Action Level (AL) Specific actions are as follows

1 When the concentration is greater than the IDL, but less than the Action Level, report the sample concentration detected with a U

2 When the sample concentration is greater than the Action Level, report the sample concentration unqualified

Applies to Field Blanks

MATRIX water

ELEMENT	MAX CONC / UNITS ug/L	AL/ UNITS ug/L
Al	37 6	188
Sb	9 6	48 - ND
Ba	15 6	78 0
Be	0 4	2 0 - ND
Cd	0 5	2 5
Ca	87 3	436
Cr	1 4	7-0
Co	3 8	19 0
Cu	4 2	21 0

MATRIX _____

ELEMENT	MAX CONC / UNITS	AL/ UNITS
Fe	179	89 5
Mg	72 3	362
Mn	4 2	21 0
Ni	3 8	19 0
K	3239	1620 - ND
Ag	18 5	92 5 - ND
Na	2531	1266
Tl	7 1	35 5
V	4 0	20 0
Zn	4 5	22 5

NOTE Blanks analyzed during a soil case must be converted to mg/kg in order to compare them with the sample results

$$\text{Conc in ug/L} \times \frac{\text{Volume diluted to (200ml)}}{\text{Weight digested (1gram)}} \times \frac{1L}{1000ml} \times \frac{1000gm}{kg} \times \frac{mg}{1000ug} = mg/kg$$

Multiplying this result by 5 to arrive at the action level gives a final result in mg/kg which can then be compared to sample results

V A ICP INTERFERENCE CHECK SAMPLE (Sections 1 & 2)

1 Recovery Criteria

List any elements in the ICS AB solution which did not meet the criteria for %R

DATE	ELEMENT	%R	ACTION	SAMPLES AFFECTED
	All met criteria			

ACTIONS

If an element does not meet the %R criteria , follow the actions stated below

	PERCENT RECOVERY		
	<50%	50-79%	>120%
Positive Sample Results	R	J	J
Non-detected Sample Results	R	UJ	A

2- Frequency Requirements

Were Interference QC samples run at the beginning and end of each sample analysis run or a minimum of twice per 8 hour working shift, whichever is more frequent? Yes or No

If no

The data may be affected Use professional judgement to determine the severity of the effect and qualify the data accordingly Discuss any actions below and list the samples affected

V B ICP INTERFERENCE CHECK SAMPLE (Section 3)

3 Report the concentration of any elements detected in the ICS A solution > 2xIDL that should not be present

ELEMENT	CONC DETECTED IN THE ICS ug/l	CONC OF INTERFERENTS IN THE ICS ug/l AL	CA	FE	MG	
		500000				
			500000			
				200000		
					500000	
		250000	250000	100000	250000	50%

Estimate the concentration produced by the interfering element in all affected samples See guidelines for examples List the samples affected by interferences below

SAMPLE AFFECTED	ELEMENT AFFECTED	SAMPLE CONC (ug/L)	SAMPLE INTERFERENT CONC AL	CA	FE	MG	ESTIMATED INTERF (ug/L)

All <50% – No action

ACTIONS

1 In general, the sample data can be accepted without qualification if the sample concentrations of Al, Ca, Fe, and Mg are less than 50% of their respective levels in the ICS solution

2 Estimate (J) positive results for affected elements for samples with levels of interferents 50% or more of that in the ICS solution

3 Reject (R) positive results if the ~~reported concentration is due entirely to the interfering element~~ estimated interference is > 80% of the sample concentration

4 Estimate (UJ) non-detected results for which false negatives are suspect

Give explanations for any actions taken below

No other Table 2 interferent (Cr, Cu, Mn, Ni, V) results > 10 mg/L. No action for other interferents

VI. MATRIX SPIKE

TR # TF5-GW MW/A-05F MATRIX water

1 Recovery Criteria

List the percent recoveries for analytes which did not meet the required criteria

S - amount of spike added
SSR - spikes sample result
SR - sample result

Analyte	SSR	SR	S	%R	Action
All	met criteria				

Matrix Spike Actions apply to all samples of the same matrix

ACTIONS

1 If the sample concentration exceeds the spike concentration by a factor of 4 or more, no action is taken

2 If any analyte does not meet the %R criteria follow the actions stated below

	PERCENT RECOVERY		
	<30%	30%-74%	>125%
Positive Sample Results	J	J	J
Non-detected Results	R	UJ	A

2 Frequency Criteria

A Was a matrix spike prepared at the required frequency? Yes or No

B Was a post digestion spike analyzed for elements that did not meet required criteria for matrix spike recovery? NA Yes or No

A separate worksheet should be used for each matrix spike pair

VII LABORATORY DUPLICATES

List the concentrations of any analyte not meeting the criteria for duplicate precision For soil duplicates, calculate the CRDL in mg/kg using the sample weight, volume and percent solids data for the sample Indicate what criteria was used to evaluate precision by circling either the RPD or CRDL for each element

MATRIX water

Element	CRDL water ug/L	CRDL soil mg/kg	Sample # TF5-GW-MW1A-05F	Duplicate# TF5 GW-MW1A-05F DUP	RPD	Action
Aluminum	200					
Antimony	60					
Arsenic	10					
Barium	200					
Beryllium	5					
Cadmium	5					
Calcium	5000					
Chromium	10					
Cobalt	50					
Copper	25					
Iron	100		36 9843	12 3871	99 6	None - Diff < CRDL
Lead	3 5					
Magnesium	5000					
Manganese	15					
Mercury	0 2					
Nickel	40					
Potassium	5000					
Selenium	5					
Silver	10					
Sodium	5000					
Thallium	10					
Vanadium	50					
Zinc	20					
Cyanide	10					

Laboratory Duplicate Actions should be applied to all other samples of the same matrix type

ACTIONS

1 Estimate (J) positive results for elements which have an RPD >20% for waters and >35% for soils

2 If sample results are less than 5x the CRDL estimate (J) positive results for elements whose absolute difference is >CRDL (<CRDL for soils) If both samples are non-detected, the RPD is not calculated (NC) Per Guidelines, App C, UJ NDs

VIII FIELD DUPLICATES

List the concentrations of all analytes in the field duplicate pair For soil duplicates, calculate the CRDL in mg/kg using the sample weight volume and percent solids data for the sample Indicate what criteria was used to evalute the precision by circling either the RPD or CRDL for each element

MATRIX Water

Element	CRDL water ug/L	CRDL soil mg/kg	Sample # TF5-GW-MW902A-05	Duplicate# TF5-GW-DUP02 05	RPD	Action
Aluminum	200		See Field Dup Worksheet			
Antimony	60					
Arsenic	10					
Barium	200					
Beryllium	5					
Cadmium	5					
Calcium	5000					
Chromium	10					
Cobalt	50					
Copper	25					
Iron	100					
Lead	3 5					
Magnesium	5000					
Manganese	15					
Mercury	0 2					
Nickel	40					
Potassium	5000					
Selenium	5					
Silver	10					
Sodium	5000					
Thallium	10					
Vanadium	50					
Zinc	20					
Cyanide	10					

Field Duplicate Actions should be applied to all other samples of the same matrix type

ACTIONS

1 Estimate (J) positive results for elements which have an RPD >30 for waters and >50% for soils

2 If sample results are less than 5x the CRDL estimate (J) positive results and (UJ) nondetected results for elements whose absolute difference is >2xCRDL (4xCRDL for soils) If both samples are non-detected the RPD is not calculated (NC)

Field Duplicates Worksheet
%RPD and Absolute Difference

MATRIX	Water											
SDG												
			1st DUP	2nd DUP								
			SAMPLE #	SAMPLE #		CRITERIA				CRITERIA		
			MW902A 05	DUP02 05		%RPD if both				ABS DIFF if		
			REP'D CONC	REP'D CONC		results >=	%RPD	ABS		both results not	2xCRDL	ABS DIFF
ANALYTE	CRDL(ug/L)	5xCRDL(ug/L)	(ug/L)	(ug/L)	% RPD	5xCRDL	>30 / ?	DIFF		>=5xCRDL	(ug/L)	>2xCRDL?	ACTION
ALUMINUM	200	1000	396	381	3 9			15		15	400	no	None
ANTIMONY	60	300	U	U	NC			NC			120		
ARSENIC	10	50	4 6	3 9	16 5			0 7		0 7	20	no	
BARIUM	200	1000	53 2	54 2	1 9			1		1	400	no	
BERYLLIUM	5	25	U	U	NC			NC			10		
CADMIUM	5	25	U	U	NC			NC			10		
CALCIUM	5000	25000	49600	49300	0 6	0 6	no	300			10000		
CHROMIUM	10	50	U	U	NC			NC			20		
COBALT	50	250	14 7	14 7	0 0			0		0	100	no	
COPPER	25	125	0 93	2 4	88 3			1 47		1 47	50	no	
IRON	100	500	17800	18100	1 7	1 7	no	300			200		
LEAD	3	15	U	U	NC			NC			6		
MAGNESIUM	5000	25000	47100	47800	1 5	1 5	no	700			10000		
MANGANESE	15	75	1510	1530	1 3	1 3	no	20			30		
MERCURY	0 20	1	U	U	NC			NC			0 40		
NICKEL	40	200	31 3	31 1	0 6			0 2		0 2	80	no	
POTASSIUM	5000	25000	2210	2170	1 8			40		40	10000	no	
SELENIUM	5	25	U	U	NC			NC			10		
SILVER	10	50	3 1	2 8	10 2			0 3		0 3	20	no	
SODIUM	5000	25000	47800	47300	1 1	1 1	no	500			10000		
THALLIUM	10	50	U	U	NC			NC			20		
VANADIUM	50	250	U	U	NC			NC			100		
ZINC	20	100	23 0	16 0	35 9			7		7	40	no	

no means criteria were met yes means criteria were not met and action is required

VIII. FIELD DUPLICATES

List the concentrations of all analytes in the field duplicate pair For soil duplicates, calculate the CRDL in mg/kg using the sample weight, volume and percent solids data for the sample Indicate what criteria was used to evalute the precision by circling either the RPD or CRDL for each element

MATRIX water

Element	CRDL water ug/L	CRDL soil mg/kg	Sample # TF5-8W-MW902A-05F	Duplicate# TF5-8W-DUP02-05F	RPD	Action
Aluminum	200		See Field Dup Worksheet			
Antimony	60					
Arsenic	10					
Barium	200					
Beryllium	5					
Cadmium	5					
Calcium	5000					
Chromium	10					
Cobalt	50					
Copper	25					
Iron	100					
Lead	3 5					
Magnesium	5000					
Manganese	15					
Mercury	0 2					
Nickel	40					
Potassium	5000					
Selenium	5					
Silver	10					
Sodium	5000					
Thallium	10					
Vanadium	50					
Zinc	20					
Cyanide	10					

Field Duplicate Actions should be applied to all other samples of the same matrix type

ACTIONS

1 Estimate (J) positive results for elements which have an RPD >30% for waters and >50% for soils

2 If sample results are less than 5x the CRDL estimate (J) positive results and (UJ) nondetected results for elements whose absolute difference is >2xCRDL (4xCRDL for soils) If both samples are nondetected the RPD is not calculated (NC)

Field Duplicates Worksheet
%RPD and Absolute Difference

MATRIX	Water											
SDG												
			1st DUP	2nd DUP								
			SAMPLE #	SAMPLE #		CRITERIA			CRITERIA			
			MW902A 05F	DUP02 05F		% RPD if both			ABS DIFF if			
			REP'D CONC	REP'D CONC		results >=	% RPD	ABS	both results not	2xCRDL	ABS DIFF	
ANALYTE	CRDL(ug/L)	5xCRDL(ug/L)	(ug/L)	(ug/L)	% RPD	5xCRDL	>30 / ?	DIFF	>=5xCRDL	(ug/L)	>2xCRDL?	ACTION
ALUMINUM	200	1000	U	U	NC			NC		400		None
ANTIMONY	60	300	U	U	NC			NC		120		
ARSENIC	10	50	4 7	3 8	21 2			0 9	0 9	20	no	
BARIUM	200	1000	50 0	50 8	1 6			0 8	0 8	400	no	
BERYLLIUM	5	25	U	U	NC			NC		10		
CADMIUM	5	25	U	U	NC			NC		10		
CALCIUM	5000	25000	48000	49200	2 5	2 5	no	1200		10000		
CHROMIUM	10	50	U	U	NC			NC		20		
COBALT	50	250	16 1	14 7	9 1			1 4	1 4	100	no	
COPPER	25	125	1 0	1 6	46 2			0 6	0 6	50	no	
IRON	100	500	16500	17000	3 0	3 0	no	500		200		
LEAD	3	15	U	U	NC			NC		6		
MAGNESIUM	5000	25000	46300	47400	2 3	2 3	no	1100		10000		
MANGANESE	15	75	1480	1520	2 7	2 7	no	40		30		
MERCURY	0 20	1	U	U	NC			NC		0 40		
NICKEL	40	200	30 0	30 7	2 3			0 7	0 7	80	no	
POTASSIUM	5000	25000	2120	2140	0 9			20	20	10000	no	
SELENIUM	5	25	U	U	NC			NC		10		
SILVER	10	50	3 2	2 9	9 8			0 3	0 3	20	no	
SODIUM	5000	25000	46500	47200	1 5	1 5	no	700		10000		
THALLIUM	10	50	U	U	NC			NC		20		
VANADIUM	50	250	U	U	NC			NC		100		
ZINC	20	100	15 0	11 9	23 0			3 1	3 1	40	no	

no means criteria were met yes means criteria were not met and action is required

IX LABORATORY CONTROL SAMPLE

1 Aqueous LCS

List any LCS recoveries not within the 80-120% criteria and the samples affected

DATE	ELEMENT	%R	ACTION	SAMPLES AFFECTED
	All met criteria			

2 Solid LCS NA

List any analytes that were not within the control windows set by the EPA for the solid LCS sample The 80-120% criteria is not used to evaluate solid LCS results

ELEMENT	LCS CONC	CONTROL WINDOWS	ACTION	SAMPLES AFFECTED

ACTIONS

AQUEOUS LCS	Percent Recovery <50%	51-79%	>120%
Positive Results	R	J	J
Non-detected Results	R	UJ	-

SOLID LCS	<EPA Control Windows	>EPA Control Windows
Positive Results	J	J
Non-detected Results	UJ	-

Frequency Criteria

Was an LCS analyzed for every matrix every digestion batch and every 20 samples? Yes or No

XI INDUCTIVELY COUPLED PLASMA (ICP) SERIAL DILUTION ANALYSIS

Serial Dilution analysis was not performed in this SDG Therefore, the data are not evaluated based on this parameter

_____ Serial Dilutions were performed for each matrix and results of the diluted sample analysis agreed within ~~ten~~ fifteen percent of the original undiluted analysis

_____ Serial Dilutions were not performed for the following

_____

_____ Serial Dilutions were performed, but analytical results did not agree within 15% for analyte concentrations greater than 50x the IDL before dilution

Report all results below that do not meet the required laboratory criteria for ICP serial dilution analysis

MATRIX _____

ELEMENT	IDL	50xIDL	SAMPLE RESULT	SERIAL DILUTION	%D	ACTION
Aluminum						
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Nickel						
Potassium						
Silver						
Sodium						
Vanadium						
Zinc						

Actions apply to all samples of the same matrix

ACTIONS

1 Estimate (J) positive results if %D >15

XII DETECTION LIMIT RESULTS

1 Instrument Detection Limits

✓ Instrument Detection Limit results were present and found to be less than the Contract Required Detection Limits

_____ IDLs were not included in the data package on Form XI

_____ IDLs were present, but the criteria was not met for the following elements _____

2 Reporting Requirements

✓ Were sample results on Form I reported down to the IDL not the CRDL for all analytes? (Yes) or No

NA Were sample results that were analyzed by ICP for Se Tl, As, or Pb at least 5x IDL Yes or No

✓ Were sample weights, volumes, and dilutions taken into account when reporting detection limits on Form I (Yes) or No

If No,

The reported results may be inaccurate Make the necessary changes on the data summary tables and request that the laboratory resubmit the corrected data

J + < 2x IDL + < CRDL due to uncertainty near the CRDL.

Note: Thallium IDL = 3.0 ug/L > Required detection limit of 2.0 ug/L

XIII SAMPLE QUANTITATION

✓ Sample results fall within the linear range for ICP and within the calibrated range for all other parameters

_____ Sample results were beyond the linear range/ calibration range of the instrument for the following samples/elements

In the space below, please show a minimum of one sample calculation per method NA, Tier II.

ICP

FURNACE

MERCURY

CYANIDE

For soil samples, the following equation may be necessary to convert raw data values (usually reported in ug/L) to actual sample concentrations (mg/kg)

The lab is required to use 1 gram sample (wet weight) to 200 ml

Wet weight concentration =

$$\text{digest conc in } \frac{ug}{L} \times \frac{200ml}{1\ gm} \times \frac{1L}{1000\ ml} \times \frac{1000gm}{1kg} \times \frac{1mg}{1000ug} = \frac{mg}{kg}$$

In addition the sample results are converted to dry weight using the percent solids calculations

$$\frac{\text{Wet weight conc}}{\%\text{solids}} \times 100 = \text{final concentration dry weight (mg/kg)}$$

APPENDIX D

SUMMARY TABLES FOR ROUND 5 ANALYTICAL RESULTS

D-1 VOLATILE ORGANIC COMPOUND SUMMARY TABLE – ROUND 5 ANALYTICAL RESULTS

D-2 SEMIVOLATILE ORGANIC COMPOUNDS SUMMARY TABLE – ROUND 5 ANALYTICAL RESULTS

D-3 METALS SUMMARY TABLE – ROUND 5 ANALYTICAL RESULTS

APPENDIX D-1

VOLATILE ORGANIC COMPOUND SUMMARY TABLE
ROUND 5 ANALYTICAL RESULTS

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW4-0		TF5-GW-MW861	
Station Location	TF5-GW-DUP02-05		TF5-GW-MW1A-05		TF5-GW-MW2A-05		TF5-GW-MW4-05		TF5-GW-MW861-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/26/04	
Date Extracted										
Date Analyzed	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW902A-05		None		None		None		None	
Dichlorodifluoromethane	5	U	5	U	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Acetone	5	U	5	U	5	U	5	U	5	U
Carbon Disulfide	5	U	5	U	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U	5	U
2-Butanone	5	U	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	2	J	5	U	5	U	5	U	5	U
Chloroform	5	U	2	J	5	U	4	J	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U	5	U	5	U
Toluene	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U	5	U	5	U
m-Xylene	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW4-0		TF5-GW-MW861	
Station Location	TF5-GW-DUP02-05		TF5-GW-MW1A-05		TF5-GW-MW2A-05		TF5-GW-MW4-05		TF5-GW-MW861-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/26/04	
Date Extracted										
Date Analyzed	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW902A-05		None		None		None		None	
Total Xylenes	5	U	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW862		TF5-GW-MW9-0		TF5GWMW901A		TF5GWMW901B		TF5GWMW902A	
Station Location	TF5-GW-MW862-05		TF5-GW-MW9-05		TF5-GW-MW901A-05		TF5-GW-MW901B-05		TF5-GW-MW902A-05	
Date Sampled	5/27/04		5/26/04		5/26/04		5/26/04		5/27/04	
Date Extracted										
Date Analyzed	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		None		None		Field Dup. TF5-GW-MW902A-05	
Dichlorodifluoromethane	5	U	5	U	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Acetone	5	U	5	U	5	U	5	U	5	U
Carbon Disulfide	5	U	5	U	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U	5	U
2-Butanone	5	U	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	5	U	5	U	5	U	5	U	2	J
Chloroform	5	U	5	U	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U	5	U	5	U
Toluene	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U	5	U	5	U
m-Xylene	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW862		TF5-GW-MW9-0		TF5GWMW901A		TF5GWMW901B		TF5GWMW902A	
Station Location	TF5-GW-MW862-05		TF5-GW-MW9-05		TF5-GW-MW901A-05		TF5-GW-MW901B-05		TF5-GW-MW902A-05	
Date Sampled	5/27/04		5/26/04		5/26/04		5/26/04		5/27/04	
Date Extracted										
Date Analyzed	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		None		None		Field Dup. TF5-GW-MW902A-05	
Total Xylenes	5	U	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5GWMW902B		TF5-GW-RB03-		TF5-GW-TB02-	
Station Location	TF5-GW-MW902B-05		TF5-GW-RB03-05		TF5-GW-TB02-05	
Date Sampled	5/27/04		5/27/04		5/26/04	
Date Extracted						
Date Analyzed	6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1	
Percent Solids						
QC Identifier	None		Rinsate Blank		Trip Blank	
Dichlorodifluoromethane	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U
Acetone	5	U	46		6	
Carbon Disulfide	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U
2-Butanone	5	U	5	U	5	U
cis-1,2-Dichloroethene	1	J	5	U	5	U
Chloroform	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U
Benzene	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U
Toluene	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U
m-Xylene	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5GWMW902B		TF5-GW-RB03-		TF5-GW-TB02-	
Station Location	TF5-GW-MW902B-05		TF5-GW-RB03-05		TF5-GW-TB02-05	
Date Sampled	5/27/04		5/27/04		5/26/04	
Date Extracted						
Date Analyzed	6/1/2004		6/1/2004		6/1/2004	
Dilution Factor	1		1		1	
Percent Solids						
QC Identifier	None		Rinsate Blank		Trip Blank	
Total Xylenes	5	U	5	U	5	U
Styrene	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01		TF5-GW-MW10-		TF5-GW-MW3A-		TF5-GW-MW701		TF5-GW-MW8-0	
Station Location	TF5-GW-DUP01-05		TF5-GW-MW10-05		TF5-GW-MW3A-05		TF5-GW-MW701-05		TF5-GW-MW8-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted										
Date Analyzed	5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		None		Field Dup. TF5-GW-MW3A-05		None		None	
Dichlorodifluoromethane	5	U	5	U	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Acetone	5	U	5	U	5	U	5	U	5	U
Carbon Disulfide	5	U	5	U	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U	5	U
2-Butanone	5	U	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Chloroform	5	U	5	U	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U	5	U	5	U
Toluene	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U	5	U	5	U
m-Xylene	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01		TF5-GW-MW10-		TF5-GW-MW3A-		TF5-GW-MW701		TF5-GW-MW8-0	
Station Location	TF5-GW-DUP01-05		TF5-GW-MW10-05		TF5-GW-MW3A-05		TF5-GW-MW701-05		TF5-GW-MW8-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted										
Date Analyzed	5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		None		Field Dup. TF5-GW-MW3A-05		None		None	
Total Xylenes	5	U	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	UJ	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW864		TF5-GW-MW865		TF5-GW-RB01-		TF5-GW-RB02-		TF5-GW-SB01-		TF5-GW-TB01-	
Station Location	TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05		TF5-GW-RB02-05		TF5-GW-SB01-05		TF5-GW-TB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/26/04		5/26/04		5/25/04	
Date Extracted												
Date Analyzed	5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004	
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	None		None		Rinsate Blank		Rinsate Blank		Source Blank		Trip Blank	
Dichlorodifluoromethane	5	U	5	U	5	U	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	5	U	5	U	63		46		68		5	U
Carbon Disulfide	5	U	5	U	5	U	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U	5	U	5	U
2-Butanone	5	U	5	U	3	J	5	U	4	J	5	U
cis-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U	5	U
Chloroform	5	U	5	U	5	U	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U	5	U	5	U	5	U
Toluene	5	U	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U	5	U	5	U	5	U
m-Xylene	5	U	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Volatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW864		TF5-GW-MW865		TF5-GW-RB01-		TF5-GW-RB02-		TF5-GW-SB01-		TF5-GW-TB01-	
Station Location	TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05		TF5-GW-RB02-05		TF5-GW-SB01-05		TF5-GW-TB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/26/04		5/26/04		5/25/04	
Date Extracted												
Date Analyzed	5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004		5/31/2004	
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	None		None		Rinsate Blank		Rinsate Blank		Source Blank		Trip Blank	
Total Xylenes	5	U	5	U	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

APPENDIX D-2

SEMIVOLATILE ORGANIC COMPOUNDS SUMMARY TABLE
ROUND 5 ANALYTICAL RESULTS

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW4-0		TF5-GW-MW861	
Station Location	TF5-GW-DUP02-05		TF5-GW-MW1A-05		TF5-GW-MW2A-05		TF5-GW-MW4-05		TF5-GW-MW861-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/26/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/8/2004		6/4/2004		6/8/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW902A-05		None		None		None		None	
Phenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	10	U	10	UJ	10	U	10	UJ	10	UJ
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	10	U
Naphthalene	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	20	U	20	U	20	U	20	U	20	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Acenaphthene	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	20	UJ	20	U	20	UJ	20	U	20	U
4-Nitrophenol	20	U	20	U	20	U	20	U	20	U
Dibenzofuran	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW4-0		TF5-GW-MW861	
Station Location	TF5-GW-DUP02-05		TF5-GW-MW1A-05		TF5-GW-MW2A-05		TF5-GW-MW4-05		TF5-GW-MW861-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/26/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/8/2004		6/4/2004		6/8/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW902A-05		None		None		None		None	
4-Nitroaniline	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-2-methylphenol	20	U	20	U	20	U	20	U	20	U
N-Nitroso-diphenylamine	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	20	U	20	U	20	U	20	U	20	U
Phenanthrene	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	10	U	1	J	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U	10	U	10	U
Pyrene	10	U	10	U	10	U	10	U	10	U
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	UJ	10	U	10	UJ	10	U	10	U
Benzo(a)anthracene	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	U	10	U	10	U	10	U	10	U
Di-n-octylphthalate	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Dibenzo(a,h)anthracene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(g,h,i)perylene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
1,1'-Biphenyl	10	U	10	U	10	U	10	U	10	U
Acetophenone	10	U	10	U	10	U	10	U	10	U
Atrazine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzaldehyde	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Caprolactam	21		85		34		8	J	1	J

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW862		TF5-GW-MW9-0		TF5GWMW901A		TF5GWMW901B		TF5GWMW902A	
Station Location	TF5-GW-MW862-05		TF5-GW-MW9-05		TF5-GW-MW901A-05		TF5-GW-MW901B-05		TF5-GW-MW902A-05	
Date Sampled	5/27/04		5/26/04		5/26/04		5/26/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		None		None		Field Dup. TF5-GW-MW902A-05	
Phenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	10	U
Naphthalene	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	20	U	20	U	20	U	20	U	20	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Acenaphthene	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	20	U	20	U	20	U	20	U	20	U
Dibenzofuran	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW862		TF5-GW-MW9-0		TF5GWMW901A		TF5GWMW901B		TF5GWMW902A	
Station Location	TF5-GW-MW862-05		TF5-GW-MW9-05		TF5-GW-MW901A-05		TF5-GW-MW901B-05		TF5-GW-MW902A-05	
Date Sampled	5/27/04		5/26/04		5/26/04		5/26/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		None		None		Field Dup. TF5-GW-MW902A-05	
4-Nitroaniline	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-2-methylphenol	20	U	20	U	20	U	20	U	20	U
N-Nitroso-diphenylamine	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	20	U	20	U	20	U	20	U	20	U
Phenanthrene	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	4	J	10	U	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U	10	U	10	U
Pyrene	10	U	10	U	10	U	10	U	10	U
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	U	10	U	10	U	10	U	4	J
Di-n-octylphthalate	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Dibenzo(a,h)anthracene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(g,h,i)perylene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
1,1'-Biphenyl	10	U	10	U	10	U	10	U	10	U
Acetophenone	10	U	10	U	10	U	10	U	10	U
Atrazine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzaldehyde	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Caprolactam	610	*	10	U	10	U	3	J	20	

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5GWMW902B		TF5-GW-RB03-	
Station Location	TF5-GW-MW902B-05		TF5-GW-RB03-05	
Date Sampled	5/27/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004	
Dilution Factor	1		1	
Percent Solids				
QC Identifier	None		Rinsate Blank	
Phenol	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U
2-Chlorophenol	10	U	10	U
2-Methylphenol	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U
4-Methylphenol	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U
Hexachloroethane	10	U	10	U
Nitrobenzene	10	U	10	U
Isophorone	10	U	10	U
2-Nitrophenol	10	U	10	U
2,4-Dimethylphenol	10	UJ	10	UJ
2,4-Dichlorophenol	10	U	10	U
Naphthalene	10	U	10	U
4-Chloroaniline	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U
Hexachlorobutadiene	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U
2-Methylnaphthalene	10	U	10	U
Hexachlorocyclopentadiene	10	UJ	10	UJ
2,4,6-Trichlorophenol	10	U	10	U
2,4,5-Trichlorophenol	20	U	20	U
2-Chloronaphthalene	10	U	10	U
2-Nitroaniline	20	U	20	U
Dimethylphthalate	10	U	10	U
Acenaphthylene	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U
3-Nitroaniline	20	U	20	U
Acenaphthene	10	U	10	U
2,4-Dinitrophenol	20	U	20	U
4-Nitrophenol	20	U	20	U
Dibenzofuran	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U
Diethylphthalate	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U
Fluorene	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8260B (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5GWMW902B		TF5-GW-RB03-	
Station Location	TF5-GW-MW902B-05		TF5-GW-RB03-05	
Date Sampled	5/27/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004	
Dilution Factor	1		1	
Percent Solids				
QC Identifier	None		Rinsate Blank	
4-Nitroaniline	20	U	20	U
4,6-Dinitro-2-methylphenol	20	U	20	U
N-Nitroso-diphenylamine	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U
Hexachlorobenzene	10	U	10	U
Pentachlorophenol	20	U	20	U
Phenanthrene	10	U	10	U
Anthracene	10	U	10	U
Carbazole	10	U	10	U
Di-n-Butylphthalate	10	U	10	U
Fluoranthene	10	U	10	U
Pyrene	10	U	10	U
Butylbenzylphthalate	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U
Benzo(a)anthracene	10	U	10	U
Chrysene	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	U	10	U
Di-n-octylphthalate	10	UJ	10	UJ
Benzo(b)fluoranthene	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U
Benzo(a)pyrene	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	UJ	10	UJ
Dibenzo(a,h)anthracene	10	UJ	10	UJ
Benzo(g,h,i)perylene	10	UJ	10	UJ
1,1'-Biphenyl	10	U	10	U
Acetophenone	10	U	10	U
Atrazine	10	UJ	10	UJ
Benzaldehyde	10	UJ	10	UJ
Caprolactam	15		10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01		TF5-GW-MW10-		TF5-GW-MW3A-		TF5-GW-MW701		TF5-GW-MW8-0	
Station Location	TF5-GW-DUP01-05		TF5-GW-MW10-05		TF5-GW-MW3A-05		TF5-GW-MW701-05		TF5-GW-MW8-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/2/2004		6/2/2004		6/2/2004		6/2/2004		6/2/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		None		Field Dup. TF5-GW-MW3A-05		None		None	
Phenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	10	U
Naphthalene	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		R		R		R		R		R
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	20	U	20	U	20	U	20	U	20	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Acenaphthene	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	20	U	20	U	20	U	20	U	20	U
Dibenzofuran	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01		TF5-GW-MW10-		TF5-GW-MW3A-		TF5-GW-MW701		TF5-GW-MW8-0	
Station Location	TF5-GW-DUP01-05		TF5-GW-MW10-05		TF5-GW-MW3A-05		TF5-GW-MW701-05		TF5-GW-MW8-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/2/2004		6/2/2004		6/2/2004		6/2/2004		6/2/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		None		Field Dup. TF5-GW-MW3A-05		None		None	
4-Nitroaniline	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-2-methylphenol	20	U	20	U	20	U	20	U	20	U
N-Nitroso-diphenylamine	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	20	U	20	U	20	U	20	U	20	U
Phenanthrene	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	10	U	10	U	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U	10	U	10	U
Pyrene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(a)anthracene	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Di-n-octylphthalate	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U	10	U	10	U
Dibenzo(a,h)anthracene	10	U	10	U	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U	10	U	10	U
1,1'-Biphenyl	10	U	10	U	10	U	10	U	10	U
Acetophenone	10	U	10	U	10	U	10	U	10	U
Atrazine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzaldehyde	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Caprolactam	6	J	10	U	7	J	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW864		TF5-GW-MW865		TF5-GW-RB01-		TF5-GW-RB02-		TF5-GW-SB01-	
Station Location	TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05		TF5-GW-RB02-05		TF5-GW-SB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/26/04		5/26/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/2/2004		6/2/2004		6/3/2004		6/3/2004		6/3/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		Rinsate Blank		Rinsate Blank		Source Blank	
Phenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	10	U
Naphthalene	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		R		R		R		R		R
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	20	U	20	U	20	U	20	U	20	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	20	U	20	U	20	U	20	U	20	U
Acenaphthene	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	20	U	20	U	20	U	20	U	20	U
Dibenzofuran	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW864		TF5-GW-MW865		TF5-GW-RB01-		TF5-GW-RB02-		TF5-GW-SB01-	
Station Location	TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05		TF5-GW-RB02-05		TF5-GW-SB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/26/04		5/26/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/2/2004		6/2/2004		6/3/2004		6/3/2004		6/3/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		Rinsate Blank		Rinsate Blank		Source Blank	
4-Nitroaniline	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-2-methylphenol	20	U	20	U	20	U	20	U	20	U
N-Nitroso-diphenylamine	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	20	U	20	U	20	U	20	U	20	U
Phenanthrene	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	10	U	10	U	1	J	10	U	1	J
Fluoranthene	10	U	10	U	10	U	10	U	10	U
Pyrene	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(a)anthracene	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	UJ	10	UJ	1	J	10	UJ	1	J
Di-n-octylphthalate	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U	10	U	10	U
Dibenzo(a,h)anthracene	10	U	10	U	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U	10	U	10	U
1,1'-Biphenyl	10	U	10	U	10	U	10	U	10	U
Acetophenone	10	U	10	U	10	U	10	U	10	U
Atrazine	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Benzaldehyde	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Caprolactam	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Low Concentration PAH (SIM) Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW4-0		TF5-GW-MW861		TF5-GW-MW862	
Station Location	TF5-GW-DUP02-05		TF5-GW-MW1A-05		TF5-GW-MW2A-05		TF5-GW-MW4-05		TF5-GW-MW861-05		TF5-GW-MW862-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/26/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	Field Dup. TF5-GW-MW902A-05		None		None		None		None		None	
Naphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
2-Methylnaphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthylene	0.10	U	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthene	0.10	U	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
Fluorene	0.10		0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
Phenanthrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Pyrene	0.10	UJ	0.10	UJ	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(a)anthracene	0.10	UJ	0.10	UJ	0.10	U	0.10	UJ	0.10	U	0.10	U
Chrysene	0.10	UJ	0.10	UJ	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(b)fluoranthene	0.10	UJ	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	UJ
Benzo(k)fluoranthene	0.10	UJ	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	UJ
Benzo(a)pyrene	0.10	UJ	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	UJ
Dibenzo(a,h)anthracene	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ
Benzo(g,h,i)perylene	0.10	UJ	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	UJ

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Low Concentration PAH (SIM) Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW9-0		TF5GWMW901A		TF5GWMW901B		TF5GWMW902A		TF5GWMW902B		TF5-GW-RB03-	
Station Location	TF5-GW-MW9-05		TF5-GW-MW901A-05		TF5-GW-MW901B-05		TF5-GW-MW902A-05		TF5-GW-MW902B-05		TF5-GW-RB03-05	
Date Sampled	5/26/04		5/26/04		5/26/04		5/27/04		5/27/04		5/27/04	
Date Extracted	6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004		6/1/2004	
Date Analyzed	6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	None		None		None		Field Dup. TF5-GW-MW902A-05		None		Rinsate Blank	
Naphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
2-Methylnaphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthylene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Fluorene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Phenanthrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ
Pyrene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(a)anthracene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Chrysene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(b)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(k)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Benzo(a)pyrene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U
Dibenzo(a,h)anthracene	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ
Benzo(g,h,i)perylene	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	U	0.10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Low Concentration PAH (SIM) Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01		TF5-GW-MW10-		TF5-GW-MW3A-		TF5-GW-MW701		TF5-GW-MW8-0	
Station Location	TF5-GW-DUP01-05		TF5-GW-MW10-05		TF5-GW-MW3A-05		TF5-GW-MW701-05		TF5-GW-MW8-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/3/2004		6/3/2004		6/3/2004		6/3/2004		6/3/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		None		Field Dup. TF5-GW-MW3A-05		None		None	
Naphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
2-Methylnaphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthylene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Fluorene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Phenanthrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Pyrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(a)anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Chrysene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(b)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(k)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(a)pyrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Dibenzo(a,h)anthracene	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ
Benzo(g,h,i)perylene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Low Concentration PAH (SIM) Analysis By SW-846 Method 8270C (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW864		TF5-GW-MW865		TF5-GW-RB01-		TF5-GW-RB02-		TF5-GW-SB01-	
Station Location	TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05		TF5-GW-RB02-05		TF5-GW-SB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/26/04		5/26/04	
Date Extracted	5/28/2004		5/28/2004		5/28/2004		5/28/2004		5/28/2004	
Date Analyzed	6/3/2004		6/3/2004		6/3/2004		6/4/2004		6/4/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		Rinsate Blank		Rinsate Blank		Source Blank	
Naphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
2-Methylnaphthalene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthylene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Acenaphthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Fluorene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Phenanthrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Pyrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(a)anthracene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Chrysene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(b)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(k)fluoranthene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(a)pyrene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Dibenzo(a,h)anthracene	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ
Benzo(g,h,i)perylene	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB - Equipment Blank contamination

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l) TABLE III - TENTATIVELY IDENTIFIED COMPOUND SUMMARY
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491_TIC

EPA Sample Number	TF5-GW-DUP02		TF5-GW-MW1A-		TF5-GW-MW2A-		TF5-GW-MW862		TF5GWMW901B	
1,8-DIAZACYCLOTETRADECANE-2,9-DIONE_TOTAL			15	NJ_1			22	NJ		
1-[4-TRIFLUOROMETHYLPHENYL]-2-METHYL-2-[							13	NJ		
1-NONADECENE_TOTAL	6	NJ_1			7	NJ_1	53	NJ_2		
9-OCTADECENOIC ACID (Z)-, OCTADECYL ESTE									5	NJ
DIETHYLTOLUAMIDE							8	NJ		
N-HEXADECANOIC ACID	5	NJ								
OCTADECANOIC ACID	5	NJ								
UNKNOWN ALKANE_TOTAL		J_		J_		J_		J_		J_
TETRADECANOIC ACID										

J - Quantitation Approximate; N - Presumptive evidence;
B - Blank contamination; _# - Number of peaks quantitated

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l) TABLE III - TENTATIVELY IDENTIFIED COMPOUND SUMMARY
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491_TIC

EPA Sample Number	TF5-GW-MW902A	
1,8-DIAZACYCLOTETRADECANE-2,9-DIONE_TOTAL		
1-[4-TRIFLUOROMETHYLPHENYL]-2-METHYL-2-[		
1-NONADECENE_TOTAL		
9-OCTADECENOIC ACID (Z)-, OCTADECYL ESTE	9	NJ
DIETHYLTOLUAMIDE		
N-HEXADECANOIC ACID	6	NJ
OCTADECANOIC ACID		
UNKNOWN ALKANE_TOTAL		
TETRADECANOIC ACID	6	NJ

Aqueous Semivolatile Organic Analysis By SW-846 Method 8270C (ug/l) TABLE III - TENTATIVELY IDENTIFIED COMPOUND SUMMARY
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477_TIC

EPA Sample Number	TF5-GW-MW864		TF5-GW-RB01-		TF5-GW-SB01-	
5-HEPTEN-2-ONE, 6-METHYL-	6	NJ				
7,9-DI-TERT-BUTYL-1-OXASPIRO(4,5)DECA-6,			4	NJ	4	NJ

J - Quantitation Approximate; N - Presumptive evidence;
B - Blank contamination; _# - Number of peaks quantitated

APPENDIX D-3

METALS SUMMARY TABLE
ROUND 5 ANALYTICAL RESULTS

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-DUP02-05		TF5-GW-DUP02-05F		TF5-GW-MW1A-05		TF5-GW-MW1A-05F		TF5-GW-MW2A-05	
Station Location	TF5-GW-DUP02-05		TF5-GW-DUP02-05F		TF5-GW-MW1A-05		TF5-GW-MW1A-05F		TF5-GW-MW2A-05	
Date Sampled	5/27/04		5/27/04		5/27/04		5/27/04		5/27/04	
Date Extracted										
Date Analyzed										
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW902A-05		Field Dup. TF5-GW-MW902A-05F		None		None		None	
Aluminum	381		6.0	U	1980		6.0	U	66.4	U
Antimony	3.0	U	3.0	U	3.0	U	3.0	U	3.1	UJ
Arsenic	3.9	J	3.8	J	8.4		3.0	U	3.0	U
Barium	54.2	U	50.8	U	32.6	U	12.1	U	10.6	U
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Calcium	49300		49200		23200		23100		10500	
Chromium	0.40	U	0.40	U	0.40	U	0.40	U	0.90	U
Cobalt	14.7	U	14.7	U	16.4	U	1.2	UJ	2.1	U
Copper	2.4	U	1.6	UJ	5.2	U	0.90	U	4.1	U
Iron	18100		17000		17400		37.0	U	234	U
Lead	2.0	U	2.0	U	2.3	J	2.0	U	2.0	U
Magnesium	47800		47400		25300		24100		14800	
Manganese	1530		1520		2120		393		12.2	U
Mercury	0.13	U	0.14	U	0.14	U	0.13	U	0.13	U
Nickel	31.1		30.7		23.2		11.5	U	9.7	U
Potassium	2170		2140		1390	U	1110	U	1400	U
Selenium	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver	2.8	UJ	2.9	UJ	2.3	UJ	2.4	UJ	2.9	UJ
Sodium	47300		47200		18100		17900		9760	
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium	0.70	U	0.70	U	2.9	U	0.70	U	1.8	U
Zinc	16.0	U	11.9	U	56.2	U	12.0	U	17.1	U

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW4-05		TF5-GW-MW4-05F		TF5-GW-MW861-05		TF5-GW-MW862-05		TF5-GW-MW862-05F		TF5-GW-MW901A-05	
Station Location	TF5-GW-MW4-05		TF5-GW-MW4-05F		TF5-GW-MW861-05		TF5-GW-MW862-05		TF5-GW-MW862-05F		TF5-GW-MW901A-05	
Date Sampled	5/27/04		5/27/04		5/26/04		5/27/04		5/27/04		5/26/04	
Date Extracted												
Date Analyzed												
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	None		None		None		None		None		None	
Aluminum	2920		6.0	U	16.1	U	65.4	U	6.0	U	91.7	U
Antimony	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Arsenic	40.3		3.0	U	3.5	J	3.0	U	3.0	U	3.0	U
Barium	36.4	U	12.2	U	4.9	U	11.9	U	12.1	U	20.8	U
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Calcium	30100		27500		14500		33700		33400		21800	
Chromium	13.2		0.42	UJ	0.40	U	0.60	UJ	0.46	UJ	0.40	U
Cobalt	10.3	U	0.90	U	0.90	U	0.90	U	0.90	U	8.6	U
Copper	14.5	U	2.8	U	1.9	U	1.8	U	2.7	U	1.3	UJ
Iron	18400		18.4	U	81.0	U	230	U	18.1	U	11400	
Lead	8.6		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium	23800		21900		11100		22400		22500		23400	
Manganese	145		3.1	U	3.0	U	8.1	U	4.3	U	723	
Mercury	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U
Nickel	15.6	U	3.1	U	4.8	U	3.8	U	3.7	U	25.8	
Potassium	2820		2160		981	U	3490		3600		1340	U
Selenium	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver	2.0	U	2.3	UJ	2.0	U	2.3	UJ	2.0	UJ	2.0	U
Sodium	25700		24400		10700		36900		36800		28100	
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium	6.0	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U
Zinc	39.0	U	7.0	U	10.7	U	7.4	U	7.5	U	24.4	U

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-MW901B-05		TF5-GW-MW902A-05		TF5-GW-MW902A-05F		TF5-GW-MW902B-05		TF5-GW-MW9-05	
Station Location	TF5-GW-MW901B-05		TF5-GW-MW902A-05		TF5-GW-MW902A-05F		TF5-GW-MW902B-05		TF5-GW-MW9-05	
Date Sampled	5/26/04		5/27/04		5/27/04		5/27/04		5/26/04	
Date Extracted										
Date Analyzed										
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		Field Dup. TF5-GW-MW902A-05		Field Dup. TF5-GW-MW902A-05F		None		None	
Aluminum	63.9	U	396		6.0	U	83.3	U	6.0	U
Antimony	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Arsenic	3.0	U	4.6	J	4.7	J	3.0	U	3.0	U
Barium	17.9	U	53.2	U	50.0	U	18.8	U	7.3	U
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Calcium	22100		49600		48000		22900		67000	
Chromium	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Cobalt	10.1	U	14.7	U	16.1	U	27.1		5.4	U
Copper	2.5	U	0.93	UJ	1.0	UJ	1.9	U	1.6	UJ
Iron	14500		17800		16500		15000		58.1	U
Lead	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium	26000		47100		46300		22400		48200	
Manganese	959		1510		1480		840		2650	
Mercury	0.14	U	0.14	U	0.14	U	0.13	U	0.14	U
Nickel	31.8		31.3		30.0		63.5		4.3	U
Potassium	955	U	2210		2120		1620		2690	
Selenium	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver	2.0	U	3.1	UJ	3.2	UJ	2.0	U	7.5	U
Sodium	21100		47800		46500		22700		15700	
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U
Zinc	99.2	U	23.0	U	15.0	U	66.4	U	8.1	U

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0491

EPA Sample Number	TF5-GW-RB01-05F		TF5-GW-RB02-05F		TF5-GW-RB03-05		TF5-GW-RB03-05F	
Station Location	TF5-GW-RB01-05F		TF5-GW-RB02-05F		TF5-GW-RB03-05		TF5-GW-RB03-05F	
Date Sampled	5/25/04		5/26/04		5/27/04		5/27/04	
Date Extracted								
Date Analyzed								
Dilution Factor	1		1		1		1	
Percent Solids								
QC Identifier	Rinsate Blank		Rinsate Blank		Rinsate Blank		Rinsate Blank	
Aluminum	6.0	U	6.0	U	7.3	UJ	6.0	U
Antimony	3.0	U	3.0	U	3.0	U	3.0	U
Arsenic	3.0	U	3.0	U	3.0	U	3.0	U
Barium	8.4	U	1.9	U	2.4	U	1.8	U
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.21	UJ	0.20	U	0.20	U	0.20	U
Calcium	74	U	74	U	145	UJ	74	U
Chromium	0.64	UJ	0.40	U	1.7	U	0.40	U
Cobalt	1.4	UJ	0.90	U	0.90	U	0.90	U
Copper	4.0	U	1.6	UJ	5.1	U	1.4	UJ
Iron	22.8	U	13.3	U	70.0	U	15.1	U
Lead	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium	14.8	U	6.0	U	60.0	U	6.0	U
Manganese	2.8	U	1.7	U	5.9	U	2.2	U
Mercury	0.13	U	0.15	U	0.14	U	0.14	U
Nickel	1.4	U	0.50	U	2.2	U	0.50	U
Potassium	58	U	58	U	58	U	58	U
Selenium	4.0	U	4.0	U	4.0	U	4.0	U
Silver	2.0	U	2.0	U	2.0	U	2.0	U
Sodium	109	U	117	U	292	U	165	U
Thallium	4.2	UJ	3.0	U	3.0	U	3.0	U
Vanadium	1.1	UJ	0.70	U	0.70	U	0.70	U
Zinc	8.5	U	6.4	U	19.9	U	13.6	U

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-DUP01-05		TF5-GW-DUP01-05F		TF5-GW-MW10-05		TF5-GW-MW10-05F		TF5-GW-MW3A-05	
Station Location	TF5-GW-DUP01-05		TF5-GW-DUP01-05F		TF5-GW-MW10-05		TF5-GW-MW10-05F		TF5-GW-MW3A-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted										
Date Analyzed										
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. TF5-GW-MW3A-05		Field Dup. TF5-GW-MW3A-05F		None		None		Field Dup. TF5-GW-MW3A-05	
Aluminum	449		6.0	U	159	U	6.0	U	432	
Antimony	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Arsenic	3.0	U	3.0	U	3.0	U	3.0	U	4.3	J
Barium	7.1	UJ	5.7	UJ	10.3	UJ	9.9	UJ	7.8	UJ
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U	0.20	U	0.20	U	0.29	UJ
Calcium	6660		6700		40700		39500		6640	
Chromium	0.80	U	0.85	U	0.65	UJ	0.41	UJ	0.71	UJ
Cobalt	1.1	UJ	1.5	UJ	0.90	U	1.1	UJ	1.3	UJ
Copper	4.5	U	2.1	U	2.5	U	3.2	U	4.7	U
Iron	1230		22.9	U	677		37.1	U	1210	
Lead	2.0	U	2.2	J	2.0	U	2.0	U	2.0	U
Magnesium	7400		7290		27000		26200		7410	
Manganese	48.3		8.8	U	9.8	U	4.2	U	52.2	
Mercury	0.16	U	0.13	U	0.14	U	0.13	U	0.15	U
Nickel	4.1	U	3.5	U	2.8	U	2.5	U	4.5	U
Potassium	1310	UJ	1260	UJ	2020	J	1930	J	1310	UJ
Selenium	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver	2.0	U	2.0	U	3.5	UJ	2.8	UJ	2.0	U
Sodium	11800		11900		16200		16100		11900	
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U
Zinc	16.2	U	14.7	U	8.4	U	19.2	U	15.5	U

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-MW3A-05F		TF5-GW-MW701-05		TF5-GW-MW8-05		TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05	
Station Location	TF5-GW-MW3A-05F		TF5-GW-MW701-05		TF5-GW-MW8-05		TF5-GW-MW864-05		TF5-GW-MW865-05		TF5-GW-RB01-05	
Date Sampled	5/25/04		5/25/04		5/25/04		5/25/04		5/25/04		5/25/04	
Date Extracted												
Date Analyzed												
Dilution Factor	1		1		1		1		1		1	
Percent Solids												
QC Identifier	Field Dup. TF5-GW-MW3A-05F		None		None		None		None		Rinsate Blank	
Aluminum	6.0	U	6.0	U	38.2	U	66.7	U	12.9	U	6.0	U
Antimony	3.0	U	6.9	U	3.5	UJ	3.0	U	3.0	U	3.0	U
Arsenic	3.0	U	3.0	U	3.0	U	6.0		3.0	J	3.0	U
Barium	5.2	UJ	75.9	J	23.8	UJ	5.8	UJ	6.4	UJ	1.6	U
Beryllium	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U	0.20	U	3.0	U	0.20	U	0.20	U
Calcium	6520		81800		48700		4470		5030		74	U
Chromium	0.40	U	0.40	U	1.3	U	0.40	U	0.40	U	0.40	U
Cobalt	0.90	U	9.3	U	2.0	U	2.7	U	1.5	UJ	0.90	U
Copper	3.0	U	4.3	U	6.7	U	5.3	U	5.2	U	2.0	U
Iron	15.5	U	88.8	U	233		48.8	U	30.8	U	9.9	U
Lead	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium	7210		50500		19500		2250		4110		20.7	U
Manganese	7.7	U	2380		25.9		23.6		6.2	U	1.5	U
Mercury	0.13	U	0.13	U	0.13	U	0.14	U	0.13	U	0.14	U
Nickel	3.2	U	0.52	UJ	3.0	U	6.6	U	3.1	U	0.50	U
Potassium	1220	UJ	4880	J	4130	J	1140	UJ	1050	UJ	58	U
Selenium	4.0	U	4.0	U	4.0	U	4.2	J	4.0	U	4.0	U
Silver	2.0	U	11.3	U	5.7	U	2.0	U	2.3	UJ	2.0	U
Sodium	11800		93900		41200		14400		11700		115	U
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium	0.70	U	1.5	U	1.6	U	0.70	U	0.70	U	0.70	U
Zinc	14.0	U	7.9	U	16.5	U	20.9	U	16.1	U	3.0	UJ

Aqueous TAL Metal Analysis By SW-846 Methods 6010B/7470A (ug/l)
Site: Tank Farm 5 - Tank 53
Case: TF5; SDG: C0477

EPA Sample Number	TF5-GW-RB02-05		TF5-GW-SB01-05	
Station Location	TF5-GW-RB02-05		TF5-GW-SB01-05	
Date Sampled	5/26/04		5/26/04	
Date Extracted				
Date Analyzed				
Dilution Factor	1		1	
Percent Solids				
QC Identifier	Rinsate Blank		Source Blank	
Aluminum	6.0	U	6.0	U
Antimony	3.0	U	3.0	U
Arsenic	3.0	U	3.0	U
Barium	1.5	U	1.2	U
Beryllium	0.30	U	0.30	U
Cadmium	0.20	U	0.20	U
Calcium	74	U	74	U
Chromium	0.40	U	0.40	U
Cobalt	0.90	U	0.90	U
Copper	1.5	UJ	1.7	UJ
Iron	10.4	U	10.5	U
Lead	2.0	U	2.0	U
Magnesium	6.0	U	6.0	U
Manganese	1.4	U	3.2	U
Mercury	0.14	U	0.14	U
Nickel	0.50	U	0.50	U
Potassium	58	U	58	U
Selenium	4.0	U	4.0	U
Silver	2.0	U	2.0	U
Sodium	75.3	UJ	87.3	UJ
Thallium	3.0	U	3.0	U
Vanadium	0.70	U	0.70	U
Zinc	2.9	UJ	2.0	U

APPENDIX E

SUMMARY TABLES FOR HISTORICAL ANALYTICAL RESULTS

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-7		EW-7		EW-7		EW-7		EW-7		EW-7		EW-7	
Date Sampled			12/19/96		3/25/97		3/25/97		3/27/97		3/27/97		8/14/97		8/14/97	
Matrix			GW		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL					DUP				DUP					
Volatile Organic Analysis (UG/L)																
1,1,1-Trichloroethane	200	200	5	U	5	U	5	U		NA		NA		NA	5	U
1,1,2,2-Tetrachloroethane			5	U	5	U	5	U		NA		NA		NA	5	U
1,1,2-Trichloroethane	5	5	5	U	5	U	5	U		NA		NA		NA	5	U
1,1-Dichloroethane			5	U	5	U	5	U		NA		NA		NA	5	U
1,1-Dichloroethene	7	7	5	U	5	U	5	U		NA		NA		NA	5	U
1,2-Dibromo-3-chloropropane		0.2	5	U	5	U	5	U		NA		NA		NA		NA
1,2-Dibromoethane			5	U	5	U	5	U		NA		NA		NA		NA
1,2-Dichloroethane	5	5	5	U	5	U	5	U		NA		NA		NA	5	U
1,2-Dichloroethene (total)	70	70		NA		NA		NA		NA		NA		NA		NA
1,2-Dichloropropane	5	5	5	U	5	U	5	U		NA		NA		NA	5	U
2-Butanone			10	U	10	U	10	U		NA		NA		NA	10	UR
2-Hexanone			10	U	10	U	10	U		NA		NA		NA	10	U
4-Methyl-2-Pentanone			10	U	10	U	10	U		NA		NA		NA	10	U
Acetone			10	U	10	U	10	U		NA		NA		NA	10	UR
Benzene	5	5	5	U	5	U	5	U		NA		NA		NA	5	U
Bromochloromethane			5	U	5	U	5	U		NA		NA		NA		NA
Bromodichloromethane		80	5	U	5	U	5	U		NA		NA		NA	5	U
Bromoform		80	5	U	5	U	5	U		NA		NA		NA	5	U
Bromomethane			10	U	10	U	10	U		NA		NA		NA	5	U
Carbon Disulfide			5	U	5	U	5	U		NA		NA		NA	5	U
Carbon Tetrachloride	5	5	5	U	5	U	5	U		NA		NA		NA	5	U
Chlorobenzene	100	100	5	U	5	U	5	U		NA		NA		NA	5	U
Chloroethane			10	U	10	U	10	U		NA		NA		NA	5	U
Chloroform	100	80	5	U	5	U	5	U		NA		NA		NA	5	U
Chloromethane			10	U	10	U	10	U		NA		NA		NA	5	U
cis-1,2-Dichloroethene	70	70	5	U	5	U	5	U		NA		NA		NA	5	U
cis-1,3-Dichloropropene			5	U	5	U	5	U		NA		NA		NA	5	U
Dibromochloromethane		80	5	U	5	U	5	U		NA		NA		NA	5	U
Ethylbenzene	700	700	5	U	5	U	5	U		NA		NA		NA	5	U
Methylene Chloride	**5**	*5*	5	U	5	U	5	U		NA		NA		NA	9	U
Styrene	100	100	5	U	5	U	5	U		NA		NA		NA	5	U
Tetrachloroethene	5	5	5	U	5	U	5	U		NA		NA		NA	5	U
Toluene	1000	1000	5	U	5	U	5	U		NA		NA		NA	5	U
Total Xylenes	10000	10000	5	U	5	U	5	U		NA		NA		NA	5	U
trans-1,2-Dichloroethene	100	100	5	U	5	U	5	U		NA		NA		NA	5	U
trans-1,3-Dichloropropene			5	U	5	U	5	U		NA		NA		NA	5	U
Trichloroethene	**5**	*5*	5	U	5	U	5	U		NA		NA		NA	2	J
Vinyl Acetate			10	U	10	U	10	U		NA		NA		NA		NA
Vinyl Chloride	2	2	10	U	10	U	10	U		NA		NA		NA	2	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-7		EW-7		EW-7		EW-7		EW-7		EW-7		EW-7	
Date Sampled			12/19/96		3/25/97		3/25/97		3/27/97		3/27/97		8/14/97		8/14/97	
Matrix			GW		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL					DUP				DUP					
Semivolatile Organic Analysis (UG/L)																
1,2,4-Trichlorobenzene	70	70	10	U	10	UJ	10	UJ		NA		NA		NA	5	U
1,2-Dichlorobenzene	600	600	10	U	10	U	10	U		NA		NA		NA	5	U
1,3-Dichlorobenzene	600		10	U	10	U	10	U		NA		NA		NA	5	U
1,4-Dichlorobenzene	75	75	10	U	10	U	10	U		NA		NA		NA	5	U
2,2'-oxybis(1-Chloropropane)			10	U	10	U	10	U		NA		NA		NA	5	U
2,4,5-Trichlorophenol			50	U	50	U	50	U		NA		NA		NA	10	U
2,4,6-Trichlorophenol			10	U	10	U	10	U		NA		NA		NA	5	U
2,4-Dichlorophenol			10	U	10	U	10	U		NA		NA		NA	5	U
2,4-Dimethylphenol			10	U	10	U	10	U		NA		NA		NA	5	U
2,4-Dinitrophenol			50	U	50	U	50	U		NA		NA		NA	10	U
2,4-Dinitrotoluene			10	U	10	U	10	U		NA		NA		NA	5	U
2,6-Dinitrotoluene			10	U	10	U	10	U		NA		NA		NA	5	U
2-Chloronaphthalene			10	U	10	UJ	10	UJ		NA		NA		NA	5	U
2-Chlorophenol			10	U	10	U	10	U		NA		NA		NA	5	U
2-Methylnaphthalene			10	U	10	U	10	U		NA		NA		NA	5	U
2-Methylphenol			10	U	10	U	10	U		NA		NA		NA	5	U
2-Nitroaniline			50	U	50	U	50	U		NA		NA		NA	10	U
2-Nitrophenol			10	U	10	U	10	U		NA		NA		NA	5	U
3,3'-Dichlorobenzidine			20	U	20	U	20	U		NA		NA		NA	5	U
3-Methylphenol			10	UJ	10	UJ	10	UJ		NA		NA		NA		NA
3-Nitroaniline			50	U	50	U	50	U		NA		NA		NA	10	U
4,6-Dinitro-2-methylphenol			50	U	50	U	50	U		NA		NA		NA	10	U
4-Bromophenyl-phenylether			10	U	10	U	10	U		NA		NA		NA	5	U
4-Chloro-3-methylphenol			10	U	10	U	10	U		NA		NA		NA	5	U
4-Chloroaniline			10	U	10	U	10	U		NA		NA		NA	5	U
4-Chlorophenyl-phenylether			10	U	10	U	10	U		NA		NA		NA	5	U
4-Methylphenol			10	UJ	10	UJ	10	UJ		NA		NA		NA	5	U
4-Nitroaniline			50	U	50	U	50	U		NA		NA		NA	10	U
4-Nitrophenol			50	U	50	U	50	U		NA		NA		NA	10	U
Acenaphthene			10	U	10	U	10	U		NA		NA		NA	5	U
Acenaphthylene			10	U	10	U	10	U		NA		NA		NA	5	U
Anthracene			10	U	10	U	10	U		NA		NA		NA	5	U
Benzo(a)anthracene			10	U	10	U	10	U		NA		NA		NA	5	U
Benzo(a)pyrene	**0.2**	*0.2*	10	U	10	U	10	U		NA		NA		NA	0.05	U
Benzo(b)fluoranthene			10	U	10	U	10	U		NA		NA		NA	5	U
Benzo(g,h,i)perylene			10	U	10	U	10	U		NA		NA		NA	5	U
Benzo(k)fluoranthene			10	U	10	U	10	U		NA		NA		NA	5	U
Bis(2-Chloroethoxy)methane			10	U	10	U	10	U		NA		NA		NA	5	U
Bis(2-Chloroethyl)ether			10	U	10	U	10	U		NA		NA		NA	5	U
bis(2-Ethylhexyl)phthalate	**6**	*6*	10	U	10	U	10	U		NA		NA		NA	5	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-7		EW-7		EW-7		EW-7		EW-7		EW-7		EW-7	
Date Sampled			12/19/96		3/25/97		3/25/97		3/27/97		3/27/97		8/14/97		8/14/97	
Matrix			GW		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL					DUP				DUP					
Butylbenzylphthalate			10	U	10	U	10	U		NA		NA		NA	5	U
Carbazole			20	R	20	UJ	20	UJ		NA		NA		NA	5	U
Chrysene			10	U	10	U	10	U		NA		NA		NA	5	U
Di-n-Butylphthalate			10	U	10	U	10	U		NA		NA		NA	5	U
Di-n-octylphthalate			10	U	10	U	10	U		NA		NA		NA	5	U
Dibenzo(a,h)anthracene			10	U	10	U	10	U		NA		NA		NA	5	U
Dibenzofuran			10	U	10	U	10	U		NA		NA		NA	5	U
Diethylphthalate			10	U	10	U	10	U		NA		NA		NA	5	U
Dimethylphthalate			10	U	10	U	10	U		NA		NA		NA	5	U
Fluoranthene			10	U	10	U	10	U		NA		NA		NA	5	U
Fluorene			10	U	10	U	10	U		NA		NA		NA	5	U
Hexachlorobenzene	1	1	10	U	10	U	10	U		NA		NA		NA	5	U
Hexachlorobutadiene			10	U	10	U	10	U		NA		NA		NA	5	U
Hexachlorocyclopentadiene		50	10	U	10	U	10	U		NA		NA		NA	5	U
Hexachloroethane			10	U	10	U	10	U		NA		NA		NA	5	U
Indeno(1,2,3-cd)pyrene			10	U	10	U	10	U		NA		NA		NA	5	U
Isophorone			10	U	10	U	10	U		NA		NA		NA	5	U
N-Nitroso-di-n-propylamine			10	U	10	U	10	U		NA		NA		NA	5	U
N-Nitroso-diphenylamine			10	U	10	U	10	U		NA		NA		NA	5	U
Naphthalene	20		10	U	10	U	10	U		NA		NA		NA	5	U
Nitrobenzene			10	U	10	U	10	U		NA		NA		NA	5	U
Pentachlorophenol	1	1	50	U	50	U	50	U		NA		NA		NA	10	U
Phenanthrene			10	U	10	U	10	U		NA		NA		NA	5	U
Phenol				NA		NA		NA		NA		NA		NA		NA
Phenols			10	U	10	U	10	U		NA		NA		NA	5	U
Pyrene			10	U	10	U	10	U		NA		NA		NA	5	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-7		EW-7		EW-7		EW-7		EW-7		EW-7		EW-7	
Date Sampled			12/19/96		3/25/97		3/25/97		3/27/97		3/27/97		8/14/97		8/14/97	
Matrix			GW		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL					DUP				DUP					
Pesticide/PCB Analysis (UG/L)																
4,4'-DDD			0.10	U	0.10	U	0.10	U		NA		NA		NA	0.050	U
4,4'-DDE			0.10	U	0.10	U	0.10	U		NA		NA		NA	0.050	U
4,4'-DDT			0.10	U	0.10	U	0.10	U		NA		NA		NA	0.050	U
Aldrin			0.050	U	0.050	U	0.050	U		NA		NA		NA	0.025	U
alpha-BHC			0.050	U	0.050	U	0.050	U		NA		NA		NA	0.025	U
alpha-Chlordane		2	0.050	U	0.050	U	0.050	U		NA		NA		NA	0.025	U
Aroclor-1016			1.0	U	1.0	U	1.0	U		NA		NA		NA	0.50	U
Aroclor-1221			2.0	U	2.0	U	2.0	U		NA		NA		NA	1.0	U
Aroclor-1232			1.0	U	1.0	U	1.0	U		NA		NA		NA	0.50	U
Aroclor-1242			1.0	U	1.0	U	1.0	U		NA		NA		NA	0.50	U
Aroclor-1248			1.0	U	1.0	U	1.0	U		NA		NA		NA	0.50	U
Aroclor-1254			1.0	U	1.0	U	1.0	U		NA		NA		NA	0.50	U
Aroclor-1260			1.0	U	1.0	U	1.0	U		NA		NA		NA	0.50	U
beta-BHC			0.050	U	0.050	U	0.050	U		NA		NA		NA	0.025	U
delta-BHC			0.050	U	0.050	U	0.050	U		NA		NA		NA	0.025	U
Dieldrin			0.10	U	0.10	U	0.10	U		NA		NA		NA	0.050	U
Endosulfan I			0.050	UJ	0.050	U	0.050	U		NA		NA		NA	0.025	U
Endosulfan II			0.10	U	0.10	U	0.10	U		NA		NA		NA	0.050	U
Endosulfan Sulfate			0.10	U	0.10	U	0.10	U		NA		NA		NA	0.050	U
Endrin		2	0.10	U	0.10	U	0.10	U		NA		NA		NA	0.050	U
Endrin Aldehyde			0.010	U	0.010	U	0.010	U		NA		NA		NA	0.050	U
Endrin Ketone			0.10	U	0.10	U	0.10	U		NA		NA		NA	0.050	U
gamma-BHC		0.2	0.050	U	0.050	U	0.050	U		NA		NA		NA	0.025	U
gamma-Chlordane		2	0.050	U	0.050	U	0.050	U		NA		NA		NA	0.025	U
Heptachlor		0.4	0.050	U	0.050	U	0.050	U		NA		NA		NA	0.025	U
Heptachlor Epoxide		0.2	0.050	U	0.050	U	0.050	U		NA		NA		NA	0.025	U
Methoxychlor		40	0.50	U	0.50	U	0.50	U		NA		NA		NA	0.25	U
Toxaphene		3	5.0	U	5.0	U	5.0	U		NA		NA		NA	2.5	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-7		EW-7		EW-7		EW-7		EW-7		EW-7		EW-7	
Date Sampled			12/19/96		3/25/97		3/25/97		3/27/97		3/27/97		8/14/97		8/14/97	
Matrix			GW		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL					DUP				DUP					
TAL Metal Analysis (UG/L)																
Aluminum			100	U		NA		NA	100	U	100	U	94.6	U	1500	
Antimony	**6**	*6*	20.0	U		NA		NA	20.0	U	20.0	U	2.0	U	***30.9***	
Arsenic	**50**	*50*	4.0	U		NA		NA	4.0	UJ	4.0	UJ	3.2	U	***95.3***	
Barium	**2000**	*2000*	10.0	U		NA		NA	10.0	U	10.0	U	7.7	U	30.9	U
Beryllium	4	4	10.0	U		NA		NA	10.0	U	10.0	U	0.78	U	0.46	U
Cadmium	**5**	*5*	10.0	U		NA		NA	10.0	U	10.0	U	0.50	U	0.50	U
Calcium			19000			NA		NA	16000		16000		15800		17000	
Chromium	**100**	*100*	20.0	U		NA		NA	90.0		90.0		6.5	UJ	***3760***	
Cobalt			20.0	U		NA		NA	20.0	U	20.0	U	15.8	U	21.1	U
Copper		*1300*	20.0	U		NA		NA	20.0	U	20.0	U	3.8	UJ	139	J
Iron			230			NA		NA	980		1100		1450	J	48200	J
Lead	**15**	*15*	5.0	U		NA		NA	5.0	U	5.0	U	1.3	U	5.5	U
Magnesium			19000			NA		NA	17000		17000		16000		17600	
Manganese			10.0	U		NA		NA	40.0		40.0		355		424	
Mercury	**2**	*2*	0.20	U		NA		NA	0.20	U	0.20	U	0.13	U	0.19	
Nickel	**100**		40.0	U		NA		NA	90.0	J	90.0	J	**116**	J	**210**	J
Potassium			2000			NA		NA	2000		2000		1370		1900	
Selenium	**50**	*50*	4.0	U		NA		NA	4.0	UJ	4.0	UJ	3.4	U	3.4	U
Silver			10.0	U		NA		NA	10.0	U	10.0	U	1.1	UJ	23.3	J
Sodium			95000			NA		NA	47000		49000		23400		23600	
Thallium	**2**	*2*	5.0	U		NA		NA	5.0	U	5.0	U	2.0	U	***5.8***	
Vanadium			10.0	U		NA		NA	10.0	U	10.0	U	5.3	U	5.3	U
Zinc			70.0			NA		NA	120		110		242		272	

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-7		EW-7		EW-7		EW-7		EW-7		EW-7		EW-7	
Date Sampled			12/19/96		3/25/97		3/25/97		3/27/97		3/27/97		8/14/97		8/14/97	
Matrix			GW		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL					DUP				DUP					
Total Petroleum Hydrocarbon Analysis (MG/L)																
Total Petroleum Hydrocarbons			1.0	U		NA		NA	1.0	U	1.0	U		NA	1.0	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-13		EW-13		EW-13		EW-13	
Date Sampled			12/19/96		12/19/96		3/25/97		8/14/97	
Matrix			GW		GW		GW		GW	
QC Info	GA Obj.	MCL			DUP					
Volatile Organic Analysis (UG/L)										
1,1,1-Trichloroethane	200	200	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane			5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	5	5	U	5	U	5	U	5	U
1,1-Dichloroethane			8		7		6		6	
1,1-Dichloroethene	7	7	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane		0.2	5	U	5	U	5	U		NA
1,2-Dibromoethane			5	U	5	U	5	U		NA
1,2-Dichloroethane	5	5	5	U	5	U	5	U	5	U
1,2-Dichloroethene (total)	70	70		NA		NA		NA		NA
1,2-Dichloropropane	5	5	5	U	5	U	5	U	5	U
2-Butanone			10	U	10	U	10	U	10	UR
2-Hexanone			10	U	10	U	10	U	10	U
4-Methyl-2-Pentanone			10	U	10	U	10	U	10	U
Acetone			10	U	10	U	10	U	10	UR
Benzene	5	5	5	U	5	U	5	U	5	U
Bromochloromethane			5	U	5	U	5	U		NA
Bromodichloromethane		80	5	U	5	U	5	U	5	U
Bromoform		80	5	U	5	U	5	U	5	U
Bromomethane			10	U	10	U	10	U	5	U
Carbon Disulfide			5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	5	5	U	5	U	5	U	5	U
Chlorobenzene	100	100	5	U	5	U	5	U	5	U
Chloroethane			10	U	10	U	10	U	5	U
Chloroform	100	80	5	U	5	U	5	U	5	U
Chloromethane			10	U	10	U	10	U	5	U
cis-1,2-Dichloroethene	70	70	8		8		7		7	
cis-1,3-Dichloropropene			5	U	5	U	5	U	5	U
Dibromochloromethane		80	5	U	5	U	5	U	5	U
Ethylbenzene	700	700	5	U	5	U	5	U	5	U
Methylene Chloride	**5**	*5*	5	U	5	U	5	U	10	U
Styrene	100	100	5	U	5	U	5	U	5	U
Tetrachloroethene	5	5	5	U	5	U	5	U	5	U
Toluene	1000	1000	5	U	5	U	5	U	5	U
Total Xylenes	10000	10000	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	100	100	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene			5	U	5	U	5	U	5	U
Trichloroethene	**5**	*5*	5	UJ	5	J	5	U	5	
Vinyl Acetate			10	U	10	U	10	U		NA
Vinyl Chloride	2	2	10	U	10	U	10	U	2	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-13		EW-13		EW-13		EW-13	
Date Sampled			12/19/96		12/19/96		3/25/97		8/14/97	
Matrix			GW		GW		GW		GW	
QC Info	GA Obj.	MCL			DUP					
Semivolatile Organic Analysis (UG/L)										
1,2,4-Trichlorobenzene	70	70	10	U		NA	10	UJ	5	U
1,2-Dichlorobenzene	600	600	10	U		NA	10	U	5	U
1,3-Dichlorobenzene	600		10	U		NA	10	U	5	U
1,4-Dichlorobenzene	75	75	10	U		NA	10	U	5	U
2,2'-oxybis(1-Chloropropane)			10	U		NA	10	U	5	U
2,4,5-Trichlorophenol			50	U		NA	50	U	10	U
2,4,6-Trichlorophenol			10	U		NA	10	U	5	U
2,4-Dichlorophenol			10	U		NA	10	U	5	U
2,4-Dimethylphenol			10	U		NA	10	U	5	U
2,4-Dinitrophenol			50	U		NA	50	U	10	U
2,4-Dinitrotoluene			10	U		NA	10	U	5	U
2,6-Dinitrotoluene			10	U		NA	10	U	5	U
2-Chloronaphthalene			10	U		NA	10	UJ	5	U
2-Chlorophenol			10	U		NA	10	U	5	U
2-Methylnaphthalene			10	U		NA	10	U	5	U
2-Methylphenol			10	U		NA	10	U	5	U
2-Nitroaniline			50	U		NA	50	U	10	U
2-Nitrophenol			10	U		NA	10	U	5	U
3,3'-Dichlorobenzidine			20	U		NA	20	U	5	U
3-Methylphenol			10	UJ		NA	10	UJ		NA
3-Nitroaniline			50	U		NA	50	U	10	U
4,6-Dinitro-2-methylphenol			50	U		NA	50	U	10	U
4-Bromophenyl-phenylether			10	U		NA	10	U	5	U
4-Chloro-3-methylphenol			10	U		NA	10	U	5	U
4-Chloroaniline			10	U		NA	10	U	5	U
4-Chlorophenyl-phenylether			10	U		NA	10	U	5	U
4-Methylphenol			10	UJ		NA	10	UJ	5	U
4-Nitroaniline			50	U		NA	50	U	10	U
4-Nitrophenol			50	U		NA	50	U	10	U
Acenaphthene			10	U		NA	10	U	5	U
Acenaphthylene			10	U		NA	10	U	5	U
Anthracene			10	U		NA	10	U	5	U
Benzo(a)anthracene			10	U		NA	10	U	5	U
Benzo(a)pyrene	**0.2**	*0.2*	10	U		NA	10	U	0.05	U
Benzo(b)fluoranthene			10	U		NA	10	U	5	U
Benzo(g,h,i)perylene			10	U		NA	10	U	5	U
Benzo(k)fluoranthene			10	U		NA	10	U	5	U
Bis(2-Chloroethoxy)methane			10	U		NA	10	U	5	U
Bis(2-Chloroethyl)ether			10	U		NA	10	U	5	U
bis(2-Ethylhexyl)phthalate	**6**	*6*	10	U		NA	10	U	5	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-13		EW-13		EW-13		EW-13	
Date Sampled			12/19/96		12/19/96		3/25/97		8/14/97	
Matrix			GW		GW		GW		GW	
QC Info	GA Obj.	MCL			DUP					
Butylbenzylphthalate			10	U		NA	10	U	5	U
Carbazole			20	R		NA	20	UJ	5	U
Chrysene			10	U		NA	10	U	5	U
Di-n-Butylphthalate			10	U		NA	10	U	5	U
Di-n-octylphthalate			10	U		NA	10	U	5	U
Dibenzo(a,h)anthracene			10	U		NA	10	U	5	U
Dibenzofuran			10	U		NA	10	U	5	U
Diethylphthalate			10	U		NA	10	U	5	U
Dimethylphthalate			10	U		NA	10	U	5	U
Fluoranthene			10	U		NA	10	U	5	U
Fluorene			10	U		NA	10	U	5	U
Hexachlorobenzene	1	1	10	U		NA	10	U	5	U
Hexachlorobutadiene			10	U		NA	10	U	5	U
Hexachlorocyclopentadiene		50	10	U		NA	10	U	5	U
Hexachloroethane			10	U		NA	10	U	5	U
Indeno(1,2,3-cd)pyrene			10	U		NA	10	U	5	U
Isophorone			10	U		NA	10	U	5	U
N-Nitroso-di-n-propylamine			10	U		NA	10	U	5	U
N-Nitroso-diphenylamine			10	U		NA	10	U	5	U
Naphthalene	20		10	U		NA	10	U	5	U
Nitrobenzene			10	U		NA	10	U	5	U
Pentachlorophenol	1	1	50	U		NA	50	U	10	U
Phenanthrene			10	U		NA	10	U	5	U
Phenol				NA		NA		NA		NA
Phenols			10	U		NA	10	U	5	U
Pyrene			10	U		NA	10	U	5	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-13		EW-13		EW-13		EW-13	
Date Sampled			12/19/96		12/19/96		3/25/97		8/14/97	
Matrix			GW		GW		GW		GW	
QC Info	GA Obj.	MCL			DUP					
Pesticide/PCB Analysis (UG/L)										
4,4'-DDD			0.10	U	0.10	U	0.10	U	0.050	U
4,4'-DDE			0.10	U	0.10	U	0.10	U	0.050	U
4,4'-DDT			0.10	U	0.10	U	0.10	U	0.050	U
Aldrin			0.050	U	0.050	U	0.050	U	0.025	U
alpha-BHC			0.050	U	0.050	U	0.050	U	0.025	U
alpha-Chlordane		2	0.050	U	0.050	U	0.050	U	0.025	U
Aroclor-1016			1.0	U	1.0	U	1.0	U	0.50	U
Aroclor-1221			2.0	U	2.0	U	2.0	U	1.0	U
Aroclor-1232			1.0	U	1.0	U	1.0	U	0.50	U
Aroclor-1242			1.0	U	1.0	U	1.0	U	0.50	U
Aroclor-1248			1.0	U	1.0	U	1.0	U	0.50	U
Aroclor-1254			1.0	U	1.0	U	1.0	U	0.50	U
Aroclor-1260			1.0	U	1.0	U	1.0	U	0.50	U
beta-BHC			0.050	U	0.050	U	0.050	U	0.025	U
delta-BHC			0.050	U	0.050	U	0.050	U	0.025	U
Dieldrin			0.10	U	0.10	U	0.10	U	0.050	U
Endosulfan I			0.050	UJ	0.050	UJ	0.050	U	0.025	U
Endosulfan II			0.10	U	0.10	U	0.10	U	0.050	U
Endosulfan Sulfate			0.10	U	0.10	U	0.10	U	0.050	U
Endrin		2	0.10	U	0.10	U	0.10	U	0.050	U
Endrin Aldehyde			0.010	U	0.010	U	0.010	U	0.050	U
Endrin Ketone			0.10	U	0.10	U	0.10	U	0.050	U
gamma-BHC		0.2	0.050	U	0.050	U	0.050	U	0.025	U
gamma-Chlordane		2	0.050	U	0.050	U	0.050	U	0.025	U
Heptachlor		0.4	0.050	U	0.050	U	0.050	U	0.025	U
Heptachlor Epoxide		0.2	0.050	U	0.050	U	0.050	U	0.025	U
Methoxychlor		40	0.50	U	0.50	U	0.50	U	0.25	U
Toxaphene		3	5.0	U	5.0	U	5.0	U	2.5	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-13		EW-13		EW-13		EW-13	
Date Sampled			12/19/96		12/19/96		3/25/97		8/14/97	
Matrix			GW		GW		GW		GW	
QC Info	GA Obj.	MCL			DUP					
TAL Metal Analysis (UG/L)										
Aluminum			100	U	100	U	100	U	84.2	U
Antimony	**6**	*6*	20.0	U	20.0	U	20.0	U	2.0	U
Arsenic	**50**	*50*	4.0	U	4.0	U	12.0		12.4	
Barium	**2000**	*2000*	10.0	U	10.0	U	20.0		24.1	U
Beryllium	4	*4*	10.0	U	10.0	U	10.0	U	0.39	U
Cadmium	**5**	*5*	10.0	U	10.0	U	10.0	U	0.050	U
Calcium			40000		41000		38000		43200	
Chromium	**100**	*100*	20.0	U	20.0	U	20.0	U	6.5	UJ
Cobalt			20.0	U	20.0	U	20.0	U	19.1	U
Copper		*1300*	20.0	U	20.0	U	20.0	U	3.8	UJ
Iron			8400		8600		10000		15100	J
Lead	**15**	*15*	5.0	U	5.0	U	5.0	U	1.6	U
Magnesium			30000		31000		30000		31700	
Manganese			1100		1200		1000		1110	
Mercury	**2**	*2*	0.20	U	0.20	U	0.20	U	0.13	U
Nickel	**100**		40.0	U	40.0	U	40.0	U	21.2	J
Potassium			2000		2000		2000		2690	
Selenium	**50**	*50*	4.0	U	4.0	U	4.0	UJ	3.4	U
Silver			10.0	U	10.0	U	10.0	U	3.2	U
Sodium			21000		22000		26000		24800	
Thallium	**2**	*2*	5.0	U	5.0	U	5.0	U	2.0	U
Vanadium			10.0	U	10.0	U	10.0	U	8.4	J
Zinc			30.0		20.0		20.0		21.7	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			EW-13		EW-13		EW-13		EW-13	
Date Sampled			12/19/96		12/19/96		3/25/97		8/14/97	
Matrix			GW		GW		GW		GW	
QC Info	GA Obj.	MCL			DUP					
Total Petroleum Hydrocarbon Analysis (MG/L)										
Total Petroleum Hydrocarbons			1.0	U		NA	1.0	U	1.0	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-1A		MW-1A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Volatile Organic Analysis (UG/L)						
1,1,1-Trichloroethane	200	200		NA	1	U
1,1,2,2-Tetrachloroethane				NA	1	U
1,1,2-Trichloroethane	5	5		NA	1	U
1,1-Dichloroethane				NA	1	U
1,1-Dichloroethene	7	7		NA	1	U
1,2-Dibromo-3-chloropropane		0.2		NA	1	U
1,2-Dibromoethane				NA	1	U
1,2-Dichloroethane	5	5		NA	1	U
1,2-Dichloroethene (total)	70	70		NA	2	U
1,2-Dichloropropane	5	5		NA	1	U
2-Butanone				NA	5	U
2-Hexanone				NA	4	U
4-Methyl-2-Pentanone				NA	3	U
Acetone				NA	5	U
Benzene	5	5		NA	1	U
Bromochloromethane				NA	1	U
Bromodichloromethane		80		NA	1	U
Bromoform		80		NA	1	U
Bromomethane				NA	2	UJ
Carbon Disulfide				NA	1	U
Carbon Tetrachloride	5	5		NA	1	U
Chlorobenzene	100	100		NA	1	U
Chloroethane				NA	2	U
Chloroform	100	80		NA	1	U
Chloromethane				NA	2	U
cis-1,2-Dichloroethene	70	70		NA	2	U
cis-1,3-Dichloropropene				NA	1	U
Dibromochloromethane		80		NA	1	U
Ethylbenzene	700	700		NA	1	U
Methylene Chloride	**5**	*5*		NA	1	U
Styrene	100	100		NA	1	U
Tetrachloroethene	5	5		NA	1	U
Toluene	1000	1000		NA	1	U
Total Xylenes	10000	10000		NA	1	U
trans-1,2-Dichloroethene	100	100		NA	2	U
trans-1,3-Dichloropropene				NA	1	U
Trichloroethene	**5**	*5*		NA	0.9	J
Vinyl Acetate				NA	1	U
Vinyl Chloride	2	2		NA	2	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-1A		MW-1A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Semivolatile Organic Analysis (UG/L)						
1,2,4-Trichlorobenzene	70	70		NA	10	U
1,2-Dichlorobenzene	600	600		NA	10	U
1,3-Dichlorobenzene	600			NA	10	U
1,4-Dichlorobenzene	75	75		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA	10	U
2,4,5-Trichlorophenol				NA	25	U
2,4,6-Trichlorophenol				NA	10	U
2,4-Dichlorophenol				NA	10	U
2,4-Dimethylphenol				NA	10	U
2,4-Dinitrophenol				NA	25	UJ
2,4-Dinitrotoluene				NA	10	U
2,6-Dinitrotoluene				NA	10	U
2-Chloronaphthalene				NA	10	U
2-Chlorophenol				NA	10	U
2-Methylnaphthalene				NA	10	U
2-Methylphenol				NA	10	U
2-Nitroaniline				NA	25	U
2-Nitrophenol				NA	10	U
3,3'-Dichlorobenzidine				NA	10	U
3-Methylphenol				NA		NA
3-Nitroaniline				NA	25	U
4,6-Dinitro-2-methylphenol				NA	25	U
4-Bromophenyl-phenylether				NA	10	U
4-Chloro-3-methylphenol				NA	10	U
4-Chloroaniline				NA	10	U
4-Chlorophenyl-phenylether				NA	10	U
4-Methylphenol				NA	10	U
4-Nitroaniline				NA	25	U
4-Nitrophenol				NA	25	U
Acenaphthene				NA	10	U
Acenaphthylene				NA	10	U
Anthracene				NA	10	U
Benzo(a)anthracene				NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA	0.2	U
Benzo(b)fluoranthene				NA	10	U
Benzo(g,h,i)perylene				NA	10	U
Benzo(k)fluoranthene				NA	10	U
Bis(2-Chloroethoxy)methane				NA	10	U
Bis(2-Chloroethyl)ether				NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA	***9***	J

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-1A		MW-1A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Butylbenzylphthalate				NA	10	U
Carbazole				NA	10	U
Chrysene				NA	10	U
Di-n-Butylphthalate				NA	10	U
Di-n-octylphthalate				NA	10	U
Dibenzo(a,h)anthracene				NA	10	U
Dibenzofuran				NA	10	U
Diethylphthalate				NA	10	U
Dimethylphthalate				NA	10	U
Fluoranthene				NA	10	U
Fluorene				NA	10	U
Hexachlorobenzene	1	1		NA	10	U
Hexachlorobutadiene				NA	10	U
Hexachlorocyclopentadiene		50		NA	10	U
Hexachloroethane				NA	10	U
Indeno(1,2,3-cd)pyrene				NA	10	U
Isophorone				NA	10	U
N-Nitroso-di-n-propylamine				NA	10	U
N-Nitroso-diphenylamine				NA	10	U
Naphthalene	20			NA	10	U
Nitrobenzene				NA	10	U
Pentachlorophenol	1	1		NA	25	U
Phenanthrene				NA	10	U
Phenol				NA	10	U
Phenols				NA		NA
Pyrene				NA	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-1A		MW-1A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Pesticide/PCB Analysis (UG/L)						
4,4'-DDD				NA		NA
4,4'-DDE				NA		NA
4,4'-DDT				NA		NA
Aldrin				NA		NA
alpha-BHC				NA		NA
alpha-Chlordane		2		NA		NA
Aroclor-1016				NA		NA
Aroclor-1221				NA		NA
Aroclor-1232				NA		NA
Aroclor-1242				NA		NA
Aroclor-1248				NA		NA
Aroclor-1254				NA		NA
Aroclor-1260				NA		NA
beta-BHC				NA		NA
delta-BHC				NA		NA
Dieldrin				NA		NA
Endosulfan I				NA		NA
Endosulfan II				NA		NA
Endosulfan Sulfate				NA		NA
Endrin		2		NA		NA
Endrin Aldehyde				NA		NA
Endrin Ketone				NA		NA
gamma-BHC		0.2		NA		NA
gamma-Chlordane		2		NA		NA
Heptachlor		0.4		NA		NA
Heptachlor Epoxide		0.2		NA		NA
Methoxychlor		40		NA		NA
Toxaphene		3		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-1A		MW-1A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
TAL Metal Analysis (UG/L)						
Aluminum			90.5	U	948	U
Antimony	**6**	*6*	3.65	U	9.13	U
Arsenic	**50**	*50*	2.53	U	42.2	
Barium	**2000**	*2000*	9.9		32.8	
Beryllium	4	4	0.18	U	1.0	U
Cadmium	**5**	*5*	0.24	UJ	0.60	U
Calcium			22600		22000	
Chromium	**100**	*100*	0.57	U	1.43	U
Cobalt			2.5	J	76.8	
Copper		*1300*	0.84	U	2.1	U
Iron			26.1	U	209000	
Lead	**15**	*15*	1.48	U	6.7	U
Magnesium			21300		20700	
Manganese			484		2560	
Mercury	**2**	*2*	0.080	U	0.76	U
Nickel	**100**		8.6	U	26.8	U
Potassium			1030		1110	
Selenium	**50**	*50*	3.04	U	7.6	U
Silver			1.03	U	2.58	U
Sodium			14300		14200	
Thallium	**2**	*2*	0.18	U	0.45	U
Vanadium			0.52	U	1.3	U
Zinc			12.9	U	259	

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-1A		MW-1A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Total Petroleum Hydrocarbon Analysis (MG/L)						
Total Petroleum Hydrocarbons				NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A	
Date Sampled			3/24/96		12/19/96		12/19/96		3/24/97		3/24/97		8/12/97		8/14/97		8/14/97		5/23/01		5/23/01	
Matrix			GW		GF		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
Volatile Organic Analysis (UG/L)																						
1,1,1-Trichloroethane	200	200		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
1,1,2,2-Tetrachloroethane				NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
1,1,2-Trichloroethane	5	5		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
1,1-Dichloroethane				NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
1,1-Dichloroethene	7	7		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
1,2-Dibromo-3-chloropropane		0.2		NA		NA	5	U		NA	5	U		NA		NA		NA		NA	1	U
1,2-Dibromoethane				NA		NA	5	U		NA	5	U		NA		NA		NA		NA	1	U
1,2-Dichloroethane	5	5		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
1,2-Dichloroethene (total)	70	70		NA		NA		NA		NA		NA		NA		NA		NA		NA	2	U
1,2-Dichloropropane	5	5		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
2-Butanone				NA		NA	10	U		NA	10	U	10	UR		NA		NA		NA	5	U
2-Hexanone				NA		NA	10	U		NA	10	U	10	U		NA		NA		NA	4	U
4-Methyl-2-Pentanone				NA		NA	10	U		NA	10	U	10	UJ		NA		NA		NA	3	U
Acetone				NA		NA	10	U		NA	10	U	26	U		NA		NA		NA	5	U
Benzene	5	5		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Bromochloromethane				NA		NA	5	U		NA	5	U		NA		NA		NA		NA	1	U
Bromodichloromethane		80		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Bromoform		80		NA		NA	5	U		NA	5	U	5	UJ		NA		NA		NA	1	U
Bromomethane				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	2	UJ
Carbon Disulfide				NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Carbon Tetrachloride	5	5		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Chlorobenzene	100	100		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Chloroethane				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	2	U
Chloroform	100	80		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Chloromethane				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	2	U
cis-1,2-Dichloroethene	70	70		NA		NA	5	U		NA	5	U	1	J		NA		NA		NA	2	U
cis-1,3-Dichloropropene				NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Dibromochloromethane		80		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Ethylbenzene	700	700		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Methylene Chloride	**5**	*5*		NA		NA	5	U		NA	5	U	14	U		NA		NA		NA	1	U
Styrene	100	100		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Tetrachloroethene	5	5		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Toluene	1000	1000		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Total Xylenes	10000	10000		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
trans-1,2-Dichloroethene	100	100		NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	2	U
trans-1,3-Dichloropropene				NA		NA	5	U		NA	5	U	5	U		NA		NA		NA	1	U
Trichloroethene	**5**	*5*		NA		NA	5	U		NA	5	U	2	J		NA		NA		NA	1	
Vinyl Acetate				NA		NA	10	U		NA	10	U		NA		NA		NA		NA	1	U
Vinyl Chloride	2	2		NA		NA	10	U		NA	10	U	2	U		NA		NA		NA	2	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A	
Date Sampled			3/24/96		12/19/96		12/19/96		3/24/97		3/24/97		8/12/97		8/14/97		8/14/97		5/23/01		5/23/01	
Matrix			GW		GF		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
Semivolatile Organic Analysis (UG/L)																						
1,2,4-Trichlorobenzene	70	70		NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
1,2-Dichlorobenzene	600	600		NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
1,3-Dichlorobenzene	600			NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
1,4-Dichlorobenzene	75	75		NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
2,4,5-Trichlorophenol				NA		NA	50	U		NA	50	U	10	U		NA		NA		NA	25	U
2,4,6-Trichlorophenol				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
2,4-Dichlorophenol				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
2,4-Dimethylphenol				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
2,4-Dinitrophenol				NA		NA	50	U		NA	50	U	10	UR		NA		NA		NA	25	UJ
2,4-Dinitrotoluene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
2,6-Dinitrotoluene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
2-Chloronaphthalene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
2-Chlorophenol				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
2-Methylnaphthalene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
2-Methylphenol				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
2-Nitroaniline				NA		NA	50	U		NA	50	U	10	U		NA		NA		NA	25	U
2-Nitrophenol				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
3,3'-Dichlorobenzidine				NA		NA	20	U		NA	20	U	5	U		NA		NA		NA	10	U
3-Methylphenol				NA		NA	10	UJ		NA	10	UJ		NA		NA		NA		NA		NA
3-Nitroaniline				NA		NA	50	U		NA	50	U	10	U		NA		NA		NA	25	U
4,6-Dinitro-2-methylphenol				NA		NA	50	U		NA	50	U	10	U		NA		NA		NA	25	U
4-Bromophenyl-phenylether				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
4-Chloro-3-methylphenol				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
4-Chloroaniline				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
4-Chlorophenyl-phenylether				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
4-Methylphenol				NA		NA	10	UJ		NA	10	UJ	5	U		NA		NA		NA	10	U
4-Nitroaniline				NA		NA	50	U		NA	50	U	10	U		NA		NA		NA	25	U
4-Nitrophenol				NA		NA	50	U		NA	50	U	10	U		NA		NA		NA	25	U
Acenaphthene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Acenaphthylene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Anthracene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Benzo(a)anthracene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA		NA	10	U		NA	10	U	0.05	U		NA		NA		NA	0.2	U
Benzo(b)fluoranthene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Benzo(g,h,i)perylene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Benzo(k)fluoranthene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Bis(2-Chloroethoxy)methane				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Bis(2-Chloroethyl)ether				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA		NA	10	U		NA	10	U	5			NA		NA		NA	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A	
Date Sampled			3/24/96		12/19/96		12/19/96		3/24/97		3/24/97		8/12/97		8/14/97		8/14/97		5/23/01		5/23/01	
Matrix			GW		GF		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
Butylbenzylphthalate				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Carbazole				NA		NA	20	R		NA	20	U	5	U		NA		NA		NA	10	U
Chrysene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Di-n-Butylphthalate				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Di-n-octylphthalate				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Dibenzo(a,h)anthracene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Dibenzofuran				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Diethylphthalate				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Dimethylphthalate				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Fluoranthene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Fluorene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Hexachlorobenzene	1	1		NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Hexachlorobutadiene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Hexachlorocyclopentadiene		50		NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Hexachloroethane				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Indeno(1,2,3-cd)pyrene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Isophorone				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
N-Nitroso-di-n-propylamine				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
N-Nitroso-diphenylamine				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Naphthalene	20			NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Nitrobenzene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Pentachlorophenol	1	1		NA		NA	50	U		NA	50	U	10	U		NA		NA		NA	25	U
Phenanthrene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U
Phenol				NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Phenols				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA		NA
Pyrene				NA		NA	10	U		NA	10	U	5	U		NA		NA		NA	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A	
Date Sampled			3/24/96		12/19/96		12/19/96		3/24/97		3/24/97		8/12/97		8/14/97		8/14/97		5/23/01		5/23/01	
Matrix			GW		GF		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
Pesticide/PCB Analysis (UG/L)																						
4,4'-DDD			0.10	U		NA	0.10	U		NA		NA	0.050	U		NA		NA		NA		NA
4,4'-DDE			0.10	U		NA	0.10	U		NA		NA	0.050	U		NA		NA		NA		NA
4,4'-DDT			0.10	U		NA	0.10	U		NA		NA	0.050	U		NA		NA		NA		NA
Aldrin			0.050	U		NA	0.050	U		NA		NA	0.025	U		NA		NA		NA		NA
alpha-BHC			0.050	U		NA	0.050	U		NA		NA	0.025	U		NA		NA		NA		NA
alpha-Chlordane		2	0.050	U		NA	0.050	U		NA		NA	0.025	U		NA		NA		NA		NA
Aroclor-1016			1.0	U		NA	1.0	U		NA		NA	0.50	U		NA		NA		NA		NA
Aroclor-1221			2.0	U		NA	2.0	U		NA		NA	1.0	U		NA		NA		NA		NA
Aroclor-1232			1.0	U		NA	1.0	U		NA		NA	0.50	U		NA		NA		NA		NA
Aroclor-1242			1.0	U		NA	1.0	U		NA		NA	0.50	U		NA		NA		NA		NA
Aroclor-1248			1.0	U		NA	1.0	U		NA		NA	0.50	U		NA		NA		NA		NA
Aroclor-1254			1.0	U		NA	1.0	U		NA		NA	0.50	U		NA		NA		NA		NA
Aroclor-1260			1.0	U		NA	1.0	U		NA		NA	0.50	U		NA		NA		NA		NA
beta-BHC			0.050	U		NA	0.050	U		NA		NA	0.025	U		NA		NA		NA		NA
delta-BHC			0.050	U		NA	0.050	U		NA		NA	0.025	U		NA		NA		NA		NA
Dieldrin			0.10	U		NA	0.10	U		NA		NA	0.050	U		NA		NA		NA		NA
Endosulfan I			0.050	U		NA	0.050	UJ		NA		NA	0.025	U		NA		NA		NA		NA
Endosulfan II			0.10	U		NA	0.10	U		NA		NA	0.050	U		NA		NA		NA		NA
Endosulfan Sulfate			0.10	U		NA	0.10	U		NA		NA	0.050	U		NA		NA		NA		NA
Endrin		2	0.10	U		NA	0.10	U		NA		NA	0.050	U		NA		NA		NA		NA
Endrin Aldehyde			0.010	U		NA	0.010	U		NA		NA	0.050	U		NA		NA		NA		NA
Endrin Ketone			0.10	U		NA	0.10	U		NA		NA	0.050	U		NA		NA		NA		NA
gamma-BHC		0.2	0.050	U		NA	0.050	U		NA		NA	0.025	U		NA		NA		NA		NA
gamma-Chlordane		2	0.050	U		NA	0.050	U		NA		NA	0.025	U		NA		NA		NA		NA
Heptachlor		0.4	0.050	U		NA	0.050	U		NA		NA	0.025	U		NA		NA		NA		NA
Heptachlor Epoxide		0.2	0.050	U		NA	0.050	U		NA		NA	0.025	U		NA		NA		NA		NA
Methoxychlor		40	0.50	U		NA	0.50	U		NA		NA	0.25	U		NA		NA		NA		NA
Toxaphene		3	5.0	U		NA	5.0	U		NA		NA	2.5	U		NA		NA		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A	
Date Sampled			3/24/96		12/19/96		12/19/96		3/24/97		3/24/97		8/12/97		8/14/97		8/14/97		5/23/01		5/23/01	
Matrix			GW		GF		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
TAL Metal Analysis (UG/L)																						
Aluminum				NA	100	U	2400		100	U	15000	J		NA	45.2	U	2240	2.2	89.0	U	12100	
Antimony	**6**	*6*		NA	20.0	U	20.0	U	20.0	U	20.0	U		NA	2.0	U	2.0	U	3.65	U	3.65	U
Arsenic	**50**	*50*		NA	4.0	U	18.0		4.0	UJ	32.0	J		NA	3.2	U	5.4	J	2.53	U	***51.7***	
Barium	**2000**	*2000*		NA	10.0	U	10.0		10.0	U	80.0	J		NA	4.5	U	17.7	U	3.3		69.1	
Beryllium	4	4		NA	10.0	U	10.0	U	10.0	U	10.0	U		NA	0.78	U	0.30	U	0.18	U	0.49	U
Cadmium	**5**	*5*		NA	10.0	U	10.0	U	10.0	U	10.0	U		NA	0.50	U	0.50	U	0.24	UJ	0.24	U
Calcium				NA	9900		11000		11000		14000			NA	11600		11400		10900		12400	
Chromium	**100**	*100*		NA	20.0	U	20.0	U	20.0	U	50.0			NA	6.5	UJ	6.5	UJ	0.57	U	18.0	U
Cobalt				NA	20.0	U	30.0		20.0	U	30.0			NA	7.0	U	13.3	U	0.92	UJ	64.9	
Copper		*1300*		NA	20.0	U	20.0	U	20.0	U	30.0			NA	3.8	UJ	3.8	UJ	0.84	U	34.7	
Iron				NA	40.0	U	7900		40.0	U	52000	J		NA	7.1	UJ	7130	J	32.9	U	43500	
Lead	**15**	*15*		NA	5.0	U	8.0		5.0	U	***17.0***			NA	1.6	U	3.3	U	1.48	U	***23.8***	
Magnesium				NA	13000		12000		13000		16000			NA	15200		14900		13900		16000	
Manganese				NA	40.0		230		50.0	J	270			NA	162		52.3		19.6		995	
Mercury	**2**	*2*		NA	0.20	U	0.20	U	0.20	U	0.20	U		NA	0.13	U	0.13	U	0.070	U	0.080	U
Nickel	**100**			NA	40.0	U	40.0	U	40.0	U	70.0	J		NA	7.9	UJ	7.9	UJ	11.0	U	99.0	J
Potassium				NA	1000		1000		1000		4000			NA	1320		1500		1610		3200	
Selenium	**50**	*50*		NA	4.0	U	4.0	U	4.0	UJ	4.0	UJ		NA	3.4	U	3.4	U	3.04	U	3.04	U
Silver				NA	10.0	U	10.0	U	10.0	U	10.0	U		NA	1.7	U	1.6	U	1.03	U	1.03	U
Sodium				NA	5900		6000		7500		10000			NA	10300		9640		8500		8280	
Thallium	**2**	*2*		NA	5.0	U	5.0	U	5.0	U	5.0	U		NA	2.0	U	2.0	U	0.27	U	0.67	U
Vanadium				NA	10.0	U	10.0	U	10.0	U	30.0			NA	5.3	U	6.0	J	0.52	U	18.8	
Zinc				NA	30.0		70.0		20.0		160	J		NA	11.2	U	35.2	U	19.9		151	

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A		MW-2A	
Date Sampled			3/24/96		12/19/96		12/19/96		3/24/97		3/24/97		8/12/97		8/14/97		8/14/97		5/23/01		5/23/01	
Matrix			GW		GF		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
Total Petroleum Hydrocarbon Analysis (MG/L)																						
Total Petroleum Hydrocarbons				NA		NA	1.0	U		NA	1.0	U		NA		NA	1.0	U		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-3A		MW-3A		MW-3A		MW-3A		MW-3A		MW-3A	
Date Sampled			12/17/96		12/17/96		3/25/97		3/25/97		8/12/97		8/12/97	
Matrix			GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
Volatile Organic Analysis (UG/L)														
1,1,1-Trichloroethane	200	200		NA	5	U		NA	5	U		NA	5	U
1,1,2,2-Tetrachloroethane				NA	5	U		NA	5	U		NA	5	U
1,1,2-Trichloroethane	5	5		NA	5	U		NA	5	U		NA	5	U
1,1-Dichloroethane				NA	5	U		NA	5	U		NA	5	U
1,1-Dichloroethene	7	7		NA	5	U		NA	5	U		NA	5	U
1,2-Dibromo-3-chloropropane		0.2		NA	5	U		NA	5	U		NA		NA
1,2-Dibromoethane				NA	5	U		NA	5	U		NA		NA
1,2-Dichloroethane	5	5		NA	5	U		NA	5	U		NA	5	U
1,2-Dichloroethene (total)	70	70		NA		NA		NA		NA		NA		NA
1,2-Dichloropropane	5	5		NA	5	U		NA	5	U		NA	5	U
2-Butanone				NA	10	U		NA	10	U		NA	10	UR
2-Hexanone				NA	10	U		NA	10	U		NA	10	U
4-Methyl-2-Pentanone				NA	10	U		NA	10	U		NA	10	UJ
Acetone				NA	10	U		NA	10	U		NA	17	U
Benzene	5	5		NA	5	U		NA	5	U		NA	5	U
Bromochloromethane				NA	5	U		NA	5	U		NA		NA
Bromodichloromethane		80		NA	5	U		NA	5	U		NA	5	U
Bromoform		80		NA	5	U		NA	5	U		NA	5	UJ
Bromomethane				NA	10	U		NA	10	U		NA	5	U
Carbon Disulfide				NA	5	U		NA	5	U		NA	5	U
Carbon Tetrachloride	5	5		NA	5	U		NA	5	U		NA	5	U
Chlorobenzene	100	100		NA	5	U		NA	5	U		NA	5	U
Chloroethane				NA	10	U		NA	10	U		NA	5	U
Chloroform	100	80		NA	5	U		NA	5	U		NA	5	U
Chloromethane				NA	10	U		NA	10	U		NA	5	U
cis-1,2-Dichloroethene	70	70		NA	5	U		NA	5	U		NA	5	U
cis-1,3-Dichloropropene				NA	5	U		NA	5	U		NA	5	U
Dibromochloromethane		80		NA	5	U		NA	5	U		NA	5	U
Ethylbenzene	700	700		NA	5	U		NA	5	U		NA	5	U
Methylene Chloride	**5**	*5*		NA	5	U		NA	5	U		NA	13	U
Styrene	100	100		NA	5	U		NA	5	U		NA	5	U
Tetrachloroethene	5	5		NA	5	U		NA	5	U		NA	5	U
Toluene	1000	1000		NA	5	U		NA	5	U		NA	5	U
Total Xylenes	10000	10000		NA	5	U		NA	5	U		NA	5	U
trans-1,2-Dichloroethene	100	100		NA	5	U		NA	5	U		NA	5	U
trans-1,3-Dichloropropene				NA	5	U		NA	5	U		NA	5	U
Trichloroethene	**5**	*5*		NA	5	U		NA	5	U		NA	5	U
Vinyl Acetate				NA		NA		NA	10	U		NA		NA
Vinyl Chloride	2	2		NA	10	U		NA	10	U		NA	2	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-3A		MW-3A		MW-3A		MW-3A		MW-3A		MW-3A	
Date Sampled			12/17/96		12/17/96		3/25/97		3/25/97		8/12/97		8/12/97	
Matrix			GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
Semivolatile Organic Analysis (UG/L)														
1,2,4-Trichlorobenzene	70	70		NA	10	U		NA	10	UJ		NA	5	U
1,2-Dichlorobenzene	600	600		NA	10	U		NA	10	U		NA	5	U
1,3-Dichlorobenzene	600			NA	10	U		NA	10	U		NA	5	U
1,4-Dichlorobenzene	75	75		NA	10	U		NA	10	U		NA	5	U
2,2'-oxybis(1-Chloropropane)				NA	10	U		NA	10	U		NA	5	U
2,4,5-Trichlorophenol				NA	50	U		NA	50	U		NA	10	U
2,4,6-Trichlorophenol				NA	10	U		NA	10	U		NA	5	U
2,4-Dichlorophenol				NA	10	U		NA	10	U		NA	5	U
2,4-Dimethylphenol				NA	10	U		NA	10	U		NA	5	U
2,4-Dinitrophenol				NA	50	U		NA	50	U		NA	10	U
2,4-Dinitrotoluene				NA	10	U		NA	10	U		NA	5	U
2,6-Dinitrotoluene				NA	10	U		NA	10	U		NA	5	U
2-Chloronaphthalene				NA	10	U		NA	10	UJ		NA	5	U
2-Chlorophenol				NA	10	U		NA	10	U		NA	5	U
2-Methylnaphthalene				NA	10	U		NA	10	U		NA	5	U
2-Methylphenol				NA	10	U		NA	10	U		NA	5	U
2-Nitroaniline				NA	50	U		NA	50	U		NA	10	U
2-Nitrophenol				NA	10	U		NA	10	U		NA	5	U
3,3'-Dichlorobenzidine				NA	20	U		NA	20	U		NA	5	U
3-Methylphenol				NA	10	UJ		NA	10	UJ		NA		NA
3-Nitroaniline				NA	50	U		NA	50	U		NA	10	U
4,6-Dinitro-2-methylphenol				NA	50	U		NA	50	U		NA	10	U
4-Bromophenyl-phenylether				NA	10	U		NA	10	U		NA	5	U
4-Chloro-3-methylphenol				NA	10	U		NA	10	U		NA	5	U
4-Chloroaniline				NA	10	U		NA	10	U		NA	5	U
4-Chlorophenyl-phenylether				NA	10	U		NA	10	U		NA	5	U
4-Methylphenol				NA	10	UJ		NA	10	UJ		NA	5	U
4-Nitroaniline				NA	50	U		NA	50	U		NA	10	U
4-Nitrophenol				NA	50	U		NA	50	U		NA	10	U
Acenaphthene				NA	10	U		NA	10	U		NA	5	U
Acenaphthylene				NA	10	U		NA	10	U		NA	5	U
Anthracene				NA	10	U		NA	10	U		NA	5	U
Benzo(a)anthracene				NA	10	U		NA	10	U		NA	5	U
Benzo(a)pyrene	**0.2**	*0.2*		NA	10	U		NA	10	U		NA	0.05	U
Benzo(b)fluoranthene				NA	10	U		NA	10	U		NA	5	U
Benzo(g,h,i)perylene				NA	10	U		NA	10	U		NA	5	U
Benzo(k)fluoranthene				NA	10	U		NA	10	U		NA	5	U
Bis(2-Chloroethoxy)methane				NA	10	U		NA	10	U		NA	5	U
Bis(2-Chloroethyl)ether				NA	10	U		NA	10	U		NA	5	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA	10	U		NA	10	U		NA	1	J

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-3A		MW-3A		MW-3A		MW-3A		MW-3A		MW-3A	
Date Sampled			12/17/96		12/17/96		3/25/97		3/25/97		8/12/97		8/12/97	
Matrix			GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
Butylbenzylphthalate				NA	10	U		NA	10	U		NA	5	U
Carbazole				NA	20	R		NA	20	UJ		NA	5	U
Chrysene				NA	10	U		NA	10	U		NA	5	U
Di-n-Butylphthalate				NA	10	U		NA	10	U		NA	5	U
Di-n-octylphthalate				NA	10	U		NA	10	U		NA	5	U
Dibenzo(a,h)anthracene				NA	10	U		NA	10	U		NA	5	U
Dibenzofuran				NA	10	U		NA	10	U		NA	5	U
Diethylphthalate				NA	10	U		NA	10	U		NA	5	U
Dimethylphthalate				NA	10	U		NA	10	U		NA	5	U
Fluoranthene				NA	10	U		NA	10	U		NA	5	U
Fluorene				NA	10	U		NA	10	U		NA	5	U
Hexachlorobenzene	1	1		NA	10	U		NA	10	U		NA	5	U
Hexachlorobutadiene				NA	10	U		NA	10	U		NA	5	U
Hexachlorocyclopentadiene		50		NA	10	U		NA	10	U		NA	5	U
Hexachloroethane				NA	10	U		NA	10	U		NA	5	U
Indeno(1,2,3-cd)pyrene				NA	10	U		NA	10	U		NA	5	U
Isophorone				NA	10	U		NA	10	U		NA	5	U
N-Nitroso-di-n-propylamine				NA	10	U		NA	10	U		NA	5	U
N-Nitroso-diphenylamine				NA	10	U		NA	10	U		NA	5	U
Naphthalene	20			NA	10	U		NA	10	U		NA	5	U
Nitrobenzene				NA	10	U		NA	10	U		NA	5	U
Pentachlorophenol	1	1		NA	50	U		NA	50	U		NA	10	U
Phenanthrene				NA	10	U		NA	10	U		NA	5	U
Phenol				NA		NA		NA		NA		NA		NA
Phenols				NA	10	U		NA	10	U		NA	5	U
Pyrene				NA	10	U		NA	10	U		NA	5	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-3A		MW-3A		MW-3A		MW-3A		MW-3A		MW-3A	
Date Sampled			12/17/96		12/17/96		3/25/97		3/25/97		8/12/97		8/12/97	
Matrix			GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
Pesticide/PCB Analysis (UG/L)														
4,4'-DDD				NA	0.10	U		NA	0.10	U		NA	0.050	U
4,4'-DDE				NA	0.10	U		NA	0.10	U		NA	0.050	U
4,4'-DDT				NA	0.10	U		NA	0.10	U		NA	0.050	U
Aldrin				NA	0.050	U		NA	0.050	U		NA	0.025	U
alpha-BHC				NA	0.050	U		NA	0.050	U		NA	0.025	U
alpha-Chlordane		2		NA	0.050	U		NA	0.050	U		NA	0.025	U
Aroclor-1016				NA	1.0	U		NA	1.0	U		NA	0.50	U
Aroclor-1221				NA	2.0	U		NA	2.0	U		NA	1.0	U
Aroclor-1232				NA	1.0	U		NA	1.0	U		NA	0.50	U
Aroclor-1242				NA	1.0	U		NA	1.0	U		NA	0.50	U
Aroclor-1248				NA	1.0	U		NA	1.0	U		NA	0.50	U
Aroclor-1254				NA	1.0	U		NA	1.0	U		NA	0.50	U
Aroclor-1260				NA	1.0	U		NA	1.0	U		NA	0.50	U
beta-BHC				NA	0.050	U		NA	0.050	U		NA	0.025	U
delta-BHC				NA	0.050	U		NA	0.050	U		NA	0.025	U
Dieldrin				NA	0.10	U		NA	0.10	U		NA	0.050	U
Endosulfan I				NA	0.050	UJ		NA	0.050	U		NA	0.025	U
Endosulfan II				NA	0.10	U		NA	0.10	U		NA	0.050	U
Endosulfan Sulfate				NA	0.10	U		NA	0.10	U		NA	0.050	U
Endrin		2		NA	0.10	U		NA	0.10	U		NA	0.050	U
Endrin Aldehyde				NA	0.010	U		NA	0.010	U		NA	0.050	U
Endrin Ketone				NA	0.10	U		NA	0.10	U		NA	0.050	U
gamma-BHC		0.2		NA	0.050	U		NA	0.050	U		NA	0.025	U
gamma-Chlordane		2		NA	0.050	U		NA	0.050	U		NA	0.025	U
Heptachlor		0.4		NA	0.050	U		NA	0.050	U		NA	0.025	U
Heptachlor Epoxide		0.2		NA	0.050	U		NA	0.050	U		NA	0.025	U
Methoxychlor		40		NA	0.50	U		NA	0.50	U		NA	0.25	U
Toxaphene		3		NA	5.0	U		NA	5.0	U		NA	2.5	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-3A		MW-3A		MW-3A		MW-3A		MW-3A		MW-3A	
Date Sampled			12/17/96		12/17/96		3/25/97		3/25/97		8/12/97		8/12/97	
Matrix			GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
TAL Metal Analysis (UG/L)														
Aluminum			100	U	3300		100	U	1800		116000	U	3390000	
Antimony	**6**	*6*	20.0	U	20.0	U	20.0	U	20.0	U	2000	U	***2200***	J
Arsenic	**50**	*50*	4.0	U	7.0		4.0	UJ	5.0	J	3200	U	***9100***	
Barium	**2000**	*2000*	10.0	U	10.0		10.0	U	50.0		5000	U	20900	U
Beryllium	4	4	10.0	U	10.0	U	10.0	U	10.0	U	780	U	1600	U
Cadmium	**5**	*5*	10.0	U	10.0	U	10.0	U	10.0	U	500	U	500	U
Calcium			7200		9500		9000		9600		8950000		8440000	
Chromium	**100**	*100*	20.0	U	20.0	U	20.0	U	20.0	U	6500	UJ	6500	UJ
Cobalt			20.0	U	20.0	U	20.0	U	20.0	U	20000	U	20000	U
Copper		*1300*	20.0	U	20.0	U	20.0	U	20.0	U	3800	UJ	3800	UJ
Iron			40.0	U	5300		40.0	U	2700		189000	J	5420000	J
Lead	**15**	*15*	5.0	U	8.0		5.0	U	5.0	U	1200	U	8300	U
Magnesium			8000		9500		11000		11000		11300000		10900000	
Manganese			10.0	U	90.0		10.0	U	80.0		497000		365000	
Mercury	**2**	*2*	0.20	U	0.20	U	0.20	U	0.20	U	130	U	130	U
Nickel	**100**		40.0	U+E	**140**		40.0	U	40.0	U	7900	UJ	7900	UJ
Potassium			1000		1000	U	2000		3000		1340000		1760000	
Selenium	**50**	*50*	4.0	U	4.0	U	4.0	UJ	4.0	UJ	3400	U	***5000***	J
Silver			10.0	U	10.0	U	10.0	U	10.0	U	1800	U	2400	U
Sodium			8000		8900		6800		8900		10500000		9580000	
Thallium	**2**	*2*	5.0	U	5.0	U	5.0	U	5.0	U	2000	U	2000	U
Vanadium			10.0	U	10.0	U	10.0	U	10.0	U	7700	J	9600	J
Zinc			40.0	U	90.0	U	120		170		30400	U	46600	

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-3A		MW-3A		MW-3A		MW-3A		MW-3A		MW-3A	
Date Sampled			12/17/96		12/17/96		3/25/97		3/25/97		8/12/97		8/12/97	
Matrix			GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
Total Petroleum Hydrocarbon Analysis (MG/L)														
Total Petroleum Hydrocarbons				NA		NA		NA		NA		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4	
Date Sampled			5/1/92		5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97		5/23/01		5/23/01	
Matrix			GF		GW		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
Volatile Organic Analysis (UG/L)																				
1,1,1-Trichloroethane	200	200		NA	3	J	2	J		NA	5	U		NA	5	U		NA	1	U
1,1,2,2-Tetrachloroethane				NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
1,1,2-Trichloroethane	5	5		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
1,1-Dichloroethane				NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
1,1-Dichloroethene	7	7		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
1,2-Dibromo-3-chloropropane		0.2		NA		NA		NA		NA	5	U		NA	5	U		NA	1	U
1,2-Dibromoethane				NA		NA		NA		NA	5	U		NA	5	U		NA	1	U
1,2-Dichloroethane	5	5		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
1,2-Dichloroethene (total)	70	70		NA	5	J	5	U		NA		NA		NA		NA		NA	2	U
1,2-Dichloropropane	5	5		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
2-Butanone				NA		NA	10	U		NA	10	U		NA	10	U		NA	5	U
2-Hexanone				NA		NA	10	U		NA	10	U		NA	10	U		NA	4	U
4-Methyl-2-Pentanone				NA		NA	10	U		NA	10	U		NA	10	U		NA	3	U
Acetone				NA	11	U	10	U		NA	10	U		NA	10	U		NA	5	U
Benzene	5	5		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Bromochloromethane				NA		NA		NA		NA	5	U		NA	5	U		NA	1	U
Bromodichloromethane		80		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Bromoform		80		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Bromomethane				NA		NA	10	U		NA	10	U		NA	10	U		NA	2	UJ
Carbon Disulfide				NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Carbon Tetrachloride	5	5		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Chlorobenzene	100	100		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Chloroethane				NA		NA	10	U		NA	10	U		NA	10	U		NA	2	U
Chloroform	100	80		NA	5	J	5	U		NA	5	U		NA	5	U		NA	1	U
Chloromethane				NA		NA	10	U		NA	10	U		NA	10	U		NA	2	U
cis-1,2-Dichloroethene	70	70		NA		NA		NA		NA	5	U		NA	5	U		NA	2	U
cis-1,3-Dichloropropene				NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Dibromochloromethane		80		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Ethylbenzene	700	700		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Methylene Chloride	**5**	*5*		NA	13	U	5	U		NA	5	U		NA	5	U		NA	1	U
Styrene	100	100		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Tetrachloroethene	5	5		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Toluene	1000	1000		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Total Xylenes	10000	10000		NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
trans-1,2-Dichloroethene	100	100		NA		NA		NA		NA	5	U		NA	5	U		NA	2	U
trans-1,3-Dichloropropene				NA		NA	5	U		NA	5	U		NA	5	U		NA	1	U
Trichloroethene	**5**	*5*		NA	***6***	J	5			NA	5	U		NA	5	U		NA	2	
Vinyl Acetate				NA		NA		NA		NA	10	U		NA	10	U		NA	1	U
Vinyl Chloride	2	2		NA		NA	10	U		NA	10	U		NA	10	U		NA	2	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4	
Date Sampled			5/1/92		5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97		5/23/01		5/23/01	
Matrix			GF		GW		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
Semivolatile Organic Analysis (UG/L)																				
1,2,4-Trichlorobenzene	70	70		NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
1,2-Dichlorobenzene	600	600		NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
1,3-Dichlorobenzene	600			NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
1,4-Dichlorobenzene	75	75		NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
2,4,5-Trichlorophenol				NA		NA	25	U		NA	50	U		NA	50	U		NA	25	U
2,4,6-Trichlorophenol				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dichlorophenol				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dimethylphenol				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
2,4-Dinitrophenol				NA		NA	25	U		NA	50	U		NA	50	U		NA	25	UJ
2,4-Dinitrotoluene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
2,6-Dinitrotoluene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
2-Chloronaphthalene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
2-Chlorophenol				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
2-Methylnaphthalene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
2-Methylphenol				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
2-Nitroaniline				NA		NA	25	U		NA	50	U		NA	50	U		NA	25	U
2-Nitrophenol				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
3,3'-Dichlorobenzidine				NA		NA	10	U		NA	20	U		NA	20	U		NA	10	U
3-Methylphenol				NA		NA		NA		NA	10	UJ		NA	10	UJ		NA		NA
3-Nitroaniline				NA		NA	25	U		NA	50	U		NA	50	U		NA	25	U
4,6-Dinitro-2-methylphenol				NA		NA	25	U		NA	50	U		NA	50	U		NA	25	U
4-Bromophenyl-phenylether				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chloro-3-methylphenol				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chloroaniline				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
4-Chlorophenyl-phenylether				NA		NA	10	NA		NA	10	U		NA	10	U		NA	10	U
4-Methylphenol				NA		NA	10	U		NA	10	UJ		NA	10	UJ		NA	10	U
4-Nitroaniline				NA		NA	25	U		NA	50	U		NA	50	U		NA	25	U
4-Nitrophenol				NA		NA	25	U		NA	50	U		NA	50	U		NA	25	U
Acenaphthene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Acenaphthylene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Anthracene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(a)anthracene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA		NA	10	U		NA	10	U		NA	10	U		NA	0.2	U
Benzo(b)fluoranthene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(g,h,i)perylene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Benzo(k)fluoranthene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethoxy)methane				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethyl)ether				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA	11	U	10	U		NA	10	U		NA	10	U		NA	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4	
Date Sampled			5/1/92		5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97		5/23/01		5/23/01	
Matrix			GF		GW		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
Butylbenzylphthalate				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Carbazole				NA		NA	10	U		NA	20	R		NA	20	U		NA	10	U
Chrysene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Di-n-Butylphthalate				NA	11	U	10	U		NA	10	U		NA	10	U		NA	10	U
Di-n-octylphthalate				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Dibenzo(a,h)anthracene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Dibenzofuran				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Diethylphthalate				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Dimethylphthalate				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Fluoranthene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Fluorene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorobenzene	1	1		NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorobutadiene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachlorocyclopentadiene		50		NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Hexachloroethane				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Indeno(1,2,3-cd)pyrene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Isophorone				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
N-Nitroso-di-n-propylamine				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
N-Nitroso-diphenylamine				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Naphthalene	20			NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Nitrobenzene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Pentachlorophenol	1	1		NA		NA	25	U		NA	50	U		NA	50	U		NA	25	U
Phenanthrene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U
Phenol				NA		NA		NA		NA		NA		NA		NA		NA	10	U
Phenols				NA		NA	10	U		NA	10	U		NA	10	U		NA		NA
Pyrene				NA		NA	10	U		NA	10	U		NA	10	U		NA	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4	
Date Sampled			5/1/92		5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97		5/23/01		5/23/01	
Matrix			GF		GW		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
Pesticide/PCB Analysis (UG/L)																				
4,4'-DDD				NA		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA		NA
4,4'-DDE				NA		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA		NA
4,4'-DDT				NA		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA		NA
Aldrin				NA		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA		NA
alpha-BHC				NA		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA		NA
alpha-Chlordane		2		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA		NA
Aroclor-1016				NA		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA		NA
Aroclor-1221				NA		NA	2.0	U		NA	2.0	U		NA	2.0	U		NA		NA
Aroclor-1232				NA		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA		NA
Aroclor-1242				NA		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA		NA
Aroclor-1248				NA		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA		NA
Aroclor-1254				NA		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA		NA
Aroclor-1260				NA		NA	1.0	U		NA	1.0	U		NA	1.0	U		NA		NA
beta-BHC				NA		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA		NA
delta-BHC				NA		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA		NA
Dieldrin				NA		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA		NA
Endosulfan I				NA		NA	0.050	U		NA	0.050	UJ		NA	0.050	U		NA		NA
Endosulfan II				NA		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA		NA
Endosulfan Sulfate				NA		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA		NA
Endrin		2		NA		NA	0.10	U		NA	0.10	U		NA	0.10	U		NA		NA
Endrin Aldehyde				NA		NA	0.10	U		NA	0.010	U		NA	0.010	U		NA		NA
Endrin Ketone				NA		NA		NA		NA	0.10	U		NA	0.10	U		NA		NA
gamma-BHC		0.2		NA		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA		NA
gamma-Chlordane		2		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA		NA
Heptachlor		0.4		NA		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA		NA
Heptachlor Epoxide		0.2		NA		NA	0.050	U		NA	0.050	U		NA	0.050	U		NA		NA
Methoxychlor		40		NA		NA	0.50	U		NA	0.50	U		NA	0.50	U		NA		NA
Toxaphene		3		NA		NA	5.0	U		NA	5.0	U		NA	5.0	U		NA		NA

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4	
Date Sampled			5/1/92		5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97		5/23/01		5/23/01	
Matrix			GF		GW		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
TAL Metal Analysis (UG/L)																				
Aluminum			94.0	BU	1870			NA	100	U	4000		100	U	4200	J	85.7	U	8760	
Antimony	**6**	*6*		NA		NA		NA	20.0	U	20.0	U	20.0	U	20.0	U	3.65	U	3.65	U
Arsenic	**50**	*50*	3.0	BJ	29.0	J		NA	4.0	U	***670***		4.0	UJ	***60.0***	J	2.53	U	***121***	
Barium	**2000**	*2000*	7.0	B	26.0	B		NA	10.0	U	40.0		10.0	U	40.0	J	10.2		126	
Beryllium	4	4		NA		NA		NA	10.0	U	10.0	U	10.0	U	10.0	U	0.18	U	0.45	U
Cadmium	**5**	*5*		NA		NA		NA	10.0	U	10.0	U	10.0	U	10.0	U	0.24	UJ	0.24	U
Calcium			30800		29800			NA	31000		35000		28000		29000		31100		37100	
Chromium	**100**	*100*		NA	11.0			NA	20.0	U	20.0	U	20.0	U	20.0		1.2	U	28.0	
Cobalt				NA	12.0	B		NA	20.0	U	20.0	U	20.0	U	20.0	U	0.92	UJ	39.9	
Copper		*1300*		NA	12.0	B		NA	20.0	U	20.0	U	20.0	U	20.0	U	0.84	U	36.2	
Iron			55.0	B	14600			NA	40.0	U	22000		40.0	U	28000	J	16.46	U	33700	
Lead	**15**	*15*		NA	3.0	J		NA	5.0	U	13.0		5.0	U	9.0		1.48	U	***17.8***	
Magnesium			25400		24300			NA	25000		27000		23000		24000		23600		23400	
Manganese			19.0		154			NA	10.0	U	160		10.0	U	180		8.2		567	
Mercury	**2**	*2*		NA		NA		NA	2.0	U	2.0	U	2.0	U	2.0	U	0.070	U	0.060	U
Nickel	**100**			NA	20.0	B		NA	40.0	U	40.0	U	40.0	U	40.0	U	2.9	U	65.4	J
Potassium			2120	B	1700	B		NA	2000		3000		2000		3000		2590		4140	
Selenium	**50**	*50*	2.0	UJ		NA		NA	4.0	U	4.0	U	4.0	UJ	4.0	UJ	3.04	U	3.04	U
Silver				NA		NA		NA	10.0	U	10.0	U	10.0	U	10.0	U	1.03	U	1.03	U
Sodium			18000		18000			NA	22000		24000		17000		19000		21500		20400	
Thallium	**2**	*2*		NA		NA		NA	5.0	U	5.0	U	5.0	U	5.0	U	0.59	U	2.5	U
Vanadium				NA		NA		NA	10.0	U	10.0		10.0	U	20.0		0.52	U	14.0	
Zinc				NA	41.0			NA	30.0	U	250		10.0	U	70.0	J	4.4	U	102	

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4		MW-4	
Date Sampled			5/1/92		5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97		5/23/01		5/23/01	
Matrix			GF		GW		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
Total Petroleum Hydrocarbon Analysis (MG/L)																				
Total Petroleum Hydrocarbons				NA		NA		NA		NA	1.0	U		NA	1.0	U		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8	
Date Sampled			5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/24/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																
Volatile Organic Analysis (UG/L)																		
1,1,1-Trichloroethane	200	200		NA	8	J	2	J		NA	5	U	5	U		NA	1	UJ
1,1,2,2-Tetrachloroethane				NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
1,1,2-Trichloroethane	5	5		NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
1,1-Dichloroethane				NA	6	J	9			NA	5	U	5	U		NA	1	U
1,1-Dichloroethene	7	7		NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
1,2-Dibromo-3-chloropropane		0.2		NA		NA		NA		NA	5	U	5	U		NA	1	UJ
1,2-Dibromoethane				NA		NA		NA		NA	5	U	5	U		NA	1	UJ
1,2-Dichloroethane	5	5		NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
1,2-Dichloroethene (total)	70	70		NA	19		6			NA		NA		NA		NA	2	U
1,2-Dichloropropane	5	5		NA		NA	5	U		NA	5	U	5	U		NA	1	U
2-Butanone				NA		NA	10	U		NA	10	U	10	U		NA	5	U
2-Hexanone				NA		NA	10	U		NA	10	U	10	U		NA	4	UJ
4-Methyl-2-Pentanone				NA		NA	10	U		NA	10	U	10	U		NA	3	UJ
Acetone				NA	10	U	10	U		NA	10	U	10	U		NA	5	U
Benzene	5	5		NA		NA	3	J		NA	5	U	5	U		NA	1	U
Bromochloromethane				NA		NA		NA		NA	5	U	5	U		NA	1	UJ
Bromodichloromethane		80		NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
Bromoform		80		NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
Bromomethane				NA		NA	10	U		NA	10	U	10	U		NA	2	UJ
Carbon Disulfide				NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
Carbon Tetrachloride	5	5		NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
Chlorobenzene	100	100		NA		NA	5	U		NA	5	U	5	U		NA	1	U
Chloroethane				NA		NA	10	U		NA	10	U	10	U		NA	2	UJ
Chloroform	100	80		NA		NA	5	U		NA	5	U	5	U		NA	1	U
Chloromethane				NA		NA	10	U		NA	10	U	10	U		NA	2	UJ
cis-1,2-Dichloroethene	70	70		NA		NA		NA		NA	5	U	5	U		NA	2	U
cis-1,3-Dichloropropene				NA		NA	5	U		NA	5	U	5	U		NA	1	U
Dibromochloromethane		80		NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
Ethylbenzene	700	700		NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
Methylene Chloride	**5**	*5*		NA	10	U	5	U		NA	5	U	5	U		NA	1	UJ
Styrene	100	100		NA		NA	5	U		NA	5	U	5	U		NA	1	U
Tetrachloroethene	5	5		NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
Toluene	1000	1000		NA		NA	5	U		NA	5	U	5	U		NA	1	U
Total Xylenes	10000	10000		NA		NA	5	U		NA	5	U	5	U		NA	1	U
trans-1,2-Dichloroethene	100	100		NA		NA		NA		NA	5	U	5	U		NA	2	UJ
trans-1,3-Dichloropropene				NA		NA	5	U		NA	5	U	5	U		NA	1	UJ
Trichloroethene	**5**	*5*		NA		NA	2	J		NA	5	U	5	U		NA	1	J
Vinyl Acetate				NA		NA		NA		NA	10	U	10	U		NA	1	UJ
Vinyl Chloride	2	2		NA		NA	10	U		NA	10	U	10	U		NA	2	UJ

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8	
Date Sampled			5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/24/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																
Semivolatile Organic Analysis (UG/L)																		
1,2,4-Trichlorobenzene	70	70		NA		NA	20	U		NA	10	U	10	U		NA	10	U
1,2-Dichlorobenzene	600	600		NA		NA	20	U		NA	10	U	10	U		NA	10	U
1,3-Dichlorobenzene	600			NA		NA	20	U		NA	10	U	10	U		NA	10	U
1,4-Dichlorobenzene	75	75		NA		NA	20	U		NA	10	U	10	U		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA		NA	20	U		NA	10	U	10	U		NA	10	U
2,4,5-Trichlorophenol				NA		NA	50	U		NA	50	U	50	U		NA	25	U
2,4,6-Trichlorophenol				NA		NA	20	U		NA	10	U	10	U		NA	10	U
2,4-Dichlorophenol				NA		NA	20	U		NA	10	U	10	U		NA	10	U
2,4-Dimethylphenol				NA		NA	20	U		NA	10	U	10	U		NA	10	U
2,4-Dinitrophenol				NA		NA	50	U		NA	50	U	50	U		NA	25	UJ
2,4-Dinitrotoluene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
2,6-Dinitrotoluene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
2-Chloronaphthalene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
2-Chlorophenol				NA		NA	20	U		NA	10	U	10	U		NA	10	U
2-Methylnaphthalene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
2-Methylphenol				NA		NA	20	U		NA	10	U	10	U		NA	10	U
2-Nitroaniline				NA		NA	50	U		NA	50	U	50	U		NA	25	U
2-Nitrophenol				NA		NA	20	U		NA	10	U	10	U		NA	10	U
3,3'-Dichlorobenzidine				NA		NA	1	J		NA	20	U	20	U		NA	10	U
3-Methylphenol				NA		NA		NA		NA	10	UJ	10	UJ		NA		NA
3-Nitroaniline				NA		NA	50	U		NA	50	U	50	U		NA	25	U
4,6-Dinitro-2-methylphenol				NA		NA	50	U		NA	50	U	50	U		NA	25	U
4-Bromophenyl-phenylether				NA		NA	20	U		NA	10	U	10	U		NA	10	U
4-Chloro-3-methylphenol				NA		NA	20	U		NA	10	U	10	U		NA	10	U
4-Chloroaniline				NA		NA	20	U		NA	10	U	10	U		NA	10	U
4-Chlorophenyl-phenylether				NA		NA	20	U		NA	10	U	10	U		NA	10	U
4-Methylphenol				NA		NA	20	U		NA	10	UJ	10	UJ		NA	10	U
4-Nitroaniline				NA		NA	50	U		NA	50	U	50	U		NA	25	U
4-Nitrophenol				NA		NA	50	U		NA	50	U	50	U		NA	25	U
Acenaphthene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Acenaphthylene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Anthracene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Benzo(a)anthracene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA		NA	20	U		NA	10	U	10	U		NA	0.2	U
Benzo(b)fluoranthene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Benzo(g,h,i)perylene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Benzo(k)fluoranthene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Bis(2-Chloroethoxy)methane				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Bis(2-Chloroethyl)ether				NA		NA	20	U		NA	10	U	10	U		NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA	10	U	3	J		NA	10	U	10	U		NA	***7***	J

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8	
Date Sampled			5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/24/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																
Butylbenzylphthalate				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Carbazole				NA		NA	20	U		NA	20	R	20	U		NA	10	U
Chrysene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Di-n-Butylphthalate				NA	10	U	20	U		NA	10	U	10	U		NA	10	U
Di-n-octylphthalate				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Dibenzo(a,h)anthracene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Dibenzofuran				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Diethylphthalate				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Dimethylphthalate				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Fluoranthene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Fluorene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Hexachlorobenzene	1	1		NA		NA	20	U		NA	10	U	10	U		NA	10	U
Hexachlorobutadiene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Hexachlorocyclopentadiene		50		NA		NA	20	U		NA	10	U	10	U		NA	10	U
Hexachloroethane				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Indeno(1,2,3-cd)pyrene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Isophorone				NA		NA	20	U		NA	10	U	10	U		NA	10	U
N-Nitroso-di-n-propylamine				NA		NA	20	U		NA	10	U	10	U		NA	10	U
N-Nitroso-diphenylamine				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Naphthalene	20			NA		NA	20	U		NA	10	U	10	U		NA	10	U
Nitrobenzene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Pentachlorophenol	1	1		NA		NA	50	U		NA	50	U	50	U		NA	25	U
Phenanthrene				NA		NA	20	U		NA	10	U	10	U		NA	10	U
Phenol				NA		NA		NA		NA		NA		NA		NA	10	U
Phenols				NA		NA	20	U		NA	10	U	10	U		NA		NA
Pyrene				NA		NA	20	U		NA	10	U	10	U		NA	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8	
Date Sampled			5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/24/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																
Pesticide/PCB Analysis (UG/L)																		
4,4'-DDD				NA		NA	0.10	U		NA	0.10	U	0.10	U		NA		NA
4,4'-DDE				NA		NA	0.10	U		NA	0.10	U	0.10	U		NA		NA
4,4'-DDT				NA		NA	0.10	U		NA	0.10	U	0.10	U		NA		NA
Aldrin				NA		NA	0.050	U		NA	0.050	U	0.050	U		NA		NA
alpha-BHC				NA		NA	0.050	U		NA	0.050	U	0.050	U		NA		NA
alpha-Chlordane		2		NA		NA		NA		NA	0.050	U	0.050	U		NA		NA
Aroclor-1016				NA		NA	1.0	U		NA	1.0	U	1.0	U		NA		NA
Aroclor-1221				NA		NA	2.0	U		NA	2.0	U	2.0	U		NA		NA
Aroclor-1232				NA		NA	1.0	U		NA	1.0	U	1.0	U		NA		NA
Aroclor-1242				NA		NA	1.0	U		NA	1.0	U	1.0	U		NA		NA
Aroclor-1248				NA		NA	1.0	U		NA	1.0	U	1.0	U		NA		NA
Aroclor-1254				NA		NA	1.0	U		NA	1.0	U	1.0	U		NA		NA
Aroclor-1260				NA		NA	1.0	U		NA	1.0	U	1.0	U		NA		NA
beta-BHC				NA		NA	0.050	U		NA	0.050	U	0.050	U		NA		NA
delta-BHC				NA		NA	0.050	U		NA	0.050	U	0.050	U		NA		NA
Dieldrin				NA		NA	0.10	U		NA	0.10	U	0.10	U		NA		NA
Endosulfan I				NA		NA	0.050	U		NA	0.050	UJ	0.050	U		NA		NA
Endosulfan II				NA		NA	0.10	U		NA	0.10	U	0.10	U		NA		NA
Endosulfan Sulfate				NA		NA	0.10	U		NA	0.10	U	0.10	U		NA		NA
Endrin		2		NA		NA	0.10	U		NA	0.10	U	0.10	U		NA		NA
Endrin Aldehyde				NA		NA	0.10	U		NA	0.010	U	0.010	U		NA		NA
Endrin Ketone				NA		NA		NA		NA	0.10	U	0.10	U		NA		NA
gamma-BHC		0.2		NA		NA	0.050	U		NA	0.050	U	0.050	U		NA		NA
gamma-Chlordane		2		NA		NA		NA		NA	0.050	U	0.050	U		NA		NA
Heptachlor		0.4		NA		NA	0.050	U		NA	0.050	U	0.050	U		NA		NA
Heptachlor Epoxide		0.2		NA		NA	0.050	U		NA	0.050	U	0.050	U		NA		NA
Methoxychlor		40		NA		NA	0.50	U		NA	0.50	U	0.50	U		NA		NA
Toxaphene		3		NA		NA	5.0	U		NA	5.0	U	5.0	U		NA		NA

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8	
Date Sampled			5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/24/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																
TAL Metal Analysis (UG/L)																		
Aluminum				NA	5590		360000		100	U	600		200	J	56.2	U	116	U
Antimony	**6**	*6*		NA		NA	50000	U	20.0	U	20.0	U	20.0	U	3.65	U	3.65	U
Arsenic	**50**	*50*		NA	20.0		***3900***	J	4.0	U	6.0		4.0	UJ	2.53	U	2.53	U
Barium	**2000**	*2000*	10.0	B	62.0	B	***22100***	J	10.0	U	30.0	U	40.0	J	6.1		9.9	
Beryllium	4	4		NA		NA	1000	U	10.0	U	10.0	U	10.0	U	0.18	U	0.18	U
Cadmium	**5**	*5*		NA		NA	3000	U	10.0	U	10.0	U	10.0	U	0.24	U	0.24	U
Calcium			23700	J	24300	J	42700000		54000		53000		42000		34500		35200	
Chromium	**100**	*100*		NA	19.0		5000	U	20.0	U	20.0	U	20.0	U	0.57	U	0.57	U
Cobalt				NA	27.0	B	10000	J	20.0	U	20.0	U	20.0	U	0.92	U	0.92	U
Copper		*1300*		NA	50.0		6900	U	20.0	U	20.0	U	20.0	U	0.84	U	1.8	U
Iron			63.0	BU	22100	J	1560000		40.0	U	1600		100	J	16.46	U	156	U
Lead	**15**	*15*	20.0	UJ	***30.0***	J	2000	U	5.0	U	5.0	U	5.0	U	2.0	U	1.48	U
Magnesium			18900	J	19800	J	28400000		21000		21000		18000		17900		18000	
Manganese			41.0	J	535	J	6310000		10.0	U	230		20.0		4.8		116	
Mercury	**2**	*2*		NA		NA	***240***	J	0.20	U	0.20	U	0.20	U	0.070	U	0.080	U
Nickel	**100**			NA	35.0		**19900**	J	40.0	U	40.0	U	40.0	U	2.3	U	6.5	U
Potassium			1590	B	2280	B	3390000	J	3000		2000		3000		2560		2600	
Selenium	**50**	*50*		NA		NA	4000	U	4.0	U	4.0	U	4.0	UJ	3.04	U	3.04	U
Silver				NA		NA	4000	U	10.0	U	10.0	U	10.0	U	1.03	U	1.03	U
Sodium			10900		10500		70200000		17000		18000		20000		11200		11000	
Thallium	**2**	*2*		NA		NA	5000	U	5.0	U	5.0	U	5.0	U	0.10	U	0.30	U
Vanadium			6.0	B	63.0	B	2000	U	10.0	U	10.0	U	10.0	U	0.52	U	0.52	U
Zinc			13.0	BU	68.0		17000	U	10.0		20.0		50.0	J	3.3	U	6.6	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8		MW-8	
Date Sampled			5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/24/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																
Total Petroleum Hydrocarbon Analysis (MG/L)																		
Total Petroleum Hydrocarbons				NA		NA		NA		NA	1.0	U		NA		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-9		MW-9	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Volatile Organic Analysis (UG/L)						
1,1,1-Trichloroethane	200	200		NA	1	U
1,1,2,2-Tetrachloroethane				NA	1	U
1,1,2-Trichloroethane	5	5		NA	1	U
1,1-Dichloroethane				NA	1	U
1,1-Dichloroethene	7	7		NA	1	U
1,2-Dibromo-3-chloropropane		0.2		NA	1	U
1,2-Dibromoethane				NA	1	U
1,2-Dichloroethane	5	5		NA	1	U
1,2-Dichloroethene (total)	70	70		NA	2	U
1,2-Dichloropropane	5	5		NA	1	U
2-Butanone				NA	5	U
2-Hexanone				NA	4	U
4-Methyl-2-Pentanone				NA	3	U
Acetone				NA	5	U
Benzene	5	5		NA	1	U
Bromochloromethane				NA	1	U
Bromodichloromethane		80		NA	1	U
Bromoform		80		NA	1	U
Bromomethane				NA	2	UJ
Carbon Disulfide				NA	1	U
Carbon Tetrachloride	5	5		NA	1	U
Chlorobenzene	100	100		NA	1	U
Chloroethane				NA	2	U
Chloroform	100	80		NA	1	U
Chloromethane				NA	2	U
cis-1,2-Dichloroethene	70	70		NA	2	U
cis-1,3-Dichloropropene				NA	1	U
Dibromochloromethane		80		NA	1	U
Ethylbenzene	700	700		NA	1	U
Methylene Chloride	**5**	*5*		NA	1	U
Styrene	100	100		NA	1	U
Tetrachloroethene	5	5		NA	1	U
Toluene	1000	1000		NA	1	U
Total Xylenes	10000	10000		NA	1	U
trans-1,2-Dichloroethene	100	100		NA	2	U
trans-1,3-Dichloropropene				NA	1	U
Trichloroethene	**5**	*5*		NA	1	U
Vinyl Acetate				NA	1	UJ
Vinyl Chloride	2	2		NA	2	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-9		MW-9	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Semivolatile Organic Analysis (UG/L)						
1,2,4-Trichlorobenzene	70	70		NA	10	U
1,2-Dichlorobenzene	600	600		NA	10	U
1,3-Dichlorobenzene	600			NA	10	U
1,4-Dichlorobenzene	75	75		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA	10	U
2,4,5-Trichlorophenol				NA	25	U
2,4,6-Trichlorophenol				NA	10	U
2,4-Dichlorophenol				NA	10	U
2,4-Dimethylphenol				NA	10	U
2,4-Dinitrophenol				NA	25	UJ
2,4-Dinitrotoluene				NA	10	U
2,6-Dinitrotoluene				NA	10	U
2-Chloronaphthalene				NA	10	U
2-Chlorophenol				NA	10	U
2-Methylnaphthalene				NA	10	U
2-Methylphenol				NA	10	U
2-Nitroaniline				NA	25	U
2-Nitrophenol				NA	10	U
3,3'-Dichlorobenzidine				NA	10	U
3-Methylphenol				NA		NA
3-Nitroaniline				NA	25	U
4,6-Dinitro-2-methylphenol				NA	25	U
4-Bromophenyl-phenylether				NA	10	U
4-Chloro-3-methylphenol				NA	10	U
4-Chloroaniline				NA	10	U
4-Chlorophenyl-phenylether				NA	10	U
4-Methylphenol				NA	10	U
4-Nitroaniline				NA	25	U
4-Nitrophenol				NA	25	U
Acenaphthene				NA	10	U
Acenaphthylene				NA	10	U
Anthracene				NA	10	U
Benzo(a)anthracene				NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA	0.2	U
Benzo(b)fluoranthene				NA	10	U
Benzo(g,h,i)perylene				NA	10	U
Benzo(k)fluoranthene				NA	10	U
Bis(2-Chloroethoxy)methane				NA	10	U
Bis(2-Chloroethyl)ether				NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA	***18***	

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-9		MW-9	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Butylbenzylphthalate				NA	10	U
Carbazole				NA	10	U
Chrysene				NA	10	U
Di-n-Butylphthalate				NA	10	U
Di-n-octylphthalate				NA	10	U
Dibenzo(a,h)anthracene				NA	10	U
Dibenzofuran				NA	10	U
Diethylphthalate				NA	10	U
Dimethylphthalate				NA	10	U
Fluoranthene				NA	10	U
Fluorene				NA	10	U
Hexachlorobenzene	1	1		NA	10	U
Hexachlorobutadiene				NA	10	U
Hexachlorocyclopentadiene		50		NA	10	U
Hexachloroethane				NA	10	U
Indeno(1,2,3-cd)pyrene				NA	10	U
Isophorone				NA	10	U
N-Nitroso-di-n-propylamine				NA	10	U
N-Nitroso-diphenylamine				NA	10	U
Naphthalene	20			NA	10	U
Nitrobenzene				NA	10	U
Pentachlorophenol	1	1		NA	25	U
Phenanthrene				NA	10	U
Phenol				NA	10	U
Phenols				NA		NA
Pyrene				NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-9		MW-9	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Pesticide/PCB Analysis (UG/L)						
4,4'-DDD				NA		NA
4,4'-DDE				NA		NA
4,4'-DDT				NA		NA
Aldrin				NA		NA
alpha-BHC				NA		NA
alpha-Chlordane		2		NA		NA
Aroclor-1016				NA		NA
Aroclor-1221				NA		NA
Aroclor-1232				NA		NA
Aroclor-1242				NA		NA
Aroclor-1248				NA		NA
Aroclor-1254				NA		NA
Aroclor-1260				NA		NA
beta-BHC				NA		NA
delta-BHC				NA		NA
Dieldrin				NA		NA
Endosulfan I				NA		NA
Endosulfan II				NA		NA
Endosulfan Sulfate				NA		NA
Endrin		2		NA		NA
Endrin Aldehyde				NA		NA
Endrin Ketone				NA		NA
gamma-BHC		0.2		NA		NA
gamma-Chlordane		2		NA		NA
Heptachlor		0.4		NA		NA
Heptachlor Epoxide		0.2		NA		NA
Methoxychlor		40		NA		NA
Toxaphene		3		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-9		MW-9	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
TAL Metal Analysis (UG/L)						
Aluminum			37.3	U	1040	
Antimony	**6**	*6*	3.65	U	3.65	U
Arsenic	**50**	*50*	2.53	U	41.8	
Barium	**2000**	*2000*	4.0		130	
Beryllium	4	4	0.18	U	0.18	U
Cadmium	**5**	*5*	0.24	U	4.3	
Calcium			62400		71200	
Chromium	**100**	*100*	0.57	U	10.3	U
Cobalt			4.6		243	
Copper		*1300*	0.84	U	18.8	U
Iron			16.46	U	23300	
Lead	**15**	*15*	1.48	U	***24.7***	
Magnesium			43200		43900	
Manganese			1730		24200	
Mercury	**2**	*2*	0.030	U	0.090	U
Nickel	**100**		7.3	U	**151**	
Potassium			3050		3460	
Selenium	**50**	*50*	3.04	U	6.08	UJ
Silver			1.03	U	2.3	
Sodium			9630		9810	
Thallium	**2**	*2*	0.10	U	0.85	U
Vanadium			0.52	U	2.8	U
Zinc			9.4	U	229	

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-9		MW-9	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Total Petroleum Hydrocarbon Analysis (MG/L)						
Total Petroleum Hydrocarbons				NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-10		MW-10	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Volatile Organic Analysis (UG/L)						
1,1,1-Trichloroethane	200	200		NA	1	U
1,1,2,2-Tetrachloroethane				NA	1	U
1,1,2-Trichloroethane	5	5		NA	1	U
1,1-Dichloroethane				NA	1	U
1,1-Dichloroethene	7	7		NA	1	U
1,2-Dibromo-3-chloropropane		0.2		NA	1	U
1,2-Dibromoethane				NA	1	U
1,2-Dichloroethane	5	5		NA	1	U
1,2-Dichloroethene (total)	70	70		NA	2	U
1,2-Dichloropropane	5	5		NA	1	U
2-Butanone				NA	5	U
2-Hexanone				NA	4	U
4-Methyl-2-Pentanone				NA	3	U
Acetone				NA	5	U
Benzene	5	5		NA	1	U
Bromochloromethane				NA	1	U
Bromodichloromethane		80		NA	1	U
Bromoform		80		NA	1	U
Bromomethane				NA	2	UJ
Carbon Disulfide				NA	1	U
Carbon Tetrachloride	5	5		NA	1	U
Chlorobenzene	100	100		NA	1	U
Chloroethane				NA	2	U
Chloroform	100	80		NA	1	U
Chloromethane				NA	2	U
cis-1,2-Dichloroethene	70	70		NA	2	U
cis-1,3-Dichloropropene				NA	1	U
Dibromochloromethane		80		NA	1	U
Ethylbenzene	700	700		NA	1	U
Methylene Chloride	**5**	*5*		NA	1	U
Styrene	100	100		NA	1	U
Tetrachloroethene	5	5		NA	1	U
Toluene	1000	1000		NA	1	U
Total Xylenes	10000	10000		NA	1	U
trans-1,2-Dichloroethene	100	100		NA	2	U
trans-1,3-Dichloropropene				NA	1	U
Trichloroethene	**5**	*5*		NA	1	U
Vinyl Acetate				NA	1	UJ
Vinyl Chloride	2	2		NA	2	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-10		MW-10	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Semivolatile Organic Analysis (UG/L)						
1,2,4-Trichlorobenzene	70	70		NA	10	U
1,2-Dichlorobenzene	600	600		NA	10	U
1,3-Dichlorobenzene	600			NA	10	U
1,4-Dichlorobenzene	75	75		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA	10	U
2,4,5-Trichlorophenol				NA	25	U
2,4,6-Trichlorophenol				NA	10	U
2,4-Dichlorophenol				NA	10	U
2,4-Dimethylphenol				NA	10	U
2,4-Dinitrophenol				NA	25	UJ
2,4-Dinitrotoluene				NA	10	U
2,6-Dinitrotoluene				NA	10	U
2-Chloronaphthalene				NA	10	U
2-Chlorophenol				NA	10	U
2-Methylnaphthalene				NA	10	U
2-Methylphenol				NA	10	U
2-Nitroaniline				NA	25	U
2-Nitrophenol				NA	10	U
3,3'-Dichlorobenzidine				NA	10	U
3-Methylphenol				NA		NA
3-Nitroaniline				NA	25	U
4,6-Dinitro-2-methylphenol				NA	25	U
4-Bromophenyl-phenylether				NA	10	U
4-Chloro-3-methylphenol				NA	10	U
4-Chloroaniline				NA	10	U
4-Chlorophenyl-phenylether				NA	10	U
4-Methylphenol				NA	10	U
4-Nitroaniline				NA	25	U
4-Nitrophenol				NA	25	U
Acenaphthene				NA	10	U
Acenaphthylene				NA	10	U
Anthracene				NA	10	U
Benzo(a)anthracene				NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA	0.2	U
Benzo(b)fluoranthene				NA	10	U
Benzo(g,h,i)perylene				NA	10	U
Benzo(k)fluoranthene				NA	10	U
Bis(2-Chloroethoxy)methane				NA	10	U
Bis(2-Chloroethyl)ether				NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-10		MW-10	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Butylbenzylphthalate				NA	10	U
Carbazole				NA	10	U
Chrysene				NA	10	U
Di-n-Butylphthalate				NA	10	U
Di-n-octylphthalate				NA	10	U
Dibenzo(a,h)anthracene				NA	10	U
Dibenzofuran				NA	10	U
Diethylphthalate				NA	10	U
Dimethylphthalate				NA	10	U
Fluoranthene				NA	10	U
Fluorene				NA	10	U
Hexachlorobenzene	1	1		NA	10	U
Hexachlorobutadiene				NA	10	U
Hexachlorocyclopentadiene		50		NA	10	U
Hexachloroethane				NA	10	U
Indeno(1,2,3-cd)pyrene				NA	10	U
Isophorone				NA	10	U
N-Nitroso-di-n-propylamine				NA	10	U
N-Nitroso-diphenylamine				NA	10	U
Naphthalene	20			NA	10	U
Nitrobenzene				NA	10	U
Pentachlorophenol	1	1		NA	25	U
Phenanthrene				NA	10	U
Phenol				NA	10	U
Phenols				NA		NA
Pyrene				NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-10		MW-10	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Pesticide/PCB Analysis (UG/L)						
4,4'-DDD				NA		NA
4,4'-DDE				NA		NA
4,4'-DDT				NA		NA
Aldrin				NA		NA
alpha-BHC				NA		NA
alpha-Chlordane		2		NA		NA
Aroclor-1016				NA		NA
Aroclor-1221				NA		NA
Aroclor-1232				NA		NA
Aroclor-1242				NA		NA
Aroclor-1248				NA		NA
Aroclor-1254				NA		NA
Aroclor-1260				NA		NA
beta-BHC				NA		NA
delta-BHC				NA		NA
Dieldrin				NA		NA
Endosulfan I				NA		NA
Endosulfan II				NA		NA
Endosulfan Sulfate				NA		NA
Endrin		2		NA		NA
Endrin Aldehyde				NA		NA
Endrin Ketone				NA		NA
gamma-BHC		0.2		NA		NA
gamma-Chlordane		2		NA		NA
Heptachlor		0.4		NA		NA
Heptachlor Epoxide		0.2		NA		NA
Methoxychlor		40		NA		NA
Toxaphene		3		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-10		MW-10	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
TAL Metal Analysis (UG/L)						
Aluminum			60.7	U	2060	
Antimony	**6**	*6*	3.65	U	3.65	U
Arsenic	**50**	*50*	2.53	U	16.3	
Barium	**2000**	*2000*	6.6		19.3	
Beryllium	4	4	0.18	U	0.18	U
Cadmium	**5**	*5*	0.24	U	0.25	U
Calcium			31900		30600	
Chromium	**100**	*100*	0.57	U	4.1	U
Cobalt			0.92	U	16.9	
Copper		*1300*	0.84	U	2.8	U
Iron			16.46	U	8830	
Lead	**15**	*15*	1.48	U	3.7	U
Magnesium			21700		21000	
Manganese			23.0		686	
Mercury	**2**	*2*	0.070	U	0.090	U
Nickel	**100**		4.4	U	27.6	U
Potassium			1950		2020	
Selenium	**50**	*50*	3.04	U	3.04	U
Silver			1.03	U	1.03	U
Sodium			10400		9690	
Thallium	**2**	*2*	0.10	U	2.5	U
Vanadium			0.52	U	3.4	
Zinc			5.2	U	29.5	

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-10		MW-10	
Date Sampled			5/22/01		5/22/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Total Petroleum Hydrocarbon Analysis (MG/L)						
Total Petroleum Hydrocarbons				NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1	
Date Sampled			7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/25/97		3/25/97		8/13/97		8/13/97	
Matrix			GW		GW		GF		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
Volatile Organic Analysis (UG/L)																						
1,1,1-Trichloroethane	200	200		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
1,1,2,2-Tetrachloroethane				NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
1,1,2-Trichloroethane	5	5		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
1,1-Dichloroethane				NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
1,1-Dichloroethene	7	7		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
1,2-Dibromo-3-chloropropane		0.2		NA		NA		NA		NA		NA	5	U		NA	5	U		NA		NA
1,2-Dibromoethane				NA		NA		NA		NA		NA	5	U		NA	5	U		NA		NA
1,2-Dichloroethane	5	5		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
1,2-Dichloroethene (total)	70	70		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
1,2-Dichloropropane	5	5		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
2-Butanone				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	10	UR
2-Hexanone				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	10	U
4-Methyl-2-Pentanone				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	10	UJ
Acetone				NA	4	JB		NA		NA		NA	10	U		NA	10	U		NA	17	U
Benzene	5	5		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Bromochloromethane				NA		NA		NA		NA		NA	5	U		NA	5	U		NA		NA
Bromodichloromethane		80		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Bromoform		80		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	UJ
Bromomethane				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Carbon Disulfide				NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Carbon Tetrachloride	5	5		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Chlorobenzene	100	100		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Chloroethane				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Chloroform	100	80		NA		NA		NA	8	J		NA	6			NA	5	U		NA	5	U
Chloromethane				NA	2	J		NA		NA		NA	10	U		NA	10	U		NA	5	U
cis-1,2-Dichloroethene	70	70		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
cis-1,3-Dichloropropene				NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Dibromochloromethane		80		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Ethylbenzene	700	700		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Methylene Chloride	**5**	*5*		NA	***11***	B		NA	10	U		NA	5	U		NA	5	U		NA	10	U
Styrene	100	100		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Tetrachloroethene	5	5		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Toluene	1000	1000		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Total Xylenes	10000	10000		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
trans-1,2-Dichloroethene	100	100		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
trans-1,3-Dichloropropene				NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Trichloroethene	**5**	*5*		NA		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Vinyl Acetate				NA		NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Vinyl Chloride	2	2		NA		NA		NA		NA		NA	10	U		NA	10	U		NA	2	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1	
Date Sampled			7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/25/97		3/25/97		8/13/97		8/13/97	
Matrix			GW		GW		GF		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
Semivolatile Organic Analysis (UG/L)																						
1,2,4-Trichlorobenzene	70	70		NA		NA		NA		NA		NA	10	U		NA	10	UJ		NA	5	U
1,2-Dichlorobenzene	600	600		NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
1,3-Dichlorobenzene	600			NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
1,4-Dichlorobenzene	75	75		NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
2,2'-oxybis(1-Chloropropane)				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
2,4,5-Trichlorophenol				NA		NA		NA		NA		NA	50	U		NA	50	U		NA	10	U
2,4,6-Trichlorophenol				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
2,4-Dichlorophenol				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
2,4-Dimethylphenol				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
2,4-Dinitrophenol				NA		NA		NA		NA		NA	50	U		NA	50	U		NA	10	U
2,4-Dinitrotoluene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
2,6-Dinitrotoluene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
2-Chloronaphthalene				NA		NA		NA		NA		NA	10	U		NA	10	UJ		NA	5	U
2-Chlorophenol				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
2-Methylnaphthalene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
2-Methylphenol				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
2-Nitroaniline				NA		NA		NA		NA		NA	50	U		NA	50	U		NA	10	U
2-Nitrophenol				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
3,3'-Dichlorobenzidine				NA		NA		NA		NA		NA	20	U		NA	20	U		NA	5	U
3-Methylphenol				NA		NA		NA		NA		NA	10	UJ		NA	10	UJ		NA		NA
3-Nitroaniline				NA		NA		NA		NA		NA	50	U		NA	50	U		NA	10	U
4,6-Dinitro-2-methylphenol				NA		NA		NA		NA		NA	50	U		NA	50	U		NA	10	U
4-Bromophenyl-phenylether				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
4-Chloro-3-methylphenol				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
4-Chloroaniline				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
4-Chlorophenyl-phenylether				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
4-Methylphenol				NA		NA		NA		NA		NA	10	UJ		NA	10	UJ		NA	5	U
4-Nitroaniline				NA		NA		NA		NA		NA	50	U		NA	50	U		NA	10	U
4-Nitrophenol				NA		NA		NA		NA		NA	50	U		NA	50	U		NA	10	U
Acenaphthene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Acenaphthylene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Anthracene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Benzo(a)anthracene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Benzo(a)pyrene	**0.2**	*0.2*		NA		NA		NA		NA		NA	10	U		NA	10	U		NA	0.05	U
Benzo(b)fluoranthene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Benzo(g,h,i)perylene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Benzo(k)fluoranthene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Bis(2-Chloroethoxy)methane				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Bis(2-Chloroethyl)ether				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1	
Date Sampled			7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/25/97		3/25/97		8/13/97		8/13/97	
Matrix			GW		GW		GF		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
Butylbenzylphthalate				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Carbazole				NA		NA		NA		NA		NA	20			NA	20	UJ		NA	5	U
Chrysene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Di-n-Butylphthalate				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Di-n-octylphthalate				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Dibenzo(a,h)anthracene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Dibenzofuran				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Diethylphthalate				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Dimethylphthalate				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Fluoranthene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Fluorene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Hexachlorobenzene	1	1		NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Hexachlorobutadiene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Hexachlorocyclopentadiene		50		NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Hexachloroethane				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Indeno(1,2,3-cd)pyrene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Isophorone				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
N-Nitroso-di-n-propylamine				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
N-Nitroso-diphenylamine				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Naphthalene	20			NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Nitrobenzene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Pentachlorophenol	1	1		NA		NA		NA		NA		NA	50	U		NA	50	U		NA	10	U
Phenanthrene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Phenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
Phenols				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U
Pyrene				NA		NA		NA		NA		NA	10	U		NA	10	U		NA	5	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1	
Date Sampled			7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/25/97		3/25/97		8/13/97		8/13/97	
Matrix			GW		GW		GF		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
Pesticide/PCB Analysis (UG/L)																						
4,4'-DDD				NA		NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.050	U
4,4'-DDE				NA		NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.050	U
4,4'-DDT				NA		NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.050	U
Aldrin				NA		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.025	U
alpha-BHC				NA		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.025	U
alpha-Chlordane		2		NA		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.025	U
Aroclor-1016				NA		NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	0.50	U
Aroclor-1221				NA		NA		NA		NA		NA	2.0	U		NA	2.0	U		NA	1.0	U
Aroclor-1232				NA		NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	0.50	U
Aroclor-1242				NA		NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	0.50	U
Aroclor-1248				NA		NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	0.50	U
Aroclor-1254				NA		NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	0.50	U
Aroclor-1260				NA		NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	0.50	U
beta-BHC				NA		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.025	U
delta-BHC				NA		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.025	U
Dieldrin				NA		NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.050	U
Endosulfan I				NA		NA		NA		NA		NA	0.050	UJ		NA	0.050	U		NA	0.025	U
Endosulfan II				NA		NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.050	U
Endosulfan Sulfate				NA		NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.050	U
Endrin		2		NA		NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.050	U
Endrin Aldehyde				NA		NA		NA		NA		NA	0.010	U		NA	0.010	U		NA	0.050	U
Endrin Ketone				NA		NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.050	U
gamma-BHC		0.2		NA		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.025	U
gamma-Chlordane		2		NA		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.025	U
Heptachlor		0.4		NA		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.025	U
Heptachlor Epoxide		0.2		NA		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.025	U
Methoxychlor		40		NA		NA		NA		NA		NA	0.50	U		NA	0.50	U		NA	0.25	U
Toxaphene		3		NA		NA		NA		NA		NA	5.0	U		NA	5.0	U		NA	2.5	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1	
Date Sampled			7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/25/97		3/25/97		8/13/97		8/13/97	
Matrix			GW		GW		GF		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
TAL Metal Analysis (UG/L)																						
Aluminum				NA		NA	368		16900		100	U	4100		100	U	4700		109000	U	1980000	
Antimony	**6**	*6*		NA		NA		NA		NA	20.0	U	20.0	U	20.0	U	20.0	U	2000	U	2000	U
Arsenic	**50**	*50*		NA	***159000***		2.0	UJ	***57.0***	J	4.0	U	28.0		4.0	UJ	14.0	J	***3400***	J	***14400***	
Barium	**2000**	*2000*		NA		NA	8.0	B	52.0	B	10.0	U	110	U	10.0	U	30.0		6800	U	14500	U
Beryllium	4	*4*		NA		NA		NA		NA	10.0	U	10.0	U	10.0	U	10.0	U	780	U	780	U
Cadmium	**5**	*5*		NA		NA	***7.0***			NA	10.0	U	10.0	U	10.0	U	10.0	U	500	U	500	U
Calcium				NA		NA	16200		16400		15000		21000		15000		24000		18100000		21000000	
Chromium	**100**	*100*		NA		NA		NA	30.0		20.0	U	20.0	U	20.0	U	20.0	U	6500	UJ	6500	UJ
Cobalt				NA		NA	36.0	B	171		20.0	U	20.0	U	20.0	U	20.0	U	20000		39100	U
Copper		*1300*		NA	*160000*			NA	63.0		20.0	U	20.0	U	20.0	U	20.0	U	3800	UJ	3800	UJ
Iron				NA		NA	1170		72200		40.0	U	9600		40.0	U	12000		7100	UJ	6670000	J
Lead	**15**	*15*	***21600***	J	***48600***			NA	***25.0***	J	5.0	U	1.5		5.0	U	5.0	U	1200	U	4900	U
Magnesium				NA		NA	13000		16700		8900		9700		9500		10000		14000000		15700000	
Manganese				NA		NA	721		3100		10.0	U	250		10.0	U	190		356000		716000	
Mercury	**2**	*2*		NA		NA		NA		NA	0.20	U	0.20	U	0.20	U	0.20	U	130	U	130	U
Nickel	**100**			NA	**250000**		40.0		**116**		40.0	U	40.0	U	40.0	U	40.0	U	**25200**	J	**39700**	J
Potassium				NA		NA	1030	B	1600	B	1000	U	1000		1000	U	2000		1220000		1160000	U
Selenium	**50**	*50*		NA		NA	2.0	UJ		NA	4.0	U	4.0	U	4.0	UJ	4.0	UJ	3400	U	3400	U
Silver				NA		NA		NA		NA	10.0	U	10.0	U	10.0	U	10.0	U	1800	U	1800	U
Sodium				NA		NA	9510		9230		7600		7800		9100		11000		11200000		11900000	
Thallium	**2**	*2*		NA		NA		NA		NA	5.0	U	5.0	U	5.0	U	5.0	U	2000	U	2000	U
Vanadium				NA		NA		NA		NA	10.0	U	10.0	U	10.0	U	10.0	U	10500	J	6900	J
Zinc				NA	334000		23.0		190		20.0		60.0		10.0		60.0		30400		50000	

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1		MW-86-1	
Date Sampled			7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/25/97		3/25/97		8/13/97		8/13/97	
Matrix			GW		GW		GF		GW		GF		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																				
Total Petroleum Hydrocarbon Analysis (MG/L)																						
Total Petroleum Hydrocarbons				NA		NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	1.1	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Volatile Organic Analysis (UG/L)						
1,1,1-Trichloroethane	200	200		NA	1	U
1,1,2,2-Tetrachloroethane				NA	1	U
1,1,2-Trichloroethane	5	5		NA	1	U
1,1-Dichloroethane				NA	1	U
1,1-Dichloroethene	7	7		NA	1	U
1,2-Dibromo-3-chloropropane		0.2		NA	1	U
1,2-Dibromoethane				NA	1	U
1,2-Dichloroethane	5	5		NA	1	U
1,2-Dichloroethene (total)	70	70		NA	2	U
1,2-Dichloropropane	5	5		NA	1	U
2-Butanone				NA	5	U
2-Hexanone				NA	4	U
4-Methyl-2-Pentanone				NA	3	U
Acetone				NA	68	U
Benzene	5	5		NA	1	U
Bromochloromethane				NA	1	U
Bromodichloromethane		80		NA	1	U
Bromoform		80		NA	1	U
Bromomethane				NA	2	UJ
Carbon Disulfide				NA	1	U
Carbon Tetrachloride	5	5		NA	1	U
Chlorobenzene	100	100		NA	1	U
Chloroethane				NA	2	U
Chloroform	100	80		NA	0.9	J
Chloromethane				NA	2	U
cis-1,2-Dichloroethene	70	70		NA	2	U
cis-1,3-Dichloropropene				NA	1	U
Dibromochloromethane		80		NA	1	U
Ethylbenzene	700	700		NA	1	U
Methylene Chloride	**5**	*5*		NA	1	U
Styrene	100	100		NA	1	U
Tetrachloroethene	5	5		NA	1	U
Toluene	1000	1000		NA	1	U
Total Xylenes	10000	10000		NA	1	U
trans-1,2-Dichloroethene	100	100		NA	2	U
trans-1,3-Dichloropropene				NA	1	U
Trichloroethene	**5**	*5*		NA	1	U
Vinyl Acetate				NA	1	U
Vinyl Chloride	2	2		NA	2	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Semivolatile Organic Analysis (UG/L)						
1,2,4-Trichlorobenzene	70	70		NA	10	U
1,2-Dichlorobenzene	600	600		NA	10	U
1,3-Dichlorobenzene	600			NA	10	U
1,4-Dichlorobenzene	75	75		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA	10	U
2,4,5-Trichlorophenol				NA	25	U
2,4,6-Trichlorophenol				NA	10	U
2,4-Dichlorophenol				NA	10	U
2,4-Dimethylphenol				NA	10	U
2,4-Dinitrophenol				NA	25	UJ
2,4-Dinitrotoluene				NA	10	U
2,6-Dinitrotoluene				NA	10	U
2-Chloronaphthalene				NA	10	U
2-Chlorophenol				NA	10	U
2-Methylnaphthalene				NA	10	U
2-Methylphenol				NA	10	U
2-Nitroaniline				NA	25	U
2-Nitrophenol				NA	10	U
3,3'-Dichlorobenzidine				NA	10	U
3-Methylphenol				NA		NA
3-Nitroaniline				NA	25	U
4,6-Dinitro-2-methylphenol				NA	25	U
4-Bromophenyl-phenylether				NA	10	U
4-Chloro-3-methylphenol				NA	10	U
4-Chloroaniline				NA	10	U
4-Chlorophenyl-phenylether				NA	10	U
4-Methylphenol				NA	10	U
4-Nitroaniline				NA	25	U
4-Nitrophenol				NA	25	U
Acenaphthene				NA	10	U
Acenaphthylene				NA	10	U
Anthracene				NA	10	U
Benzo(a)anthracene				NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA	0.2	U
Benzo(b)fluoranthene				NA	10	U
Benzo(g,h,i)perylene				NA	10	U
Benzo(k)fluoranthene				NA	10	U
Bis(2-Chloroethoxy)methane				NA	10	U
Bis(2-Chloroethyl)ether				NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA	***18***	

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Butylbenzylphthalate				NA	10	U
Carbazole				NA	10	U
Chrysene				NA	10	U
Di-n-Butylphthalate				NA	10	U
Di-n-octylphthalate				NA	10	U
Dibenzo(a,h)anthracene				NA	10	U
Dibenzofuran				NA	10	U
Diethylphthalate				NA	10	U
Dimethylphthalate				NA	10	U
Fluoranthene				NA	10	U
Fluorene				NA	10	U
Hexachlorobenzene	1	1		NA	10	U
Hexachlorobutadiene				NA	10	U
Hexachlorocyclopentadiene		50		NA	10	U
Hexachloroethane				NA	10	U
Indeno(1,2,3-cd)pyrene				NA	10	U
Isophorone				NA	10	U
N-Nitroso-di-n-propylamine				NA	10	U
N-Nitroso-diphenylamine				NA	10	U
Naphthalene	20			NA	10	U
Nitrobenzene				NA	10	U
Pentachlorophenol	1	1		NA	25	U
Phenanthrene				NA	10	U
Phenol				NA	10	U
Phenols				NA		NA
Pyrene				NA	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Pesticide/PCB Analysis (UG/L)						
4,4'-DDD				NA		NA
4,4'-DDE				NA		NA
4,4'-DDT				NA		NA
Aldrin				NA		NA
alpha-BHC				NA		NA
alpha-Chlordane		2		NA		NA
Aroclor-1016				NA		NA
Aroclor-1221				NA		NA
Aroclor-1232				NA		NA
Aroclor-1242				NA		NA
Aroclor-1248				NA		NA
Aroclor-1254				NA		NA
Aroclor-1260				NA		NA
beta-BHC				NA		NA
delta-BHC				NA		NA
Dieldrin				NA		NA
Endosulfan I				NA		NA
Endosulfan II				NA		NA
Endosulfan Sulfate				NA		NA
Endrin		2		NA		NA
Endrin Aldehyde				NA		NA
Endrin Ketone				NA		NA
gamma-BHC		0.2		NA		NA
gamma-Chlordane		2		NA		NA
Heptachlor		0.4		NA		NA
Heptachlor Epoxide		0.2		NA		NA
Methoxychlor		40		NA		NA
Toxaphene		3		NA		NA

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
TAL Metal Analysis (UG/L)						
Aluminum			87.2	U	6140	
Antimony	**6**	*6*	3.65	U	3.65	U
Arsenic	**50**	*50*	2.53	U	25.8	
Barium	**2000**	*2000*	6.2		53.6	
Beryllium	4	4	0.18	U	0.31	U
Cadmium	**5**	*5*	0.24	UJ	1.6	U
Calcium			16500		34900	
Chromium	**100**	*100*	0.60	U	12.4	U
Cobalt			7.9	J	18.1	
Copper		*1300*	0.84	U	27.3	
Iron			381		19400	
Lead	**15**	*15*	1.48	U	11.6	U
Magnesium			9090		11000	
Manganese			59.8		484	
Mercury	**2**	*2*	0.090	U	0.080	U
Nickel	**100**		12.7	U	33.9	U
Potassium			932		1580	
Selenium	**50**	*50*	3.04	U	3.04	U
Silver			1.03	U	1.03	U
Sodium			10200		10400	
Thallium	**2**	*2*	0.15	U	0.20	U
Vanadium			0.52	U	9.1	
Zinc			45.7		141	

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-1		MW-86-1	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Total Petroleum Hydrocarbon Analysis (MG/L)						
Total Petroleum Hydrocarbons				NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2	
Date Sampled			10/1/86		10/25/90		5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/25/97		3/25/97	
Matrix			GW		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
Volatile Organic Analysis (UG/L)																				
1,1,1-Trichloroethane	200	200	5		7			NA		NA	2	J		NA	5	U		NA	5	U
1,1,2,2-Tetrachloroethane				NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
1,1,2-Trichloroethane	5	5		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
1,1-Dichloroethane			2		1	J		NA		NA	7			NA	5	U		NA	5	U
1,1-Dichloroethene	7	7		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
1,2-Dibromo-3-chloropropane		0.2		NA		NA		NA		NA		NA		NA	5	U		NA	5	U
1,2-Dibromoethane				NA		NA		NA		NA		NA		NA	5	U		NA	5	U
1,2-Dichloroethane	5	5		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
1,2-Dichloroethene (total)	70	70		NA	12			NA		NA	3	J		NA		NA		NA		NA
1,2-Dichloropropane	5	5		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
2-Butanone				NA		NA		NA		NA	10	U		NA	10	U		NA	10	U
2-Hexanone				NA		NA		NA		NA	10	U		NA	10	U		NA	10	U
4-Methyl-2-Pentanone				NA		NA		NA		NA	10	U		NA	10	U		NA	10	U
Acetone				NA	3	JB		NA		NA	10	U		NA	10	U		NA	34	U
Benzene	5	5		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Bromochloromethane				NA		NA		NA		NA		NA		NA	5	U		NA	5	U
Bromodichloromethane		80		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Bromoform		80		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Bromomethane				NA		NA		NA		NA	10	U		NA	10	U		NA	10	U
Carbon Disulfide				NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Carbon Tetrachloride	5	5		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Chlorobenzene	100	100		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Chloroethane				NA		NA		NA		NA	10	U		NA	10	U		NA	10	U
Chloroform	100	80	10		5			NA		NA	5	U		NA	5	U		NA	5	U
Chloromethane				NA		NA		NA		NA	10	U		NA	10	U		NA	10	U
cis-1,2-Dichloroethene	70	70		NA		NA		NA		NA		NA		NA	5	U		NA	5	U
cis-1,3-Dichloropropene				NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Dibromochloromethane		80		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Ethylbenzene	700	700		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Methylene Chloride	**5**	*5*		NA	***11***	B		NA	10	U	5	U		NA	5	U		NA	5	U
Styrene	100	100		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Tetrachloroethene	5	5		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Toluene	1000	1000		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Total Xylenes	10000	10000		NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
trans-1,2-Dichloroethene	100	100		NA		NA		NA		NA		NA		NA	5	U		NA	5	U
trans-1,3-Dichloropropene				NA		NA		NA		NA	5	U		NA	5	U		NA	5	U
Trichloroethene	**5**	*5*	1		***8***			NA		NA	3	J		NA	5	U		NA	5	U
Vinyl Acetate				NA		NA		NA		NA		NA		NA	10	U		NA	10	U
Vinyl Chloride	2	2		NA		NA		NA		NA	10	U		NA	10	U		NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2	
Date Sampled			10/1/86		10/25/90		5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/25/97		3/25/97	
Matrix			GW		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
Semivolatile Organic Analysis (UG/L)																				
1,2,4-Trichlorobenzene	70	70		NA		NA		NA		NA	10	U		NA	10	U		NA		NA
1,2-Dichlorobenzene	600	600		NA		NA		NA		NA	10	U		NA	10	U		NA		NA
1,3-Dichlorobenzene	600			NA		NA		NA		NA	10	U		NA	10	U		NA		NA
1,4-Dichlorobenzene	75	75		NA		NA		NA		NA	10	U		NA	10	U		NA		NA
2,2'-oxybis(1-Chloropropane)				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
2,4,5-Trichlorophenol				NA		NA		NA		NA	25	U		NA	50	U		NA		NA
2,4,6-Trichlorophenol				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
2,4-Dichlorophenol				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
2,4-Dimethylphenol				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
2,4-Dinitrophenol				NA		NA		NA		NA	25	U		NA	50	U		NA		NA
2,4-Dinitrotoluene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
2,6-Dinitrotoluene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
2-Chloronaphthalene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
2-Chlorophenol				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
2-Methylnaphthalene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
2-Methylphenol				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
2-Nitroaniline				NA		NA		NA		NA	25	U		NA	50	U		NA		NA
2-Nitrophenol				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
3,3'-Dichlorobenzidine				NA		NA		NA		NA	10	U		NA	20	U		NA		NA
3-Methylphenol				NA		NA		NA		NA		NA		NA	10	UJ		NA		NA
3-Nitroaniline				NA		NA		NA		NA	25	U		NA	50	U		NA		NA
4,6-Dinitro-2-methylphenol				NA		NA		NA		NA	25	U		NA	50	U		NA		NA
4-Bromophenyl-phenylether				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
4-Chloro-3-methylphenol				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
4-Chloroaniline				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
4-Chlorophenyl-phenylether				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
4-Methylphenol				NA		NA		NA		NA	10	U		NA	10	UJ		NA		NA
4-Nitroaniline				NA		NA		NA		NA	25	U		NA	50	U		NA		NA
4-Nitrophenol				NA		NA		NA		NA	25	U		NA	50	U		NA		NA
Acenaphthene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Acenaphthylene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Anthracene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Benzo(a)anthracene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Benzo(a)pyrene	**0.2**	*0.2*		NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Benzo(b)fluoranthene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Benzo(g,h,i)perylene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Benzo(k)fluoranthene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Bis(2-Chloroethoxy)methane				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Bis(2-Chloroethyl)ether				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA		NA		NA		NA	4	J		NA	10	U		NA		NA

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2	
Date Sampled			10/1/86		10/25/90		5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/25/97		3/25/97	
Matrix			GW		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
Butylbenzylphthalate				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Carbazole				NA		NA		NA		NA	10	U		NA	20	R		NA		NA
Chrysene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Di-n-Butylphthalate				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Di-n-octylphthalate				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Dibenzo(a,h)anthracene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Dibenzofuran				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Diethylphthalate				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Dimethylphthalate				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Fluoranthene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Fluorene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Hexachlorobenzene	1	1		NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Hexachlorobutadiene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Hexachlorocyclopentadiene		50		NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Hexachloroethane				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Indeno(1,2,3-cd)pyrene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Isophorone				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
N-Nitroso-di-n-propylamine				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
N-Nitroso-diphenylamine				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Naphthalene	20			NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Nitrobenzene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Pentachlorophenol	1	1		NA		NA		NA		NA	25	U		NA	50	U		NA		NA
Phenanthrene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Phenol				NA		NA		NA		NA		NA		NA		NA		NA		NA
Phenols				NA		NA		NA		NA	10	U		NA	10	U		NA		NA
Pyrene				NA		NA		NA		NA	10	U		NA	10	U		NA		NA

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2	
Date Sampled			10/1/86		10/25/90		5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/25/97		3/25/97	
Matrix			GW		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
Pesticide/PCB Analysis (UG/L)																				
4,4'-DDD				NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDE				NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDT				NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.10	U
Aldrin				NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.050	U
alpha-BHC				NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.050	U
alpha-Chlordane		2		NA		NA		NA		NA		NA		NA	0.050	U		NA	0.050	U
Aroclor-1016				NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1221				NA		NA		NA		NA	2.0	U		NA	2.0	U		NA	2.0	U
Aroclor-1232				NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1242				NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1248				NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1254				NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1260				NA		NA		NA		NA	1.0	U		NA	1.0	U		NA	1.0	U
beta-BHC				NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.050	U
delta-BHC				NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.050	U
Dieldrin				NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan I				NA		NA		NA		NA	0.050	U		NA	0.050	UJ		NA	0.050	U
Endosulfan II				NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan Sulfate				NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin		2		NA		NA		NA		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin Aldehyde				NA		NA		NA		NA	0.10	U		NA	0.010	U		NA	0.010	U
Endrin Ketone				NA		NA		NA		NA		NA		NA	0.10	U		NA	0.10	U
gamma-BHC		0.2		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.050	U
gamma-Chlordane		2		NA		NA		NA		NA		NA		NA	0.050	U		NA	0.050	U
Heptachlor		0.4		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.050	U
Heptachlor Epoxide		0.2		NA		NA		NA		NA	0.050	U		NA	0.050	U		NA	0.050	U
Methoxychlor		40		NA		NA		NA		NA	0.50	U		NA	0.50	U		NA	0.50	U
Toxaphene		3		NA		NA		NA		NA	5.0	U		NA	5.0	U		NA	5.0	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2	
Date Sampled			10/1/86		10/25/90		5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/25/97		3/25/97	
Matrix			GW		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
TAL Metal Analysis (UG/L)																				
Aluminum				NA		NA	18900		18900			NA	100	U	2800			NA		NA
Antimony	**6**	*6*		NA		NA		NA		NA		NA	20.0	U	20.0	U		NA		NA
Arsenic	**50**	*50*		NA	***51600***		47.0		47.0			NA	4.0	U	18.0			NA		NA
Barium	**2000**	*2000*		NA		NA	67.0	B	67.0			NA	10.0	U	10.0			NA		NA
Beryllium	4	*4*		NA		NA		NA		NA		NA	10.0	U	10.0	U		NA		NA
Cadmium	**5**	*5*		NA		NA		NA		NA		NA	10.0	U	10.0	U		NA		NA
Calcium				NA		NA	25300	J	25300	J		NA	35000		36000			NA		NA
Chromium	**100**	*100*		NA	***12400***		66.0		66.0			NA	20.0	U	20.0	U		NA		NA
Cobalt				NA		NA	102		102			NA	20.0	U	20.0	U		NA		NA
Copper		*1300*		NA	*91200*		76.0		76.0			NA	20.0	U	20.0	U		NA		NA
Iron				NA		NA	94600	J	94600	J		NA	40.0	U	8900			NA		NA
Lead	**15**	*15*		NA	***36200***		***53.0***	J	***53.0***	J		NA	5.0	U	9.0			NA		NA
Magnesium				NA		NA	27700	J	27200	J		NA	28000		28000			NA		NA
Manganese				NA		NA	4380	J	4380	J		NA	140		350			NA		NA
Mercury	**2**	*2*		NA		NA	0.14	B	0.14	B		NA	0.20	U	0.20	U		NA		NA
Nickel	**100**			NA	**134000**		**115**		**115**			NA	40.0	U	40.0	U		NA		NA
Potassium				NA		NA	2860	B	2860	B		NA	3000		3000			NA		NA
Selenium	**50**	*50*		NA		NA		NA		NA		NA	4.0	U	4.0	U		NA		NA
Silver				NA		NA		NA		NA		NA	10.0	U	10.0	U		NA		NA
Sodium				NA		NA	15100		15100			NA	19000		18000			NA		NA
Thallium	**2**	*2*		NA		NA		NA		NA		NA	5.0	U	5.0	U		NA		NA
Vanadium				NA		NA		NA		NA		NA	10.0	U	10.0	U		NA		NA
Zinc				NA	331000		255		255			NA	30.0		70.0			NA		NA

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2		MW-86-2	
Date Sampled			10/1/86		10/25/90		5/1/92		5/1/92		2/28/95		12/18/96		12/18/96		3/25/97		3/25/97	
Matrix			GW		GW		GF		GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL																		
Total Petroleum Hydrocarbon Analysis (MG/L)																				
Total Petroleum Hydrocarbons				NA		NA		NA		NA		NA		NA	1.0	U	1.0	U		NA

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4	
Date Sampled			10/1/86		7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/5/97		3/25/97		3/25/97		8/14/97		5/22/01		5/22/01	
Matrix			GW		GW		GW		GF		GW		GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																										
Volatile Organic Analysis (UG/L)																												
1,1,1-Trichloroethane	200	200		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
1,1,2,2-Tetrachloroethane				NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
1,1,2-Trichloroethane	5	5		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
1,1-Dichloroethane				NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
1,1-Dichloroethene	7	7		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
1,2-Dibromo-3-chloropropane		0.2		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U		NA		NA	1	U
1,2-Dibromoethane				NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U		NA		NA	1	U
1,2-Dichloroethane	5	5		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
1,2-Dichloroethene (total)	70	70		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	2	U
1,2-Dichloropropane	5	5		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
2-Butanone				NA		NA		NA		NA		NA		NA	10	U		NA		NA	10	U	10	UR		NA	5	U
2-Hexanone				NA		NA		NA		NA		NA		NA	10	U		NA		NA	10	U	10	U		NA	4	U
4-Methyl-2-Pentanone				NA		NA		NA		NA		NA		NA	10	U		NA		NA	10	U	10	U		NA	3	U
Acetone				NA		NA		NA		NA	10	U		NA	10	U		NA		NA	10	U	10	UR		NA	5	U
Benzene	5	5		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Bromochloromethane				NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U		NA		NA	1	U
Bromodichloromethane		80		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Bromoform		80		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Bromomethane				NA		NA		NA		NA		NA		NA	10	U		NA		NA	10	U	5	U		NA	2	UJ
Carbon Disulfide				NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Carbon Tetrachloride	5	5		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Chlorobenzene	100	100		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Chloroethane				NA		NA		NA		NA		NA		NA	10	U		NA		NA	10	U	5	U		NA	2	U
Chloroform	100	80	12			NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Chloromethane				NA		NA		NA		NA		NA		NA	10	U		NA		NA	10	U	5	U		NA	2	U
cis-1,2-Dichloroethene	70	70		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	2	U
cis-1,3-Dichloropropene				NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Dibromochloromethane		80		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Ethylbenzene	700	700		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Methylene Chloride	***5***	*5*		NA		NA	***8***	B		NA		NA		NA	5	U		NA		NA	5	U	9	U		NA	1	U
Styrene	100	100		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Tetrachloroethene	5	5		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Toluene	1000	1000		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Total Xylenes	10000	10000		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
trans-1,2-Dichloroethene	100	100		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	2	U
trans-1,3-Dichloropropene				NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Trichloroethene	**5**	*5*		NA		NA		NA		NA		NA		NA	5	U		NA		NA	5	U	5	U		NA	1	U
Vinyl Acetate				NA		NA		NA		NA		NA		NA	10	U		NA		NA	10	U		NA		NA	1	UJ
Vinyl Chloride	2	2		NA		NA		NA		NA		NA		NA	10	U		NA		NA	10	U	2	U		NA	2	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4	
Date Sampled			10/1/86		7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/5/97		3/25/97		3/25/97		8/14/97		5/22/01		5/22/01	
Matrix			GW		GW		GW		GF		GW		GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																										
Semivolatile Organic Analysis (UG/L)																												
1,2,4-Trichlorobenzene	70	70		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
1,2-Dichlorobenzene	600	600		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
1,3-Dichlorobenzene	600			NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
1,4-Dichlorobenzene	75	75		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
2,4,5-Trichlorophenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	25	U
2,4,6-Trichlorophenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
2,4-Dichlorophenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
2,4-Dimethylphenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
2,4-Dinitrophenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	25	UJ
2,4-Dinitrotoluene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
2,6-Dinitrotoluene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
2-Chloronaphthalene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
2-Chlorophenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
2-Methylnaphthalene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
2-Methylphenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
2-Nitroaniline				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	25	U
2-Nitrophenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
3,3'-Dichlorobenzidine				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
3-Methylphenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
3-Nitroaniline				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	25	U
4,6-Dinitro-2-methylphenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	25	U
4-Bromophenyl-phenylether				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
4-Chloro-3-methylphenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
4-Chloroaniline				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
4-Chlorophenyl-phenylether				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
4-Methylphenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
4-Nitroaniline				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	25	U
4-Nitrophenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	25	U
Acenaphthene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Acenaphthylene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Anthracene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Benzo(a)anthracene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	0.2	U
Benzo(b)fluoranthene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Benzo(g,h,i)perylene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Benzo(k)fluoranthene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Bis(2-Chloroethoxy)methane				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Bis(2-Chloroethyl)ether				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4	
Date Sampled			10/1/86		7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/5/97		3/25/97		3/25/97		8/14/97		5/22/01		5/22/01	
Matrix			GW		GW		GW		GF		GW		GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																										
Butylbenzylphthalate				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Carbazole				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Chrysene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Di-n-Butylphthalate				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Di-n-octylphthalate				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Dibenzo(a,h)anthracene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Dibenzofuran				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Diethylphthalate				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Dimethylphthalate				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Fluoranthene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Fluorene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Hexachlorobenzene	1	1		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Hexachlorobutadiene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Hexachlorocyclopentadiene		50		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Hexachloroethane				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Indeno(1,2,3-cd)pyrene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Isophorone				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
N-Nitroso-di-n-propylamine				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
N-Nitroso-diphenylamine				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Naphthalene	20			NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Nitrobenzene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Pentachlorophenol	1	1		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	25	U
Phenanthrene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Phenol				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U
Phenols				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
Pyrene				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4	
Date Sampled			10/1/86		7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/5/97		3/25/97		3/25/97		8/14/97		5/22/01		5/22/01	
Matrix			GW		GW		GW		GF		GW		GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																										
Pesticide/PCB Analysis (UG/L)																												
4,4'-DDD				NA		NA		NA		NA		NA		NA	0.10	U	0.10	U		NA		NA		NA		NA		NA
4,4'-DDE				NA		NA		NA		NA		NA		NA	0.10	U	0.10	U		NA		NA		NA		NA		NA
4,4'-DDT				NA		NA		NA		NA		NA		NA	0.10	U	0.10	U		NA		NA		NA		NA		NA
Aldrin				NA		NA		NA		NA		NA		NA	0.050	U	0.050	U		NA		NA		NA		NA		NA
alpha-BHC				NA		NA		NA		NA		NA		NA	0.050	U	0.050	U		NA		NA		NA		NA		NA
alpha-Chlordane		2		NA		NA		NA		NA		NA		NA	0.050	U	0.050	U		NA		NA		NA		NA		NA
Aroclor-1016				NA		NA		NA		NA		NA		NA	1.0	U	1.0	U		NA		NA		NA		NA		NA
Aroclor-1221				NA		NA		NA		NA		NA		NA	2.0	U	2.0	U		NA		NA		NA		NA		NA
Aroclor-1232				NA		NA		NA		NA		NA		NA	1.0	U	1.0	U		NA		NA		NA		NA		NA
Aroclor-1242				NA		NA		NA		NA		NA		NA	1.0	U	1.0	U		NA		NA		NA		NA		NA
Aroclor-1248				NA		NA		NA		NA		NA		NA	1.0	U	1.0	U		NA		NA		NA		NA		NA
Aroclor-1254				NA		NA		NA		NA		NA		NA	1.0	U	1.0	U		NA		NA		NA		NA		NA
Aroclor-1260				NA		NA		NA		NA		NA		NA	1.0	U	1.0	U		NA		NA		NA		NA		NA
beta-BHC				NA		NA		NA		NA		NA		NA	0.050	U	0.050	U		NA		NA		NA		NA		NA
delta-BHC				NA		NA		NA		NA		NA		NA	0.050	U	0.050	U		NA		NA		NA		NA		NA
Dieldrin				NA		NA		NA		NA		NA		NA	0.10	U	0.10	U		NA		NA		NA		NA		NA
Endosulfan I				NA		NA		NA		NA		NA		NA	0.050	UJ	0.050	U		NA		NA		NA		NA		NA
Endosulfan II				NA		NA		NA		NA		NA		NA	0.10	U	0.10	U		NA		NA		NA		NA		NA
Endosulfan Sulfate				NA		NA		NA		NA		NA		NA	0.10	U	0.10	U		NA		NA		NA		NA		NA
Endrin		2		NA		NA		NA		NA		NA		NA	0.10	U	0.10	U		NA		NA		NA		NA		NA
Endrin Aldehyde				NA		NA		NA		NA		NA		NA	0.010	U	0.010	U		NA		NA		NA		NA		NA
Endrin Ketone				NA		NA		NA		NA		NA		NA	0.10	U	0.10	U		NA		NA		NA		NA		NA
gamma-BHC		0.2		NA		NA		NA		NA		NA		NA	0.050	U	0.050	U		NA		NA		NA		NA		NA
gamma-Chlordane		2		NA		NA		NA		NA		NA		NA	0.050	U	0.050	U		NA		NA		NA		NA		NA
Heptachlor		0.4		NA		NA		NA		NA		NA		NA	0.050	U	0.050	U		NA		NA		NA		NA		NA
Heptachlor Epoxide		0.2		NA		NA		NA		NA		NA		NA	0.050	U	0.050	U		NA		NA		NA		NA		NA
Methoxychlor		40		NA		NA		NA		NA		NA		NA	0.50	U	0.50	U		NA		NA		NA		NA		NA
Toxaphene		3		NA		NA		NA		NA		NA		NA	5.0	U	5.0	U		NA		NA		NA		NA		NA

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4	
Date Sampled			10/1/86		7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/5/97		3/25/97		3/25/97		8/14/97		5/22/01		5/22/01	
Matrix			GW		GW		GW		GF		GW		GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																										
TAL Metal Analysis (UG/L)																												
Aluminum				NA		NA		NA	105	BU	17400		100	U	6300			NA		NA		NA		NA	114	U	203	U
Antimony	**6**	*6*		NA		NA		NA		NA		NA	20.0	U	20.0	U		NA		NA		NA		NA	3.65	U	3.65	U
Arsenic	**50**	*50*		NA		NA		NA	2.0	UJ	16.0	J	4.0		14.0			NA		NA		NA		NA	2.53	U	2.53	U
Barium	**2000**	*2000*		NA		NA		NA		NA	23.0	B	10.0	U	10.0	U		NA		NA		NA		NA	3.3		3.9	
Beryllium	4	*4*		NA		NA		NA		NA		NA	10.0	U	10.0	U		NA		NA		NA		NA	0.18	U	0.18	U
Cadmium	**5**	*5*		NA		NA		NA		NA		NA	10.0	U	10.0	U		NA		NA		NA		NA	0.76	U	1.1	U
Calcium				NA		NA		NA	4660	B	6000		5400		6800			NA		NA		NA		NA	4340		4240	
Chromium	**100**	*100*		NA		NA		NA		NA	30.0		20.0	U	20.0	U		NA		NA		NA		NA	0.57	U	0.57	U
Cobalt				NA		NA		NA		NA	17.0	B	20.0	U	20.0	U		NA		NA		NA		NA	2.8		3.1	
Copper		*1300*		NA		NA		NA	8.0	B	34.0		20.0	U	20.0	U		NA		NA		NA		NA	0.84	U	0.84	U
Iron				NA		NA		NA		NA	44700		40.0	U	19000			NA		NA		NA		NA	20.4	U	154	U
Lead	**15**	*15*		NA	***20200***	J		NA		NA	***17.0***	J	5.0		11.0			NA		NA		NA		NA	1.48	U	1.48	U
Magnesium				NA		NA		NA	2100	B	7000		2100		3800			NA		NA		NA		NA	2070		2030	
Manganese				NA		NA		NA	20.0		263		20.0		200			NA		NA		NA		NA	20.3		23.7	
Mercury	**2**	*2*		NA		NA		NA		NA		NA	0.20		0.20	U		NA		NA		NA		NA	0.050	U	0.060	U
Nickel	**100**			NA		NA		NA		NA	27.0	B	40.0	U	40.0	U		NA		NA		NA		NA	6.3	U	6.8	U
Potassium				NA		NA		NA		NA	1330	B	1000		1000			NA		NA		NA		NA	1130		1030	
Selenium	**50**	*50*		NA		NA		NA	2.0	UJ	2000	UJ	4.0		4.0	U		NA		NA		NA		NA	3.04	U	3.04	U
Silver				NA		NA		NA		NA		NA	10.0	U	10.0	U		NA		NA		NA		NA	1.03	U	1.03	U
Sodium				NA		NA		NA	8960		8700		4700		5000			NA		NA		NA		NA	8390		8230	
Thallium	**2**	*2*		NA		NA		NA		NA		NA	***5.0***		***5.0***			NA		NA		NA		NA	0.10	U	0.12	U
Vanadium				NA		NA		NA		NA	12.0	B	10.0	U	10.0	U		NA		NA		NA		NA	0.52	U	0.52	U
Zinc				NA		NA		NA	10.0	B	84.0		30.0		30.0			NA		NA		NA		NA	12.6	U	12.3	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4		MW-86-4	
Date Sampled			10/1/86		7/20/90		10/25/90		5/1/92		5/1/92		12/18/96		12/18/96		3/5/97		3/25/97		3/25/97		8/14/97		5/22/01		5/22/01	
Matrix			GW		GW		GW		GF		GW		GF		GW		GW		GF		GW		GW		GF		GW	
QC Info	GA Obj.	MCL																										
Total Petroleum Hydrocarbon Analysis (MG/L)																												
Total Petroleum Hydrocarbons				NA		NA		NA		NA		NA		NA	1.0	U		NA	1.0	U		NA		NA		NA		NA

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5	
Date Sampled			5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97	
Matrix			GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
Volatile Organic Analysis (UG/L)														
1,1,1-Trichloroethane	200	200		NA	5	U		NA	5	U		NA	5	U
1,1,2,2-Tetrachloroethane				NA	5	U		NA	5	U		NA	5	U
1,1,2-Trichloroethane	5	5		NA	5	U		NA	5	U		NA	5	U
1,1-Dichloroethane				NA	5	U		NA	5	U		NA	5	U
1,1-Dichloroethene	7	7		NA	5	U		NA	5	U		NA	5	U
1,2-Dibromo-3-chloropropane		0.2		NA		NA		NA	5	U		NA	5	U
1,2-Dibromoethane				NA		NA		NA	5	U		NA	5	U
1,2-Dichloroethane	5	5		NA	5	U		NA	5	U		NA	5	U
1,2-Dichloroethene (total)	70	70		NA	5	U		NA		NA		NA		NA
1,2-Dichloropropane	5	5		NA	5	U		NA	5	U		NA	5	U
2-Butanone				NA	10	U		NA	10	U		NA	10	U
2-Hexanone				NA	10	U		NA	10	U		NA	10	U
4-Methyl-2-Pentanone				NA	10	U		NA	10	U		NA	10	U
Acetone			17	U	10	U		NA	10	U		NA	10	U
Benzene	5	5		NA	5	U		NA	5	U		NA	5	U
Bromochloromethane				NA		NA		NA	5	U		NA	5	U
Bromodichloromethane		80		NA	5	U		NA	5	U		NA	5	U
Bromoform		80		NA	5	U		NA	5	U		NA	5	U
Bromomethane				NA	10	U		NA	10	U		NA	10	U
Carbon Disulfide				NA	5	U		NA	5	U		NA	5	U
Carbon Tetrachloride	5	5		NA	5	U		NA	5	U		NA	5	U
Chlorobenzene	100	100		NA	5	U		NA	5	U		NA	5	U
Chloroethane				NA	10	U		NA	10	U		NA	10	U
Chloroform	100	80		NA	5	U		NA	5	U		NA	5	U
Chloromethane				NA	10	U		NA	10	U		NA	10	U
cis-1,2-Dichloroethene	70	70		NA		NA		NA	5	U		NA	5	U
cis-1,3-Dichloropropene				NA	5	U		NA	5	U		NA	5	U
Dibromochloromethane		80		NA	5	U		NA	5	U		NA	5	U
Ethylbenzene	700	700		NA	5	U		NA	5	U		NA	5	U
Methylene Chloride	**5**	*5*	10	U	5	U		NA	5	U		NA	5	U
Styrene	100	100		NA	5	U		NA	5	U		NA	5	U
Tetrachloroethene	5	5		NA	5	U		NA	5	U		NA	5	U
Toluene	1000	1000		NA	5	U		NA	5	U		NA	5	U
Total Xylenes	10000	10000		NA	5	U		NA	5	U		NA	5	U
trans-1,2-Dichloroethene	100	100		NA		NA		NA	5	U		NA	5	U
trans-1,3-Dichloropropene				NA	5	U		NA	5	U		NA	5	U
Trichloroethene	**5**	*5*		NA	5	U		NA	5	U		NA	5	U
Vinyl Acetate				NA		NA		NA	10	U		NA	10	U
Vinyl Chloride	2	2		NA	10	U		NA	10	U		NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5	
Date Sampled			5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97	
Matrix			GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
Semivolatile Organic Analysis (UG/L)														
1,2,4-Trichlorobenzene	70	70		NA	10	U		NA	10	U		NA	10	U
1,2-Dichlorobenzene	600	600		NA	10	U		NA	10	U		NA	10	U
1,3-Dichlorobenzene	600			NA	10	U		NA	10	U		NA	10	U
1,4-Dichlorobenzene	75	75		NA	10	U		NA	10	U		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA	10	U		NA	10	U		NA	10	U
2,4,5-Trichlorophenol				NA	25	U		NA	50	U		NA	50	U
2,4,6-Trichlorophenol				NA	10	U		NA	10	U		NA	10	U
2,4-Dichlorophenol				NA	10	U		NA	10	U		NA	10	U
2,4-Dimethylphenol				NA	10	U		NA	10	U		NA	10	U
2,4-Dinitrophenol				NA	25	U		NA	50	U		NA	50	U
2,4-Dinitrotoluene				NA	10	U		NA	10	U		NA	10	U
2,6-Dinitrotoluene				NA	10	U		NA	10	U		NA	10	U
2-Chloronaphthalene				NA	10	U		NA	10	U		NA	10	U
2-Chlorophenol				NA	10	U		NA	10	U		NA	10	U
2-Methylnaphthalene				NA	10	U		NA	10	U		NA	10	U
2-Methylphenol				NA	10	U		NA	10	U		NA	10	U
2-Nitroaniline				NA	25	U		NA	50	U		NA	50	U
2-Nitrophenol				NA	10	U		NA	10	U		NA	10	U
3,3'-Dichlorobenzidine				NA	10	U		NA	20	U		NA	20	U
3-Methylphenol				NA		NA		NA	10	UJ		NA	10	UJ
3-Nitroaniline				NA	25	U		NA	50	U		NA	50	U
4,6-Dinitro-2-methylphenol				NA	25	U		NA	50	U		NA	50	U
4-Bromophenyl-phenylether				NA	10	U		NA	10	U		NA	10	U
4-Chloro-3-methylphenol				NA	10	U		NA	10	U		NA	10	U
4-Chloroaniline				NA	10	U		NA	10	U		NA	10	U
4-Chlorophenyl-phenylether				NA	10	U		NA	10	U		NA	10	U
4-Methylphenol				NA	10	U		NA	10	UJ		NA	10	UJ
4-Nitroaniline				NA	25	U		NA	50	U		NA	50	U
4-Nitrophenol				NA	25	U		NA	50	U		NA	50	U
Acenaphthene				NA	10	U		NA	10	U		NA	10	U
Acenaphthylene				NA	10	U		NA	10	U		NA	10	U
Anthracene				NA	10	U		NA	10	U		NA	10	U
Benzo(a)anthracene				NA	10	U		NA	10	U		NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA	10	U		NA	10	U		NA	10	U
Benzo(b)fluoranthene				NA	10	U		NA	10	U		NA	10	U
Benzo(g,h,i)perylene				NA	10	U		NA	10	U		NA	10	U
Benzo(k)fluoranthene				NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethoxy)methane				NA	10	U		NA	10	U		NA	10	U
Bis(2-Chloroethyl)ether				NA	10	U		NA	10	U		NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA	2	J		NA	10	U		NA	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5	
Date Sampled			5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97	
Matrix			GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
Butylbenzylphthalate				NA	10	U		NA	10	U		NA	10	U
Carbazole				NA	10	U		NA	20	R		NA	20	U
Chrysene				NA	10	U		NA	10	U		NA	10	U
Di-n-Butylphthalate				NA	10	U		NA	10	U		NA	10	U
Di-n-octylphthalate				NA	10	U		NA	10	U		NA	10	U
Dibenzo(a,h)anthracene				NA	10	U		NA	10	U		NA	10	U
Dibenzofuran				NA	10	U		NA	10	U		NA	10	U
Diethylphthalate				NA	10	U		NA	10	U		NA	10	U
Dimethylphthalate				NA	10	U		NA	10	U		NA	10	U
Fluoranthene				NA	10	U		NA	10	U		NA	10	U
Fluorene				NA	10	U		NA	10	U		NA	10	U
Hexachlorobenzene	1	1		NA	10	U		NA	10	U		NA	10	U
Hexachlorobutadiene				NA	10	U		NA	10	U		NA	10	U
Hexachlorocyclopentadiene		50		NA	10	U		NA	10	U		NA	10	U
Hexachloroethane				NA	10	U		NA	10	U		NA	10	U
Indeno(1,2,3-cd)pyrene				NA	10	U		NA	10	U		NA	10	U
Isophorone				NA	10	U		NA	10	U		NA	10	U
N-Nitroso-di-n-propylamine				NA	10	U		NA	10	U		NA	10	U
N-Nitroso-diphenylamine				NA	10	U		NA	10	U		NA	10	U
Naphthalene	20			NA	10	U		NA	10	U		NA	10	U
Nitrobenzene				NA	10	U		NA	10	U		NA	10	U
Pentachlorophenol	1	1		NA	25	U		NA	50	U		NA	50	U
Phenanthrene				NA	10	U		NA	10	U		NA	10	U
Phenol				NA		NA		NA		NA		NA		NA
Phenols				NA	10	U		NA	10	U		NA	10	U
Pyrene				NA	10	U		NA	10	U		NA	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5	
Date Sampled			5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97	
Matrix			GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
Pesticide/PCB Analysis (UG/L)														
4,4'-DDD				NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDE				NA	0.10	U		NA	0.10	U		NA	0.10	U
4,4'-DDT				NA	0.10	U		NA	0.10	U		NA	0.10	U
Aldrin				NA	0.050	U		NA	0.050	U		NA	0.050	U
alpha-BHC				NA	0.050	U		NA	0.050	U		NA	0.050	U
alpha-Chlordane		2		NA		NA		NA	0.050	U		NA	0.050	U
Aroclor-1016				NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1221				NA	2.0	U		NA	2.0	U		NA	2.0	U
Aroclor-1232				NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1242				NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1248				NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1254				NA	1.0	U		NA	1.0	U		NA	1.0	U
Aroclor-1260				NA	1.0	U		NA	1.0	U		NA	1.0	U
beta-BHC				NA	0.050	U		NA	0.050	U		NA	0.050	U
delta-BHC				NA	0.050	U		NA	0.050	U		NA	0.050	U
Dieldrin				NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan I				NA	0.050	U		NA	0.050	UJ		NA	0.050	U
Endosulfan II				NA	0.10	U		NA	0.10	U		NA	0.10	U
Endosulfan Sulfate				NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin		2		NA	0.10	U		NA	0.10	U		NA	0.10	U
Endrin Aldehyde				NA	0.10	U		NA	0.010	U		NA	0.010	U
Endrin Ketone				NA		NA		NA	0.10	U		NA	0.10	U
gamma-BHC		0.2		NA	0.050	U		NA	0.050	U		NA	0.050	U
gamma-Chlordane		2		NA		NA		NA	0.050	U		NA	0.050	U
Heptachlor		0.4		NA	0.050	U		NA	0.050	U		NA	0.050	U
Heptachlor Epoxide		0.2		NA	0.050	U		NA	0.050	U		NA	0.050	U
Methoxychlor		40		NA	0.50	U		NA	0.50	U		NA	0.50	U
Toxaphene		3		NA	5.0	U		NA	5.0	U		NA	5.0	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5	
Date Sampled			5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97	
Matrix			GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
TAL Metal Analysis (UG/L)														
Aluminum				NA		NA	100	U	1100		100	U	8000	J
Antimony	**6**	*6*		NA		NA	20.0	U	20.0	U	20.0	U	20.0	U
Arsenic	**50**	*50*		NA		NA	4.0	U	4.0	U	4.0	UJ	15.0	J
Barium	**2000**	*2000*		NA		NA	10.0	U	10.0	U	10.0	U	20.0	J
Beryllium	4	*4*		NA		NA	10.0	U	10.0	U	10.0	U	10.0	U
Cadmium	**5**	*5*		NA		NA	10.0	U	10.0	U	10.0	U	10.0	U
Calcium				NA		NA	7900		9200		8800		10000	
Chromium	**100**	*100*		NA		NA	20.0	U	20.0	U	20.0	U	20.0	U
Cobalt				NA		NA	20.0	U	20.0	U	20.0	U	20.0	U
Copper		*1300*		NA		NA	20.0	U	20.0	U	20.0	U	20.0	U
Iron				NA		NA	40.0	U	2100		40.0	U	20000	J
Lead	**15**	*15*		NA		NA	5.0	U	5.0	U	5.0	U	10.0	
Magnesium				NA		NA	9100		9200		9000		11000	
Manganese				NA		NA	10.0	U	10.0		10.0	U	90.0	
Mercury	**2**	*2*		NA		NA	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	**100**			NA		NA	40.0	U	40.0	U	40.0	U	**270**	J
Potassium				NA		NA	1000		1000	U	1000	U	2000	
Selenium	**50**	*50*		NA		NA	4.0	U	4.0	U	4.0	UJ	4.0	UJ
Silver				NA		NA	10.0	U	10.0	U	10.0	U	10.0	U
Sodium				NA		NA	6800		6900		6500		8100	
Thallium	**2**	*2*		NA		NA	5.0	U	5.0	U	5.0	U	5.0	U
Vanadium				NA		NA	10.0	U	10.0	U	10.0	U	10.0	
Zinc				NA		NA	10.0	U	20.0		10.0		70.0	J

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5		MW-86-5	
Date Sampled			5/1/92		2/28/95		12/17/96		12/17/96		3/24/97		3/24/97	
Matrix			GW		GW		GF		GW		GF		GW	
QC Info	GA Obj.	MCL												
Total Petroleum Hydrocarbon Analysis (MG/L)														
Total Petroleum Hydrocarbons				NA		NA		NA	1.0	U		NA	1.0	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-701		MW-701		MW-701		MW-701		MW-701		MW-701		MW-701	
Date Sampled			3/24/97		3/24/97		3/25/97		8/13/97		8/13/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL									DUP					
Volatile Organic Analysis (UG/L)																
1,1,1-Trichloroethane	200	200		NA		NA	5	U	5	U	5	U		NA	1	U
1,1,2,2-Tetrachloroethane				NA		NA	5	U	5	U	5	U		NA	1	U
1,1,2-Trichloroethane	5	5		NA		NA	5	U	5	U	5	U		NA	1	U
1,1-Dichloroethane				NA		NA	5	U	5	U	5	U		NA	1	U
1,1-Dichloroethene	7	7		NA		NA	5	U	5	U	5	U		NA	1	U
1,2-Dibromo-3-chloropropane		0.2		NA		NA	5	U		NA		NA		NA	1	U
1,2-Dibromoethane				NA		NA	5	U		NA		NA		NA	1	U
1,2-Dichloroethane	5	5		NA		NA	5	U	5	U	5	U		NA	1	U
1,2-Dichloroethene (total)	70	70		NA		NA		NA		NA		NA		NA	2	U
1,2-Dichloropropane	5	5		NA		NA	5	U	5	U	5	U		NA	1	U
2-Butanone				NA		NA	10	U	10	UR	10	UR		NA	5	U
2-Hexanone				NA		NA	10	U	10	U	10	U		NA	4	U
4-Methyl-2-Pentanone				NA		NA	10	U	10	UJ	10	U		NA	3	U
Acetone				NA		NA	10	U	10	UR	10	UR		NA	5	U
Benzene	5	5		NA		NA	5	U	5	U	5	U		NA	1	U
Bromochloromethane				NA		NA	5	U		NA		NA		NA	1	U
Bromodichloromethane		80		NA		NA	5	U	5	U	5	U		NA	1	U
Bromoform		80		NA		NA	5	U	5	UJ	5	U		NA	1	U
Bromomethane				NA		NA	10	U	5	U	5	U		NA	2	UJ
Carbon Disulfide				NA		NA	5	U	5	U	5	U		NA	1	U
Carbon Tetrachloride	5	5		NA		NA	5	U	5	U	5	U		NA	1	U
Chlorobenzene	100	100		NA		NA	5	U	5	U	5	U		NA	1	U
Chloroethane				NA		NA	10	U	5	U	5	U		NA	2	U
Chloroform	100	80		NA		NA	5	U	5	U	5	U		NA	1	U
Chloromethane				NA		NA	10	U	5	U	5	U		NA	2	U
cis-1,2-Dichloroethene	70	70		NA		NA	5	U	5	U	5	U		NA	2	U
cis-1,3-Dichloropropene				NA		NA	5	U	5	U	5	U		NA	1	U
Dibromochloromethane		80		NA		NA	5	U	5	U	5	U		NA	1	U
Ethylbenzene	700	700		NA		NA	5	U	5	U	5	U		NA	1	U
Methylene Chloride	**5**	*5*		NA		NA	5	U	10	U	9	U		NA	1	U
Styrene	100	100		NA		NA	5	U	5	U	5	U		NA	1	U
Tetrachloroethene	5	5		NA		NA	5	U	5	U	5	U		NA	1	U
Toluene	1000	1000		NA		NA	5	U	5	U	5	U		NA	1	U
Total Xylenes	10000	10000		NA		NA	5	U	1	J	5	U		NA	1	U
trans-1,2-Dichloroethene	100	100		NA		NA	5	U	5	U	5	U		NA	2	U
trans-1,3-Dichloropropene				NA		NA	5	U	5	U	5	U		NA	1	U
Trichloroethene	**5**	*5*		NA		NA	5	U	5	U	5	U		NA	1	U
Vinyl Acetate				NA		NA	10	U		NA		NA		NA	1	UJ
Vinyl Chloride	2	2		NA		NA	10	U	2	U	2	U		NA	2	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-701		MW-701		MW-701		MW-701		MW-701		MW-701		MW-701	
Date Sampled			3/24/97		3/24/97		3/25/97		8/13/97		8/13/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL									DUP					
Semivolatile Organic Analysis (UG/L)																
1,2,4-Trichlorobenzene	70	70		NA		NA	10	U	5	U	5	U		NA	10	U
1,2-Dichlorobenzene	600	600		NA		NA	10	U	5	U	5	U		NA	10	U
1,3-Dichlorobenzene	600			NA		NA	10	U	5	U	5	U		NA	10	U
1,4-Dichlorobenzene	75	75		NA		NA	10	U	5	U	5	U		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA		NA	10	U	5	U	5	U		NA	10	U
2,4,5-Trichlorophenol				NA		NA	50	U	10	U	10	U		NA	25	U
2,4,6-Trichlorophenol				NA		NA	10	U	5	U	5	U		NA	10	U
2,4-Dichlorophenol				NA		NA	10	U	5	U	5	U		NA	10	U
2,4-Dimethylphenol				NA		NA	10	U	5	U	5	U		NA	10	U
2,4-Dinitrophenol				NA		NA	50	U	10	U	10	U		NA	25	UJ
2,4-Dinitrotoluene				NA		NA	10	U	5	U	5	U		NA	10	U
2,6-Dinitrotoluene				NA		NA	10	U	5	U	5	U		NA	10	U
2-Chloronaphthalene				NA		NA	10	U	5	U	5	U		NA	10	U
2-Chlorophenol				NA		NA	10	U	5	U	5	U		NA	10	U
2-Methylnaphthalene				NA		NA	10	U	5	U	5	U		NA	10	U
2-Methylphenol				NA		NA	10	U	5	U	5	U		NA	10	U
2-Nitroaniline				NA		NA	50	U	10	U	10	U		NA	25	U
2-Nitrophenol				NA		NA	10	U	5	U	5	U		NA	10	U
3,3'-Dichlorobenzidine				NA		NA	20	U	5	U	5	U		NA	10	U
3-Methylphenol				NA		NA	10	UJ		NA		NA		NA		NA
3-Nitroaniline				NA		NA	50	U	10	U	10	U		NA	25	U
4,6-Dinitro-2-methylphenol				NA		NA	50	U	10	U	10	U		NA	25	U
4-Bromophenyl-phenylether				NA		NA	10	U	5	U	5	U		NA	10	U
4-Chloro-3-methylphenol				NA		NA	10	U	5	U	5	U		NA	10	U
4-Chloroaniline				NA		NA	10	U	5	U	5	U		NA	10	U
4-Chlorophenyl-phenylether				NA		NA	10	U	5	U	5	U		NA	10	U
4-Methylphenol				NA		NA	10	UJ	5	U	5	U		NA	10	U
4-Nitroaniline				NA		NA	50	U	10	U	10	U		NA	25	U
4-Nitrophenol				NA		NA	50	U	10	U	10	U		NA	25	U
Acenaphthene				NA		NA	10	U	5	U	5	U		NA	10	U
Acenaphthylene				NA		NA	10	U	5	U	5	U		NA	10	U
Anthracene				NA		NA	10	U	5	U	5	U		NA	10	U
Benzo(a)anthracene				NA		NA	10	U	5	U	5	U		NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA		NA	10	U	0.05	U	0.05	U		NA	0.2	U
Benzo(b)fluoranthene				NA		NA	10	U	5	U	5	U		NA	10	U
Benzo(g,h,i)perylene				NA		NA	10	U	5	U	5	U		NA	10	U
Benzo(k)fluoranthene				NA		NA	10	U	5	U	5	U		NA	10	U
Bis(2-Chloroethoxy)methane				NA		NA	10	U	5	U	5	U		NA	10	U
Bis(2-Chloroethyl)ether				NA		NA	10	U	5	U	5	U		NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA		NA	10	U	2	J	5	U		NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-701		MW-701		MW-701		MW-701		MW-701		MW-701		MW-701	
Date Sampled			3/24/97		3/24/97		3/25/97		8/13/97		8/13/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL									DUP					
Butylbenzylphthalate				NA		NA	10	U	5	U	5	U		NA	10	U
Carbazole				NA		NA	20	U	5	U	5	U		NA	10	U
Chrysene				NA		NA	10	U	5	U	5	U		NA	10	U
Di-n-Butylphthalate				NA		NA	10	U	5	U	5	U		NA	10	U
Di-n-octylphthalate				NA		NA	10	U	5	U	5	U		NA	10	U
Dibenzo(a,h)anthracene				NA		NA	10	U	5	U	5	U		NA	10	U
Dibenzofuran				NA		NA	10	U	5	U	5	U		NA	10	U
Diethylphthalate				NA		NA	10	U	5	U	5	U		NA	10	U
Dimethylphthalate				NA		NA	10	U	5	U	5	U		NA	10	U
Fluoranthene				NA		NA	10	U	5	U	5	U		NA	10	U
Fluorene				NA		NA	10	U	5	U	5	U		NA	10	U
Hexachlorobenzene	1	1		NA		NA	10	U	5	U	5	U		NA	10	U
Hexachlorobutadiene				NA		NA	10	U	5	U	5	U		NA	10	U
Hexachlorocyclopentadiene		50		NA		NA	10	U	5	U	5	U		NA	10	U
Hexachloroethane				NA		NA	10	U	5	U	5	U		NA	10	U
Indeno(1,2,3-cd)pyrene				NA		NA	10	U	5	U	5	U		NA	10	U
Isophorone				NA		NA	10	U	5	U	5	U		NA	10	U
N-Nitroso-di-n-propylamine				NA		NA	10	U	5	U	5	U		NA	10	U
N-Nitroso-diphenylamine				NA		NA	10	U	5	U	5	U		NA	10	U
Naphthalene	20			NA		NA	10	U	5	U	5	U		NA	10	U
Nitrobenzene				NA		NA	10	U	5	U	5	U		NA	10	U
Pentachlorophenol	1	1		NA		NA	50	U	10	U	10	U		NA	25	U
Phenanthrene				NA		NA	10	U	5	U	5	U		NA	10	U
Phenol				NA		NA		NA		NA		NA		NA	10	U
Phenols				NA		NA	10	U	5	U	5	U		NA		NA
Pyrene				NA		NA	10	U	5	U	5	U		NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-701		MW-701		MW-701		MW-701		MW-701		MW-701		MW-701	
Date Sampled			3/24/97		3/24/97		3/25/97		8/13/97		8/13/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL									DUP					
Pesticide/PCB Analysis (UG/L)																
4,4'-DDD				NA	0.10	U		NA	0.050	U	0.050	U		NA		NA
4,4'-DDE				NA	0.10	U		NA	0.050	U	0.050	U		NA		NA
4,4'-DDT				NA	0.10	U		NA	0.050	U	0.050	U		NA		NA
Aldrin				NA	0.050	U		NA	0.025	U	0.025	U		NA		NA
alpha-BHC				NA	0.050	U		NA	0.025	U	0.025	U		NA		NA
alpha-Chlordane		2		NA	0.050	U		NA	0.025	U	0.025	U		NA		NA
Aroclor-1016				NA	1.0	U		NA	0.50	U	0.50	U		NA		NA
Aroclor-1221				NA	2.0	U		NA	1.0	U	1.0	U		NA		NA
Aroclor-1232				NA	1.0	U		NA	0.50	U	0.50	U		NA		NA
Aroclor-1242				NA	1.0	U		NA	0.50	U	0.50	U		NA		NA
Aroclor-1248				NA	1.0	U		NA	0.50	U	0.50	U		NA		NA
Aroclor-1254				NA	1.0	U		NA	0.50	U	0.50	U		NA		NA
Aroclor-1260				NA	1.0	U		NA	0.50	U	0.50	U		NA		NA
beta-BHC				NA	0.050	U		NA	0.025	U	0.025	U		NA		NA
delta-BHC				NA	0.050	U		NA	0.025	U	0.025	U		NA		NA
Dieldrin				NA	0.10	U		NA	0.050	U	0.050	U		NA		NA
Endosulfan I				NA	0.050	U		NA	0.025	U	0.025	U		NA		NA
Endosulfan II				NA	0.10	U		NA	0.050	U	0.050	U		NA		NA
Endosulfan Sulfate				NA	0.10	U		NA	0.050	U	0.050	U		NA		NA
Endrin		2		NA	0.10	U		NA	0.050	U	0.050	U		NA		NA
Endrin Aldehyde				NA	0.010	U		NA	0.050	U	0.050	U		NA		NA
Endrin Ketone				NA	0.10	U		NA	0.050	U	0.050	U		NA		NA
gamma-BHC		0.2		NA	0.050	U		NA	0.025	U	0.025	U		NA		NA
gamma-Chlordane		2		NA	0.050	U		NA	0.025	U	0.025	U		NA		NA
Heptachlor		0.4		NA	0.050	U		NA	0.025	U	0.025	U		NA		NA
Heptachlor Epoxide		0.2		NA	0.050	U		NA	0.025	U	0.025	U		NA		NA
Methoxychlor		40		NA	0.50	U		NA	0.25	U	0.25	U		NA		NA
Toxaphene		3		NA	5.0	U		NA	2.5	U	2.5	U		NA		NA

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-701		MW-701		MW-701		MW-701		MW-701		MW-701		MW-701	
Date Sampled			3/24/97		3/24/97		3/25/97		8/13/97		8/13/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL									DUP					
TAL Metal Analysis (UG/L)																
Aluminum			100	U	3100	J		NA	331000	U	215000	U	53.3	U	70.5	U
Antimony	**6**	*6*	20.0	U	20.0	U		NA	2000	U	2000	U	3.65	U	4.38	U
Arsenic	**50**	*50*	4.0	UJ	6.0	J		NA	3200	U	3200	U	2.53	U	3.04	U
Barium	**2000**	*2000*	30.0		80.0	J		NA	36300	U	37200	U	24.6		24.8	
Beryllium	4	4	10.0	U	10.0	U		NA	1600	U	1200	U	0.18	U	0.22	U
Cadmium	**5**	*5*	10.0	U	10.0	U		NA	500	U	500	U	0.24	U	0.29	U
Calcium			50000		49000			NA	57100000		57200000		39600		39600	
Chromium	**100**	*100*	20.0	U	20.0	U		NA	6500	UJ	6500	UJ	0.57	U	0.68	U
Cobalt			20.0	U	20.0	U		NA	10000	U	10800	U	1.7	J	1.2	J
Copper		*1300*	20.0	U	20.0	U		NA	3800	UJ	3800	UJ	0.84	U	1.01	U
Iron			610	J	7700	J		NA	532000	J	370000	J	16.46	U	61.9	U
Lead	**15**	*15*	5.0	U	5.0	U		NA	1700	U	2500	U	1.48	U	1.78	U
Magnesium			14000		16000			NA	26700000		28000000		23300		22200	
Manganese			3100	J	2200			NA	2130000		2250000		1180		1430	
Mercury	**2**	*2*	0.20	U	0.20	U		NA	130	U	130	U	0.11	U	0.080	U
Nickel	**100**		40.0	U	40.0	U		NA	7900	UJ	7900	UJ	1.4	U	1.8	U
Potassium			2000		3000			NA	3350000		3640000		2800		2930	
Selenium	**50**	*50*	4.0	UJ	4.0	UJ		NA	3400	U	3400	U	3.04	U	3.65	U
Silver			10.0	U	10.0	U		NA	39900	J	4100	U	1.03	U	1.24	U
Sodium			13000		16000			NA	20500000		21600000		12000		11900	
Thallium	**2**	*2*	5.0	U	5.0	U		NA	2000	U	2000	U	0.14	U	0.28	U
Vanadium			10.0	U	10.0	U		NA	5800	J	5300	U	0.52	U	0.62	U
Zinc			10.0	U	20.0	J		NA	6700	U	9900	U	2.6	U	1.8	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-701		MW-701		MW-701		MW-701		MW-701		MW-701		MW-701	
Date Sampled			3/24/97		3/24/97		3/25/97		8/13/97		8/13/97		5/22/01		5/22/01	
Matrix			GF		GW		GW		GW		GW		GF		GW	
QC Info	GA Obj.	MCL									DUP					
Total Petroleum Hydrocarbon Analysis (MG/L)																
Total Petroleum Hydrocarbons				NA	1.0	U		NA	1.0	U	1.0	U		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901A		MW-901A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Volatile Organic Analysis (UG/L)						
1,1,1-Trichloroethane	200	200		NA	1	U
1,1,2,2-Tetrachloroethane				NA	1	U
1,1,2-Trichloroethane	5	5		NA	1	U
1,1-Dichloroethane				NA	0.8	J
1,1-Dichloroethene	7	7		NA	1	U
1,2-Dibromo-3-chloropropane		0.2		NA	1	U
1,2-Dibromoethane				NA	1	U
1,2-Dichloroethane	5	5		NA	1	U
1,2-Dichloroethene (total)	70	70		NA	2	
1,2-Dichloropropane	5	5		NA	1	U
2-Butanone				NA	5	U
2-Hexanone				NA	4	U
4-Methyl-2-Pentanone				NA	3	U
Acetone				NA	5	UJ
Benzene	5	5		NA	1	U
Bromochloromethane				NA	1	U
Bromodichloromethane		80		NA	1	U
Bromoform		80		NA	1	U
Bromomethane				NA	2	UJ
Carbon Disulfide				NA	1	U
Carbon Tetrachloride	5	5		NA	1	U
Chlorobenzene	100	100		NA	1	U
Chloroethane				NA	2	U
Chloroform	100	80		NA	1	U
Chloromethane				NA	2	U
cis-1,2-Dichloroethene	70	70		NA	2	
cis-1,3-Dichloropropene				NA	1	U
Dibromochloromethane		80		NA	1	U
Ethylbenzene	700	700		NA	1	U
Methylene Chloride	**5**	*5*		NA	1	U
Styrene	100	100		NA	1	U
Tetrachloroethene	5	5		NA	1	U
Toluene	1000	1000		NA	1	U
Total Xylenes	10000	10000		NA	1	U
trans-1,2-Dichloroethene	100	100		NA	2	U
trans-1,3-Dichloropropene				NA	1	U
Trichloroethene	**5**	*5*		NA	1	
Vinyl Acetate				NA	1	U
Vinyl Chloride	2	2		NA	2	UJ

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901A		MW-901A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Semivolatile Organic Analysis (UG/L)						
1,2,4-Trichlorobenzene	70	70		NA	10	U
1,2-Dichlorobenzene	600	600		NA	10	U
1,3-Dichlorobenzene	600			NA	10	U
1,4-Dichlorobenzene	75	75		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA	10	U
2,4,5-Trichlorophenol				NA	25	U
2,4,6-Trichlorophenol				NA	10	U
2,4-Dichlorophenol				NA	10	U
2,4-Dimethylphenol				NA	10	U
2,4-Dinitrophenol				NA	25	UJ
2,4-Dinitrotoluene				NA	10	U
2,6-Dinitrotoluene				NA	10	U
2-Chloronaphthalene				NA	10	U
2-Chlorophenol				NA	10	U
2-Methylnaphthalene				NA	10	U
2-Methylphenol				NA	10	U
2-Nitroaniline				NA	25	U
2-Nitrophenol				NA	10	U
3,3'-Dichlorobenzidine				NA	10	U
3-Methylphenol				NA		NA
3-Nitroaniline				NA	25	U
4,6-Dinitro-2-methylphenol				NA	25	U
4-Bromophenyl-phenylether				NA	10	U
4-Chloro-3-methylphenol				NA	10	U
4-Chloroaniline				NA	10	U
4-Chlorophenyl-phenylether				NA	10	U
4-Methylphenol				NA	10	U
4-Nitroaniline				NA	25	U
4-Nitrophenol				NA	25	U
Acenaphthene				NA	10	U
Acenaphthylene				NA	10	U
Anthracene				NA	10	U
Benzo(a)anthracene				NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA	0.2	U
Benzo(b)fluoranthene				NA	10	U
Benzo(g,h,i)perylene				NA	10	U
Benzo(k)fluoranthene				NA	10	U
Bis(2-Chloroethoxy)methane				NA	10	U
Bis(2-Chloroethyl)ether				NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901A		MW-901A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Butylbenzylphthalate				NA	10	U
Carbazole				NA	10	U
Chrysene				NA	10	U
Di-n-Butylphthalate				NA	10	U
Di-n-octylphthalate				NA	10	U
Dibenzo(a,h)anthracene				NA	10	U
Dibenzofuran				NA	10	U
Diethylphthalate				NA	10	U
Dimethylphthalate				NA	10	U
Fluoranthene				NA	10	U
Fluorene				NA	10	U
Hexachlorobenzene	1	1		NA	10	U
Hexachlorobutadiene				NA	10	U
Hexachlorocyclopentadiene		50		NA	10	UJ
Hexachloroethane				NA	10	U
Indeno(1,2,3-cd)pyrene				NA	10	U
Isophorone				NA	10	U
N-Nitroso-di-n-propylamine				NA	10	U
N-Nitroso-diphenylamine				NA	10	U
Naphthalene	20			NA	10	U
Nitrobenzene				NA	10	U
Pentachlorophenol	1	1		NA	25	U
Phenanthrene				NA	10	U
Phenol				NA	10	U
Phenols				NA		NA
Pyrene				NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901A		MW-901A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Pesticide/PCB Analysis (UG/L)						
4,4'-DDD				NA		NA
4,4'-DDE				NA		NA
4,4'-DDT				NA		NA
Aldrin				NA		NA
alpha-BHC				NA		NA
alpha-Chlordane		2		NA		NA
Aroclor-1016				NA		NA
Aroclor-1221				NA		NA
Aroclor-1232				NA		NA
Aroclor-1242				NA		NA
Aroclor-1248				NA		NA
Aroclor-1254				NA		NA
Aroclor-1260				NA		NA
beta-BHC				NA		NA
delta-BHC				NA		NA
Dieldrin				NA		NA
Endosulfan I				NA		NA
Endosulfan II				NA		NA
Endosulfan Sulfate				NA		NA
Endrin		2		NA		NA
Endrin Aldehyde				NA		NA
Endrin Ketone				NA		NA
gamma-BHC		0.2		NA		NA
gamma-Chlordane		2		NA		NA
Heptachlor		0.4		NA		NA
Heptachlor Epoxide		0.2		NA		NA
Methoxychlor		40		NA		NA
Toxaphene		3		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901A		MW-901A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
TAL Metal Analysis (UG/L)						
Aluminum			89.4	U	132	U
Antimony	**6**	*6*	3.65	U	3.65	U
Arsenic	**50**	*50*	2.53	U	2.53	U
Barium	**2000**	*2000*	17.0		16.7	
Beryllium	4	4	0.20	U	0.18	U
Cadmium	**5**	*5*	0.24	UJ	0.24	U
Calcium			25500		25000	
Chromium	**100**	*100*	0.97	U	0.76	U
Cobalt			11.8	J	10.8	
Copper		*1300*	0.84	U	0.84	U
Iron			13000		12900	
Lead	**15**	*15*	1.9	U	1.48	U
Magnesium			26600		26200	
Manganese			789		774	
Mercury	**2**	*2*	0.090	U	0.030	U
Nickel	**100**		36.7	U	35.6	U
Potassium			1260		1220	
Selenium	**50**	*50*	3.04	U	3.04	U
Silver			1.03	U	1.03	U
Sodium			21200		20200	
Thallium	**2**	*2*	1.9	U	0.10	U
Vanadium			0.52	U	0.52	U
Zinc			12.5	U	84.1	

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901A		MW-901A	
Date Sampled			5/23/01		5/23/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Total Petroleum Hydrocarbon Analysis (MG/L)						
Total Petroleum Hydrocarbons				NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901B		MW-901B		MW-901B		MW-901B	
Date Sampled			5/23/01		5/23/01		5/23/01		5/23/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
Volatile Organic Analysis (UG/L)										
1,1,1-Trichloroethane	200	200		NA		NA	1	U	1	U
1,1,2,2-Tetrachloroethane				NA		NA	1	U	1	U
1,1,2-Trichloroethane	5	5		NA		NA	1	U	1	U
1,1-Dichloroethane				NA		NA	0.8	J	0.8	J
1,1-Dichloroethene	7	7		NA		NA	1	U	1	U
1,2-Dibromo-3-chloropropane		0.2		NA		NA	1	U	1	U
1,2-Dibromoethane				NA		NA	1	U	1	U
1,2-Dichloroethane	5	5		NA		NA	1	U	1	U
1,2-Dichloroethene (total)	70	70		NA		NA	1	J	2	J
1,2-Dichloropropane	5	5		NA		NA	1	U	1	U
2-Butanone				NA		NA	5	U	5	U
2-Hexanone				NA		NA	4	U	4	U
4-Methyl-2-Pentanone				NA		NA	3	U	3	U
Acetone				NA		NA	5	U	5	U
Benzene	5	5		NA		NA	1	U	1	U
Bromochloromethane				NA		NA	1	U	1	U
Bromodichloromethane		80		NA		NA	1	U	1	U
Bromoform		80		NA		NA	1	U	1	U
Bromomethane				NA		NA	2	UJ	2	UJ
Carbon Disulfide				NA		NA	1	U	1	U
Carbon Tetrachloride	5	5		NA		NA	1	U	1	U
Chlorobenzene	100	100		NA		NA	1	U	1	U
Chloroethane				NA		NA	2	U	2	U
Chloroform	100	80		NA		NA	1	U	1	U
Chloromethane				NA		NA	2	U	2	U
cis-1,2-Dichloroethene	70	70		NA		NA	1	J	2	J
cis-1,3-Dichloropropene				NA		NA	1	U	1	U
Dibromochloromethane		80		NA		NA	1	U	1	U
Ethylbenzene	700	700		NA		NA	1	U	1	U
Methylene Chloride	**5**	*5*		NA		NA	1	U	1	U
Styrene	100	100		NA		NA	1	U	1	U
Tetrachloroethene	5	5		NA		NA	1	U	1	U
Toluene	1000	1000		NA		NA	1	U	1	U
Total Xylenes	10000	10000		NA		NA	1	U	1	U
trans-1,2-Dichloroethene	100	100		NA		NA	2	U	2	U
trans-1,3-Dichloropropene				NA		NA	1	U	1	U
Trichloroethene	**5**	*5*		NA		NA	1		0.8	J
Vinyl Acetate				NA		NA	1	U	1	U
Vinyl Chloride	2	2		NA		NA	2	U	2	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901B		MW-901B		MW-901B		MW-901B	
Date Sampled			5/23/01		5/23/01		5/23/01		5/23/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
Semivolatile Organic Analysis (UG/L)										
1,2,4-Trichlorobenzene	70	70		NA		NA	10	U	10	U
1,2-Dichlorobenzene	600	600		NA		NA	10	U	10	U
1,3-Dichlorobenzene	600			NA		NA	10	U	10	U
1,4-Dichlorobenzene	75	75		NA		NA	10	U	10	U
2,2'-oxybis(1-Chloropropane)				NA		NA	10	U	10	U
2,4,5-Trichlorophenol				NA		NA	25	U	25	U
2,4,6-Trichlorophenol				NA		NA	10	U	10	U
2,4-Dichlorophenol				NA		NA	10	U	10	U
2,4-Dimethylphenol				NA		NA	10	U	10	U
2,4-Dinitrophenol				NA		NA	25	UJ	25	UJ
2,4-Dinitrotoluene				NA		NA	10	U	10	U
2,6-Dinitrotoluene				NA		NA	10	U	10	U
2-Chloronaphthalene				NA		NA	10	U	10	U
2-Chlorophenol				NA		NA	10	U	10	U
2-Methylnaphthalene				NA		NA	10	U	10	U
2-Methylphenol				NA		NA	10	U	10	U
2-Nitroaniline				NA		NA	25	U	25	U
2-Nitrophenol				NA		NA	10	U	10	U
3,3'-Dichlorobenzidine				NA		NA	10	U	10	U
3-Methylphenol				NA		NA		NA		NA
3-Nitroaniline				NA		NA	25	U	25	U
4,6-Dinitro-2-methylphenol				NA		NA	25	U	25	U
4-Bromophenyl-phenylether				NA		NA	10	U	10	U
4-Chloro-3-methylphenol				NA		NA	10	U	10	U
4-Chloroaniline				NA		NA	10	U	10	U
4-Chlorophenyl-phenylether				NA		NA	10	U	10	U
4-Methylphenol				NA		NA	10	U	10	U
4-Nitroaniline				NA		NA	25	U	25	U
4-Nitrophenol				NA		NA	25	U	25	U
Acenaphthene				NA		NA	10	U	10	U
Acenaphthylene				NA		NA	10	U	10	U
Anthracene				NA		NA	10	U	10	U
Benzo(a)anthracene				NA		NA	10	U	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA		NA	***1***		0.2	U
Benzo(b)fluoranthene				NA		NA	10	U	10	U
Benzo(g,h,i)perylene				NA		NA	10	U	10	U
Benzo(k)fluoranthene				NA		NA	10	U	10	U
Bis(2-Chloroethoxy)methane				NA		NA	10	U	10	U
Bis(2-Chloroethyl)ether				NA		NA	10	U	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA		NA	10	U	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901B		MW-901B		MW-901B		MW-901B	
Date Sampled			5/23/01		5/23/01		5/23/01		5/23/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
Butylbenzylphthalate				NA		NA	10	U	10	U
Carbazole				NA		NA	10	U	10	U
Chrysene				NA		NA	10	U	10	U
Di-n-Butylphthalate				NA		NA	10	U	10	U
Di-n-octylphthalate				NA		NA	10	U	10	U
Dibenzo(a,h)anthracene				NA		NA	10	U	10	U
Dibenzofuran				NA		NA	10	U	10	U
Diethylphthalate				NA		NA	10	U	10	U
Dimethylphthalate				NA		NA	10	U	10	U
Fluoranthene				NA		NA	10	U	10	U
Fluorene				NA		NA	10	U	10	U
Hexachlorobenzene	1	1		NA		NA	10	U	10	U
Hexachlorobutadiene				NA		NA	10	U	10	U
Hexachlorocyclopentadiene		50		NA		NA	10	U	10	U
Hexachloroethane				NA		NA	10	U	10	U
Indeno(1,2,3-cd)pyrene				NA		NA	10	U	10	U
Isophorone				NA		NA	10	U	10	U
N-Nitroso-di-n-propylamine				NA		NA	10	U	10	U
N-Nitroso-diphenylamine				NA		NA	10	U	10	U
Naphthalene	20			NA		NA	10	U	10	U
Nitrobenzene				NA		NA	10	U	10	U
Pentachlorophenol	1	1		NA		NA	25	U	25	U
Phenanthrene				NA		NA	10	U	10	U
Phenol				NA		NA	10	U	10	U
Phenols				NA		NA		NA		NA
Pyrene				NA		NA	10	U	10	U

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901B		MW-901B		MW-901B		MW-901B	
Date Sampled			5/23/01		5/23/01		5/23/01		5/23/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
Pesticide/PCB Analysis (UG/L)										
4,4'-DDD				NA		NA		NA		NA
4,4'-DDE				NA		NA		NA		NA
4,4'-DDT				NA		NA		NA		NA
Aldrin				NA		NA		NA		NA
alpha-BHC				NA		NA		NA		NA
alpha-Chlordane		2		NA		NA		NA		NA
Aroclor-1016				NA		NA		NA		NA
Aroclor-1221				NA		NA		NA		NA
Aroclor-1232				NA		NA		NA		NA
Aroclor-1242				NA		NA		NA		NA
Aroclor-1248				NA		NA		NA		NA
Aroclor-1254				NA		NA		NA		NA
Aroclor-1260				NA		NA		NA		NA
beta-BHC				NA		NA		NA		NA
delta-BHC				NA		NA		NA		NA
Dieldrin				NA		NA		NA		NA
Endosulfan I				NA		NA		NA		NA
Endosulfan II				NA		NA		NA		NA
Endosulfan Sulfate				NA		NA		NA		NA
Endrin		2		NA		NA		NA		NA
Endrin Aldehyde				NA		NA		NA		NA
Endrin Ketone				NA		NA		NA		NA
gamma-BHC		0.2		NA		NA		NA		NA
gamma-Chlordane		2		NA		NA		NA		NA
Heptachlor		0.4		NA		NA		NA		NA
Heptachlor Epoxide		0.2		NA		NA		NA		NA
Methoxychlor		40		NA		NA		NA		NA
Toxaphene		3		NA		NA		NA		NA

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901B		MW-901B		MW-901B		MW-901B	
Date Sampled			5/23/01		5/23/01		5/23/01		5/23/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
TAL Metal Analysis (UG/L)										
Aluminum			91.9	U	92.8	U	82.5	U	94.7	U
Antimony	**6**	*6*	3.65	U	3.65	U	3.65	U	3.65	U
Arsenic	**50**	*50*	2.53	U	2.53	U	2.53	U	2.53	U
Barium	**2000**	*2000*	18.6		17.2		17.8		17.8	
Beryllium	4	4	0.18	U	0.18	U	0.18	U	0.18	U
Cadmium	**5**	*5*	0.24	UJ	0.24	UJ	0.24	U	0.24	U
Calcium			23200		23500		24200		24100	
Chromium	**100**	*100*	1.1	U	1.2	U	0.61	U	0.57	U
Cobalt			9.4	J	9.6	J	10.5		11.2	
Copper		*1300*	0.84	U	0.84	U	0.84	U	0.84	U
Iron			15200		15400		16200		16600	
Lead	**15**	*15*	1.48	U	1.48	U	1.48	U	1.48	U
Magnesium			25500		25700		26600		26600	
Manganese			1040		1050		1080		1090	
Mercury	**2**	*2*	0.090	U	0.090	U	0.090	U	0.070	U
Nickel	**100**		27.6	U	28.2	U	29.9	U	31.5	U
Potassium			926		892		907		910	
Selenium	**50**	*50*	3.04	U	3.04	U	3.04	U	3.04	U
Silver			1.03	U	1.03	U	1.03	U	1.03	U
Sodium			18000		17700		18000		18200	
Thallium	**2**	*2*	0.52	U	0.23	U	0.92	U	0.47	U
Vanadium			0.52	U	0.52	U	0.52	U	0.52	U
Zinc			15.7	U	17.3	U	29.8		46.3	

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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-901B		MW-901B		MW-901B		MW-901B	
Date Sampled			5/23/01		5/23/01		5/23/01		5/23/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
Total Petroleum Hydrocarbon Analysis (MG/L)										
Total Petroleum Hydrocarbons				NA		NA		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902A		MW-902A		MW-902A		MW-902A	
Date Sampled			5/24/01		5/24/01		5/24/01		5/24/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
Volatile Organic Analysis (UG/L)										
1,1,1-Trichloroethane	200	200		NA		NA	1	U	1	U
1,1,2,2-Tetrachloroethane				NA		NA	1	U	1	U
1,1,2-Trichloroethane	5	5		NA		NA	1	U	1	U
1,1-Dichloroethane				NA		NA	1		2	
1,1-Dichloroethene	7	7		NA		NA	1	U	1	U
1,2-Dibromo-3-chloropropane		0.2		NA		NA	1	U	1	U
1,2-Dibromoethane				NA		NA	1	U	1	U
1,2-Dichloroethane	5	5		NA		NA	1	U	1	U
1,2-Dichloroethene (total)	70	70		NA		NA	3		3	
1,2-Dichloropropane	5	5		NA		NA	1	U	1	U
2-Butanone				NA		NA	5	U	5	U
2-Hexanone				NA		NA	4	U	4	U
4-Methyl-2-Pentanone				NA		NA	3	U	3	U
Acetone				NA		NA	6	U	5	U
Benzene	5	5		NA		NA	1	U	1	U
Bromochloromethane				NA		NA	1	U	1	U
Bromodichloromethane		80		NA		NA	1	U	1	U
Bromoform		80		NA		NA	1	U	1	U
Bromomethane				NA		NA	2	UJ	2	UJ
Carbon Disulfide				NA		NA	1	U	0.7	J
Carbon Tetrachloride	5	5		NA		NA	1	U	1	U
Chlorobenzene	100	100		NA		NA	1	U	1	U
Chloroethane				NA		NA	2	U	2	U
Chloroform	100	80		NA		NA	1	U	1	U
Chloromethane				NA		NA	2	U	2	U
cis-1,2-Dichloroethene	70	70		NA		NA	3		3	
cis-1,3-Dichloropropene				NA		NA	1	U	1	U
Dibromochloromethane		80		NA		NA	1	U	1	U
Ethylbenzene	700	700		NA		NA	1	U	1	U
Methylene Chloride	**5**	*5*		NA		NA	1	U	1	U
Styrene	100	100		NA		NA	1	U	1	U
Tetrachloroethene	5	5		NA		NA	1	U	1	U
Toluene	1000	1000		NA		NA	1	U	1	U
Total Xylenes	10000	10000		NA		NA	1	U	1	U
trans-1,2-Dichloroethene	100	100		NA		NA	2	U	2	U
trans-1,3-Dichloropropene				NA		NA	1	U	1	U
Trichloroethene	**5**	*5*		NA		NA	1		1	
Vinyl Acetate				NA		NA	1	U	1	U
Vinyl Chloride	2	2		NA		NA	2	U	2	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902A		MW-902A		MW-902A		MW-902A	
Date Sampled			5/24/01		5/24/01		5/24/01		5/24/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
Semivolatile Organic Analysis (UG/L)										
1,2,4-Trichlorobenzene	70	70		NA		NA	10	U	10	U
1,2-Dichlorobenzene	600	600		NA		NA	10	U	10	U
1,3-Dichlorobenzene	600			NA		NA	10	U	10	U
1,4-Dichlorobenzene	75	75		NA		NA	10	U	10	U
2,2'-oxybis(1-Chloropropane)				NA		NA	10	U	10	U
2,4,5-Trichlorophenol				NA		NA	25	U	25	U
2,4,6-Trichlorophenol				NA		NA	10	U	10	U
2,4-Dichlorophenol				NA		NA	10	U	10	U
2,4-Dimethylphenol				NA		NA	10	U	10	U
2,4-Dinitrophenol				NA		NA	25	UJ	25	UJ
2,4-Dinitrotoluene				NA		NA	10	U	10	U
2,6-Dinitrotoluene				NA		NA	10	U	10	U
2-Chloronaphthalene				NA		NA	10	U	10	U
2-Chlorophenol				NA		NA	10	U	10	U
2-Methylnaphthalene				NA		NA	10	U	10	U
2-Methylphenol				NA		NA	10	U	10	U
2-Nitroaniline				NA		NA	25	U	25	U
2-Nitrophenol				NA		NA	10	U	10	U
3,3'-Dichlorobenzidine				NA		NA	10	U	10	U
3-Methylphenol				NA		NA		NA		NA
3-Nitroaniline				NA		NA	25	U	25	U
4,6-Dinitro-2-methylphenol				NA		NA	25	U	25	U
4-Bromophenyl-phenylether				NA		NA	10	U	10	U
4-Chloro-3-methylphenol				NA		NA	10	U	10	U
4-Chloroaniline				NA		NA	10	U	10	U
4-Chlorophenyl-phenylether				NA		NA	10	U	10	U
4-Methylphenol				NA		NA	10	U	10	U
4-Nitroaniline				NA		NA	25	U	25	U
4-Nitrophenol				NA		NA	25	U	25	U
Acenaphthene				NA		NA	10	U	10	U
Acenaphthylene				NA		NA	10	U	10	U
Anthracene				NA		NA	10	U	10	U
Benzo(a)anthracene				NA		NA	10	U	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA		NA	0.2	UJ	0.2	UJ
Benzo(b)fluoranthene				NA		NA	10	U	10	U
Benzo(g,h,i)perylene				NA		NA	10	U	10	U
Benzo(k)fluoranthene				NA		NA	10	U	10	U
Bis(2-Chloroethoxy)methane				NA		NA	10	U	10	U
Bis(2-Chloroethyl)ether				NA		NA	10	U	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA		NA	10	U	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902A		MW-902A		MW-902A		MW-902A	
Date Sampled			5/24/01		5/24/01		5/24/01		5/24/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
Butylbenzylphthalate				NA		NA	10	U	10	U
Carbazole				NA		NA	10	U	10	U
Chrysene				NA		NA	10	U	10	U
Di-n-Butylphthalate				NA		NA	10	U	10	U
Di-n-octylphthalate				NA		NA	10	U	10	U
Dibenzo(a,h)anthracene				NA		NA	10	U	10	U
Dibenzofuran				NA		NA	10	U	10	U
Diethylphthalate				NA		NA	10	U	10	U
Dimethylphthalate				NA		NA	10	U	10	U
Fluoranthene				NA		NA	10	U	10	U
Fluorene				NA		NA	10	U	10	U
Hexachlorobenzene	1	1		NA		NA	10	U	10	U
Hexachlorobutadiene				NA		NA	10	U	10	U
Hexachlorocyclopentadiene		50		NA		NA	10	U	10	U
Hexachloroethane				NA		NA	10	U	10	U
Indeno(1,2,3-cd)pyrene				NA		NA	10	U	10	U
Isophorone				NA		NA	10	U	10	U
N-Nitroso-di-n-propylamine				NA		NA	10	U	10	U
N-Nitroso-diphenylamine				NA		NA	10	U	10	U
Naphthalene	20			NA		NA	10	U	10	U
Nitrobenzene				NA		NA	10	U	10	U
Pentachlorophenol	1	1		NA		NA	25	U	25	U
Phenanthrene				NA		NA	10	U	10	U
Phenol				NA		NA	10	U	10	U
Phenols				NA		NA		NA		NA
Pyrene				NA		NA	10	U	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902A		MW-902A		MW-902A		MW-902A	
Date Sampled			5/24/01		5/24/01		5/24/01		5/24/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
Pesticide/PCB Analysis (UG/L)										
4,4'-DDD				NA		NA		NA		NA
4,4'-DDE				NA		NA		NA		NA
4,4'-DDT				NA		NA		NA		NA
Aldrin				NA		NA		NA		NA
alpha-BHC				NA		NA		NA		NA
alpha-Chlordane		2		NA		NA		NA		NA
Aroclor-1016				NA		NA		NA		NA
Aroclor-1221				NA		NA		NA		NA
Aroclor-1232				NA		NA		NA		NA
Aroclor-1242				NA		NA		NA		NA
Aroclor-1248				NA		NA		NA		NA
Aroclor-1254				NA		NA		NA		NA
Aroclor-1260				NA		NA		NA		NA
beta-BHC				NA		NA		NA		NA
delta-BHC				NA		NA		NA		NA
Dieldrin				NA		NA		NA		NA
Endosulfan I				NA		NA		NA		NA
Endosulfan II				NA		NA		NA		NA
Endosulfan Sulfate				NA		NA		NA		NA
Endrin		2		NA		NA		NA		NA
Endrin Aldehyde				NA		NA		NA		NA
Endrin Ketone				NA		NA		NA		NA
gamma-BHC		0.2		NA		NA		NA		NA
gamma-Chlordane		2		NA		NA		NA		NA
Heptachlor		0.4		NA		NA		NA		NA
Heptachlor Epoxide		0.2		NA		NA		NA		NA
Methoxychlor		40		NA		NA		NA		NA
Toxaphene		3		NA		NA		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902A		MW-902A		MW-902A		MW-902A	
Date Sampled			5/24/01		5/24/01		5/24/01		5/24/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
TAL Metal Analysis (UG/L)										
Aluminum			101	U	144	U	2310		1870	
Antimony	**6**	*6*	3.65	U	3.65	U	3.65	U	3.65	U
Arsenic	**50**	*50*	2.53	U	3.3	U	6.5	U	2.53	U
Barium	**2000**	*2000*	27.8		26.7		36.9		34.8	
Beryllium	4	4	0.18	U	0.18	U	0.33	U	0.18	U
Cadmium	**5**	*5*	0.24	UJ	0.24	UJ	0.24	U	0.24	U
Calcium			35200		33600		31800		31900	
Chromium	**100**	*100*	1.2	U	0.80	U	4.1	U	3.8	U
Cobalt			13.1	J	12.4	J	11.9		12.5	
Copper		*1300*	0.84	U	0.84	U	3.5	U	1.6	U
Iron			13400		12800		16200		15500	
Lead	**15**	*15*	1.9	U	1.9	U	4.0	U	3.3	U
Magnesium			33700		32100		30700		31000	
Manganese			1140		1090		1070		1070	
Mercury	**2**	*2*	0.040	U	0.040	U	0.050	U	0.050	U
Nickel	**100**		32.3	U	30.0	U	31.8	U	30.4	U
Potassium			1610		1550		1650		1470	
Selenium	**50**	*50*	3.04	U	3.04	U	3.1	U	3.04	U
Silver			1.03	U	1.03	U	1.03	UJ	1.03	U
Sodium			20100		19400		19100		18500	
Thallium	**2**	*2*	0.10	U	0.10	U	1.9	U	0.68	U
Vanadium			0.77	U	0.52	U	2.1	U	1.6	U
Zinc			26.6		25.5		31.9	U	32.3	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902A		MW-902A		MW-902A		MW-902A	
Date Sampled			5/24/01		5/24/01		5/24/01		5/24/01	
Matrix			GF		GF		GW		GW	
QC Info	GA Obj.	MCL			DUP				DUP	
Total Petroleum Hydrocarbon Analysis (MG/L)										
Total Petroleum Hydrocarbons				NA		NA	0.24	NA	0.21	NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902B		MW-902B	
Date Sampled			5/24/01		5/24/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Volatile Organic Analysis (UG/L)						
1,1,1-Trichloroethane	200	200		NA	1	U
1,1,2,2-Tetrachloroethane				NA	1	U
1,1,2-Trichloroethane	5	5		NA	1	U
1,1-Dichloroethane				NA	1	
1,1-Dichloroethene	7	7		NA	1	U
1,2-Dibromo-3-chloropropane		0.2		NA	1	U
1,2-Dibromoethane				NA	1	U
1,2-Dichloroethane	5	5		NA	1	U
1,2-Dichloroethene (total)	70	70		NA	2	J
1,2-Dichloropropane	5	5		NA	1	U
2-Butanone				NA	5	U
2-Hexanone				NA	4	U
4-Methyl-2-Pentanone				NA	3	U
Acetone				NA	5	U
Benzene	5	5		NA	1	U
Bromochloromethane				NA	1	U
Bromodichloromethane		80		NA	1	U
Bromoform		80		NA	1	U
Bromomethane				NA	2	UJ
Carbon Disulfide				NA	1	U
Carbon Tetrachloride	5	5		NA	1	U
Chlorobenzene	100	100		NA	1	U
Chloroethane				NA	2	U
Chloroform	100	80		NA	1	U
Chloromethane				NA	2	U
cis-1,2-Dichloroethene	70	70		NA	2	J
cis-1,3-Dichloropropene				NA	1	U
Dibromochloromethane		80		NA	1	U
Ethylbenzene	700	700		NA	1	U
Methylene Chloride	**5**	*5*		NA	1	U
Styrene	100	100		NA	1	U
Tetrachloroethene	5	5		NA	1	U
Toluene	1000	1000		NA	1	U
Total Xylenes	10000	10000		NA	1	U
trans-1,2-Dichloroethene	100	100		NA	2	U
trans-1,3-Dichloropropene				NA	1	U
Trichloroethene	**5**	*5*		NA	1	
Vinyl Acetate				NA	1	U
Vinyl Chloride	2	2		NA	2	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902B		MW-902B	
Date Sampled			5/24/01		5/24/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Semivolatile Organic Analysis (UG/L)						
1,2,4-Trichlorobenzene	70	70		NA	10	U
1,2-Dichlorobenzene	600	600		NA	10	U
1,3-Dichlorobenzene	600			NA	10	U
1,4-Dichlorobenzene	75	75		NA	10	U
2,2'-oxybis(1-Chloropropane)				NA	10	U
2,4,5-Trichlorophenol				NA	25	U
2,4,6-Trichlorophenol				NA	10	U
2,4-Dichlorophenol				NA	10	U
2,4-Dimethylphenol				NA	10	U
2,4-Dinitrophenol				NA	25	UJ
2,4-Dinitrotoluene				NA	10	U
2,6-Dinitrotoluene				NA	10	U
2-Chloronaphthalene				NA	10	U
2-Chlorophenol				NA	10	U
2-Methylnaphthalene				NA	10	U
2-Methylphenol				NA	10	U
2-Nitroaniline				NA	25	U
2-Nitrophenol				NA	10	U
3,3'-Dichlorobenzidine				NA	10	U
3-Methylphenol				NA		NA
3-Nitroaniline				NA	25	U
4,6-Dinitro-2-methylphenol				NA	25	U
4-Bromophenyl-phenylether				NA	10	U
4-Chloro-3-methylphenol				NA	10	U
4-Chloroaniline				NA	10	U
4-Chlorophenyl-phenylether				NA	10	U
4-Methylphenol				NA	10	U
4-Nitroaniline				NA	25	U
4-Nitrophenol				NA	25	U
Acenaphthene				NA	10	U
Acenaphthylene				NA	10	U
Anthracene				NA	10	U
Benzo(a)anthracene				NA	10	U
Benzo(a)pyrene	**0.2**	*0.2*		NA	0.2	UJ
Benzo(b)fluoranthene				NA	10	U
Benzo(g,h,i)perylene				NA	10	U
Benzo(k)fluoranthene				NA	10	U
Bis(2-Chloroethoxy)methane				NA	10	U
Bis(2-Chloroethyl)ether				NA	10	U
bis(2-Ethylhexyl)phthalate	**6**	*6*		NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902B		MW-902B	
Date Sampled			5/24/01		5/24/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Butylbenzylphthalate				NA	10	U
Carbazole				NA	10	U
Chrysene				NA	10	U
Di-n-Butylphthalate				NA	10	U
Di-n-octylphthalate				NA	10	U
Dibenzo(a,h)anthracene				NA	10	U
Dibenzofuran				NA	10	U
Diethylphthalate				NA	10	U
Dimethylphthalate				NA	10	U
Fluoranthene				NA	10	U
Fluorene				NA	10	U
Hexachlorobenzene	1	1		NA	10	U
Hexachlorobutadiene				NA	10	U
Hexachlorocyclopentadiene		50		NA	10	U
Hexachloroethane				NA	10	U
Indeno(1,2,3-cd)pyrene				NA	10	U
Isophorone				NA	10	U
N-Nitroso-di-n-propylamine				NA	10	U
N-Nitroso-diphenylamine				NA	10	U
Naphthalene	20			NA	10	U
Nitrobenzene				NA	10	U
Pentachlorophenol	1	1		NA	25	U
Phenanthrene				NA	10	U
Phenol				NA	10	U
Phenols				NA		NA
Pyrene				NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902B		MW-902B	
Date Sampled			5/24/01		5/24/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Pesticide/PCB Analysis (UG/L)						
4,4'-DDD				NA		NA
4,4'-DDE				NA		NA
4,4'-DDT				NA		NA
Aldrin				NA		NA
alpha-BHC				NA		NA
alpha-Chlordane		2		NA		NA
Aroclor-1016				NA		NA
Aroclor-1221				NA		NA
Aroclor-1232				NA		NA
Aroclor-1242				NA		NA
Aroclor-1248				NA		NA
Aroclor-1254				NA		NA
Aroclor-1260				NA		NA
beta-BHC				NA		NA
delta-BHC				NA		NA
Dieldrin				NA		NA
Endosulfan I				NA		NA
Endosulfan II				NA		NA
Endosulfan Sulfate				NA		NA
Endrin		2		NA		NA
Endrin Aldehyde				NA		NA
Endrin Ketone				NA		NA
gamma-BHC		0.2		NA		NA
gamma-Chlordane		2		NA		NA
Heptachlor		0.4		NA		NA
Heptachlor Epoxide		0.2		NA		NA
Methoxychlor		40		NA		NA
Toxaphene		3		NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902B		MW-902B	
Date Sampled			5/24/01		5/24/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
TAL Metal Analysis (UG/L)						
Aluminum			96.4	U	102	U
Antimony	**6**	*6*	3.65	U	3.65	U
Arsenic	**50**	*50*	2.6	U	2.53	U
Barium	**2000**	*2000*	12.8		12.6	
Beryllium	4	4	0.18	U	0.18	U
Cadmium	**5**	*5*	0.24	UJ	0.24	U
Calcium			19900		19800	
Chromium	**100**	*100*	0.75	U	1.8	U
Cobalt			22.0	J	24.5	
Copper		*1300*	0.84	U	0.84	U
Iron			11600		12200	
Lead	**15**	*15*	1.48	U	1.48	U
Magnesium			18200		18300	
Manganese			710		708	
Mercury	**2**	*2*	0.040	U	0.090	U
Nickel	**100**		51.5	U	57.9	J
Potassium			1270		1310	
Selenium	**50**	*50*	3.04	U	3.04	U
Silver			1.03	U	1.03	U
Sodium			12600		12500	
Thallium	**2**	*2*	0.10	U	0.15	U
Vanadium			0.52	U	0.52	U
Zinc			35.2		137	

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUNDS 1 THROUGH 4
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

Sample Location			MW-902B		MW-902B	
Date Sampled			5/24/01		5/24/01	
Matrix			GF		GW	
QC Info	GA Obj.	MCL				
Total Petroleum Hydrocarbon Analysis (MG/L)						
Total Petroleum Hydrocarbons				NA		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUND 5
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND

Sample Location			MW1A		MW1A		MW2A		MW3A		MW3A		MW3A		MW3A		MW4		MW4		MW8		MW9		MW10		MW10	
Date Sampled			5/27/2004		5/27/2004		5/27/2004		5/25/2004		5/25/2004		5/25/2004		5/25/2004		5/27/2004		5/27/2004		5/25/2004		5/26/2004		5/25/2004		5/25/2004	
Matrix			GW		GF		GW		GW		GW		GF		GF		GW		GF		GW		GW		GW		GF	
QC Info	GA Obj.	MCL									DUP				DUP													
Volatile Organic Analysis (UG/L)																												
1,1,1-Trichloroethane	200	200	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,1,2,2-Tetrachloroethane			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,1,2-Trichloro-1,2,2-trifluoroethane			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,1,2-Trichloroethane	5	5	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,1-Dichloroethane			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,1-Dichloroethene	7	7	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,2,4-Trichlorobenzene	70	70	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,2-Dibromo-3-chloropropane	2	0.2	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,2-Dibromoethane			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,2-Dichlorobenzene	600	600	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,2-Dichloroethane	5	5	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,2-Dichloropropane	5	5	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,3-Dichlorobenzene	600		5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
1,4-Dichlorobenzene	75	75	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
2-Butanone			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
2-Hexanone			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
4-Methyl-2-Pentanone			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Acetone			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Benzene	5	5	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Bromodichloromethane		80	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Bromoform		80	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Bromomethane			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Carbon Disulfide			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Carbon Tetrachloride	5	5	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Chlorobenzene		100	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Chloroethane			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Chloroform	100	80	2	J		NA	5	U	5	U	5	U		NA		NA	4	J		NA	5	U	5	U	5	U		NA
Chloromethane			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
cis-1,2-Dichloroethene	70	70	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
cis-1,3-Dichloropropene			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Cyclohexane			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Dibromochloromethane		80	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Dichlorodifluoromethane			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Ethylbenzene	700	700	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Isopropylbenzene			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Methyl Acetate			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Methyl tert-Butyl Ether	40		5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Methylcyclohexane			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Methylene Chloride	5	5	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
m-Xylene			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
o-Xylene			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUND 5
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND

Sample Location			MW1A		MW1A		MW2A		MW3A		MW3A		MW3A		MW3A		MW4		MW4		MW8		MW9		MW10		MW10	
Date Sampled			5/27/2004		5/27/2004		5/27/2004		5/25/2004		5/25/2004		5/25/2004		5/25/2004		5/27/2004		5/27/2004		5/25/2004		5/26/2004		5/25/2004		5/25/2004	
Matrix			GW		GF		GW		GW		GW		GF		GF		GW		GF		GW		GW		GW		GF	
QC Info	GA Obj.	MCL									DUP				DUP													
Styrene	100	100	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Tetrachloroethene	5	5	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Toluene	1000	1000	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Total Xylenes	10000	10000	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
trans-1,2-Dichloroethene	100	100	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
trans-1,3-Dichloropropene			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Trichloroethene	5	5	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Trichlorofluoromethane			5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Vinyl Chloride	2	2	5	U		NA	5	U	5	U	5	U		NA		NA	5	U		NA	5	U	5	U	5	U		NA
Semivolatile Organic Analysis (UG/L)																												
1,1'-Biphenyl			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
2,2'-oxybis(1-Chloropropane)			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
2,4,5-Trichlorophenol			20	U		NA	20	U	20	U	20	U		NA		NA	20	U		NA	20	U	20	U	20	U		NA
2,4,6-Trichlorophenol			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
2,4-Dichlorophenol			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
2,4-Dimethylphenol			10	UJ		NA	10	U	10	U	10	U		NA		NA	10	UJ		NA	10	U	10	UJ	10	U		NA
2,4-Dinitrophenol			20	U		NA	20	UJ	20	U	20	U		NA		NA	20	U		NA	20	U	20	U	20	U		NA
2,4-Dinitrotoluene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
2,6-Dinitrotoluene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
2-Chloronaphthalene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
2-Chlorophenol			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
2-Methylnaphthalene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
2-Methylphenol			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
2-Nitroaniline			20	U		NA	20	U	20	U	20	U		NA		NA	20	U		NA	20	U	20	U	20	U		NA
2-Nitrophenol			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
3,3'-Dichlorobenzidine			10	U		NA	10	UJ	10	UJ	10	UJ		NA		NA	10	U		NA	10	UJ	10	U	10	UJ		NA
3-Nitroaniline			20	U		NA	20	U	20	U	20	U		NA		NA	20	U		NA	20	U	20	U	20	U		NA
4,6-Dinitro-2-methylphenol			20	U		NA	20	U	20	U	20	U		NA		NA	20	U		NA	20	U	20	U	20	U		NA
4-Bromophenyl-phenylether			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
4-Chloro-3-methylphenol			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
4-Chloroaniline			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
4-Chlorophenyl-phenylether			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
4-Methylphenol			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
4-Nitroaniline			20	U		NA	20	U	20	U	20	U		NA		NA	20	U		NA	20	U	20	U	20	U		NA
4-Nitrophenol			20	U		NA	20	U	20	U	20	U		NA		NA	20	U		NA	20	U	20	U	20	U		NA
Acenaphthene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Acenaphthylene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Acetophenone			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Anthracene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Atrazine			10	UJ		NA	10	UJ	10	UJ	10	UJ		NA		NA	10	UJ		NA	10	UJ	10	UJ	10	UJ		NA
Benzaldehyde			10	UJ		NA	10	UJ	10	UJ	10	UJ		NA		NA	10	UJ		NA	10	UJ	10	UJ	10	UJ		NA
Benzo(a)anthracene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUND 5
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND

Sample Location			MW1A		MW1A		MW2A		MW3A		MW3A		MW3A		MW3A		MW4		MW4		MW8		MW9		MW10		MW10	
Date Sampled			5/27/2004		5/27/2004		5/27/2004		5/25/2004		5/25/2004		5/25/2004		5/25/2004		5/27/2004		5/27/2004		5/25/2004		5/26/2004		5/25/2004		5/25/2004	
Matrix			GW		GF		GW		GW		GW		GF		GF		GW		GF		GW		GW		GW		GF	
QC Info	GA Obj.	MCL									DUP				DUP													
Benzo(a)pyrene	0.2	0.2	10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Benzo(b)fluoranthene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Benzo(g,h,i)perylene			10	UJ		NA	10	UJ	10	U	10	U		NA		NA	10	UJ		NA	10	U	10	UJ	10	U		NA
Benzo(k)fluoranthene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Bis(2-Chloroethoxy)methane			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Bis(2-Chloroethyl)ether			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
bis(2-Ethylhexyl)phthalate	6	6	10	U		NA	10	U	10	UJ	10	UJ		NA		NA	10	U		NA	10	UJ	10	U	10	UJ		NA
Butylbenzylphthalate			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Caprolactam			85			NA	34		7	J	6	J		NA		NA	8	J		NA	10	U	10	U	10	U		NA
Carbazole			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Chrysene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Dibenzo(a,h)anthracene			10	UJ		NA	10	UJ	10	U	10	U		NA		NA	10	UJ		NA	10	U	10	UJ	10	U		NA
Dibenzofuran			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Diethylphthalate			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Dimethylphthalate			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Di-n-Butylphthalate			1	J		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Di-n-octylphthalate			10	UJ		NA	10	UJ	10	U	10	U		NA		NA	10	UJ		NA	10	U	10	UJ	10	U		NA
Fluoranthene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Fluorene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Hexachlorobenzene	1	1	10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Hexachlorobutadiene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Hexachlorocyclopentadiene		50	10	UJ		NA	10	UJ		R		R		NA		NA	10	UJ		NA		R	10	UJ		R		NA
Hexachloroethane			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Indeno(1,2,3-cd)pyrene			10	UJ		NA	10	UJ	10	U	10	U		NA		NA	10	UJ		NA	10	U	10	UJ	10	U		NA
Isophorone			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Naphthalene	20		10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Nitrobenzene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
N-Nitroso-di-n-propylamine			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
N-Nitroso-diphenylamine			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Pentachlorophenol	1	1	20	U		NA	20	U	20	U	20	U		NA		NA	20	U		NA	20	U	20	U	20	U		NA
Phenanthrene			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Phenol			10	U		NA	10	U	10	U	10	U		NA		NA	10	U		NA	10	U	10	U	10	U		NA
Pyrene			10	U		NA	10	U	10	UJ	10	UJ		NA		NA	10	U		NA	10	UJ	10	U	10	UJ		NA

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GROUNDWATER RESULTS-
ROUND 5
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND

Sample Location			MW1A		MW1A		MW2A		MW3A		MW3A		MW3A		MW3A		MW4		MW4		MW8		MW9		MW10		MW10	
Date Sampled			5/27/2004		5/27/2004		5/27/2004		5/25/2004		5/25/2004		5/25/2004		5/25/2004		5/27/2004		5/27/2004		5/25/2004		5/26/2004		5/25/2004		5/25/2004	
Matrix			GW		GF		GW		GW		GW		GF		GF		GW		GF		GW		GW		GW		GF	
QC Info	GA Obj.	MCL									DUP				DUP													
Low Concentration PAH (SIM) Analysis (UG/L)																												
2-Methylnaphthalene			0.10	U		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Acenaphthene			0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Acenaphthylene			0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Anthracene			0.10	U		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Benzo(a)anthracene			0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA
Benzo(a)pyrene	0.2	0.2	0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Benzo(b)fluoranthene			0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Benzo(g,h,i)perylene			0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Benzo(k)fluoranthene			0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Chrysene			0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA
Dibenzo(a,h)anthracene			0.10	UJ		NA	0.10	UJ	0.10	UJ	0.10	UJ		NA		NA	0.10	UJ		NA	0.10	UJ	0.10	UJ	0.10	UJ		NA
Fluoranthene			0.10	U		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Fluorene			0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Naphthalene	20		0.10	U		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Phenanthrene			0.10	U		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U		NA	0.10	U	0.10	U	0.10	U		NA
Pyrene			0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA		NA	0.10	UJ		NA	0.10	U	0.10	U	0.10	U		NA

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUND 5
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND

Sample Location			MW1A		MW1A		MW2A		MW3A		MW3A		MW3A		MW3A		MW4		MW4		MW8		MW9		MW10		MW10	
Date Sampled			5/27/2004		5/27/2004		5/27/2004		5/25/2004		5/25/2004		5/25/2004		5/25/2004		5/27/2004		5/27/2004		5/25/2004		5/26/2004		5/25/2004		5/25/2004	
Matrix			GW		GF		GW		GW		GW		GF		GF		GW		GF		GW		GW		GW		GF	
QC Info	GA Obj.	MCL									DUP				DUP													
TAL Metal Analysis (UG/L)																												
Aluminum			1980		6.0	U	66.4	U	432		449		6.0	U	6.0	U	2920		6.0	U	38.2	U	6.0	U	159	U	6.0	U
Antimony	6	6	3.0	U	3.0	U	3.1	UJ	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.5	UJ	3.0	U	3.0	U	3.0	U
Arsenic		*10*	8.4		3.0	U	3.0	U	4.3	J	3.0	U	3.0	U	3.0	U	*40.3*		3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Barium	2000	2000	32.6	U	12.1	U	10.6	U	7.8	UJ	7.1	UJ	5.2	UJ	5.7	UJ	36.4	U	12.2	U	23.8	UJ	7.3	U	10.3	UJ	9.9	UJ
Beryllium	4	4	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	5	5	0.20	U	0.20	U	0.20	U	0.29	UJ	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Calcium			23200		23100		10500		6640		6660		6520		6700		30100		27500		48700		67000		40700		39500	
Chromium	100	100	0.40	U	0.40	U	0.90	U	0.71	UJ	0.80	U	0.40	U	0.85	U	13.2		0.42	UJ	1.3	U	0.40	U	0.65	UJ	0.41	UJ
Cobalt			16.4	U	1.2	UJ	2.1	U	1.3	UJ	1.1	UJ	0.90	U	1.5	UJ	10.3	U	0.90	U	2.0	U	5.4	U	0.90	U	1.1	UJ
Copper		1300	5.2	U	0.90	U	4.1	U	4.7	U	4.5	U	3.0	U	2.1	U	14.5	U	2.8	U	6.7	U	1.6	UJ	2.5	U	3.2	U
Iron			17400		37.0	U	234	U	1210		1230		15.5	U	22.9	U	18400		18.4	U	233		58.1	U	677		37.1	U
Lead	15	15	2.3	J	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.2	J	8.6		2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium			25300		24100		14800		7410		7400		7210		7290		23800		21900		19500		48200		27000		26200	
Manganese			2120		393		12.2	U	52.2		48.3		7.7	U	8.8	U	145		3.1	U	25.9		2650		9.8	U	4.2	U
Mercury	2	2	0.14	U	0.13	U	0.13	U	0.15	U	0.16	U	0.13	U	0.13	U	0.14	U	0.14	U	0.13	U	0.14	U	0.14	U	0.13	U
Nickel	100		23.2		11.5	U	9.7	U	4.5	U	4.1	U	3.2	U	3.5	U	15.6	U	3.1	U	3.0	U	4.3	U	2.8	U	2.5	U
Potassium			1390	U	1110	U	1400	U	1310	UJ	1310	UJ	1220	UJ	1260	UJ	2820		2160		4130	J	2690		2020	J	1930	J
Selenium	50	50	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver			2.3	UJ	2.4	UJ	2.9	UJ	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.3	UJ	5.7	U	7.5	U	3.5	UJ	2.8	UJ
Sodium			18100		17900		9760		11900		11800		11800		11900		25700		24400		41200		15700		16200		16100	
Thallium	2	2	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium			2.9	U	0.70	U	1.8	U	0.70	U	0.70	U	0.70	U	0.70	U	6.0	U	0.70	U	1.6	U	0.70	U	0.70	U	0.70	U
Zinc			56.2	U	12.0	U	17.1	U	15.5	U	16.2	U	14.0	U	14.7	U	39.0	U	7.0	U	16.5	U	8.1	U	8.4	U	19.2	U

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GROUNDWATER RESULTS-
ROUND 5
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND

Sample Location			MW701		MW861		MW862		MW862		MW864		MW865		MW901A		MW901B		MW902A		MW902A		MW902A		MW902A		MW902B	
Date Sampled			5/25/2004		5/26/2004		5/27/2004		5/27/2004		5/25/2004		5/25/2004		5/26/2004		5/26/2004		5/27/2004		5/27/2004		5/27/2004		5/27/2004		5/27/2004	
Matrix			GW		GW		GW		GF		GW		GW		GW		GW		GW		GW		GF		GF		GW	
QC Info	GA Obj.	MCL																			DUP				DUP			
Volatile Organic Analysis (UG/L)																												
1,1,1-Trichloroethane	200	200	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,1,2,2-Tetrachloroethane			5	UJ	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,1,2-Trichloroethane	5	5	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,1-Dichloroethane			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,1-Dichloroethene	7	7	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,2,4-Trichlorobenzene	70	70	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,2-Dibromo-3-chloropropane	2	0.2	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,2-Dibromoethane			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,2-Dichlorobenzene	600	600	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,2-Dichloroethane	5	5	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,2-Dichloropropane	5	5	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,3-Dichlorobenzene	600		5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
1,4-Dichlorobenzene	75	75	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
2-Butanone			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
2-Hexanone			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
4-Methyl-2-Pentanone			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Acetone			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Benzene	5	5	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Bromodichloromethane		80	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Bromoform		80	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Bromomethane			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Carbon Disulfide			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Carbon Tetrachloride	5	5	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Chlorobenzene		100	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Chloroethane			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Chloroform	100	80	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Chloromethane			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
cis-1,2-Dichloroethene	70	70	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	2	J	2	J		NA		NA	1	J
cis-1,3-Dichloropropene			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Cyclohexane			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Dibromochloromethane		80	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Dichlorodifluoromethane			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Ethylbenzene	700	700	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Isopropylbenzene			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Methyl Acetate			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Methyl tert-Butyl Ether	40		5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Methylcyclohexane			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Methylene Chloride	5	5	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
m-Xylene			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
o-Xylene			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUND 5
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND

Sample Location			MW701		MW861		MW862		MW862		MW864		MW865		MW901A		MW901B		MW902A		MW902A		MW902A		MW902A		MW902B	
Date Sampled			5/25/2004		5/26/2004		5/27/2004		5/27/2004		5/25/2004		5/25/2004		5/26/2004		5/26/2004		5/27/2004		5/27/2004		5/27/2004		5/27/2004		5/27/2004	
Matrix			GW		GW		GW		GF		GW		GW		GW		GW		GW		GW		GF		GF		GW	
QC Info	GA Obj.	MCL																			DUP				DUP			
Styrene	100	100	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Tetrachloroethene	5	5	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Toluene	1000	1000	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Total Xylenes	10000	10000	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
trans-1,2-Dichloroethene	100	100	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
trans-1,3-Dichloropropene			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Trichloroethene	5	5	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Trichlorofluoromethane			5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Vinyl Chloride	2	2	5	U	5	U	5	U		NA	5	U	5	U	5	U	5	U	5	U	5	U		NA		NA	5	U
Semivolatile Organic Analysis (UG/L)																												
1,1'-Biphenyl			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
2,2'-oxybis(1-Chloropropane)			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
2,4,5-Trichlorophenol			20	U	20	U	20	U		NA	20	U	20	U	20	U	20	U	20	U	20	U		NA		NA	20	U
2,4,6-Trichlorophenol			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
2,4-Dichlorophenol			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
2,4-Dimethylphenol			10	U	10	UJ	10	UJ		NA	10	U	10	U	10	UJ	10	UJ	10	UJ	10	U		NA		NA	10	UJ
2,4-Dinitrophenol			20	U	20	U	20	U		NA	20	U	20	U	20	U	20	U	20	U	20	UJ		NA		NA	20	U
2,4-Dinitrotoluene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
2,6-Dinitrotoluene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
2-Chloronaphthalene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
2-Chlorophenol			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
2-Methylnaphthalene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
2-Methylphenol			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
2-Nitroaniline			20	U	20	U	20	U		NA	20	U	20	U	20	U	20	U	20	U	20	U		NA		NA	20	U
2-Nitrophenol			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
3,3'-Dichlorobenzidine			10	UJ	10	U	10	U		NA	10	UJ	10	UJ	10	U	10	U	10	U	10	UJ		NA		NA	10	U
3-Nitroaniline			20	U	20	U	20	U		NA	20	U	20	U	20	U	20	U	20	U	20	U		NA		NA	20	U
4,6-Dinitro-2-methylphenol			20	U	20	U	20	U		NA	20	U	20	U	20	U	20	U	20	U	20	U		NA		NA	20	U
4-Bromophenyl-phenylether			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
4-Chloro-3-methylphenol			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
4-Chloroaniline			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
4-Chlorophenyl-phenylether			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
4-Methylphenol			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
4-Nitroaniline			20	U	20	U	20	U		NA	20	U	20	U	20	U	20	U	20	U	20	U		NA		NA	20	U
4-Nitrophenol			20	U	20	U	20	U		NA	20	U	20	U	20	U	20	U	20	U	20	U		NA		NA	20	U
Acenaphthene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Acenaphthylene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Acetophenone			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Anthracene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Atrazine			10	UJ	10	UJ	10	UJ		NA	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ		NA		NA	10	UJ
Benzaldehyde			10	UJ	10	UJ	10	UJ		NA	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ		NA		NA	10	UJ
Benzo(a)anthracene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; NA - Not Analyzed

GROUNDWATER RESULTS-
ROUND 5
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND

Sample Location			MW701		MW861		MW862		MW862		MW864		MW865		MW901A		MW901B		MW902A		MW902A		MW902A		MW902A		MW902B	
Date Sampled			5/25/2004		5/26/2004		5/27/2004		5/27/2004		5/25/2004		5/25/2004		5/26/2004		5/26/2004		5/27/2004		5/27/2004		5/27/2004		5/27/2004		5/27/2004	
Matrix			GW		GW		GW		GF		GW		GW		GW		GW		GW		GW		GF		GF		GW	
QC Info	GA Obj.	MCL																			DUP				DUP			
Benzo(a)pyrene	0.2	0.2	10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Benzo(b)fluoranthene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Benzo(g,h,i)perylene			10	U	10	UJ	10	UJ		NA	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ		NA		NA	10	UJ
Benzo(k)fluoranthene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Bis(2-Chloroethoxy)methane			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Bis(2-Chloroethyl)ether			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
bis(2-Ethylhexyl)phthalate	6	6	10	UJ	10	U	10	U		NA	10	UJ	10	UJ	10	U	10	U	4	J	10	U		NA		NA	10	U
Butylbenzylphthalate			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Caprolactam			10	U	1	J	610	*		NA	10	U	10	U	10	U	3	J	20		21			NA		NA	15	
Carbazole			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Chrysene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Dibenzo(a,h)anthracene			10	U	10	UJ	10	UJ		NA	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ		NA		NA	10	UJ
Dibenzofuran			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Diethylphthalate			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Dimethylphthalate			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Di-n-Butylphthalate			10	U	10	U	4	J		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Di-n-octylphthalate			10	U	10	UJ	10	UJ		NA	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ		NA		NA	10	UJ
Fluoranthene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Fluorene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Hexachlorobenzene	1	1	10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Hexachlorobutadiene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Hexachlorocyclopentadiene		50		R	10	UJ	10	UJ		NA		R		R	10	UJ	10	UJ	10	UJ	10	UJ		NA		NA	10	UJ
Hexachloroethane			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Indeno(1,2,3-cd)pyrene			10	U	10	UJ	10	UJ		NA	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ		NA		NA	10	UJ
Isophorone			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Naphthalene	20		10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Nitrobenzene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
N-Nitroso-di-n-propylamine			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
N-Nitroso-diphenylamine			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Pentachlorophenol	1	1	20	U	20	U	20	U		NA	20	U	20	U	20	U	20	U	20	U	20	U		NA		NA	20	U
Phenanthrene			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Phenol			10	U	10	U	10	U		NA	10	U	10	U	10	U	10	U	10	U	10	U		NA		NA	10	U
Pyrene			10	UJ	10	U	10	U		NA	10	UJ	10	UJ	10	U	10	U	10	U	10	U		NA		NA	10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUND 5
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND

Sample Location			MW701		MW861		MW862		MW862		MW864		MW865		MW901A		MW901B		MW902A		MW902A		MW902A		MW902A		MW902B	
Date Sampled			5/25/2004		5/26/2004		5/27/2004		5/27/2004		5/25/2004		5/25/2004		5/26/2004		5/26/2004		5/27/2004		5/27/2004		5/27/2004		5/27/2004		5/27/2004	
Matrix			GW		GW		GW		GF		GW		GW		GW		GW		GW		GW		GF		GF		GW	
QC Info	GA Obj.	MCL																			DUP				DUP			
Low Concentration PAH (SIM) Analysis (UG/L)																												
2-Methylnaphthalene			0.10	U	0.10	U	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
Acenaphthene			0.10	U	0.10	U	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
Acenaphthylene			0.10	U	0.10	U	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
Anthracene			0.10	U	0.10	U	0.10	UJ		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
Benzo(a)anthracene			0.10	U	0.10	U	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	UJ		NA		NA	0.10	U
Benzo(a)pyrene	0.2	0.2	0.10	U	0.10	U	0.10	UJ		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	UJ		NA		NA	0.10	U
Benzo(b)fluoranthene			0.10	U	0.10	U	0.10	UJ		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	UJ		NA		NA	0.10	U
Benzo(g,h,i)perylene			0.10	U	0.10	U	0.10	UJ		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	UJ		NA		NA	0.10	U
Benzo(k)fluoranthene			0.10	U	0.10	U	0.10	UJ		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	UJ		NA		NA	0.10	U
Chrysene			0.10	U	0.10	U	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	UJ		NA		NA	0.10	U
Dibenzo(a,h)anthracene			0.10	UJ	0.10	UJ	0.10	UJ		NA	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ		NA		NA	0.10	UJ
Fluoranthene			0.10	U	0.10	U	0.10	UJ		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
Fluorene			0.10	U	0.10	U	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10			NA		NA	0.10	U
Naphthalene	20		0.10	U	0.10	U	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
Phenanthrene			0.10	U	0.10	U	0.10	UJ		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U		NA		NA	0.10	U
Pyrene			0.10	U	0.10	U	0.10	U		NA	0.10	U	0.10	U	0.10	U	0.10	U	0.10	UJ	0.10	UJ		NA		NA	0.10	U

Bold\Italic - Criteria Exceeded; GF- Filtered GW; U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
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GROUNDWATER RESULTS-
ROUND 5
FORMER TANKS 53 AND 56 - TANK FARM 5
NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND

Sample Location			MW701		MW861		MW862		MW862		MW864		MW865		MW901A		MW901B		MW902A		MW902A		MW902A		MW902A		MW902B	
Date Sampled			5/25/2004		5/26/2004		5/27/2004		5/27/2004		5/25/2004		5/25/2004		5/26/2004		5/26/2004		5/27/2004		5/27/2004		5/27/2004		5/27/2004		5/27/2004	
Matrix			GW		GW		GW		GF		GW		GW		GW		GW		GW		GW		GF		GF		GW	
QC Info	GA Obj.	MCL																			DUP				DUP			
TAL Metal Analysis (UG/L)																												
Aluminum			6.0	U	16.1	U	65.4	U	6.0	U	66.7	U	12.9	U	91.7	U	63.9	U	396		381		6.0	U	6.0	U	83.3	U
Antimony	6	6	6.9	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Arsenic		*10*	3.0	U	3.5	J	3.0	U	3.0	U	6.0		3.0	J	3.0	U	3.0	U	4.6	J	3.9	J	4.7	J	3.8	J	3.0	U
Barium	2000	2000	75.9	J	4.9	U	11.9	U	12.1	U	5.8	UJ	6.4	UJ	20.8	U	17.9	U	53.2	U	54.2	U	50.0	U	50.8	U	18.8	U
Beryllium	4	4	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	5	5	0.20	U	0.20	U	0.20	U	0.20	U	3.0	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Calcium			81800		14500		33700		33400		4470		5030		21800		22100		49600		49300		48000		49200		22900	
Chromium	100	100	0.40	U	0.40	U	0.60	UJ	0.46	UJ	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Cobalt			9.3	U	0.90	U	0.90	U	0.90	U	2.7	U	1.5	UJ	8.6	U	10.1	U	14.7	U	14.7	U	16.1	U	14.7	U	27.1	
Copper		1300	4.3	U	1.9	U	1.8	U	2.7	U	5.3	U	5.2	U	1.3	UJ	2.5	U	0.93	UJ	2.4	U	1.0	UJ	1.6	UJ	1.9	U
Iron			88.8	U	81.0	U	230	U	18.1	U	48.8	U	30.8	U	11400		14500		17800		18100		16500		17000		15000	
Lead	15	15	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Magnesium			50500		11100		22400		22500		2250		4110		23400		26000		47100		47800		46300		47400		22400	
Manganese			2380		3.0	U	8.1	U	4.3	U	23.6		6.2	U	723		959		1510		1530		1480		1520		840	
Mercury	2	2	0.13	U	0.14	U	0.14	U	0.14	U	0.14	U	0.13	U	0.14	U	0.14	U	0.14	U	0.13	U	0.14	U	0.14	U	0.13	U
Nickel	100		0.52	UJ	4.8	U	3.8	U	3.7	U	6.6	U	3.1	U	25.8		31.8		31.3		31.1		30.0		30.7		63.5	
Potassium			4880	J	981	U	3490		3600		1140	UJ	1050	UJ	1340	U	955	U	2210		2170		2120		2140		1620	
Selenium	50	50	4.0	U	4.0	U	4.0	U	4.0	U	4.2	J	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Silver			11.3	U	2.0	U	2.3	UJ	2.0	UJ	2.0	U	2.3	UJ	2.0	U	2.0	U	3.1	UJ	2.8	UJ	3.2	UJ	2.9	UJ	2.0	U
Sodium			93900		10700		36900		36800		14400		11700		28100		21100		47800		47300		46500		47200		22700	
Thallium	2	2	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Vanadium			1.5	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U
Zinc			7.9	U	10.7	U	7.4	U	7.5	U	20.9	U	16.1	U	24.4	U	99.2	U	23.0	U	16.0	U	15.0	U	11.9	U	66.4	U

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